1. **EXECUTIVE SUMMARY** .................................................................................................................. 4
   1.1 Plan on a page ................................................................................................................................. 6

2. **CONTEXT** ........................................................................................................................................ 7
   2.1 The National Context .................................................................................................................... 7
   2.2 The London Context ..................................................................................................................... 8
   2.2.1 London Digital Targets .......................................................................................................... 9
   2.2.2 SWL working with The Healthy London Partnership ............................................................ 10
   2.3 The Local Context ....................................................................................................................... 10
   2.4 The LDR and digital funding ........................................................................................................ 11

3. **VISION AND OBJECTIVES** ......................................................................................................... 12
   3.1 The role of digital in enabling the STP ....................................................................................... 14
   3.1.1 Promoting self-care and wellness ......................................................................................... 14
   3.1.2 Delivering the right care in the best setting .......................................................................... 14
   3.1.3 Hospital configuration and clinical networking ...................................................................... 15
   3.1.4 Improving productivity .......................................................................................................... 17
   3.1.5 Future system architecture and population health ............................................................... 17
   3.2 Digital requirements to support delivery of the STP .............................................................. 18

4. **BASELINE POSITION** .................................................................................................................. 20
   4.1 Provider and CCG Digital Maturity ............................................................................................ 20
   4.2 Current progress .......................................................................................................................... 22

5. **DELIVERING THE DIGITAL CAPABILITIES** ............................................................................... 23
   5.1 Universal Capabilities ................................................................................................................ 23
   5.1.1 Tactical interoperability solution for SWL ........................................................................... 25
   5.2 Digital Maturity Trajectory for Secondary Care ........................................................................ 27
   5.3 Local Technology Capabilities to deliver the STP ...................................................................... 28
   5.4 Phasing the delivery of the Roadmap ....................................................................................... 30

6. **READINESS ASSESSMENT** ......................................................................................................... 32

7. **INFORMATION SHARING** ......................................................................................................... 36
   7.1 Common information sharing agreement .................................................................................. 36
   7.2 NHS Number adoption .............................................................................................................. 37
   7.3 Standards Adoption .................................................................................................................... 37
   7.3.1 SNOMED-CT .......................................................................................................................... 37
   7.3.2 Dictionary of Medicines and Devices (dm+d) ...................................................................... 37
   7.3.3 CDA v3 .................................................................................................................................... 37
7.3.4 Interoperability Toolkit (ITK) ........................................................................................................ 38
7.4 London interoperability .......................................................................................................................... 38
7.4.1 Patient/Citizen access to information .......................................................................................... 38
7.5 Summary of SWL information sharing approach .............................................................................. 38

8. INFRASTRUCTURE ................................................................................................................................. 40
8.1 Importance of Infrastructure to support Channel Shift ..................................................................... 40

9. MINIMISING RISKS FROM ARISING TECHNOLOGY ........................................................................... 41

10. FUNDING .................................................................................................................................................... 42

11. APPENDICES ........................................................................................................................................ 43

12. ANNEX .................................................................................................................................................... 43

Version 6.4 FINAL – 29th November 2016
1. Executive Summary

This Local Digital Roadmap (LDR) for South West London (SWL) describes a five-year trajectory of digital enablement that underpins the delivery of the Sustainability and Transformation Plan (STP). The STP itself sets out how the SWL health and care economy will transform the delivery of services to address the clinical and financial challenges it faces, whilst acknowledging that the use of technology as an enabler is critical in achieving this.

The STP clearly recognises that simply expanding the current model of delivery is not going to meet the challenges faced by the health and care system. A series of actions are being scoped to tackle these challenges and to transform services. In turn, the innovative use of technology and a focus on being ‘Paper-less at the Point of Care’ is essential to underpin and realise this transformation.

These digital requirements for supporting the plan can be categorised as:

a. **Digitally-enabled self-care**: using technology to help patients to capture and share information relating to their condition, or provide information, such as their record, to help them make informed decisions about managing their health.

b. **Channel shift**: using technology, like video conferencing, to break down barriers to access between patients and clinicians, and to help clinicians get rapid specialist input where necessary e.g. before referring a patient.

c. **Information sharing for the point of care**: helping health and care professionals make the best decisions possible by providing access to all relevant information about an individual, including clinical records and care plans.

d. **Information sharing for whole systems intelligence**: combining clinical, operational and financial information to derive insights into how we can improve how services are commissioned and delivered.

e. **Mobile infrastructure**: making sure digital technology is available to clinicians and care professionals when and where they need it.

The multiple specific technology requirements that will support our STP are detailed in the Table 3 (pg.18), where SWL has identified a number of local capabilities that are planned to support the aims of the STP.

There are pockets of good practice across south west London which gives us a positive basis for expanding the use of these technologies to the scale required to deliver these ambitions.

However, we know from our recent assessments of ‘digital maturity’ across NHS and social care organisations that we have some way to go in south west London to make best use of technology, particularly in how we share clinical information within the NHS and across NHS and social care boundaries.

This roadmap incorporates three phases to deliver a significant increase in digital maturity over five years:

1) **Developing a Collaborative Future** - a SWL collaborative capability that supports the successful delivery and utilisation of the tactical and strategic solutions (years 1 to 5)

2) **Building on the Current Position** - a tactical foundation that achieves establishes proof of concept in information sharing across SWL in the short term (years 1 to 2)

3) **Delivering a Strategic Platform** - a strategic solution that achieves the long term aims of the SWL Sustainability and Transformation Plan (years 2 to 5)
Two vital elements of phase 2 are to maximise current progress and assets by implementing a tactical solution (described in section 5.1.1) and by moving quickly to get all parties to sign up to a common, over-arching information sharing agreement.

We have a well-established and robust governance structure for IM&T across SWL which gives us a stable platform for implementation, and links closely to the STP’s implementation. South West London is also active in the collaboration of the 32 CCGs working across London through the Healthy London Partnership (HLP), and providers in SWL are also active in the London CIO Council. The particular challenge in the capital is to recognise that the 9 million people living within five STP and seven LDR footprints in London move between footprints but expect care to be delivered consistently. This is expanded on in section 2.2.

SWL intends to secure resource from the Estates and Technology Transformation Fund for Phases 1 & 2 of the Roadmap over years 1 and 2. We will also work with the Healthy London Partnership digital programme to ensure we adopt digital solutions and processes that support patients wherever they are treated across London.

Moving to a strategic solution and population health platform will be a significant cost for SWL. Funding will be sought from national funding earmarked for the ‘paperless NHS’ initiative.
1.1 Plan on a page

Figure 1: The SWL LDR Plan on a page
2. Context

Better use of data and digital technology has the power to support people to live healthier lives. It is capable of transforming the cost and quality of services when they are needed. It can unlock insights for population health management at scale, and support the development of future medicines and treatments. Putting data and technology to work for patients, service users, citizens and the caring professionals who serve them will help ensure that health and care services in south west London improve and are sustainable. It has a key part to play in helping local leaders across health and care systems meet the efficiency and quality challenges we face.

The NHS’ Five Year Forward View makes a commitment that, by 2020, there will be “fully interoperable electronic health records so that patient’s records are paperless”. This was supported by a Government commitment in Personalised Health and Care 2020 that “all patient and care records will be digital, interoperable and real-time by 2020”.

This Local Digital Roadmap (LDR) for south west London (SWL) describes a five-year trajectory of digital enablement that underpins the transformation initiatives, including new models of care, articulated by the SWL Sustainability and Transformation Plan (STP).

Additionally, the LDR builds on nationally and regionally provided capabilities which support the vision articulated through the STP and the LDR for south west London. These local, regional and national contexts are described below.

This LDR provides a short, medium and long-term perspective on plans and priorities for digital technology deployment and optimisation, with particular focus on ‘paper-free at the point of care’. The identification of future aspirations will support local strategic decisions on architecture, prioritisation and investment, and assist in relationships with suppliers.

