Devon Integrated Care System (ICS) Digital Strategy update

Contents

1. Background

1.1 This paper is an update on the progress of delivering the ICS Devon Digital Strategy. ICS Devon is known as One Devon.

1.2 The One Devon Digital Strategy was developed during 2022 and is closely aligned to the national What Good Looks Like (WGLL) national digital framework. System partners and clinicians contributed to its development to ensure that content also reflected the future technology requirements of the Devon health and care system. Technology is a rapidly evolving environment and therefore it is recognised that the strategy will continue to develop. The current digital strategy was approved by the Integrated Care Board in March 2023.

1.3 The One Devon Digital Strategy is focused on supporting the following ICS priorities:

- Urgent and emergency care
- Planned care
- Diagnostics
- Children and young people
- Digital

1.4 To support the One Devon priorities listed above and provide a flexible technology environment that can be adapted and respond to the needs of delivering health and care services, the One Devon Digital Strategy has five priorities:

- Digital Citizen

- Electronic Patient Record (EPR) and Operational Systems
- Devon and Cornwall Care Record
- Business Intelligence and Population Health Management
- Unified and Standardised Infrastructure

1.5 This report will provide an update of the key transformation activity against these five digital priorities.

2. The order of doing things

2.1 There is order in which things are done, which requires internal processes and services to be digitised in order to enable digital to be an enabler of service transformation. The national digital strategy, to which the One Devon Digital Strategy is aligned, describes the order of doing things as shown in Diagram 1:

Diagram 1: National NHS digital strategy order of doing things

2.2 In digital terms we can't transform health and care services delivery with modern technology, such as robotics, Artificial Intelligence (AI) or wearable and remote monitoring equipment, until we connect systems and data. Before we connect, there is an underpinning need to digitise. For example, there are hospitals and care homes in Devon that still operate on paper, and we can't connect paper to digital systems. In essence there are still organisations operating with analogue systems in a digital world and first we must replace those analogue systems with digital ones.

2.3 A substantial part of the One Devon Digital Strategy is therefore focused on the near term need to digitise existing analogue ways of working and replacing obsolete digital systems so that patients and health and care services are able to take advantage of technological advances.

3. New Models of Care, the importance of digital infrastructure and making the most of existing investments

3.1 The future delivery of resilient and sustainable health and care services will require new models of care which will see services being delivered and received in new ways; these new ways will be increasingly enabled through the internet.

Examples of new models of care include the following, but not exhaustive list:

- information to support well-being and self-care
- individuals monitoring their own health
- virtual wards
- remote care

- monitoring of the home or care environment

The development of these services will help deliver the vision of One Devon: *'Equal chances for everyone in Devon to lead long, happy and healthy lives.'*

3.2 There is a direct link here to the digitise element described in section 2. The use of the internet for delivering health and care services is rapidly accelerating beyond accessing information; it can now be used to connect devices such as watches, health monitors (temperature, blood pressure, heart rate, oxygen levels), environmental monitors such as room temperature and oxygen concentration, fall alarms and much more. The data produced from these devices can be incorporated within health and care processes and be used to make better decisions and provide better care for individuals.

3.3 People will be able to receive more care at their preferred setting, perhaps outside of the hospital, providing they or their carers have access to the internet. To maximise the opportunity that the internet provides for our community in supporting their health and care there is a need to digitise and invest in the necessary digital infrastructure.

3.4 In addition to the infrastructure, the applications provide the vital interface and functionality to enable the new models of care to be delivered. The marketplace is full of many products offering all types of capabilities and the opportunity to transform ways of working. Recognising the financial constraints within which the Devon ICS is operating, two principles have been established to ensure that the value of existing investments in applications are fully exploited before investing in new products.

