NHS
Somerset
Clinical Commissioning Group

Somerset Digital Roadmap

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Document History

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V 0.2 10.05.16	06.05.16	Sue Glanfield, Allison Nation and Justin Harrington's amendments
V 0.3 11.05.16	10.05.16	Richard Greaves amendments/ editing across the whole document
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V1.1 29.06.16	28.06.16	Further amendments by all
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Distribution

This document has been distributed and/or made available to:

Organisation	Date of Issue
Yeovil District Hospital NHS Foundation Trust	May 2016
Taunton and Somerset NHS Foundation Trust	May 2016
Royal United Hospital Bath NHS Foundation Trust	May 2016
Weston Area Health Trust	May 2016
Somerset Doctors Urgent Care	May 2016
Care UK	May 2016
Somerset County Council	May 2016
Local Medical Committee	May 2016

Somerset GP Practices	May 2016
Somerset Patient Participation Group Chairs	June 2016
South Western Ambulance NHS Foundation Trust	June 2016
St Margaret's Hospice	June 2016
Digital Inclusion Group members: DWP Cosmic Age UK Mendip Council Taunton Deane Council	June 2016
Somerset Healthwatch	June 2016
EDF Energy	August 2016
Circle Health Bath	July 2016
Kernow CCG	July 2016
Duradimond/ EDF	August 2016
Dorset CCG	September 2016
PLUSS	September 2016
North, East and West Devon CCG	September 2016
Local Pharmacy Committee	October 2016
Local Optometric Committee	October 2016

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Executive Summary

At a national level, NHS England's Five Year Forward View (October 2014) set the context for transformation of healthcare delivery. Many of the changes envisaged are critically dependent on the transformative power of information and technology. One key commitment is that, by 2020, there would be "fully interoperable electronic health records so that patient's records are paperless". In response NHS England's National Information Board (NIB) identified the need for "development of local roadmaps for digital interoperability to be published in 2016".

NHS Somerset Clinical Commissioning Group has been tasked with coordinating the development of a local digital roadmap for the Somerset 'footprint', which intends to support the delivery of the 'Triple Aims', and priorities set within the Somerset Sustainability and Transformation Plan.

With the development of our first Somerset Digital Roadmap, through digital maturity assessment and discussions in workshops, we have gained a fuller understanding of our recent achievements, and an agreement to be ambitious in our vision for 2020; as a community to work further, faster, wider and deeper in our pace and scale to be paper free at the point of care.

Commissioners and Providers have developed a shared digital vision that underpins the Somerset Health and Wellbeing Strategy, the ambitions of the Sustainability and Transformation Plan (STP) as the key transformation programme:

"People of Somerset will have high quality care that is affordable and sustainable supported by:

- *Digital systems which support individuals to maintain their health and wellbeing and take control of managing their conditions*
- *Individuals who have ownership of their record with is shared digitally at the point of care*
- *Digital systems that extend into, and connect, resilient communities enabling 'one system' to be efficient and effective*
- *Planning of care which uses joined up information*
- *Digital systems that provide paper free efficiencies, removing paper and fax flow of information".*

The objectives to meet this vision are:

- *All relevant information is digitally shared and accessible by individuals and relevant professionals involved in supporting the individual at the point of care across health, social care and legitimate providers.*
- *That people seeking care in Somerset are aware and understand that their personal information is shared to support their direct care.*
- *That people living in Somerset are able to self-care and self-manage health conditions, with ability to access and add to their information recorded by health and social care providers.*

- *The system is efficient and effective through the use of technological solutions embedded as business as usual, using a capable and robust IT infrastructure that is universally available across the wider health and social care community to meet these aspirations.*
- *That data recorded by health and social care services, can have personally identifiable information removed, enabling local health and care planning teams to use the data for planning and development of health and care services for the population of Somerset.*

To deliver the vision and objectives the Somerset Digital Roadmap identifies four key work streams:

1. A paperless system, with shared records and interoperability
2. Person facing services and digital inclusion
3. Real-time data analytics at the point of care
4. Whole systems intelligence

Further to the nationally defined 10 universal capabilities, we have defined further local priorities:

- A common language and messaging standard to be developed between health and social care, to include coding and understanding of preferred coding system by NHS England
- To raise awareness and engagement of local population and staff members on information sharing and use of digital technology in providing health and social care services
- Identify all Digital Leaders across the Somerset community, including Chief Information Officers, Chief Clinical Information Officers and other critical digital leads

The Somerset Digital Roadmap as the digital thread to the Somerset STP, has its governance established through the STP Programme Board to the Somerset Health and Wellbeing Board. Within Somerset STP, the Somerset Digital Roadmap will be held by the STP Digital Reference Group, with operational planning and implementation through Somerset Integrated Digital e-Record Group.

The Digital Reference Group will be chaired by the STP SRO, and incorporate clinical and lay representation, as well as the key providers in Somerset, to define and determine the path to full interoperability of key systems, to allow for access to key patient information irrespective of the care setting.

The Roadmap identifies key risks, recognising the pace of delivery may be restricted by resources and funding availability, and identifies specific enablers, including;

- Somerset Overarching Information Sharing Agreement established with all key providers, establishing the baseline of understanding of principles for sharing information;

- Support across the STP from the Somerset Integrated Digital e-Record Programme with a full range of information management and technology related initiatives;
- Good structures in place to engage with representatives of our local population, including equality and diversity leads, clinical and non-clinical staff, and working with communication and system leaders.

Somerset has a defined and standalone footprint, with good current progress on digital maturity, and a commitment from our local health and social care community to work together. There is a clear ambition to achieve a system that enables information flow to be paper free at the point of care by 2020.

OUR VISION:

"People of Somerset will have high quality care that is affordable and sustainable supported by:

- Digital systems which support individuals to maintain their health and wellbeing and take control of managing their conditions
- Individuals who have ownership of their record with is shared digitally at the point of care
- Digital systems that extend into, and connect, resilient communities enabling 'one system' to be efficient and effective
- Planning of care which uses joined up information
- Digital systems that provide paper free efficiencies, removing paper and fax flow of information".

OUR PATIENT'S PRIORITIES

"I will only have to give my information once as everyone shares my records."
"My care is joined up around me as everyone keeps in touch with me and each other."
"I can have easy and quick conversations with my care team when I need them.
"I am in control of my own records and plans and can share them when I need to."

OBJECTIVES

All relevant information is digitally shared and accessible by individuals and relevant professionals involved in supporting the individual at the point of care across health, social care and legitimate providers.

That people seeking care in Somerset are aware and understand that their personal information is shared to support their direct care.

That people living in Somerset are able to self-care and self-manage health conditions, with ability to access and add to their information recorded by health and social care providers.

The system is efficient and effective through the use of technological solutions embedded as business as usual, using a capable and robust IT infrastructure that is universally available across the wider health and social care community to meet these aspirations.

That data recorded by health and social care services, can have personally identifiable information removed, enabling local health and care planning teams to use the data for planning and development of health and care services for the population of Somerset.

WORKSTREAM	PLANS
A paperless system, with shared records and interoperability	**Paperless working across Foundation Trusts, Primary Care and Adult Social Care** **Extension of paperless and interoperable working to wider providers of Health and Social Care, and extend to new service providers coming into Somerset** **Identification of independent sector and communities that will be providing prevention and early intervention to individuals, avoiding or delaying a need for health or social care**
People-facing services	**Deliver system efficiencies to current practices** **Identification of opportunities to use technology to support efficiencies in how the workforce engage with individuals** **Identification of opportunities to use technologies to support self-management, and health education, avoiding or delaying the need for health or social care interventions**
Real-time data analytics at the point of care	Data routinely used in planning, review and procurement of local services Increased digital maturity indicated in DMSA annual assessment
Whole systems intelligence	**By 2018, the system will have a joined up information system that is able to provide information against the Somerset Together Outcomes Framework that supports monitoring of population health management and proactively support identification of future outcomes**

BENEFITS

closing the health and well-being gap;

- **Supporting individuals to use technology as an enabler to taking control of their health and wellbeing**
- **prioritise clinical areas that there are high levels of health inequality and, focus on hard to reach populations**
- **system wide sharing of information to support health planning and monitoring of progress**

closing the finance and efficiency gap;

- **enabling staff and communities to work with individuals in new ways, to have remote working and information at the point of care which will drive efficient and sustainable models of care**
- **Using joined up information will contribute to understanding the needs of the population and the effectiveness of new models of care**

driving transformation to close the care and quality gap;

- **system wide shared records and patient ownership of records will enable improved quality of care through access to the right information at the right time, reducing duplication, and improve communication**
- **patient facing technologies will enable remote and efficient ability to contribute to prevention and early intervention, giving better quality of care**
- **enabling staff and communities to work with individuals in new ways, to have remote working and information at the point of care will drive efficient and sustainable models of care**

A About the Digital Roadmap

A1 Background

A1.1 NHS England's Five Year Forward View (October 2014) set the context for transformation of healthcare delivery. The document recognises that the Health Service needs to change over the next five years if it is to achieve the 'Triple Aim' to close the widening gaps in the health of the population, transforming the quality of care, and achieving sustainable funding of services. This cannot be done nationally but locally in collaboration with key organisational stakeholders, individuals, communities and staff.

A1.2 Many of the changes envisaged are critically dependent on the transformative power of information and technology. One key commitment is that, by 2020, the system would have "fully interoperable electronic health records so that patient's records are paperless".

A1.3 In response, the National Information Board (NIB) set out a series of IM&T priorities (NHS England November 2014). Amongst its recommendations, the NIB identified the need for "development of local roadmaps for digital interoperability to be published in 2016". Commissioners have been tasked with coordinating the development of Local Digital Roadmaps (LDRs). Progress in delivering the commitments and aspirations in the LDR will become part of commissioner and provider assurance, assessment and inspection regimes.

A1.4 The LDR footprint is co-terminus with the STP footprint, which offers strong cohesion across plans and enables digital transformation to have a consistent focus and priority in delivering sustainable services.

A1.5 We have had two years system wide working arrangements within Somerset as a planning unit, and governance structures in place to support this. We have one Health and Wellbeing Board in Somerset and the Joint Strategic Needs Assessment is prepared on this basis. It is through these vehicles that we have identified and are addressing the challenges we face that will impact on health and social care system going forward, in particular, the demographic change in Somerset. We believe that our comprehensive plans to deliver Outcome Based Commissioning within Somerset will support the delivery of the transformational change we require in Somerset and will mitigate any risks associated with not being part of a wider footprint.

A1.6 The following core organisations are included within the Local Digital Roadmap footprint:

- Somerset CCG
- Somerset County Council
- Taunton and Somerset NHS Foundation Trust
- Yeovil District Hospital NHS Foundation Trust
- Somerset Partnership NHS Foundation Trust

- Somerset GP Practices
- Somerset Doctors Urgent Care
- South Western Ambulance Services Foundation Trust
- Care UK

A1.7 A number of other local organisations have engaged in early discussions in the development of the Somerset Digital Roadmap and include:

- St Margaret's Hospice (Third sector)
- District Councils (Mendip, Sedgemoor, South Somerset, Taunton Deane, West Somerset)

A1.8 The ambition of becoming paperless and interoperable at the point of care requires digital transformation to follow the patient's journey, and not be limited by traditional organisational boundaries. In Somerset, a number of people will attend out of county Hospitals, including Royal United Hospital and Weston General Hospital, for secondary care, and tertiary specialist services are provided across a number of neighbouring counties. The ambition is to ensure that all patient flows can be enabled through digital transformation, and this is a shared commitment across partner CCGs to ensure that each footprint enables the system to work as one when required. Further engagement, and planning for shared developments, is ongoing with neighbouring CCG areas and their associated providers, including:

- South West – Kernow CCG, North, East and West Devon CCG, South Devon and Torbay CCG via the South West Academic Health Science Network
- Dorset CCG
- Bath and North East Somerset (BaNES) CCG, including Royal United Hospital Trust, Bath.
- Bristol, North Somerset, South Gloucester (BNSSG) CCGs via the South, Central and West Commissioning Support Unit, including Weston Area Hospital Trust.

A1.9 Somerset is part of the North Bristol Trauma Network and the Severn Urgent and Emergency Care Network. These networks align and cover Bristol, North Somerset, Somerset, South Gloucestershire, BaNES, Wiltshire, Swindon and Gloucestershire. We are also linked into the wider South West Clinical Networks including cancer, cardiovascular, diabetes, stroke, maternity and children, mental health, dementia and neuro conditions. Somerset will continue to actively participate and contribute to these networks and ensure that the strategic transformational change across these networks is incorporated within our Sustainability and Transformation Plan and Local Digital Roadmap.

A1.10 The Forward View indicated that the NHS needs to take decisive steps to break down the barriers in how care is provided between family doctors and hospitals, between physical and mental health, and between health and social care. The future will see far more care delivered locally but with some services in specialist centres, organised to support people with multiple health conditions, not just single diseases. Most importantly the Forward View highlighted the need for the development of new care models where commissioners and providers work together to develop more person centred models of care around the needs of individuals.

A1.11 In Somerset, it is recognised that the scale of transformation required cannot be delivered by health and social care organisations in isolation. The contribution of patients, carers, community, and voluntary and third sector organisations in future service models is critical, as well as recognising the existing role of other commissioned independent and smaller providers, including public health services, hospices, care homes, housing, education and district councils.

A1.12 Engagement has started and will be ongoing with patient groups and other service providers, including statutory, community, independent sector and third sector organisations. Much of the engagement will be embedded in the STP engagement strategy, as digital technology forms an integral part of new models of care, other specific projects will require dedicated focus groups to progress; by asking the public about their own individual experiences as patients and carers, to help to shape the specific digital outcomes framework and ways in which we will measure the delivery of person-centred outcomes in future. A number of engagement conduits are regularly used, including the Somerset Engagement Advisory Network, the PPG Chairs' Network, HealthWatch, voluntary sector partners and the nine health forums.

A1.13 The CCG will proactively targeting community groups and voluntary organisations who can help us hear the voices of groups who are marginalised or vulnerable, specifically communities that are not digitally enabled, but also Black or Minority Ethnic (BME) communities, Lesbian, Gay, Bisexual and Transgender (LGBT) people, young people, carers, faith communities, and people with learning and other disabilities.

A2 Purpose

A2.1 Locally the need for electronic sharing of patient/client records has long been recognised as fundamental to achieving many of the goals set out in Somerset CCG's strategic and operational plans. The LDR provides a framework for achieving a greater ambition for Somerset, in ensuring that digital transformation underpins wider system transformation, underpinning strategic programmes of work.

A2.2 By definition achieving fully interoperable electronic health records requires high levels of collaboration and coordination amongst local stakeholders. The LDR is the vehicle through which some of the necessary collective milestones and issues become identified and agreed.

A2.3 The LDR extends the original remit to address Paper-free at the Point of Care (PF@PoC). It encompasses:

- PF@PoC – for information used both within and shared between organisations
- Digitally enabled self-care
- Real-time data analytics at the point of care
- Whole systems intelligence to support population health management and effective commissioning, clinical surveillance and research.

A2.4 This updated iteration of the LDR provides the opportunity to have one shared vision for digitally enabled care in Somerset, with a high level plan of how this will be realised, and a narrative of the progress and plans of each of our key organisations' in our community. Whilst the Digital Maturity Self-Assessment provides a core monitoring tool to measure progress in achieving PF@PoC each year, and a focus on the universal capabilities, agreeing a vision also supports the prioritisation of a number of additional local collaborative programme to be identified.

A2.5 It is recognised that many organisations already have advanced IM&T strategies, and it is not intended that the LDR replaces or replicates the IM&T strategies and plans of individual organisations. Rather, the LDR focuses on the strategic objectives for the whole system, and draws together the common themes where collaboration is either desirable (e.g. to achieve economies of scale, to share scarce resources, to share best practice) or essential (e.g. cross-organisational data sharing and interoperability).

A2.6 It should be noted that, whilst building on pre-existing IM&T strategies and plans, this is the first LDR for Somerset. As such, the LDR will evolve, being refined and expanded in subsequent iterations.

A3 Development and Endorsement of the Roadmap

A3.1 The LDR is a new vehicle with guidance from NHS England and provides Somerset with a real opportunity to build on existing Somerset IM&T Strategies. Somerset has previously formed a Somerset Integrated Digital e-Record (SIDeR) Programme, bringing together all of the key care providers in Somerset, to define and determine the path to full interoperability of key systems, to allow for access to key patient information irrespective of the care setting. This Roadmap will support the group to develop their work programme as part of the STP. The Digital Roadmap will govern the digital change requirements to support transformation of services for the Somerset population.

A3.2 This roadmap has been developed by Somerset CCG, in consultation with representatives from each of the main health and social care organisations within the footprint, in recognition that the ambitions can only be delivered through provider and commissioner collaboration. This development has also had support from South, Central and West Commissioning Support Unit (SCWCSU). For each organisation, the development involved provision and analysis of documentation, completion of pro-formas, participation in workshops, discussions and review of draft LDR documentation. The process and emerging priorities have been shared through a number of meetings and forums, such as the Somerset Health and Wellbeing Board, to ensure system leaders are engaged and in agreement with the digital ambition and delivery plan for PF@POC by 2020.

A3.3 Further work has been undertaken to align the LDR with the STP through agreeing a shared governance and reporting approach within the STP Programme. Operationally, development of the Somerset Digital Roadmap has been discussed with stakeholders through routine project boards, programme, finance, planning and supplier meetings, including implementation leads from NHS Digital, NHS England Digital and DCO team members. Support has been sought from suppliers, NHSE and NHS Digital in terms of planned roadmaps for delivery of new functionality at national level (such as GPSoC) as well as metrics from NHS Digital to enable monitoring of utilisation. LDR briefing and discussion has included Somerset Local Medical Committee and Local Pharmaceutical Committee, providing strategic context for the work already being undertaken and to seek renewed support for implementation timescales.

A3.4 Briefing and engagement to date in the development of the Roadmap:

LDR Briefing to go to CCG Leadership Team	10 March 2016
Provider Engagement Workshops for LDR Development	14 and 22 March 2016
Draft LDR – shared for discussion and amendment	March – June 2016
LDR links to System Transformation Plan (STP) and Operational Plan	March – June 2016
Electronic Prescription Service Board – Discussed with LPC	12 April 2016
LDR briefing to CCG Clinical Operations Group	11 May 2016
Somerset Primary Care Joint Committee	26 May 2016
TSFT EPR Programme Board	24 May 2016
LDR briefing to Health and Wellbeing Board (HAWB)	26 May 2016
Meeting with the LMC	May 2016
SPFT Trust Executive Team	June 2016
Somerset Health and Social Care Leadership Group	14 June 2016

TSFT Trust Executive Team	14 June 2016
Primary Care Joint Committee	16 June 2016
YDH Trust Board for approval	22 June 2016
TSFT Trust Board for approval	29 June 2016
GP Members Meeting for information	29 June 2016
CCG Leadership Team for approval	30 June 2016
Submission to NHS England (LDR and STP)	30 June 2016
PPG Chairs Network	20 July 2016
Meeting with HealthWatch	July 2016
South West CPIS Stakeholder Engagement Group	July 2016
Somerset Urgent Care Project Board	8 September 2016
SSDC Annual Engagement Event	15 September 2016
Meeting with PLUSS	19 September 2016
IM&T Strategy Group	5 October 2016

A3.5 The first version of the Roadmap has been approved by Somerset CCG and was shared with key providers in June 2016, prior to submission on 30 June 2016. The principles of the Roadmap have been given approval by these organisations and Health and Wellbeing Boards. The Somerset Digital Roadmap will be reviewed annually, noting progress supported by annual Digital Maturity Self-Assessments of Somerset organisation, and celebrating outcomes for Somerset population.