2.1 The National Context

National guidance highlights four ‘digital agendas’ that will, if pursued, enable the delivery of ‘new models of care’ and help to close the care and quality gap, the finance and efficiency gaps and health and well-being gap. These are:

1. Paper-free at the point of care
2. Digitally enabled self-care
3. Real-time data analytics at the point of care
4. Whole systems intelligence to support health management and effective commissioning, clinical surveillance and research

This roadmap, and the STP it supports, primarily reflects the focus of south west London on the first two of these, although all four are noted.

The Department of Health, its arms-length bodies and key partners are committed to aligning levers and incentives to achieve the ambition of being paper-free at the point of care. Over the coming years, progress towards the ambition will be a key component of commissioner and provider continuous improvement, performance, regulation and inspection, and LDRs are a key foundation for this.
2.2 The London Context

In London, the 32 CCGs, NHS England, the three Academic Health Science Networks (AHSNs), Local Authorities and providers have come together to form the London Digital Programme (LDP) as a vehicle for strategic collaboration, hosted by the Health London Partnership. The particular digital challenge in the capital is to recognise that the 9 million people living within the five STP and seven LDR footprints in London move between footprints, but expect care to be delivered consistently and to a high standard. This makes the need for collaboration at scale essential.

The shared design principles for digital enablement in London are:

1. **The NHS should remember me.** Individuals should be able to express their information sharing preferences once only and be confident they will be remembered by all health and care organisations.

2. **Anywhere anytime.** Individuals should be confident that data held by organisations providing care and which is relevant to the immediate care needs of the citizen are available to be shared, in real time, with clinicians who are involved in the delivery of care anywhere in London.

3. **All of the data at my fingertips.** Clinicians should expect to be able to locate and access data from multiple sources across London via a single search launched from their normal clinical application, and using agreed data content and technology standards.

4. **Playing a bigger role.** Individuals should be able to connect to NHS systems in London through a reliable information exchange using the application of their choice.

Achieving financial sustainability and improving outcomes will require us to introduce new models of care that are fully enabled by technology. The London Digital Programme’s plans will:

- Reduce our reliance on traditional face to face models of care in primary care and outpatient settings in favour of digital alternatives.

- Streamline referral, access to diagnostic services and the delivery of care in our hospitals by making the processes of care delivery paperless at the point of care

- Ensure that every interaction with the patient counts by making greater use of algorithmic decision support tools for clinicians working in all care settings

- Improve our ability to provide co-ordinated, pro-active, care delivery to the most vulnerable people by consolidating and connecting the many electronic record systems that exist today.

Many individuals in south west London will continue to receive care from several different health and care providers, some of which operate outside the local geography. If we are to move from existing models of face-to-face care, we will also need to make it easy for patients to make greater use of digital services. To this end, we will work with other STP footprints in London to ‘**connect the capital**’. Pursuing this common goal will allow us to simplify and connect our existing systems infrastructure in a way that supports the way that care is delivered to our population.

Delivering this digitally enabled transformation will require collaboration within and across all STP footprints. Under collective governance and utilising national funding sources where we can:

- At a local level, we will invest in technology leadership and support for change management. We will seek to exploit nationally and regionally provided technology services wherever we can.
Working regionally, we will seek to connect the patient ‘once’, and to connect clinicians to all the data that they need to deliver safe and well co-ordinated care.

2.2.1 London Digital Targets

Within 1 year

- To have simplified the process of administering information sharing using the pan-London data controller console, and saved significant costs
- To have connected systems to a pan-London information exchange architecture and to have enabled the electronic sharing of electronic documents. Whilst this will deliver immediate clinical benefits, it will allow us to reduce costs
- To be fully utilising e-Referral and demonstrating improvements in cancer treatment targets
- To have developed a partnership model for informatics delivery that makes best use of specialist technology skills both within and across STP footprints

Within 2 years

- To have enabled real-time information exchange to support the care of people at the end of their lives and in so doing gain savings of £150m, potentially achieved through reductions in unwanted admissions to hospital across London
- To have connected the patient and allowed them to exchange information via connected digital apps of their choice
- To have deployed digital alternatives to face to face care in primary care and outpatient settings
2.2.2 SWL working with The Healthy London Partnership

Maximising the use of the London Health and Care Information Exchange is a fundamental element of the development of a health and care system across SWL. This will provide ‘federated’ services that will sit above the SWL local architecture as an overall connectivity layer designed to enable improvements in the patient’s journeys across the capital.

Wherever possible, and technically and financially advantageous, SWL wants to support and take advantage of London-wide developments. Additional focused work where this could be of value would be investment in developing an enhanced SCR for London with agreement being reached on the additional information added to the content.

The focus of the HLP ambitions are to transform urgent and emergency care and cancer using common shared capabilities and to build on this infrastructure. The SWL LDR incorporates this ambition as part of the five-year vision.

2.3 The Local Context

Along with the national challenges, such as an aging primary care workforce and difficulties recruiting and training staff, key system challenges across SWL include:

- Pockets of deprivation linked to poorer health and wellbeing outcomes
- Failing to meet minimum standards for urgent and emergency care 7 days a week
- An aging population with increasing numbers of people with multiple co-morbidities and complex needs
- Year on year growth in emergency admissions
- Variability in the quality and accessibility of general practice
- Inconsistency in meeting the needs of people who have mental health needs or dementia
- Not all the hospital estate is suitable for 21st century healthcare
- There is a projected financial deficit in the region of £850m in 2020/21 across SWL NHS organisations

The effective use of technology will aid in addressing some of these challenges; patients can take a more proactive approach to managing their care, clinicians can be supported to make informed decisions, and the system can provide a better patient experience by ensuring patients only need to tell their story once. These benefits will not only lead to better health outcomes for the population of SWL, but will also create efficiencies in a system that is under increasing financial pressure.

This LDR identifies how health and care systems across South West London will deploy and optimise digitally-enabled capabilities to improve and transform practice, workflows and pathways across the local health and care system.

The multiple specific technology requirements that will support delivery of the STP are detailed in the local capabilities Table 5.2 in Section 5.
These requirements can be categorised as:

a. **Digitally-enabled self-care**: using technology to allow patients to capture and share information relating to their condition to their clinician or carer, either themselves or through an automated monitoring system. Technology can also provide information (such as their record, or dietary advice) to patients through apps and websites, to allow them to make informed decisions about managing their health.

b. **Channel shift**: giving individuals greater and more efficient access to their clinicians or health services through online, telephone or video conferencing systems. Channel shift can also be used in clinician to clinician interfaces, such as allowing GPs to access a specialist consultant’s opinion before referring a patient.

c. **Information sharing for the point of care**: giving clinicians and other health and care professionals digital access to all relevant information about a patient at the point of care, to allow them to make the best decisions about the treatment and management of that patient. This includes both clinical records, capturing past treatment, and care plans, capturing future treatment. This may include A&E doctors viewing an individual’s GP record to see their allergies and current medication, to avoid administering a drug which may be harmful to them.

d. **Information sharing for whole systems intelligence**: combining clinical, operational and outcomes information in order to derive insights into the effective delivery of health services, allowing continual improvements to be made to how they are commissioned and delivered. The value of this information increases considerably the more accurately it reflects the full journey of the individual patient across different settings of care, particularly for managing how that patient journey can be best integrated to avoid crisis or deterioration in their condition.

e. **Mobile infrastructure**: the use of digital technology to support the above must be made available to clinicians and care professionals in a manner which suits their ways of working, and maximises their contact time with patients. This includes being available in the community, reducing the need to travel back to ‘base’ to input key information.

### 2.4 The LDR and digital funding

Importantly, the LDR is a ‘gateway’ to national funding for digital transformation. The LDR is, however, not intended to be a replacement for business cases and does not replace the informatics strategies of individual organisations.
3. Vision and objectives

The SWL Sustainability and Transformation Plan (STP) describes the following vision:

“We want people to live longer, healthier lives. Our vision is that local people should be supported to look after themselves and those they care for and have access to high quality, joined-up physical and mental health and care services when they need them. We want to deliver better health outcomes within our budget.”

The service design principles of the STP are:

- Care is patient centred and holistic
- Care is proactive and preventative
- Care supports the quality of life and the outcomes people value
- Care is financially sustainable
- Our staff and care givers feel supported and able to do their roles

The SWL STP sets out how we will work together across south west London to support people to keep healthy and well, and intervene early and deliver the right care in the best place to support them when they do get ill. To do this we will shift care from our hospitals into our local communities so we can provide more care closer to where people live. We will also ensure that care is tailored to people’s needs so we can provide better support to help them to stay as well as possible for as long as possible.