These principles are shown below:

First Principle
New models of care should utilise the existing functionality within the following solutions:
- Primary Care EPR
- Devon and Cornwall Care Record
- Interoperable EPR

Second Principle
New alternative solutions may be deployed where the functionality is not provided by the First Principle solutions.
New alternative solutions must integrate with the First Principle solutions

4. Progress of One Devon Digital Priorities

4.1 Digital Citizen

4.1 In terms of the internet, the community can be considered in two groups: internet natives and internet adopters. For many in society the internet was introduced during their adult lifetime and therefore they have adopted to the help it provides in fulfilling their daily lives: shopping, banking, travel, games, education and much more. For younger generations they have known nothing but the internet and the help it provides. This understanding, together with socio-economic factors, is important when considering how the community may respond to new technologies, how they will be used and the potential for gaps in service accessibility.

4.1.2 While digital technology provides great opportunity for improving accessibility to information and services, when considering a service change, an equality, quality and impact assessment (EQIA) is undertaken by those responsible for the proposed change to ensure that the needs of the whole community are considered. This includes ensuring that the needs of people who cannot access digital services are met.

Virtual wards

4.1.1 Virtual wards are an important development in delivering hospital care outside of the physical hospital environment. There is a specific definition of a virtual ward, which is:

A virtual ward is a safe and efficient **alternative to NHS bedded care** that is enabled by technology.

Virtual wards support patients who would **otherwise be in hospital** to receive the acute care, monitoring and treatment they need in their own home.

This includes either **preventing avoidable admissions** into hospital, or **supporting early discharge** out of hospital.

4.1.1 The provision of virtual ward beds has been steadily increasing from 65 beds in January 2023 to the current level of 129 beds across Devon.

4.1.2 Members of the One Devon Unscheduled Care Board have reviewed the bed opening trajectory planned for the remainder of the financial year and instructed providers to bring forward the March 24 planned capacity of 227 virtual ward beds to September 23 in preparation for winter demand. Providers are currently revising their implementation plans to accommodate the change from their current capacity shown in Table 1.

Provider	Current Virtual Ward bed capacity	Target Virtual Ward bed capacity Sept 23
Royal Devon University Healthcare Trust	66	100
University Hospitals Plymouth	31	50
Torbay and South Devon	29	77
ICS Total	**126**	**227**

Table 1: Virtual ward capacity by Trust

4.1.3 The overall utilisation of the current bed capacity is reported directly to NHS England via the Foundry system which takes a single daily snap-shot every two weeks. The programme team are working with the NHS Devon business intelligence

team to develop a daily reporting format to enable more accurate performance and trend monitoring. This is revealing a variable occupancy between 45-70%. The providers remain committed to achieving and maintaining 80% occupancy from September alongside launching the additional beds.

4.1.4 Further scrutiny of the Virtual Ward performance data supplied by providers is required, as the data suggest the majority of the Virtual Ward activity is early supported discharge. However, local scrutiny has identified that a significant number of the patients are admission avoidance following a short attendance at an acute site for diagnostics. Manual counting has revealed this can be up to 49% of the total activity.

4.1.5 A central programme team is undertaking a high-level review of the different technology solutions implemented by each provider to understand their capabilities.

Remote and Virtual Care

Domiciliary care

4.1.6 One Devon has been successful in securing funding of £250k to progress and scale an initiative that develops the interface between primary and social care. This work provides remote care by enhancing the clinical support that domiciliary care workers can give their clients.

4.1.7 The support given by domiciliary care workers is enabled by equipment (known as Kit4Care) that allows carers to take basis observations; blood pressure, temperature, oxygen and pulse. Training is provided to the care workers through the Devon Training Hub. When needed, carers are able to access medical advice through a single point of access to a primary care team.

4.1.8 The concept has already been piloted and the funding seeks to scale to the following:

- 1,100 clients in 'at home' settings to benefit from this including GP connectivity
- 650 care workers to have access to equipment and training
- With one (Kit4Care) unit per 13 care workers as a team serving neighbourhoods
- Marginal costing of social care staff and interface with multi-disciplinary team response hub already in place

Research

4.1.9 We are currently working with Plymouth University to develop a proposal which will seek to enable further analysis of a particular health condition that may benefit from a remote care service.

