

ICS Devon - Digital Strategy 2022-2027

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Foreword

by

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I am proud to be introducing the ICS for Devon Digital Strategy that will guide our digital investment for the next five years. The strategy reflects the digital transformation requirements across the key partners to improve the delivery of health and social care. This includes primary care, hospitals, mental health services, social care, hospices, care homes and charities. By working together we can provide better access and improve the delivery of health and care services which are focused on the needs of people in Devon.

Digital technology has changed our lives beyond recognition over the last 20 years. Whilst we frequently manage our finances, shopping and spend our leisure time online, we have yet to fully exploit the benefits that digital technology can bring to the health and care system.

Within the next five years, digital technology will play an increasing role in the care process, changing the working lives of our care professionals. They will spend an increased amount of time interacting with technology and we must ensure that this results in positive ways of working to meet the changing needs of our population. The next generation expects digital interactions and a digital first approach. There is also an importance in getting data quality correct as this will assist in population health management and decision making.

Embracing digital approaches is about more than technology – it is about changing the way people live, connect, communicate and work. This strategy complements a wider range of activities taking place across One Devon and will help us to achieve our ambitions.

The pandemic has accelerated progress in the use and acceptance of technology that could never have been envisaged in the NHS pre pandemic. Our most important resources are each and every one of our health and care workforce and they are facing increasing demands and pressures as they try to provide health and care services in today's world. We believe that our digital strategy will help them to meet the challenges they will face over coming years by investing in their skills and the digital systems to support them in this demanding environment. We are building this work from a position in which we have already started to explore these opportunities, for example: GP online and remote consultations, online outpatient appointments, online corporate meetings and the start of using virtual wards.

The ICS has wide ranging and ambitious transformation priorities, but this digital strategy outlines a key number of basic fundamental components that will underpin and enable any future clinical service delivery model through the following digital priorities:

- Interoperable EPR and operational systems
- A unified technical infrastructure
- The Devon and Cornwall Care Record
- A single population health management solution
- Digital Citizen
- A single digital service for the ICS

This ambitious digital strategy will not be delivered overnight but we look forward to delivering it in order to support the overall ambitions for “One Devon”.



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1 Executive summary



Executive Summary

Context: The Integrated Care System (ICS) Digital Strategy comes at a critical point in the ICS' transformation journey. Digital is one of the five ICS priorities and is identified as a key driver for change. It is recognised that traditional approaches cannot deliver sustainable services nor achieve the move to a value-based approach to healthcare.

Vision: The ICS Digital strategy provides a response to this by outlining how digital solutions can enable the clinical and operational transformation through a set of **five digital priorities**. These five digital priorities will provide 'future-proofed' digital solutions; recognising care delivery models continue to change.

Priorities:

		<i>Key implications</i>	<i>Critical next steps</i>
1	 Digital Citizen	Move to a tailored set of channels through a unified digital front door	Simplifying access: transform booking services and digital care models
2	 Interoperable EPR and Op system	Build on Acute EPR strategy: interoperable between care settings	Case for Change for MH, Primary, Community and Social Care EPRs
3	 Devon and Cornwall Care Record (DCCR)	DCCR is key to share information across settings and achieve ICS priorities	Accelerate provider feeds and spread adoption and use across organisations.
4	 Single BI and PHM platform	Interactive visualisation tool recognising stakeholder maturity and data quality	BI strategy, focusing on enablers inc. workforce, IG, real-time feeds
5	 Unified and Standardised Infrastructure	Data centre, voice and mobile investment and access management to unlock sustainability	Data centre consolidation approach, voice and mobile agreements
+	Digital governance and operating model	Complex portfolio but with significant potential synergies for joint working	Single ICS digital service governance and target operating model

What this means:

1. This is a 'living strategy': not a one-off exercise. It must be revisited as the ICS clinical strategy is developed.
2. Investment levels need to be iterated based on further analysis on the opportunity to release 'trapped value' in the system, such as redesigning access and booking services and moving to a unified front door for citizens.
3. There are short-term critical decisions to be made including the strategy for EPRs across mental health, social care, community and primary care. These decisions should be informed by the changing care models and the opportunity to maintain momentum based on the acute EPR decisions.



2 Context



2.1 Context: national drivers

The national What Good Looks Like (WGLL) framework¹ sets out a common vision for good digital practice to enable frontline leaders to accelerate digital transformation in their organisations. WGLL identifies seven core dimensions of good digital practice aligned to the core principles of Digitise, Connect and Transform. This strategy focuses on how ICS Digital transformation aligns to these fundamental elements of national strategy.

Within each of the seven core dimensions outlined below, clear actions are defined to effectively transform digital services.

Well led

A clear strategy for digital transformation and collaboration. Leaders across the ICS collectively own and drive the digital transformation journey, placing citizens and frontline perspectives at the centre. All leaders promote digitally enabled transformation to efficiently deliver safe, high-quality care.¹

Smart foundations

Digital, data and infrastructure operating environments that are reliable, modern, secure, sustainable and resilient. Across the ICS, all organisations have well-resourced teams who are competent to deliver modern digital and data services.¹

Safe practice

Organisations across the ICS maintain standards for safe care, as set out by the Digital Technology Assessment Criteria for health and social care (DTAC). They routinely review system-wide security, sustainability and resilience.¹

Support people

A digitally literate workforce that's able to work optimally with data and technology. Digital and data tools and systems are fit for purpose and support staff to do their jobs well.¹

Empower citizens

Citizens are at the centre of service design and have access to a standard set of digital services that suit all literacy and digital inclusion needs. Citizens can access and contribute to their healthcare information, taking an active role in their health and well-being.¹

Improve care

Embed digital and data within the ICS improvement capability to transform care pathways, reduce unwarranted variation and improve health and wellbeing. Digital solutions enhance services for patients and ensure that they get the right care, when and where they need it.¹

Healthy populations

Data used to design and deliver improvements to population health and wellbeing, making best use of collective resources. Use insights from data to improve outcomes and address health inequalities.¹

Source: 1) "NHSX. "What Good Looks like Framework." 31 Aug. 2021, www.nhs.uk/digitise-connect-transform/what-good-looks-like/what-good-looks-like-publication/ "

2.2 Context: local drivers

Critically, any future digital strategy needs to be set within the context of the overall transformation drivers that need to be addressed by the ICS. This should not be a **‘standalone’ digital strategy** but rather part of an overall transformation strategy and plan that is enabled through digital. Consequently, the starting point for this digital strategy are the Devon Case for Change drivers.

Policy Drivers

2022/23 Operating Guidance for integrated care, CORE20PLUS5, DCC, PCC and TC health and wellbeing strategies.²

Population Drivers

Ageing Population, 58% population in rural settings, health inequalities, deprivation, mental health problems and dementia.²

Clinical and Social Care Drivers

Urgent care, integrated care, population health management, planned care, diagnostics, cancer, mental health, learning disabilities, maternity and children's care.²

Workforce Drivers

Staff burnout, high vacancies, high turnover, and low levels of retention impacting on the quality and safety of services that can be delivered.²

Estates Drivers

Unoccupied estate, undersized inadequate estate, backlog maintenance, a need to enable the delivery of new models of care and respond to changing work patterns.²

Financial Drivers

Financial governance arrangements need to reflect that the ICSD will become the key body for financial accountability. Focuses: operational, clinical, preventative and strategic.²

Patient and User Experience Drivers

Limited/unsynchronised communication with patients, a need to receive care in more appropriate settings, meeting people's expectations and addressing their concerns.²

Environmental Drivers

Delivering a 'Net Zero' National Health Service (2020): NHS will work towards net zero for a NHS Carbon Footprint Plus with an ambition for an 80% reduction by 2036 to 2039.²

Economic Drivers

Devon, Plymouth and Torbay first of nine areas invited to participate in the Levelling Up programme, addressing a mix of factors is needed to transform and boost local growth.²

Digital Drivers

Our ambition is for every interaction with the health and care system in the future to be 'digital-first'.²

2.3 Taking a Value Based Approach

Any response to the Devon Case for Change Drivers needs to consider the stretched workforce and financial resources. Therefore, traditional models of healthcare delivery will not enable the transformation needed and we will need to move to a Value Based Approach (VBA) to healthcare delivery.

‘Value-based healthcare is the equitable, sustainable and transparent use of the available resources to achieve better outcomes and experiences for every person’

A VBA to Health and Care will provide the ICS with a ‘single shared purpose’ that can be clearly articulated by all Partners.

Proposed components of the VBA approach for ICS Devon, known locally as ‘the way we do things together in Devon’³ are as follows:

- A personalised approach to health and care which provides a ‘joined-up’ package based on individual need.³
- Support for our workforce to ensure they are able to do their best work.³
- Shared decision-making should be a consistent approach across all services.³
- Avoidance of waste and harm – We should not undertake investigations unless clear about the potential benefits for the individual. We should review pathways and processes to avoid waste. Linking to our shared commitments to reducing environmental impact.³
- Tackling unwarranted variation in practices, outcomes and inequality.³
- Managing risk across the system, ensuring that decisions made in one sector do not increase the risk in another.³
- Addressing challenges from a whole population perspective (including the wider determinants of health e.g. housing).³
- Ensuring spread of improvement and innovation.³
- The development of a ‘Culture of Stewardship’.³

Source: 3) “The way we do things together in Devon: A workshop to explore the potential impact of adopting a value-based approach to health and care across ICS Devon”

2.4 ICS Vision - five priority areas

The overall ICS vision is to provide **Equal chances for everyone in Devon to lead long, happy, and healthy lives.**⁴ In February 2022 senior executives from across ICS Devon agreed on five strategic service priorities to deliver this vision, which were signed off at an NHS Chief Executives meeting in March 2022. These priorities have created a focus and set the transformation agenda for the ICS.

These five key priority areas will have significant impact on outcomes for the public and patients within Devon.

1. **Urgent and emergency care (UEC) resilience** – building on NHSE/I priority to *improve the responsiveness of UEC and build community care capacity* - we will deliver an integrated urgent care system that ensures that people have their urgent needs met at the right time and in the right place. This includes urgent access to social care, community care, primary care and mental health services.⁴
2. **Planned Care** – *Deliver significantly more elective care to tackle the elective backlog, reduce long waits and improve performance against cancer waiting times standards* - Reduction in number of people waiting more than 52 weeks for a elective care through delivery of accelerator and Targeted Investment Fund schemes and transforming outpatient care in order to maximise capacity.⁴
3. **Diagnostics** - We will achieve the *highest possible diagnostic activity, and provide high quality services*, maximising capacity and efficiency through development of community diagnostics centres and image sharing network, workforce network and technological innovation.⁴
4. **Children, young people and maternity** – *delivering a range of transformation objectives to make maternity and neonatal care safer, more personalised and more equitable* - Spanning across a broad spectrum, including mental health, transition to adulthood and pathways we will give babies the best start in life and children, young people and maternity the best opportunities to lead healthy, happy lives that continue into their adulthood.⁴
5. **Digital** – We will Digitise, Connect and Transform in line with the national “What Good Looks Like” (WGLL) framework to *exploit the potential of digital technologies to transform the delivery of care and patient outcomes, achieving a core level of digitisation in every service across systems.*⁴

Whilst Digital has been highlighted in its own right to be one of the five priorities, digital solutions and ways of working will also be a key enablers to deliver the other four priorities. This Digital Strategy outlines how these 5 priorities will collectively be served through digital means.

Source: 4) “Scope of ICS Devon’s five key priorities: Equal chances for everyone in Devon to lead long, happy, and healthy lives”

2.5 Our starting position

This Digital ICS Strategy builds upon the engagement completed to date.

Background:

In January 2020, the Devon Sustainability and Transformation Partnership (STP) digital strategy and roadmap was approved by the Programme Delivery Executive Group. This set out a vision to transform the health and care services for the people and population of Devon through digital systems and services. This version was then updated and agreed with our ICS partner organisations at the September 2021 Digital Transformation Boards and subsequent locality Digital Boards in Devon. The initial ICS Devon Digital Strategy, produced as an update to the original STP document, had set out the direction of travel, presenting 'what' ICS Devon will achieve.

The next steps, answering the 'How' and the 'When':

The initial digital strategy had identified what the key digital priorities are, this strategy will aim to answer the 'how' questions:

- 1) How the Digital vision and priorities will support and enable the delivery of the ICS five key priorities.
- 2) Translating the vision and priorities into a five-year prioritised roadmap, identifying when the priorities will be delivered.
- 3) How to successfully deliver key activities through identifying the target operating model and financial investments required.

Providing a framework that can be iterated and refreshed throughout the delivery of the strategy.

Key achievements to date:

- Successful implementation of EPR at Royal Devon University Healthcare NHS Foundation Trust (RDUH), and undergoing business cases of interoperable EPRs by Torbay and South Devon NHS Foundation Trust (TSD) and University Hospitals Plymouth NHS Trust (UHP).
- Work is underway to baseline all Devon organisations' infrastructure, via the Technology Together subgroup. Single procurements for Digital assets, systems and infrastructure.
- The launch of patient online consultation platforms such as eConsult, which won the 2020 Building Better Healthcare award for 'Best Use of Technology – Primary / Community Care'.
- The launch of One Devon Dataset (ODD): A whole population, person-level linked dataset that acts as a vital tool in helping us effectively understand our population and the services provided for them now and into the future. At present this sits in organisational silos, spreading information about people across multiple sources.
- The set-up of Devon and Cornwall Care Record (DCCR), that provides a holistic view of the citizen's record by sourcing information from various systems.