Our STP indicates the NHS in SWL should:

- Set up locality teams across south west London to provide care to and improve health for defined populations of approximately 50,000 people. The teams will align with GP practice localities and have the skills, resources and capacity to deliver preventative health and support self-care.
- Use our workforce differently to give us enough capacity in community, social care and mental health services to bring care closer to home and reduce hospital admissions.
- Review our acute hospitals to ensure that we meet the changing demands of our populations, and to ensure that acute providers deliver high quality, efficient care. Our working hypothesis is that we will need four acute hospital sites in south west London, but we need to do further work on this.
- Address both mental and physical needs in an integrated way, because we know this improves the wellbeing and life expectancy of people with severe mental illness and reduces the need for acute and primary care services for people with long term conditions.
- Introduce new technologies to deliver better patient care (e.g. virtual clinics and apps).
- Make best use of acute staff through clinical networking and redesigning clinical pathways.
• Review specialised services in south London. With NHS England, we have initiated a programme of work to identify the best configuration of the eight acute specialised providers in south London to be clinically and financially sustainable and deliver the best patient care.

This vision and these principles and plans have informed our proposed service model for SWL, shown diagrammatically in Figure 2.

**Figure 2 - SWL Proposed Service Model**
3.1 The role of digital in enabling the STP

It is recognised that this vision is only achievable when underpinned by digital technology.

The following vision statement has been agreed by the SW London IM&T Strategy Board:

“In Integrated health and social care excellence enabled through technology, information, intelligence and insight”

This Local Digital Roadmap thus describes the programmes and capabilities that must be achieved in order that this overall vision becomes a reality.

The SWL STP is clear that simply expanding our current model is likely to perpetuate some of our clinical and financial challenges. As a health economy, we want to transform services by introducing new models of care.

Digital technology is essential to underpinning and enabling this transformation, and for SWL to be able to realise the service design and development principles outlined in the STP. These are categorised below.

3.1.1 Promoting self-care and wellness

There is real value to the individual, and financial value to the health and care economy, in focusing on enabling people to stay well and avoid the need for healthcare interventions.

In the medium term, technology will be used to better support self-care by allowing patients to capture and share information relating to their condition with their clinician or carer, either themselves or through an automated monitoring system. Technology will also be used to provide information (such as their record or dietary advice) to patients through apps and websites, to allow them to make informed decisions about managing their health. National developments, such as the accreditation of apps, will help to realise the viability of this approach.

A challenge for technology is to support the care processes in such a way that is inclusive for all the population. IT will be used to address inequalities, but we must also prevent IT creating inequalities as we move to greater patient involvement. We must recognise that a small proportion of the population are not able or willing to use IT, and must be supported through training and engagement to access channels of communication best suited to their needs and preferences.

3.1.2 Delivering the right care in the best setting

It is clear that care needs to be joined up within and across organisational boundaries, encompassing people’s physical, mental and social care needs. To achieve this, information on the person, their medical history and care plans must also be joined up.

The value of sharing information increases considerably the more accurately it reflects the full journey of the individual patient across different settings of care, particularly for managing how that patient journey can be best integrated to avoid crisis or deterioration in their condition.
This sharing of records, care plans and information is a fundamental capability described in this Local Digital Roadmap. All relevant information will be available, paper-free, at the point of care. Processes such as referrals and discharges will be communicated across the health economy electronically.

Locality-based multidisciplinary teams will require access to information from records and care plans across boundaries, including the ability to collaborate digitally in care planning across GP, social care, mental health and community boundaries.

The use of risk stratification and resource allocation will have a significant role to play in this, especially when coupled with the potential to analyse larger cohorts of the population using information from local repositories of data.

The delivery of primary care at scale to reduce reliance on urgent and emergency care will be supported by information sharing across primary care, allowing hubs and extended hours providers to view the records of patients registered at different practices.

Urgent and emergency care services, such as A&Es, 111 and Out Of Hours services, will have access to medical records electronically. This will improve their knowledge of each individual to be able to provide more appropriate responses and, importantly, to prevent unnecessary emergency admissions. Integrated urgent care will be supported by patient relationship management systems and the ability to electronically refer, and book, into related services, improving patient pathways.

All clinicians across SWL will have access to the Directory of Services (DoS) providing them, and others (for example call handlers) with real time information about services available to support a particular patient.

### 3.1.3 Hospital configuration and clinical networking

If there are any changes to the location and networking of acute hospital services in SW in the future to optimise the clinical workforce, they will need to be supported by the timely and secure transfer of relevant information between providers, including test results, images and medical history.
NHS 111 Patient Relationship Manager

A key area of focus for south west London and the NHS in London is Urgent and Emergency Care. The Healthy London Partnership has a programme dedicated to this area and SWL are committed to working with both the U&E Care Programme and the London Digital Programme where the solution and our footprint needs align.

It is acknowledged that there are limited digital links between urgent and emergency care hospital providers, Integrated Urgent Care (IUC) and the London Ambulance Service (LAS). This can be significantly improved through the use of a Patient Relationship Management service (PRM), a standards-based integrator and the use of an integrated electronic patient record system for the LAS. Going further than this, however, is the potential for Multi-Disciplinary Team (MDT) hubs, to include various medical professionals with a variety of knowledge to make a secondary assessment downstream from the IUC call handler.

Our approach is to consider adoption of the HLP IUC model for greater joined up working and collective benefits to the system, which is summarised below:

The key requirements are an automated Patient Relationship Manager (PRM) system to route, triage and manage calls, driven by the Directory of Services (DOS), and an Integrated Care Exchange to share patient information, referrals and appointments in real time to and from primary, community and mental health providers through interoperability. The PRM will link the patient to a telephone number and look up their clinical details, enabling the 111 service to direct them to the appropriate clinical service for their condition and remove the current need for a cumbersome full pathway assessment. The PRM also provides an interface with Adastra’s Special Patient Notes functionality (SPN).
3.1.4 Improving productivity

It is recognised that there is a significant amount of waste in the combined health system that could be reduced through more efficient working underpinned by IT.

The sharing of information across the health and care economy, together with the use of easy and inexpensive technology based processes such as SMS reminders can deliver benefits such as reductions in missed appointments, repeated tests and unnecessary additional patient reviews.

In some cases we will be doing the same things more efficiently using technology, such as the way tailored information is pushed out to the patient after visiting hospital. We will also be doing things differently using technology, such as developing virtual GP and outpatient appointments using video conferencing systems.

Using digital technology to more efficiently gain a specialist opinion from hospital doctors, as opposed to traditional outpatient appointments, will also be critical to significantly reducing physical referrals and improving productivity.

Clinicians and care professionals will need to operate across a much more flexible geography to deliver the new models of care. Developing a mobile infrastructure to enable this is recognised as a core capability. Through this mobile working, patients will receive care in more appropriate locations and care workers will reduce wasted time travelling to base to access or input key information.

3.1.5 Future system architecture and population health

The new models of care envisaged by the STP will require an unprecedented level of proactive collaboration and service integration. This integration will in turn be driven by innovative organisational and contractual arrangements that incentivise proactive, holistic care and a reduction in costly treatments resulting from the failure to manage the health and wellbeing of the population.

Evidence from examples of health systems integrated in this fashion shows the significant potential of digital technology to support these care models by deriving intelligence from structured data captured at all levels of the health and care system. This is used to create real-time analytics and predictive capabilities.

Such intelligence can be used to support outcomes-based contracting and tailor the commissioning and planning of services. It can also be integrated into clinical workflows to more effectively support clinical decision making and proactive care, tailored to the individual patient.

This Roadmap contains the ambition for a ‘Strategic Solution’ to meet these requirements, recognising that significant progress relating to data liquidity and supporting arrangements such as information governance, mobile hardware, and cultural change are all required.
3.2 Digital requirements to support delivery of the STP

The main technology requirements to support the STP vision are detailed in Section 5.