4.1.10 Meetings have been held with clinicians and there is a progress to focus on anticipatory care for long term management of respiratory conditions. Further work is required to develop this proposal.

Access - NHS App

4.1.11 The NHS App launched on 31 December 2018. Since its launch it has been developed and currently enables the public to:

- get health advice using the health A-Z on the NHS website
- find out what to do when they need help urgently using NHS 111 online
- choose organ donation preferences
- choose whether the NHS uses your data for research and planning
- show others the details of your COVID-19 vaccine (or vaccines) when travelling abroad
- find NHS services nearby

Additionally, if a person registers and prove who they are, they can:

- order repeat prescriptions and view, set or change the pharmacy from which to collect prescriptions (known as your nominated pharmacy)
- view the GP health record securely
- manage a first hospital or clinic appointment with a specialist, if referred by a GP through the NHS e-Referral Service (e-RS)
- sign up for updates about participating in health research

In some areas of the country there is additional functionality such as being able to view and manage care plans.

4.1.12 In Devon the current uptake of the NHS App is 51% of GP patients aged over 13years, which equates to 568,657 patients registered to use the NHS App.

4.1.13 At a local level, Devon is similar to the whole South-West region which has achieved 52% registrations, but is behind the national target to have 68% of people in England registered with the NHS App by March 2023 (and 75% registered by 2024).

4.1.14 Work continues to promote NHS App use via general practice.

Access - Standardisation of GP websites

4.1.15 In order to provide a consistent user experience for patients accessing services through their GPs' websites, a project is progressing to develop a standard template for the format and layout of the websites.

4.1.16 This work is led by the region and is now progressing to Phase 2 which is to develop and test the new template with pilot practices.

Self-care and self-management

4.1.17 One Devon has benefited from regional funding to implement the Orcha Health App Library. There are many health apps that are available for the public to use but not all have any level of assurance that they are appropriate for use. The

Orcha Health App Library provides a single source of health apps to which people can be directed. The apps contained within the library have been assessed by Orcha against standards and regulations in clinical and professional assurance, data and privacy and usability and accessibility.

4.1.18 The regional funding for this product will end in 2024 and a decision will be needed to as to whether there remains a requirement and what the best way may be to deliver that requirement.