A3.6 This second iteration has been reviewed within the STP programme team to ensure digital aspects are integrated with work plans. Organisations have provided updates on digital maturity progress and are aware of ongoing development work through SIDeR. This updated version will be circulated to all as part of ongoing review and development process.

A3.7 Initial briefing and discussion with wider public services has been through the Digital Inclusion Group – Somerset. Recognising the wider determinants of health, further discussion is required with the five District Councils (including housing teams), Police and Fire Services, library services, and extend into other service providers such as Air Ambulance.

A3.8 Since June, further points of contact with non-NHS organisations involved in delivery of health and care services has been made to ensure wider sharing of the Digital Roadmap, enabling us to share information about plans and capture other elements of work already underway or start to develop new digital ambitions to progress by 2020.

B Strategic Context

B1.1 The NHS and social care services in England are facing unprecedented challenges due to demographic shifts and an extended period of financial austerity, coupled with an ever growing public expectation of what services they should deliver.

B1.2 The Somerset Health and Wellbeing Board, through the Joint Strategic Needs Assessment, has identified a number of challenges that will impact on the health and social care system going forward, in particular, demographic change. The population of Somerset is projected to rise steadily by 0.7% each year for the next 5 years but there will be disproportionate growth in our over 65 population, a group set to grow by 30% between 2011 and 2021. Over 44% of our population are living with at least one long term condition, and we know that we need to do something that helps people manage their conditions more effectively and live independently. If we do nothing differently, it is estimated that the cost across the Somerset health and social care system will increase by more than £212m over the next 5 years. The additional funding allocated to Somerset will cover about a third of this, still leaving a substantial gap to be covered by reducing demand and increasing productivity.

B1.3 At a national level, there is an NHS Mandate that by 2020:

- 95% GP patients offered e-consultation and digital services
- 95% tests digitally transferred between organisations
- Local Digital Roadmaps, increased digital maturity and Paper Free at the Point of Care are achieved

B2 The Somerset Vision

B2.1 Somerset CCG, the three Somerset NHS Foundation Trust providers together with Somerset County Council and the Somerset Health and Wellbeing Board have agreed a clear vision for Somerset which is in line with the Health and Wellbeing Strategy and priorities.

B2.2 The vision is aspirational, yet it sets the context for what we believe will need to change and improve to create a sustainable health and care system. This vision requires health and care organisations (including the County Council, District Councils, NHS providers and commissioners) as well as the voluntary community and social enterprise sector, to come together with a common purpose around improving health outcomes and achieving sustainable services. The vision also requires all people in Somerset to actively take up their role in supporting the change and transformation.

‘‘People in Somerset will be encouraged to stay healthy and well through a focus on:

- *building support for people in our local communities and neighbourhoods*

- *supporting healthy lifestyle choices to be the easier choices*
- *supporting people to self-care and be actively engaged in managing their condition*

When people need to access care or support this will be through joined up health, social care and wellbeing services. The result will be a healthier population with access to high quality care that is affordable and sustainable."

B2.3 There is a collective recognition that system transformation requires high levels of collaboration and a will to put individual outcomes above organisational form, while maintaining high quality of care.

B2.4 Somerset CCG and its partners continue to recognise the enormity of the challenge for Somerset. The extent of the change in terms of behaviours and culture required is not underestimated; however there is an increasing conviction that we need to act together now to support the change that is required to ensure the health and social care system in Somerset can provide safe, effective and sustainable services in the future.

B2.5 In November 2015, the Kings Fund published 'Place- based systems of care: A way forward for the NHS in England'. The document proposed a new approach to tackling the growing challenges relating to financial and service pressures at a time of significant rising demand. This guide has influenced our approach to the system plan in Somerset.

B2.6 The LDR in Somerset seeks to reflect all these elements set out within the Forward View and translate them into meaningful change which will support the Somerset vision.

B3 Sustainability and Transformation Plan

B3.1 A key national requirement is to return the local health system to aggregate financial balance. The scale of the challenge in Somerset should not be underestimated and will require a level of collaboration between organisations, transformation of services and engagement of clinicians, other staff and the public that has not previously been achieved.

B3.2 The Five Year Forward View noted that for the NHS to meet the needs of future patients in a sustainable way, we need to:

- Close the health and well-being gap;
- Close the finance and efficiency gap;
- Drive transformation to close the care and quality gap.

B3.3 In Somerset we have to come understand that we will need to transform the system and the constituent parts in a co-ordinated manner.

B3.4 There is an increasing emphasis on the delivery of improved outcomes via health and care organisations working together within locally determined organisational forms, and the need to reform the commissioning incentives to achieve these objectives.

B3.5 The role of technology and deployment of digital functionality has been identified as one of the key priorities in the STP in order to accelerate change, as well as supporting each of the local projects as seen in Figure 1:

Figure 1.

B3.6 Further to this, the developing of an Outcomes Framework for an outcomes based commissioning approach has included performance indicators for interoperability, and this is further underpinned with an interoperability transformational CQUIN for 2016/17

Primary Care

B3.7 General Practice is usually the first place patients have contact with when seeking help with their health and provides approximately 90% of NHS activity. The current model of General Practice is under significant pressure because of workforce issues, a growing population which is living longer with more complex conditions and changing individual expectations.

B3.1 The GP Forward View addresses these issues and we recognise that building a sustainable and resilient future requires transformational change and innovation. The Somerset Primary Care Plan is our local approach to delivering the GP Forward View, primary care elements of our STP and the Somerset together programme for accountable care delivery. IT and Technology plays a critical role in creating the infrastructure necessary to

support change, enabling interoperability throughout the health system and providing the ability to manage demand to make sure people see the right health professional in a timely manner.

B4 Vision for Digitally Enabled Transformation

B4.1 It is recognised locally and nationally that the kinds of transformative change set out in the STP cannot be achieved without realising many of the opportunities afforded through extensive investment and deployment of digital technology.

B4.2 A shared digital vision has been generated in partnership with providers, which seeks to underpin the Somerset Health and Wellbeing Strategy, and the ambitions of the STP as the key transformation programme.

"People of Somerset will have high quality care that is affordable and sustainable supported by:

- *Digital systems which support individuals to maintain their health and wellbeing and take control of managing their conditions*
- *Individuals who have ownership of their record with is shared digitally at the point of care*
- *Digital systems that extend into, and connect, resilient communities enabling 'one system' to be efficient and effective*
- *Planning of care which uses joined up information*
- *Digital systems that provide paper free efficiencies, removing paper and fax flow of information".*

B4.3 The objectives to meet this vision are:

- *All relevant information is digitally shared and accessible by individuals and relevant professionals involved in supporting the individual at the point of care across health, social care and legitimate providers.*
- *That people seeking care in Somerset are aware and understand that their personal information is shared to support their direct care.*
- *That people living in Somerset are able to self-care and self-manage health conditions, with ability to access and add to their information recorded by health and social care providers.*
- *The system is efficient and effective through the use of technological solutions embedded as business as usual, using a capable and robust IT infrastructure that is universally available across the wider health and social care community to meet these aspirations.*
- *That data recorded by health and social care services, can have personally identifiable information removed, enabling local health and care planning teams to use the data for planning and development of health and care services for the population of Somerset.*

B4.4 The vision and objectives can be seen to support the Forward View's 'triple aims' through:

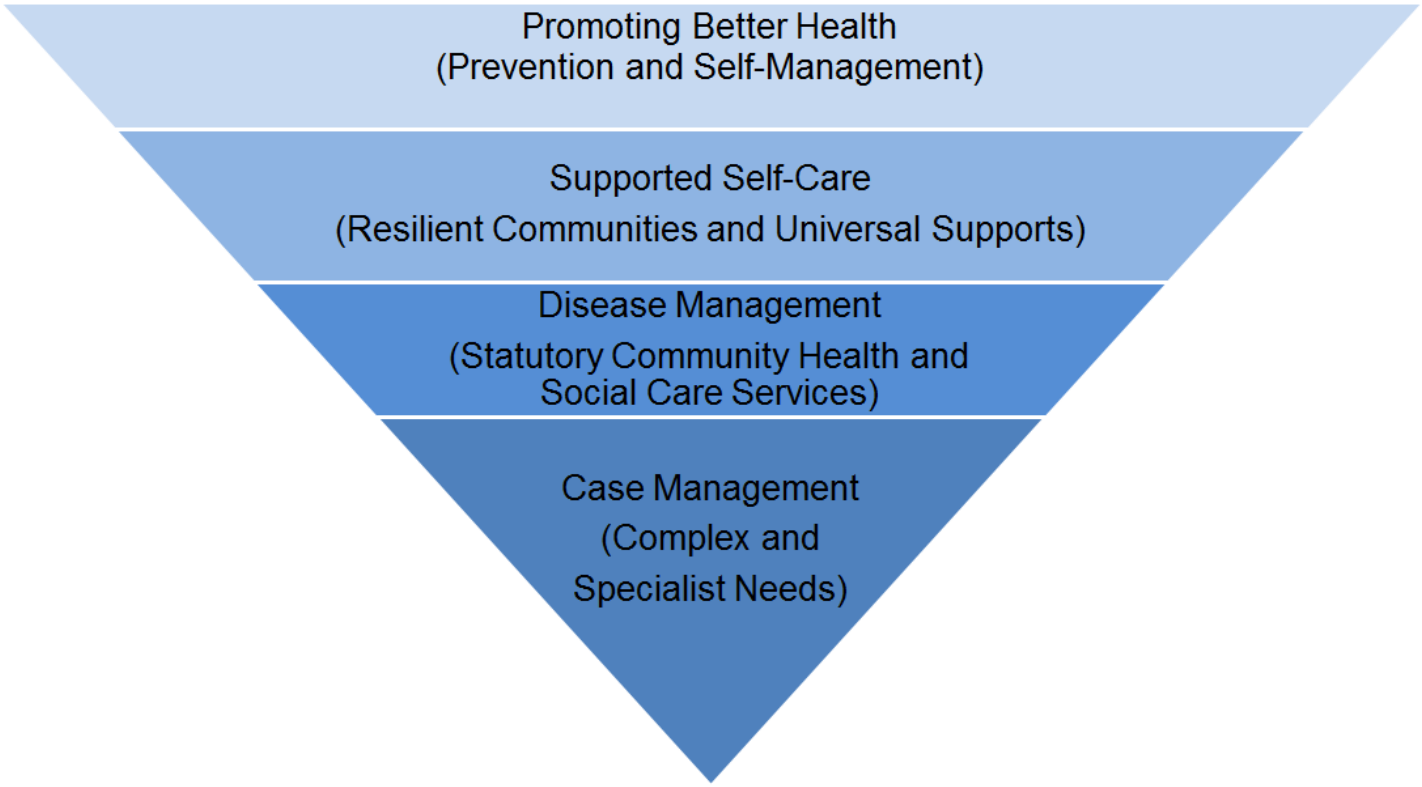
Triple Aims
closing the health and well-being gap;
• Supporting individuals to use technology as an enabler to taking control of their health and wellbeing, for example developing telehealth approaches to promote healthy lifestyles including increasing exercise and people managing their hypertension • prioritise clinical areas that there are high levels of health inequality, and, focus on hard to reach populations, including improving accessibility of diabetes education to reduce complications and increase health and wellbeing and targeting smoking cessation in populations where there is a high prevalence • system wide sharing of information to support health planning and monitoring of progress, including proactive reduction in falls and hip fractures by targeting populations at risk
closing the finance and efficiency gap;
• enabling staff and communities to work with individuals in new ways, with information at the point of care which will drive efficient and sustainable models of care, including supporting 'decide to admit' and 'discharge to assess' models of care, and, transformation of outpatient models of care • Using joined up information will contribute to understanding the needs of the population and the effectiveness of new models of care, for example using real time system wide data to reduce delayed transfers of care, and identifying people at risk of admission early to support admission avoidance. • Enabling staff to have to have remote working and information which will support sustainable new models of care; including using interactive whiteboard technology to manage hospital at home services, rather than continued reliance on bed based services
driving transformation to close the care and quality gap;
• system wide shared records and individual ownership of records will enable improved quality of care through access to the right information at the right time, reducing duplication, and improve communication • patient facing technologies will enable remote and efficient ability to contribute to prevention and early intervention, giving better quality of care, for example models of care that help to meet urgent care targets • enabling staff and communities to work with individuals in new ways, to have remote working and information at the point of care will drive efficient and sustainable models of care, for example new models of offering outpatient follow up that support meeting the RTT target

B5 Assumptions

B5.1 There are a number of assumptions that are either made individually or as a system that have informed the development of the Roadmap to date, and are fundamental building clocks for the system wide delivery of digital change:

- That people already think clinicians share information to understand and provide the care required
- That we will continue to have multiple organisations, not one, providing care services in Somerset
- That consent will be sought at the point of care, to access information available
- That organisations work to the same technical standards for recording and sharing information
- We need to be mindful that some sectors and sub-groups need support in decision making, including children and those cognitively impaired.
- There are aspects of transactional care, which can be improved with introduction of digital alternatives
- There are multiple layers of support across a wide system, as shown below, and digital transformation needs to ensure timely information flow between all four levels of care, and not focus on Health and Social Care alone
- That for younger people, social media and technology are included in a revised Maslow's hierarchy of needs.

Figure 2.



B6 Patient Engagement

B6.1 As part of ongoing CCG engagement Co-design workshops for Somerset Community Services Review, and more recently Somerset's Outcome Based Commissioning developments, members of the public provided feedback regarding what they would like to see from the Somerset Health and Social Care system:

What participants said they wanted:	Theme:
• "I want information on my options, including staying at home, that are appropriate to the stages of my life and my health and support needs at that time" • "I want to understand the system" • "I want to know what my options are" • "I want the hospital to keep in touch with me" • "I want to have a conversation with my clinician" • "I need a buddy – someone I can trust and ask questions"	Good communication and information
• "I want more flexible options (one size does not fit all)" • "I want a system that deals with me as a person, not a set of individual problems" • "I need holistic support where I can get help for all aspects of my life" • "I want to be able to make my own decisions" • "I want support, not just tablets" • "It's difficult getting a personalised service in a 'one size fits all' system" • "I want services that are about me, not the system"	Person-centred care / individually-tailored care
• "I want support, not just tablets" • "I want to have an appropriate and sufficient amount of time with care professionals" • "I want to be able to speak to someone who is knowledgeable and has the right experience, not necessarily a GP or doctor" • "I want support from someone who understands about my condition" • "I want consistent community care from people who have time to care" • "I don't want to have to battle to get what I need" • "I don't want my GP to be the gate-keeper"	Access to the right care with the right person
• "I want hospital discharge to be joined-up and person-centred, involving those important to me" • "I want services to be co-ordinated and ready when I am discharged" • "I would like to have a care plan for myself as a carer" • " I want a single point of contact"	Co-ordinated care

• "I want services to be able to communicate with each other" • " I want health and social care to have joint records" • "I want co-ordinated IT systems" • "I want an IT system for the benefit of patients, not the organisation"	

B6.2 The feedback was used to support the development of the vision and aims for the digital roadmap. The Roadmap is summarised as a plan on a page to support the communication of the vision, objectives and work streams to the wider public on page 4. Further opportunities for members of the public to be involved in development of the Somerset Digital Roadmap were provided during 2016 and will continue as part of the annual review process, as well as within specific STP work streams and projects, to ensure the outcomes of digital transformation are providing positive impact to individual care.

B6.3 From many people's daily use of technology, social media is one of the most well used tools. At a recent South West Clinical Senate event, social media and its increased use was presented, identifying that the "NHS is finally ready to step up to the mark and bring social media into mainstream core business operations, delivering real value and improvement across activities such as listening, engagement, improvement and collaborative innovation". As a Somerset community, we will include informed use of social media as one part of our communication and engagement plan.[1]

B6.4 It is recognised that we need to communicate the complex scenario and technical language of our digital vision and projects into 'Plain English' and Easy Read and there is agreement to work with Somerset Healthwatch on this.

B6.5 Early sharing of the digital vision with our Patient Participation Group (PPG) Network and Health Forums during Summer 2016, has already led to small changes in context and language used in slides, on the website and social media. As these conversations develop and widen, it is anticipated that the focus will shift to care delivery with acceptance of digital tools in supporting everyday care.

[1] NHS Providers and J B McCrea Ltd Report "Beyond the Brink - the second annual analysis of NHS Social Media" as presented at SW Clinical Senate, March 2016

C Digital Workstreams

C1.1 The vision and objectives for the Digital Roadmap translate into 4 key work streams for implementation.

C2 Workstream 1: A Paperless System, with Shared Records and Interoperability

C2.1 Our aim is to make technology, including ready access to information for the clinician and the patient in Health and Social Care, part of everyday life for the registered population of Somerset. This will include ensuring the right person can deliver an optimal level of care at the right time in the right place for the person, based on access to an appropriate level of patient information compiled from all care providers.

C2.2 Taunton and Somerset NHS Foundation Trust have been selected as a Global Digital Exemplar and may receive funding to deliver pioneering approaches to digital services. This is an opportunity to accelerate this digital transformation in one site, and share the learning across the county through this mechanism. Whilst does mean the full benefits may not be realised until all organisations at the same stage, we anticipate the spread should become swifter as a benefit of this development.

C2.3 A key element of supporting person centred care and transformation is the vital role of the voluntary and community sector in proactively supporting people to maintain health and wellbeing, and avoid the reactive traditional health and social care models. This will see a new workforce develop across Somerset, and a range of independent and third sector providers take up roles that are significant in achieving new models of care. This ambition is a thread that runs through the development of the Roadmap; ensuring that becoming paperless and interoperable across statutory providers is only the first step, and that being digital at the point of care reflects this new landscape.

C2.4 In addition to information access and exchange, the SIDeR programme aims to provide intelligent alerting and escalation regarding patient arrival and treatment in any Somerset care setting. This will notify relevant clinicians of a service request / attendance and any resultant care and medication provided, including notifying care providers who had scheduled appointments with a patient that due to new circumstances, that patient won't be attending their appointment and a care plan review may be necessary. This will truly join up healthcare providers and improve the individual's experience.

C2.5 The detailed plans for the universal capabilities have already seen digital functionality introduced through a number of projects, and with further focus and engagement, we plan to increase utilisation in order to enable further system wide changes to effectively support services being paper free at the point of care. The impact of these changes will support our local population in accessing information to support self-care and transactional requests being completed as people do with other online service interactions. The impact of digital changes on service providers will support increased efficiency, enabling both time and financial savings to be realised.

C2.6 We recognise that digital technology cannot be implemented in isolation, and for full and meaningful implementation, a package of digital functionality together with a change in culture and behaviour is required. To enable this, through our Digital Roadmap, we will look to identify and work with an expanded range of system leaders to become digital leaders, to understand and champion the role of digital functionality in service provision. With digital as a key thread for the STP, the increased profile of digital technology as a change enabler, we will work to identify technology in support of projects, rather than IT projects being implemented for their own purpose. With this approach an improved understanding will emerge of how IT systems can benefit patient care and experiences.

