

## **NHS Tayside's Digital Health and Social Care Strategy**

Helping people live longer, healthier and happier lives through digital technology

2022 - 2027

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*Digital strategy isn't just about building exciting technology, it's about the needs of real people and working together to find out how technology can support them. We have worked with patients and staff to understand what really matters to them. We will continue to work hand-in-hand with the people this strategy is designed to help.*

*We have a vision of people being able to take control of their care, making informed decisions and interacting with practitioners in the way that works for them; of staff being supported with all the right information they need; and with time freed up from routine tasks so they can focus on patients.*

*We recognise that just as digital has the power to empower people, it can also exclude people. That is why we won't take a 'one size fits all' approach. We won't assume that everybody has the latest device or that navigating apps is second nature.*

*NHS Tayside has a long history of innovation and we believe it has the potential to be a future leader in digital care. But we can't do this alone. We want this digital strategy to bring together the NHS, Local Authorities, 3<sup>rd</sup> sector organisations, academia, the private sector and the public to make the vision not only realistic but also achievable in five years. In this document we lay out our joint approach to making that happen.*

*This gives us confidence that the strategy and the outcomes it aims to achieve will resonate with the people of NHS Tayside. We will work together to ensure technology is a positive force for high quality care delivered by the Health and Social Care providers that help us all live longer, healthier and happier lives.*



**Grant Archibald**, Chief Executive Officer of NHS Tayside



**Lorna Birse-Stewart**, Chair of Tayside NHS Board



**Laic Khaliq**, Digital Director of NHS Tayside

# The next five years for digital care in NHS Tayside

Digital technology is changing virtually every aspect of our lives. For many, this has been empowering, connecting them to people, information and opportunities. In some cases, it has excluded people, presented harmful information or deprived people of opportunities.

In NHS Tayside, digital technology has the opportunity to transform every aspect of care. But it is our duty to make sure digital technology works for everyone regardless of their background.

This strategy lays out our ambition over the next five years to develop digitally-powered services that will help the people of NHS Tayside live longer, healthier and happier lives.

We will help put the population in control of their own Health and Social Care journeys. This means providing patients with all the relevant information they need to make informed decisions about their care and lifestyle, building patient confidence and helping them improve their health outcomes without putting additional strain on our essential public services.

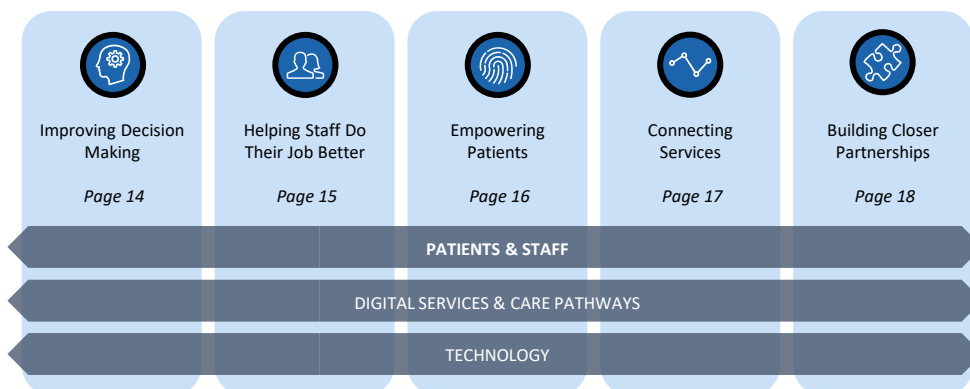
We will help patients get the right care in the right way for them. As well as providing visibility over care options we will expand new channels to access care through remote consultations or online chat.

We will consider accessibility in all ways when designing solutions accommodating different levels of experience, disabilities and device ownership. We will facilitate carer and proxy access whilst ensuring safety and privacy.

In addition to helping patients find the right care, digital technology will improve its quality and timeliness. We will provide care providers with the right data at the right time to improve the speed and accuracy of decisions they make about the persons care.

We will also support decisions about the operations of the care system. We will provide patients and staff with a complete view of where patients are in the system and improve our ability to predict where future demand will come from in order to help us plan capacity and cope with the growing demand for care in NHS Tayside.

Our strategy outlines five areas that digital technology will make the biggest impact in



We will not just help staff by providing the right information. We will create intuitively designed tools that are quick and easy to operate, and we will save staff time by digitising repetitive tasks or automating them all together.

This will save staff time so they can focus on doing the parts of their job that matter most, and it will reduce the risk of error.

Digital solutions like these often try to solve problems for one area of care and do not take into account what happens when people need care from different parts of the system. This strategy recognises that moving between different types of care creates challenges for patients and digital solutions should help that rather than exacerbate it. We will bridge these gaps within NHS Tayside (e.g. when moving from emergency care to cardiac consultation) or between partners (e.g. from primary care to community care).

We will deliver the future described above by applying existing technology to NHS Tayside's biggest social challenges. But our ambition goes further. This strategy paves the way for use of emerging technology that will mature over the coming years. We will highlight the technology and partnerships we need to build now so NHS Tayside can apply artificial intelligence in the future.

No organisation can transform care in NHS Tayside alone. We will work alongside Local Authorities, 3rd sector partners, academia, regional and national groups and private industry. We need to play to our strengths, share data and co-design services. We will build a mutual commitment to deliver longer, healthier and happier lives for the people of NHS Tayside

Health and Social Care has been undergoing change in 2020 at a level unseen since the inception of the NHS.

The current environment has crystallised the need for a clear strategy for digital across NHS Tayside to guide a collective, coordinated response to the growing demands on the health and social care system.

The COVID-19 pandemic has had an immense human impact in health and social care and beyond, which has generated a remarkable response in NHS Tayside and across the country.