4.1.19 A summary of the use of Orcha is provided in Diagram 3:

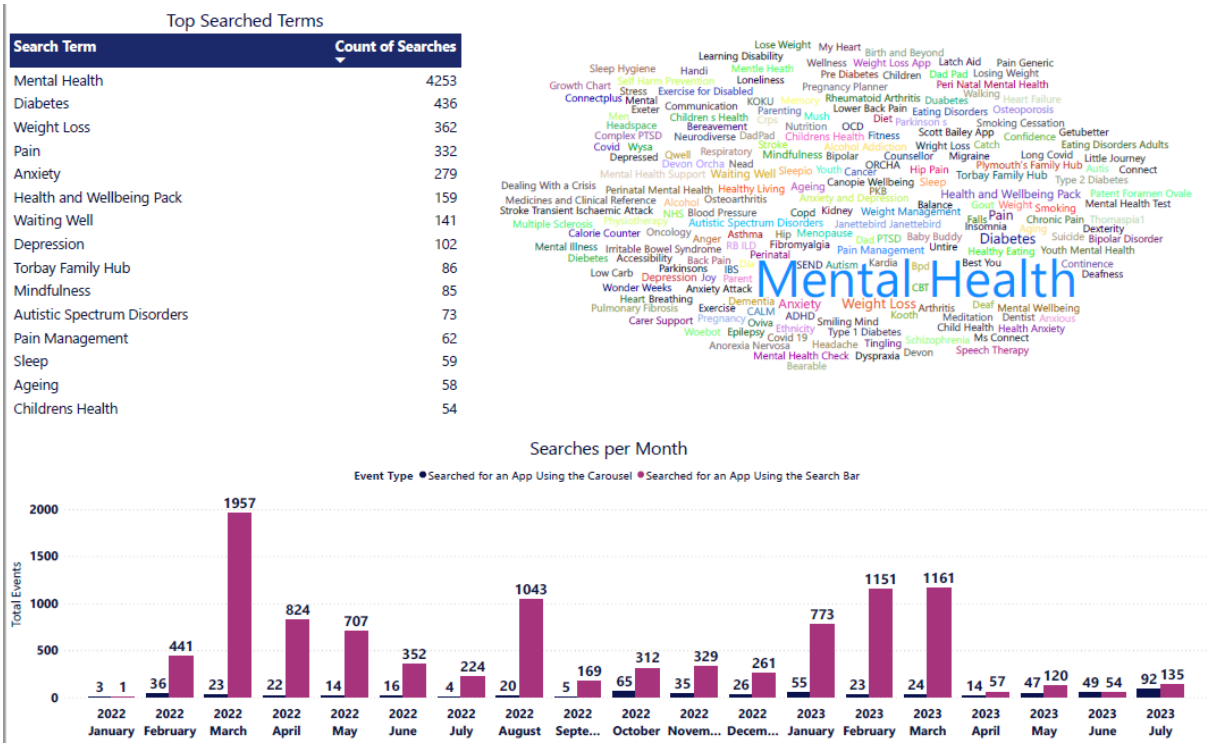

Diagram 3: Summary of Orcha use

4.2 Electronic Patient Record and Operational Systems

Electronic Patient Records

Acute

4.2.1 NHSE assessed three of the Trusts within Devon as being in urgent need of an Electronic Patient Record (EPR): Torbay and South Devon Foundation Trust (TSDFT), University Hospitals Plymouth (UHP) and Devon Partnership Trust (DPT). The result of this national recognition has been the allocation of £85m to fund the procurement and implementation of EPRs for these organisations.

4.2.2 DPT has procured the SystmOne EPR. This product selection means that the two mental health service providers within Devon, DPT and Livewell are using the

same system. SystmOne is also used by the four hospices and the majority of general practice primary care.

4.2.3 TSDFT and UHP have been preparing individual Outline Business Cases for each organisation and are progressing through the approvals process. TSDFT has received notification that it's Outline Business Case has been approved by NHSE and is now in the procurement process. UHP are anticipating that their Outline Business Case will be approved in September.

Social care

4.2.4 One Devon has been successful in securing total cumulative funding of £1.1m across 2022/23 and 2023/24 to support the implementation of digital records in social care providers, which includes both care homes and domiciliary care providers.

4.2.5 The implementation of digital records in social care providers has been progressing under the leadership of NHS Devon, within the scope of the One Devon ethos. The programme of change is achieving a digital social care record adoption rate that is performing above the regional and national average, see Chart 1. This excellent work has been achieved with the involvement of Devon Integrated Social Care Alliance (DISCA) and Devon Care Home Collaborative (DCHC). The South West AHSN and Delt have provided support to the programme.