C2.7 Ongoing communication and updates on digital roadmap and delivery, with shared learning and capture of benefits, remain as core requirements in all projects. With the need for improved finances and pace of project delivery, as a community we will need to ensure we seek and capture early learning in balance with delivery of initiatives at scale and pace. Within Primary Care, success in implementation of IT projects has been achieved through a model of piloting, with clinical and non-clinical engagement. As we progress with delivery of our digital ambition, we will need to more robustly extend our work to engage with staff and population groups.

C2.8 This approach has already made significant progress though the Somerset Integrated Digital e-Record (SIDeR) Programme. This programme has brought care providers together in one forum with one common goal, to improve the quality of patient care in Somerset by improved access to patient information, irrespective of source. From May 2016, Somerset CCG has appointed a full time programme manager to work with all key stakeholders, to determine current capability to share patient information, to assess any technology requirements that will improve this position, to define the costs involved and to create a formal proposal and plan to implement incremental change in Somerset.

C2.9 With interoperability identified as a key enabler for change, digital transformation has been formally included in contractual discussions with Somerset providers. A number of items have been identified as part of transformational CQUINS, as well as within Data Quality and Service Improvement Plans. Operational planning and delivery will be co-ordinated through the SIDeR Programme.

C2.10 As part of ongoing support to clinicians, we are aware there is a current issue for GPs, hospital consultants and other clinical staff where patient flow is across organisations, in ordering diagnostic tests and accessing results digitally. This is a local priority. This will require discussion both in county and with neighbouring footprint providers (including Mendip with RUH in Bath and Yeovil with Dorchester) to improve the flow of information between different systems.

C2.11 During summer 2016, first steps of change have enabled access to data for services in Mendip/ Bath area and discussions have begun for similar changes between Somerset and Devon hospitals and PathLab services.

C2.12 A Teledermatology pilot to enable clinician to clinician communication using technology and preventing unnecessary referrals and fast-track is to be reviewed to explore outcomes and inform further rollout based on early feedback.

Phase	Workstream1 Deliverables	Timeframe

Phase 1	**Paperless working across Foundation Trusts, Primary Care and Adult Social Care**
	This will include development of:
	• Shared language
	• Standards, language and integration (all Providers to have an agreed approach):
	  ○ Technical (HL7, CDA, MESH, FHIR)
	  ○ AoMRC Standards
	  ○ Accessible Information Standard – LD and communication preferences captured and shared
	• Information Governance
	• Portal: explore procurement options and specification development
	• Tests and results: Ordering diagnostic tests and accessing results digitally
	• Staff education on Digital Roadmap and information sharing
	• Detailed plan for patient access and population health module
	• The range of providers to include given new models of care
	• Explore options available via GPSoC Framework for new tools
		June 2016 – Sept 2017

Phase 2	**Extension of paperless and interoperable working to wider providers of Health and Social Care, and extend to new service providers coming into Somerset.** This will include: • Identification of key providers	**April 2017 – Sept 2018**

	• Adoption of shared IG, standards, and language • All core Somerset health and social care providers (FT and ASC) will have core digital systems implemented.	
Phase 3	**Identification of independent sector and communities that will be providing prevention and early intervention to individuals, avoiding or delaying a need for health or social care** • Identification of key providers • Identification of key areas for sharing, and with whom • Identification of resources required to deliver interoperability • Adoption of shared IG, standards, and language • Implementation of systems and technologies that support self-care and community collaborations that support sustainability of local health and care systems	**Ongoing**

Work stream 1: Measures of Success by 2020:	
Digital maturity in secondary care is significantly increased	• Patient information is recorded once, digitally, at or close to the point of care • Clinicians alerted promptly to key patient events and changes in status, supported by knowledge management and decision support tools • Improved management, administration and optimisation of medicines, availability of assets and effective staff-rostering
Information is digital (paper free) and flows between primary, secondary and social care providers seamlessly	• Patient information at the point of care is available digitally (irrespective of where it was recorded), on a secure, timely and accessible basis • Transfers, referrals, bookings, orders, results, alerts, notices and clinical communications are passed digitally between organisations • Telehealth and collaborative technologies being used to deliver care in new ways

C2.13 What will this look like for the individual?

"I will only have to give my information once as everyone shares my records."

"I know my options and I can make informed decisions as my care team have all the information they need."

"My care is joined up around me as everyone keeps in touch with me and each other."

C3 Work stream 2: People-facing Services and Digital Inclusion

C3.1 In developing this Somerset Digital Roadmap, we recognise the need to be innovative and ambitious. As a Somerset community, we plan to continue to scan the horizon for new digital technology, looking outside NHS services for alternative tools and ways of working that can be applied to health and care services. In working with local people as part of Somerset Digital Roadmap development, we need to start and consider what works and how technology can support care.

C3.2 In planning, we need to work with targeted self-management for sub-groups of the population. As a community we need to consider the vibrancy of digital actions outside healthcare, how people interact with other home and personal services in use of software and applications. This will include transforming the interface between people and clinicians such as virtual appointments, as well as using technology for individuals to directly influence health behaviours, as well as manage their health and wellbeing.

C3.3 Appropriate use of technology for direct access by individuals has the potential to:

- Reduce demand on services by better informing individuals about healthy choices and appropriate use of services
- Empower people to become partners in choices concerning their healthcare and social care (no decision about me without me)
- Enable people to take great responsibility and control for managing their own health and care
- Offer a wider range of channels through which support and advice can be provided and accessed, which are more convenient and efficient than conventional means
- Transforming traditional face to face contact, allowing the possibility of new models and settings of care

C3.4 The range of relevant information services and technologies is wide. They include:

- People access to / ability to view and to manage their own records
- Telehealth in support of self-management, especially for those with chronic conditions
- Online tools, smartphone apps which can provide tailored advice and support
- SMS text alerts such as appointment reminders
- Social media, e.g. peer group support networks
- Websites to provide information about and signposting to services available such as Somerset Choices
- E- and telephone consultations, video-consultations
- Telecare, including the “internet of things”, i.e. alerts from smart household appliances of vulnerable people

- Virtual clinics for care delivery and virtual PPG to seek views and involvement in planning services
- The NHS England Patient Participation Hub
- Offer real time access to information and data, to the workforce at the point of care, that enables a more efficient system and use of resources
- The STP Prevention work stream is key in setting the clinical priorities for this work. The priority areas of hypertension, diabetes, falls, dementia and mental health will form the initial target groups for patient facing primary prevention, and will also be priority areas in achieving secondary prevention with transforming the use telehealth for the same key areas.

Digital Inclusion

C3.5 Whilst it is recognised that all of these have their place in supporting the STP goals and the shared vision for digitally enabled transformation, we recognise that the people with the greatest health needs are often less likely to have the technology and skills to engage with and benefit from digital services.[2] Therefore, it is critical that attention is given to digital inclusion and accessibility to technology / internet for the ambitions to be realised:

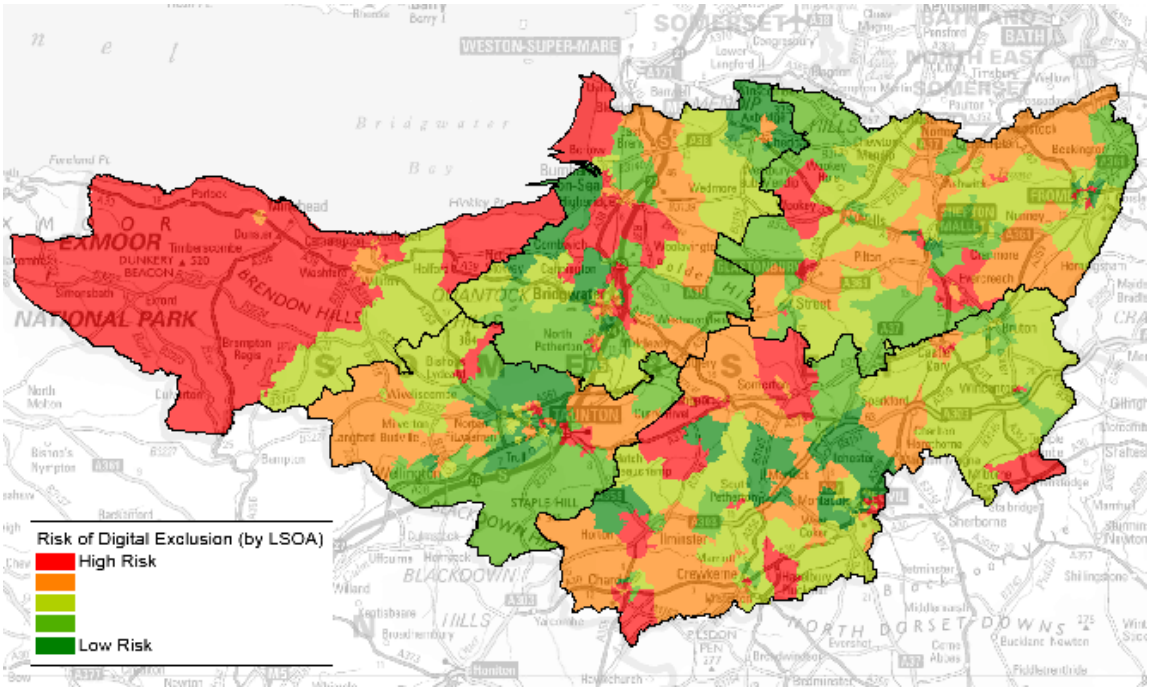
- Significant increase in patient access to and use of their primary care based electronic health record
- Use of tele/audio-visual communication tools for clinician to clinician and clinician to patient
- Awareness and skills training for use of digital technology both in the workplace and at home to decrease the number of Somerset residents who are digitally excluded.

C3.6 Somerset CCG is a member of the Somerset Digital Inclusion Group (DIG) and the South West Digital Working Group, which includes representatives from county and district councils, housing organisations and private digital enablers. The aim of this Group is to prevent digital exclusion, enhance the digital skills of the Somerset population and to ensure that there is an option for public services to be digitally available for those who find it easier to access them this way.

C3.7 The DIGs Group have undertaken a piece of work to map the current risks of digital exclusion across Somerset as detailed in Figure 3.

[2] A Digital NHS, *An introduction to the digital agenda and plans for implementation,* September 2016

Figure 3.



C3.8 Work is being undertaken to improve Wi-Fi connectivity across the county via Connecting Devon and Somerset who will receive an extra £8m following this year's budget announcements.[3] As part of the SIDeR programme, discussions are underway to look at Wi-Fi access for professionals across organisational locations to improve access to core information and tools whether staff are working at their base or visiting other organisations sites. Wi-Fi access for people is already available in a number of NHS sites, and as part of SIDeR further access and options are to be considered.

C3.9 A number of organisations are working to provide IT training for individuals. PLUSS are rolling out a local programme to enhance the digital skills of the public and have met with the CCG to understand how health can be incorporated. Somerset libraries provide IT training across the county and this includes a health module using the Learn My Way website (www.learnmyway.com/subjects/improving-your-health-online/). Mendip Health Connections are prominent across all three Mendip federations and work with both NHS and tertiary organisations (e.g Village Agents) to deliver a number of technology focused projects with the patient at the centre. As a consequence, Mendip GP Practices have a high number of patients signed up to GP Online Services. For example, Frome Medical Centre has 60% of their registered population signed up for online appointment booking and repeat prescription ordering.

[3] http://www.connectingdevonandsomerset.co.uk/

Phase	Workstream 2 Deliverables	Timeframe
Phase 1	**Deliver system efficiencies to current practices** • All providers will have an agreed approach to patient information and information sharing by September 2016 • Equality Impact Assessment – address digital inclusion/ exclusion and understand reasons why, and identify range of opportunities to use technology •	**September 2016**
Phase 2	**Identification of opportunities to use technology to support efficiencies in how the workforce engage with individuals** • Develop a clinician and practitioner engagement plan that will identify the opportunities to enhance practice and the interface between practitioners and individuals, such as remote systems, digital alternatives, and would deliver improved quality and system efficiency • Wi-Fi connectivity across health and social care organisations • Identify further projects and develop full plan, including measureables and outcomes • Review of tele-services in Somerset (Telehealth) and evidence base/ research of emerging 'wearable' technology	**April 2017**
Phase 3	**Identification of opportunities to use technologies to support self-management, and health education, avoiding or delaying the need for health or social care interventions** • A stakeholder engagement plan agreed by December 2016 that will ensure co-production with patients, carers and wider communities in understanding and developing the right options for supporting self-care and prevention. • Identify the area with significant health inequalities to target new technologies • Develop a patient engagement process that will support testing and evaluating the use of technology • Undertake a review of current use of telehealth, and equipment that will support extension of telehealth as a concept • Wifi connectivity considered for population access to digital services • Identify further projects and develop full plan, including measurables and outcomes	**April 2018**

Workstream 2: Measures of Success by 2020:	
Patients, carers and citizens use digital technologies to manage their health and well-being	• Phase 1 - Individuals digitally book and manage their appointments, request and manage their prescriptions and consent to share personal information • Phase 2 - Individuals can view, understand and contribute to their digital record, and manage how this is made available to family and carers • Phase 3 – Approved digital tools and applications used across care settings to facilitate: care planning and shared decision making; education and access to resources; monitoring and feedback on health and wellbeing; and administration of personal budgets

C3.10 What will this look like for individuals?

"I am confident making my own decisions about looking after myself, in a way that suits me."

"I can have easy and quick conversations with my care team when I need them."

"I am in control of my own records and plans and can share them when I need to. I am able to monitor my health condition using a variety of ways and can easily share this with my care team if I need to."

C4 Workstream 3: Real-time Data Analytics at the Point of Care

C4.1 Data analytics are the discovery, interpretation and communication of meaningful patterns in data. In a care setting, clinical decision support tools are used to interpret clinical information and support health providers to make prescriptive decisions. Wider data analytics take two or more elements of patient data recorded to generate specific / tailored advice. This is widely used in retail to suggest other products or services to the consumer that may be of interest given browser history or previous purchases, this is now being applied to other sectors including care.

C4.2 System prompts around previous patient attendances, patterns of behaviour, medication and support required for similar cases could be argued are based on data analytics.

C4.3 Integration of outlying information, such as orders and results, will enable the move towards electronic prescribing. System level capacity management (such as bed capacity) and risk triggers (such as infection control alerts) will also inform data analytics, including decision support.

C4.4 The CCG is currently reviewing with the SCWCSU the likely needs of its business intelligence service going forward. With the STP, SIDeR and the South Somerset Symphony Vanguard programme, the needs are likely to change in 2016/17 and beyond. The CSU is currently seeking to answer the question about what business intelligence will be needed to support this agenda alongside business as usual. The current agenda includes but is not limited to:

- Replacing the RISC system which takes GP and other data to provide a risk profile for the patient population in a more real time manner
- Seeking partners who have experience in reporting on outcome measures
- Addressing what type of information is critical to support new ways of working
- How can the CCG support providers to supply more real time data

C4.5 Priority areas where real time analytics can be used to support a whole system's benefit is understanding patient flows, that will enable real time knowledge of pressures in the system, to be able to respond and deploy resources proactively, and, the ability to view available services to plan and implement discharge arrangements swiftly, reducing the high levels of delayed transfers of care.

C4.6 Further work is needed with clinicians and practitioners to identify further opportunities that real time information and access at the point of care can offer in improving both person centred care and delivering efficiency to the workforce. Coordination of care and access to resources to support shared decision making may be examples of practice that can be simplified through the application of real time data, alongside remote working capability.

Phase	Workstream 3 Deliverables	Timeframe
Phase 1	• Enriching Acute patient records with order and results information for key examinations • Broadening the scope of electronic ordering capability, further enriching patient records • Moving closer to full electronic prescribing and medicines administration, enhancing the communication of prescriptions, aiding the choice, administration and supply of medication through information and decision support • Providing clinicians with alerts, escalations, notifications, reminders, clinician to clinician messaging, clinical guidelines, condition-specific order sets and focused patient data reports	**September 2016**

Phase 2	**Improved health and social care patient flows** This includes: • Understanding the type and level of information required by the system, and the timeliness • Development of shares systems to view in real time information and data to inform decision making and access to services • Workforce and operational process to enable the timely deployment of resources	**April 2017**
Phase 3	**Identify opportunities that real-time / timely information at point of care could offer to person centred care models and system efficiency**	**September 2017**

Workstream 3: Measures of Success by 2020:

1. Data routinely used in planning, review and procurement of local services
2. Increased digital maturity indicated in DMSA annual assessment

C4.7 What will this look like to individuals?

"I am able to get the right support at the right time"

"My care and support is joined up"

"I am able to make appointments and manage my needs at a time and in a way that suits me"

"I can manage my care better myself by being in control"

C5 Workstream 4: Whole Systems Intelligence

C5.1 The bringing together of financial, operational and clinical outcome data centred around people provides an opportunity for deriving whole system intelligence to support population health management, effective commissioning, outcome based contracting, planning, clinical surveillance, service re-design, education, training and research. This, in turn, will enable more effective prioritisation and targeting of resources, increased opportunities for joint initiatives, common solutions and shared learning and expertise.

C5.2 Currently SCW CSU manages on behalf of the CCG a data warehouse which holds pseudonymised patient level data, as well as aggregated data from acute, community and mental health trusts and from primary care. The work to support the Symphony programme has linked several of these data sets to enable the CCG to understand more about its patient population and what are the main drivers of costs within the system.

C5.3 This ability to join up data to give a whole system view is if significance for the Outcome Based Commissioning programme. Outcomes are set for population health and wellbeing, and metrics to support these, as part of the Outcomes Framework. Both require the ability to have a level of system intelligence to both monitor successful achievement of the outcomes but also enable further proactive planning and targeting of outcomes and metrics for future years of the programme.

C5.4 Issues to address for the future, to allow further exploitation of this intelligence, particularly in support of demand management, interoperability and service redesign are:

- Speaking the same language across all Somerset care providers
- Adhering to the same set of standards
- Real time interface messaging between Clinical Systems
- Alerting, escalation, reminders, notifications, clinician to clinician messaging, clinical guidelines, condition-specific order sets and focused patient data reports
- Inclusion of third and private sector data
- Virtual meetings, video conferencing, instant messaging and remote consultations between clinical colleagues to enable clinical collaboration
- Review of service delivery data to understand and explore issues at point of transfer between providers, for example data recorded on ambulance activity to indicate transfer and wait times between ambulance and A&E departments.

C5.5 We will also use digital technology to support education, training and sharing expertise across Somerset geography and providers. As an example, St Margaret's Hospice are looking at the Echo Model as a tool for education to support delivery of health care services in their Fit4Future Strategy.

C5.6 As part of the national work on care.data, informing the public on potential use of NHS data, Somerset signed up to be a care.data Pathfinder area in September 2014. During this time, a local team of clinical, IT, patient engagement and communications leads formed a project group working with NHS England and NHS Digital project team members. The aim of this work was to test some pilot concept and communication materials, seek co-production of these materials with local patient group representative and devise a communications plan for engaging with community and media leads to inform our local population of the initiative. The outcome of the National Data Guardian Review in autumn 2016, regarding the consent model, will influence the next steps.

C5.7 The national care.data programme was closed in summer 2016. As a local project team, we are reviewing lessons learned and outcomes of our conversations with people representing local carers and groups. This information will be used to inform the development of our SDR and SIDeR engagement and communication plan. The value of data in planning and reviewing services to benefit health and care of our local population is recognised, and we are working with the SCW CSU and AHSN to explore opportunities to learn from international suppliers of Artificial Intelligence and data analysis tools.