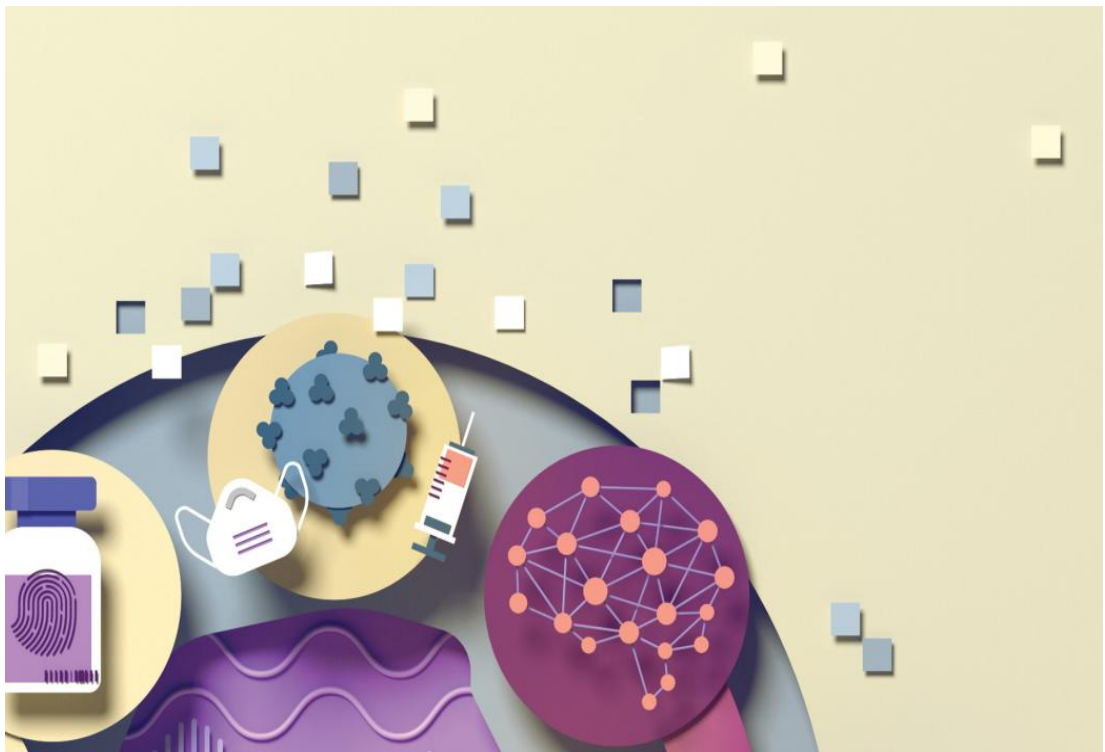
In 2019 a push to adopt remote consultations yielded only 200 appointments, in 2020 we made over 100,000. This demonstrates the ability NHS Tayside has to enact massive change rapidly, when we need to.

This strategy builds on the rapid progress made in 2020 and looks to continue the new way of doing things: fast, collaboratively and ambitiously. At the same time we need to manage risk and support the wellbeing of our staff.

The care system has faced growing pressure for many years which has been exacerbated by the pandemic. This has created a significant backlog for elective care that will continue to put pressure on the care system. As services readjust, there is an opportunity to adopt new models of care with digital technology. NHS Tayside's new National Treatment Centre opening in 2023 will give us a chance to implement leading digital processes and pathways from day one.

In this strategy we identify the areas where digital technology can have biggest impact on our services, reducing pressure on resources and improving outcomes for patients. In each of these areas we have created a roadmap for developing the technology needed to make this impact.

NHS Tayside has a strong history of innovation, from building the foundations of the modern community health index to ongoing partnership with Dundee University on Artificial Intelligence diagnosis of skin cancer. This strategy aims to build on that potential, play to its strengths, seek investment, and create the digital infrastructure that will advance digital Health and Social Care in NHS Tayside over the next five years.





## What will the next five years look like for patients?

*The following stories describe the experiences of six future patients. We have used these to illustrate what our digital strategy will mean for people in real life care.*



**Celia is 87 and has a pacemaker implanted for her arrhythmia, she moved into a Care Home last year and was diagnosed with dementia.**

Celia's pacemaker flags an abnormal event to her cardiac specialist and care home via a connected system. This prompts the set-up of a remote consultation, during which Celia is supported by care home staff with whom she is familiar, helping her to feel less frightened. Celia and the care home professional complete follow-up via a patient portal that has been co-designed with care home residents, care home staff, and NHS Tayside digital representatives. Relevant data is shared with the care home to help them provide the right care for Celia. Celia's care home, and others across NHS Tayside, use shared systems with Acute Care to monitor data from patients with pacemakers and help them spot risks and make informed decisions.



**Vikram has uncontrolled hypertension and is due to receive replacement knee surgery at the NHS Tayside Elective Care Centre, a new digital hospital.**

Having recorded consistently dangerously high blood pressure readings via Vikram's patient portal, the need for an additional preoperative assessment is prompted, resulting in Vikram's medication being changed. This helps drop Vikram's blood pressure and get him ready for surgery. After surgery, Vikram is discharged with all follow-up appointments scheduled and post-op instructions accessible via his patient portal highlighting personalised steps he can take to speed up his recovery, including advice from Physiotherapy and local exercise groups he can join.



**Quinn notices a worrying change in a mole on their thigh, prompting them to schedule remote consultation with their GP.**

Upon examining Quinn's mole, their GP initiates a dermatology referral. An automated tool fast tracks the referral as urgent based on level of risk decided by medical data. In addition to having a single view of Quinn's medical records, the dermatologist sees that Quinn identifies as non-binary, ensuring they respectfully interact with their new patient. During the initial consultation, the dermatologist applies an artificial intelligence (AI) imaging tool to help diagnose Quinn's mole. The AI imaging tool enables Quinn's dermatologist to more quickly determine the mole should be removed and is able to do so during their visit. This eliminates the need for multiple interactions and stops the mole from growing.



**Jacqui has type II diabetes and bipolar disorder, with a history of two suicide attempts.**

When Jacqui is feeling depressed, she tends to sleep more, often causing her to delay or miss her morning diabetes medications. Realising she might need a medication adjustment, Jacqui chooses an in-person consultation because she finds it hard to communicate on video chats. While she waits to be seen, Jacqui is given an electronic tablet to complete a mental health risk assessment; her answers guide her GP's verbal review based on risk. Relevant details of Jacqui's mental health history are automatically alerted to the diabetes nurse educator, prompting her to tailor advice on her medication. Follow-up with her mental health team is initiated during the GP visit, who can access the appropriate information captured by her GP. Jacqui's GP sets her up with automatic prescription refills which are delivered to her doorstep, helping reduce disruption in her medications.



