

Local Digital Roadmap for Berkshire West (Wokingham with partners)

Document History

Revision History

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Preface

The organisations contributing to the Berkshire West local Digital Roadmap have an established history of working together on cross health economy projects. The ten organisations in our footprint are:

- ◆ 4 CCGs comprising 57 GP practices.
- ◆ 3 Unitary Authorities.
- ◆ 1 Acute trust.
- ◆ 1 Community and Mental Health Trust.
- ◆ South Central Ambulance Trust.

All organisations agreed in 2013 that to ensure safe and effective care, the patient's information required to be available wherever and whenever they are treated and the Berkshire West Connected Care programme was conceived. This programme has helped our health and care economy to work more collaboratively and we have developed a robust governance framework to support the delivery of this complex initiative. We are now seeing the benefits of these good working relationships deliver across the system, supporting new pathways of care to develop uninhibited by the constraints of information silos and allowing new ways of working across the public estate which would not have been delivered without our experience of collaboration and joint working.

The Connected Care and other collaborative digital projects are essential to delivering transformation and are also essential enablers of our health and care change priorities. This has been recognised by the agreement to fund Connected Care through the Better Care Fund, allowing us to radically change out of hospital care to meet the challenges of our growing elderly population and people with complex needs. Through Connected Care we will deliver:

- ◆ Interoperability and information exchange between health and social care organisations – with all ten organisations sending and receiving information by 2020.
- ◆ A person held record for health and social care for the citizens of Berkshire, to support prevention of ill health the promotion of wellbeing and promote self-care and self-management for those who become unwell.

Our history of collaborative working includes initiatives with neighbouring health economies which has enabled us to bring together a network of digital leaders across the Sustainability and Transformation Plan (STP) footprint. Chief Information Officers from NHS Commissioners, providers and Local Authorities from Buckinghamshire, Oxfordshire and Berkshire West (BOB) have agreed to work collaboratively with the aim of implementing fully integrated records across the footprint by 2020. Key priorities for 2016/17 include:

- ◆ Sharing best practice from across the three health and care communities.
 - e-Consultations in Urgent Primary Care in Buckinghamshire.
 - Connected Care Integrated Records in Berkshire.
 - Person Held records in Oxfordshire.
- ◆ Joining forces where we can demonstrate efficiency.
 - Developing our Digital Transformation capabilities.
 - Delivery of projects and programmes.
 - Procurements.
- ◆ Developing population health and risk stratification tools.
- ◆ Creating a single set of information sharing agreements.
- ◆ Agreeing a clear direction for patient portals and self-management, with a joint approach to citizen identity across health and local government.
- ◆ Ensuring integrated records are available where patient flows cross borders.

These are the initial priorities agreed by the technology leaders at the BOB STP level. We are also working with a number of clinical programmes to ensure that the digital priorities which flow from their work are reflected in ours.

In addition to the technology priorities there is also a critical link with the workforce workstream to ensure that we develop our existing and future workforce to maximise the opportunity digital transformation offers.

Although Berkshire West is starting from a robust baseline we recognise there is work to do to ensure that:

- ◆ All our information is electronic.
- ◆ All our information is shared.
- ◆ Our patients are empowered with their health and care information.

We are passionate advocates of the role the Commissioner can play in supporting integration, contracting for change, developing system leadership in technology and digital services and we will continue to support our providers to deliver individual digital strategies and investment plans which will lead to the whole system being greater than the sum of its parts.

Lois Lere, Director of Operations, NHS Wokingham Clinical Commissioning Group

30th June 2016

A Executive Summary

A1 The case for change

A1.1 Berkshire West serves a population of 521,000 patients and comprises of a number of organisations:

- ◆ CCGs: Wokingham, Newbury and District, North and West Reading, South Reading
- ◆ Unitary Authorities: Reading Borough Council, West Berkshire Council, Wokingham Borough Council
- ◆ Ambulance Trusts: South Central Ambulance Service Foundation Trust
- ◆ Mental health and community providers: Berkshire Healthcare Foundation Trust
- ◆ Acute care provider: Royal Berkshire Foundation Trust

A1.2 The Berkshire West Local Digital Roadmap is closely aligned to the Buckinghamshire, Oxfordshire and Berkshire West Sustainability and Transformation Plan (the BOB STP). The BOB STP footprint serves a population of 1.8 million people registered with GPs in seven CCGs: Berkshire West (four CCGs), Oxfordshire, Aylesbury Vale and Chiltern.

A1.3 There is broad alignment between providers and commissioners on the size of the challenge and a realisation that current ways of working and providing care are not sufficient to bridge the projected financial gap. It is accepted that commissioners and providers planning in isolation will not bring the system into balance and could worsen provider positions. A whole system approach is required.

A1.4 The BOB STP has identified six priorities to help drive forward the whole system approach, they are:

- ◆ Improve wellbeing through prevention
- ◆ Redesigning urgent and emergency care
- ◆ Realignment of acute care
- ◆ Mental Health Vanguard
- ◆ Workforce – leadership, capability and capacity
- ◆ Digital Transformation

A1.5 The BOB STP includes a number of initiatives that will support these priorities across the footprint. The priorities described in the BOB STP are reliant on the development and utilisation of a number of technological innovations to enable improvement in outcomes, support of self-care and provide a greater proportion of care in a community setting. The Berkshire West Local Digital Roadmap is aligned to the BOB Sustainability and Transformation Plan and includes a roadmap to achieve:

- ◆ Paper-free at the point of care.
- ◆ 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 Leadership, governance and engagement

A2.1 The delivery of the Local Digital Roadmap is being overseen by the Berkshire West Digital Roadmap Board. This group was originally the Connected Care Board, but has taken on additional responsibilities for the workstreams associated with the delivery of the broader roadmap. The Board includes representation from each of the health and social care partners involved in the footprint, has been operating since mid-2013 and has overseen significant cross system digital developments. The Senior Responsible Officer (SRO) is the Director of Operations for Wokingham CCG.

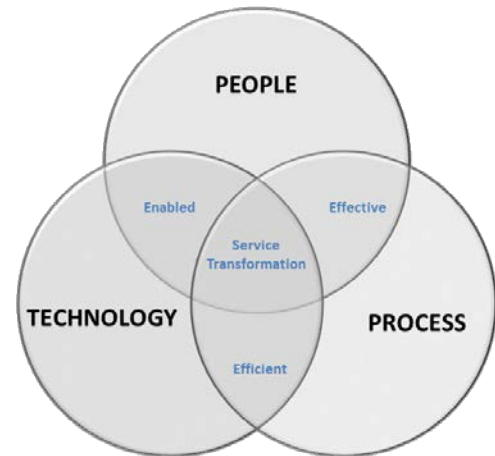


Figure [A1] - Transformation Model

A2.2 Berkshire West have been very clear that “digitally enabled transformation” should not focus on the



technology alone but must be driven by the end-users, i.e. those at the front line of delivering care. To this end, over 50 members of staff across health and social care were involved in the development of Sam’s story - a fictional journey used to illustrate some of the issues facing care professionals in obtaining patient/citizen centric data in relation to individuals under their care. Sam’s story was completed in September 2015 and was one of the key inputs to the shared care record (Connected Care) requirements that were published as part of the Invitation To Tender (ITT) process which started in October 2015.

In many cases the level of transformation of business processes is under estimated. In order to maximize the benefits of technology and innovate new models of care, transformational change must be given equal attention and resources.

A2.3 Clinical and care professionals were involved in the Connected Care ITT marking and selection process.

- ◆ Clinicians and care professions were involved in the marking and moderation of the functional and operational requirements.
- ◆ 71 clinical and care professionals attended the two day supplier demonstrations (January 2016) and were actively involved in the final selection process. Suppliers involved in the process commented that this was the best clinical engagement they had seen during a procurement exercise.

A2.4 The Connected Care Programme Board has patient representation since inception in early 2014 and was involved in the ITT marking and selection process.

- ◆ Patients were involved in the marking and moderation of the patient portal requirements.
- ◆ Patients attended the two day supplier demonstrations (January 2016) and were actively involved in the final selection process.

- A2.5 In September 2015 Berkshire initiated an Information Governance steering group comprising of the Caldicott guardians (or delegates) from each of the organisations involved in digital transformation. The purpose of this group was to ensure a strong IG management framework was developed to demonstrate that all personal confidential data will be processed, used and shared lawfully and that all data protection requirements are being effectively satisfied. The steering group is chaired by the Local Medical Committee (LMC). Following the production of 12 key principles (and supporting collateral) the LMC wrote to all Berkshire West GPs in April 2016 to endorse the sharing of data and the Connected Care programme.
- A2.6 Since the LDR and STP footprints were formed, the complexity of multiple LDR's being involved in multiple STP's has become apparent. It is imperative that the BOB STP is supported with consistent digital strategies from the multiple LDR's and an STP Digital Group is being established to bring together the LDR's. This will have representation from Berkshire West, Oxfordshire, Aylesbury Vale and Chiltern CCG's, as well as providers and councils.
- A2.7 In summary, in terms of leadership, governance and engagement Berkshire West is well prepared to implement the Local Digital Roadmap thereby achieving; paper-free at the point of care, digitally enabled self-care, real-time data analytics and whole systems intelligence.

A3 Implementation capability

- A3.1 The organisations across Berkshire West have been working together for the past 30 months, developing solutions, investigating options and learning how to work successfully with each other. The relationships developed during this time are critical to the successful implementation of the Local Digital Roadmap.
- A3.2 All organisations have agreed that the NHS number will be the primary identifier. Wokingham Council is currently in the process of installing a connection to the N3 spine (preparing to test the Demographic Batch Service and Patient Demographic Service) and the other two councils are in the process of completing their IG Toolkit submission to begin the process (anticipated Q4 2016).
- A3.3 Significant advances have been made in terms of cross organisational information sharing however, to-date, these have been mainly technology led.
- ◆ Phase 1 of the Connected Care project enabled the sharing of (selected) primary care data from the 54 GP surgeries in Berkshire West with Westcall Out of Hours Service, Reading Walk In centre and approximately 200 pilot users in Berkshire Health Foundation Trust and the Royal Berkshire Hospital. Phase 1 went live in December 2015.
 - ◆ Phase 2 of the Connected Care project implemented a “proof of concept” integrated portal which extended the data provider organisations and the data consumers. In addition to the primary care information the pilot portal also included Admissions/Discharges/Transfers from the Royal Berkshire Hospital and community information from Berkshire Health Foundation Trust – in effect this was one of the first stages in moving towards paper-free at the point of care. The proof of concept ran for 6 months and was decommissioned in April 2016. Phase 2 also included the procurement process for the full interoperability solution.
 - ◆ The implementation of reablement, intermediate and integrated care teams including but not limited to the Out of Hospital Transformation team, Integrated Cardiac Prevention Programme and End of Life sitting service.
 - ◆ Care & Support @ home – This initiative encourages closer working and data sharing between the local authority, the domiciliary care provider and the person to develop a person centric plan to keep the person safe, well and in their own home. This is a significant move towards digitally enabled self-care.
 - ◆ Multi Agency Safeguarding Hub (MASH) - Inter-agency initiative between the Council, NHS and Police services, requiring secure communications and data transferred.
- A3.4 Many of the organisations across Berkshire West are undergoing major system upgrades while at the same time facing severe budgetary constraints. These two factors are driving behaviours that are detrimental to the long terms success of the LDR, they are:
- ◆ Organisations are focussing on “run the business” functions as opposed to cross organisational initiatives.
 - ◆ Technical staff with highly desirable integration skills are being asked to perform other roles or are being released, i.e. it is more difficult to get the people with the right technical skills.
 - ◆ Front line clinicians and carers are less able to participate in design, configure and testing.
 - ◆ The focus on Cost Improvement Plans (CIPs) and short term savings can impede the ability to achieve greater efficiencies in savings that could be achieved from a longer term view.
- Berkshire West is looking at pragmatic solutions to these problems including shared resource pools across organisations, however It is essential that funding is made available to assist in this area.