C5.8 **Public Health and Joint Strategic Needs Assessment (JSNA):** The public health objectives in Somerset are to reduce health inequalities and increase life expectancy, with work co-ordinated through the Health and Wellbeing board. An annual JSNA is undertaken, utilising data to inform commissioners and providers of the needs of the Somerset population. This includes data on demographics, changes over time, health conditions, and predicted needs for future years. The strength of this assessment is based on the data available, and we recognise the need to continue with digital improvements in recording and sharing data, to support future planning.

C5.9 **Somerset Practice Quality Scheme (SPQS)** is a local general practice quality incentive scheme, offered in place of the national Quality and Outcomes Framework scheme. It incentivises person-centred care and system integration. SPQS is part of the system alignment of person-centred measures of quality. SPQS also supports the move towards sustainable primary care by mandating inter-provider collaboration and viability planning.

Workstream 4 Deliverables

1. By 2018, the system will have a joined up information system that is able to provide information against the OBC Outcomes Framework that supports monitoring of population health management and proactively support identification of future outcomes
2. Care.data Pathfinder – Review outcome of the National Data Guardian review in 2016, develop a communications and engagement plan to inform local people and organisations of SDR plans, and explore potential data use for Somerset healthcare service planning and research.
3. Explore opportunities to utilise new analytics technology and Artificial Intelligence to improve whole systems intelligence

Workstream 4: Measures of Success by 2020:

1. Repeat the increase in digital maturity
2. Working routinely with other services in planning and research

C5.10 What will this look like to individuals?

"I have the right services at the right time"

"I am confident that my care team understand my needs and can support me"

"I can see services being set up that meet the needs of my family and friends"

"I can see new medicines being developed and provided"

C6 Benefits and Assumptions

C6.1 The DMSA return identifies the need to improve the capture of benefits to inform the development of future projects, including return on investment and improved patient safety.

C6.2 It is recognised that the measure of success for digital technology projects is the uptake by staff rather than the implementation of the technology itself, and so focus and funding needs to be given to embed IT, and that this requires significant investment to ensure that the workforce are able to learn and adapt to these changes, and are part of the learning.

C6.3 The system needs to develop more sophisticated methods to capture outcomes from digital technology, and be able to articulate these in terms of the individual or clinical outcomes, rather than the technical solution being in place, which in turn will support the understanding of how technology has contributed to achieving the triple aims.

Benefits:
closing the health and well-being gap;
• Supporting individuals to use technology as an enabler to taking control of their health and wellbeing, for example developing telehealth approaches to promote healthy lifestyles • prioritise clinical areas that there are high levels of health inequality, and, focus on hard to reach populations, for example improving accessibility of diabetes education to reduce complications and increase health and wellbeing • system wide sharing of information to support health planning and monitoring of progress, for example using mapping of where wheelchair users live to inform housing planning decisions
closing the finance and efficiency gap;
• enabling staff and communities to work with individuals in new ways, to have remote working and information at the point of care which will drive efficient and sustainable models of care, for example supporting 'decide to admit' and discharge to assess models of care • Using joined up information will contribute to understanding the needs of the population and the effectiveness of new models of care, for example using real time system wide data to reduce delayed transfers of care
driving transformation to close the care and quality gap;
• system wide shared records and individual ownership of records will enable improved quality of care through access to the right information at the right

time, reducing duplication, and improve communication

- patient facing technologies will enable remote and efficient ability to contribute to prevention and early intervention, giving better quality of care, for example models of care that help to meet urgent care targets
- enabling staff and communities to work with individuals in new ways, to have remote working and information at the point of care will drive efficient and sustainable models of care, for example new models of offering outpatient follow up that support meeting the RTT target

D Current situation

D1 Digital Maturity

D1.1 Each NHS Trust completed the national Digital Maturity Self-Assessment (DMSA) in January 2016, which evaluates how well-developed the different aspects of readiness, capability and infrastructure are. The findings are summarised in Table A. Although too much emphasis should not be placed on the actual percentage score, the shading does indicate where organisations are substantially above or below the national average.

D1.2 The LDR is especially concerned with the current maturity for each of the seven Paper Free at the Point of Care capabilities (highlighted in bold in Figure 5). It can be seen that there is wide variation, with some local Trusts above and some below the national average for most of the capabilities.

D1.3 The narrative of the DMSA outputs was explored at the two workshops held in early 2016 with our health and social care providers. This enabled us as a community to understand current status in context of local organisational strategy and plans.

Figure 4. DMSA scores for the Somerset footprint

Issue	England	YDHFT	TSTFT	Care UK	SWASFT	SPFT	WAH	RUHFT	SCC
Strategic Alignment	76	100	70	100	65	100	75	95	75
Leadership	77	100	85	100	70	60	50	100	47
Resourcing	66	50	75	95	70	55	30	100	85
Governance	74	65	60	95	90	60	45	100	67
Information Governance	73	58	67	96	71	71	75	92	77
Records, Assessments & Plans	44	27	28	81	34	50	25	64	40
Transfers Of Care	48	27	62	88	49	33	50	52	-
Orders & Results Management	55	42	67	75	25	50	51	73	N/A
Medicines Management & Optimisation	30	16	11	88	62	24	21	21	N/A
Decision Support	36	31	11	100	72	30	0	50	39
Remote & Assistive Care	32	50	17	58	0	50	33	33	7
Asset & Resource Optimisation	42	40	45	63	63	40	25	50	N/A
Standards	41	53	48	83	28	38	33	71	45
Enabling Infrastructure	68	55	73	84	84	70	43	70	40

D1.4 It is clear that each organisation has a robust IM&T strategy that will positively impact on this position over the next 12 – 18 months, which provides assurance that this will be an improving position.

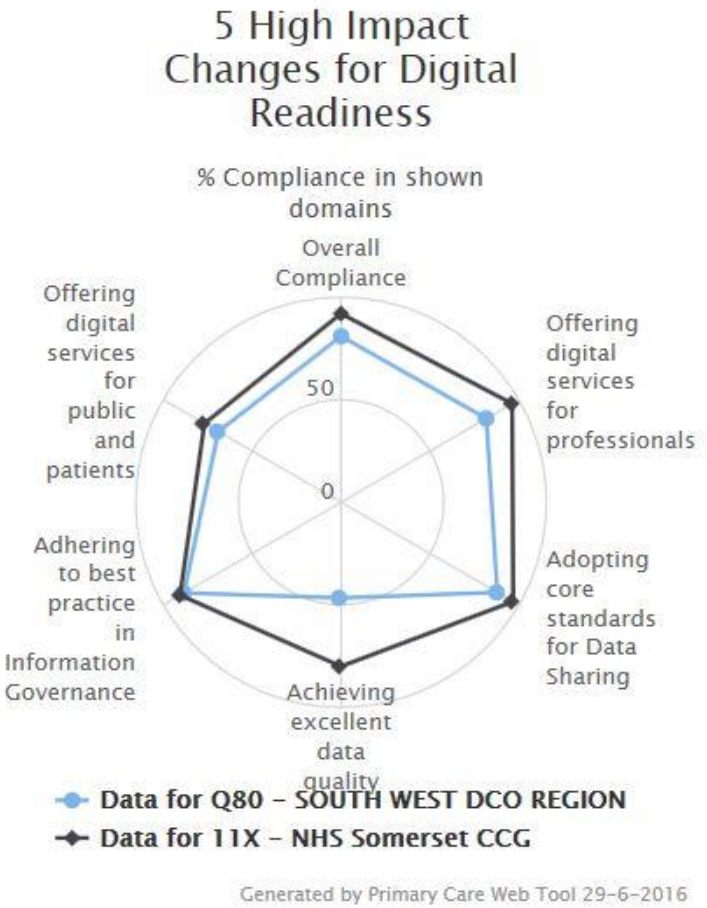
D1.5 A national DMSA tool has been designed for social care (adult and children) providers. It follows the same broad headings as the NHS assessment, and has specific questions which are more pertinent to social care.

D1.6 Highlights include the funding and development activity of Adult and Children's Social Care case management systems, an Adult Social Care assistive technology service solution, and the sharing of Adult and Children's Social Care information via an integrated care record.

D1.7 SCC will not be looking into an Adult or Children's Social Care mobile workforce or Adult Social Care telecare/ assistive technology at this point.

D1.8 A similar systematic national exercise has been conducted for primary care collating data from e-Declaration, NHS Digital and CCG DMSA return. Meanwhile, much is already known, locally, about the availability and usage of systems and IT infrastructure within general practices and applicable DMSA areas have been evaluated with a return drafted. The current status on key aspects is summarised in Figure 5 below (this diagram is unchanged).

Figure 5.



D1.9 Overall, general practices are considerably more digitally mature than NHS trusts in their use of electronic patient records, decision support systems, order communications, e-prescribing, and the other capability areas. For example, it is rare for a GP to need to access / refer to a patient's paper notes for a consultation, or to check a test result or current medications recorded in another setting, or any other routine clinical process. The DMSA shortcomings for primary care relate, largely, to their dependency on other organisations to provide them with information in appropriate formats.

D1.10 Currently, GP IT services are established through a national framework, with 'Digital Primary Care – Securing Excellence in GP IT Services – Operating Model 2016-18'. National discussions are being led by NHS England to include wider primary care teams in digital transformation with involvement of Pharmacy, Optometry and Dental Services. This will ensure that by March 2018, there will be a national single Digital Primary Care Operating Model to ensure digital technology fully supports and enables new models of care. To support this, the SDR lead has contacted all four local committees to ensure that they are aware of, briefed in and engaged with the SDR during 2016-17.

D2 Current and Planned Initiatives

D2.1 There are a wide range of initiatives, both within individual organisations and across the community, that are already supporting the ambitions of the roadmap. These include:

Somerset Current Initiatives:
Creation of an interoperability vision and plan, as part of the SIDeR Programme in Somerset, that will lead to seamless information sharing initiatives and technology solutions accessible by care providers and individuals
Collaborative working, as part of the SIDeR Programme and the vision of Accountable Joint Venture service provision in Somerset
Whole system – Through SIDeR and LDR discussions, Somerset organisations are working together to implement use of digital technology, examples include Mobile working, clinical correspondence and virtual working
The two Acute Trusts are testing virtual working, through videoconferencing to support timely clinical assessment and treatment planning for acute stroke.
Work is being undertaken with through Task and Finish Groups with all Trusts, SCC and Primary Care to discuss and align flags, messaging and alerts across the county
Linking in with similar initiatives in the South West, including AHSN and SWLEP, and on the national scale to provide the best services for the patient, irrespective of the point of care
Redesign of RiO to meet AoMRC Standards
Tele-dermatology pilot in Mendip area
Through links in DIGS to non-health focused services, aware of 'Glass Box' initiative in June 2016 by SCC to develop digital area for microbusinesses as part of Google

Digital Garage initiative, with funding from Tinder Foundation. Seek to learn from innovation and enterprise aspects of this initiative and how this might apply to care services
Corporate use of digital technology such as Skype for Business across key Somerset Providers
Administrative use of digital technology – identify paper flow and replace with digital methods

Planned Initiatives to build a range electronic messaging system between healthcare providers, recognising patient safety risks associated with delays in transfer of timely and accurate information about patient care and treatment
electronic messaging between the community nursing team and GP practices
pilot work with NHS DIGITAL to develop standard messaging between Local Authority and GP
structured tailored electronic messaging for people being cared for by joint services as part of early supported discharge for stroke
electronic messaging for community for patients being cared for
electronic messaging between NHS and non-NHS health services, such as St Margaret's Hospice
electronic Referral Service enhanced functionality for Any-to-Any referrals, and dataflow, working with NHSE and NHS DIGITAL
Structured and automatically populated hospital admission forms, using EMIS templates
Structured and automatically populated hospital referrals
Communication about current medication, newly prescribed medication and changed doses with other services which support the patient, such as community pharmacists and local home

D3 Local transformation pilots / initiatives

D3.1 A number of projects have already started to develop and test new models of care in Somerset, and where digital transformation is identified as being a significant enabler. During 2015/16 these have supported the transformation of the system and will continue to be delivered in 2016/17. A summary of these projects is set out below:

D3.2 *Primary and Acute Care Systems (PACS):*

- In South Somerset, a new organisational model is being tested, based on the Five Year Forward View. The Primary and Acute Care Systems (PACS) model is one of 29 Vanguards which is a partnership between Yeovil District Hospital NHS Foundation Trust, Somerset CCG, South Somerset Healthcare GP Federation and Somerset County Council.
- A joint venture holds a single budget for the population and targets resources to parts of the system where they can make the most difference to people.

- This initially is focused on approximately 1,500 South Somerset residents who have multiple long term conditions, intending to provide integrated care in three hubs that bring together primary, secondary and other care in one place

D3.3 *Symphony and Test and Learn Projects*

- Following the CCG's request for expressions of interest, Test and Learn sites for person-centred coordinated care are running in South Somerset, Taunton and Mendip.
- The principal aims of the Test and Learn sites are to:
    - Act as a catalyst for collaborative working between local partner organisations as a precursor to the STP Programme
    - Test out the effectiveness of the models of care in respect of a number of key outcome areas

D3.4 *South Somerset Symphony*

- The PACS organisational model in South Somerset is part of a redesigned care model, Symphony.
- The Symphony outcomes and Care Hub Model have been developed by patients, carers, health and social care staff and voluntary organisations as a better way of supporting people living with three or more specific long-term conditions. The model puts the person in control of their care and ensures they get the most from local services.
- The Hub helps patients to navigate through services more efficiently and effectively, and will work with each person to create a bespoke Single Care Plan.
- This brings together details and arrangements for any care and support already being accessed – and any other suitable support – making it easier for people to stay in control of their health and wellbeing.
- Patients and any chosen carers or family are able to access the care plan through a safe, secure and easy to navigate website called Patients Know Best. The Hub will also be used to test different flexible models of working with practices, including the ability to see patients in the Hub, in the practice, in the community, in the person's own home or remotely using technological options.
- Symphony Projects in Taunton area, and in the Mendips, have developed alternative models of care, with the same set of outcomes as South Somerset Symphony.

D3.5 *Taunton Symphony*

- Taunton Symphony at its heart has a model that helps people to engage in developing their own personalised support plan. It is anticipated that people involved in this project will gain confidence in proactively managing their own conditions

- Three organisations have come together as one team to test this new model of care: Taunton Federation of GPs, Somerset Partnership and Musgrove Park Hospital. Their role is to ensure that services are brought together, improving communication and joined up working across organisations to achieve outcomes that are important to the individual person. Health and Wellbeing Advisors work in virtual teams.

D3.6 *Mendip Symphony*

- The Mendip Test and Learn is due to commence in February/March 2016 following a review and will be similar to the Taunton model. It will operate out of three hubs and involve local GP practices, Somerset Partnership NHS Foundation Trust, the Royal United Hospital Bath NHS Foundation Trust and Health Connections Mendip
- Better Care Fund
- Estates and Technology Transformation Fund (previously PCTF)

D3.7 Through development of the Somerset Digital Roadmap, we are aware of other initiatives in our community which will have a digital impact. This includes:

- St Margaret's Hospice developing 'Fit4Future' Strategy including development of a Patient and Carer Portal, an improved referral process to the Hospice, facilitating access to patient notes by patients and associated health care professionals, providing key educational facilities through the use of 'Prescribed' information, along with a start to telehealth services.
- Department for Work and Pensions are switching to online digital services in 2016-17, for people to access information and application forms for Universal Credit.

D4 Update October 2016

D4.1 Following the initial Roadmap submission on 30 June 2016, we asked our three main Trusts, YDH, TST and SPFT to re-evaluate their digital maturity.

D4.2 The results from YDH and Taunton can be seen below:

Issue	England	YDH	TST
Strategic Alignment	76	100	100
Leadership	77	100	100
Resourcing	66	80	100
Governance	74	100	80
Information Governance	73	70	75
Records, Assessments &	44	37	33

Plans			
Transfers Of Care	48	43	74
Orders & Results Management	55	58	67
Medicines Management & Optimisation	30	16	11
Decision Support	36	47	11
Remote & Assistive Care	32	50	25
Asset & Resource Optimisation	42	60	60
Standards	41	63	48
Enabling Infrastructure	68	77	77

D4.3 It is evident that each Trust's digital maturity has significantly improved over the 9 months since their DMSA return in January 2016.

D4.4 The key changes that have influenced YDH's score improvement are:

- Trakcare phase 1 (EPR) completed
- Rollout of single sign-on technology in ED
- Improved governance – creation of Central PMO and IT PMO

D4.5 TST have provided the following narrative to support their return:

- *Strategic Alignment, Leadership and Resources are now all 100%, with the work to develop our GDE bid providing a real focus and belief that embracing digital will enable us to deliver greatly improved patient care. Our CEO is now personally driving our plans.*
- *Governance and Information Governance continue to improve and our benefits approach for our GDE bid means we are tracking our digital work better than before.*
- *We have submitted detailed plans, to NHS England as part of our GDE status, to improve our scores on Records, Assessments' and plans, along with Medicines Administration and Decision Support. Our work with SIDER will see our score for Remote and Assistive Care improving as we use data to keep patients well and away from Hospital Admissions.*
- *Our work to comply with Standards, such as GS1 and Snomed are also detailed in our GDE submission and will deliver by November 2018.*
- *Our GDE status and confirmation of £10 million of funding will help ensure a timely delivery of our digital roadmap, benefitting*

patient care and outcomes in Taunton and the wider Somerset Health economy.

D4.6 SPFT have also provided an update on changes to their digital maturity:

- *Strategic Alignment topic confirmed 100%.*
- *Leadership - The Executive have approved the funding for a CCIO, a clinician should be in post shortly.*
- *Governance – IM&T services have reviewed our project management processes and have strengthened our approach especially with benefits analysis.*
- *Information Governance – a new Information Asset Owners' training has been introduced to strengthen understanding of information governance.*
- *Records, Assessments & Plans – End of bed care module is being rolled out to community hospitals and inpatient wards, this includes National Early Warning Scores. The trust is streamlining RiO to meet the AoRMC Clinical Record Standards. EMIS Viewer will be rolled out to Urgent Care staff in Phase 1 to give access to the GP record. Access to Local Authority LiveView has been extended to a wider range of staff. The trust continues to support third party access to RiO for other health and social care staff.*
- *Transfers of care - E-Discharge Summary has been introduced for inpatient mental health and will be rolled out over October/November 2016. Community Hospital e-Discharge Summary is planned to go live 31 October 2016.*
- *Orders & Results Management – t-Quest Phlebotomy and District Nurse blood test ordering process now live.*
- *Medicines Management & Optimisation – inpatient e-prescribing nearly complete. Business case has been written for the roll out of e-prescribing and medicines management for community hospitals is under consideration.*
- *Decision Support - End of bed care module is being rolled out to community hospitals and inpatient wards, this includes National Early Warning Scores. Redesign of RiO to meet AoRMC standards should have a positive impact on decision support.*
- *Remote & Assistive Care – the trust has enabled Skype and video-conferencing to staff, this will be extended to patient-staff consultations shortly.*
- *Asset & Resource Optimisation – the trust has developed an interactive board for services which gives a visual overview of their patients across Somerset showing intensity of support, case worker, etc etc*
- *Standards – RiO is being re-designed to meet AoRMC standards. E-messaging and e-discharge summaries meet AoRMC standards.*

- *Enabling infrastructure – Public Wi-Fi is being rolled out. The trust has renewed firewalls and improved network access control. Phase 2 of WAN is being stalled in line with NHS Digital HSCN.*

D4.7 SCC has provided an update on their current ICT Projects. In 2016 SCC adopted a new Vision for ICT, which can be summed up in the following points:

- *Technology that assists the delivery of the Council's strategic objectives*
- *Move to a platform that enables future collaboration and sharing – Health, public sector partners.*
- *Technology that enables efficient, effective and secure working whilst driving innovation – Saves Money!*
- *A modern workforce - using technology that is used at home*
- *Become a beacon of innovation within Public Sector*
- *Home grown ICT talent*

D4.8 In adopting the vision, the following 6 key ICT principles now apply across the organisation:

- *Reduce, reuse, buy then build – Drastically reducing SCC application estate*
- *Cloud first where appropriate – At least 80% of infrastructure and systems in the cloud by 2018*
- *Collect data once use many times – Intelligent use of data to drive the right decisions*
- *Integrated technology solutions - Enterprise architecture approach to core technologies*
- *Open standards – Only keep or buy systems that allow integration*
- *Keep systems simple – Get the processes right first, keep customisation to a minimum*

D4.9 Further information on SCC's Projects and recent achievements can be found in Appenidix F.