3 ICS vision enabled by digital



3.1 The ICS Digital vision

Our vision is our statement of intent to use digital technologies to enable the delivery of the five key priorities of ICS Devon. It is aligned to national guidance and frameworks such as Operating Planning Guidance and WGLL. Digital is one of the five key priorities for the ICS, with all ICS leaders promoting digitally enabled transformation to efficiently deliver safe, high quality care. To demonstrate this alignment, we have elaborated on four key concepts which sit behind our vision: **digitise, connect, transform and prevent.**

Five ICS key priorities⁴

1. Urgent and emergency care

2. Planned care

3. Diagnostics

4. Children and young people

5. Digital

*The ICS Digital Vision
(explained through four concepts)*

Digitise

Modernisation of legacy systems through the move to interoperable EPRs and operational systems with underpinning robust infrastructure

Connect

Improve information sharing and clinical workflow across the ICS using the DCCR and a move towards interoperable EPRs and operational systems.

ICS Digital vision:

Invest in a digital Devon: people will only **tell their story once, first contact will be digital where appropriate** and **more advice and help will be available online.** We want to **make the most of advances in digital technology to help people stay well, prevent ill-health,** and provide care

Transform

Digital-first contact options available for all appropriate services via new channels for citizens, with new ways of working for staff

Prevent

Use of data providing proactive actionable insights to intervene early, providing insight for operational issues as well as addressing population trends to reduce disparity across the region.

Source: 4) "Scope of ICS Digital's 5 key priorities: Equal chances for everyone in Devon to lead long, happy, and healthy lives"

3.2 Meeting the ICS priorities

Our digital strategy will enable the five ICS key priorities through five digital priorities and an associated governance and operating model. These are applicable across the five ICS key priorities and provide a way to future-proof changes in the clinical delivery of care by providing a “platform-based” approach.

Five ICS key priorities⁴

How our strategy will enable the five ICS priorities

	Digital Response	Functionality enabled	Benefits
1. Urgent and emergency care	Interoperable EPR and Op Systems	Single view of the patient and improved clinical workflow across all Devon and Cornwall Providers in real time	Improved patient care and outcomes of care
2. Planned care	Devon and Cornwall Care Record	Ubiquitous access to networks and applications across Devon	Improved flexible use of workforce
3. Diagnostics	Unified and Standardised Infrastructure	Better decision making at the most appropriate point of care	
4. Children and young people	Single Business Intelligence (BI) and Population Health Management (PHM) Platform	Single source of truth providing better insights for care planning and research	Preventing inappropriate walk ins to Acute EDs
5. Digital	Digital Citizen	Citizens and carers have improved real time access to information and interactions with care professionals and services	Citizens taking more responsibility for their wellbeing
	Unified and standardised infrastructure	Ubiquitous access to networks and applications across Devon	Better value for money and increased resilience from our digital services
	A collaborative digital service operating model and governance structure	Simplified and more resilient digital service	Improved flexible use of workforce

Source: 4) “Scope of ICS Digital’s 5 key priorities: Equal chances for everyone in Devon to lead long, happy, and healthy lives”

3.3 Introducing the five digital priorities

Below is a description of each of the five priorities and the alignment of the digital transformation priorities to the digital vision.

Digital Citizen

Empower citizens to take ownership of their wellbeing and care, through digital technology and contact across the system. Digital will offer new ways of delivering care to help citizens manage their care at home.

Connect

Transform

Prevent

Interoperable EPR and Operational Systems

The move towards interoperable digital solutions that meet the information sharing and workflow needs of the various organisations across the ICS.

Digitise

Connect

Transform

Devon and Cornwall Care Record

DCCR will allow information to be available across care settings and coordination of care through specific functionality such as read/write for key flags and care plans.

Digitise

Connect

Transform

Business Intelligence and Population Health Management

A cross-system intelligence function to support operational and strategic conversations, as well as building platforms to enable better clinical decisions. This will necessitate linked data, accessible by a shared analytical resource that can work on cross-system priorities.

Connect

Transform

Prevent

Unified and Standardised Infrastructure

Levelling-up and consolidation of infrastructure, to support future enterprise scale digital systems such as interoperable EPRs, digital technologies for citizens and also agility and frictionless cross-site working and support experience for the workforce.

Digitise

Connect

Transform

3.4 The digital strategy principles

The vision is underpinned by a set of principles that will allow our vision to become embedded in all our decision making with regards to all digital programmes, innovations and ways of working. Our governance structures and process will ensure digital programmes and solutions adhere to these principles.

ICS Digital vision:

Invest in a digital Devon: people will only **tell their story once, first contact will be digital where appropriate** and **more advice and help will be available online**. We want to **make the most of advances in digital technology to help people stay well, prevent ill-health**, and provide care



Value Based Approach

A focus on achieving better outcomes and experiences for everyone by the equitable, sustainable and transparent use of the available resources.



Cyber security and data governance

All organisations within the ICS will be compliant with cyber security and national data guardian standards 'the 10 Data Standards'.



User experience and journeys

Consult with clinicians, staff, and citizens, using personas and user journeys to co-create a vision that will improve user experience and outcomes for patients.



Standardise and rationalise technologies

Standardise and rationalise systems, processes and IT Infrastructure to enable us to work together.



Workforce strategy and digital skills

Solutions will be co-developed by staff to maximise their ability to be flexible, resilient and productive.



Harmonise contracts and strategic procurement

Unifying and reducing the number of contracts to use our collective buying power to reduce spend.



Data Standardisation

Develop coded and structured data with real-time flows to unlock the potential of PHM and drive improved outcomes.



Working together for Devon

Working as a single system to both remove unwarranted variation in the delivery of digital services and to improve long-term sustainability

3.5 Outcomes for citizens

Our strategy is designed to directly and indirectly benefit our citizens and patients. Digital will enable us to forge an active dialogue between citizens, carers and those working to provide health and care services. Digital technologies will be used to empower patients, provide tailored experiences for needs and help them improve their health outcomes.



Citizens will be able to engage digitally through simplified channels

Digital patient portals will allow citizens to have a consolidated and simplified access to information, services and care professionals. Access and booking functions will be transformed to provide a modern and seamless experience across channels.



Data will be used to actively prevent disease

ICS Devon will use actionable data insights to actively support ICS PHM to be able to target interventions to specific care needs of individual citizens.



Digital tools will empower patients to manage their health and conditions

Patients will be able to use digital tools and resources to move beyond just accessing information to being able to proactively self-manage their wellbeing and care and interact with health and care services.



Citizens will only need to tell their story once

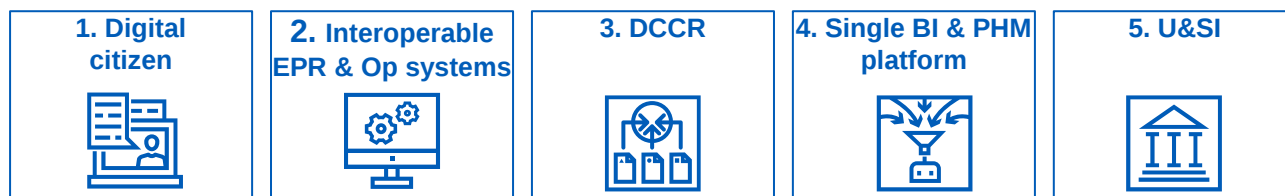
Interoperable EPRs and the DCCR across the ICS mean providers will have access to core information, and have consistent workflow so patients have a seamless transition between providers of care.



Citizens will benefit from innovative digital care

From virtual wards to home diagnostics to personal behavioural nudges, patients will benefit from innovative forms of digital care such as virtual care. These new treatments will complement their care plans and improve outcomes, often from the comfort of their own homes.

Key: Digital priorities which will deliver user benefits



3.6 Outcomes for staff

Our strategy will empower and enable clinicians to be involved in the decision making associated with the provision and development of future technology. Digital technologies will improve staff decision making leading to better patient outcomes. Digital technologies will transform the way our staff work and interact with patients.



Seamless eReferrals and accelerated discharges

Electronic referrals and seamless discharge information will connect organisations across the ICS, meaning faster, safer handovers.



Digital tools to support scheduling, releasing provider times

Optimised access, scheduling and booking services will release time for providers, alongside providing an improved patient experience



Standardised, secure, reliable networking infrastructure on all sites

Care professionals are able to work seamlessly, regardless of location and across systems without hindrance. Paired with modernised telephony and the use of cloud services where appropriate, this will provide staff choice and facilitate seamless care delivery across our ICS.



Staff will benefit from connected data across the ICS

The DCCR and interoperable EPRs across ICS care settings will enable staff to access information from across care settings when making decisions at the point of care.



Our staff will be empowered with active notifications and workflow at the point of care

Care professionals will be able to use decision support at the point of care, driven by actionable insights and workflow in their EPRs to helping them decide what treatment options would be optimal for a patient. Clinical data will be at the heart of driving the best outcomes for patients.



Key: Digital priorities which will deliver user benefits

1. Digital citizen



2. Interoperable EPR & Op systems



3. DCCR

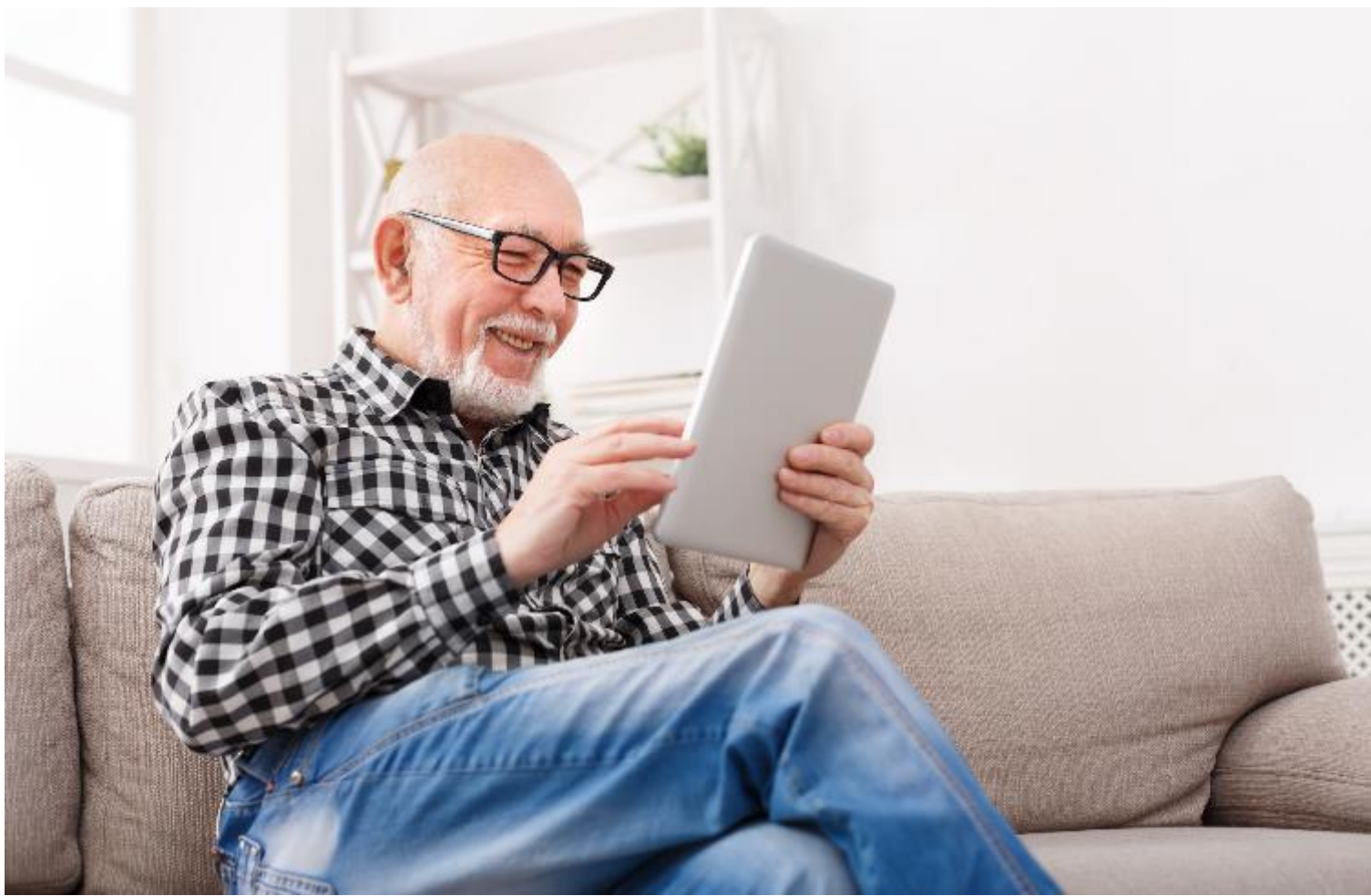


4. Single BI & PHM platform



5. U&S I





4 Digital Citizen



4.1 Case for Change

The Digital Citizen movement means empowering people through the use of technology. It enables us to adopt a 'digital-first' approach across the whole system, in respect of access and delivery of care while taking account of those digitally excluded. This will ensure everyone in Devon is supported to access care.

1. Why is this important?

Drivers

Digital initiatives are required to maximise the opportunities to provide out-of-hospital care, including supporting and empowering citizens to stay well. In Devon more than 400,000 people (30% of the population), including 13,000 children, are living with one or more long-term condition (LTC), and this percentage is projected to grow.² Over 95,000 with a physical LTC also have a mental illness which impacts upon their physical health.² Digital also provides opportunities to alleviate pressure on emergency departments (EDs), by providing alternative routes for timely access to care in more appropriate settings.

2. Where are we now?

Current state

There are currently a multitude of digital citizen solutions in Devon. Digital tools for citizens are often specialty focused, meaning individuals with multiple comorbidities need to use multiple apps. Simplifying digital access to care will enable citizens to better control their care and more easily maintain their health. Special consideration needs to be given to digitally excluded citizens: digital inequality is a social determinant of health and patients who are digitally excluded are often frequent users of our services. The issue of digital exclusion is particularly important in Devon, where 10% of our population do not have broadband access. Digital service design and the continued provision of non-digital options will be important in order for us to meet the needs of our digitally excluded population. The Inclusion Group will be the key approval group to ensure inclusion is considered within all digital initiatives

3a. Where do strategic requirements need us to be?