- A3.5 Berkshire West has successfully implemented a number of information sharing projects. The cross organisational relationships are in place and mature, there is clarity in terms of organisational interdependencies and there is a shared vision. There is a proven mechanism for managing information governance, all organisations are fully supportive and the LMC has endorsed our approach. In terms of deployment capability Berkshire West is well prepared to implement the Local Digital Roadmap.

A4 Change and benefits management

- A4.1 The Connected Care Full Business Case contained a detailed benefits realisation section and the final Key Performance Indicators will be part of the Board updates. Berkshire West has already had discussions with organisations outside the STP footprint to learn lessons and better prepare for this work. During the initiation phase (June/July 2016) baseline measures will be made and the data required to perform the appropriate analysis will be determined. Results will be reported to the Berkshire West Digital Roadmap Board.

- A4.2 In addition to use and utilisation, the Connected Care and supporting technology solutions will also be used to monitor progress against specific benefits realisation, for example:

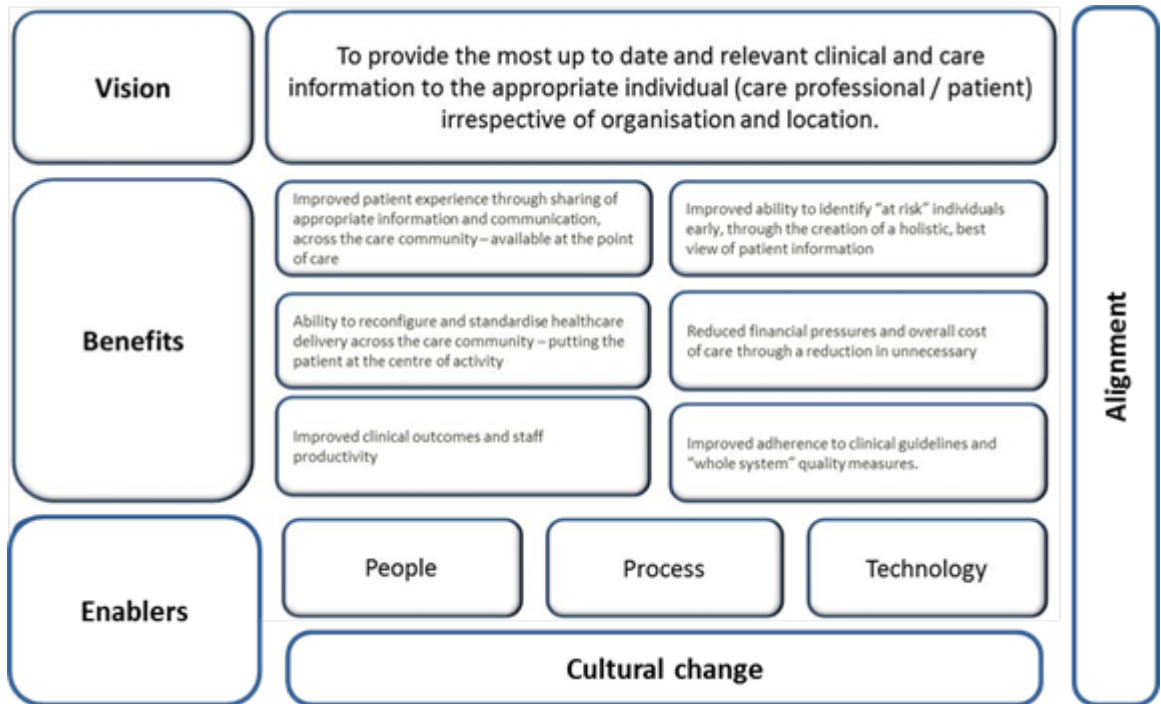
- ◆ Reduction in length of stay.
- ◆ Reduction in unnecessary admissions.
- ◆ Reduction in unnecessary and duplicate tests.

From a system strategy perspective, Connected Care and supporting technology is a key enabler for the delivery of the STP priorities. The proactive digitalisation of the patient record and other technology advancements will allow the people of Berkshire and our wider STP footprint to become more actively involved in their care encouraging active partnership across health and social care with the person at the centre of their own care. This personalisation may encourage the culture shift necessary in order to promote sustainability in the future.

- A4.3 Benefits management and the change management work that delivers the desired patient, staff and financial benefits are identified, planned, delivered and monitored on a system-wide basis and using a combination of input and output metrics and performance indicators. This integrated approach ensures that the change initiatives are consistent across the dimensions of people, process and technology and coordinated across all participating organisations, projects and programmes. The methodology to be employed in delivering and managing the benefits and transformational changes has evolved from pioneering work done in NHS IM&T in the early 1990s drawing on and enhanced by Managing Successful Programmes (MSP) and by work done with Cranfield University and the former NHS Institute for Innovation and Improvement.

A4.4 Within the technology space, lessons have been learned about the importance of culture and change management when implementing new technology. The below vision will support us in bringing patients and health and social care professionals along with the digital transformation agenda.

Figure [A2] - Transformation Alignment



A5 Digital maturity

A5.1 Each NHS trust has recently completed the national Digital Maturity Self-Assessment (DMA), which evaluates how well-developed different aspects of readiness, capability and infrastructure are. The DMA baseline for provider organisations in health shows that, broadly speaking, each trust is well-placed regarding strategic alignment, leadership, resourcing, governance, asset optimisation, standards and enabling infrastructure. The table shows that significant work needs to be done but overall the health organisations are starting from a sound base.

Figure [A3] - Footprint Organisation Digital Maturity

Issue	National Average Health	BHFT	RBH	SCAS	National Average LAs	Reading	West Berkshire	Wokingham
Strategic Alignment	76%	100%	60%	56%	78%	71%	71%	75%
Leadership	77%	90%	80%	85%	79%	78%	78%	88%
Resourcing	66%	95%	45%	75%	75%	58%	63%	67%
Governance	74%	100%	65%	75%	76%	79%	88%	83%
Information Governance	73%	96%	50%	75%	82%	77%	81%	92.31 %
Records, Assessments & Plans	44%	56%	26%	57%	47%	50%	50%	44%
Transfers Of Care	48%	59%	42%	61%	35%	55%	55%	41%
Orders & Results Management	55%	49%	66%	14%	-	-	-	-
Medicines Management & Optimisation	30%	4%	17%	29%	-	-	-	-
Decision Support	36%	30%	33%	22%	62%	0%	0%	25%
Remote & Assistive Care	32%	92%	25%	50%	56%	61%	61%	61%
Asset & Resource Optimisation	42%	81%	45%	56%	65%	68%	68%	86%
Standards	41%	46%	44%	75%	62%	0%	0%	25%
Enabling Infrastructure	68%	80%	48%	75%	70%	81%	81%	72%

A national DMA tool has been designed for social care (adult and children) providers. It follows the same broad headings as the NHS assessment but has specific questions which are more pertinent to social care. The Digital Maturity Assessment for Social Care was not compulsory to complete and it is testament to the overall commitment to service transformation that all three Local Authorities in Berkshire West have made submissions and demonstrate a consistently high standard in comparison to the national standards.

- A5.2 The DMA baseline for social care shows that, broadly speaking, all Local Authorities demonstrate a consistently high standard in comparison to the national standards. Strategic alignment, leadership, remote & assistive care and enabling infrastructure are key areas where Local Authorities are developing and investing, i.e. where they can potentially see significant benefits with the emphasis on a person being more self-reliant, prevention strategies, reablement and keeping a person out of residential care for as long as possible. This is done through investment in new technologies, moving towards digital platforms, movement away from paper and development of remote and assistive technology strategies.
- A5.3 It should also be noted that the digital maturity assessments were self assessments and the questions were open to interpretation, e.g. are systems available, or are they actually used. The cross system working and new governance structures will therefore be more important to this LDR, than using the DMA to assess how individual trusts are developing to achieve paper free at the point of care.
- A5.4 In terms of digital maturity Berkshire West is well prepared to implement the Local Digital Roadmap. The ambition of each organisation is to improve their digital maturity and they all have board level support as long as it maps to the STP priorities and the LDR initiatives of paper-free at the point of care, digitally enabled self-care, real-time data analytics and whole systems intelligence. The challenge will be if funding is not available to support their ambitions.

A6 Capability

- A6.1 The Local Digital Roadmap guidance identifies 10 “Universal Capabilities” with 25 associated “Aims” which focus on fully exploiting the existing national digital assets. The following table summarises the current position for the footprint in relation to each of the Capabilities with two columns indicating the anticipated position in terms of percentage delivery for each Universal Capability at the end of 2016/17 and 2017/18 based on plans agreed by footprint partners.

Capability	2016/17 Goal	2017/18 Goal	Aim	Current
Cross care settings access to GP held information			Secondary, emergency and triage views of GP information	25%
			Pharmacy views of GP information	60%
U & EC access information for patients most likely to present			GPs compiling enhanced SCR information for key patient groups	5%
			Secondary, emergency and triage views of enhanced GP information	5%
Patients can access their GP record			Access to detailed coded GP records actively offered to key patient groups	2%
			Patients who request it are given access to their detailed coded GP record	2%
GPs can refer electronically to secondary care			Every referral created and transferred electronically	72%
			Every patient presented with information to support their choice of provider	50%
			Every initial outpatient appointment booked for a date and time of the patient's choosing (subject to availability)	50%
			By Sep 17 –80% of elective referrals made electronically	60%
GPs receive timely electronic discharge summaries			All discharge summaries sent electronically from all acute providers to the GP within 24 hours	60%
			All discharge summaries shared in the form of structured electronic documents	25%
			All discharge documentation aligned with Academy of Medical Royal Colleges headings	10%
Social care receive timely electronic Assessment, Discharge and Withdrawal Notices from acute care			Assessment, Discharge and associated Withdrawal Notices sent electronically from the acute provider to local authority social care	20%
Clinicians in unscheduled care settings - access CPI / social care professionals notified accordingly			Child protection information checked for every child or pregnant mother presenting in an unscheduled care setting	0%
			Indication of child protection plan, looked after or unborn child protection plan flagged to clinician, along with social care contact details	0%
			The social worker of a child on a child protection plan receives a notification when that child presents at an unscheduled care setting	0%
Professionals across care settings made aware of end-of-life preference information			All patients at end-of-life able to express their preferences to their GP and know that this will be available to those involved in their care	30%
			All professionals from local providers involved in end-of-life care of patients access recorded preference information	50%
GPs and community pharmacists can utilise electronic prescriptions			All permitted prescriptions electronic	44%
			All prescriptions electronic for patients with and without nominations - for the latter, the majority of tokens electronic	44%
			Repeat dispensing done electronically for all appropriate patients	7%
			By end 16/17 –80% of repeat prescriptions to be transmitted electronically	57%
Patients can book appointments and order repeat prescriptions from their GP practice			By end 16/17 – Minimum of 10% of patients registered for, and actively accessing, one or more online services	14%
			All patients registered for online services use them above alternative channels	1%

◆ In summary the key points are

- ◆ Many relevant digital enablers are in place (e.g. SCR, MIG, patient access from GP systems to summary and to detailed record, booking, prescriptions, EPS, ERS)
- ◆ However Capabilities that are driven largely by patient awareness and adoption e.g. view record online appear to demonstrate relatively low rates of utilisation. (e.g. only 14% patients are registered for online GP booking, etc and only 1.3% patients currently are registered to access their detailed GP records; Although 20% ED staff have access to SCR / MIG, there is moderate usage). Hence more communication, awareness, education is required amongst the workforce and citizens. However it should be noted that in primary care only a proportion of registered patients (est.30%) actively use their GP services and benefit from engagement with these digital services Clear accountability is also required to ensure that these capabilities are delivered. To achieve this, workstreams will be developed that will have a mandate and responsibility for progressing the aims. These workstreams will bring together end users and the relevant professionals from all organisations. The workstreams will report into the appropriate Board, but will often have “dotted line” links to multiple organisational and systems boards to give the appropriate assurances.
 - ◆ Trusts / GPs do not yet have access to the Child Protection Information Sharing service, although trusts do receive a weekly extract by secure email
 - ◆ Social Care currently receives between 61-80% of their referrals through electronic means where the remainder are still made via a telephone conversation

A7 Infrastructure, Standards and Information Sharing

- A7.1 The LDR is acting as a vehicle to ensure collaboration between organisational IT teams and already there have been discussions to explore where existing systems can be linked to enable stronger collaboration between partners. This includes linking networks to enable health and social care professional to access their core systems from any NHS site and exploring opportunities for the standardisation of mobile working solutions. It also ensures that future, provider specific, procurements will take the wider LDR aims into consideration thus ensuring the systems are compatible with wider procurements while achieving economies of scale and making best use of the local IM&T professionals across the health and social care system.
- A7.2 In determining overall priorities it 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” through change management and benefits realisation programmes and basic digital skills of the workforce.