E Digital successes to date

E1.1 In summary, key recent IM&T achievements that are contributing to the overall vision and aims of the LDR are:

Primary Care	Summary Care Record – 100% of GP Practices have uploaded SCRs Electronic Referral Service utilised for 98% of referrals from General Practice. Electronic Prescription Service implemented in 50 practices to date. TSFT, YDHFT, RUHFT, SPFT, SCCG, SDUC and 42 Practices have all signed up to the Level 2 Information Sharing Agreement for GP System Viewer. Phase 1 in urgent and emergency care is planned to go live in July 2016. Over 40 Smart Document Referral Forms are available which automatically upload individual demographic and clinical information from the GP Clinical System to save clinician time and to ensure that secondary care have all appropriate information
Community and Mental Health Services	SPFT have implemented Live View with Somerset County Council. This system enables a small team in each organisation to access information for subgroup Group of people Mobile devices have been issued to community staff enable access to patient information at the point of care Collaborative working with community, GP and Yeovil Acute Care providers End of bed care on i-Pads is being introduced to inpatient mental health wards, roll out will be completed by mid-November 2016. Mobile working has been introduced to Community Mental Health , Crisis Teams and Older People's integrated Teams. Staff have access to RiO live where connectivity is available and off-line via RiO Store and Forward. Smart phones are being introduced to front line community staff. Interactive boards have been developed for community teams to enable them to manage capacity and demand. The board takes relevant patient information and displays on a map of Somerset. The mental health services have been working with a company called Healios to develop self-help and assessment, these are: • Family Interventions for Psychosis (fits with early intervention / parenting, evidence base and self-management) • Assessment and self-management "avatar" and app.

	• CBT for Eating disorder (evidence base and self-management) SPFT are in liaison with the SWAHSN to look at opportunities to develop new on-line tools for patients to support them before and after contact with mental health services. e-roster has been implemented for several years.
Acute Trusts	TSFT have replaced Cerner with IMS Maxims which has resulted in some specialties and services becoming paper-light. Radiology and pathology results were already 100% electronic prior to IMS Maxims. YDHFT began roll out of Phase 1 of their new TrakCare system in June 2016 which will ensure that they will achieve all DMSA requirements by 2020. They will be publishing a strategic digital Strategy for the Symphony work, including the work of the Complex Care Hub. This will include the key enablers to achieve interoperability
Adult Social Care and Children's Social Care services	N3 connectivity established February 2016 enabling services to plan for introduction of NHS number to support information sharing between health and social care and to introduce the national Child Protection – Information Sharing (CP-IS) service. Live View implemented with SPFT
Emergency Care	Implementing electronic ambulance clinical record system (Ortivus) with strong engagement across acute hospitals and clear plans for this first stage of integration, to share information electronically with hospitals prior to arrival. Electronic post event messaging from 999, 111 and Out of Hours services to General Practices. Focus on technology in vehicles including installation of Wi-Fi through Safer Hospitals, Safer Wards
Court and Justice	SPFT (adult) and AWP (children and young people) run Court Assessment and Advice Services in Somerset which support people appearing at Somerset's criminal courts and to those who have been arrested and are detainees in police custody where people are thought to have mental health needs or other vulnerabilities. The service is part of NHS England's national liaison and diversion programme, the team complete assessments in criminal justice setting and identify unmet needs, with a view to referring onto a range of relevant health and social care services. Both services use RiO and have access to each other's record. The services are based in Taunton Crown Court/Bridgwater Police Station (West team) and Yeovil Magistrates Court/Yeovil Police Custody (East team) and use mobile working to access trust systems. The SPF Forensic Liaison Team use mobile working, this team support colleagues working with patients with a forensic history or

	are considered to be high risk. The team liaises with a range of external agencies including Probation; Police; The Courts; Prisons and Prison In-reach teams; Ministry of Justice. APFT's Safeguarding team is based in Bridgwater Police Station as part of the Multi Agency Safeguarding Hub (MASH) using mobile working to access RiO and other trust systems.
Transfers of Care	SPFT inpatient mental health units went live with e-Discharge Summary at the end of September, roll out will be completed by the end of October. Community hospitals e-Discharge summary has been developed in readiness for go live on 31 October.
Mobile working in place and developing across all organisations	

E1.2 Right at the outset of the CCG, an arena was created to combine technical, clinical and project management expertise to compliment the technical project development approach across the community to building IT communication capacity. Through the SDR, and as part of STP discussions, digital vision and initiatives will be clinically led with IT support. Further to this, from 2017, there is SDR ambition to identify both patient led and focused initiatives that require IT support.

E1.3 The Somerset Clinical Documentation and Communications (CDC) group consists of representative members of all local acute and mental health secondary care providers, community services, primary care GP practices and the Local Medical Committee. The group facilitates the growth of electronic communication to be informed and supported by the end users of the information being transferred. It also supports roll-out of new systems of processes being both informed by and communicated to end users. A small change in technical process, can for front line service mean significant operational process changes. In Somerset this group has helped enable the implementation of acute hospital discharge information being electronically messaged direct into GP computer system work flows. The establishment of this technical infra-structure has placed the relevant trusts into a strong position for progressing to develop other patient transfer information, such as A&E attendance notes and out-patient clinical letters. TSFT was able to implement the electronic transfer of outpatient clinic letters across all of its services in 2015.

E2 Rate limiting factors

E2.1 The following rate limiting factors were identified from the Workshops held on 14 March 2016 and 22 April 2016, and further discussions in development of Somerset Digital Roadmap:

- Full awareness and understanding of Information Governance across all staff groups and organisations
- Historical notes remain on paper and not digitally accessible

- The internal focus on systems need to be widened to digitally engage with patient groups and the population of Somerset
- Pace will be severely hampered unless there are resources and funding available or forthcoming from national sources
- Use of SNOMED in systems and payment process
- Need for common language/ plain English use in care provision by staff in different settings
- Number of GP Federations and Practices to engage with (74 Practices in Somerset)
- Paucity of experience and system intelligence in measurement of success for digital transformation projects
- MRHA – licensing of apps if they are used for making decisions in treatment and care, and need to link to NHSE/NHS Digital process. This is the same for 'medical device' regulations in terms of exploring potential functionality of 'wearables'.

E2.2 In working with suppliers, organisations need to reflect on the pace of technological development and digital functionality planned by system suppliers, for example electronic linkage between the e-Referral Service (eRS) and GP decision support tools. Where new systems are required, the procurement framework and process will influence the pace of progress.

E2.3 The development of systems that support digital sharing of information needs to be supported with good quality data being recorded at the point of care. Staff teams and individuals need to understand the purpose of recording data, the coding and language used, and the wider team access that supports each person receiving care. The SMART Principles of data apply – specific, measurable, accurate, realistic and timely.

E2.4 Change management requires continued effort to raise awareness, engage and train both staff members and our local population, in a new way of delivering and accessing services. People need time to be aware that changes are being planned, and to be supported to understand how and when to use a new digital tool or system. Training and information sharing require:

- Cultural changes within clinical practice to explore, test and embrace digital technology in daily working, including funding required to work side by side with teams to support the change in practice to become business as usual
- Staff resource to update e-records contemporaneously may impact on bedstate and escalation periods
- Systems that are user friendly and intuitive will aid early uptake and optimise use of new kit

E2.5 To implement change, there is a recognised need for investment in people, equipment and time. All organisations have plans and requirements, and will need to identify funding sources to enable implementation and delivery of digital initiatives. An outline of current plans, costs and potential funding sources are identified later in the roadmap.

E2.6 As part of the wider emerging community in Somerset, we recognise the need to engage with and support new providers in digital connectivity, information governance and the standards for sharing information. As one example, we will work with Village Agents and village hall initiatives with the 'Digital Village Hall Toolkit' for community WiFi and paperless planning, as part of system transformation. Domiciliary care providers will need to be supported in how to handle and share patient information through increased use of digital services with NHS and Social Care.

E2.7 All or many of these rate limiting factors will need to be addressed and minimised as we progress with delivery of this SDR. Through the STP, there is a need to identify digital solutions to support new models of care between primary and community services, hospital to home initiatives and avoiding unnecessary hospital admissions.

F Capabilities

F1 Universal Capabilities

F1.1 The LDR guidance identifies 10 Universal Capabilities which focus on fully exploiting the existing national digital assets. For each of these capabilities, NHS England expects plans to show clear momentum in 2016/17 and substantive delivery in 2017/18. A number of these are largely primary care focused given the maturity of GP records, and recognise the importance of sharing information appropriately for individual care. Two of the capabilities will give people both the information and the ability to use digital services via Patient Online Access in GP clinical systems.

F1.2 Figure 6 summarises the current status and local plans for the Universal Capabilities over the next two years. Further detail is provided in Appendix E.

F1.3 In summary:

- There is strong adoption of national systems, especially ERS with 98% of referrals from primary to secondary care made electronically, and 100% of practices uploading SCR where functionality exists
- Much has been achieved in use of GP Online with an average of 20% of Somerset patients registered.

F1.4 The main areas where further effort needs to be concentrated are End of Life records monitoring, Child Protection Information Sharing, Care Plans (including treatment and escalation plans) and Social Care referrals.

F1.5 The main challenges in achieving more comprehensive take-up and optimisation will be:

- Patient access and motivation to use technology to support their care
- The information and level and availability of support in place, from care providers, to assist people with the cultural change in service provision and use of technology
- Poor information signposting / intelligence leading to information overload
- The need to communicate using all forms of communication style in all care and community settings and services, in order to capture the audience
- The resources required to deliver this effectively
- Need for change in culture and standard operating processes, ie moving away from use of print and fax, and to improve information and training during implementation of new digitally based processes, to ensure that staff understand the reasons and impact of change.
- Identifying clinical and patient outcomes and benefits to support funding requests and business case developments where new systems are required (i.e End of Life)

Figure 6. Summary of Universal Capability Baseline and Plans

Capability	Baseline position	Main activities to achieve full capability
1)Professionals across care settings can access GP-held information on GP-prescribed medications, patient allergies and adverse reactions	SCRs created by 71 Practices. TSFT have access to SCR in A&E, Pharmacy and AMU. YDHFT have access in ED, FOPAS and Pre-op assessment. SPFT have access via pharmacies. 18 independent community pharmacies have access.	Seek clarity from Microtest and NHS England regarding the timeline for functionality. Introduction of SCR in NHS 111/ OOH. Identify specific patient groups where care can be enhanced through SCR AI. All independent community pharmacies to have access to SCR.
2) Clinicians in urgent and emergency care settings can access key GP-held information for those patients previously identified by GPs as most likely to present (in U&EC)	GP System Viewer Phase 1 rollout October 2016. Exploring use of SCR AI. Provider specific plans.	Phase 1 and 2 rollout of GP Clinical System Viewer. Increase utilisation in all settings. Explore INPS & Microtest Viewers. Identify specific patient groups where care can be enhanced through SCR AI.
3) Patients can access their GP record	95.9% of practices have enabled Detailed Coded Record Access for patients.	The three remaining practices will switch on this capability following their Clinical System migrations in summer 2016/17. Training for people is being delivered via the Digital Inclusion Group (DIG) members, including Somerset Libraries and Yarlington.
4) GPs can refer electronically to secondary care	98% of referrals are done electronically in Somerset via ERS.	Looking to develop for first outpatient – digitise for elective care. Look at other professional groups to refer via ERS. Developing key capabilities. Integration – publishing APIs, working with suppliers. Establish e-referrals from GP to secondary care using auto filled e-SMART form from GP

		Clinical System.
5) GPs receive timely electronic discharge summaries from secondary care	All Discharge Summaries sent electronically from main providers, within a standard of 24 hours.	Monitoring of timely sending and volumetrics from all Trusts, by specialty, for Discharge Summaries and other clinical correspondence. Need Providers to assess compliance with AoMRC.
6) Social care receive timely electronic Assessment, Discharge and Withdrawal Notices from Acute care	Notification 2 (legal requirement) Acute and Community Hospital notify ASC (referral) for Care within 45 hours.	Engage key stakeholders to develop project plan to introduce electronic flow of information.
7) Clinicians in unscheduled care settings can access child protection information with social care professionals notified accordingly	MoU letter issued to Somerset providers. N3 connection achieved for SCC.	To re-establish local list of contacts and to form Project Group. To work with NHS DIGITAL Implementation Lead to develop project plan for 2016-17 and longer term plan in line with emerging SDR.
8) Professionals across care settings made aware of end-of-life preference information	EPaCCs template used on Adastra by GPs, 111, OOHs, Hospices and is being introduced to A&E at MPH. No reports currently generated.	Increase the number of people in Somerset offered Advance Care Planning discussions. To review EPaCCS so that as more people wish to make their choices for end of life care known, these are recorded and accessible to clinicians in all appropriate settings.
9) GPs and community pharmacists can utilise electronic prescriptions	54 Practices live with EPS, 5 with planned dates 102 Community Pharmacies. Utilisation: 65% use by live GPs	20 Practices to plan to introduce EPSr2. Increase utilisation.
10) Patients can book appointments and order repeat prescriptions from their GP practice	100% of practices have enabled online ordering for repeat prescriptions and appointment booking. Average of 20% Somerset registered patients are enabled to order repeat prescriptions online and 20%	To ensure that 10% of patients at each practice (not just an average across Somerset) are registered for POLA. To increase the amount of patients registered to 40% and for online to be their primary way of booking appointments and ordering repeat

	are enabled to book online appointments.	prescriptions.

F2 Broader capability deployment

F2.1 This section describes, for each of the seven capabilities directly relevant to PF@PoC, the requirements over a three year horizon to March 2019. Figure 7 summarises what is covered by the seven capabilities, and Figure 8 provides examples of some elements which are mainly dependent on functionality *within an individual organisation*, and those that require action *across organisations*.

Figure 7. Scope of PF@PoC Capabilities

Figure 8. Organisational and Whole System Dependencies

Capability	Organisation-specific dependency, e.g.	Whole system dependency, e.g.
Records, Assessments & Plans	Structured digital records accessed and updated in own systems	Access to clinical information from other organisations
Transfers Of Care	Systems able to generate and integrate referral and discharge information	Standardised approach for transfer / receipt of referrals and discharges
Orders & Results Management	Digital ordering of tests and access to results	May cover to/from primary care
Medicines Management & Optimisation	Digital prescribing by the organisation's clinicians	Limited
Decision Support	Digital alerts concerning patients under the care of	Limited

	the organisation	
Remote & Assistive Care	Remote/virtual clinical consultations between clinician and patient	Remote/virtual clinical consultations between clinicians from different organisations
Asset & Resource Optimisation	Digital tracking and management of internal resources, such as beds, staff, equipment	Limited

F2.2 Somerset is in a good position following the DMSA returns. This can be seen in section E1.

G Information Sharing

G1 Information Sharing Approach

G1.1 Efficient, effective, secure patient / client information sharing across organisations is fundamental to achieving many of the whole system transformation priorities set out in the STP, as well as to the ambition of PF@PoC.

G1.2 Information sharing amongst clinicians / care workers can take many forms, e.g. the sharing of documents at the transfer of care (such as discharges, referrals), real-time access to specific parts of the clinical record (such as medications), sharing of information such as tasks or notifications as part of the workflow.

G1.3 In November 2013, Somerset held an Information Governance (IG) Summit that was attended by Caldicott Guardians, IG Leads, IT Leads and Operational Managers from Somerset Providers to discuss and agree an approach to information sharing. Caldicott, Caldicott 2 and the Data Protection Principles were noted, with a duty to share personal confidential data as important as duty to respect service user confidentiality.

G1.4 This led to the development of the Somerset Overarching Information Sharing Protocol (ISP). The latest version was signed by all relevant agencies and was issued in 2014. When local projects are being planned that lead to introduction of new ways of sharing information a Level 2 Information Sharing Agreement is to be developed. This establishes the purpose of sharing, who will be sending and receiving, the process for sharing, the security and review measures and the content of data to be shared. A number of these Level 2 Agreements already exist. The template is held by the CCG Caldicott Guardian, with review by the CCG Information Governance and Records Management Caldicott Committee (IGRMCC) on a quarterly basis.

G1.5 As a community, there was agreement to continue a shared approach and explore opportunities to further utilise technology in improving the flow of information to support care at the point of delivery. As a health and social care IM&T Group, with clinical leads, the Somerset Integrated Digital e-Record (SIDeR) Group was formed with a vision to:

"Improve the care and experiences of people, by delivering the right information to the right person at the right time"

G1.6 Further to information governance, work streams were focused on infrastructure, projects and information viewer development. The SIDeR Programme will provide operational delivery of the Somerset Digital Roadmap.

G1.7 In addition to sharing data and records amongst professionals, collaboration between professionals from different organisations may involve more interactive digital technologies. Alongside existing methods, i.e. telephony and email, opportunities exist to use, for example, instant messaging, video / web-conferencing, enterprise collaboration tools. This enhanced use of technology can also facilitate sharing information as an educational route between providers, with early examples of use of Skype to brief staff across the county on change programmes or training on health conditions and care management between clinicians.

G1.8 It is the ambition of the Somerset Health and Social Care community that information sharing is extended beyond the traditional provider landscape. It is recognised that a number of independent providers are critical to the current delivery models, such as care homes and the Hospices.