The specific local capabilities relating to the delivery of specific STP objectives are summarised below and, together with the universal capabilities, will be delivered through this Roadmap in order to support the transformational schemes included in the SWL STP.

Table 3 – Local digital capabilities to support STP objectives

<table>
<thead>
<tr>
<th>STP strategic theme</th>
<th>STP operational or clinical objective</th>
<th>Supporting technology capability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preventative and proactive care</td>
<td>Promote self-care and wellness</td>
<td>1. SMS and app-based telehealth solutions and provision of information to support individuals to take a more active role in managing and maintaining their own health and wellbeing.</td>
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<tr>
<td></td>
<td></td>
<td>2. Support for roll-out of consumer health apps through publication of relevant data and facilitating links to clinical systems</td>
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<td>3. Digital awareness and training for patient cohorts to benefit from digital solutions.</td>
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<tr>
<td>Right care in the best setting</td>
<td>Deliver primary care at scale</td>
<td>4. Write-access to GP records across GPs for extended hours working, 7/7</td>
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<td></td>
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<td>5. Virtual GP clinics for patients using phone or video conferencing</td>
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<td>6. GPs can electronically place orders for all diagnostic tests and receive the results in real-time, including:</td>
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<td>– Cardiac Investigations</td>
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<td>– Endoscopic Procedures</td>
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<td>– Nuclear Medicine</td>
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<td>– Radiology</td>
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<td>– Pathology</td>
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<td>– Respiratory Tests</td>
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<tr>
<td>Proactive, locality-based MDTs</td>
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<td>7. Risk stratification technology to identify patients at risk of deterioration.</td>
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<td></td>
<td>8. Shared care plans with write-access across relevant services/organisations, including social care. Data sharing agreements to enable care record sharing across all SWL providers within the footprint agreed and signed.</td>
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<tr>
<td></td>
<td></td>
<td>9. Shared access to the GP record in community and mental health services.</td>
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<td></td>
<td></td>
<td>10. Direct booking functionality from our single integrated urgent care provider to the wider UEC system including dentistry, ED etc.</td>
</tr>
<tr>
<td>Hospital configuration &amp; clinical networking</td>
<td>Potential clinical networking across acute sites</td>
<td>11. Acute records follow the patient from OP or IP referral, in time to support decision making at the receiving trust</td>
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<tr>
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<td>--------------------------------------------------------------------------------------------------</td>
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<tr>
<td>Improving productivity</td>
<td>Reduce un-necessary outpatient appointments</td>
<td>12. E-consultation technology deployed across SWL to link GPs to specialist consultants</td>
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<td></td>
<td>Reduce staff travel time and administrative overheads</td>
<td>13. Virtual patient consultations in outpatients services</td>
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<td></td>
<td>Move to capitation and integrated, outcomes-based contracts</td>
<td>14. Mobile working solutions for community services</td>
</tr>
<tr>
<td>Future system architecture and population health</td>
<td>Move to capitation and integrated, outcomes-based contracts</td>
<td>15. Mobile working solutions for acute services, including digital vital signs</td>
</tr>
<tr>
<td></td>
<td>Move to capitation and integrated, outcomes-based contracts</td>
<td>16. WiFi infrastructure enabled in all SWL locations for staff and individual patients. Shared networks to allow access back to professional core system with the appropriate security</td>
</tr>
<tr>
<td></td>
<td>Move to capitation and integrated, outcomes-based contracts</td>
<td>17. Population health platform incorporating near-real time data and a whole-system longitudinal health and care record, with analytics to support population health management and effective commissioning, clinical surveillance and measuring of outcomes</td>
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</tbody>
</table>
4. Baseline Position

The delivery of these objectives will require SWL to make significant progress on its current level of digital maturity. This section sets out a summary of the current context for ‘digital’ within south west London.

As is common across the NHS, the digital maturity of key primary and secondary care providers and social care organisations is mixed. The summary maturity positions are given in section 4.1, with the detail in Appendix 1. The results highlight the gaps in some of our providers’ ability to deliver paper-free at the point of care that will be addressed through local roadmaps.

It is recognised and understood that different systems will be able to progress towards operating ‘paper-free at the point of care’ at different rates. Certain organisations and systems will need to focus in the short term on having robust arrangements in place to successfully manage core system replacements and to address the immaturity of particular clinical infrastructure. The current topology of systems and networks is given in diagrammatic form in Appendix 2.

A summary of key recent achievements and current initiatives relevant to digital transformation in SW London is provided in Appendix 1, with selected summaries in section 4.2. The LDR builds on these developments and lesson learned from delivering complex technology solutions, to form a foundation for future developments.

4.1 Provider and CCG Digital Maturity

In November 2015, hospital trusts nationally were required to complete a Digital Maturity Assessment (DMA) that measured the extent to which healthcare services in England are supported by the effective use of technology. The averaged results for the acute providers within the SWL footprint are summarised in Table 4.1 below. An explanation of these categories and the way the percentages are made up is given in Appendix 1.

Table 4.1 – SWL Summary DMA results for Providers

<table>
<thead>
<tr>
<th>Capability Group</th>
<th>National</th>
<th>SWL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Alignment</td>
<td>76%</td>
<td>72%</td>
</tr>
<tr>
<td>Leadership</td>
<td>77%</td>
<td>68%</td>
</tr>
<tr>
<td>Resourcing</td>
<td>66%</td>
<td>64%</td>
</tr>
<tr>
<td>Governance</td>
<td>74%</td>
<td>71%</td>
</tr>
<tr>
<td>Information Governance</td>
<td>73%</td>
<td>75%</td>
</tr>
<tr>
<td>Records, Assessment &amp; plans</td>
<td>44%</td>
<td>52%</td>
</tr>
<tr>
<td>Transfers of Care</td>
<td>48%</td>
<td>57%</td>
</tr>
<tr>
<td>Orders &amp; Results Management</td>
<td>55%</td>
<td>53%</td>
</tr>
<tr>
<td>Medicines Management &amp; Optimisation</td>
<td>30%</td>
<td>39%</td>
</tr>
<tr>
<td>Decision Support</td>
<td>36%</td>
<td>45%</td>
</tr>
<tr>
<td>Remote &amp; Assistive Care</td>
<td>32%</td>
<td>47%</td>
</tr>
<tr>
<td>Asset &amp; Resource Optimisation</td>
<td>42%</td>
<td>49%</td>
</tr>
<tr>
<td>Standards</td>
<td>41%</td>
<td>51%</td>
</tr>
<tr>
<td>Enabling Infrastructure</td>
<td>68%</td>
<td>70%</td>
</tr>
</tbody>
</table>
CCGs have more recently been asked to provide answers to a series of CCG specific questions as part of a Digital Maturity Assessment. The results of these are given in Appendix 1 and a summary averaged across South West London for key selected questions is given in Table 4.2 below.