**Max is a five year old boy whose dad takes him to A&E one evening for acute stomach pain and vomiting.**

Max's parents are recently divorced with a shared parenting arrangement. Before leaving for A&E Max's dad checks projected wait times online helping him keep Max calm and talk him through the process. The consultant quickly and easily accesses live records in a single view from multiple care providers, including recent history and his health and social care summary. The consultant also sees Max's custody status, making sure to include his mum in his consultation. As only Max's dad is with him in the A&E, the consultant updates his mum via video before he discharges him. Both parents have access to Max's follow-up instructions via his patient portal



**Gail is an 83 year old lady who is virtually housebound, does not feel well and has symptoms of a chesty cough.**

Gail's son contacts the GP to advise that his mother has not been feeling well and describes symptoms of a chesty cough. Gail does not feel well enough to attend the GP practice so Gail's son requests a home visit. A virtual consultation on the telephone confirms that a home visit is appropriate for Gail. An Advanced Nurse Practitioner (ANP) visits Gail at home and diagnosed a chest infection. The ANP is able to view Gail's electronic medical records at her GP practice from her mobile device. She is able to see that Gail is allergic to some antibiotics and is able to prescribe an antibiotic for Gail that is safe to take and will treat her chest infection. The ANP is able to record the prescription in Gail's medical records and this is sent directly to the community pharmacy for Gail's son to pick up. The ANP is also able to make an electronic referral to Speech and Language Therapy for further assessment of Gail's swallowing which was affected by her stroke to ensure this is not a contributing factor in Gail developing a chest infection. Gail is able to receive safe, effective and timely treatment for her chest infection in a person-centred way.





## What will the next five years look like for staff?

*Our digital strategy will help all staff do their jobs better. We have used the perspectives of a range of different disciplines and settings, to describe how digital technology will support them in 2026.*



**Khalid is a GP partner based in Aberfeldy. He has seen an increase in patient volumes over his career and is keen to focus his time on working with patients.**

Digital technology helps Khalid focus on his role as a Primary Care expert, interacting with patients rather than being tied up with administrative tasks. Khalid can access all appropriate aspects of his patients' records before visits, utilising a single view to quickly review information that is relevant for his interactions as a GP, some patients are directly referred to secondary care rather than going via a GP consultation. Khalid can initiate referrals that are automatically scheduled, indicating patient preference for in-person or remote consultation.

Khalid has previously spent a lot of time physically signing off prescriptions; because of the time-consuming nature, this has resulted in errors; now he authorises digitally with risks flagged for extra attention. Khalid also leads a review of older people with care homes and social care providers with aggregated data analysis that highlights areas for service improvements.



**Neha is a Nurse Prescriber who takes on extra shifts across different wards. She is a champion for digital technology.**

Digital technology has saved Neha a lot of time she previously spent on administrative tasks, giving her more time to interact with and assist patients. Neha uses a single tool to capture patient interactions, no matter the ward, reducing time spent navigating and logging into systems and fielding calls from people looking

for information as its all accessible directly to them. Neha can quickly and easily prescribe medications electronically through the hospital medication management system, straight into the electronic patient record, and reducing any risk of transcription error.

Neha also records bedside observations electronically which are monitored and tracked automatically and is alerted to any abnormalities for her patients. Neha also supports her colleagues with using new systems – she is recognised and given time / resources to support this. Neha works with the digital team to explain which aspects nurses are finding hard to use, and they co-design improvements to digital care processes and systems.



**Hayley is a Team Leader in Acute Mental Health. She wants to put the patient at the centre of care while managing growing demand.**

Hayley and her team use digital technology to ensure their patients get the right treatment, at the right time, in a safe and respectful way. During times of stress and distress it can be difficult for patients and their families to recall information discussed with members of the team. Personalised digital communications from Hayley's team help patients and families feel empowered and included in their assessment and treatment. Hayley can track all the appropriate care outcomes for patients accessing the service allowing her to measure these against local and national standards. When Hayley's team is flagged as having the best care Acute Mental Health metric, Hayley uses this data to understand why and share best practice learning with her peers.



**Ken is an Operations Manager at Ninewells who manages scheduling of resources and spaces.**

A single "Command Centre" interface gives Ken a clearer view of what's going across the hospital and what demand for services will look like in the near, medium, and long-term. Past data and trends help Ken plan future capacity, meaning seasonal spikes in emergency volume won't result in cancelled planned care.

Ken is alerted that the volume of new arrivals in A&E will be higher than expected and could result in delays by the end of the day. Ken takes action ahead of time to reallocate spaces and avoid delays before they happen.

Longer term, machine learning helps Ken to forecast physician workload and patients' length-of-stay, day of discharge and readiness for discharge. It also helps plan optimal pre-op for surgical patients and manage the surgery backlog.



**Kirsty is a cardiology consultant who uses a range of data to inform decisions she makes with her patients.**

Kirsty has access to continuous data from a range of outpatients. Some via patient-submitted questions and some from pacemakers. There's too much data for Kirsty to review everything, but her system alerts her when there are concerning patterns. Kirsty is always keen to understand a patient's wider medical history. In the single electronic patient record, Kirsty uses an automatic tool to search for relevant medical information and uses it to make more informed decisions about treatment.



**Louise is a general practice pharmacist responsible for supporting patients with chronic pain.**

Louise has just received a digital alert, a patient on her case list has accessed the patient portal and reported a significant deterioration in their chronic pain and is struggling to manage their medication.

Louise sets up a video chat with the patient, accessing the patient's notes through the single care record. Highlighted are some very helpful medication related issues identified by the hospital pharmacist during the patient's recent unscheduled hospital admission, along with recorded outcomes from the patient's recent encounters with their community pharmacist.

Louise, as an advanced pharmacist practitioner, conducts a comprehensive polypharmacy and pain review with the patient; discusses options and agrees a plan with them about changes to their prescribed medicines along with a referral to an appropriate social prescribing pathway.

Once Louise and the patient agree on the changes, the digital care record is updated, a prescription is automatically generated and sent to the patients registered community pharmacy; Louise also organises the follow up appointment for her to review the patient. This automatically populates the single care record so that the patient can see it on their patient portal.

Before finishing the consultation, the patient advises that they have received a digital alert from their community pharmacy offering a choice of collecting the new medication or choosing to have it delivered at a time that is convenient for them. Louise, content that all of the administration tasks have been completed throughout the patient consultation, then ends the consultation and continues to work on her remaining case load.



**Kath is a District Nurse working in the Community as part of the Health and Social Care Integrated Team and is able to access the electronic patient record via her mobile device while visiting patients.**

This includes personal information to ensure Kath can safely access the property, and highlights any issues that Kath needs to be aware of, e.g. who holds Power of Attorney for an individual. Easy access to information also facilitates continuity of care for patients, quickly enables any changes in treatment and care if interventions are not effective and keeps the whole team informed. Kath is able to record any care she delivers directly into the patient's records at the time of the visit, make any electronic referrals to specialist services attaching relevant information to the referral, and order any equipment that the patient needs, directly involving the patient, carers and family at the point of care. This information is visible to the Social Work Occupational Therapists who also regularly visit the same individuals preventing duplication of effort and waste.