A8 Conclusion

- A8.1 Analysis of the identified strategic LDR priorities and the existing situation across the footprint indicates that the individual organisations and the footprint as a whole have made considerable progress in relation to many of the issues considered in this LDR especially with regard to inter organisational operations and whole system intelligence. The main areas of strength are:
- ◆ Leadership and governance is strong with mature working relationships, a willingness to share experience/information and transparency regarding the decision making process.
 - ◆ Clinical and care engagement is high and the solution delivery team (technical) is embedded into the clinical/care decision making process.
 - ◆ Berkshire West has successfully delivered multiple projects that span organisational boundaries.
 - ◆ The digital maturity is starting from a strong baseline with clarity as to how to move this forward.
- A8.2 Although Berkshire West is starting from a solid baseline position there are a number of key factors which are currently considered to be constraining the rate of progress towards the goal of paper-free at the point of care / digitally enabled self-care / real-time data analytics / whole systems intelligence and the vision for digital transformation in general. The following limiting facts have been categorised using the People – Process – Technology theme discussed in Section C3:

People

- ◆ Pace of change – organisational and individual capacity to deal with change fatigue
- ◆ Work force development – skills development, recruitment (IM&T and other) and retention.
- ◆ Risk aversion/risk tolerance
- ◆ Resourcing in times when both health and Local Authorities are under significant funding pressure and where resources are being stretched by competing priorities
- ◆ Capacity in relation to the scale of ambition

Process

- ◆ Funding availability: programmes will require investment to enable benefits to be delivered in other transformation projects.
- ◆ Service user acceptance – normalising a paper-free at the point of care service is a significant cultural shift that will impact adoption rates.

- ◆ Change management - varying levels of engagement across the workforce
- ◆ The rate at which individual and all organisations will move to a fully digital technology solution
- ◆ The ability to get timely responses from organisations such as NHS Digital which prevents further delays to ongoing pieces of work

Technology

- ◆ Older provider legacy systems and main social care systems are not easy to integrate with and/or do not support “to be” processes.
 - ◆ Multiple networks / multiple systems / multiple out-of-footprint flows – no enterprise architecture.
 - ◆ Lack of vendor engagement due to over commitment of resources
- A8.3 The issues listed above clearly show that the majority of the concerns relate to transformation activities associated with people and process. It is important to re-iterate that in order to maximise the benefits of technology and innovate models of care, transformational change must be given equal attention and resources.
- A8.4 IM&T is listed as a key enabler to the STP, and it is imperative that the digital priorities are aligned to the priorities set out in the STP. There is a strong belief, that technology can have a significant impact on each of the priority areas and that the building blocks are in place to take exciting and ambitious steps.
- A8.5 The alignment of the Berkshire West LDR and BOB STP provides an integrated approach that has the commitment to realise the vision for health delivery across the footprint.

B About the Berkshire West Digital Roadmap

B1 Background and Context

- B1.1 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 (summarised as information management and technology (IM&T) throughout this document). One key commitment is that, by 2020, there would be “fully interoperable electronic health records so that patient’s records are paperless”.
- B1.2 In response NHS England’s National Information Board (NIB) set out a series of IM&T priorities (in *Personalised Health and Care 2020. Using Data and Technology to Transform Outcomes for Patients and Citizens. A Framework for Action*, (November 2014)). Amongst its recommendation, 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).
- B1.3 A signed-off LDR is a condition for accessing investment for technology enabled transformation. Progress in delivering the commitments and aspirations in the LDR will become part of commissioner and provider assurance, assessment and inspection regimes.
- B1.4 Berkshire West serves a population of over 500,000 and comprises a number of organisations:
- ◆ CCGs: Wokingham, Newbury & District, North & West Reading and South Reading (52 General Practices)
 - ◆ Unitary Authorities: Reading Borough Council, West Berkshire Council, Wokingham Borough Council
 - ◆ Ambulance Trusts: South Central Ambulance Service NHS FT

- ◆ Mental Health and community providers: Berkshire Healthcare NHS FT
 - ◆ Acute care provider: Royal Berkshire NHS FT
- B1.5 The Berkshire West Local Digital Roadmap is closely aligned to the Buckinghamshire, Oxfordshire and Berkshire West Sustainability and Transformation Plan (STP). The STP footprint serves a population of over 1.8m people registered with GPs in 7 CCGs: Berkshire West (4 CCGs), Aylesbury Vale, Chiltern and Oxfordshire. The Berkshire West LDR is one of 4 LDRs associated with the above mentioned STP.
- ◆ Given that this LDR needs to support the vision and aims of the Buckinghamshire, Oxfordshire and Berkshire West STP it is important to understand some of the associated complexities across the wider geography. Due to its geographic reach, the South Central Ambulance Service has responsibilities across the three regional STPs.
 - ◆ Frimley Health (STP No34)
 - ◆ Hampshire and the Isle of Wight (STP No42)
 - ◆ Buckinghamshire, Oxfordshire and Berkshire West (STP No44) This engagement involves the collaborative working across 19 CCG's and input into 7 LDR's. Alignment across so many service providers will be difficult.
 - ◆ Similarly, Berkshire Healthcare NHS FT covers across 2 regional STPs – Frimley Health (STP No34) and Buckinghamshire, Oxfordshire and Berkshire West (STP No44). This engagement involves the collaborative working across 7 CCG's and input into 2 LDR's.

The Berkshire West LDR is part of a much wider and extremely complex environment.

B2 Purpose

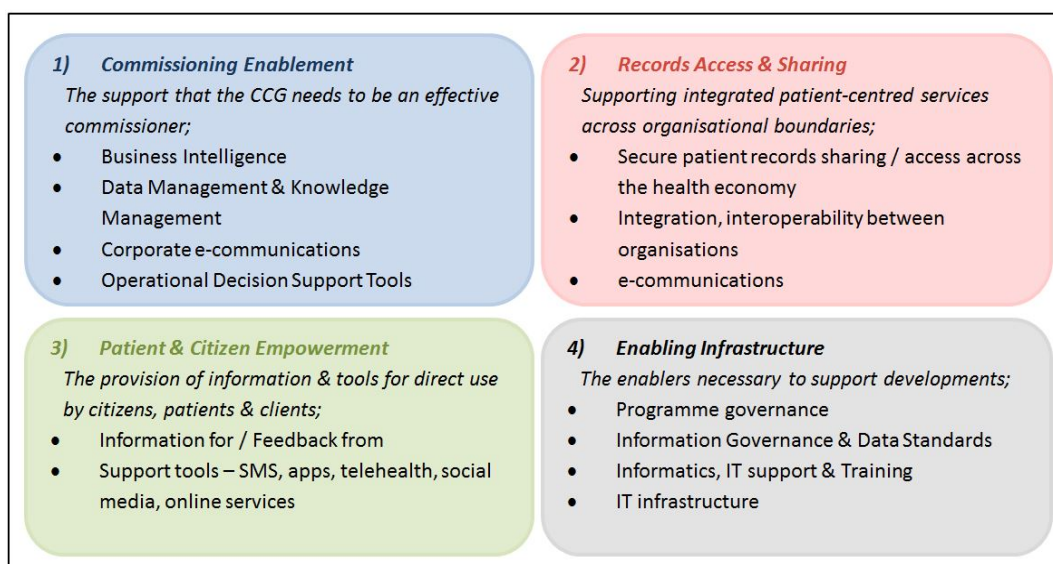
- B2.1 Production and agreement of the LDR is intended to be the first stage towards supporting the health economy to become 'paper-free at the point of care' with systems interoperability across multi-agency provider organisations. By definition achieving fully interoperable electronic health records requires high levels of collaboration and coordination amongst local stakeholders. The LDR is the vehicle through which the necessary collective milestones and issues become codified and agreed.
- B2.2 Locally the need for e-sharing of patient/client records has long been recognised as fundamental to achieving many of the goals set out in the CCGs' strategic and operational plans. Hence this requirement is a major component of the CCGs' IM&T Strategy (first developed in 2013). Section [F] outlines the local approach and plans for interoperability across the health and care community. The LDR allows these plans to be further aligned with each organisation's current status, priorities and plans with regard to e-records.

B3 Local Digital Roadmap Scope

- B3.1 The scope of the Local Digital Roadmap is broader than just the original remit to address Paper-free at the Point of Care. It now encompasses the following topics:
- ◆ Paper Free at Point of Care 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.

- B3.2 In prioritising the topics identified above Berkshire West has focussed on Paper Free at Point of Care ensuring that the immediate needs (12 – 24 months) associated with the Universal Capabilities are described in considerable detail while the broader, longer term (3 years) capabilities are documented at a slightly higher level (appropriate to the timescale involved). For those topics not directly related to Paper Free at Point of Care the direction of travel over the next 5 years will be described but they are not documented in any depth.
- B3.3 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 common themes across the footprint 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).
- B3.4 It is understood that Berkshire West’s LDR will need to be aligned with those from the neighbouring regions in order that they form a cohesive technical strategy across the Buckinghamshire, Oxfordshire and Berkshire West STP. With this in mind it is anticipated that this LDR will be refined and expanded in subsequent iterations. Development and endorsement of the Roadmap
- B3.5 Whilst, in some respects, the LDR is a new concept, it builds on the CCGs’ existing IM&T Strategy. Figure [B1] illustrates the scope and focus of the CCGs’ existing IM&T Strategy. Most of the themes in the strategy have been developed as workstreams within an overarching CCG IM&T Programme.
- B3.6 The Strategy addresses issues of direct relevance to the LDR, such as sharing of patient records amongst local organisations, utilisation of national systems and infrastructure, clinical decision support and whole system analytics. Where the scope differs from that of the LDR is that there is less emphasis on the status and plans for, for example, Paper Free at Point of Care within the trusts and Local Authorities, and there is more focus on the internal information and IT needs of the CCGs (Figure [B1], Box 1). Also, the CCGs’ Operational Plan and Strategic Plan were the drivers, rather than the STP.

Figure [B1]. Scope of existing CCGs’ IM&T Strategy



- B3.7 This roadmap has been developed by the NHS Wokingham CCG, NHS Newbury and District CCG and NHS North and West Reading CCG, with support from South Central and West Commissioning Support Unit (SCWCSU), in consultation with representatives from each of the main health and social care organisations within the footprint. For each organisation, the development involved provision and analysis of documentation, completion of pro-formas, participation in workshops, bilateral discussions, review of draft LDR documentation.

- B3.8 Alignment of the Local Digital Roadmap with the developing STP has been ensured through dialogue with those responsible for development of the STP / whole system transformation plans, as well as the informatics communities. Key suppliers have been consulted as part of this work and the interoperability workstream to ensure that the ambitions set out in this roadmap are achievable. These include primary care system suppliers, Servelec, Microsoft, System C/Graphnet and Adastr.
- B3.9 This version of the Local Digital Roadmap has been endorsed and signed-off by the Digital Transformation Programme Board which has representatives from all partners.