Table 4.2 CCG Maturity Summary

<table>
<thead>
<tr>
<th>Digital Maturity Assessment</th>
<th>South West London CCG Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>All practices have access to SMS integrated with clinical system to support communications with patients</td>
<td>Approximately 85%</td>
</tr>
<tr>
<td>All health &amp; care organisations can access principle record systems from all local commissioner provider locations</td>
<td>&lt;25%</td>
</tr>
<tr>
<td>A local Electronic Palliative Care Co-ordination System (EPaCCS) is integrated with primary care clinical systems</td>
<td>60%</td>
</tr>
<tr>
<td>All local providers of health &amp; social care sharing patient digital information have systems which maintain a full automated audit of read and write access to individual patient records</td>
<td>100%</td>
</tr>
<tr>
<td>All local GPs and providers of health &amp; social care sharing patient digital information agree to a consistent information sharing model</td>
<td>60%</td>
</tr>
<tr>
<td>The CCG has appointed a CCIO or equivalent accountable officer who will provide clinical leadership for the development of the local IT strategy</td>
<td>60%</td>
</tr>
<tr>
<td>There is a local GP IT strategy and programme with roadmap annually reviewed and aligned with local commissioning priorities</td>
<td>85%</td>
</tr>
<tr>
<td>There is a comprehensive ongoing training and optimisation service to support GP Principal clinical systems and national services available to all practices</td>
<td>60%</td>
</tr>
<tr>
<td>There is a clear, agreed local (CCG) budgeted plan for the full funding of all core GP IT requirements for the next 2 years</td>
<td>80%</td>
</tr>
<tr>
<td>All general practices have secure data storage services available for all electronic data other than that stored in their GPSOC clinical systems and NHS Mail to a standard not less that tier 3 data centre</td>
<td>Varies widely. Most &lt;25%, one at &gt;75%</td>
</tr>
<tr>
<td>Within primary care locations WiFi access is available to GPs and primary care delivery staff</td>
<td>&lt;10%</td>
</tr>
<tr>
<td>Access to WiFi services is available to general practice clinical staff across local commissioned provider locations</td>
<td>0%</td>
</tr>
<tr>
<td>There is clearly defined Executive Leadership (CCG) to ensure that digital technology maturity is recognised as a key enabler</td>
<td>100%</td>
</tr>
<tr>
<td>Formal governance and accountability arrangements are clearly articulated and embedded</td>
<td>60%</td>
</tr>
<tr>
<td>Information Governance Toolkit compliance is assured through the standard contractual routes with wider health economy providers</td>
<td>100%</td>
</tr>
</tbody>
</table>
Benefits are explicitly defined, tracked and captured within individual projects 85%

CCGs actively promote take up and utilisation of national strategic systems, such as SCR, e-Referrals, GP2GP, EPS2, Patient Online 100%

A formal and structured data quality accreditation programme is commissioned by the CCG and available for GP sites 85%

### 4.2 Current progress

In Appendix 1 there is a list of selected current projects and initiatives across South West London that are supporting the move towards paper-free at the point of care. These fall into two main categories. Firstly, those that are pan-SWL including:

- Coordinate My Care
- South West London Pathology

And those that are primarily being developed in one part of SWL but have the potential to be rolled out across the whole of the geography, namely:

- Kingston Care Passport
- Sutton Integrated Digital Care Record
- Kinesis
- Myhealthlocker
- Sutton Homes of Care
- Paper-light working across Mental Health

There are also a number of projects running across parts of SWL focused on providing portals for the access of clinical information. These include work with Cerner HIE, Orion and Graphnet. It is recognised that portals bring challenges as well as benefits and this work will receive further focus as it develops. This will be addressed through the development and implementation of the SWL ‘tactical solution’ for interoperability, described in section 5.1.1.
5. Delivering the Digital Capabilities

The three types of capability (Provider Digital Maturity, Universal, and SWL Local) combine to underpin the SWL STP, and in turn this LDR describes the SWL ambitions to achieve the digital requirements that enable these capabilities.

Operating paper-free at the point of care is about ensuring health and care professionals have access to digital information that is more comprehensive, more timely and better quality, both within and across care settings. Its scope is defined by the following seven groups of capabilities:

- Records, assessments and plans
- Transfers of care
- Orders and results management
- Medicines management and optimisation
- Decision support
- Remote care
- Asset and resource optimisation

5.1 Universal Capabilities

Every local health and care system is expected to make early progress on the ten, nationally-defined universal capabilities, demonstrating clear momentum between now and the end of March 2017, with substantive delivery by the end of March 2018.

A summary of the SWL footprint status of these universal capabilities is given in Table 5.1 below and the detailed data in the national template is provided in Appendix 4. Several of the capabilities have already been deployed to some degree and the main challenge going forward is achieving more comprehensive take-up and optimisation. Nationally, evidence has been gathered that shows that the potential of these capabilities has already been clearly demonstrated in some localities.
### Table 5.1 Summary of the Universal Capability deployment

<table>
<thead>
<tr>
<th>Universal Capability</th>
<th>SWL Baseline</th>
<th>SWL Ambition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UC-A:</strong> Professionals across care settings can access GP-held information on GP-prescribed medications, patient allergies and adverse reactions</td>
<td>The SCR is already in use in almost all Trusts and is clearly improving the quality of clinical decisions. Virtually 100% of GP practices are uploading SCR data. SCR is accessible in Care UK, 111 and OOH settings. SCR is continuing to be rolled out to community pharmacies.</td>
<td>100% of patients (where it is appropriate) will have their information accessed from this year onwards, with the exception of Mental Health and Community Pharmacies where the percentage will rise to 100% by the end of 2017/18</td>
</tr>
<tr>
<td><strong>Records, assessments and plans</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>UC-B:</strong> 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&amp;EC)</td>
<td>This is very patchy across SWL. Where it is possible it is usually within a single Borough and its Acute provider.</td>
<td>The SWL Tactical Solution is aimed at resolving this, so that at least 50% of patients will have their information available to U&amp;EC clinicians by the end of 2016/17 and 100% by the end of 2017/18.</td>
</tr>
<tr>
<td><strong>Records, assessments and plans</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>UC-C:</strong> Patients can access their GP record</td>
<td>Patient Online has been activated in a proportion of practices across SWL. Approximately 12% of patients can current access their record.</td>
<td>Target end 2016/17 – 45% Target end 2017/18 – 90%</td>
</tr>
<tr>
<td><strong>Records, assessments and plans</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>UC-D:</strong> GPs can refer electronically to secondary care</td>
<td>There is a clear recognition the e-Referrals brings greater efficiency. The current level of e-Referrals is very low (&lt;5%).</td>
<td>Target for the end of 2016/17 is to raise the existing levels by at least 20% (in line with the amended GMS contract) Target end 2017/18 – 90%</td>
</tr>
<tr>
<td><strong>Transfers of Care</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>UC-E:</strong> GPs receive timely electronic discharge summaries from secondary care</td>
<td>Over 80% of discharge summaries in Acute and Community are sent electronically. In Mental Health it is currently 30%. However, none of these is yet sent in a standard structured format</td>
<td>Acute and Community targets are for 100% by the end of 2016/17 for electronic transmission. Mental Health target is 50% then and 100% by the end of 2017/18. SWL stakeholders have agreed to work to agree and deploy a structured (CDA compliant) discharge summary, reaching 100% by end of 2017/18</td>
</tr>
<tr>
<td><strong>Transfers of Care</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>UC-F:</strong> Social care receives timely electronic information</td>
<td>80% of secondary care able to send information electronically. However,</td>
<td>Target end 2016/17 – 100% secondary care sending information electronically.</td>
</tr>
</tbody>
</table>
### Transfers of Care

<table>
<thead>
<tr>
<th>Admittation, discharge and withdrawal notices from secondary care</th>
<th>Social care unable to transfer information from Docman where used.</th>
<th>Social care systems being upgraded, so most will receive electronically in 2017/18 using the London Adapter.</th>
</tr>
</thead>
</table>

#### UC-G: Clinicians in unscheduled care settings can access child protection information with social care professionals notified accordingly

<table>
<thead>
<tr>
<th>Decision Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information is currently received from social care and is entered manually. Currently social care does not receive information from unscheduled care.</td>
</tr>
<tr>
<td>Within two years the ambition is for this to be automated. Work will be carried out using the NHS England CP-IS initiative to enable this. 111 &amp; OOH are working with Adastra to achieve 100% availability.</td>
</tr>
</tbody>
</table>

#### UC-H: Professionals across care settings made aware of end-of-life preference information

<table>
<thead>
<tr>
<th>Decision Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>20% of patients have EoL plans with CMC. CMC records are flagged in Adastra for OOH/111 and on local authority systems. Most Councils do not use CMC because proportion of patients with EoL plans is currently low. Care Homes don’t have N3 access.</td>
</tr>
<tr>
<td>There is a particular focus in SWL on increasing usage of CMC. This will depend on the new version meeting the required needs. If this is the case the ambition is reach 100% within two years.</td>
</tr>
</tbody>
</table>

#### UC-I: GPs and community pharmacists can utilise electronic prescriptions

<table>
<thead>
<tr>
<th>Medicines Management &amp; Optimisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtually all practices are enabled for e-prescribing with about a 50% active usage.</td>
</tr>
<tr>
<td>The 80% target by the end of 2016/17 depends heavily on phase 4 of EPS. The target for the end of 2017/18 is 100%</td>
</tr>
</tbody>
</table>

#### UC-J: Patients can book appointments and order repeat prescriptions from their GP practice online

<table>
<thead>
<tr>
<th>Remote Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is the capability to register around 50% of patients but currently only around 5% are actively using the service in preference to other routes.</td>
</tr>
<tr>
<td>The SWL ambition is that 75% of patients will be registered to use the service by the end of 2017/18.</td>
</tr>
</tbody>
</table>

### 5.1.1 Tactical interoperability solution for SWL

An important step in supporting the rapid delivery of the universal and local capabilities is for the NHS in south west London is to select and implement a tactical interoperability solution quickly. This will achieve short term objectives such as demonstrating the reality of sharing clinical information across the footprint whilst overcoming information governance, cultural and financial barriers. It will also help to maximise the value of current investments, including national and regional systems.