# NHS Tayside's Digital Charter

We want to make sure digital technology in NHS Tayside is safe and secure and works for everyone. To do that we have agreed ten principles that will guide everything we do.

The spirit of these principle's is about putting people at the centre of decisions we make about digital technology. We don't want people to think of digital technology as something that happens to them but as something that helps them do what they need to do.

We will make sure that every partner we work with embodies these principles. We will hold each other to account for these principles openly and transparently.

Every day the health and social care system faces new challenges and new opportunities. These principles will ground us as new digital technologies become available to make sure we stay true to our commitments while recognising new opportunities.

**1** *We won't leave anyone behind regardless of differences in access to devices or experience with digital technology*

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**2** *We will provide staff with the training and support so they can use digital technology to provide the highest quality of care*

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**3** *We recognise that everyone has different needs and we will work together to address them*

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**4** *We will put security, privacy and patient safety first when designing digital technology*

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**5** *We will take responsibility as a whole organisation for digital technology, helping our colleagues and patients make best use of it*

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**6** *We will make sure that existing technology and resources are used to make effective use of existing capabilities and resource*

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**7** *We recognise the value of data and evidence and use it to guide our decisions*

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**8** *We will work with Regional and National groups and take the lead when we need to*

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**9** *We will work closely with partners in the public and private sectors*

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**10** *We will design digital technology alongside the people that will actually use it*

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# Our strategy supports the wider plan for Health and Social Care in NHS Tayside

This strategy builds on an ongoing commitment to improving health and social care outcomes. The Transforming NHS Tayside agenda has defined NHS Tayside's priorities to 2022. This looks to support these priorities and take them even further, including:

- Improving access to high-quality care and the reduction of waiting times
- Stepping up the pace of integration and improving the effectiveness of our partnership working
- Improving access to Secondary Care Services
- Improving access to Mental Health Services
- Improving access to Primary Care Services

Similar to Transforming NHS Tayside, the Digital Strategy has a focus on prevention and helping people manage their own care.

Mental Health, for example, is going through a critical period of change in NHS Tayside, and this strategy aims to support that.

The Listen Learn Change Action Plan details our commitment to creating a world class Mental Health system in NHS Tayside. Mental Health is considered a high impact area in our digital strategy and, as such, the Listen Learn Change report has shaped it with direct input from Mental Health stakeholders. This concept has guided our approach to digital technology across different types of care and helped shape our need for service redesign, clear governance, engagement with people, a strong learning culture, and a clear approach to communication.

This strategy brings together perspectives from across the NHS Tayside care system. We have worked with partners and patients to understand their perspectives, and with health and social care providers and the people they serve, to ensure the digital strategy recognises and supports the needs of people in NHS Tayside. Fundamentally, the digital technology we create needs to play a positive role in peoples lives.

This approach aims to create a shared vision for NHS Tayside. We are committed to working with patients and staff as we develop digital technology and as colleagues roll it out to build in their needs.

National bodies offer a useful set of standards and policies to help us stay aligned with our partners: locally in NHS Tayside, regionally in the North of Scotland and nationally. Scotland's Digital Health & Care Strategy and, more broadly, the Digital Strategy for Scotland clearly articulates the importance of digital technologies for organisations like NHS Tayside and its partners. These documents have helped shape this strategy. In our detailed roadmap, we highlight the importance of drawing on national capabilities and committing to national standards where it will support NHS Tayside's goals.

While we have drawn on national perspectives, we have applied them to the needs of people within NHS Tayside to develop a specific set of priorities.

This strategy also closely draws on the core principles of Realistic Medicine and person centred care. We support this principle in three ways. Firstly, this strategy has been driven by care needs of people with input from patients and health and social care providers. Secondly, we will enhance our operating model to further integrate patients and staff into the design and development of digital solutions. Finally, the strategy identifies capabilities that will empower people to engage with their care and will empower health and social care providers to tailor care to individuals needs.

To ensure that this strategy is equitable for all staff, we have been guided by NHS Scotland's Staff Governance Standard. To deliver this, we have agreed an approach to delivery that ensures staff are actively involved in design and development, that they are supported with training and development, and that the diversity of their needs is properly recognised and supported.

# Our ambition focuses on five areas that will have the most impact for NHS Tayside

Digital technology has such a wide range of applications in care, it is important that we focus on the areas that will make most impact for the population of NHS Tayside. Working in a blended team with input from digital teams, clinical teams, support staff and partners, we have identified the five digital areas that will have the largest impact on our services and the people that use them.

Improving decision making helps people accessing care get the right type of care for them. Helping staff do their job better with intuitive digital tools allow staff to concentrate on what matters most for patient outcomes.

Empowering patients with the right information and tools for interacting helps them make more informed decisions and access care in the way that works for them. Connecting services bridges the gaps between different types of care, making sure that practitioners can access the right information and that patients receive consistent support. Building closer partnerships with Local Authorities, 3rd Sector partners, academia, private enterprise and regional and national groups will allow us to play to our strengths to make the strategy a reality.

The following pages explore how each of these areas will make an impact on care outcomes and what we will do to deliver it.

## The five most impactful areas for digital in NHS Tayside



### 1. IMPROVING DECISION MAKING

Improve the accuracy and effectiveness of decision making by providing the right information at the right time



### 2. HELPING STAFF DO THEIR JOB BETTER

Create intuitive digital tools and experiences for staff that save time and help them concentrate on what matters most for patient outcomes



### 3. EMPOWERING PATIENTS

Give patients access to the right information and interactions with their care to help them make informed decisions



### 4. CONNECTING SERVICES

Join up different Health and Social Care services by making relevant information accessible and creating shared technology



### 5. BUILDING CLOSER PARTNERSHIPS

Work with Local Authorities, 3<sup>rd</sup> Sector partners, academia, private enterprise and regional and national groups to transform care together



## Improving Decision Making

### Overview

We will provide the right data at the right time to care providers to help **improve the accuracy and speed of their diagnoses**. In addition to providing this timely data access, we will also develop analytical tools that will help these teams to **assess the right course of action and assist in their day-to-day decision making**.