National and system strategic requirements

This strategy has been informed by digital strategies and policies at a national, ICS and local level. We recognise further work is required to align our detailed plan with the roadmap of key national tools, such as the NHS app. Key strategic needs have been categorised into four themes:

- Access
- Remote and virtual care
- Self-care and self-management
- Virtual wards

3b. Where do our stakeholders expect us to be?

User need identified by Healthwatch

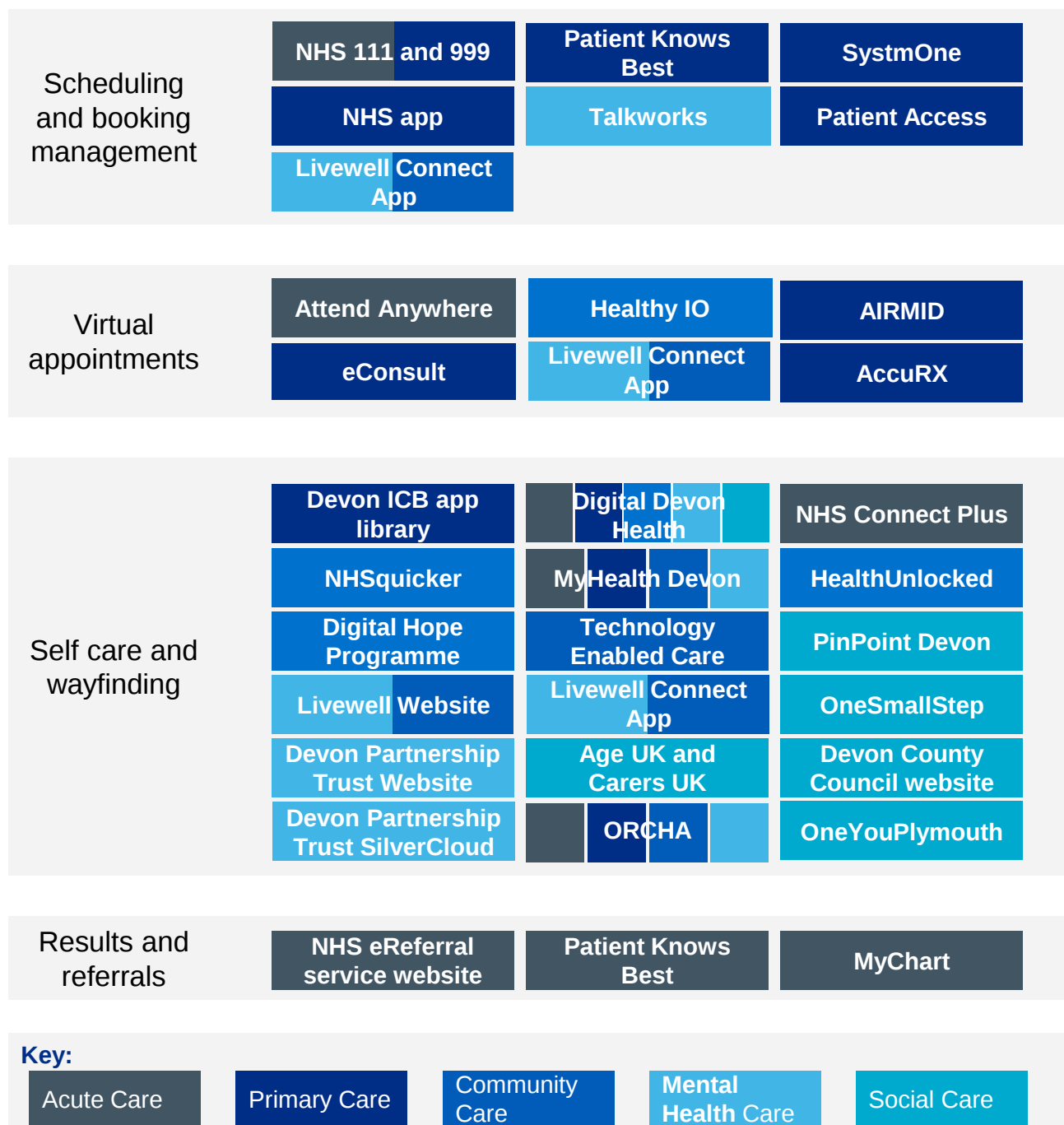
The Healthwatch survey drew views from public engagement undertaken in Devon, Plymouth and Torbay over the summer of 2019 and in September 2021. This provided an insight into their experience of our Devon health and care services – where things are working well, and what improvements they need to see. The themes identified were:

- Patient centred-care
- I want care to be on my terms; digital as a choice
- Technology needs to be user friendly and appropriate
- Support to maintain a healthy lifestyle

4.2 Where are we now?

There is already significant progress being made in the delivery of digital solutions across the ICS. However, at the same time, citizens need to interact individually with a multitude of apps and websites to receive digital care and communicate with providers.

The diagram below highlights the multiple systems used across health and care settings to access similar services. This fragmentation illustrates an opportunity to create interoperable systems and improve the citizen experience.



4.3 Where do strategic requirements need us to be?

Our strategy has been informed by digital strategies and policies at a national, ICS and local level. The key strategic needs have been categorised into four themes: access, remote and virtual care and self-care and self-management.

Access: The ability to access, manage and use services through digital tools, information and services.

In one place: the NHS App will be a front door for interacting with the NHS and receiving personalised services, with 75% of adults registered for the NHS App by March 2024 and benefitting from an array of new features

National Priorities

- NHS Long Term Plan⁵ - Empowering people and carers and Supporting clinical care
- What Good Looks Like¹
- 2022/23 Priorities and Operational Planning Guidance⁶
- Delivery plan for tackling the COVID-19 backlog of elective care⁷
- Fuller Stocktake Report⁸

ICS Priorities

- Healthy and Happy Communities – Devon's Joint Health and Wellbeing Strategy 2020-25⁹
- Thriving Lives – Torbay's Joint Health and Wellbeing Strategy 2018-2022¹⁰
- The Plymouth Plan (2014-2034)¹¹

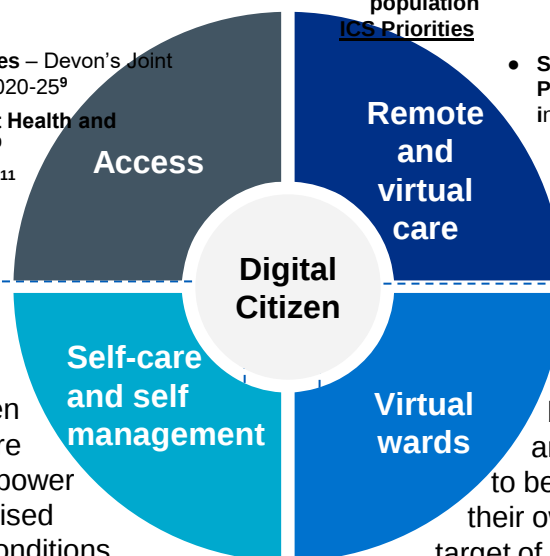
Remote and virtual care: Patients with long term conditions. Where clinically appropriate, patients should have the option of receiving care closer to or in the comfort of their own homes. Innovation in technology can improve patient outcomes, improve the patient experience and facilitate a more efficient delivery model for providers and staff.

National Priorities

- NHS Long Term Plan⁵ - Digitally-enabled primary and outpatient care will go mainstream across the NHS
- What Good Looks Like¹ - Improve Care
- Topol Review¹²
- People at the heart of care¹³
- Enablers for success: virtual wards including hospital at home¹⁴ e.g. 480 beds for Devon population

ICS Priorities

- Strategy for General Practice in Devon¹⁷ innovative technology



Self-care and self management:

Use digital to forge a lifelong relationship between Citizens and health and care providers. Support and empower citizens to access personalised advice and manage their conditions

National Priorities

- Healthcare Information and Management Systems Society (HIMSS)²⁰ - patient education content
- Secretary of State (SoS) - February 2022 announcement
- Data Saves Lives²³
- CQC 2021 strategy²⁵
- Joining up for people, places and population²²
- Fuller Stocktake Report⁸

ICS Priorities

- Healthy and Happy Communities – Devon's Joint Health and Wellbeing Strategy 2020-25⁹
- Thriving Lives – Torbay's Joint Health and Wellbeing Strategy 2018 - 2022¹⁰
- The Plymouth Plan (2014-2034)¹¹
- Livewell Southwest Digital Strategy¹⁶

Virtual wards: Scale remote services to prevent patients from being admitted to hospital and instead enable patients to be monitored in the comfort of their own home. National strategic target of 480 people being treated on virtual wards by December 2023.

National Priorities

- NHS Long Term Plan⁵ - Digitally-enabled primary and outpatient care will go mainstream across the NHS
- What Good Looks Like¹ - Improve Care
- Enablers for success¹⁴ - virtual wards including hospital at home
- Topol Review¹²
- People at the heart of care¹³

ICS Priorities

- Strategy for General Practice in Devon¹⁷ - innovative technology

4.4 Where do our citizens expect us to be?

Citizen expectations of health technology are shaped by the experiences they have in their personal lives as consumers of digital banking and retail services. They need technology to empower them and provide a coherent high quality user experience across the NHS and social care.

We have used the findings of Healthwatch Devon, the independent consumer champion for people using local health and social services in Devon, to ensure our strategy accounts for users' needs.

Citizen-centred care

- I need to be more involved in the decisions about my care and for professionals to see me as a whole person, to ask about all my needs¹⁵
- I expect to only tell my story once¹⁵
- I need to be able to access my health information easily so that I feel more informed and in control of my health¹⁵
- I expect to be able to keep track of all my appointments and referrals in one place²

I need care to be on my terms; digital as a choice

- I need to be able to choose the type of remote appointment style that works for me phone, video or text/email¹⁵
- I need to be able to see my doctor in person if I need to, especially it's something serious²
- I like that virtual consultations mean I don't have to pay for travel and take extra time off work to get there¹⁸

Technology needs to be user friendly and appropriate

- I need to be able to provide feedback for when the digital forms I'm filling out aren't appropriate for me¹⁸
- If the best solution for managing my health is digital I would need to be shown how to use it²
- If all my information is going to be held on an app I would need to be reassured that my information is being held securely²
- I don't have the broadband that supports virtual consultations²

Support to maintain a healthy lifestyle

- I expect there to be greater support to live a healthier lifestyle online. It would be great to have one place online with advice that I know I can trust¹⁵
- I expected it to be easier to connect with people and communities that are going through similar challenges for support²
- I never remember which app to use for what, and all the passwords²

4.5 Vision

The ICS long term vision is that digital creates another channel to access care. It will enable a simplified access to health and care services, empower citizens in line with the WGLL framework to carry out self-care and management and provide an alternative method of care delivery meaning patients can receive care in settings more appropriate to their needs.



Access

Digital will augment access to care by providing another route in addition to typical channels. Devon citizens will be able to access their health and care information through consolidated channels and patient portals will be clearly signposted and user-friendly. In the longer-term there is an expectation that citizens will be able to contribute their own information to their record. This will help citizens to feel in control of their health and wellbeing, and to realise a citizen-centred model of care e.g. by 2022/23, NHS 111 will be the single, universal point of access for people of all ages experiencing mental health crisis. Access and referral management functions will be simplified and orientated around the citizen. Technologies such as automation, self serve, and people support through an omni-channel approach, will enable the ICS to unlock trapped value to increase patient-initiated follow up, reduce 'did not attend' rates, utilise data and increase retention.

Self-Care and Self-Management

Maintaining a healthy population is a societal responsibility that is shared across the public and private sectors through services and infrastructure. The ICS will contribute towards this by empowering citizens to take responsibility for their health and wellbeing so that they can help themselves. This means improving access to virtual communities to safely connect with people that have similar experiences to provide support and companionship. In addition, creating better signposting to trustworthy information and relevant self-help apps in app stores such as ORCHA which will empower citizens to stay healthy and independent, and providing personalised behavioural nudges to promote preventative actions.

Remote and Virtual Care

A cultural change has already commenced in care delivery towards supporting people closer to home. Citizens will have more choice about how and where that care is received, so that they can be treated in venues most appropriate for their needs. This will mean harnessing the benefits of connected devices either in the home or wearables that will enable those with long-term conditions (LTCs) such as asthma, Chronic Obstructive Pulmonary Disease (COPD) and diabetes to be proactively monitored at home to facilitate timely interventions from peers e.g diabetes sensors.

The ICS will further expand current virtual care capabilities started under Covid to increase the use of virtual appointments so that those who wish to access their care digitally can do so, such as for outpatient follow-up appointments.

Virtual Wards

The ICS will further expand the use of virtual wards as an alternative to hospital admission to support patients to receive the acute care and treatment they need in their own home; this will also include increasing the support for home births.



5 Interoperable EPR and Operational Systems



5.1 Case for Change

Interoperability has long been the goal within the NHS, but the move to convergence on common enterprise wide scale digital solutions is the best way to go, since a single database provides active workflow for staff, enables the move to standardised pathways of care, improved system working and staff flexibility and future proofing service reconfiguration of any kind.

1. Why is this important?

Drivers

Devon organisations have been financially challenged over many years, driven by an ageing population, living longer with a number of complex comorbidities. Challenges with increasing unmet demand, health inequalities, workforce shortages across the health and social care systems are compelling reasons for the need to radically transform the way we deliver our services.

2. Where are we now?

Current state

Across Devon, there are currently a multitude of EPRs and operational systems used within the same care setting and across different care settings. The acute providers are on the journey towards interoperable EPRs, but this same ambition is not reflected in other care settings. Additionally, there are applications and products that deliver similar functionality which could be replaced with fewer solutions and achieve greater benefits for sharing of information and overall value.

3a. Where do strategic requirements need us to be?

National and system strategic requirements

This strategy has been informed by digital strategies and policies at a national, ICS and local level. The national WGLL framework requires us to have completed detailed mapping of strategic digital solutions across the ICS to meet a number of requirements; namely:

- Improving digital maturity
- Enable better care through digitisation and actionable workflow
- Digital to support integration

3b. Where do our stakeholders expect us to be?