The scope for the solution has been agreed as promoting access to the GP record in urgent and emergency care settings, and allowing GPs a view of acute clinical information where it exists in order to create virtuous circle of information sharing.
A preferred option for the tactical solution has been agreed by all CCGs and providers and will be refined further over 2016/17 as we move to implementation. The key components of this preferred option are:

- Connecting all GP systems across SW London to both the Medical Interoperability Gateway and the SWL instance of the Graphnet repository, to allow clinicians in all of our A&Es, urgent care centres, and 111/out of hours to view the GP record in their native system using established views
- Providing access to relevant acute information (where it exists) from all four of our acute hospitals to all GP practices
- Providing a link to psychiatric liaison services provided by South West London and St. George’s NHS Trust.

This tactical solution has been arrived at through the involvement of all the key stakeholders, including suppliers, commissioners and providers, and is intended to deliver results quickly, build on current capabilities and maximise an early return on investment.

The benefit to individuals will include:

- improved outcomes because care professionals have better data about their condition and needs
- reduced delays in receiving the right treatment, and quicker discharge because care professionals do not have to wait for information to be received from another care setting
- improved transitions of care that should avoid having to give their details and history each time

The benefits to care professionals and care provider organisations include:

- improved quality of clinical decisions taking into account all relevant information, especially in complex cases
- reduced care costs through avoiding repeated tests and unnecessary treatment, and more effective medication reconciliation
- better integrated care by sharing data for handovers and MDTs
- enabling new models of care for delivering integrated care e.g. cross-organisational workflows
- quicker communication between care organisations by reducing the use of risky and inefficient paper and fax

It is important to note that the main drivers for the tactical solution are to achieve quick wins across SWL and for clinicians to see demonstrable progress. The technology being proposed will enable the SWL footprint move to a future strategic solution which may include components from the future developments of a pan-London information exchange.

## 5.2 Digital Maturity Trajectory for Secondary Care

Following their Digital Maturity Assessment, all secondary care providers were asked to provide target value for the next three years against the seven capability groups with the assessment (listed at the beginning of Section 5). Figure 5 below presents the summary position for South West London.

**Figure 5 – SWL Secondary Care Capability Trajectory**

The detail of this capability trajectory is given in the accompanying Capability Trajectory Template, which is also referred to in Appendix 4.

There is, as one would expect, a clear ambition to progress these seven groups of capabilities across South West London. In turn, this will ensure that care professionals will increasingly operate ‘paper-free at the point of care’ over the next three years.
### 5.3 Local Technology Capabilities to deliver the STP

Our local deployment schedule for the capabilities that support the STP is at the core of the Local Digital Roadmap. A table detailing this against all 17 of the technology capabilities supporting the STP is given below and in Appendix 4.

**Table 5.2 - Technology requirements to support delivery of the STP**

<table>
<thead>
<tr>
<th>STP strategic theme</th>
<th>STP operational or clinical objective</th>
<th>Supporting technology capability</th>
<th>Baseline end 2015/16</th>
<th>Ambition end 2016/17</th>
<th>Ambition end 2017/18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preventative and proactive care</td>
<td>Promote self-care</td>
<td>1. SMS and app-based telehealth solutions and provision of information to support individuals to take a more active role in managing and maintaining their own health and wellbeing.</td>
<td>0%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Support for roll-out of consumer health apps through publication of relevant data and facilitating links to clinical systems.</td>
<td>0%</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Digital awareness and training for patient cohorts to benefit from digital solutions.</td>
<td>0%</td>
<td>10%</td>
<td>30%</td>
</tr>
<tr>
<td>Right care in the best setting</td>
<td>Deliver primary care at scale</td>
<td>4. Write-access to GP record across GPs for extended hours working 7/7</td>
<td>15%</td>
<td>50%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Virtual GP clinics for patients using phone or video conferencing</td>
<td>5%</td>
<td>15%</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. GPs can electronically place orders for all diagnostic tests and receive the results in real-time, including: a. Cardiac Investigations b. Endoscopic Procedures c. Nuclear Medicine d. Radiology e. Pathology f. Respiratory Tests</td>
<td>0%</td>
<td>10%</td>
<td>35%</td>
</tr>
<tr>
<td></td>
<td>Proactive, locality-based MDTs</td>
<td>7. Risk stratification technology to identify patients</td>
<td>70%</td>
<td>90%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. Shared care plan with write-access across relevant services/organisations, including social care. Data sharing agreements to enable care record sharing across all SWL providers within the footprint agreed and signed</td>
<td>0%</td>
<td>10%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Hospital configuration &amp; clinical networking</strong></td>
<td>Potential clinical networking across acute sites</td>
<td>11. Acute records follow the patient from OP or IP referral, in time to support decision making at the receiving trust</td>
<td>0%</td>
<td>Tbc depends on clinical model</td>
<td>Tbc depends on clinical model</td>
</tr>
<tr>
<td><strong>Productivity</strong></td>
<td>Reduce unnecessary outpatient appointments</td>
<td>12. E-consultation technology deployed across SWL to link GPs to specialist consultants</td>
<td>30%</td>
<td>75%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13. Virtual consultations in outpatients for patients</td>
<td>0%</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Reduce staff travel time and administrative overheads</td>
<td>14. Mobile working solutions for community services</td>
<td>75%</td>
<td>80%</td>
<td>90%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15. Mobile working solutions for acute services, including digital vital signs</td>
<td>75%</td>
<td>85%</td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16. WiFi infrastructure is enabled in all SWL locations for staff and citizens. Shared networks to allow access back to professional core system with the appropriate security</td>
<td>WiFi: 25%</td>
<td>45%</td>
<td>75%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Citizen: 10%</td>
<td>10%</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Staff: 5%</td>
<td>5%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Future system architecture</strong></td>
<td>Move to capitation and integrated, outcomes-based contracts</td>
<td>17. Population health platform incorporating near-real time data and a whole-system longitudinal health and care record, with analytics to support population health management and effective commissioning, clinical surveillance and measure outcomes</td>
<td>0%</td>
<td>0%</td>
<td>Initiation</td>
</tr>
</tbody>
</table>

All of the universal and local capabilities have been mapped to provide a clear view of progress over time and the increase in maturity of the digital provision. This chart is provided at the end of this document (in Annex 1) and in Appendix 4.
5.4 Phasing the delivery of the Roadmap

To deliver the capabilities outlined above, this Roadmap incorporates three phases to deliver a significant increase in digital maturity across CCGs and health and care providers over five years, that builds on progress already made in SW London.

This LDR plans to deliver the vision through three Phases:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Characteristics</th>
</tr>
</thead>
</table>
| **1. Developing a Collaborative Future** - a SWL collaborative capability that supports LDR delivery and provides ongoing support for the tactical and strategic solutions (1 to 5 year horizon) | • Implemented in parallel to (2) and (3)  
• Requirement for SWL IM&T PMO to manage e.g. information governance model, provider contract schedules, adoption of national standards  
• Collaboration to delivery universal and local capabilities |
| **2. Building on the Current Position** - a tactical foundation that achieves short term Objectives (1 to 2 year horizon) | • Achieve ‘proof of concept’ in sharing clinical information across SWL in rapid timeframe  
• Focus on clinical record sharing only  
• Overcome IG, cultural, financial barriers within manageable scope  
• Maximise value of current investments, incl. national systems for universal capabilities |
| **3. Delivering a Strategic Platform** - a strategic solution that achieves the long term Objective (2 to 5 year horizon) | • Move to ‘full’ strategic solution, including sophisticated requirements concerning self-management and prevention  
• Predicated on greater collaboration between CCGs and providers  
• Design principles agreed, e.g. move to ‘open’ architecture to reduce costs and enable choice |

Each phase is defined with a set of actions that supports the delivery of the priorities above, represented in the following Figure.
SWL has an effective and engaged IM&T community across the NHS and social care. The actions detailed above will build upon this engagement to create the practical capability required to deliver our digital priorities. This includes significant potential barriers to progress such as information governance, and demonstrating benefits from existing digital investment, before moving towards more complex and costly initiatives.