### How does improved decision making enhance health and social care outcomes?

Health and social care decisions enhanced by data and analytics improve the quality of patient outcomes. Operationally, decisions enhanced by data and analytics are more efficient and reduce cost and risk.

We will facilitate more effective person centred decisions by enabling health and care providers to access **relevant data at appropriate moments in the treatment process**. This will be augmented by digitally assisted analysis which will help health and care teams **make decisions earlier in the patient journey** than they would with current tools, and will also **analyse greater volumes of data** than possible today.

Additionally, Enhanced Decision Making will also be applied to **capacity planning and operational management services to all sites across NHS Tayside**. We will use historical data to identify trends to support decisions in allocating resources and **managing capacity according to forecasted levels of demand**.

### Our approach to improving decision making

Our use of data needs to be rigorous and consistent to enhance decision making in a safe way. We will continue to **protect patient data** with robust control, monitoring and storage practices. We will build in safeguards, accountability and the necessary **regulatory oversight** from the beginning.

When we develop these solutions we will **bring together perspectives and design input from third sector partners, carers and academics**. Together we will make tools that digitally enhance our daily lives while accommodating the knowledge and experience of health and care providers.

### Technology is needed to improve decision making

To improve decision making we need to make sure data is captured, shared, interrogated and accessed in the right ways.

Standardisation of the patient data capture process will be fundamental to the implementation of Enhanced Decision Making tools. It is essential that **data is captured using similar formats and standards** across services so that they can be analysed and compared in a consistent manner.

We will develop decision support tools that are able to quickly process large volumes of complex data to **extract insights that will be timely for clinical consideration**. For example, digitally assisted analysis and action could be used for diagnoses, screening, risk stratification in services like dermatology, radiology and oncology.

NHS Tayside's current Command Centre capability aggregates and presents operational data from the Ambulance Service, the Emergency Department and Acute wards to inform allocation of resources and flag risks. This approach will be expanded to include further operational data and service areas.

Growing the impact of our current data and analytics capabilities requires organisational as well as technological change. We will grow skills and capacity to develop and run these systems as we foster collaboration inside NHS Tayside with partners to ensure the data and analytics capabilities are applied across the most impactful service areas.

Technologies we will deliver in this area

Single Health and Social Care Summary

Consolidated EPR View

Advanced Capacity Planning

Population Health & Patient Cohort Mgmt

Advanced Clinical Decision Support





## Helping Staff Do Their Job More Effectively

### Overview

Digital services aim to make life easier for our staff by delivering a seamless and convenient experience, enabling them to do the right thing at the right time.

At its core, our approach to staff digital services prioritises those services that, directly or indirectly, **increase the amount of time care providers can spend with the patient** and on their care.

### How will this improve health and social care outcomes?

By designing experiences that are **user friendly and intuitive digital technology**, we will aim to minimise 'time spent on device' for staff. Digital support will also augment the quality of care delivered by **minimising the risk of human error**. For example, we will invest in services that allow automation of data capture; this will free up the time care providers would have spent completing paperwork, and will also verify the data captured in real time, in turn increasing patient facing time.

Digital interventions will also help our staff working across multiple locations access all the information they need to deliver a **consistent patient experience regardless of location**.

By providing digital services that tangibly in a positive way impact our staff's day-to-day life, we hope to improve **staff wellbeing, retention, and development**.

### Our approach to helping staff do their job effectively

**Staff will be instrumental** - throughout the design and development process, to ensure they are addressing their needs and we are delivering a product that they will actually use.

However, digital solutions cannot succeed in isolation. In tandem with the development of digital applications, we will look to **redesign our processes and staff journeys**

so that on the ground operations are updated to keep pace with this digitisation; and together with the digital applications are able to deliver the desired improvement in staff experiences.

Our approach will be closely aligned with the Staff Governance Standard. We will use digital technology to give staff transparency over important information and we will also be guided by Staff Governance Standard principles on including staff in decision making about digital technology developments.

Finally, we will support our staff with appropriate **training** so they are able to fully participate and benefit from this digital transformation.

### Technology needed to help staff do their job more effectively

We will start by targeting tasks and processes that are routine, repetitive and time intensive for our staff. We will develop **digital delivery models (as opposed to paper-based)** that reduce the need for clinical input and can be used by multiple specialities and care providers; high impact areas for digitisation include prescriptions, referrals, lab orders, and elective care.

Perhaps the most important digital tool for helping care practitioners is a **single, consolidated, digital view of patient data**. We will bring together patient data from various sources – primary, secondary, community and social care – so that health and care teams are able to access all the information they need on a single platform and thus, make fully informed decisions.

In the longer term, we will build on this consolidated patient record platform to allow **teams to monitor patients remotely** (for example, vitals) instead of waiting for scheduled appointment occurrences, and make treatment decisions or escalations based on this real-time data input.

Technologies we will deliver in this area

Health and Social Care  
Portal

Single Health and Social  
Care Summary

Digitisation of Clinical  
and Care Processes

Data Capture Automation



## Empowering Patients

### Overview

Services will be developed with the aim of empowering the NHS Tayside population with the knowledge they need to make more informed decisions about their care, making them feel included and in control, building confidence in knowing how, when and where to access the care they need.

We provide patients and carers with **greater and more transparent access** to their health and social care records, facilitating **easier and faster engagements between patients and their carers with health and social care providers**.

### How does empowering patients improve health and social care outcomes?

We believe that real-time and consistent awareness of their health status is likely to **encourage patients to make healthier choices**; this includes round the clock visibility of vital metrics and new ways to engage with health and care providers, and carers will enable patients to access the **right care at the right time**.

These teams can also use this richer source of information, in a convenient and flexible way, unique to each patient to deliver in a **person centred way**.

Patients' contribution to their health record will lead to a **reduction in the time spent by health and care providers manually capturing data**, and instead this time can be dedicated to interacting with the patient. And as more and more patients adopt this digital care model, we anticipate a decline in the footfall in hospitals, which will in turn free up capacity and staff time and enabling them to focus on areas of greatest need.

### Our approach for empowering patients and carers

**Patient and carers education** is a core aspect of the delivery of this ambition. We will invest in training programmes and communication

campaigns to ensure our patients and carers understand the clear distinction between their responsibilities and those of their health and care providers.

Through our Patient Ownership services, we will help **patients understand their diagnosis and treatment options** available to them at any given point in time, and in the case of ongoing treatment or consultation, where they are in the process.