C Strategic context

C1 The case for change

C1.1 Berkshire West serves a population of 521,000 patients and comprises of ten organisations: Wokingham CCG, Newbury and District CCG, North and West Reading CCG, South Reading CCG, Reading Borough Council, West Berkshire Council, Wokingham Borough Council, South Central Ambulance Service NHS FT, Berkshire Healthcare NHS Foundation Trust and Royal Berkshire NHS Foundation Trust.

C1.2 The Berkshire West Local Digital Roadmap is closely aligned to the Buckinghamshire, Oxfordshire and Berkshire West Sustainability and Transformation Plan (the BOB STP). The BOB STP footprint serves a population of 1.8 million people registered with GPs in seven CCGs: Berkshire West (four CCGs), Oxfordshire, Aylesbury Vale and Chiltern.

C1.3 There is broad alignment between providers and commissioners on the size of the challenge and a realisation that current ways of working and providing care are not sufficient to bridge the projected financial gap. It is accepted that commissioners and providers planning in isolation will not bring the system into balance and could worsen provider positions. A whole system approach is required.

C1.4 The BOB STP has identified four priorities to help drive forward the whole system approach, they are:

- ◆ Improve wellbeing through prevention.
- ◆ Redesigning urgent and emergency care.
- ◆ Development of specialist services.
- ◆ Workforce – leadership, capability and capacity.

C1.5 The BOB STP includes a number of initiatives that will support these priorities across the footprint. The priorities described in the BOB STP are reliant on the development and utilisation of a number of technological innovations to enable improvement in outcomes, support of self-care and provide a greater proportion of care in a community setting. The Berkshire West Local Digital Roadmap is aligned to the BOB Sustainability and Transformation Plan and includes a roadmap to achieve:

- ◆ Paper-free at the point of care.
- ◆ 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.

C2 Digital technology as change enabler

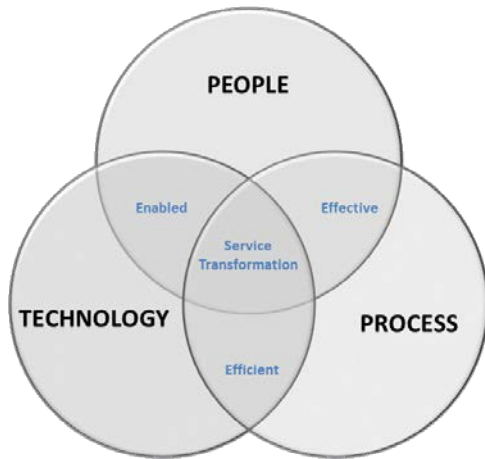
C2.1 It is recognised locally and nationally that the kinds of transformative change set out in the STP cannot be achieved without realising many of the opportunities afforded through extensive deployment of digital technology..

C2.2 More recently NHS England's *General Practice Forward View* (April 2016) emphasises the importance of greater use of technology to connect primary care with others, for the sharing of best practice, for greater online access for patients and to deliver new modalities for provision of advice and support for patients and the public.

C3 Vision for digitally enabled transformation

C3.1 Digitally enabled transformation is an essential component for addressing the challenges faced by the local health system. Berkshire West have been very clear that “digitally enabled transformation” should not focus on the technology alone but must be driven by the end-users, i.e. those at the front line of delivering care. Often the level of transformation of business processes is significantly under estimated. Figure [C2] shows the relationship between technology, people and process that lies at the heart of successful transformation.

Figure [C2]. Key enablers for successful service transformation



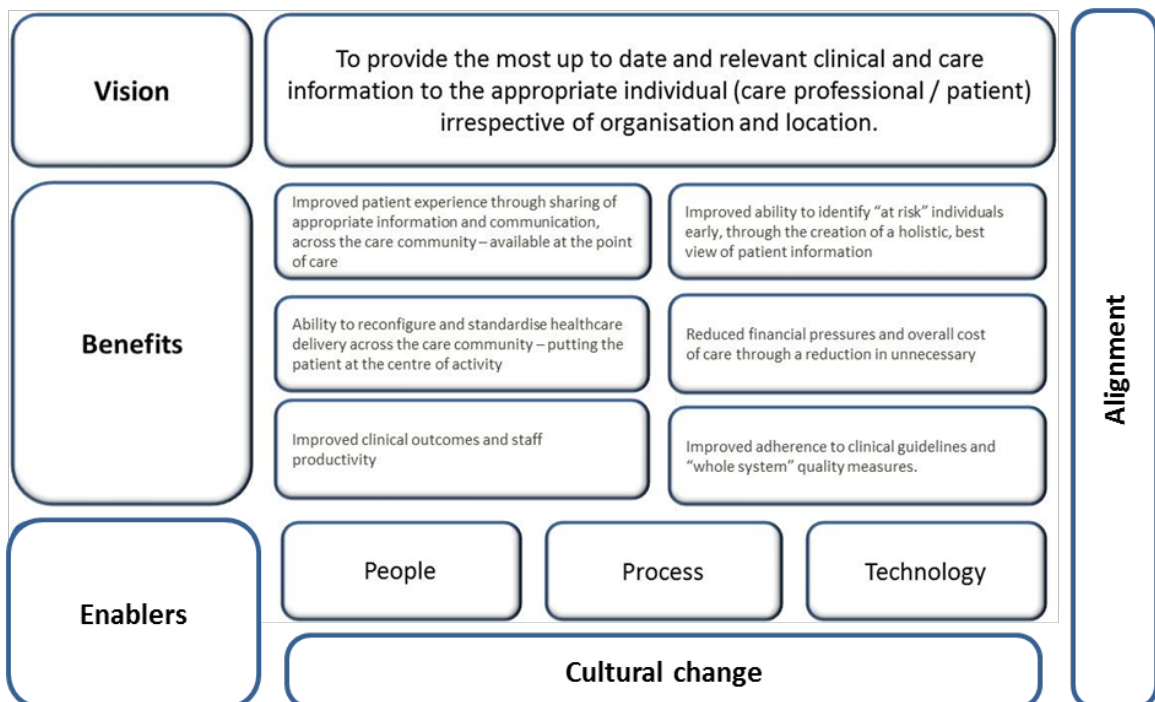
The theme of People, Process and Technology appears throughout Berkshire West’s approach to whole system transformation.

Figure [C2] shows that technology is a key component and requires close coordination with the business in terms of strategic direction and process redesign. Cross organisational service transformation requires changes to corporate culture and re-alignment at an individual level. People have to come together to redefine processes that are not only significantly different to their current situation but that may be to their personal detriment.

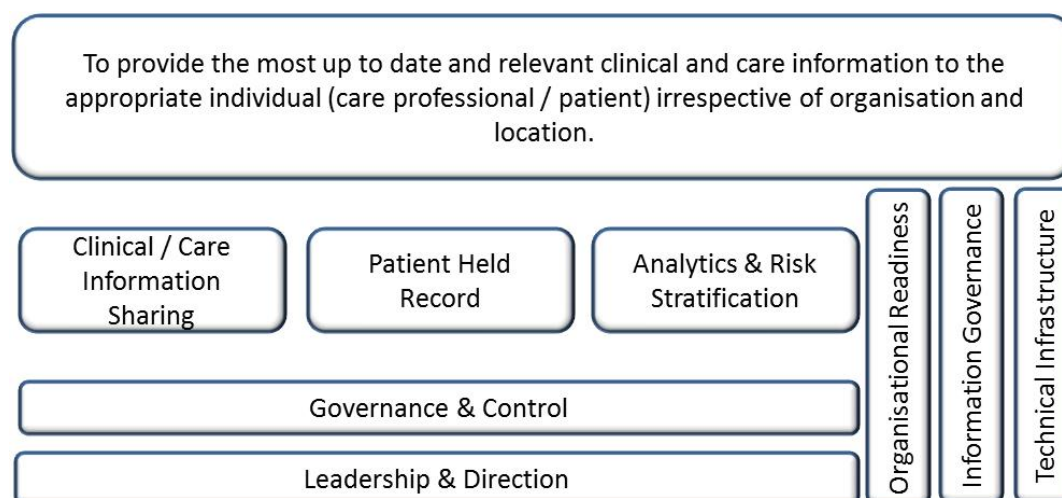
C3.2 Berkshire West is committed to technology being an enabler for whole system transformational change as referenced in the BOB STP, however in order to maximize the benefits of technology and innovate models of care, transformational change must be given equal attention and resources.

C3.3 Our vision is summarised in Figure [C3] with investment in technology to support self-care through digital tools and enablers, data and information sharing across organisations and the development of a predictive urgent care model across the footprint.

Figure [C3].Berkshire West vision



- C3.4 IM&T is listed as a key enabler for the BOB STP and it is imperative that the digital priorities are aligned to the priorities set out in the STP. There is a strong belief that technology can have a significant impact on each of the priority areas and that the building blocks are in place to take exciting and ambitious steps.
- C3.5 The alignment of the LDR and BOB STP provides an integrated approach that has the commitment to realise the vision for health delivery for those we serve.
- C3.6 The technology enablers of our digital vision need to meet a broad set of requirements across a number of care settings, however collectively, they need address three high level objectives:
- ◆ **Interoperability and information exchange between health and social care organisations** to allow the flow of real time data between two or more organisations for the benefit of co-ordinating current and future service provision across care pathways, improving care and data analysis. This is a major step towards paper-free at the point of care and real-time data analytics at the point of care.
 - ◆ **Having a person / patient held record (PHR) for health and social care for the citizens** of Berkshire West, that contains accurate real time data and information from commissioners, health and social care providers and citizens, enabling the individual to hold and manage their care (digitally enabled self-care) and give consent to providers of services and carers to view their record based on an agreed data set.
 - ◆ **Whole systems intelligence** to bring together financial, operational and clinical outcome data centred around patients providing an opportunity for deriving whole system intelligence to support population health management, effective commissioning, outcome based contracting, planning, clinical surveillance, service re-design and research.

Figure [C4]. Key Enabling Components - Technology

- C3.7 From a strategic point of view, sections C4, C5 and C6 outline the anticipated benefits and options being considered or currently under way.
- C3.8 The current state and the next steps associate with each of these components is more fully detailed later in this document.

C4 Information sharing between health & social care organisations

- C4.1 Multi-organisational, real-time (or near real-time) patient-level data available at the point of care is a pre-requisite for many of the Berkshire West STP initiatives. Detailed analysis has indicated that success in this area contribute towards:
- ◆ Reduction in Length of Stay
 - ◆ Reduction in admission
 - ◆ Reduction of unnecessary and duplicate tests
 - ◆ Improvements in clinical outcomes
 - ◆ Adherence to end of life preferences
 - ◆ Reduction in citizen anxiety due to delayed communication
 - ◆ Increased trust and confidence in the service.
 - ◆ Greater staff confidence due to complete day access.
 - ◆ Improved care experience - the patient only has to repeat their story once.
 - ◆ Reduction in effort – improved time efficiency
 - ◆ Reduction in diagnostic and treatment errors
 - ◆ Reduction in adverse patient incidents
 - ◆ Reduction in unnecessary referrals
 - ◆ Reduction in readmissions
 - ◆ Reduction in unnecessary follow up appointments
 - ◆ Reduced ambulance conveyances
 - ◆ Reduction in prescribing errors and adverse drug reactions (ADRs)

C4.2 Point of care clinical decision support has been used for many years within primary care (e.g. for prescribing) and is becoming more widespread in trusts as EPR capabilities are deployed.

C4.3 As well as supporting patient-level clinical decisions (paper-free at the point of care, real-time data analytics), integrated real-time data offers opportunities for real-time demand management by tracking activity across the whole system to, for example, raise alerts when urgent care capacity is likely to be breached. These are new application areas which will increasingly become feasible as the scale and scope of real-time digital records becomes reality.

C4.4 Section H provides information relating to what we are doing to recognise this vision.