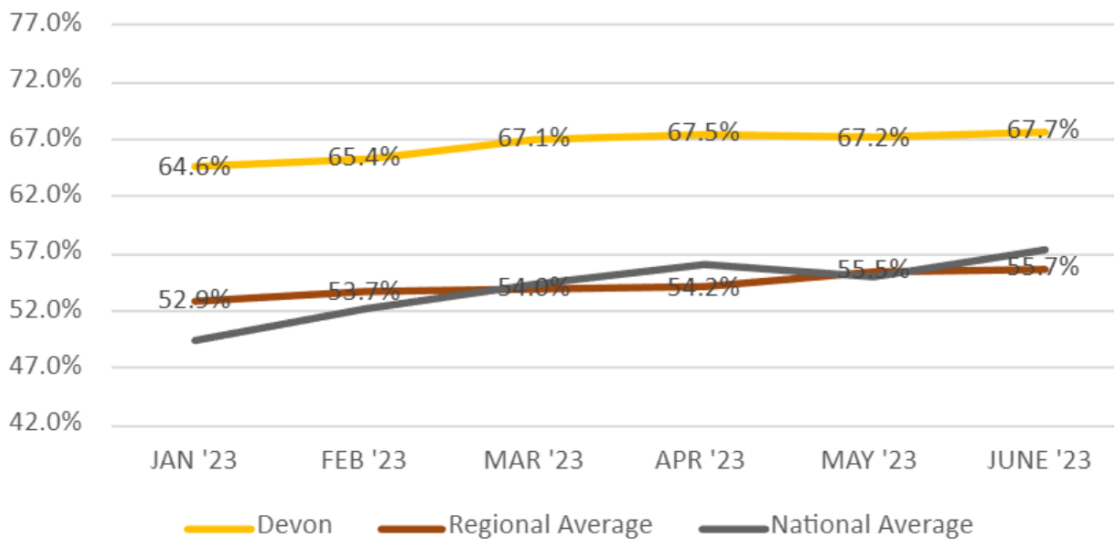

Chart 1: Devon ICS Digital Social Care Record Adoption 2023

4.2.6 The target is to achieve an 80% adoption rate of Digital Social Care Records (DSCR) by March 2024 within CQC registered adult social care providers (residential and non-residential). Devon has already achieved and exceeded the 60% target set for March 2023. Based on our calculations Devon is expected to deliver a projected 74.5% level of digitisation by March 2024. Devon has surpassed the agreed targets

set with NHSE in the original funding plans and will continue to work to support NHSE achieve the 80% target.

Primary Care

4.2.7 The Electronic Patient Records in Primary Care are due for re-procurement. This activity will commence during 2023/24. The release of the national GP IT (General Practice Information Technology) Futures framework is expected in the autumn 2023. The next immediate step is to plan for re-procurement.

Operational Systems

4.2.8 There are three key clinical operational systems that are proceeding through procurement. These systems are:

- Picture Archiving Computer System (PACS)
- Laboratory Information Management System (LIMS)
- Digital histopathology

These are critical systems that enable diagnostic services which underpin the operational running of a hospital. In all three cases a joint procurement is proceeding across the Peninsula with consideration being given to the relevant EPR positions.

4.2.9 For the PACS procurement, progress has proceeded to evaluating best and final offers from suppliers. Cirdan have been selected as the preferred supplier for the LIMS system at TSDFT and RCHT. Discussions are being held with UHP and RDUH regarding commitment and interoperability.

4.3 Devon and Cornwall Care Record

4.3.1 The first phase of connecting the early adopter organisations to the Devon and Cornwall Care Record completed in August 2022. Since the go-live of the first phase, work has progressed and 176 organisations have connected to either provide and/or consume data. While there are a large number of organisations that have connected, there remains a few significant providers of information that have yet to connect. This situation means that usage of the DCCR is not optimised due to the gaps in information.

4.3.2 The next phase of developing the Devon and Cornwall Care Record to provide additional functionality has commenced. The current focus is the development of an electronic Treatment Escalation Plan. The information held on this plan includes important flags such as whether a patient has a *Do Not Resuscitate* notice. Currently this information is held in a number of different places and is not available in a single location; the development of an electronic Treatment Escalation Plan will enable a single read/write source to this information that will be available across multiple care settings.

4.4 Business Intelligence / Population Health Management

4.4.1 There is currently much activity at the local, regional and national levels which have an impact on Business Intelligence and Population Health Management strategy.

4.4.2 The Federated Data Platform is a national development which will enable NHS organisations to bring together operational data to support staff to access the information they need in one safe and secure environment. The 'federated' description means that every Hospital Trust and Integrated Care System will have their own platform, which can connect and collaborate with other data platforms as a 'federation' making it easier for health and care organisations to work together. The five initial use cases for the Federated Data Platform are Population Health Management, Care Co-ordination, Elective Recovery, Vaccination and Immunisation, and Supply Chain. There will be a national open procurement with implementation expected from September 2023.