We are committed to the **equity of healthcare** across NHS Tayside. We will, therefore, enable proxy access where needed (e.g. carers and family), as this is a **fundamental principle** to provide digital navigators the tools to assist those who can't access digital services or don't know how, or provide **non-digital** routes to care services if needed.

Safely delivering tools and services that support Patient Ownership requires a deep understanding of the potential risks associated with providing patients' information without direct care professional support. Services that support patient ownership will be developed collaboratively with health and social care providers to ensure information is relevant, appropriate and safe.

### Technology is needed to empower patients

Patient Ownership is primarily supported by patient facing applications. Digital self service tools will allow patients establish initial contact and perform certain basic tasks digitally; e.g. to **book appointments, check-in and participate in video consultations**. We will create a **patient platform** that will bring together patients' Health and Social Care data, and will allow them to view and add to their electronic care records, communicate with clinical teams, and understand their treatment plans and see where they are in their care pathway and what will happen next.

We will also build **remote monitoring** capabilities that will enable monitoring of patients who are in their homes. We will work across our community and social care partners to scale and use this service across NHS Tayside especially to detect changes in condition and proactively provide health and social care interventions.

Technologies we will deliver in this area

Digital Self Service

Patient Platform

Remote Consultation  
Expansion

Remote Monitoring



## Connecting Services

Moving between different types of care can create challenges for patients and the health and social care providers that support them. Gaps between services can mean health and care providers lack the right information, risks may be missed or care is delayed. Patients and their carers feel frustrated at repeating the same information to multiple care providers. We will make sure that patient facing tools bring together the right parts of their care journey, and that they are not left with a confusing set of disconnected apps and services to navigate. Connecting digital systems is not enough to provide connected services, we will also work across partnerships to redesign pathways that join up.

### How will connecting services improve health and social care outcomes?

When moving between care services, patients, health and care providers, and carers often face the challenge of not having access to all the information they need. This is largely due to the information silos that exist between the various patient record systems in use across different NHS Tayside service providers.

This information gap often results in **treatment delays and/or unnecessary tests for patients**, and **increasing time to confirm diagnoses** for health and social care providers. Furthermore, disjointed services and systems create a significant risk of critical **patient data not available**. Data flowing between different types of care creates a feedback loop that helps practitioners understand how they can best support the next step in their patients' journeys.

The new digital capabilities join up different care records and mitigate these challenges by giving staff and patients **end-to-end visibility of health and social care data regardless of service provider**. They will significantly **reduce the risk of error due to lack of access to a holistic view** of patient data and records.

We will make sure that patients have consistent levels of information and they can interact with different types of care consistently and reliably.

### Our approach to connecting services

To help services connect up safely and effectively, we will not focus on technology and build pathways around it, instead we will focus on designing pathways and use digital technologies to improve them. This means putting the person who access these services first and understanding their experiences. We will work with them to make sure digital technology bridges the gaps. The solutions will support access to the patient regardless of where this is, for example, home, care home or hospital.

We will connect services within a healthcare setting and a wider social and community care setting. We also recognise the importance of connecting services and opportunities from out of the conventional care system. For example, community groups such as sports clubs can play a critical role in helping people live longer and healthier lives. Digital technology will provide an information link so patients and practitioners know what services are available and how to access them.

We will also set interoperability standards to guide the exchange of data across NHS Tayside and partner systems and to **protect the privacy and security** of people who access and receive care.

### Technology needed to connect services

To deliver Connected Services, we will need strong integration capabilities to join up systems and exchange data.

A **single view of electronic patient records** across all services who deliver care and support to people in NHS Tayside will be developed to serve as the foundation that will support the access and use of data across different care services.

For health and social care providers, a **single health and social care summary** and a **shared health and social care portal** will provide access to the relevant information and systems. And eventually, patient facing applications will be integrated into this Connected Services system so **patients also have a closer connection to their health and social care journey**.

Technologies we will deliver in this area

Single Health and Social  
Care Summary

Strategic Integration  
Platform

Unified Data Platform

Consolidated EPR View



## Building Closer Partnerships

### Overview

This strategy aims to improve experiences and outcomes for all types of care, whether that care is provided directly by NHS Tayside or by a local authority or by a 3<sup>rd</sup> sector organisation. To do this we need to work even more closely with our delivery partners, developing digital technology together.

Additionally, we will work with academia and industry to find new ways to deliver care, only using new technologies where they meaningfully improve the services we provide to patients and staff.

### How will closer digital partnerships improve health and social care outcomes?

Working closely with all delivery partners and people accessing and receiving care, will mean that the technology we develop can be successfully deployed by all delivery partners. We will build in a wider range of experiences and perspectives.

We will be able to play to the strengths of different partners and realise the full potential of our local area. We will increase the pace of our delivery and achieve things that would be impossible on our own.

### Our approach to building closer digital partnerships

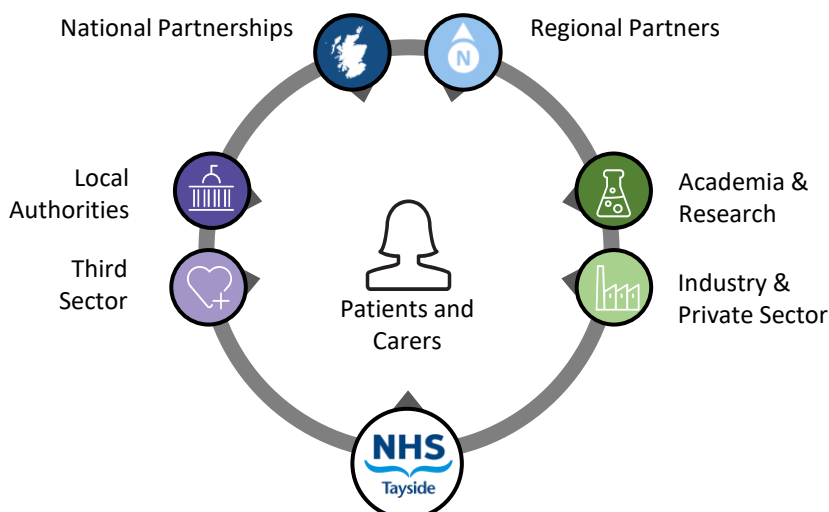
We will empower the existing forums we have with delivery partners to take decisive action on digital technology. We will make sure all partners uphold the principles of the NHS Tayside Digital Charter.