C5 Person / patient held record and associated client facing services

C5.1 Appropriate use of technology for direct access by citizens / patients / clients (digitally enabled self-care) has the potential to:

- ◆ Reduce demand on services by better informing citizens about healthy choices and appropriate use of services
- ◆ Empower patients / clients to become partners in choices concerning their healthcare and social care (no decision about me without me)
- ◆ Enable patients / clients to take great responsibility and control for managing their own health and care
- ◆ Citizens get a greater sense of shared decision making, feel part of the care process and increased confidence in the service as they have access to a greater range of information.
- ◆ Offer a wider range of channels through which support and advice can be provided, which are more convenient, accessible and efficient than conventional face to face contacts, allowing the possibility of new models and settings of care.

C5.2 The range of relevant information services and technologies is wide. They include:

- ◆ Patient / client access to / ability to view and to add to their own records
- ◆ On-line appointment booking and repeat prescriptions
- ◆ 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
- ◆ E-consultations, video-consultations
- ◆ Telecare, including the “internet of things”, i.e. alerts from smart household appliances of vulnerable people.

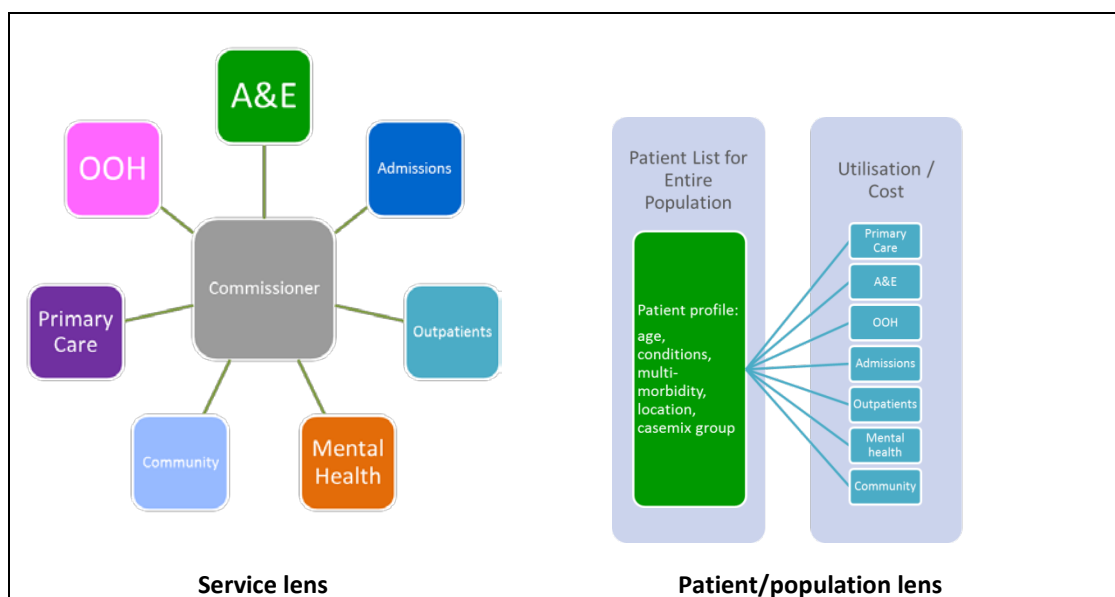
C5.3 There is a significant emphasis on self-care and self-management in the STP. One of the most important areas that can support this is person-held records and preliminary discussions are taking place to explore this further. We have looked at other areas in the NHS that are using patient portals, and there are pockets of real innovation but generally at a trust level.

- C5.4 The provision of universal free WiFi for patients across the NHS estate may act as an enabler for patients to become more engaged in digital tools generally, and specifically those that support health and well-being including condition specific support groups and social networks, apps that help monitor conditions and support the concept of a 'digital prescription'. The funding referenced in *The General Practice Forward View* will be key to delivering this across the footprint. The scale of ambition within Berkshire West is significant, with trusts stopping procurement of patient portals so that they can join with a system-wide implementation. All organisations understand the benefits of having a single portal for all health and social care requirements.
- C5.5 This, aligned with ambitious plans to harness the power of health and social care websites, apps and wearable devices will all help support patients at home and support them being healthier.
- C5.6 Discussions are taking place with Microsoft Health who is one of the world leaders in patient portals and we have already procured their platform through the Connected Care programme. This ensures we have the best building blocks to design a portal with patients and health and social care professionals.
- C5.7 Given the emphasis placed in the BOB STP and in local plans regarding greater self-care and self-management, this aspect of the LDR Programme will acquire much greater focus and increased scale than currently is the case.
- C5.8 Section H provides information relating to what we are doing to recognise this vision.

C6 Whole systems intelligence

- C6.1 The bringing together of financial, operational and clinical outcome data centred around patients provides an opportunity for deriving whole system intelligence to support population health management, effective commissioning, outcome based contracting, planning, clinical surveillance, service re-design and research. This, in turn, should enable more effective prioritisation and targeting of resources, increased opportunities for joint initiatives, common solutions and shared expertise.
- C6.2 A core goal of the Buckinghamshire, Oxfordshire and Berkshire West STP is to improve the integration of services around the patient, and whole systems intelligence is critical to this. To this end, West Berkshire CCGs in 2013 commissioned the "Eclipse" project, using a risk stratification and analytics system of the same name that extracts data from GP systems to allow benchmarking and audit in long term conditions (LTCs), as well as identifying those at risk of emergency admissions This can be supported by refocusing analysis of service use and resources around the patient, rather than on services.

Figure [C5]: Analysis of service use and cost: service versus patient and population lens



C6.3 Within a secure data repository, pseudonymised patient level data is already available for secondary care services and the ID POC will add a one-off extract of pseudonymised primary care data to this existing repository. The data repository also holds demographic and public health datasets, performance information and contract monitoring reports. Within the Data Services for Commissioners Regional Office (DSCRO) the CSU is able to obtain identifiable data and undertake linkage between data sets (subject to appropriate data sharing arrangements being in place). The CSU repository provides a rich source of information which is already used to support population based analytics. There are a number of examples where this is already happening across Berkshire West.

- ◆ A current application of population based analytics is the use of risk stratification to identify patients at high risk of hospital admission thereby enabling CCGs to prioritise segments of the population with costly health needs. The risk stratification tool provided by the CSU uses the Adjusted Clinical Groups (ACG) risk stratification algorithm developed by the Johns Hopkins University (calibrated using local data). The tool supports GPs and community teams with case management of high risk patients.
- ◆ The “Eclipse” project started in 2014, initially with a focus on improving diabetic care, which has since extended to include a wider range of LTCs patient groups. It is a tool analysing prescribing and screening data extracted from primary and secondary care, generating automatic safety reports and alerts enabling clinicians to identify patients at risk from their medications, and patients not fulfilling local guidelines. This presents the opportunity for improved patient healthcare and admission avoidance.
- ◆ Furthermore, clinicians are able to remotely monitor patient clinical profiles and access extensive analysis, allowing interventions that have improve the safety of “at-risk” patients and optimise prescribing efficiencies.

C6.4 There is considerable scope to extend the use of these linked data sets and these form part of the LDR strategy, for example;

- ◆ Build meaningful patient cohorts (segments) based on demographic and clinical features, and use these cohorts as a lens through which to understand current and future activity, financial impact and long term outcomes
- ◆ Better engage clinicians whilst still delivering the information that commissioners need
- ◆ As a basis for proactive case management of high risk/cost patients
- ◆ Total vertical and horizontal data integration: every person and every activity – this data set can be used for analysis at each level of the health system: federation/locality, CCG, STP
- ◆ Basis for developing capitated budgets and new contracting models

- ◆ A primary component of BAU analytics support for commissioning
 - ◆ Services and contracts better aligned with populations and their needs – not just with providers / activity / precedent
 - ◆ Strategic planning e.g. based on projections of the distribution of segments / cohorts e.g. long-term multi-morbidity projections
 - ◆ Future scenario / cost modelling Cohort flagging / marking and then monitoring e.g. monitoring frail elderly patients, or use of services by care home residents
 - ◆ Opportunity identification for Operational planning / QIPP, etc. – via case-mix adjusted benchmarking
- C6.5 The future development of integrated population analytics can build on the existing integrated data repositories as patient level data sets are developed for further service sectors such as community and mental health. In parallel, the development of clinical interoperability solutions has the potential to enable integrated population analytics using data which has been brought together for use at the point of care. This offers the potential to feed the results of predictive analytics back into clinical solutions, and to develop analytics within interoperability solutions. As commissioning and planning of services becomes more focused on the patient, there is likely to be a convergence of strategic analysis based on analysis of repository data and real-time analytics.
- C6.6 The Berkshire interoperability initiative, Connected Care, will enable greater opportunities for real-time information and data sharing across health and social care. This level of data integration will enrich the central data repository empowering the risk stratification algorithm in identifying certain high risk patient groups and provide the linkage to social care dataset thereby defining a more complete depiction of an individual's need. Instead of being patient-centric care it will become more person-centric, allowing these people being offered preventive health and social care today aimed at averting costly, unpleasant health and social problems tomorrow.

D Current Situation

- D1.1 This section documents the baseline position for West Berkshire in embarking on the Local Digital Roadmap. It is from this baseline position that the roadmap will be identified to transform West Berkshire from its current state to the future state identified in Section C Strategic Context.
- D1.2 The baseline position of the digital maturity of each of the Primary and Secondary Care providers and Social Care organisations are documented in section D1. Section D2 reviews the current digital projects and programmes that are currently in flight across the footprint. Section D3 reviews where new models of care are being piloted or deployed across Primary and Secondary Care providers and Social Care organisations. Section D4 reviews the recently completed digital projects and programmes. Section D5 documents the factors that are or will limit progress in completing the Local Digital Roadmap.

D2 Digital Maturity

- D2.1 Each NHS trust and Local Authority has recently completed the national Digital Maturity Self-Assessment (DMA), which evaluates how well-developed their different aspects of readiness, capability and infrastructure are. The findings are summarised in Table [D1]. Although too much emphasis should not be placed on the actual percentage score, the green shading is used to highlight where organisations are above the national average.
- D2.2 The LDR is especially concerned with the current maturity for each of the seven Paper Free at Point of Care capabilities (highlighted in bold in Table [D1]) – explained further in Section [E2].
- D2.3 The DMA baseline shows that each trust is generally well-placed regarding readiness / governance / leadership / strategy, etc, although some issues possibly need to be addressed at RBFT regarding resourcing and IG.
- D2.4 For Paper Free at Point of Care capabilities, there is a mixed picture. BHFT is mostly close to or above national averages, whereas the baseline for RBFT indicates progress has been more limited, to date, in several areas. e-Medicines Management is generally a weak area across both RBFT and BHFT. This reflects the fact that neither trust has yet deployed a e-PMA as part of their EPR - RBFT is planning for deployment in 2017/18 (or possibly later), BHT will review the business case, in 2016/17, for investing in an e-PMA solution.
- D2.5 SCAS currently appears to have little digital support for orders/results and medicines management, but these areas are possibly less relevant for ambulance services. Of these areas, SCAS has included Medicines management and optimisation and Decision support as opportunities for improvement and reflected in the initiatives identified.