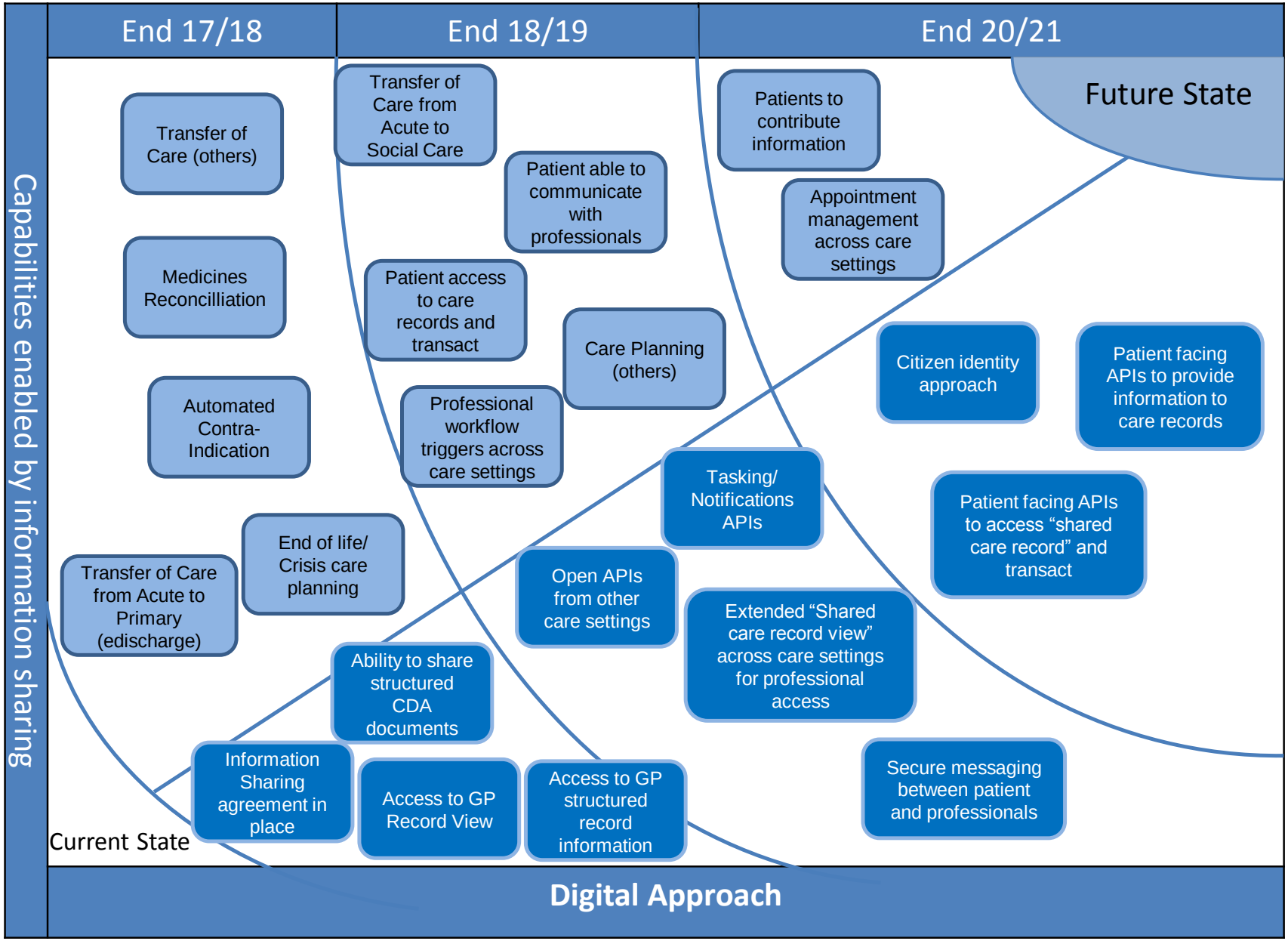
G1.9 As the STP programme develops, the role of the voluntary and community sector will further develop as a key provider in supporting people to remain at home and independent, and they will need support to develop the information governance and digital standards for information sharing.

G1.10 This work will continue and be taken forward through the LDR and SIDeR groups. Figure 10 indicates the digital approach of Somerset for the time periods 2016-18, by the end of 2018/19 and by 2020.

G1.11 At a national level, the National Data Guardian Team have undertaken a review of current consent model used in delivery of health care services, with consideration of the terminology used in coding consent, and the level and timing of information for people to make an informed decision on whether to consent for their information to be shared. The outcome of the consultation of Review Recommendations 'Caldicott 3' will be considered by the Somerset community as part of digital roadmap and SIDeR discussions, with consideration and advice from Caldicott Guardians and information governance leads in Somerset.

G1.12 The Somerset Overarching Information Sharing Protocol (ISP) is due for review in late 2016. This will include consideration of other service providers who are not currently signatories, and are part of STP planning and delivery and other aspects of sharing at specific service delivery level e.g MASH, Level 2 Protocols and SEND. As part of the SDR review, there is recognised need to understand and widen the extent of the Caldicott Guardian and Information Governance Leads Network. This review will be undertaken by Clinical and Information Governance Leads network.

Figure 9


End 17/18
End 18/19
End 20/21
Future State
Capabilities enabled by information sharing
Transfer of Care (others)
Transfer of Care from Acute to Social Care
Patient able to communicate with professionals
Patients to contribute information
Appointment management across care settings
Medicines Reconcilliation
Patient access to care records and transact
Care Planning (others)
Citizen identity approach
Patient facing APIs to provide information to care records
Automated Contra-Indication
Professional workflow triggers across care settings
Tasking/ Notifications APIs
Patient facing APIs to access "shared care record" and transact
End of life/ Crisis care planning
Transfer of Care from Acute to Primary (edischarge)
Open APIs from other care settings
Extended "Shared care record view" across care settings for professional access
Ability to share structured CDA documents
Information Sharing agreement in place
Access to GP Record View
Access to GP structured record information
Secure messaging between patient and professionals
Current State
Digital Approach

G2 Progress and Plans

Progress

G2.1 As part of further alignment and integration with the STP during summer 2016, the SDR is to be strategically held by Somerset Digital Reference Group as outlined previously. Operational delivery will be planned and implemented though the SIDeR Programme and report to the DRG.

G2.2 SIDeR now has an established Steering Group (CIO/Heads of IT, and Clinical Lead) to ensure strategic aims of the STP/SDR transfer into a SIDeR Programme of Work for the Somerset health and care community. The SIDeR Operational Working Group (including operational, clinical, technical and information governance leads) coordinate project implementation plans for the organisations.

G2.3 We accept that it is highly unlikely that all providers within the health and social care arena will at any point, move to a single IT solution that will meet the needs of all organisations. Therefore, the right solution to link information together for the purposes of direct patient care, will be to harness existing integration platforms, but these will need an overall presentation layer such as you would normally have as part of a portal solution, as well as the ability to interrogate and deep dive into any of the organisations core local systems.

G2.4 The implementation of such a programme across multiple organisations and a large geographical area, will need to be carefully considered, planned and executed. It will also require the support and co-operation of many health and social care professionals to ensure a successful “Go Live”.

G2.5 Some of the NHS organisations in the area are dealing with their own IT implementations – these plans and go live dates will need to be co-ordinated and phased in with SIDeR.

G2.6 It is proposed that the implementation of a solution be split into a number of phases, as it would be unrealistic to expect a programme of this size to be rolled out with advanced functionality to all organisations at the same time.

SIDeR Outline Plan	
Phase 1 (May 2016 – March 2017)	Introduce new governance structure, re-engage with stakeholder organisations, conduct an assessment of current capability with respect to integration and promote small tests of change including Emergency and Urgent care access to EMIS Viewer
Phase 2 (To October 2018)	Clinical information exchange at the point of care
Phase 3 (To April 2020)	Allow patient access to their information Adopt and publish care plans and service directories Provide whole system intelligence for commissioning purposes

G2.7 Further planning work is required to confirm deliverables, resources and costs. Dates will be co-ordinated and agreed.

G2.8 Since June 2016, the main focus of the SIDeR Programme has been:

- EMIS Viewer Implementation
- Marketplace research
- In-house Somerset developed solutions
- Open source capability and discussion

EMIS Viewer Implementation

G2.9 EMIS Viewer provides frontline clinicians with read only access to a patient's GP record, in all Urgent, Emergency and Immediate Care settings in the RUH and across Somerset, including the Somerset out of hours and 111 services. All Information Governance and patient consent issues have been addressed, resolved and shared in user training. All 71 Somerset EMIS Practices have signed up to this solution, and the implementation is fully supported by the LMC.

G2.10 EMIS configuration, technical and training sessions were held in September 2016. The Trusts went live in October 2016. Once this initial phase has been successfully deployed, Somerset will consider extending the service in 2017

G2.11 Clinicians have already delivered the following positive feedback since the implementation of EMIS Viewer:

> *'The patient was for trauma surgery and had a heart murmur. They couldn't recall the details but said they'd had investigation in the past. The concern in this situation is that there's an aortic stenosis ruling out certain anaesthetic techniques and making the procedure high risk, there was nothing in our notes. The patient gave me permission to access their GP record which contained the results of an echocardiogram, ruling out aortic stenosis. Without this information I would either have had to delay the urgent surgery to await an echo or proceed with the anaesthetic assuming that the patient has aortic stenosis and use invasive monitoring/critical care bed post op.'*
>
> *'A lady, who was being seen in Cardiac Investigations, was noted to have a facial weakness and was advised to come to ED. When assessed in ED she mentioned that this was a longstanding problem and she was awaiting a Neurology Outpatient appointment. Looking at the correspondence on Web EMIS gave me reassurance that this issue was being dealt with so she didn't in fact require any input or investigation in the ED, and could be rapidly and safely discharged.'*

Marketplace Research

G2.12 Detailed work has been carried out to appraise a number of market leaders and health communities that have successfully deployed integration solutions, that bring together multiple IT systems from multiple organisations to create a single view of a patient record. Our research has shown that we could expect to pay costs of between £5m - £8m total cost of ownership over the first five years (ongoing revenue thereafter, subject to contract) for an off the shelf solution.

G2.13 Our initial thoughts were to start a procurement process to expose market costs, capabilities and timeframes from suppliers, so that a business case could be developed in readiness for future potential NHS Digital funding. Having reflected on this, we will still continue to develop a business plan, but look at alternative lower cost open source solutions instead as well as determine our local capability to create interoperability services.

G2.14 As part of this work, the AHSN introduced us to a charitable foundation set up with the sole intention to provide health communities with a fully working integration back end, at no cost until 2020, leaving only the presentation layer and ongoing support costs from 2020 to fund. We are currently exploring this option in detail.

In-house Somerset Developed Solution

G2.15 With the recent implementation of Trak Care at Yeovil Hospital and IMS Maxims at Musgrove Park Hospital, plus the fact that Somerset Partnership has been using RiO as their electronic patient record system for a decade, Somerset is in a very good position with regards capability, expertise and position to to meet the digital roadmap targets.

G2.16 We have a number of skilled individuals within the Somerset community that have the technical knowhow to potentially setup, maintain and develop locally owned interoperability solutions.

G2.17 We are therefore going to build a local FHIR proof of concept solution and then run a subsequent zero cost mirror concept (in order to allow quality comparison with our own local build) with the main Somerset incumbent integration supplier. We also have further options to consider if needed.

SIDeR Programme Management

G2.18 The SIDeR Programme Manager has responsibility for delivering the scope of the programme as outlined above. Part of the programme team, once resourced, will be retained to provide ongoing support of the contract and supplier solution. The structure of the programme team will be reviewed to ensure the most appropriate staffing and skill levels are in place.

G2.19 The programme team will either be recruited to complement existing staffing in place in the SIDeR organisations, or the organisations will need to commit and release local resource to the programme.

SIDeR Governance

G2.20 A Steering Group is in place that includes:

- Executive Director (Governance lead)
- Executive/ Senior IT representative from each stakeholder organisation
- SIDeR Programme Manager
- Representative from the SW AHSN

G2.21 In addition, Working Groups are in place to support delivery, these include:

- Technical
- Clinical
- Other (Procurement, IG, Training, Patient Representation)

G2.22 A Programme Team is being established, this currently includes the Programme Manager – (Full Time), and the intention is to identify further resources to include:

- Programme Support Officer – (1 WTE)
- Finance / Procurement Lead (0.4 WTE)
- Communications Lead (0.2 WTE)
- Trust representatives for the working groups

G2.23 We recognise that SWASFT are not part of current SIDeR membership, recognising regional area the organisation covers, and are aware they have significant digital maturity plans (included in Appendix A.). Somerset plans are to engage with SWASFT leads on 3-6 monthly basis to ensure updates are shared, and look to utilise shared service areas of SWASFT and SCWCSU in facilitating sessions to develop and share opportunities for further digital and data planning. From early digital roadmap discussions, there are possibilities to share real time dashboard information to increase understanding of patient flow from incident though SWASFT to A&E services, and through Somerset Digital Roadmap and STP discussions, we are keen to explore this during 2017.

Enablers

G2.24 Progression of the SIDeR interoperability programme is dependent upon several enablers, including:

A. Governance:

- Establishing strong governance via a strategic body that includes key executive, public and programme stakeholders
- Forming, populating and delivering technical, clinical and other working groups
- Committing each organisation to the SIDeR programme, including:-
    - Being part of the governance model
    - Committing local capital and recurrent revenue funding
    - Allocating local staff time to the SIDeR Programme Team to deliver against the timescales, objectives and milestones
    - Supporting delivery and ongoing maintenance of the SIDeR technology solutions

B. Information Governance and Data Sharing Agreements

- All Somerset Trusts, Somerset County Council and General Practices have signed the Somerset Overarching Information Sharing Protocol
- Engaging with clinical providers and patients to ensure the SIDeR programme takes account of all concerned in the shape and direction of services and information handling

C. Key infrastructure components and standards

- NHS number to be used as the primary identifier
- Communications networks
- Structured and coded data standards
- Trust Integration Engine standards (XDSi, FHIR, HL7 etc)

D. Utilisation of resources.

- Work through SIDeR Programme – matrix working to include organisational resources
- Involve regional digital team members in specialist project areas. i.e Patient Online Access: to engage and effectively support and discuss with practices and representative of PPGs or population groups.

H Infrastructure and standards

H1 Mobile working

H1.1 Providing a robust, secure mobile IT infrastructure will not only enable flexible information access for professionals within their normal place of work, but will also support their ability to work in other care settings, patient homes, residential homes, etc.

H1.2 The necessary mobile infrastructure components include mobile devices (laptops, handhelds, tablets, smartphones), authentication / security, device-specific user interfaces, connectivity (WiFi, 4G), mobile device management.

H1.3 The current status of the mobile working infrastructure across the footprint is as follows:

Mobile Working	Status
Mobile devices	tablet computer (e.g. iPads), laptop/netbook computer, smart phones
Authentication / security	Laptop computers are network authenticated, encrypted and required two stage log on to log in to (McAfee Endpoint Encryption, and Windows User name and password). Tablet devices and mobile phones have Mobile Device Management (MDM) provided by MobileIron
Device-specific user interfaces	None
Connectivity	N3 directly via NHS provided wireless access points for the devices, mostly laptops, which are listed in the security rules to allow access. N3 connectivity is enable using Sonicwall Aventail secure virtual private network (VPN) to N3 and local servers
Mobile device management	MobileIron is an enterprise standard MDM that encrypts, tracks, wipes, and locks devices remotely

H1.4 Individual providers have plans to develop their mobile working infrastructure and these are outlined in the Digital Capability Plans included in Appendices A-D.

H1.5 Through Somerset Digital Roadmap discussions, the potential for system-wide initiatives to further develop and exploit the mobile working infrastructure has been identified. This will be explored through SIDeR to review plans to improve the accessibility of wireless connectivity for health and care professionals, with the ambition for all health and care professionals

to have wifi access from any site, irrespective of organisation. Further to this, to review and expand the wifi connectivity for people accessing health and care services. As explored in the section on digital inclusion, there is a supporting need to improve the provision of digital skill courses for those that need it, both as users of services and staff members using new technology.

H2 Communications and Networking

H2.1 Currently, all NHS organisations have full access to the NHS secure network, N3. Somerset County Council (SCC) also has an N3 connection. The speed of connectivity at sites will need to be monitored as organisations look to utilise hosted and cloud based solutions, and the volume of electronic traffic increased with a digital exchange of information. As part of digital transformation of the range of organisations in Somerset health and social care community, we recognise the need to support other organisations in the process of applying for network connectivity with the NHS.

H2.2 Part of the national Digital Roadmap is the work being undertaken by NHS Digital, with development of the new Health and Social Care Network due in 2017. Somerset organisations will need to ensure connectivity both locally and nationally in line with this work, to ensure continued flow of data securely to relevant organisations in health and social care.

H3 Standards & Policies

H3.1 The implementation of certain standards and agreed policies across the footprint are essential enablers for sharing information and we note the publication of Records Management Code of Practice (2016) by the IGA. To support digital transformation and electronic flow of information, we will work with other care providers in the capture and use of NHS numbers as part of routine care and information exchange. The current status and plans for the adoption of other key national standards is summarised below

H3.2 It is of note that 100% achievement of NHS Number is not considered locally as an appropriate aspirational standard, as there are at any time a number of individuals that present in Somerset from prison services, travellers and those unregistered.

Use of National Standards

Topic	Current status	Plans to address gaps
SNOMED-CT	Rolled out to general practice Not applicable to LAs	To be considered in LDR and contract/ payment discussions. Being considered in Acute Care where currently using ICD10. All Trusts working with NHS DIGITAL on SNOMED and dm+d as part of the AoRMC structured messaging project.
GS1	Barcoding used to ID order	To be considered post EPR

standards (barcoding and RFID)	comms samples for primary care - PathLab	implementation and develop for inventory and stock management, potential for Sterile Services to consider with RFID allowing procurement trigger if devices are returned damaged etc
Dictionary of Medicines and Devices (dm+d)	Used in General Practice Not applicable to LAs	To be considered in LDR and contract/ payment discussions. Being considered in Acute Care where currently using ICD10. All Trusts working with NHS DIGITAL on SNOMED and dm+d as part of the AoRMC structured messaging project.

H3.3 Most organisations have robust plans, policies and procedures in place to minimise risks arising from increasing dependence on technology. Across the key relevant areas, the main concern agreed at the local roadmap workshops was with regard to 'confidence [that] the entire workforce understands and follows your organisation IG policies and processes'. The Group propose to address this as a local priority starting in 2016.

H3.4 One Trust has identified a gap in 'receive assurance on a regular basis that your suppliers and digital assets are secure, including business continuity and disaster recovery penetration testing'. Plans are in place to improve this once the EPR system is implemented from May 2016, and status updated as part of DMSA review in early 2017.

H3.5 The self-assessment of information governance, business continuity and disaster recovery for trusts, as defined in the recent DMA exercise, is summarised below. SCC have assessed at 73% for the IG Toolkit, which is in line with the national average.

DMSA scores for IG and Business Continuity / Disaster Recovery

Standard	Description	Eng	Care UK	RUH FT	SPFT	SWAS FT	TSFT	WAH	YDH FT	SCC
Information Governance	IGTK accreditation., IG understanding by Board, workforce, 3rd party suppliers, cyber security, active monitoring	73	96	92	71	71	67	75	58	77
Business Continuity & Disaster Recovery	BC&DR plans, processes, procedures; Multi-site redundancy for business-critical systems	71	100	58	92	100	75	17	23	40

H3.6 The table shows that four providers have self-assessed above the national average, with three providers in our footprint below. YDHFT have identified that their implementation plans for 2016 will see the introduction of the TrakCare system which will improve continuity and recovery plans.

H3.7 As part of the expanding community involved in providing care, the SDR recognised the need to engage with new and smaller care providers where information governance is a contractual requirement.