4.4.3 A second national initiative is the Secure Data Environment. A national secure data testing environment already exists to provide approved researchers and analysts access to essential, de-identified health data from national health settings. The initiative will also create sub-national secure data environments which, together with the national provision, will be the intended default way to access NHS health and social care data for research and analysis. We are currently exploring what a regional secure data environment architecture solution may look like.

4.4.4 At the local level, the options currently being explored for data storage are also a factor when considering the Secure Data Environment.

4.4.5 The current provision of Business Intelligence functions across the ICS are also being reviewed to determine if a system wide function would enable:

- centralised system reporting
- enhanced and resilient support to provider services

The development of a system wide strategic intelligence function would maximise the benefit of system wide population health data. The first step towards a system wide function is sharing the NHS Devon Director of Business Intelligence role with RDUH.

4.4.6 The prevalence of good analysts is low in Devon and there will become a greater demand on their skills. An increasing volume of data enables analysts to identify trends, correlations and ultimately provide data as evidence to inform future strategy of where services and treatments should be targeted and improved. Recognising the future requirement for expert analysts, the South-West region is establishing the South-West Decision Support Network. This network is only the second in the country and is a collaboration between NHSE and the South-West ICSs. The purpose of the network is to focus on training, knowledge exchange, bespoke analytical reports and supporting intelligence functions development in the South-West.

4.5 Unified and Standardised Infrastructure

4.5.1 The unified and standardised infrastructure priority addresses the importance of a modern digital infrastructure as described earlier in this report. It is fundamentally important and the ambition for this part of the One Devon Digital Strategy is to provide ubiquitous access to the necessary health and care systems for an individual to fulfil their role, no matter which NHS organisation a person is employed by or where they are working in Devon, the equipment just works. A key element of this work is standardisation where possible across the system.

Cyber

4.5.2 Cyber security is of utmost importance. In response to the growing threat, the government established the National Cyber Security Centre which became operational in 2016. The large organisations within One Devon are potential targets with a successful attack also having the potential for severe consequences. Organisations within the One Devon have experienced the consequences of supplier chain cyber attacks within the last twelve months and the disruption can be measured in months.

4.5.3 A single One Devon Cyber Security Strategy is being prepared so that there is a common approach developed by the specialists in each organisation. The development of this joint strategy allows the knowledge and skills of the specialists to be combined so that strategy benefits from a collaborative approach. The regional NHSE Cyber lead is also supporting the local specialists in the development of the strategy.

Standardise Policies and Toolkits

4.5.4 Standardising policies and toolkits is an important step towards the One Devon working in a common and standard way across organisations. The mobile policy has been identified as the first to review. A specific part of the policy is being scrutinised to identify if a common position can be established across organisations.

Data Centres and Networks

4.5.5 There are 13 data centres across the NHS organisations. Individual organisations have one primary and at least one secondary back up data centre. With modern advances in cloud technology and network speeds, the need to continue with 13 data centres is questioned. A reduction in data centres is likely, which as a minimum will provide a capital cost reduction as there will be fewer data centres to replace when the equipment becomes obsolete and requires updating.

4.5.6 We have been working with global suppliers and the Electronic Patient Record programmes to understand the range of possible data storage architecture solutions needed to meet the current and future local requirements.

Mobile and Landline Telephony and Pagers

4.5.7 There is an opportunity for cost savings on mobile contracts. The potential for the savings arose from each organisation having different contracts with the same, or different suppliers, which meant that different contract rates were paid.

4.5.8 An estimated £1.85m of savings is possible over a five-year period by organisations adopting the lower contract rates already paid within the ICS. Organisations have agreed to proceed and will progress as existing contract arrangements permit. Savings will be reported through each organisations' Cost Improvement Programme (CIP).