Clearly, a significant investment into IT in the future will be required to close the digital gap and enable the delivery of the STP. This is detailed further in Section 10.
6. Readiness Assessment

It is recognised that successful system-wide change requires strong leadership, deep clinical engagement and effective governance arrangements. All organisations across South West London have a key role to play in achieving the objectives of this Roadmap. Providers, commissioners, social care, GPs, 111 and OOH, Ambulance Services, and the third sector will all have to play an active part based on their position in the health and care economy.

It is also recognised that whilst there is a good selection of local projects moving forward on the paper-free at the point of care agenda, most of these are being developed in single boroughs within South West London footprint. We need to take advantage of the good work done in a more coordinated way to maximise the value to South West London as a whole.

There is already good stakeholder engagement in a robust governance structure across the SWL footprint that draws on the full range of providers and commissioners across SWL, including local authorities. This governance, detailed below, has created a shared IM&T Strategy for South West London which was subsequently refreshed by the groups to form the basis of this LDR.

Figure 4 below lays out the SWL governance structure.

*These roles to be included only if other roles do not include individuals with clinical background, e.g. CCIOs*
Following the design phase of the LDR, the IMT Strategy Board is to be refreshed to gear it towards the successful implementation of the LDR and ensure close links with the delivery of the STP. This will ensure projects are appropriately defined, implemented and monitored to deliver their anticipated benefits.

The first step to enabling this was the appointment of a substantive Chief Information Officer for SWL, learning from the successful approach of other footprints such as WELC where the role provides critical leadership and expertise to inter-organisational digital initiatives.

Proposals for revised governance and leadership have been agreed by the Strategy Board are detailed in Figure 5 below. Funding for the project management office is dependent on the resourcing model agreed for the STP by NHS organisations in SW London, and the availability of national funding for initiatives such as the Estates and Technology Transformation Fund (ETTF).

**SWL LDR Delivery Board**

- **Chair:** SWL CIO
- **1 x GP**
- **1 x acute CCIO**
- **1 x comm. nurse**
- **1 x STP Asst. Dir.**
- **1 x AHSN**

**Responsibilities:**
- LDR implementation programme design
- Programme delivery oversight
- Identify and secure sources of funding
- Align contractual approaches with providers
- Supplier contractual oversight

**SWL LDR Executive Group**

- **Chair:** SWL CIO
- **1 x GP IT/IG lead**
- **1 x integration architect/technical project manager**
- **1 x STP Asst. Dir.**

**Responsibilities:**
- Programme delivery
- Issues resolution
- Supplier engagement and contract management

**SWL LDR Project Management Office**

- **Core – funded by system-wide contributions to STP implementation (tbc):**
  - 0.4 WTE SWL CIO
  - 0.4 WTE, 8b/c Asst. Dir. – IM&T
  - 1 WTE, 8a Project Manager
  - 0.5 WTE, 6, Project Support Officer

- **Contingent on ETTF:**
  - 6 x 7/8a practice facilitators (CCG hosted, coordinated by PMO)
  - Tactical solution change management & integration personnel
  - Primary care (OP referral and SMS systems) change management / deployment personnel

**Membership:**
- **Chair:** SWL CIO
- **1 x GP**
- **1 x acute CCIO**
- **1 x comm. nurse**
- **1 x STP Asst. Dir.**
- **1 x AHSN**

**Nominated IT lead reps:**
- 1 x CCGs (diff. CCG to GP)
- 1 x Social care
- 3 x Acute care
- 1 x Mental health
- 1 x GP

**Information Governance Working Group**

**Referral and Discharge Working Group**

**Interoperability Working Group**

**Patient and end user representation where design is necessary**

**Individual providers and CCGs IT/IG leads (incl. social care) contribute as required within existing roles**

*Pending projects progressed*
Being a critical enabler for the STP, the governance for the LDR will be fully integrated into that for the delivery of the STP. Arrangements agreed at November 2016 are detailed in Figure 6 below. LDR delivery will also benefit from being integrated into the full STP programme office, which includes dedicated pan-SPG PMO support in addition to the LDR PMO.

The SWL IM&T Board identified a specific objective of a Benefits Driven Approach. This recognises the importance of investments in IM&T solutions being driven by their contribution to the objectives in the LDR with quantifiable benefits and return on investment. A focus on business cases across the SWL footprint will lessen the problems created by costs and benefits being seen in different parts of the health economy. The approach to benefits management and measurement will be organised through the SWL LDR PMO.

A function of readiness is the identification of potential sources of funding and investment. The known, anticipated and target sources of investment to support the achievement of the ambition of this Roadmap, encompassing capital, one-off revenue and ongoing revenue costs, is described in more detail in Section 10.
It is recognised that resourcing the work contained in this LDR is a challenge. By working as a local health and care system, in a collaborative way, South West London aims to utilise resources more effectively by supplementing the core PMO with specific expertise and availability from around the footprint. Where appropriate this could involve temporarily back-filling roles to allow certain individuals to use their experience on a wider basis.
7. Information Sharing

Information sharing underpins the delivery of the capabilities described in this Roadmap. The goal is that shared information will be structured and coded to support decision making, available in real-time as required and without unduly burdening the inputting party or recipient.

The information sharing approach looks at how South West London moves from only viewing information, through to enabling clinicians to use structured information, and on to advanced decision-support.

The NIB Interoperability Strategy outlines the sharing of information within and across localities through open interfaces (open APIs) based on open standards. An outline of how South West London is planning to develop its information sharing approach is provided in the given template which is attached in Appendix 5.

Interoperability is accepted as a crucial element of a digital NHS. To interoperate, clearly communicating parties must agree a common set of standards that specify:

a. How they will exchange information; and
b. What type of information they will exchange and in what format.

A more in-depth explanation of interoperability is included in Appendix 5., and a summary of the key activities is given in the following sections.

7.1 Common information sharing agreement

This LDP includes plans for South West London to achieve a common information sharing framework agreement by the end of 2016/17, to which all organisations are signed up. This would be a document that outlined the intent for all parties to share information but not an agreement to actually do so.

Following on from this there would be a series of specific ‘plug-ins’ relating to particular sets of information passing between identified organisations. It is felt this is the most pragmatic way to move this key, and complex, deliverable forward.

There are already examples of progress towards this goal by individual parts of SWL, e.g. the Kingston Overarching Information Sharing Protocol. Additionally, last year Sutton developed a data sharing agreement for their IDCR, which involved significant resources to address all appropriate legal information governance issues.

It will be important to share this task as widely as possible, not only to spread the cost and expertise, but also to create a data sharing agreement that is applicable across the broadest set of organisations. SWL is keen to share the developments of the London Health and Care Information Exchange where one component of the ‘federated’ services is the provision of data controller across London with the means to establish and maintain trusted ‘electronic relationships’ with one another.
7.2 NHS Number adoption

The NHS Number is the only national Unique Patient Identifier and must therefore be used as the primary identifier of the patient when exchanging information between systems.

The current status regarding the adoption of the NHS Number across South West London is that it is virtually 100% in NHS organisations and around 90% in Local Authorities. However, there will always be challenges across the South West London relating to transient populations, where a proportion of the population at any one time do not have an NHS Number.

7.3 Standards Adoption

It is recognised that the active use of information coding standards is required to extract the most value from the sharing of information. Information sharing entities are therefore expected to adopt a set of national standard terminology and coding schemes. The three standards reported on here are:

- SNOMED-CT
- Dictionary of Medicines and Devices (dm+d)
- CDA v3

In addition, it will be important for standards to be adhered to for the development of applications. The lead for these and others will be taken through the London Digital Programme.