User needs

This strategy has been developed through listening to staff and patients in interviews, workshops, shadowing sessions and reading survey results. The needs of these key stakeholders were at the heart of the strategy development approach. Some of the key insights across the four stakeholders are:

- Citizens: Tell their story only once
- Staff: Real-time access to data and associated workflow to provide care
- Service providers: Participate in cross-organisational care pathways
- ICS: Increase process efficiency with reduced duplication and centralised admin across sites

5.2 Where are we now?

Across Devon, there are currently a multitude of EPRs and operational systems used within the same care setting. The acute providers are on the journey towards interoperable EPRs convergence but other care settings have not started this journey.

Acutes	RDUH	UHP	TSD
	Epic	Legacy PAS	Legacy PAS
Community	RDUH	Livewell	TSD
	Epic	SystemOne	SystemOne
Mental Health	DPT	Livewell	
	CareNotes	SystemOne	
Social Care	Devon County Council	Plymouth City Council	Torbay Council
	Eclipse CareFirst 6	CareFirst 6 (moving to Eclipse)	Paris: Adults Liquid logic: Children
General Practice	Devon Primary Care (PCNs)		Out of hours Service
	SystemOne or EMIS		ADASTRA
PODAC	Community Pharmacy		SWASFT
	Pinnacle / PharmaOutcomes		Ortivus
Third sector	Multiple charitable organisations		
	Mixed digital and non-digital solutions		
Care Homes	Multiple businesses		
	Mixed digital and non-digital solutions		

Source: Stakeholder interviews

5.3 Where do strategic requirements need us to be?

This strategy has been informed by digital strategies and policies at a national, ICS and local level. The key strategic needs have been categorised into four themes: digital maturity, integrations, better care and convergence.

Digital Maturity: Investing in technology and improve digital maturity to minimum HIMSS Level 5 across the country with ICSs to develop digital investment plans for bringing all constituent organisations to the same level of digital maturity, with key national target for EPR installation across 100% of trusts by March 2025, and 80% adoption of digital social records among CQC-registered social care providers by March 2024.

National Priorities

- NHS Long Term Plan⁵
- HIMSS²⁰
- What Good Looks Like¹
- Health and care secretary speech²¹
- Joining up care²² - people, places and population

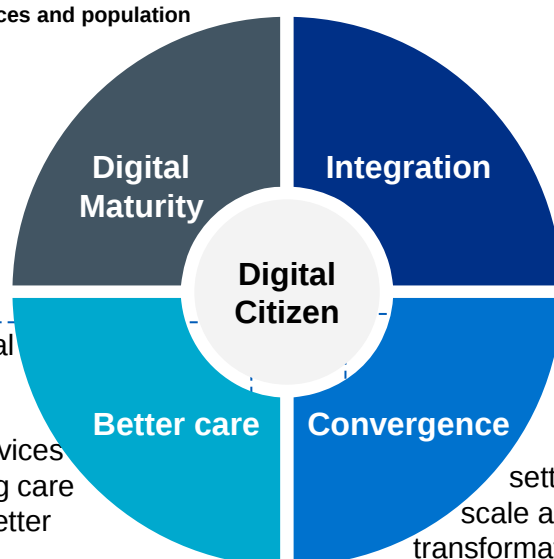
ICS Priorities

- Devon Case for Change²

Joined-up care: Digitally-enabled integrated health and social care through the effective use of data and technology allowing information and data to move seamlessly across care pathways, making digital health services a mainstream part of the NHS.

National Priorities

- NHS Long Term Plan⁵
- What Good Looks Like¹ - Improve Care
- Joining up care²² - people, places and population
- Data Saves Lives²³
- Next steps to building strong and effective Integrated Care Systems across England (2020)²⁴



Quality of care: Use digital to pursue high quality care at lower cost and reducing unwanted variations in services and practices, transforming care Pathways and providing better patient experience.

National Priorities

- What Good Looks Like¹
- Data Saves Lives²³
- CQC 2021 strategy²⁵
- Joining up for people, places and population²²

ICS Priorities

- Devon Case for Change²

Rationalise and consolidate systems to enable unified workflows within and across care settings to achieve benefits at scale and future proof clinical transformation.

National Priorities

- NHS Long Term plan⁵
- Network Contract for Direct Enhanced Service for Primary Care Networks²⁶
- National GP IT Future Framework²⁶

ICS Priorities

- Strategy for General Practice in Devon¹⁷

5.4 Where do our stakeholders expect us to be?

The comments below summarise some of the expectations of clinical and non-clinical staff across the ICS, expressed in interviews during the development of the strategy.

Staff	Citizens
• I would like to have higher quality clinical engagement with my patients and improved patient safety arising from increased real-time visibility of information like allergies, drug interactions, patient safety alerts • Duplication of information and erroneous transcribing is counterproductive and reduces my morale, better quality of patient records through is key • I don't expect to spend extra hours to train on new systems at different care sites • I would like to be to be actively prompted by my EPR and to have workflow built into the system to enable me to provide safer care more effectively.	• I would like to have my data on a digital record where it is secure and I can easily access it • I need to tell my story only once and not to have to give information on my medical condition at every point of care • I need my caregiver to be aware of my entire medical record, especially if I have any allergies for them be automatically alerted • I need to receive the same level of care across different care settings
Service providers	ICS
• There are opportunities to participate in cross-organisational care pathways more safely and efficiently as individual organisations • We would like to see more opportunities for virtual healthcare to reduce F2F demand, where appropriate • Increased automation and introduction of joint care pathways designed for seamless, integrated patient care, especially for 'high volume-low complexity' cases e.g. monitoring "routine tests" and use of Patient reported outcomes measures (PROMs) • We need to improve patient flow, cost of service, and reach higher adherence to best practice guidelines and clinical outcomes • Without a technology platform, we will not be able to evolve our population health management capabilities	• The aim is increased process efficiency with reduced duplication and centralised admin across sites • Having standardised workflows across organisations in our care settings will allow our busy staff to work more efficiently • By rationalising our operational systems, we can improve procurement and contract management and reduce digital spend • Devon data should be more joined up, allowing us to understand the impact of service planning decisions on staff, finances and patients. • To transform into a paperless working workplace and also into 'touchless' technology working for our workforce.

Source: Stakeholder interviews, shadowing sessions

5.5 Vision

All acutes are on their way to having interoperable EPRs, inspired by the success of Royal Devon's EPR implementation. A potential opportunity for interoperable systems exists for other care settings and underpinned by clinical and operational drivers. This vision supports the WGLL framework in terms of safe practice, supporting ICS staff by providing fit for purpose systems that enables staff to do their jobs well, improving care through the reduction of unwarranted variation and unified care pathways.

unified care pathways.				Will there be interoperable EPRs?
Acutes	RDUH interoperable EPR and Operational Systems	UHP interoperable EPR and Operational Systems	TSD interoperable EPR and Operational Systems	Yes interoperable EPR, Pathology and PACS
Community	RDUH Same as acutes	Livewell SystmOne/ (see note on right)	TSD Same as acutes	Interoperable EPR is service and provider dependent (on bed use)
Mental Health	DPT Interoperable EPR and Operational Systems	Livewell Interoperable EPR and Operational Systems		Potential to have interoperable EPR
Social Care	Devon County Council Eclipse & CareFirst 6	Plymouth County Council Eclipse	Torbay Council Adults: Same as acutes Children: Liquid logic	To be explored: interoperable instance across the care setting
General Practice	Devon Primary Care PCNs General Practice PCNs converged onto same system over time		Out of Hours Service Orion Shared Care Record	To be explored: interoperable system, multiple instances, across each PCN
PODAC	All PODAC Orion Shared Care Record	SWASFT Ortivis, with access to DCCR via NRL		To be explored with engagement across PODAC for specific systems
Third Sector	Orion Shared Care Record			DCCR dependent upon DSPT standards met
Care Homes	Care home access to GP Connect via preferred EPR Care home access to DCCR			To be explored: potential to identify a preferred option

Source: Stakeholder interviews, workshops

5.6 Interoperable EPR and Operational Systems Vision

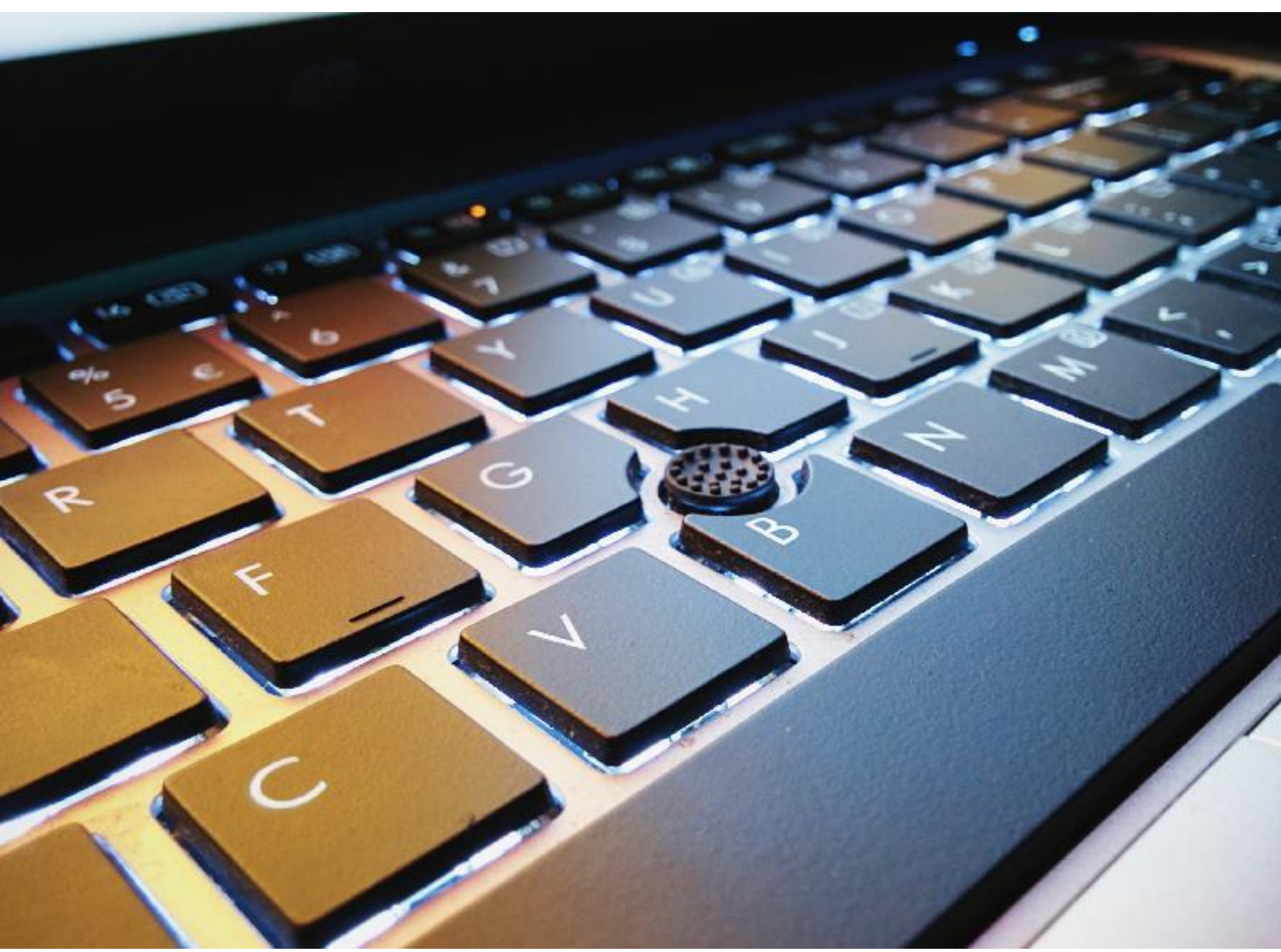
The following provides details on how we envisage applying the vision to each care setting. The vision is subject to the following: further analysis, stakeholder engagement, business cases and procurements, and it is anticipated to change based on the outcomes of those activities (1/2).

	Vision	Drivers	Decision considerations
Acute care	Use interoperable EPR instance (including Royal Cornwall Hospitals Trust) – an interoperable EPR will, within its environment, replace many individual separate applications Picture Archiving and Communication System (PACS) - to have a single vendor neutral archive that store and provide access to all image types	• Opportunity presented by end-of-life PASSs in TSD and UHP. • Significant clinical and financial benefits identified. • Improved sharing of information and workforce flexibility by using the same specialist applications. • The need to support workforce flexibility resilience with the ability to share images • The need to procure PACS for different image types.	• Local and national investment needed • Ensuring that the operating model, EPR readiness and change programme is sufficiently scaled • Organisations' need for priority systems such as LIMS may influence tactical decisions. • Procurement timescales for existing PACS image stores
Community	Service and provider dependent (based on bed use): 1. For Outpatients - use mental health or acute instance 2. For Inpatients (core) - use mental health or acute instance 3. For Inpatient (acute capacity support) - use acute instance	• Integrated care providers (ie. acute and community providers) use an interoperable instance to include inpatient bed-based care. • For non-integrated care providers, given the scale of their services, there is an opportunity to use the mental health instance, in order to provide similar benefits identified in other EPR business cases.	• Comparison of benefits of sharing the acute instance versus the mental health instance. • The practicalities of using multiple EPRs within the same organisation. • Functionality: can the acute instance meet community requirements? • Linkage of primary care and community care solutions?

5.6 Interoperable EPR and Operational Systems Vision

The following provides details on how we envisage applying the vision to each care setting. The vision is subject to the following: further analysis, stakeholder engagement, business cases and procurements, and it is anticipated to change based on the outcomes of those activities (2/2).