Table [D1]. DMA scores for the Berkshire West footprint

Issue	National Average Health	BHFT	RBFT	SCAS	National Average LAs	Reading	West Berkshire	Wokingham
Strategic Alignment	76%	100%	60%	56%	78%	71%	71%	75%
Leadership	77%	90%	80%	85%	79%	78%	78%	88%
Resourcing	66%	95%	45%	75%	75%	58%	63%	67%
Governance	74%	100%	65%	75%	76%	79%	88%	83%
Information Governance	73%	96%	50%	75%	82%	77%	81%	92.31 %
Records, Assessments & Plans	44%	56%	26%	57%	47%	50%	50%	44%
Transfers Of Care	48%	59%	42%	61%	35%	55%	55%	41%
Orders & Results Management	55%	49%	66%	14%	-	-	-	-
Medicines Management & Optimisation	30%	4%	17%	29%	-	-	-	-
Decision Support	36%	30%	33%	22%	62%	75%	75%	25%
Remote & Assistive Care	32%	92%	25%	50%	56%	61%	61%	61%
Asset & Resource Optimisation	42%	81%	45%	56%	65%	68%	68%	86%
Standards	41%	46%	44%	75%	62%	0%	0%	25%
Enabling Infrastructure	68%	80%	48%	75%	70%	81%	81%	72%

- D2.6 A national DMA tool has been designed for social care (adult and children) providers. It follows some of the same broad headings as the NHS assessment, but has specific questions which are more pertinent to social care. The Digital Maturity Assessment for Social Care ran from 4th April 2016 until the 20th May 2016 and was not compulsory to complete. All 3 Local Authorities in West Berkshire have made submissions and Table [D1] demonstrate the results.
- D2.7 All Local Authorities demonstrate a consistently high standard in comparison to the national standards.
- D2.8 The main area of concern is in relation to the Standards section of the assessment. The reason for the results not just locally but nationally being low is 2 fold:
- Firstly in relation to the vendors of Social Care IT rather than the organisations themselves. The limitations around the IT solutions available and their lack of the use of Open APIs severely restricts the Local Authorities from progressing significantly in this area until the available solutions are developed in line with existing and new technologies.
 - Secondly around the use of the NHS number and the ability to accurately capture record and validate the NHS number has historically been difficult. With the implementation of the Connected Care project all Local Authorities are working towards 100 % compliance with the NHS number and the connection to the N3 spine for the use of the Demographic Batch Service (DBS) and the Person Demographic Service (PDS). At present we have two Local Authorities that are undertaking IG Compliance against Version 14 of the IG Toolkit and one Local Authority who have submitted their Local Connection Architecture (LCA) to NHS Digital for approval before ordering the BT Connection.
- D2.9 Areas where we see consistently high figures are around Remote & Assistive Care and Enabling Infrastructure as these are the key areas where Local Authorities are developing and investing in where they can potentially see significant benefits, with the emphasis on a person being more self-reliant, prevention strategies, reablement and keeping a person out of residential care for as long as possible. This is done through investment in new technologies and developing more integrated and closely working teams across health and social care.
- D2.10 A similar systematic national exercise will be conducted for primary care in the near future. Meanwhile, much is already known, locally, about the availability and usage of systems and IT infrastructure within general practices. The current status in relation to provision of digital services for patients and other initiatives is summarised in Table [D2]. NB This table does not provide information on the take-up and usage of these services by patients, which currently is generally modest.

Table [D2]. Primary Care Current Status

Issue	Description	N&D CCG	N&WR CCG	SR CCG	W CCG	Total
Number Of Practices		11	10	19	13	53
Digital Services for Patients						
Prescriptions	EPSr2 live	64%	70%	84%	77%	74%
	EPSr2 average utilisation	67%	47%	36%	40%	44%

	Repeat prescriptions online	100%	90%	89%	100%	94%
Appointments	Book / Cancel Appts. online	100%	90%	100%	100%	98%
Patient Access to Electronic Records	Access to Summary Info. Available - Medication, Allergies/Adverse reactions	100%	86%	100%	100%	97%
	Access to Detailed Record available -Results	82%	60%	68%	62%	68%
	Access to Detailed Record available -View letters	45%	10%	58%	31%	40%
Reminders / Alerts	SMS Text messaging - Appt reminders	100%	100%	100%	100%	100%
Other Developments	Data submitted to SCR	100%	100%	100%	100%	100%
	Practice WiFi	27%	20%	58%	31%	38%
	Data sharing via interop	100%	100%	100%	100%	100%

- D2.11 Overall, general practices are considerably more mature than are 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 the patient's paper notes for a consultation, or to check a test result or current medications, or any other routine clinical process. The Paper Free at Point of Care shortcomings for primary care relate, largely, to where they are dependent on another organisation to provide them with information in an appropriate format.

D3 Current initiatives

- D3.1 Many local initiatives are underway which are of direct relevance to the vision set out above. Some of the key ones with whole-system implications include:
- ◆ Implementing digital tool (DXS) for pathway / referrals decision support for GPs
 - ◆ Implementing single domain and WiFi across all general practices. It is planned that this will be extended beyond enabling practice staff access to corporate systems, to allow Health and Social Care staff access their corporate systems and patient access to public wifi
 - ◆ RBFT – further deployment of EPR (Millennium) e.g. to cover ED, e-PMA, and continue to integrate EPR with other internal IT systems
 - ◆ Further deployment and improved utilisation of nationally-developed systems such as SCR, EPS, ERS, PAERS (primary care)
 - ◆ Further deployment / benefits realisation from use of Open Rio; Wider usage of SCR and MIG in urgent care, pharmacy and other departments (BHT)
 - ◆ SCAS LiveLink to Care Homes, currently undertaking a small scale pilot providing a service of virtual see and treat between the Clinical Contact Centre and participating Care Homes.
 - ◆ SCAS LiveLink to Patient / Caller, project to provide visual communications with the public that contact the service which will support the decision of what course of action needs to be taken.
 - ◆ SCAS 111 Clinical Call Handling System, project that has been scoped to implement the Adastra system to strategically align the SCAS service for improved interoperability and improved working with other service providers.

- ◆ Carers integrated commissioning – To validate and refine plans for commissioning carers services and assessments
- ◆ Step Up/Step Down – Delivering a comprehensive reablement service as well as an ongoing assessment service of someone's needs prior to going home.
- ◆ Night Responder service – Working with Domiciliary Care Plus service provide options where a person requires 24 hrs support without the need of going into hospital or residential home
- ◆ Neighbourhood clusters, self-care and prevention (Wokingham) – integrating long term social care, community health services and third sector organisations in local communities. The third sector is expected to provide support in accessing appropriate services and provide social support to people living in the community

D4 Local transformation pilots / initiatives

- D4.1 There are several examples of where new care models are being developed to transform care delivery, both at a whole-system scale and at a more local / specialist level, where IM&T dependence is recognised. These include:
- ◆ Establishment of an “Accountable Care System” (ACS) serving the population around Reading and West Berkshire. This is a major transformation initiative which aims to move to a more preventative model of care, to improve quality and outcomes and to become financially sustainable. These aims clearly overlap with those of the STP, as do the many IM&T dependencies. It is considered that (lack of appropriate) technology is a barrier to change towards an ACS. The sharing of patients’ health and care records across organisations is at an early stage – but without this progressing at apace and at scale, it will inhibit continuity of care across complex pathways and limit our ability to affect their redesign - resulting in a duplication of assessments and diagnostics as well as gaps and delays in the provision of care.
 - ◆ Primary Care Transformation initiatives are supporting federated working and extended hours. These in turn depend upon solutions for shared access to records and robust, secure flexible IT infrastructure.
 - ◆ Wokingham Integrated Service Hub (WISH) is developing an integrated “front door” for health and social care. Although members of this team will initially use existing technology, detailed plans are underway to provide links between the various organisations’ IT systems
 - ◆ Wokingham Council has embarked upon a “21st Century Council” work stream to bring change management and IT together across all services, and the Better Care Fund Connectivity programme is an integral part of this project
 - ◆ RBFT clinical service transformation initiatives, e.g. establishing a T&O Virtual Clinic, use of Tele-Dermatology.
 - ◆ Rapid Response & Treatment for Care Homes – Provide a consistent and coordinated health and social care multi-disciplinary team.
 - ◆ Integrated Hub – A single point of access for the Integrated Short Term team, which is also accessible by the public and professionals.
 - ◆ Integrated short term team – The WISH team joins up the social care hospital liaison team, the START reablement team, the Council’s social care assessment team and BHFTs intermediate care team.
 - ◆ Workforce planning – Inter organisational workforce planning across health and social care to deliver more integrated and efficient services
 - ◆ Integrated short term team – The WISH team joins up the social care liaison team, the START team and BHFTs intermediate care team
 - ◆ Neighbourhood clusters, self-care and prevention (Wokingham) – integrating long term social care and community health services.
 - ◆ Joint Care Pathway/7 Day Working – Integrated hospital discharge service staffed by both health and social care to deliver prompt responses to referrals and avoid delays in discharge from hospital
 - ◆ Patient Recovery Guide (West Berkshire) – To develop a dedicated personal support service to assist patients through the care pathway so patients do not remain in hospital longer than they should do.
 - ◆ Multi Agency Safeguarding Hub (MASH) - The implementation of an Inter-agency initiative between the Councils, NHS and Police services, requiring secure communications and data transferred aiming at the safeguarding of Children across West Berkshire

D5 Recent digital achievements

D5.1 In summary, key recent IM&T achievements that are contributing to the overall vision and aims of the LDR are:

- ◆ Berkshire West has benefited from cross-organisational working on IM&T for many years. The current Berkshire West Innovation, Technology and Information Systems (ITIS) Programme Board co-ordinates an ambitious programme of IM&T projects which address topics within each of the 4 areas of the CCGs' IM&T Strategy (see Figure [B1])
- ◆ Connected Care is a multi-organisational programme which has piloted limited sharing of patient information. Following a successful procurement, it now is deploying an interoperability solution, at scale, to enable information and data sharing across health and social care, providing immediate access to real time data
- ◆ SCAS - roll out of mobile access to the NHS Summary Care Record for ambulance crews. It is the first ambulance trust in England to give paramedics electronic access to the SCR, ensuring they have constant access to real-time patient information at the scene. The SCR will be embedded into the Trust's Ortivus EPR, allowing crews to view the patient's record using mobile devices once the patient has given their consent
- ◆ Reading Borough Council was one of the first authorities in Berkshire to set up and run a Multi-Agency Safeguarding Hub (MASH) with the Police and Health and Social Care.
- ◆ BHFT has implemented a fully managed mobile solution deployed across the whole mobile workforce. This is sufficiently flexible to allow it to be updated as care delivery models change and as new usability features become available
- ◆ GPs receive electronic correspondence from BHT via their DocMan solution (now 10,000+ documents per month)
- ◆ Partner organisations have direct access (where appropriate) to BHFT's EPR records
- ◆ The use of Glasscubes which is also used by Health for secure information sharing and collaboration.
- ◆ GCSX email for secure email connection across PSN network to other authorities and @nhs.net addresses
- ◆ The use of Global Certs Secure email for secure email communications outside of PSN email domains with standard @reading.gov.uk email domain
- ◆ Integrated team having access to both social care and RIO from same laptop - as an interim measure until Connected Care can facilitate better sharing arrangements
- ◆ Publication of data to the Child Protection Information System (CP-IS)
- ◆ 21st century council – move towards more sophisticated use of IT linked to cloud computing and reorganisation of local authority services away from old "Directorate" structure

D6 Rate limiting factors

D6.1 The key factors which are currently considered to be constraining the rate of progress towards the vision for digital transformation across the whole system are:

- ◆ Varying levels of clinical engagement across the workforce
- ◆ Keeping up with the pace of change in some clinical areas
- ◆ The culture of paper dependency
- ◆ The capacity of staff, both front-line and support, in relation to the scale of ambition for change, whilst ensuring ongoing operational activities
- ◆ Poor network access / mobile connectivity in some areas
- ◆ The main social care systems are not easy to integrate

- ◆ Costs vs likely capital and revenue funding availability.
 - ◆ Resources in times when both health and Local Authorities are looking at making cost savings and therefore key staff being unavailable with too many conflicting priorities
 - ◆ The ability to get timely responses from organisations such as NHS Digital which prevents further delays to ongoing pieces of work
 - ◆ A culture amongst service users of not engaging with digital services as well as poor communication of features, functionality and benefits of these services
 - ◆ Lack of vendor engagement due to over commitment of resources

Some of these issues are examined further in the sections below.

E Capabilities

E1 Universal capabilities

E1.1 The LDR guidance identifies 10 “Universal Capabilities” with 25 associated “Aims” which focus on fully exploiting the existing national digital assets (See Table [E1]). For each of these capabilities, NHS England expects plans to show “clear momentum” in 2016/17 and “substantive delivery” in 2017/18.