7.3.1 SNOMED-CT

SNOMED-CT is an international standard and has been mandated by the National Information Board (NIB) as the single clinical terminology to be used in all care settings in England. The NIB implementation timeline is for all primary care systems to adopt SNOMED-CT by the end of December 2016 followed by full adoption of the standard across the NHS in England by April 2020.

7.3.2 Dictionary of Medicines and Devices (dm+d)

dm+d is a set of codes and terms based on SNOMED-CT that provides the recognised NHS standard for uniquely identifying medicines and medical devices across all healthcare settings. Health and social care organisations, system suppliers and pharmaceutical companies are required to adopt the standard by 30 June 2017.

7.3.3 CDA v3

Clinical Document Architecture (CDA) has been agreed by NHS England as the standard for document exchange solutions containing clinical data.

Organisations and suppliers joining the London Programme will be required to support CDA v3 standards for the ‘publication’ and exchange of transfer of care data with GPs and with Social Care.

Native support for CDA publication/consumption will be encouraged, and over time mandated.
### 7.3.4 Interoperability Toolkit (ITK)

The Interoperability Toolkit (ITK) is a set of common specifications, frameworks and implementation guides to support interoperability within local organisations and across local health and social care communities. SWL is mindful of the value of ITK in reducing complexity and thus expenditure by introducing unified specifications, and will take this into account as a guide when developing digital solutions across SWL.

### 7.4 London interoperability

The NHS in London is in a unique position of actively developing interoperability and plans for information sharing across its seven LDR footprints. The London Digital Programme, as part of the HLP, is developing an architecture for the London Health and Care Information Exchange that comprises a set of regionally provided and ‘federated’ services that will sit above each local architecture as an overall connectivity layer. SWL will continue to actively support these developments.

An element of this work is to drive the adoption of the Coordinate My Care digital end of life care plan across London. SWL already has a focus, as a universal capability, to do this.

#### 7.4.1 Patient/Citizen access to information

An element of information sharing with patients is being able to direct them to the most appropriate sources of approved advice and guidance. Currently they are confronted with a plethora of websites (each laid out in a different way). SWL will work to coordinate its public facing clinical and service information, with the first call for patients identified as NHS Choices.

Another element of the London developments that SWL will take advantage of is the HLP citizen account service that will provide a digital platform through which patients/citizens can create or re-use an existing GDS (Government Identity Service) identity in order to establish their account, set up proxy preferences, and set preferences and provide permissions and consents.

Digital developments in SWL will also be mindful that the citizen does not want to be confronted with multiple portals. In addition, apps will increasingly play an important role for the citizen. We will work to support, and make information available to, a selected list of accredited apps that we will ensure our systems work well with and we will promote these to patients.

### 7.5 Summary of SWL information sharing approach

A summary of the SWL information sharing approach is presented in the following diagram.
Figure 7 South West London Information Sharing Approach
8. Infrastructure

It is understood that an effective mobile working infrastructure is required to fully exploit our local capabilities. This includes devices, authentication, user interfaces tailored to the device, connectivity and mobile device management.

Not only does this help to mobilise professionals in their normal place of work, it will also provide them with the ability to work in other care settings, including care homes and in patients’ homes.

The current status of the mobile working infrastructure across south west London is poor. Around 10% of primary care staff have access to WiFi within primary care locations and none are able to access WiFi when on other locally-commissioned provider locations.

The hospital providers in south west London have plans to develop their mobile working infrastructure. Predominantly this is on an individual basis but these separate advances will add to the ability of the local health and care system to interoperate. The initial steps mostly focus on the roll-out of WiFi across their geographies but, increasingly, there are investigations into the use of mobile devices for front-line clinicians.

There are pockets of progress across south west London. For example, in South West London & St. George’s Mental Health Trust, the organisation began rolling out mobile working with 3G laptops in 2009/10. Since they switched to 4G laptops community clinicians are now seeing the benefit of accessing and entering clinical information at the point of care. Also, in Wandsworth primary care clinicians have been provided with remote access to their surgery system securely so that they can see patient notes on a tablet or smart phone when in the community.

8.1 Importance of Infrastructure to support Channel Shift

The SWL STP recognises that the greater use of technology can more efficiently spread the expertise of our clinicians, and patients, across traditional provider boundaries and the home.

Channel shift is an important aspect of both improving the efficiency of service provision whilst, at the same time, improving the timeliness and quality of the patient experience. This will be achieved through giving individuals greater and more efficient access to their clinicians or health services through online, telephone or video conferencing facilities. Patient Online is an example of this and is being actively rolled out across South West London.

Digitally-enabled self-care will use technology to allow patients to capture and share information relating to their condition to their clinician or carer, either themselves or through an automated monitoring system.
9. Minimising Risks from arising technology

The National Data Guardian review of data security is underway. This is expected to produce a set of leadership responsibilities and data security standards. Meanwhile, South West London organisations are working to build plans, policies and procedures to minimise risks to patient safety and organisational reputation associated with the use of technology. The relevant areas are:

- Data security
- Clinical security
- Data quality
- Data protection and privacy
- Accessible information standards
- Business continuity and disaster recovery

GS1 standards cannot currently be progressed due to outstanding issues requiring resolution, thus GS1 is only progressing in specialist areas at the moment such as Genomics.
10. Funding

Clearly, a significant investment into digital technology in the future will be required to close the digital maturity gap and enable the delivery of the STP. This includes both the cost of technology, and, more significantly, the resources required to collaborate across organisations to effectively implement new technology and change the way we work.

However, it is important that significant investments made into digital technology to date are not lost, and we sweat our current assets as we move to a greater level of digital maturity in SWL. A first step is to move ahead as quickly as possible with the identified ‘Tactical Solution’.

SWL intends to secure resource from the Estates and Technology Transformation Fund for Phases 1 & 2 of the Roadmap over years 1 and 2. Precise costs have been determined as part of the bids submitted for the ETTF during the summer of 2016. We will also work with the Healthy London Partnership digital programme to ensure we adopt digital solutions and processes that support patients wherever they are treated across London.

Moving to a strategic solution and population health platform will be a significant cost for SWL. Funding will be sought from national funding earmarked for the ‘paperless NHS’ initiative. These costs will be defined further depending on the level of digital maturity achieved in existing systems over years 1-2, and the specific requirements of new commissioning and provision models in SWL, e.g. the number and scope of outcomes-based contracts in place.
11. Appendices

The Appendices are provided in a separate document. Those included are:

1. South West London Baseline Position
2. Topology of current applications, systems and networks by CCG
3. Organisations in the South West London footprint
4. Capabilities and Deployment
5. Information Sharing Approach

12. Annex

Over the page is the Capability Deployment Plan providing an overview of the whole Local Digital Roadmap for South West London.
Annex - South West London Capability Deployment Plan

Developing, Progressing, Transforming

1. SMS and app-based health solutions to promote self-care
2. Support for rolling out of consumer health apps through publication of relevant data
3. Digital awareness and training for patient cohorts to benefit from digital solutions
4. Write-access to GP record across GPs for extended hours working 7/7
5. Virtual GP clinics for patients using phone or video conferencing
6. GPs can electronically place orders for all diagnostic tests and receive results in real-time
7. Risk stratification technology to identify patients at risk
8. Shared plans with write-access across relevant services including social care
9. Shared access to the GP record in community and mental health
10. Direct booking functionality from the SWL single integrated urgent care provider
11. Acute records follow the patient from GP or IP referral in time to support decision making at receiving Trust
12. E-consultation technology deployed across SWL to link GPs to specialist consultants
13. Patient virtual consultation in outpatients
14. Mobile working solutions for Community services
15. Mobile working solutions for Acute services
16. WIFI infrastructure is enabled in all SWL locations for staff and citizens
17. Population health platform incorporating near real-time data and whole-system longitudinal health record with analytics support

Key
- Universal Capabilities
- Healthy London Capabilities
- Local SWL Capabilities

Relative Maturity


Delivery Year