	Vision	Drivers	Decision considerations
Mental Health	Use a common EPR	• Opportunity for financial savings relative to DPTs current in-house developed clinical modules. • Clinical staff hypothesise there are significant benefits if the number of MH EPRs in Devon were rationalised.	• The extent of clinical and financial benefits • Explore opportunities for greater interoperability with primary care e.g. for prescriptions • The case for change for a converged social care EPR including the costs of moving away from existing EPRs.
Social care	To be explored: interoperable systems across the care setting	• Given the new focus on interoperable systems, social care could consider a focus on making systems interoperable.	• The case for change for interoperable EPRs versus standalone systems. • The impact on interdependencies of the existing EPRs such as their Digital Citizen solutions.
Primary care	To be explored: same system, multiple instances, across the care setting	• Historically, the context of 120+ GP practices and the GP Systems of Choice framework has made convergence difficult. • GP contracting changes increase convergence likelihood. • Potential benefits of horizontal convergence and vertical convergence with the mental health / community system	• The need for a clear clinical rationale for the move to interoperable EPRs. • The case for change including comparison of costs and benefits between a maintaining a duality of GP systems vs a move to a single vendor system. • The national direction of PCNs to have the same GP systems.



6 Devon and Cornwall Care Record



**Devon &
Cornwall
Care
Record**

6.1 Case for Change

A common theme running across the five ICS priorities is the need to be able to share information across care settings and providers. Consequently, the role of the Devon and Cornwall Care Record (DCCR) remains critical with the ever increasing need for care-coordination across care settings in delivering the five ICS priorities.

1. Why is this important?

Drivers

Each of the ICS Priorities; Urgent Emergency Care services, Planned Care, Diagnostics and Children and Young People⁴ are services that not confined to a single venue of care, spanning a multitude of providers and care settings such as care homes, charities, individuals, acute, PC, mental health, social care, SWASFT etc. Consequently, to be able to transform these services, information needs to flow seamlessly across these touch points.

2. Where are we now?

Current state

The DCCR has been established with integrations to source systems across acute, community, mental health and primary care. This went live in summer 2022.¹⁹ To date, 110 organisations – including 100 general practices – have signed up with a view to continue onboarding additional care organisations in parallel to increasing system functionalities.¹⁹

3a. Where do strategic requirements need us to be?

National and system strategic requirements

The national requirements have set out the need for ICSs to be able provide “basic information sharing” with means providing information sharing between primary care and NHS Trusts (acute, mental health and community).

At a local level, there is the need to move beyond primary and NHS trusts to include information sharing across health and care. Furthermore, is the need to ensure that those care settings that are not digitally mature are able to update and view key common flags and care plans. The key strategic needs have been categorised into two themes:

- Information sharing across health and social care organisations including third and voluntary sector
- Additional features - Viewing and updating of flags and care plans across care settings including for less mature sites

3b. Where do our stakeholders expect us to be?

User needs

Our strategy has been developed building on the work done in the DCCR and also informed from wider engagement on the role of the DCCR across the NHS. The needs of our staff (clinical needs), citizens, service providers and the ICS were at the heart of our strategy development approach.

6.2 Where are we now?

The Devon and Cornwall Care Record (DCCR) is being implemented jointly by teams from Devon and Cornwall ICS's. Currently, an increasing number of organisations across health and care systems are joining the DCCR as part of a phased roll-out. Whilst participation of organisations is stipulated by a DCCR-specific data sharing agreement (DSA), communication activities drive awareness about the programme to help realise its full potential.



Onboarding of organisations to share using the DCCR

To date, 65 organisations – including 55 general practices – have signed up. The user can see a list of the participating organisations on the DCCR website. The ICS is in the process of contacting health and care organisations in Devon and Cornwall as part of a phased roll-out. This includes GP surgeries, NHS Trusts, hospices and community interest communities.¹⁹



Public engagement to ensure buy-in with citizens

Although the DCCR does not radically change the care process, it is vital that patients and service users understand how care providers manage their data. Therefore, public engagement is a key aspect of the programme.

With this in mind, the ICS has produced a communications toolkit which we will be providing to participating organisations to inform their patients or service users about the programme.

The toolkit contains a suite of bespoke resources that convey the key points of the DCCR, including how it will improve their care and how data is kept safe and confidential. The resources include a poster, leaflet, patient email, infographic and digital graphics.¹⁹



Data sharing agreement established

Safe and secure sharing of data in line with IG principles is critical to establishing trust across care professionals in providing and accessing data in the DCCR. To participate in the programme, all stakeholder organisations are required to sign a DSA that specifically relates to the DCCR. Once the ICS held conversations with organisations to get them onboard, It sends them the DSA via an electronic document system called DocuSign.¹⁹

6.3 Where do strategic requirements need us to be?

This strategy has been informed by the DCCR programme and good practice seen from across the NHS on shared care records. The key strategic needs have been categorised into two themes: Information sharing and additional features such as viewing and updated of flags and care plans for less mature sites.



6.4 The Vision

The DCCR brings together patient data from a number of health and social care providers and presents it as a single record. It enables frontline staff to see details held by GP practices, hospitals, care homes and other organisations across Devon, Cornwall and the Isles of Scilly, giving them a more complete view of a patient's history. The citizen will also have access to this record, to view and add their own data, from Apps and Wearables. This vision supports the WGLL framework dimensions of safe practice, supporting our people and improving care by providing the right information in the right place at the right time.

How will it improve patients' care?

Having access to patients' overall health and medical history will help health professionals identify problems more effectively and make quicker diagnosis. For example:
Staff will be able to see what medication patients are taking and if they have any allergies. As well as making treatment safer, this will provide patients with greater continuity of care.
The improved administration will save healthcare staff time chasing down information and spare patients the frustration of having to repeat themselves as they move through the system.⁷



How will it be delivered?

A technology aggregator will integrate patient data from a large number of providers' applications that facilitate clinical and care activities across the health and care ecosystem.
It will be hosted in the cloud using Amazon Web Services (AWS) and will have the capacity to be accessed by citizens, care homes, charities and third sector organisations.⁷

What data will be used?

Over time, the DCCR will include a broad range of health and social care data⁷ including:

- Health problems
- Diagnoses
- Procedures
- Allergies
- Vital signs
- Medications
- Lab results
- Immunisations
- Radiology data
- Clinical correspondence
- Appointments
- Physical examinations
- Family history
- Health setting visits
- Social history
- Social care record
- Photographs and images



7 Business Intelligence and Population Health Management

7.1 Case for Change

This section is not a Business Intelligence (BI) strategy: it is focused on detailing the technical infrastructure which will enable future BI and Population Health Management (PHM). It references the case for change and vision for infrastructure and highlights the drivers for the future BI strategy (which will include a PHM strategy). The BI strategy will be responsible for developing the overall cross-system intelligence function.

1. Why is this important?

Drivers

Improved BI and PHM are recognised as key means to improve health outcomes and improve service efficiency in the ICS. PHM is aligned to the current efforts underway within the Integrated Care Programme and is recognised as the mechanism for how data and insights will be used to serve the needs of local populations. Current challenges, such as system-level financial planning, capital raising, workforce allocation, can be responded to in new and different ways.

Data insights inform PHM which is used to improve health and well-being through proactively targeting services to those most in need. Effective PHM will support the prevention of ill-health, improve health outcomes and the more efficient operation of health and care services.

2. Where are we now?

Current state

In terms of broader BI, in order to improve our outputs, the key dependency is on our providers' systems being able to provide real-time data which is sufficiently harmonised and standardised so we can provide real-time outputs. In terms of PHM, the ICS is on a journey to create the One Devon Dataset (ODD) - a shared patient level pseudonymised dataset for secondary/indirect care uses of data (with the potential future ability to re-identify patient data for appropriate agreed direct care purposes). The dataset will collect data across primary, secondary and social points of care, alongside wider determinants of health. The greatest blocker to achieving the BI and PHM ambitions may not only be technological: the ICS needs to help users transition from receiving data in files to interacting with digital analytics solutions, developing workforce capabilities and improving Information Governance (IG) as well as moving to real-time flows.

3a. Where do strategic requirements need us to be?

National and system strategic requirements

We have categorised the requirements of this section, and to some extent the broader BI strategy, under the following themes:

- [Data architecture](#)
- [Data insights](#)
- [Equality of care](#)
- [Reporting](#)
- [Safety and quality](#)
- [Planning and care coordination](#)

3b. Where do our stakeholders expect us to be?

User needs

The population health management maturity framework, supplemented by stakeholder interviews has helped define our understanding of what our stakeholders need, recognising further work will be required in the BI strategy. The building blocks of the target state are **infrastructure, intelligence, interventions** and **incentives**.

7.2 Where are we now?

The ICS is in the process of maturing its BI and PHM offering at a system level and the associated infrastructure changes accompanying this. Central to this push, a focus on PHM as opposed to broader BI, is the development of the One Devon Dataset (ODD).

We are currently on a journey to create the One Devon Dataset. Currently refreshed quarterly, it is intended to be used to develop a greater understanding of system interdependencies, costs, health inequalities, future citizen need for services and the potential impact of interventions. Acute, community, social care datasets are currently part of the dataset, and the aim is for GPs to be part of the dataset by end of summer (pending agreement). Police and education data integration is also planned. The One Devon Dataset, coupled with the general data warehouses used for operational reporting, will help us produce both long-term planning, such as what workforce services need, and rapid insights, such as Winter Readiness dashboards. An assessment of the current position against the three core PHM capabilities is provided below:



Infrastructure

- Inconsistent approaches to linking data flows between primary and secondary care, often requiring manual intervention
- Information governance arrangements in place between commissioners and secondary care providers to support analysis of population health (primary care is a work in progress)
- Limited BI / PHM expertise
- Digitised health and care providers and common integrated health and care record plan in place
- Bespoke extracts remain with the need to address legacy systems
- Health and care data is linked in the One Devon Dataset

Intelligence

- Traditional reporting (non-interactive), intelligence systems and analytical outputs acting at organisation level with limited clinical engagement
- There is currently limited BI/PHM capability and capacity at all levels across the system. Analytical teams and support units provide population health analytical insight, but not in a systematic and consistent way across the system
- Costing and performance analysis is organisationally focussed rather than patient focussed
- Occasional assessment and monitoring of health inequalities data
- Mapping the system analytical workforce and intelligence tools, with a view to formalising cross system analytical collaboration in an ICS intelligence function

Intervention

- Limited engagement across primary and secondary care teams to integrate care around high need groups
- Limited use of voluntary and third sector to respond to key patient groups and health inequalities
- Social prescribing and anticipatory care activity not linked to needs or inequalities analysis
- Ad-hoc approach to co-production

BI / PHM

7.3 Where do strategic requirements need us to be?

This strategy has been informed by digital strategies and policies at a national, ICS and local level. The key strategic needs have been categorised into four themes: Incentives, Intervention, Intelligence, and Infrastructure.

Data Architecture: Moving away from collecting aggregate data to using (anonymised) client-level data. Integration of health and social care data. Support ICS colleagues to use de-personalised data to enable more sophisticated PHM approaches and support world-leading research. Build a data layer with registers and APIs

National Priorities

- People at the heart of care¹³ - Chapter 7
- Supporting local authorities to deliver social care reform and our vision
- NHS Long Term Plan⁵
- Data Saves Lives²³
- The future of healthcare³⁰: our vision for digital, data and technology in health and care
- Joining up care for people, places and populations²²

ICS Priorities:

- Devon Joint Forward Plan²

Data insights: A proactive approach to working with the population. Reduce the risk of escalating health and care needs of the population by taking a more individualised citizen centric approach to needs

Equality of care: Developing PHM capabilities, including access to and use of appropriate data on underserved communities.

Tackling wider social determinants of health

National Priorities

- NHS Long Term Plan⁵
- Topol Review¹²
- Joining up for people, places and population²²
- 2022/23 Priorities and Operational Planning Guidance⁶
- What Good Looks Like¹

ICS Priorities:

- Devon Case for Change²

Planning and Care

Coordination: Using digital technology and advanced data systems to free up capacity and deliver services in new ways that more efficiently meet the needs of both patients and staff. Implementing a population health platform with care coordination functionality that uses joined up data across health and social care to support planning, decision making, proactive PHM and precision public health. Creating a governance structure and upskilling the workforce to empower individuals into more agile decision making within integrated teams.

National Priorities

- What Good Looks Like¹ Success measure 7 - Healthy populations
- The future of healthcare³⁰: our vision for digital, data and technology in health and care - Chapter 3: Innovation
- Delivery plan for tackling the COVID-19 backlog of elective care⁷
- Getting it right first time³¹

ICS Priorities:

- Devon Joint Forward Plan²

Reporting: Allowing integrated health and social care data to support clinical trials, real-world evidencing and the development of AI tools. Move away from writing long reports and instead provide intelligence and insight to better meet the needs of all audiences. e.g. data that can be used at board level for monthly reporting and trend analysis through to reporting for next day interventions by frontline staff for unscheduled care.

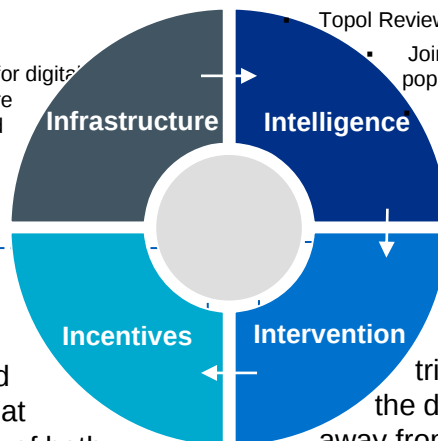
Safety and Quality: Consistent measurement of performance to address performance variations and drive improvement

National Priorities

- What Good Looks Like¹ - Success measure 7 - Healthy populations
- The future of healthcare³⁰: our vision for digital, data and technology in health and care - Chapter 3: Innovation
- CQC 2021 strategy²⁵
- People at the Heart of Care¹³
- Joining up care for people, places and populations²²
- Digital Clinical Safety Strategy

ICS Priorities:

- Devon Joint Forward Plan¹⁵
- Devon STP Roadmap to progress PHM



7.4 Where do our stakeholders need us to be?

The PHM maturity framework, supplemented with stakeholder calls, has helped to define our understanding what our stakeholders require from the target architecture. The BI strategy will define wider BI requirements. The requirements to achieve 'advanced' in the PHM framework are:

Infrastructure

- Integrated health and care record including PHM insights: Single health and care record inc. insights
- Full flows of data inc. determinants: Flows of data from all health and social care sources available inc. demonstrable efforts to link patient level information on wider determinants
- Whole system information governance: data sharing and processing arrangements
- PHM data and analytics platform: Maintained by the ICS intelligence function and is well understood by decision-makers.
- Cross system leadership and vision: Embedded across the system, with a clear health inequalities responsibility.