H4 Opportunities for Shared Infrastructure

H4.1 It is recognised that there are potential economic, strategic and operational benefits from further sharing of the IT infrastructure across the footprint or beyond. Already network connectivity is shared for transfer of electronic messages from secondary and community care to primary care, as well as shared access to WiFi services across core health / social care estate. Further opportunities will be considered as part of the LDR Implementation and SIDeR Programmes:

- Further transfer of electronic messages for other clinical correspondence between health
- Transfer of electronic messages between health and social care via N3
- Appropriate infrastructure and failover to provide a robust solution for SIDeR initiatives
- WiFi access to care professionals from wider health and social care team, i.e hospice community team members visiting NHS sites.
- Shared working bases and staff members are being explored as part of new models of care

H5 Minimising Risks Arising From Technology

H5.1 As with all changes being introduced, there are always unintended consequences, and this applies to digital transformation. Standardised project and change management approaches will be utilised to ensure robust plans, policies and procedures (such as Risk Registers and escalation processes) are in place within organisations and across the system to minimise risks and address gaps in development. This section will identify a number of key areas which we need to be mindful of within each digital initiative, and assess at implementation stages and review as the change becomes embedded into daily routines.

H5.2 State **–** CCG (data is held by the CSU) and other organisational governance structures: each representative officer to report back to own Risk Management Process.

H5.3 As part of the SIDeR Programme, the Risk Register is to be reviewed quarterly and each representative officer to review at SIDeR. The CCG and other organisations hold their own Risk Registers and policies, with GP IT project risks held by the CSU, and escalated to the CCG as required. It is

recognised that an IT risk may be different to organisational risk, and that many clinical projects are supported with IT.

H5.4 Data security – all new technologies have to be assessed to ensure adherence to national standards of security, and Somerset will continue to work with NHS Digital and IT suppliers to address the risks, such as cyber threats, and ensure data is protected. As part of using technology, all organisations will have clear business continuity and disaster recovery processes identified and tested in line with national guidance.[4] Information of the 10 Data Security Standards will be shared with all partner organisations via the National Data Guardian Review publications.

H5.5 Data Protection and Privacy – the people receiving care services in Somerset have expectations on how we handle and record information about their health and care needs and services they are provided. The national legal framework requirements are already identified in the Somerset Overarching Information Sharing Agreement, and through recent and ongoing developments, we need to ensure that all staff, clinical and non-clinical, in statutory and non-statutory organisations, understand the need for confidentiality. We also need to support staff in understanding when to share information in line with Caldicott 2 , and this work has been recognised as one of our local priorities in 2016-18.

H5.6 Clinical safety - clinical safety governance and assurance are key to the implementation of new systems and technologies. We need to ensure that clinical use of tools and systems is appropriate, understood and ensures care remains safe and effective. Where issues arise, we will continue to explore, understand and learn from incidents reported to Patient Safety Teams, amending systems and processes as required.

H5.7 Risks and Issues, Opportunities and Benefits – the formal project management of IT initiatives routinely capture risks and issues, with escalation and resolution. As noted earlier, there are often unintended consequences and these may often be positive and should be captured as opportunities and benefits, forming part of the successful outcomes recording. It is important to capture these at all stages from concept and planning, through to delivery, post-implementation and evaluation.

H6 Data Quality

H6.1 As noted earlier, we need the whole system to recognise that data input needs to be of quality, and how data is captured and used in support of direct patient care and planning future services.

[4] The EU Data Protection Regulations, 2016.

Primary Care Data Quality

H6.2 To support quality improvement of the clinical standards of care, Somerset CCG promotes, and where opportunities arise, incentivises mechanisms to support audit of clinical practice in primary care using the Nottingham University suite of PRIMIS audit tools.

H6.3 The GRASP Suite is a series of three free audit tools:

- GRASP-AF
- GRASP-HF, and
- GRAP-COPD

H6.4 Together with similar audit tools for asthma and diabetes, PRIMIS audit tools can help general practices to case-find and audit their management of people with some of the most prevalent long term conditions. By promoting use of these clinical audit tools in primary care this will help the community to avoid costly hospital admissions and readmissions, target valuable clinical intervention effectively, use resources efficiently and provides a stimulus for improvement by allowing practices to see how they are performing against their peers with the CCG. Most importantly it will help to improve the quality of care, save lives and improve the quality of life.

Prescribing and Medicines Management

H6.5 The prescribing and medicines management 'digital' vision and strategy includes:

- Support to roll out and use PRIMIS tools (including GRASP and chart) across Somerset GP practices
- Vision would be to have instant PRIMIS via EMIS searches rather than current use of Miquest
- Completing roll out of eclipse live across all GP practices (currently live in 70 out of 75 practices) Eclipse live system is a prescribing support and audit tool
- Vision Upskilling of GP practices in the use and benefits of eclipse live so that every alert is reviewed within a week of being flagged
- Further development of eclipse live search parameters (currently 200+ searches running each week) to identify unmet need and unsafe prescribing
- Developing and rolling out of clinical audit packages which can be run simply on EMIS Web to support and facilitate greater levels of clinical audit within primary care.

H6.6 Developing and rollout out of medicines management EMIS Web protocols and clinical audit packages which can be run simply on EMIS Web to support and facilitate greater levels of clinical audit within primary care.

H6.7 During 2016, information has emerged on the Hospital Pharmacy and Medicines Optimisation Project (HoPMOp) team, who work chiefly with a broad range of NHS Trusts, NHS England, NHS Digital, Health Education England and Specialist Pharmacy Services and consults with external bodies and representative organisations. The project team is working on three priority projects:

- Medicines Optimisation
- Developing the Model Hospital and associated metrics, and
- Infrastructure projects

H7 Digital Inclusion

H7.1 An earlier section focused on the need to include all people in our planning for introduction and use of digital technology, and to consider that not all people wish to or will be able to use digital services and tools. We recognise that digital technology can be an enabler and through our digital roadmap we will support and encourage use, working outside traditional health and social care organisations, embracing opportunities of common purpose with other services that are also increasing digital use.

H7.2 Accessible information standards – NHS England published a set of standards in June 2015 that established the legal requirement for all NHS and social care organisations to implement the Standards by 31 July 2016. The standard tells organisations they need to make information accessible to patients, service users and their carers and parents, so they can understand the information, and receive communication support in different formats if they need it, such as large print, Braille, easy read, via email. From a digital perspective, we support this, and work is already underway with commissioners and service leads in Learning Difficulties to explore what data is already captured on this, and how we can share appropriate flag, alert and register information with service providers.

H7.3 Change Management culture and behaviour have already been acknowledged earlier in the roadmap as a key to the success of implementing digital changes. Through the roadmap workshops, we have agreed a local priority to raise awareness of the digital roadmap, with engagement required around information sharing, and support for utilisation of new digital tools. We recognise all these steps require time, effort, training and change in ‘hearts and minds’ to embrace opportunity technology provides.

I Moving forward

I1 Emerging Priorities

I1.1 The above analysis indicates that the individual organisations and the footprint as a whole are in a good position, with clear progress planned for the next 12-18 months. Local priorities identified in the workshop are:

- Staff information sharing awareness/ technology training
- Patient communications
- Benefits and realisation
- Interoperability/ information viewer

I1.2 Furthermore, it clearly is essential to ensure current and future ongoing information and IT operational needs are adequately resourced, along with more general enabling activities such as addressing the “digital culture”, basic digital skills of the workforce and our population. As both our population and workforce expand, we recognise the skillset of ‘millennials’ and will look to utilise their native digital culture to benefit and support change in Somerset.

I1.3 Priorities within the vision include:

- A streamlined health and social care system, which enables a reduction in system overheads, whilst supporting the improvement of communities and individuals to self-care and improve their health and well-being.
- A review of the proposed universal capabilities confirms the current IM&T Programme of Work to utilise national system capability for local care (through SCR, EPS and eRS) and strengthening emerging discussions across the community (such as CP-IS now that the local authority has received N3 connectivity) and further opportunities for electronic messaging between providers.
- Maintaining the shared organisational approach to information sharing, with the need for further awareness and education of staff on confidentiality
- The population of Somerset need to be involved in plans for improved information sharing and consent through the digital transformation programme, and the use of data in both direct care and planning of local services
- Enabling people to access and use digital services and tolls in self-care and prevention of ill health. Through STP, clinically-led and patient led discussions, a series of opportunities will be identified to trial, such as ‘wearables’ in rehab or health promotion; through to review of tele-health devices
- Understanding a shared language and adhering to the same set of standards will provide further opportunities for using data for improving both individual and whole system intelligence, to plan direct service intervention through primary care, and to develop services for groups identified through data analysis

I2 Prioritisation Approach

Established at the Roadmap workshops, work will be prioritised according to:

- Potential impact
- Effectiveness of clinical services
- What will make the difference fastest

I2.1 Somerset will then look ahead for new initiatives on which to work together, and identify further opportunities in discussion with local people and new providers.

I2.2 There will be review of this Somerset Digital Roadmap on an annual cycle using a Plan Do Study Act approach, with ongoing progress reported through the Digital Reference Group, with reporting to Sustainability and Transformation Plan leads.

I3 High-level Plan

I3.1 Figure 7 (p44) and Section C provide details of the key milestones for the four main work streams for 2016/17 and 2017/18. In addition, the details of the SIDeR programme, outline plan and details has previously been described. As already noted, the challenge of measuring benefits has been recognised and each work stream requires further progress planning to help establish the benefits and risks. Once the IT element has been implemented, users and project teams will need to capture any time or cost savings to inform further projects and reflect volume over following 2 or more years.

I3.2 A high-level plan is outlined below of 10 Universal Capabilities and 3 local priorities as part of the SIDeR Programme:

Universal Capability	2016/17	2017/18
A. SCR	✓ Primary Care ↑ Urgent Care	✓ Urgent Care ↑ Other settings
B. EMIS Viewer/ SCR AI	↑ Primary Care ↑ Urgent Care ↑ Community Pharmacy	✓ Urgent Care ✓ Other settings ✓ Community Pharmacy
C. POLA (access to record)	✓ Primary Care ↑ Patient Uptake	✓Patient Uptake
D. eRS	✓98% of referrals via eRS ✓Local development/ pilot for national enhancements	

E. e-Discharge	✓ All Somerset organisations Extend to other clinical correspondence	↑ e-flow from all providers for clinical correspondence
F. Acute to Social Care Information	Develop Project Plan	Monitor Delivery
G. CP-IS	Project Planned	Full Go Live
H. End of Life	Project Planned	Implement solution
I. EPS	✓ All Live	↑ Utilisation
J. POLA (prescriptions and appointments)	20% of patients enabled	40% of patients enabled

SIDeR

Standards, Language and Integration

SIDeR Steering Group and Working Group - purpose and frequency List key streams of work: Flags and Alerts, Integration options, Clinical Communications, EMIS Viewer, etc. Suggest to have financial work stream too and reference ETTF, Digital Maturity Investment Fund, Better Care Fund, Digital Exemplar, Vanguard, others.

With indicative/outline quarterly milestones ie Q3, Q4 for 2016-17-18.

The benefits of these projects are already being captured, with clinicians from both YDH and TST reporting that having access to EMIS Viewer has streamlined care and, in one instance, prevented time consuming tests from having to be taken before emergency surgery.

Communication and Stakeholder Engagement Plan 2

1. Review and apply information and lessons learned from care.data Pathfinder work to communications required for Somerset Digital Roadmap (Nov 2016-March 2017)
2. Liaise with Communications Teams across Somerset, as part of wider STP work, to ensure sharing of digital successes and promoting opportunities for people to be involved in shaping use and access to digital services in health and care (Nov 2016-March 2017)
3. Liaise with Patient Equality and Engagement Team to engage with patient, carer and representative groups of Somerset, including minority groups. To develop and understand cohorts of the population who may be excluded or included through improved use of digital technology. (Jan 2017 onwards)
4. Liaise with local representatives of professional staff groups to ensure awareness of and engaged with digital initiatives and development of the Somerset Digital Roadmap, including LMC, LPC, LOC and LDC (by March 2017)

Digital Leaders

1. To identify and establish a network of Digital Leaders across the Somerset community, including clinical, operational, patient and carer leads, and understand their digital roles as champions, users, technicians and supporters of use of digital tools in providing health and care services:

Organisation based - Caldicott Guardians, CCIO, CIO, Information Governance - by December 2016
Operational leads - identified in line with project plans Patient and Carer Leads - ongoing through Communications and Engagement Plan

2. At a grass roots level, to acknowledge that digital champions help and support other people in their community to use the internet and gain online skills, in booking a GP appointment, ordering repeat prescriptions online, finding health promotion information or finding out how to access services in their community (Ongoing and in line with Communications and Engagement Plan)

SIDeR 2020 Enablers

	Target Date
Develop interoperability proofs of concept to consider next steps at scale	March 2017
Paperless working across FTs/ Primary Care and Social Care	Sept 2017
Use of technology to support efficiencies in how the workforce engage with individuals	April 2018
Improved health and social care data flows	April 2017
Shared records and interoperability across the system	Sept 2018
Sharing information with independent sector and communities providing prevention and early intervention	Dec 2018
Extension of paperless working across all health and care providers across system	Sept 2019
Person facing services and digital inclusion	Sept 2019
Real time/timely information at point of care to support person centred care and system efficiency	Sept 2019
Real time analytics at the point of care	Sept 2019

J Readiness

J1 Introduction

J1.1 This report outlines ambitious plans and identifies several likely challenges in meeting the plans. Therefore, to succeed the Somerset Digital Roadmap requires strong leadership and clarity regarding governance and accountabilities.

J1.2 In order to deliver the anticipated benefits, and identify financial impact, there needs to be a robust approach to both change management and to benefits management.

J1.3 This section outlines the approach that will be taken to these issues, as well as highlighting overall resource requirements and additional funding priorities. Financial aspects are also presented and cover resources, revenue and capital requirements and savings.

J2 Leadership, Engagement and Governance

J2.1 In line with the review of both the STP and the Somerset Digital Roadmap, the leadership and governance arrangements have been amended to reflect the acknowledged need for robust integration of the digital requirements in the wider system transformation plans. A Somerset Digital Reference Group is being established to be accountable for the digital roadmap with STP Senior Responsible Officer as Chair. Membership includes all key stakeholders Chief Information Officers/Heads of IT, GP Clinical Lead, Local Authority Information Governance Lead, and two members of STP team (one Local Authority, one NHS). A Lay Member also to be identified and invited to attend to ensure lay perspective is represented and considered in planning.

J2.2 Operational planning and delivery of the Roadmap will be through the Somerset Integrated Digital e-Record (SIDeR) programme, continuing with the work already underway in development and delivery of the universal capabilities, together with the ambition for integration through procurement and design stages. Further Task and Finish groups will be established as required for the delivery of specific tasks within the Roadmap.

J2.3 Each organisation that supports the care of Somerset population will continue to manage and implement its own organisational IM&T Programme, with co-ordination of goals that require system collaboration to be undertaken by the SIDeR programme.

J2.4 The self-assessment of IM&T leadership and governance of trusts, as defined in the recent DMSA exercise, is summarised in Figure 10.

Figure 10. Trust DMSA scores for Leadership and Governance

	Description	Care UK	RUH FT	SPFT	SWAS FT	TSFT	WAH	YDHFT	SCC
Leadership	Board level ownership, clinical leadership, digital tech horizon-scanning	100	100	60	70	85	50	100	47
Governance	Board-led IM&T programme, project management, business cases, follow best practices	95	100	60	90	60	45	65	67

J2.5 All organisations recognise the importance of leadership for IM&T and the digital vision and are working to ensure a combination of digital leaders, Chief Information Officers and Chief Clinical Information Officer roles are identified as part of the digital network in sharing vision, learning and outcomes. From workshop discussions and self-assessment, we acknowledge the current status for not routinely evaluating the benefit of digital projects using a consistent approach, and look to address this aspect as part of continued discussions through the SIDeR Programme.

J2.6 Clinical engagement is improved in organisations where new electronic patient record systems have or are being implemented. It is expected that this will continue with the LDR vision and priorities. Providers in Somerset, through development of the STP, recognise the changes in a whole system approach, with emerging new models of care. This includes the recognition of the individual at the centre of the care model, with providers working in collaboration and with new shared arrangements.

J2.7 As previously noted, further iterations of the Somerset Digital Roadmap will have more extensive engagement with population groups and emerging health and care providers, and a review process will be required to ensure our vision, ambition and delivery mechanisms are fit for purpose, to support both the wider system transformation and being paper free at the point of care by 2020. We plan to utilise an annual review of Digital Maturity Self Assessments of individual organisational progress, combined with an annual review of SIDeR programme for Somerset wide progress on collaborative technology projects. Initially, this will be reported to the Digital Reference Group and reviewed in line with the STP and Operational Plans. Initially, this will focus on the ten universal capabilities and their deployment in 2016-18, with review of timelines to ensure quarterly and annual activities are achieved, identifying opportunities for further scale and pace, alongside risks and challenges to be addressed.

J2.8 Further to this, Somerset CCG is subject to a CCG Improvement and Assessment Framework from 2016/17, which will require confirmation of a signed off local digital roadmap, and of composite indicators covering digital interactions between primary and secondary care.

J2.9 Ultimately, the achievement of the roadmap will be measured according to the impact on individual care, and as a community we need to continue to brief and engage with local population groups on our digital vision. Most organisations already have communications and engagement teams to liaise with our local population and representative groups. The CCG and practices have a number of networks, including:

- PPGs Network
- Somerset Engagement and Advisory Group (SEAG)
- HealthWatch
- Health Forums (one for each of the nine commissioning localities)

J2.10 As part of our Digital Roadmap objectives, we plan to improve the number and range of briefings, utilising digital methods of website, social media, video clips, alongside traditional methods of informing our population through press releases, articles and presentations in formal meetings and community groups. The Communications and Engagement Plan will be developed based on lesson learnt during the care.data Pathfinder, and through the wider STP.

J3 Change Management

J3.1 "Technology will only succeed if it supports new ways of working. Interventions have failed where technology has simply been layered on top of existing structures and work patterns, creating additional workload for health care professionals", *Delivering the Benefits of Digital Health Care*, Nuffield Trust (Feb 2016).

J3.2 'It's increasingly clear that technology, on its own, will not be enough to propel organizations toward their new strategic objectives. Winners will create corporate cultures where technology empowers people to evolve, adapt, and drive change. In other words, the mantra for success is: 'People First." *Digital First – Executive Summary (2016),* Page 10.

J3.3 Achievement of the aims set out in this local roadmap is critically dependent upon continued improvements to relationships, to workflows and to care pathways, with appropriate clinical engagement, training and support.

J3.4 Across Somerset, a shared approach to quality improvement is developing, based on the Institute of Healthcare Improvement (IHI) methodology. This approach will be used to ensure work projects are scoped effectively and change clearly measured. This approach supports small scale testing and scaling up which has a dependency on local ownership. This is the preferred methodology as local ownership and allowing time for culture change is particularly important factor for success in getting the take up and embedding of technology in clinical teams.

J3.5 The high level milestone plan and the local goals have been prioritised to ensure that the impact of variation is minimised, and the enablers for the broader vision are in place at the outset, such as having agreed common language and the approach to individual consent across the community.

J3.6 As we have progressed through the development of Digital Roadmap discussions with clinical leads, it has been important to recognise that the use of technology in the workplace is a tool to support the work required. All parts of the health and care system have standard operating procedures and processes which have developed over time, and the introduction of digital methods provide a range of opportunities to review current practice, redesign the way a service works or interacts with the person or another part of the service. As previously identified, the need for system leaders to become digital leaders will provide this opportunity to utilise digital functionality in our service redesign. By embracing the potential for change at both leadership and operational levels, we can begin to manage how the change is implemented and work towards addressing the Forward View's three challenge gaps in our system.