Align and Maximise Economies of Scale on High Value Contracts

4.5.9 To help determine what opportunities exist a baseline review of existing equipment, applications and contracts is required. This work has started to produce its results and through procurement analysis the digital workstream will be working with their procurement colleagues to identify potential opportunities.

4.5.10 While this activity continues, work progresses with global suppliers to explore the potential savings that may be achieved from single contracting as opposed to separate multiple contracts.

4.5.11 The work on the previously mentioned LIMS, PACS and digital histopathology shared operational systems, is also progressing on a joint procurement basis.

Standardise on End User Devices

4.5.12 The local NHS Organisations currently use different end user devices, e.g. laptops, PCs, tablets and mobile phones. These devices are different in terms of manufacturer, specification and build. There is opportunity to standardise specifications and build and then procure from a single manufacturer. This work also links closely with that of the Electronic Patient Record programmes as these complex applications require end user devices to be of a certain standard; this requirement is known as the Warranted Environment Specification (WES).

4.5.13 One global manufacturer has already been approached and has informally indicated that there are additional savings to achieved above normal public sector discounts if One Devon were able to agree a standard specification and commit to volumes over a period of time.

Enterprise Architecture

4.5.14 An enterprise architecture is a strategic framework that helps define business goals and align them with a digital architecture of information systems, applications and infrastructure. There is a clear dependency on understanding the clinical and business support requirements. At present the strategy for these areas has not been clearly described and in their absence, an approach of developing infrastructure and systems that provide the maximum flexibility for future use is being pursued.

4.5.15 The importance of digital architecture is recognised at a national level and a national team have been developing the high-level architecture view. A draft of this architecture was presented on a national meeting in May 2023.

Identity and Access Management

4.5.16 A key dependency on supporting ubiquitous access across One Devon, which will facilitate workforce flexibility, is the creation of a single workforce directory. This is a complex piece of work and commences with a need for workforce teams to align their electronic staff record processes and systems. Engagement has commenced with the HR Directors group who have a key action to align HR systems and processes as part of the National Digital People Plan. One Devon is one of three ICSs looking to develop a single One Devon solution.

4.5.17 NHSE are supporting by exploring options for One Devon to use national tools to begin alignment of directories.

4.6 Shared Services

4.6.1 The opportunity for developing a One Devon shared digital service has been identified. A shared service is a natural culmination of delivering the strategy, as One Devon will be working in common ways, using common applications and infrastructure.

4.6.2 A small but important step towards this commitment is the joining of the two NHS Devon digital teams; one team was focused on One Devon digital transformation and the other on providing a digital service to NHS Devon and primary care. The teams joined together at the beginning of May 2023 under the leadership of the ICS Director of Digital Transformation.

4.7 The potential of AI and RPA

4.7.1 The development of Artificial Intelligence (AI) and Robotic Process Automation (RPA) technologies have a massive potential to increase efficiency, reduce costs and to standardise the services provided across the county.

4.7.2 In progressing these technologies, One Devon is working very closely with NHS England to ensure it remains aligned with national policy and guidance. The work in RPA at University Hospitals Plymouth (UHP) is seen as a national exemplar and there is opportunity to strengthen this team and use it as an ICS wide resource. This opportunity is being progressed in a partnership between UHP, NHS England and UiPath (a company that makes robotic software).

4.7.3 In order to maximise the benefits of RPA we must first work to standardise processes across One Devon and one key area is around the Digital People Plan work, where Devon is one of three ICSs looking to standardise processes in order to maximise the benefits of applying RPA to those processes.

5. Exiting National Oversight Framework Segment 4 (NOF4)

5.1 The NHS Devon digital workstream is supporting the Devon system in identifying financial savings that will contribute to the system exiting Segment 4 of the National Oversight Framework (NOF4). The area of digital has been tasked with delivering £4.5m savings in 2023/24.

5.3 In addition to the 2023/24 savings, a target of £13m exists for 2024/25 and another £13m for 2025/26. The work on developing business cases for a shared service, single service desk, data centres and potential savings through contract rationalisation are key components of supporting the savings targets.