Academia will remain an important partnership avenue for us. We will look to **deepen our involvement with academic institutions** such as Dundee University to co-develop opportunities around incorporating digital tools and methods to enhance and accelerate medical research/trials and the development of digital solutions such as advanced decision support through Artificial Intelligence to modernise care provision, among others.

Our operations over the years have enabled us to create an expansive **data and knowledge base** of immense value to the public and private sector. We will explore ways of leveraging these NHS Tayside assets to **unlock further opportunities** for our partners.

We will invest in our own **relationship management capabilities** to coordinate and deliver this effort across all stakeholders involved.

### Our network of partners

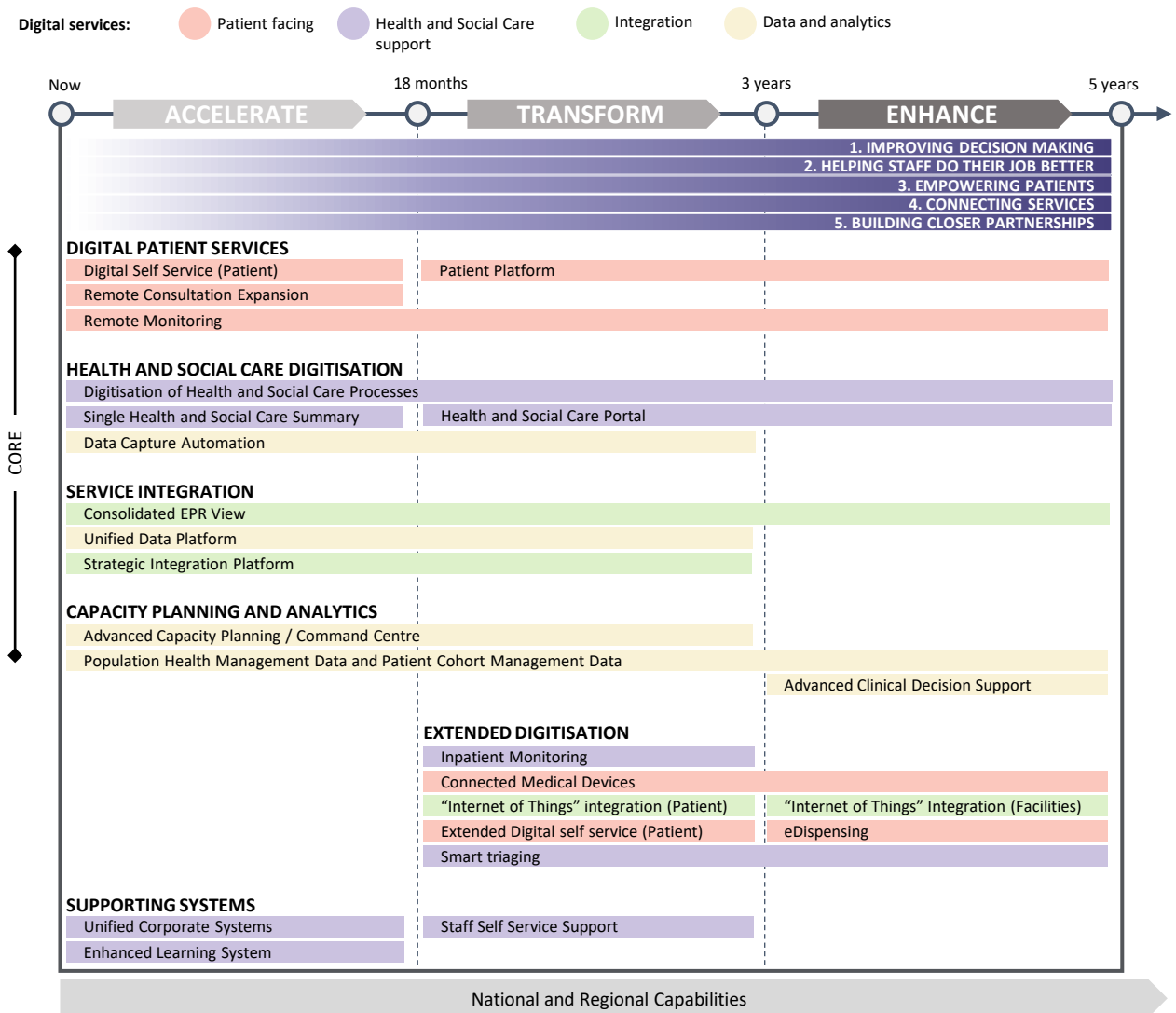


# Our five year roadmap for transforming digital care

Below we outline the roadmap for delivering the priority digital capabilities over three time horizons. Each of these horizons achieves a different level of 'digital maturity'. This strategy will guide the deployment of digital technology to 2026. Over these five years we will work with our partners and patients to deliver the future described in this document.

The **Accelerate phase** covers the first 18 months of our strategy. In this period we will aim to sustain the momentum for responsive

digital solutions created by the Pandemic. We will formalise our approach and establish the foundations for the rest of the strategy. The **Transform phase** from late 2022 to 2024 builds on these foundations to provide users with a more powerful set of tools connecting to different providers, further improving the experience of patients and staff. The **Enhance phase** will take us to 2026. In this period we will build in more advanced technology with a higher level of automation.



## Improving Decision Making

The digital roadmap breaks down the services we will deliver at each horizon. These services will increase in maturity and provide growing value to patients and staff. Below we have described the main benefits that these services will create in each horizon. This will support outcome-based programme planning that specifies scope, development and delivery timelines\*.