Intelligence

- Multidisciplinary health intelligence function: Whole function with multi-disciplinary analytical and finance teams with skills in predictive techniques that enable actionable insights.
- Bespoke support: The intelligence function provides bespoke support to PCNs, places, the ICS and provider collaboratives as needed.
- Cohort risk analysis: Showing current and future costs of cohorts, key risk factors and patients who are at greatest risk of deterioration.
- Current and predicted health status analysis: Health status of the local population with achievable health and well-being outcomes and performance standards for similar populations.

Incentives

- System oversight metrics: Oversight metrics based around segments and outcomes delivery.
- Payment models to drive outcomes: Payment based around segment and outcome delivery.
- Contracting approaches for shared accountability: Contracting encourages shared accountability.
- Workforce planning: across organisations; future need focus.
- Incentives alignment: Value and population health based contracting.
- Workforce development and modelling: upskilling and hiring.

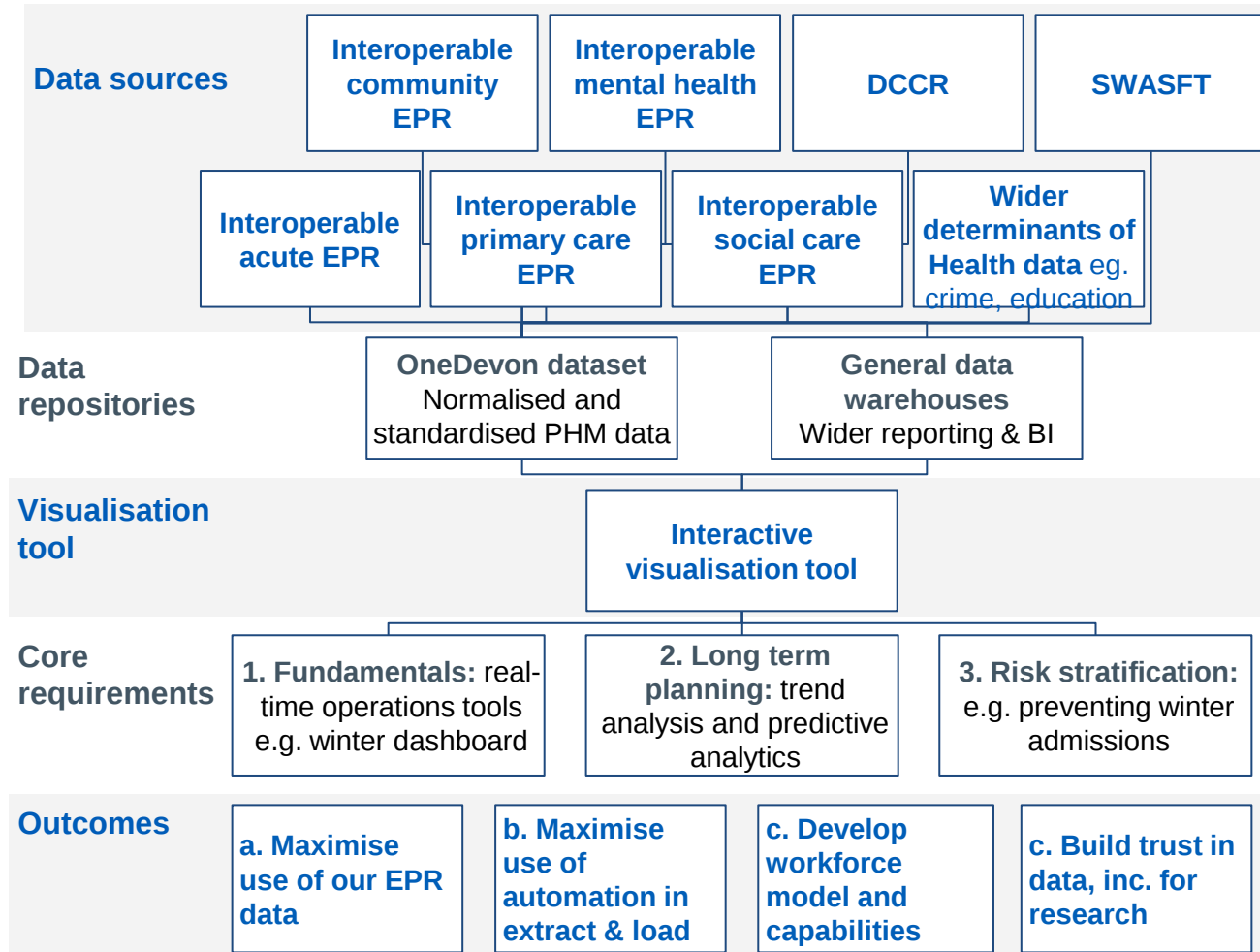
Intervention

- Care models: Clearly defined care models in place across vertically and horizontally integrated teams.
- Clear working arrangements: Clear working arrangements across all settings and providers.
- Progress monitoring: Progress in reducing health inequalities is routinely monitored and iterated.
- Service-user tracking: Making use of tracking to enable Partners to monitor, understand and influence how interventions impact on required outcomes.

7.5 The Vision

The vision for BI and PHM is to maximise the opportunity from the data that will be available if the aspiration to have a world-leading EPR landscape is achieved. In progressing the capability and outcomes from PHM there is significant maturity journey. The diagram below references key data sources, architecture and outcomes we expect our architecture to achieve. This vision supports the WGLL framework dimension of healthy populations where we use data to design and deliver improved outcomes and address health inequalities.

Data infrastructure and intelligence



Our **core requirements** focus on the need to drive actionable insight and system wide performance indicators (such as 104 week waits) to more efficiently meet the needs of both patients and staff:

- 1) **Easily accessible fundamentals:** developing close to real time (24 hour/daily) operational tools such as the winter dashboard in acute care to inform operations, with a long term view to creating a command centre/intelligence hub (*see referenced data flow improvements overleaf*).
- 1) **Enable longer term planning:** more effective longer term planning and resource allocation, ensuring budgets distributed across the ICS according to demand.
- 1) **Enable risk stratification:** proactive PHM to reduce readmission rates such as targeted interventions for patients at risk of respiratory infections in winter.

7.5 Vision assessment and needs

Digital infrastructure is a necessary but not sufficient enabler of a BI/PHM function and solution. This is highlighted by assessing the extent to which the current plans, **if further developed and implemented**, will achieve the desired BI and PHM maturity.

Vision assessment against PHM maturity framework

Infrastructure	Intelligence	Intervention	Incentives
- PHM data and analytics platform - Full flows of data inc. determinants - Whole system information governance - Cross system leadership and vision - Integrated health and care record incl. PHM insights	- Cohort risk analysis - Bespoke support - Current and predicted health status analysis - Multidisciplinary health intelligence function	- Care models - Clear working arrangements - Progress monitoring - Service user tracking	- System oversight metrics - Payment models to drive to outcomes - Contracting approaches for shared accountability - Incentives alignment - Workforce development and modelling - Workforce planning

* The One Devon Dataset will integrate wider determinants of health data at a geographical level, as granular as possible i.e. postcode level

Key: Scope of this strategy Scope of BI and PHM roadmap Scope of future BI strategy

A BI strategy, including PHM, is required to respond to the national Intelligence Functions guidance, noting that many of these challenges, outlined below, are not technical:

Data flows

Infrastructure

Improvements and harmonisation in provider systems: for example, to make real-time data available in the general data warehouses; improve legacy data management etc.

Information Governance

Infrastructure

To build a governance structure to ensure the target feeds are integrated whilst maintaining patient and stakeholder trust

Data flows

Visualisation

Visualisation

Infrastructure

To ensure that the visualisation tool meets the future needs of stakeholders and recognises their maturity levels

Operating model and workforce

Intelligence & incentives

To maximise capacity by automating low value activities and upskilling workforce (and exploring ICS-wide operating models)

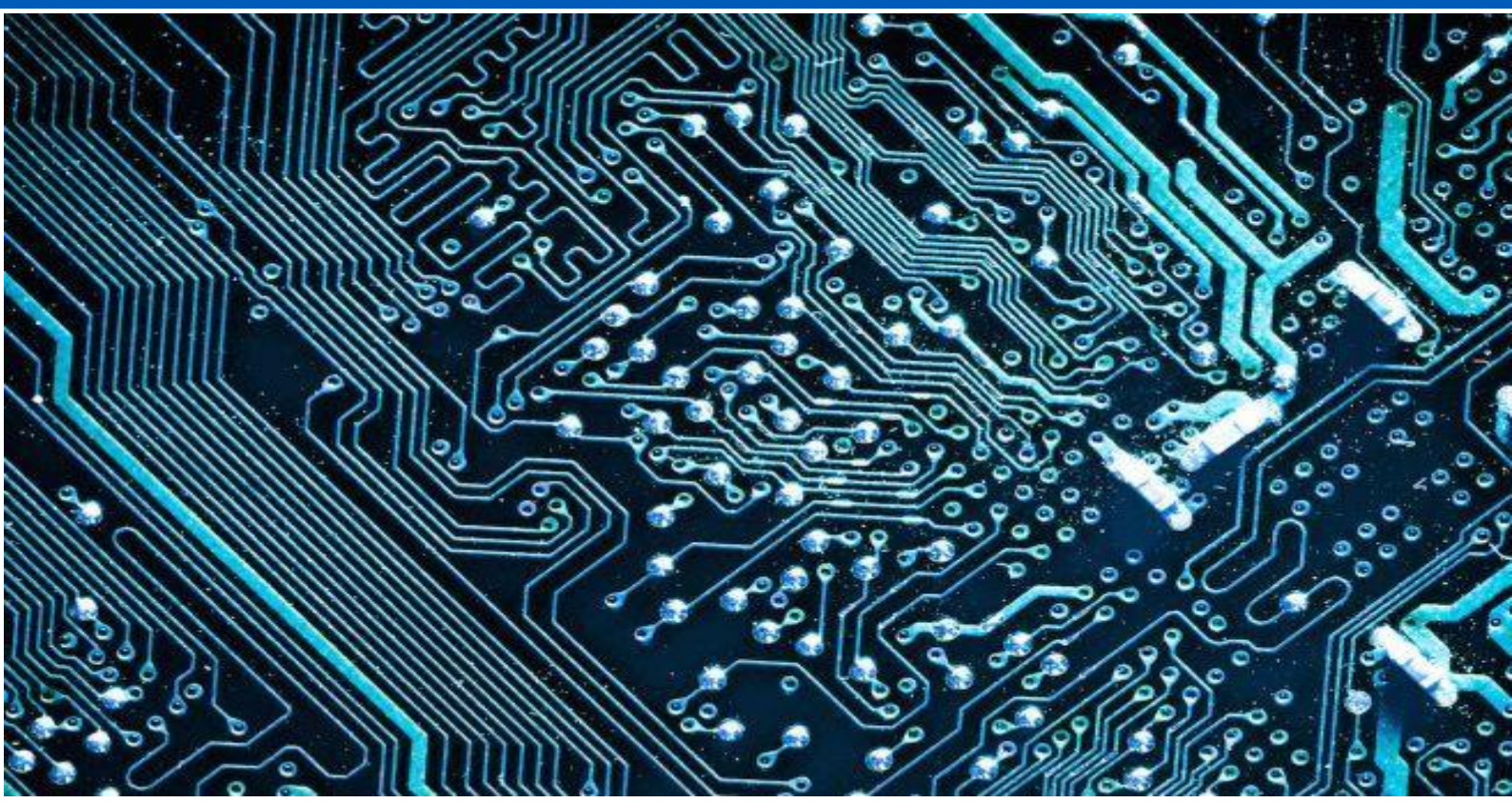
BI Strategy (inc. PHM)

Information governance

Operating model



8 Unified and Standardised Infrastructure



8.1 Case for Change

Modern digitally enabled health and care services cannot be sustainably delivered upon ageing infrastructure with potential security vulnerabilities. Furthermore, current investment in infrastructure is not optimised across organisations. This must be addressed for the other strategy areas to deliver.

1. Why is this important?

Drivers

There is a requirement nationally to drive organisations towards ‘simplification of the infrastructure’ by sharing and considering consolidation of spending, strategies and contracts. Infrastructure also represents a significant opportunity for the ICS to contribute to sustainability targets through use of cloud computing to consume less power and reduce carbon emissions. The future ICS reference target architecture and data model, will point towards adopting a simplified cloud-first infrastructure that provides agility and frictionless cross-site working experience for the workforce.

A recent assessment carried out in Devon has identified potential efficiencies that could be made by consolidating contracts across the ICS.

2. Where are we now?

Current state

Work has been completed to baseline all Devon organisations’ Infrastructure, via the Technology Together subgroup. This baseline will help make the business case for a move to interoperable Devon Infrastructure. There is little current alignment between organisations within the ICS. Each of the Trusts utilise their own contracts and have differing purchasing strategies, which could be streamlined in order to deliver operating expenditure savings. There is a large difference between the costs of the services for each Trust.

There is a need to develop consolidated strategies before embarking on further tactical improvements, following strategy development we can agree a transition plan to align. There is potential to streamline additional services such as recruitment and payroll, desktop support, and mobile support.

3a. Where do strategic requirements need us to be?