Table [E1]. Universal Capabilities & Associated Aims

Capability	Aim
1) Professionals across care settings can access GP-held information on GP-prescribed medications, patient allergies and adverse reactions	<ul style="list-style-type: none"> a) Information accessed for every patient presenting in an A&E, ambulance or 111 setting where this information may inform clinical decisions (including for out-of-area patients) b) Information accessed in community pharmacy and acute pharmacy where it could inform clinical decisions
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)	<ul style="list-style-type: none"> a) Information available for all patients identified by GPs as most likely to present, subject to patient consent, encompassing reason for medication, significant medical history, anticipatory care information and immunisations b) Information accessed for every applicable patient presenting in an A&E, ambulance or 111 setting (including for out-of-area patients)
3) Patients can access their GP record	<ul style="list-style-type: none"> a) Access to detailed coded GP records actively offered to patients who would benefit the most and where it supports their active management of a long term or complex condition b) Patients who request it are given access to their detailed coded GP record
4) GPs can refer electronically to secondary care	<ul style="list-style-type: none"> a) Every referral created and transferred electronically b) Every patient presented with information to support their choice of provider c) Every initial outpatient appointment booked for a date and time of the patient’s choosing (subject to availability) d) By Sep 17 – 80% of elective referrals made electronically
5) GPs receive timely electronic discharge summaries from secondary care	<ul style="list-style-type: none"> a) All discharge summaries sent electronically from all acute providers to the GP within 24 hours b) All discharge summaries shared in the form of structured electronic documents c) All discharge documentation aligned with Academy of Medical Royal Colleges headings
6) Social care receive timely electronic Assessment, Discharge & Withdrawal Notices from acute care	<ul style="list-style-type: none"> a) All Care Act 2014 compliant Assessment, Discharge and associated Withdrawal Notices sent electronically from the acute provider to local authority social care within the timescales specified in the Act
7) Clinicians in unscheduled care settings can access child protection information with social care professionals notified accordingly	<ul style="list-style-type: none"> a) Child protection information checked for every child or pregnant mother presenting in an unscheduled care setting with a potential indicator of the child being at risk (including for out-of-area children) b) Indication of child protection plan, looked after child or unborn child protection plan (where they exist) flagged to clinician, along with social care contact details c) The social worker of a child on a child protection plan, looked after or on an unborn child protection plan receives a notification when that child presents at an unscheduled care setting and the clinician accesses the child protection alert in their record
8) Professionals across care settings made aware of end-of-life preference information	<ul style="list-style-type: none"> a) All patients at end-of-life able to express (and change) their preferences to their GP and know that this will be available to those involved in their care b) All professionals from local providers involved in end-of-life care of patients (who are under the direct care of a GP) access recorded preference information where end-of-life status is flagged, known or suspected
9) GPs and community pharmacists can utilise electronic prescriptions	<ul style="list-style-type: none"> a) All permitted prescriptions electronic b) All prescriptions electronic for patients with and without nominations - for the latter, the majority of tokens electronic c) Repeat dispensing done electronically for all appropriate patients d) By end 16/17 – 80% of repeat prescriptions to be transmitted electronically
10) Patients can book appointments and order repeat prescriptions from their GP practice	<ul style="list-style-type: none"> a) By end 16/17 – Minimum of 10% of patients registered for, and actively accessing (per NHS Mandate 2016/17), one or more online (or through apps) services (repeat prescriptions, appointment booking or access to record) b) All patients registered for online services use them above alternative channels

E1.2 Appendix [B] summarises the current baseline position and plans in relation to each Universal Capability / Aim. Figure [E2] summarises the current position for the footprint in relation to each of the Capabilities with two columns indicating the anticipated position in terms of percentage delivery for each Universal Capability at the end of 2016/17 and 2017/18 based on plans agreed by footprint partners. Each Aim related to the Capabilities is shown in terms of current delivery status (an estimated overall % across all providers), and the status of current improvement plans (Green – plans in place, existing initiatives underway, Aim achieved; Amber – plans developed, new initiatives required; Red – further planning required, significant new initiatives required). The final (Note: further detail of the footprint plans can be found in the Universal Capability Delivery Plan templates).

Figure [E2]. Summary of Universal Capability Baseline and Plans

Capability	2016/17 Goal	2017/18 Goal	Aim	Current
Cross care settings access to GP held information			Secondary, emergency and triage views of GP information	25%
			Pharmacy views of GP information	60%
U & EC access information for patients most likely to present			GPs compiling enhanced SCR information for key patient groups	5%
			Secondary, emergency and triage views of enhanced GP information	5%
Patients can access their GP record			Access to detailed coded GP records actively offered to key patient groups	2%
			Patients who request it are given access to their detailed coded GP record	2%
GPs can refer electronically to secondary care			Every referral created and transferred electronically	72%
			Every patient presented with information to support their choice of provider	50%
			Every initial outpatient appointment booked for a date and time of the patient's choosing (subject to availability)	50%
			By Sep 17 – 80% of elective referrals made electronically	60%
GPs receive timely electronic discharge summaries			All discharge summaries sent electronically from all acute providers to the GP within 24 hours	60%
			All discharge summaries shared in the form of structured electronic documents	25%
			All discharge documentation aligned with Academy of Medical Royal Colleges headings	10%
Social care receive timely electronic Assessment, Discharge and Withdrawal Notices from acute care			Assessment, Discharge and associated Withdrawal Notices sent electronically from the acute provider to local authority social care	20%
Clinicians in unscheduled care settings - access CPI / social care professionals notified accordingly			Child protection information checked for every child or pregnant mother presenting in an unscheduled care setting	0%
			Indication of child protection plan, looked after or unborn child protection plan flagged to clinician, along with social care contact details	0%
			The social worker of a child on a child protection plan receives a notification when that child presents at an unscheduled care setting	0%
Professionals across care settings made aware of end-of-life preference information			All patients at end-of-life able to express their preferences to their GP and know that this will be available to those involved in their care	30%
			All professionals from local providers involved in end-of-life care of patients access recorded preference information	50%
GPs and community pharmacists can utilise electronic prescriptions			All permitted prescriptions electronic	44%
			All prescriptions electronic for patients with and without nominations - for the latter, the majority of tokens electronic	44%
			Repeat dispensing done electronically for all appropriate patients	7%
			By end 16/17 – 80% of repeat prescriptions to be transmitted electronically	57%
Patients can book appointments and order repeat prescriptions from their GP practice			By end 16/17 – Minimum of 10% of patients registered for, and actively accessing, one or more online services	14%
			All patients registered for online services use them above alternative channels	1%

E1.3 In summary, the key points are:

- ◆ Many relevant digital enablers are in place (e.g. SCR, MIG, patient access from GP systems to summary and to detailed record, booking, prescriptions, EPS, ERS)

- ◆ However Capabilities that are driven largely by patient awareness and adoption e.g. view record online appear to demonstrate relatively low rates of utilisation. (e.g. only 14% patients are registered for online GP booking, etc and only 1.3% patients currently are registered to access their detailed GP records; Although 20% ED staff have access to SCR / MIG, there is moderate usage). Hence more communication, awareness, education is required amongst the workforce and citizens. However it should be noted that in primary care only a proportion of registered patients (est.30%) actively use their GP services and benefit from engagement with these digital services
 - ◆ Utilisation amongst practices of ERS is relatively high at 72%, whereas EPS utilisation is currently about 44%. About 60% discharges from RBFT have an accompanying e-discharge summary sent within 24 hours
 - ◆ Opportunities exist for more innovative use of existing digital enablers to improve capabilities. For example the use of enhanced SCR to record End of Life preferences.
 - ◆ Unscheduled care settings are currently able to view Child Protection data through the Child Protection Information Service however at present only 23 organisations are publishing data to CP-IS
 - ◆ Trusts / GPs do not yet have access to the Child Protection Information Sharing service, although trusts do receive a weekly extract by secure email
- E1.4 Social Care currently receives between 61-80% of their referrals through electronic means where the remainder are still made via a telephone conversation. Broader capability deployment
- E1.5 This section describes, for each of the seven capabilities directly relevant to Paper Free at Point of Care, the expected trajectory over a three year horizon to March 2019. Figure [E3] summarises what is covered by the seven capabilities, and Table [E4] provides examples of some elements which are mainly dependent on functionality *within an individual organisation*, and those that require action *across organisations*. Note that of the seven, three capabilities have fairly weak or no dependence on whole system working.

Figure [E3]. Scope of Paper Free at Point of Care Capabilities

AS A HEALTH AND CARE PROFESSIONAL, PAPER-FREE WILL MEAN I CAN:



Records, Assessments and Plans
Capture information electronically for use by me and share it with other professionals through the Integrated Digital Care Record



Medicines Management and Optimisation
Ensure people receive the right combination of medicines every time



Asset & Resource Optimisation
Increase efficiency to significantly improve the quality and safety of care



Transfers of Care
Use technology to seamlessly transfer patient information at discharge, admission or referral



Orders & Results Management
Use technology to support the ordering of diagnostics and sharing of test results



Decision Support
Receive automatic alerts and notifications to help me make the right decisions



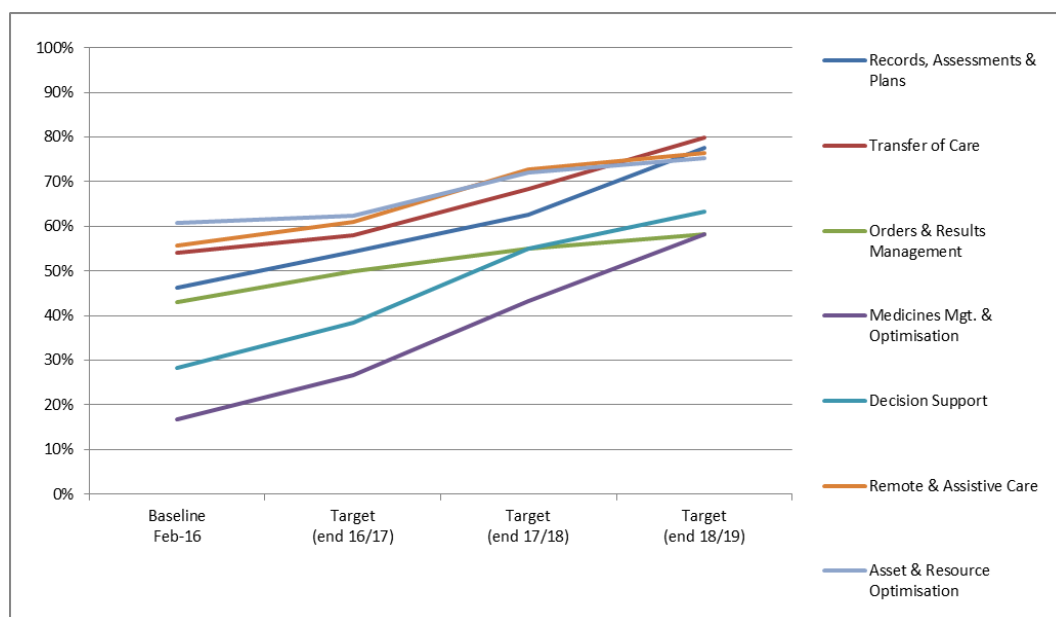
Remote Care
Use remote, mobile and assistive technologies to help me provide care

Table [E4]. 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 The capability to match NHS number
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 the organisation	Limited
Remote & Assistive Care	Remote/virtual clinical consultations between clinician and patient	Remote/virtual clinical consultations between clinicians from different organisations The investment in assistive technology Promotion of assistive technology The development of support and training in the use of assistive technology
Asset & Resource Optimisation	Digital tracking and management of internal resources, such as beds, staff, equipment	Limited

E1.6 Figure [E5] provides a high-level view of the capability trajectory for secondary care across the whole system, and the current baseline position. (Systematic data is not yet available for primary care nor for social care. The baseline scores are from the DMA. The prospective scores have been estimated by each organisation, based on their proposed systems and capability deployment plans. The whole system scores are derived by aggregating scores from individual organisations. Capability trajectory scores and deployment schedules for each trust, explaining what lies behind the forecast trajectories, are provided in Appendix [C].