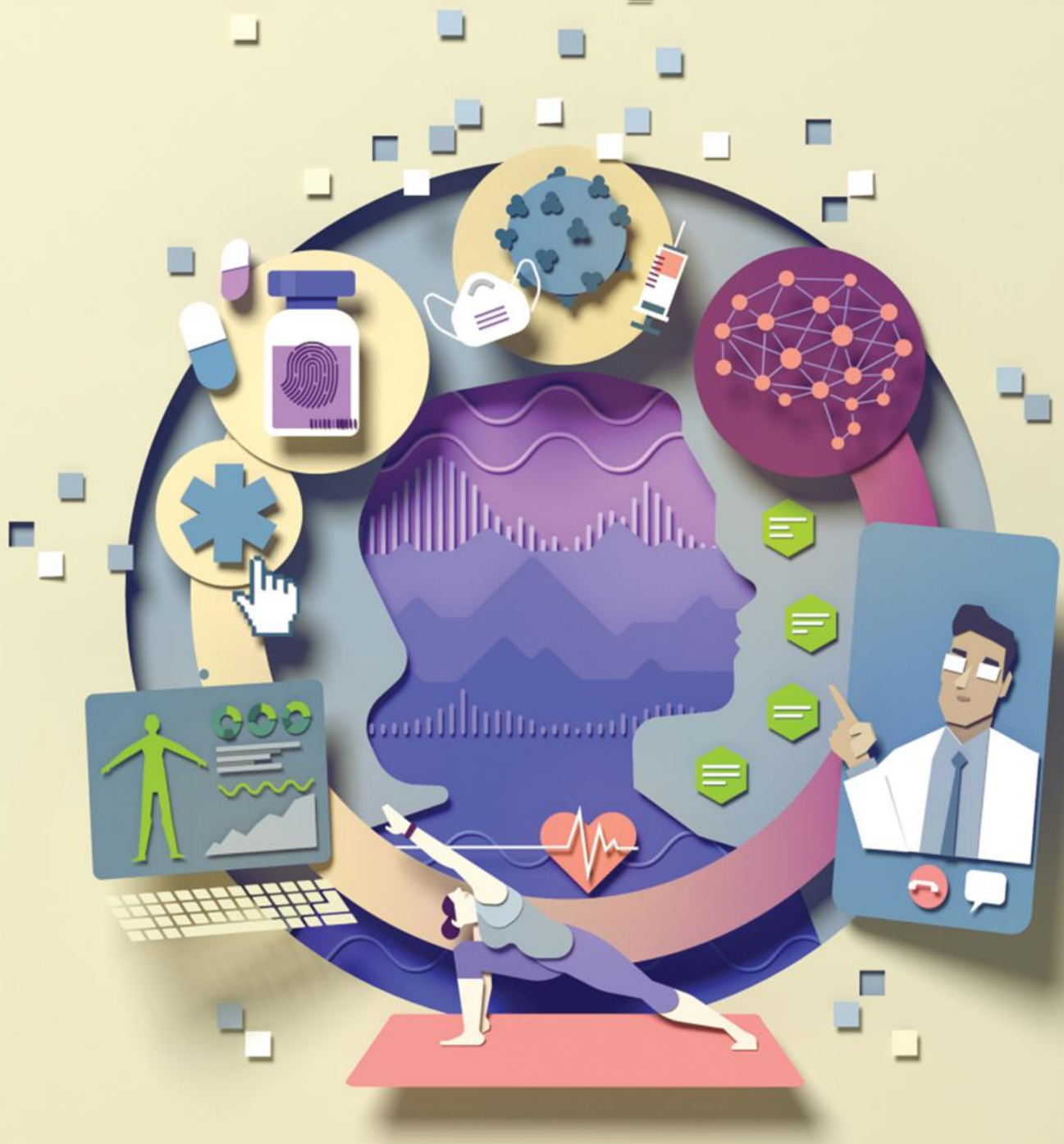
These services will be designed around real patient and staff needs with their active involvement to ensure they gain the full benefits and that they are intuitive and easy to use.

We will adapt our roadmap to reflect the rapidly changing face of Health and Social Care technology and take advantage of new opportunities as they present themselves.

Digital Services	ACCELERATE	TRANSFORM	ENHANCE
<b>DIGITAL PATIENT SERVICES</b>  <b>High impact service areas:</b> <ul style="list-style-type: none"> <li>• Outpatients</li> <li>• Primary Care</li> <li>• Mental Health / Social Care</li> </ul>	<p>Patients can access relevant information, perform tasks like self-check in, reducing DNAs and improving clinic capacity. They can submit data in advance e.g. pre-op. All appropriate consultations are remote.</p>	<p>Patients have improved access to information about their care in one place, can communicate with their treatment team, and can see their care pathway. Data from appropriate patient devices is shared in real time to health and care teams, providing a more holistic view of their situation.</p>	<p>Patient Portal is increasingly personalised connecting up to more services. Expanded sets of data supported by remote monitoring. Automated alerts detect relevant changes and prompts escalation, further improving patient safety.</p>
<b>HEALTH AND SOCIAL CARE DIGITISATION</b>  <b>High impact service areas:</b> <ul style="list-style-type: none"> <li>• Primary Care &amp; Secondary Care</li> <li>• Planned Care &amp; Unscheduled Care</li> <li>• Mental Health, Social and Community Care</li> </ul>	<p>More staff time is freed up for care as clinical processes are digitised. Digital summaries of Health and Social Care data give practitioners a fuller view of relevant patient data to better inform care decisions.</p>	<p>Staff can access relevant information from different care sectors in one system. Data is gathered and automated to present the most relevant information to health and social care providers.</p>	<p>Further increases in staff time saved with the intelligent automation of more complex processes such as triaging and escalation. A wider set of partners are also able to access and contribute to the patient record.</p>
<b>SERVICE INTEGRATION</b>  <b>High impact service areas:</b> <ul style="list-style-type: none"> <li>• Secondary Care</li> <li>• Mental Health / Social Care</li> <li>• 3<sup>rd</sup> Sector and Social Prescribing</li> </ul>	<p>Access to a wider range of systems is available through a single interface saving staff time and improving their knowledge of the patient. Data is exchanged seamlessly between connected systems making it available to the right user at the right time.</p>	<p>Practitioners can access systems from different areas of health and care as social care and community care data is integrated with healthcare, supporting the redesign of more connected services such as Mental Health.</p>	<p>Operational and clinical decisions are enhanced with population data and medical data that is integrated onto a single platform.</p>
<b>CAPACITY PLANNING &amp; ANALYTICS</b>  <b>High impact service areas:</b> <ul style="list-style-type: none"> <li>• Emergency department</li> <li>• Planned Care</li> <li>• Unscheduled Care</li> <li>• Specialist Care (e.g. Dermatology, Diabetes)</li> </ul>	<p>Operational decision making is supported by an expanded command centre. Capacity and service planning tools support the more effective allocation of resources. Planning improves based on simulation of forecasted scenarios.</p>	<p>Expanded use of population health management data defines risk profiles and care models for specific NHS Tayside population groups, improves anticipatory care interventions and provides data for use in direct care and care design.</p>	<p>Artificial Intelligence tools support clinical decision making around diagnosis and interventions, accelerating care for the most urgent case and giving more time and data to review complex cases.</p>

\* Please see full strategy for additional detail to support outcome-based programme planning.





## **NHS Tayside's Digital Health and Social Care Strategy**

Helping people live longer, healthier and happier lives through digital technology

2022 - 2027