National and system strategic requirements

This strategy has been informed by digital strategies and policies at a national, ICS and local level.

We have completed a detailed mapping between our strategic solutions and each of these requirements. The key strategic needs have been categorised into the following priority areas:

- Policies and Procedures, including Cyber security, IG and access management
- Networking and Data Centres
- Mobile, pagers and Voice Services
- End User Devices (EUDs)
- Align and maximise economies of scale on high value contracts.

3b. Where do our stakeholders expect us to be?

User needs

Having a strong interoperable infrastructure enables fully integrated care to be provided across all organisations within the ICS. Citizens expect professionals to be able to access relevant systems and records without delay, and staff expect tech that ‘just works’ allowing them to work from any location seamlessly, allowing them to focus on delivering care and support.

8.2 Where are we now

There is currently a disparity between organisations within the ICS on current state, future strategy and purchasing approach. This presents an opportunity for consolidation, bringing the potential to improve value for money, which could offset a portion of the investment required to deliver this strategy. Via the governance of the ICS Technical Design Authority there is collective agreement to work on the following areas, underpinned by an enterprise architecture and with the overarching aim to unify and standardise, for example to reduce the number of data centres.



Reduce and rationalise Data Centres

At present there are 15 Data Centres (DCs) across the ICS with each organisation having at least two. There is recognition that there is an opportunity to rationalise the number of data centres with a move to cloud.



Standardise on mobile telephony and pagers

All organisations have good mobile contracts with their providers, however efficiencies could be made by consolidating on the most cost effective contract. Implementing a consistent approach to the purchase of mobile devices could deliver significant annual savings.



Standardise on landline telephony and voice services

5 of the 6 organisations run their own Voice over Internet Protocol services. There is a large difference between the costs of the services for each trust. The N365 service that one organisation is using could be extended to all trusts to deliver efficiencies. Moving to N365 would provide a standardised service across the ICS and simplify movement of individuals between the trusts



Standardise policies, toolkits and cyber

Each organisation operates its own policies, toolkits and approach to cyber. There is an opportunity to do this once across the ICS and standardise on common approaches reducing the amount of time the ICS collectively spends on doing the same work. This also underpins the unification of hardware and applications.



Unify and standardise network infrastructure

The network infrastructure across the ICS is not standardised, which means different suppliers are used, networks are configured differently and consequently staff require specific local knowledge to maintain the networks.



Standardise on end user devices

Different types of end user devices are used in each ICS organisation from desktops, laptops, tablets to mobile phones. Different makes are purchased, of different sizes and with different hardware and software build specifications. This standardisation is part of ensuring that the technology 'just works' wherever it is used in Devon.

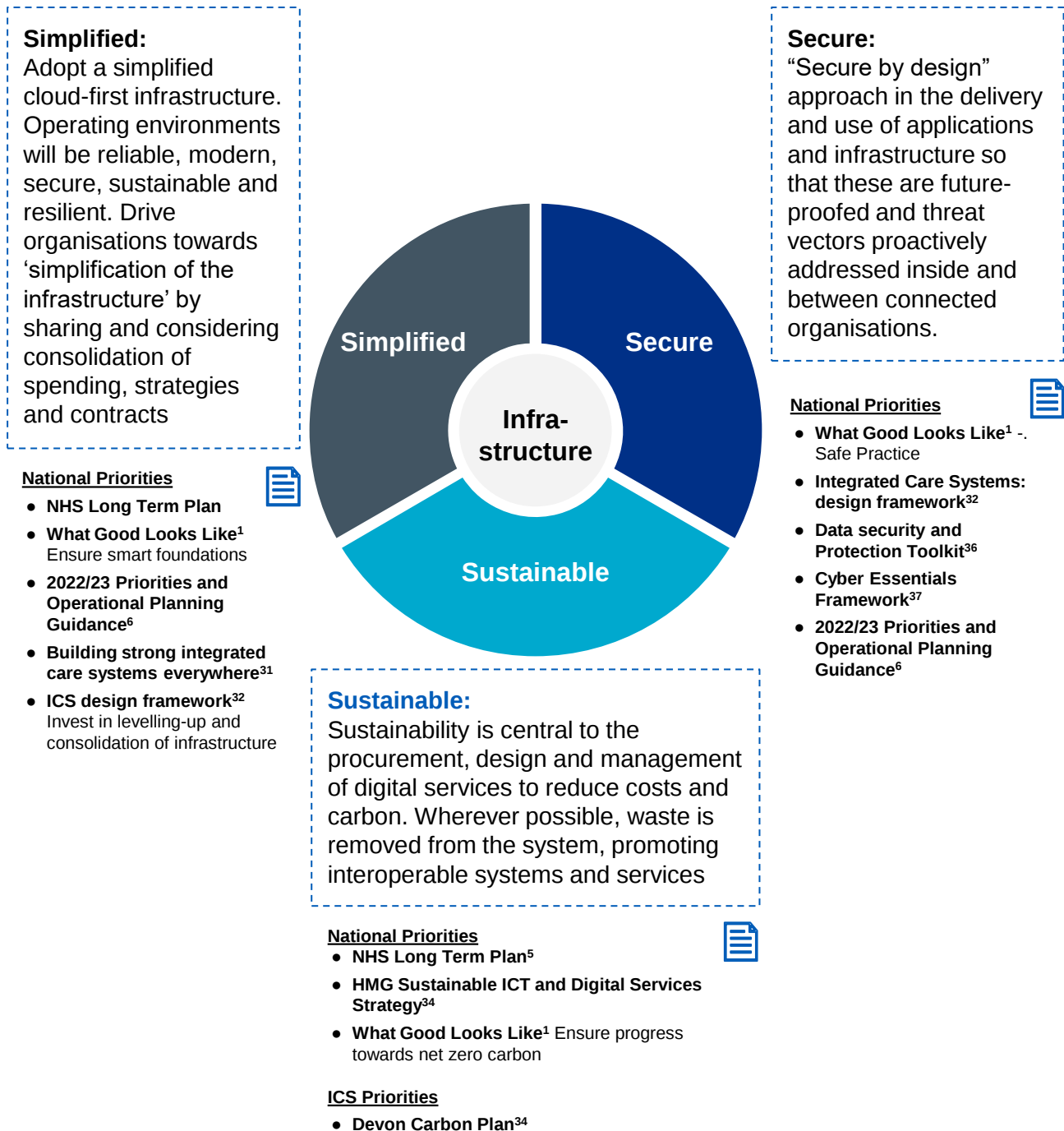


Align and maximise economies of scale on high value contracts

There are many high value digital contracts across the ICS. In most instances these contracts are negotiated on an individual organisational basis. There is opportunity for the organisations to work together and with the benefit of the standardisation activity detailed above, procure the same goods and services to maximise economies of scale.

8.3 Where do strategic requirements need us to be?

Our strategy has been informed by digital strategies and policies at a national, ICS and local level. The key strategic needs have been categorised into three themes: simplified, sustainable and secure.



8.4 The vision

A unified and standardised infrastructure that enables integrated care to be provided across all organisations within the ICS. Staff will have technology that ‘just works’ allowing them to work productively from any location, without the need for complicated sign-up or access processes - freeing up capacity to focus on delivering high quality care and support to patients and residents. This vision supports the WGLL framework dimension of safe practice and smart foundations which is to have digital, data and infrastructure operating environments that are reliable, modern, secure, sustainable and resilient.

Changes in how infrastructure can be provided that drive the vision

The ICS will move towards a unified and standardised infrastructure for Devon. The ICS Devon Digital leaders helped undertake a baseline assessment that has identified the following opportunities to achieve the vision:

- A single, safe and secure cyber service
- Standardisation on policies and toolkits
- To reduce and rationalise data centres
- Unify and standardise network infrastructure
- Standardise on mobile telephony and pagers
- Standardise on landline telephony
- Standardise on end user devices
- Align and maximise economies of scale on high value contracts

What does this mean for staff?

Care professionals are able to work seamlessly across systems without hindrance. Paired with modernised telephony and the use of cloud services where appropriate, this will provide staff choice and facilitate consistent care delivery across the county. Key benefits include:

- Minimal requirement of technical resources locally
- Staff able to work from any location within the county and access all necessary applications

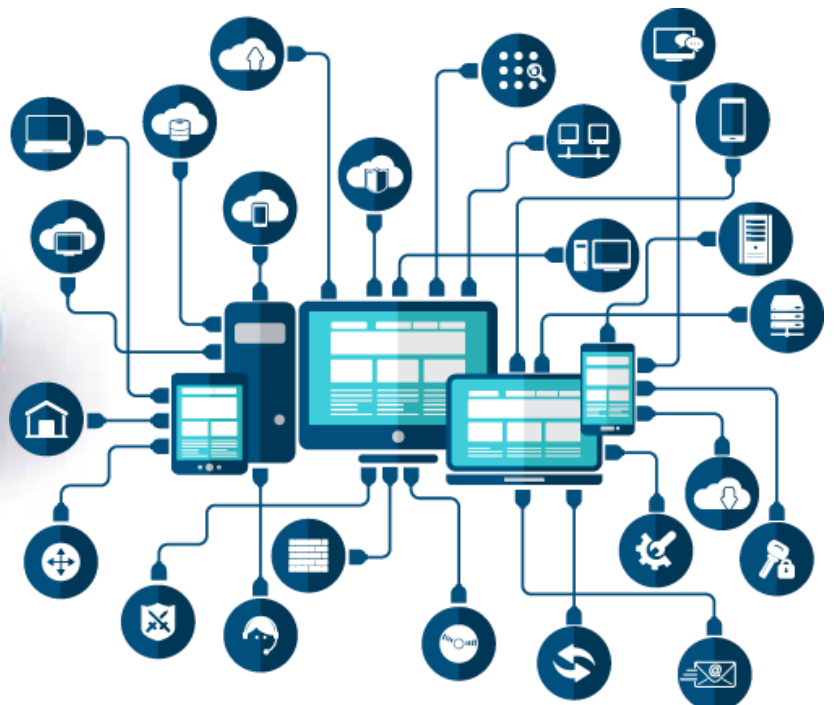
Reaching further

The infrastructure will support all major clinical and business applications, enabled through shared procurement, technical support and maximising economies of scale.

The ultimate achievement will come when the vision has been delivered and the ICS has the opportunity to organise the digital support service into a single virtual team/operating model.



9 How this fits together



9.1 Blending the national and local strategies

The national What Good Looks Like (WGLL) framework sets out the core principles of Digitise, Connect and Transform. These principles are incorporated with this strategy's four key concepts, with the addition of Prevent, to deliver its vision. Using an analogy of a house, these principles could be considered as the foundations, structure and roof: without a strong digital infrastructure as the smart foundations, the ability to connect or transform services will always be compromised. Therefore, it is vital that the ICS focuses on building strong digital foundations.

Digitise

With the appropriate digital infrastructure in place, as the smart foundations, there will be sufficient flexibility to meet the demands of delivering future health and care services, however they may be structured. Within the ICS, these core underpinning requirements are also known as Smart Objectives. Part of delivering the Smart Objectives is the requirement to implement digital applications that will support the workforce to do their jobs well. In addition to simply digitising the ICS is looking to digitise on common applications on each sector of the ICS, therefore supporting workflow, common care pathways and the best possible flexible use of resources.

Connect

The ICS has many partners delivering health and care and we have plans to create interoperable systems in many areas. A key element of this, and in line with all 42 ICSs, is the implementation by ICS Devon of a shared care record in partnership with Cornwall and Isles of Scilly ICS, known as the Devon and Cornwall Care Record (DCCR). This solution initially focuses on information sharing for direct care, but has the potential to be used as a patient portal and a population health management platform for the future.



Transform

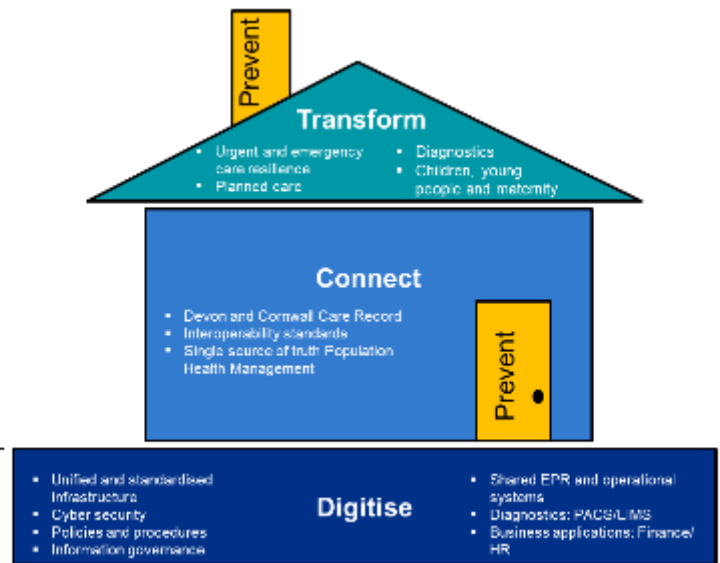
Only by delivering on Digitise and Connect can the Transformation journey begin. This strategy presents the five Digital priorities as the key enablers to delivering the service transformation required.

Prevent

The ultimate achievement through the Digital strategy is to prevent ill-health before it happens. This is in line with the One Devon vision to deliver **“Equal chances for everyone in Devon to lead long, happy and healthy lives”**. The Digital Strategy will support prevention by opening the door to Population Health Management insights and the development of the Digital Citizen, where individuals will be more involved in their own self-care and self-management.