J4 Benefits Management

J4.1 The benefits of digital transformation all intend to support the 'Triple Aims'. The overall approach to benefits and measurements needs to be improved as part of our priority work. This will be coordinated through SIDeR and will include tracking of benefits, capturing opportunities and outcomes and estimation of cost saving.

J4.2 A benefits realisation focus of all projects will be formed to manage and monitor the benefits of this programme of work. Initially this will focus on the identification and setting of a baseline position, so that improvements can be accurately measured and reported on. The agreement of these baseline metrics will be made in conjunction with all partners. Once agreed, monthly reporting of progress against the baseline will be made to the IM&T Strategy Group and subsequently disseminated to all partner organisations to form part of their usual Board / Assurance reporting arrangements.

J4.3 Key elements of benefit management to capture:

- Improving practitioner efficiency
- Improved patient experience
- Qualitative and Quantative methods

- Review patient safety incidents
- Clinical feedback
    - Improved confidence and decision making
    - Less frustration in where and how to access information
- Audit trail or case review (i.e where GP knows patient seen in Urgent Care setting, was access made to SCR/ GP System Viewer?)

J4.4 All major local investment decisions are supported by business cases, which identify specific benefits. For many key components of the universal capabilities outlined in this report, business cases / benefits plans have already been approved by the respective individual providers. Major areas where business cases have yet to be developed and/or approved are where collaboration is required for effective delivery. These include:

- Common standards
- Integration / information viewer

J4.5 The benefits to be delivered include:

- Improved clinical confidence in decision making
- Reduced unnecessary or duplicate referrals
- Improved individual outcomes
- Reduced home visits
- Reduced clinical errors
- Improved person safety
- A better person experience by fewer duplications or delays
- Reduced waiting times
- Reduced hospital admissions
- Safer prescribing
- Improved risk management and safeguarding
- Reduced administrative tasks
- Improved clinical efficiency and effectiveness
- More time spent with the individual focussed on their needs
- Better staff job fulfilment

J5 Resources

J5.1 The plans outlined in this first Somerset Digital Roadmap will require substantial further financial investment over the next five years. Each organisation has an IM&T capital programme, with supporting revenue streams, and these are summarised in below, with further organisational plans and costs included in Appendices A-D. It is anticipated that the majority of core organisation-specific developments will be funded through these programmes, with local organisations seeking funding through national bid applications as appropriate.

Project Costs

Trust	2016/17Funding Requirements £(000)		
	Capital	Revenue recurring	Total
TSTFT	2,199	1,306	**3,505**
YDHFT	2,093	599	**2,692**
SWASFT*	4,090	1,045	**5,135**
SPFT	266	--	**266**
GP IT#	1,064	1,200	**2,264**
TOTAL	**9,712**	**4,150**	**13,862**

Trust	2017/18 Funding Requirements £(000)		
	Capital	Revenue recurring	Total
TSTFT	3,069	1,409	**4,478**
YDHFT	500	16	**516**
SWASFT*	4,180	3,412	**7,592**
SPFT	--	--	--
GP IT #	680	1,327	**2,007**
TOTAL	**8,429**	**6,164**	**14,593**

Trust	2018/19 Funding Requirements £(000)		
	Capital	Revenue recurring	Total
TSTFT	1,839	1,627	**3,466**
YDHFT	--	63	**63**
SWASFT*	1,150	4,045	**5,195**
SPFT	--	--	--
GP IT #	712	1,327	**2,039**
TOTAL	**3,701**	**7,062**	**10,763**

Trust	2019/20 Funding Requirements £(000)		
	Capital	Revenue recurring	Total
TSTFT	1,865	1,725	**3,590**
YDHFT	--	598	**598**
SWASFT*	500	4,230	**4,730**

SPFT	--	--	**--**
GP IT #	652	1,327	**1,979**
TOTAL	**3,017**	**7,880**	**10,897**
Trust	**2020/21 Funding Requirements £(000)**		
	Capital	**Revenue recurring**	**Total**
TSTFT	1,205	1,924	**3,129**
YDHFT	--	597	**597**
SWASFT*	500	4,045	**4,545**
SPFT	--	--	**--**
GP IT	678	1,200	**1,878**
TOTAL	**2,383**	**7,766**	**10,149**

* *SWASFT Values for whole of South West*
\# *GP IT subject to annual Capital bid process*

J5.2 Early assessment of achievements, gaps and local roadmap requirements have enabled CCG to identify funding requirements, for which bids are being submitted to NHSE under the Estates and Technology Transformation Fund.

J5.3 The SIDeR Programme will co-ordinate the whole-system initiatives, and the current scope and budget assumptions for these have been outlined in section H2.12. Detailed planning during 2016-17 will inform clearer plan with indicative funding detail.

J5.4 Through the Somerset Digital Roadmap workshops and discussions, several new priorities that support the new models of care have been identified, whilst others will bring forward the required investment timescale for some pre-existing organisationally defined priorities, leading to a funding gap.

J5.5 The main initiatives which require further funding are:

- £1.5m for SIDeR Integration/Portal Solution
- £200k for mobile devices
- £40,000 for Communications and Engagement Lead to work across Somerset community, informing people on vision of Somerset Digital Roadmap and signpost to others to engage.
- £40,000 for Information Governance Trainer to support wider care providers in assessment and completion of NHS DIGITAL Information Governance Toolkit
- £100,000 for Clinical Digital Engagement

J5.6 GP IT Capital Bids for 2017-18 and following four years are in development in line with the GP IT Operating Model requirements.

J5.7 Where funding sources have already been identified, applications are being prepared in line with this digital roadmap.

J5.8 Somerset CCG is currently awaiting the outcome of the ETTF bid (detailed in table below), due to be announced at the end of October 2016.

2016/17	2017/18	Estates and Technology Transformation Fund Bids £(000)
192	304	One Domain
280	1,506	SIDeR*
134	226	Taunton and Wellington Access Project
30	--	Mendip Online Consultation
57	--	West Somerset Urgent Care Centre

J5.9 Somerset CCG is developing a 2 year Operational Plan, with digital elements to include:

2 Year Financial Plan for SDR/ SIDeR £(000)	
80	2/3 x Band 4/5 wte IG Trainers (200+ organisations in wider Somerset community – provide 3 days support per site over 2 years to ensure all providers IG Toolkit completion by March 2019)
40	1wte Band /6 Comms and Engagement Lead – technical understanding plus patient engagement skills, able to share digital vision, community/patient/carer groups/outreach
280	SIDeR Technical Integration – Programme Manager and 5 Project Managers/Tech Lead/Training (Bands 6/7/8)
100	Clinical Engagement as Digital Leaders
400	mobile devices (£200 per year)
TBC	End of Life system for Somerset
TBC	Telehealth (initial focus dermatology and wearables)

J5.10 During autumn 2016, Global Digital Exemplar status has been awarded to TST, and further details of funding (c£10) and assessment process are to be clarified during October – November 2016.

J5.11 Further potential funding sources include each organisation's budget, identification of benefits and savings for reinvestment, NHS England GP IT Revenue, NHS England GP Systems of Choice Lot 1 Fund for Principal and Subsidiary Systems, as well as future potential Better Care Fund and Technology Funds identified nationally. We await details of the Digital Maturity Investment Fund identified in LDR Guidance to support increased digital maturity over the next five years. Further to this, looking at wider community funding potential, we await details of the South West AHSN Creative England funding and of the South West Local Economic Partnership 'Building Better Opportunities Fund'. Other funding opportunities for clinical or social change may emerge, and we will continue to work with service leads to identify investment in digital technology to support and accelerate system changes in improving delivery of care.

J5.12 Local funding priorities identified in the wo rkshop and in discussion are:

- Staff information sharing awareness/ technology training
- Patient communications – Fair Processing Notice, patients, carers and families
- Benefits and realisation
- Interoperability/ Information viewer
- E-Prescribing in Providers (TSFT estimate £1.5m)
- Consent model (SCC CEO letter)
- SCC – ASC and Children's Systems with links to Education, with procurement planned for 2016-17, implement in 2017, for one system, and integration with health
- SIDeR Programme for integration (portal solution and projects to support electronic flow of information between care providers)
- SCR Additional Information to be created for individual patients in General Practice
- Portal for people to access their information.

J5.13 Further potential will depend on development of the national digital roadmap and for NHSE, NHS Digital and GPSoC to deliver with system suppliers in line with national standards and readiness for integration.

J5.14 The CCG manages capital and revenue funding for IT on behalf of general practices, as delegated authority from NHS England, and in line with 'Securing Excellence in GP IT Services: 2016-18 Operating Model. With recent publication of the Digital Primary Care Maturity, CCG and practice leads need to review the outputs of utilisation of current functionality, and to consider and plan further local engagement. Work under the GP IT Service Delivery will continue with general practices and LMC to understand CQC requirements, and address five high impact areas of readiness.

J5.15 The publication of GP Five Year Forward View (2016) contains “specific, practical and funded steps to grow and develop workforce, drive efficiencies in workload and relieve demand, modernise infrastructure and technology, and support local practices to redesign the way modern primary care is offered to patients”. The digital elements noted for general practice and technology are:

- 18% increase in CCG allocations for GP IT from NHSE
- £45m national online consultations system
- Online access for patients to clinical triage systems
- Interoperability across IT systems
- Funding WiFi services in GP practices for staff and the public from April 2017
- National catalogue and buying framework for IT products and services
- Complete roll out of access to the SCR to Community Pharmacy by March 2017

J5.16 These elements are already included in the SDR.

K Summary

K1.1 Somerset has a defined and standalone footprint, with good current progress on digital maturity, and a commitment from our local health and social care community to work together. The local organisational plans are already well developed for the next year, and provide a resilient infrastructure on which to develop further collaborative plans.

K1.2 From the local digital roadmap workshops held in Spring 2016, there is a clear ambition for a system that enables information flow to be paper free at the point of care, and a willingness from system leaders to drive the work forward – further, faster and wider – than the nationally defined requirements for 2016-18.

K1.3 The Somerset progress already achieved during 2016 indicated the drive and ambition to collectively make a difference, to both patients and clinicans.

K1.4 We recognise that digital transformation is a key enabler for accelerating whole system change, and through links to the Somerset Sustainability and Transformation Plan, a clear plan of action and delivery is required through the Digital Reference Group to our Somerset Integrated Digital electronic Record Programme. To support the identification of digital leaders, working with clinicians, practitioners and staff members, will by key to changing culture and behaviour. Alongside this, we need to inform and engage with local people about our digital vision and ambitions, and support individuals in accessing digital tools and information to self-care and self-manage health conditions.

K1.5 This Somerset Digital Roadmap provides a second iteration which will form the basis for ongoing discussion and engagement, with annual review of progress and ambitions planned.

Appendix F.

INVESTMENT REQUIREMENTS AND SOURCES

NHS England Estates and Technology Transformation Fund

Bids by 30 June 2016 for primary care to fund enhanced and transformational IT requirements to support new models of care and seven day working.

Better Care Fund

£30,000 received in 2015-16, used for SIDeR Programme development and introduction of GP Clinical System Viewer into Somerset. Phase 1 – July 2016 – introduction of EMIS Viewer into Emergency and Urgent Care setting including 2 acute hospitals, community and mental health Trust, 111 and Out of Hours clinicians.

Creative England

Somerset CCG, with the South West Academic Health Science Network, and in conjunction with Creative England, West of England Academic Health Science Network and SETsquared, are pleased to announce the South West Interactive Healthcare Programme, pledging £500,000 for creative and digital companies to develop innovative healthcare technology and solutions. See http://www.swahsn.com/launch-south-west-interactive-healthcare-programme/ for more information.

NHS England GP IT Capital and Revenue

As per Securing Excellence in GP IT Services 2016-18, allocation from NHS England annually to provide core IT infrastructure and project delivery in line with GPSoC and national roadmap.

Building Better Opportunities Fund via SW LEP £4m later in 2016

A fund to support initiatives to support 55 plus age group, and BMEs, where gaps for this group ie unemployed, extended retirement age, lower skilled group) – recognising when this group get to needing care services, they will have no/little digital knowledge and services will be based on digital technology.

Appendix G.

Somerset County Council ICT Projects Summary

The Vision

In 2016 SCC adopted a new Vision for ICT, which can be summed up in the following points:

- Technology that assists the delivery of the Council's strategic objectives
- Move to a platform that enables future collaboration and sharing – Health, public sector partners.
- Technology that enables efficient, effective and secure working whilst driving innovation – Saves Money!
- A modern workforce - using technology that is used at home
- Become a beacon of innovation within Public Sector
- Home grown ICT talent

In adopting the vision, the following 6 key ICT principles now apply across the organisation:

- **Reduce, reuse, buy then build** – Drastically reducing our application estate
- **Cloud first where appropriate** – At least 80% of infrastructure and systems in the cloud by 2018
- **Collect data once use many times** – Intelligent use of data to drive the right decisions
- **Integrated technology solutions** - Enterprise architecture approach to core technologies
- **Open standards** – Only keep or buy systems that allow integration
- **Keep systems simple** – Get the processes right first, keep customisation to a minimum

Recent Achievements

Disaster Recovery

A new solution for Disaster Recovery of critical applications has now been implemented. This solution uses Microsoft Azure to back up and restore applications across a dedicated, secure network connection between SCC and the Microsoft cloud. This provides the organisation with a resilience never achieved before. Should we ever face a disaster situation we are no longer reliant on a single site. Critical applications can be restored and run in the cloud and users connected from anywhere. Real disaster scenario testing will now be scheduled on an annual basis focusing specific services in turn on testing their critical applications and ensuring our speed of response as an organisation, should it ever be needed.

Office365

The entire organisation of over 5000 mailboxes has now been migrated off site and moved to our new Office365 tenant in the cloud. This provides the same level of backup and disaster recovery for email as we have achieved for critical applications but also enables users to access their calendar and emails from any location, on any device and at any time. Again, a level of resilience and access that has never been achievable before and that many other organisations are working towards. The move to office365 also means that we can start to roll out new tools to the organisation that will enhance our productivity.

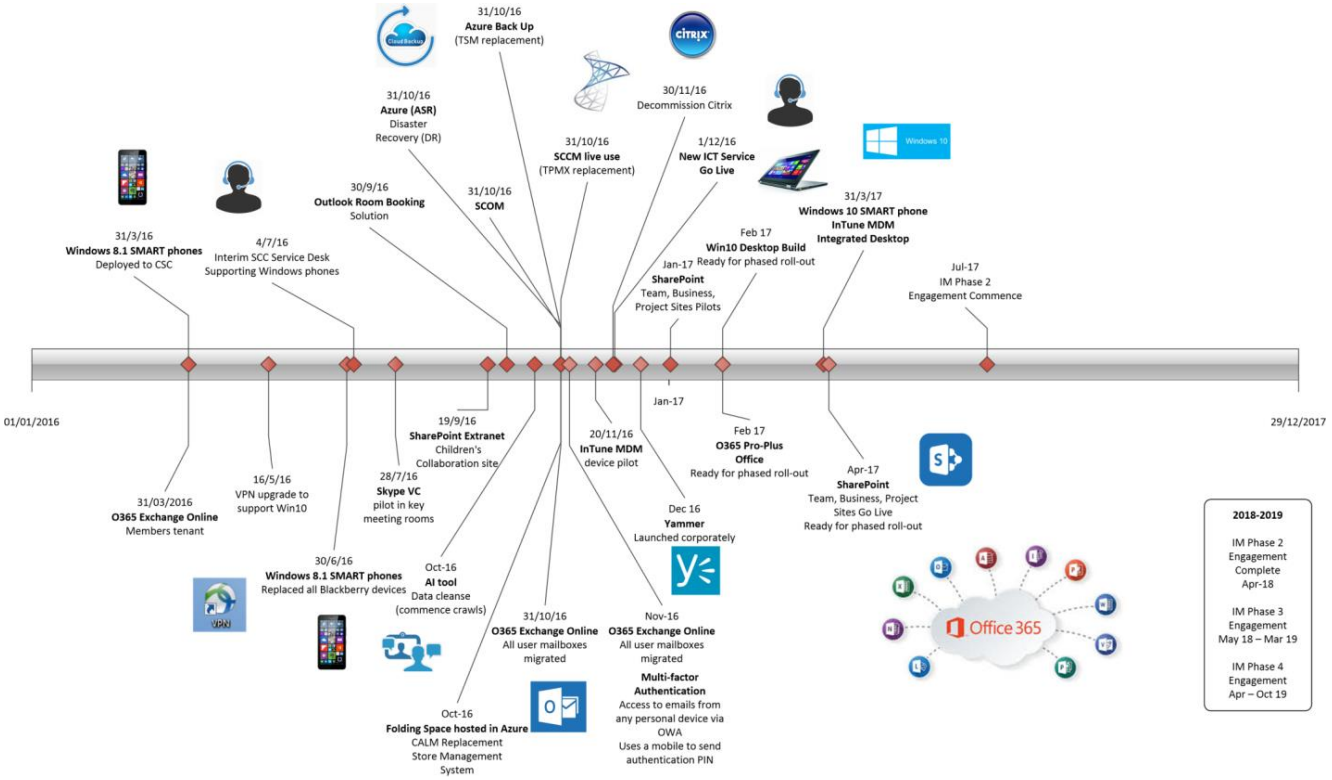
Next Steps

Productivity and Mobility Tools

Tools such as Skype for video conferencing, SharePoint for collaboration and many others can now be deployed through our O365 tenant. As we move forward making use of this new access and new technology, work really can become something you do rather than somewhere you go.

Moving the organisation from an entirely on-site and ageing ICT platform to the new cloud platform set up we have today is an enormous achievement. The transformation continues and will now extend to backing up and then running all servers and applications off site. The future deployment of the Office365 productivity tools partnered with user education will enable us to work smarter and continue to meet the challenges we face as an organisation.

The illustration below shows product delivery timeline, followed up by large scale embedding as part of an organisation wide change programme.



Information Management

The Information Management Programme is transforming the way that information is currently managed. Utilising the capabilities of 0365 SharePoint Platform provides employees new Business Sites to create, capture and manage their core business data. This programme is providing a physical shift of data from the current culture of legacy shared drives, which contain over 79% duplicated and redundant data, to the new innovative ways of working and collaborating.

This solution is being delivered as a new functional file plan to the whole organisation. Provision of clear information repositories, automatic retention, disposal and work flow are included. This ensures that information integrity is preserved and access to information is easy from any location, supporting the flexible working ethos.

In addition to increased legislative compliance and collaboration, this solution will also provide a platform for secure partnership working.

Device Refresh

From January to November 2017 SCC will be upgrading all devices to Windows 10 including the current Smartphone estate. The approach is the right devices specific for your role and allows the full enterprise approach to O365 to be utilised across the hardware. This will further enhance the work from anywhere approach and continue the drive for productivity improvements.

Collaboration

A good example of collaboration to benefit a shared client/patient is the Professional Choices site which has just been launched. This allows for virtual meeting rooms where partners can share information and work on joint plans. This again is built on a SharePoint platform and will be developed further to have a single assessment and referral route, replacing almost 50 existing forms used across a multitude of agencies.

http://professionalchoices.org.uk/

Future Projects

- Fully exploiting the new technology to automate manual tasks and reduce resource
- Use of Power BI to change the way we analyse data and drive better business decisions
- Full deployment of Skype for Business to replace existing Unified Comms including Cloud PBX
- Improved collaboration with partners through data sharing and collaboration