9.2 Key milestones to delivering the strategy

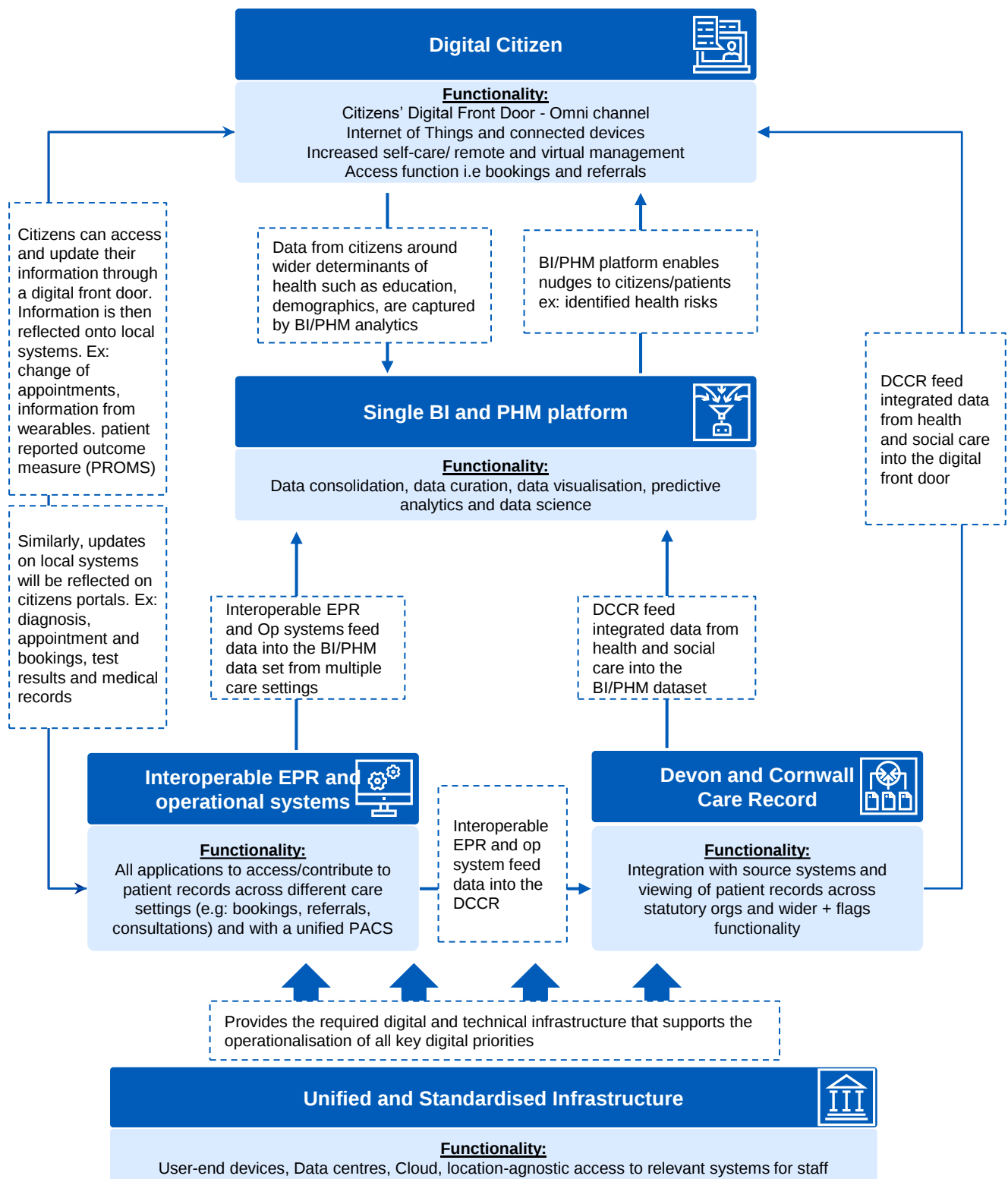
A summary of the key milestones as aligned to the key concepts of Digitise, Connect, Transform and Prevent are provided below. For more detail, please refer to the roadmaps at the end of each Digital priority section.



Concept	Scheme	22/23	23/24	24/25	25/26	26/27
Digitise	Interoperable EPR across acutes			★		
	Interoperable EPR across Mental Health		★			
	Rationalise data centres				★	
	Single image repository (all file types)					★
Connect	DCCR implementation (Phase 1 complete)	★				
	DCCR implementation (Phase 2 complete)		★			
	PHM: wider social determinants of health data integrated into One Devon dataset		★			
	PHM: integrate acute EPR data into One Devon dataset					★
Transform	Single virtual team / operating model					★
	NHS App: 75% of GP patients registered for NHS APP		★			
	Virtual wards in place	★				
	Remote monitoring solutions commenced		★			
Prevent	Prevention measures are enabled and enhanced over time					

9.2 Overall Target Architecture

The five digital priority areas do not operate in silos, the below figure shows a high level architecture as to how the five areas interact with each other and the process flows that take place between them.



9.2 Interdependencies

In delivering the overall target architecture, each digital priority area has a set of dependencies and potential functionality duplication with other areas that must be addressed at the beginning and throughout the delivery of the associated programmes. We have detailed a list of interdependencies below. These will need to be considered and managed as part of the overall transformation portfolio.

	Dependency on other priority areas	Areas of functionality duplication and challenges
Digital Citizen 	- Open Application Programming Interface (APIs) from source systems to be able to provide consolidated views of care record information - Open APIs to enable citizens to conduct transactions (e.g. appointment management) - Single mechanism for identity verification and authentication (e.g. using NHS Login). - Integration with remote monitoring devices to enable citizens to provide readings and preferences.	Multitude of different patient portals both within and across care settings. Inability to get a “single view of the citizen” across the different patient portals need to be addressed through the unified digital front door. Access and booking services remain suboptimal and inefficient resulting in poor experience and costly running of services.
Interoperable EPR and Operational Systems 	- Infrastructure is fit-for-purpose for EPR ambitions - Central authentication; single sign-on amongst all constituent organisations to enable seamless ways of working	Duplication of functionality and/or gaps of acute systems meeting primary, community and mental health requirements
Devon and Cornwall Care Record 	- Evolution of EPRs and APIs (depth of functionality) to provide structured data to and from source systems into DCCR - Complete sign-up for information sharing across all source systems and care settings - Cyber readiness across the chain of source systems and DCCR - Care home readiness	Avoidance of duplication of functionality with interoperable EPR i.e. actionable notifications and workflow remains in the EPRs and not in the DCCR.
BI/PHM 	- EPRs, DCCR and operational systems able to provide structured data in near real-time to the local data platform - Consistency in data formats and data representations from source systems with normalised and cleansed data. - Development of the ICS Devon BI Strategy (inc. PHM) outlining the future data requirements and associated operating model for analysts. - Clarity on role of local data platform in the context of the national federated data platform. - Consolidation of local BI data warehouses vs creating a persisted version of DCCR - Information governance - DSAs in place across all Partners	Tools and app ecosystem to enable insights to generated and actions notified. Information governance that moves from static visualisations through to the ability to use this data to drive action for direct care. Potential duplication of functionality across the interoperable EPRs and the BI platform e.g. creation of a shared waiting list view.
Unified and Standardised infrastructure 	- Specifications of hosting for acute interoperable EPR(s) - Social care and local authority infrastructure requirements - Mobile, Voice and Data Centre Strategy - Infrastructure requirements from Cornwall - Clarity on PHM Strategy (including access to academia) to define different access needs - Outcome of regional PACS opportunity (regional repository of all images)	Duplication of public cloud, private cloud and on-premise capabilities with unnecessary ingress/egress costs.

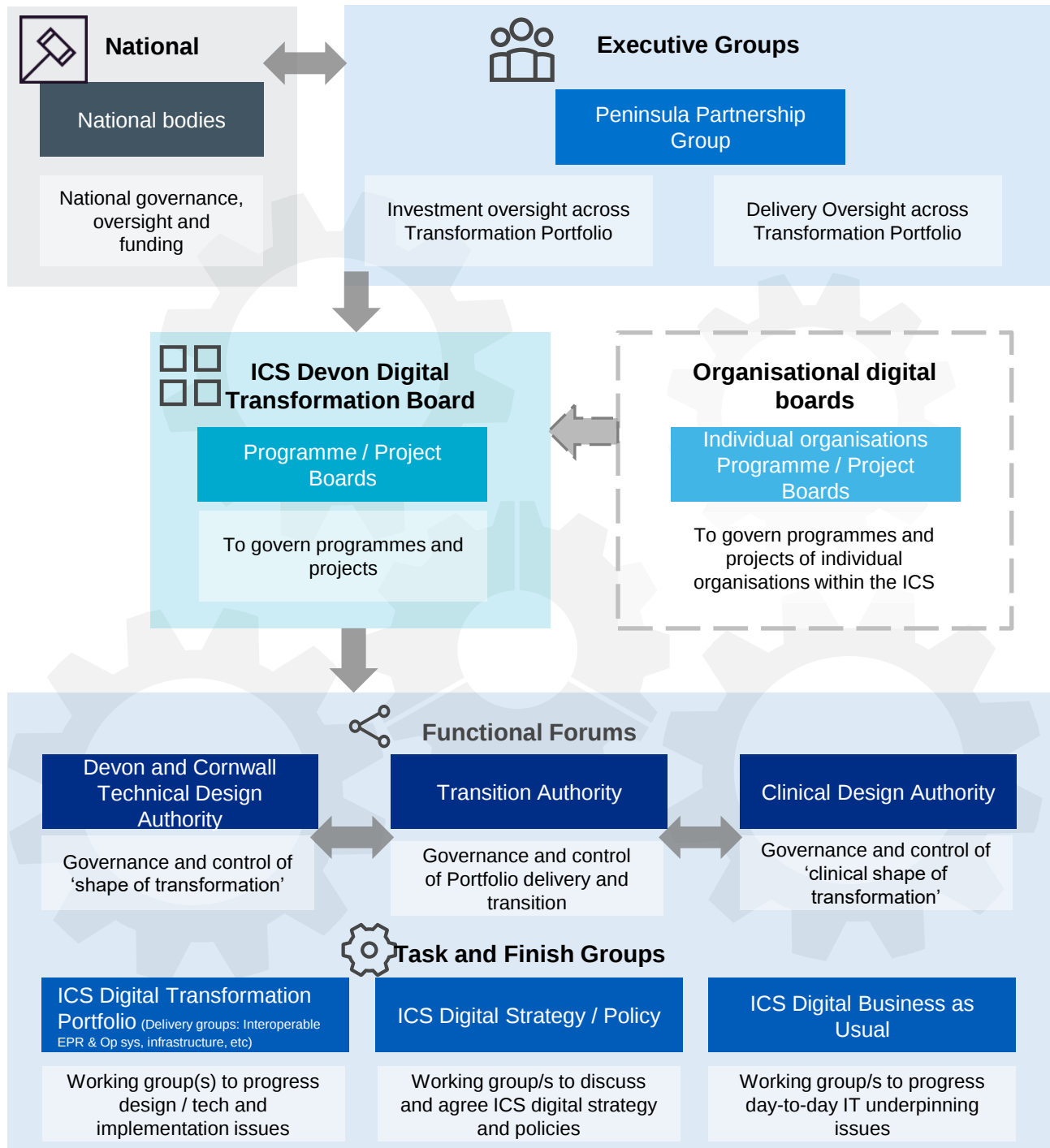


10 Future governance



10.1 Proposed future governance

In light of the complex portfolio needed to deliver the ICS ambitions, strong and nimble governance is critical to delivery. The proposed future governance builds on good practice from other programmes. This has been designed to be: i) clinically led, ii) bring together investment and delivery iii) explicitly taking account of what initiatives need to be commenced, be continued and also transitioned to BAU.



Next steps: This approach requires all the digital teams and resources to work closely together. An immediate next step in enacting this governance is to develop the target operating model for a single digital service for the ICS.

10.2 Key roles

Following the proposed governance structure, the following provides a detailed view on the roles and responsibilities across the three layers of governance.

- **Peninsula Partnership Group:**

- To provide strategic direction, exec level decision-making alongside advice and guidance on the opportunities, priorities and requirements for digital technology solutions to underpin a sustainable health and care system in Devon.
- Managing investment (national and local), resource allocations and commitments from constituent organisations
- Oversee the delivery of the digital transformation workplan

- **Programme / Project Boards:**

- Oversee the management of delivery activities programmes and projects at an ICS level
- Engage pro-actively with both the ICS Digital Portfolio Transformation and Transition Authority Task and Finish groups and ensure adherence with outlined standards and policies advocated by ICS Digital Strategy/Policy Task and Finish groups

- **Individual organisations Programme / Project Boards:**

- Oversee the management of delivery activities across each individual organisation
- Reports to the ICS Devon Digital Transformation Board on status of organisational programmes/projects

- **Technical Design Authority:**

- Provide ICS leadership on shared and interoperable infrastructure and technical design, procurement, cyber security and supplier management. Defines the ‘target architecture’ and ‘transition states’.
- Provide recommendations to the Digital Transformation Board and relevant Programme/Project Board on ICS shared and interoperable infrastructure and technical design.
- Provide control and coordination across the Transformation design activities.
- Manage the risks associated with shared and interoperable infrastructure and technical design.
- Solicit input from different organisations ahead of organisational level decisions.

- **Clinical Design Authority:**

- Provide professional and clinical advice on the design of solutions, linking the projects into relevant external pathway and governance groups and committees to ensure design is clinically-led and fit for purpose.
- Recommend prioritisation for roadmap of deployed content, functionality, and consumer onboarding.

- **Transition Authority:**

- Oversee the transition of new business capabilities into the operational environment and ensuring implementation readiness standards are upheld.
- Transition transformation programmes into BAU.
- Ensuring there is a transition operating model in place so all people, process, technology considerations are taken into account.

- **ICS Digital Transformation Portfolio:**

- Oversee the individual delivery of each digital priority area and coordinate implementation across organisations.
- Provide detailed control to ensure alignment of design and delivery to the overarching transformation vision

- **ICS Digital Strategy/Policy:**

- Provide periodical digital strategy refresh based on internal and external needs
- Coordinates with authority and transformation teams to ensure adherence to ICS and national guidelines

- **ICS Digital Business as Usual:**

- Oversee day-to-day IT operations and technical issues
- Ensure functional effectiveness of systems and maintenance of the digital and technical infrastructure