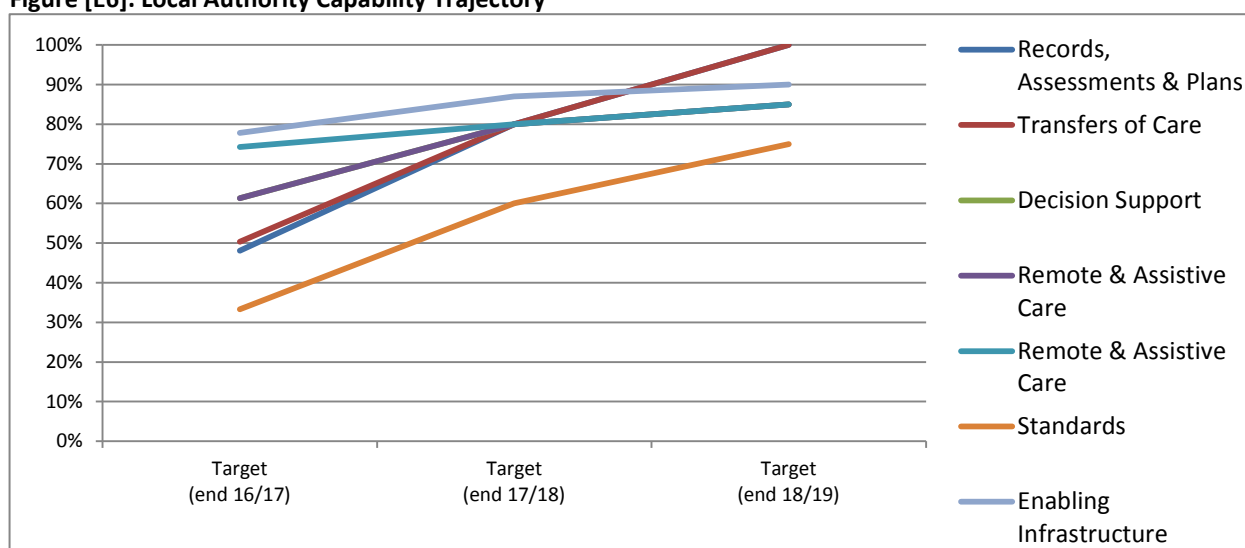
Figure [E5]. Secondary Care Capability Trajectory



E1.7 Figure [E5] shows that:

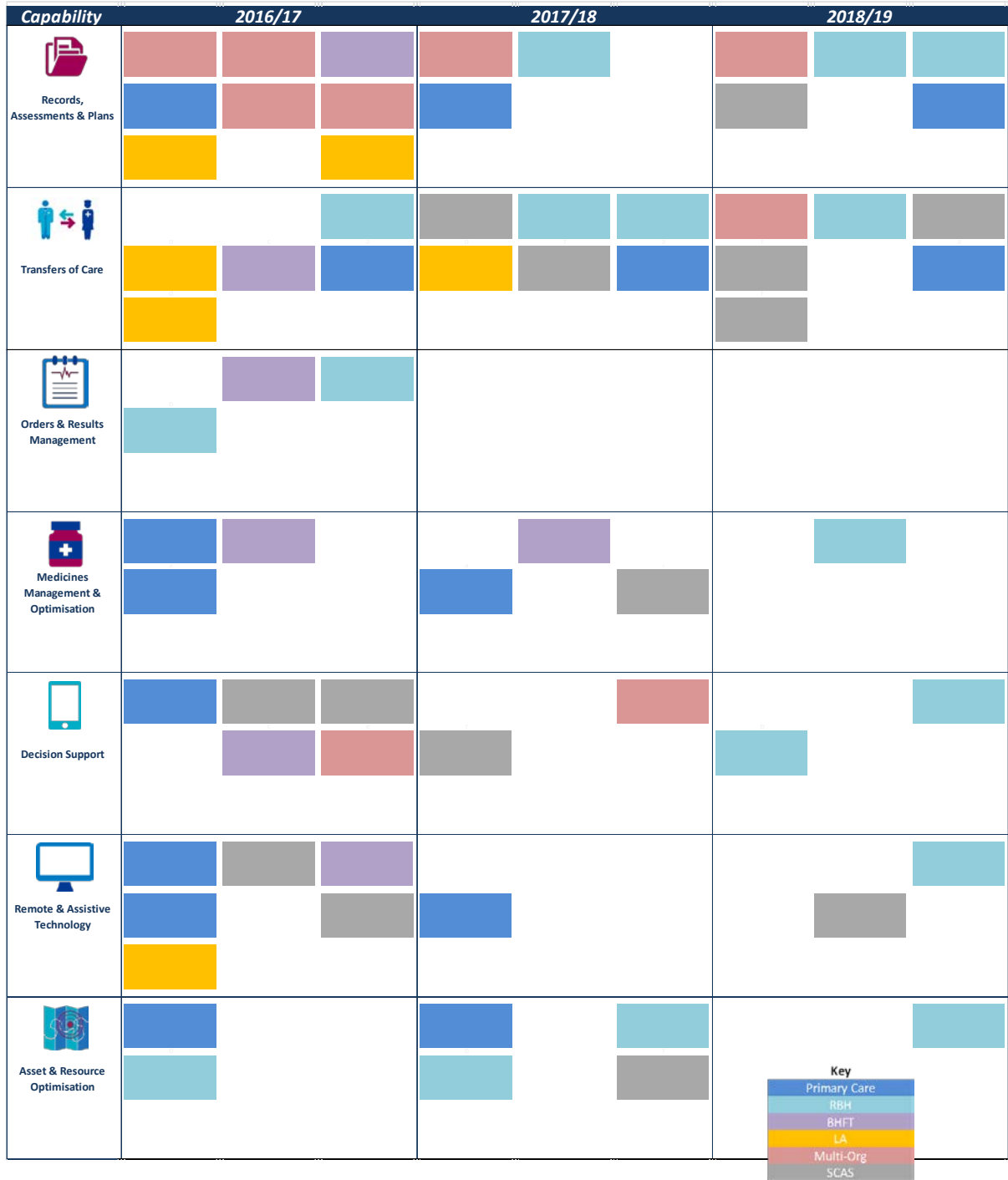
- ◆ The overall capability trajectory (BHFT, RBFT and SCAS combined) indicates steady and relatively rapid progress is planned over next 3 years across all Paper Free at Point of Care capability areas
- ◆ No capability is expected to reach 100% by 2019, indeed only 1/7 categories (transfers of care) is expected to reach 80% by 2019 (*cf* national target of paperless working in primary, urgent and emergency care by 2018)
- ◆ Appendix [C] shows that for most capabilities, RBFT is anticipating a gradual increase, year on year, whereas there is a much more mixed picture for BHFT. SCAS is expecting a rapid improvement in relation to decision support and medicines management over the next two years, but only modest change for orders/results.
- ◆ Appendix [C] also suggests, for example, there will be big differences in the extent of deployment for orders/results amongst the three trusts. By 2019, RBFT expects to achieve 85% deployment, BHFT 60% and SCAS 30%.








E1.8 Figure [E6] provides a high level overview of the capability trajectory for Local Authorities across West Berkshire across the whole system and the current baseline position which have been provided as part of the output of the DMA. The prospective scores have been estimated by each organisation, based on their responses to the DMA, proposed systems and capability deployment plans. The whole system scores are derived by aggregating scores from individual organisations and agreeing realistic targets for the next 3 years based on work either ongoing or planned over that period of time

Figure [E6]. Local Authority Capability Trajectory

- E1.9 There are a number of capabilities that are not expected to reach 100% within the next 3 years and potentially in the next 5 years. This is due to a number of reasons including financial investment, limitations in the current technology available and organisational changes.
- E1.10 Most areas will see gradual changes in the capabilities over the next 3 years except in the standards area where the Local Authorities are currently undertaking work with connection to the N3 spine service and NHS number matching.
- E1.11 A wide range of developments relevant to the Paper Free at Point of Care capabilities are proposed across all organisations. Figure [E7] shows, in outline only, when key aspects of deployment are expected in relation to each capability category: a) by organisation, and b) for the whole system, classified by status (active, committed, aspirational). The capabilities cover primary care and local authorities, as well as secondary care. For reasons of readability these diagrams do not contain details of what specifically will be deployed – this detail is provided in Appendix [D].
- E1.12 Figure [E7] and Appendix [D] allow some of the secondary care capability trajectories to be explained in terms of planned deployments. For example:
- ◆ Figure [E7] suggests there will be more activity in the early years than later – but this probably reflects levels of certainty. Furthermore, Figure [E7] suggests that many of the deployments for 2018/19 are “aspirational”, rather than being current/active or planned/committed.
 - ◆ The detailed deployment charts in Appendix [D] provide insight into some of the major milestones for each organisation / sector over the next three years. For example RBFT expects that by the end of 2017/18 no paper records will be required in outpatients and e-prescribing will have been deployed by 2018/19. BHFT expects, by the end of 2016/17, to have e-access to RBFT diagnostic services for orders/results and deployment of telemonitoring for patients of the heart failure team.
- E1.13 More generally, Appendix [D] indicates further deployments / uptake / utilisation during 2016/17 and 2018/19 in relation to the various universal capabilities (e.g. use of SCR and/or MIG, e-referrals, e-discharges, wider access to EoL information, access to CP-IS), all of which will support further progress towards goals for both paperless working and for information sharing.

Figure [E7]. Capability deployment chart by organisation and status



Capability	2016/17			2017/18			2018/19		
 Records, Assessments & Plans	Green	Green	Green	Green	Green		Blue	Blue	Red
	Green	Blue	Green	Green			Red		Green
 Transfers of Care			Green	Red	Blue	Blue	Blue	Blue	Red
	Green	Green	Blue	Blue	Red	Blue	Red		Blue
							Red		
 Orders & Results Management		Green	Green						
	Green								
 Medicines Management & Optimisation	Green	Green			Blue			Red	
	Green			Green		Red			
 Decision Support	Green	Red	Red			Blue			Red
		Blue	Green	Red			Red		
 Remote & Assistive Technology	Blue	Red	Blue						Red
	Blue		Red	Blue				Red	
 Asset & Resource Optimisation	Green			Green		Blue			Red
	Green			Green		Red			

Key

Current / Active (Green)

Planned / Committed (Blue)

Aspirational (Red)

F Information sharing

F1 Background

- F1.1 It is recognised locally and nationally that the kinds of transformative change set out in the STP¹ cannot be achieved without realising many of the opportunities afforded through extensive deployment of digital technology.
- F1.2 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 paper free at the point of care (Paper Free at Point of Care).
- F1.3 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, self-care enablers and population health management. These can be summarised as follows:
- ◆ **Interoperability and information exchange between health and social care organisations** to allow the flow of real time data between two or more organisations for the benefit of co-ordinating current and future service provision across care pathways, improving care and data analysis.
 - ◆ **Having a person / patient held record (PHR) for health and social care for the citizens** of Berkshire West, that contains accurate real time data and information from commissioners, health and social care providers and citizens, enabling the individual to hold and manage their care and give consent to providers of services and carers to view their record based on an agreed data set.
 - ◆ **Whole systems intelligence** to bring together financial, operational and clinical outcome data centred around patients providing an opportunity for deriving whole system intelligence to support population health management, effective commissioning, outcome based contracting, planning, clinical surveillance, service re-design and research.
- F1.4 The Berkshire interoperability initiative, the “Connected Care” Programme was established in 2013 as a collaboration amongst all the main organisations within the footprint and latterly (since 2015) as a joint development with Berkshire East. The aim of the overall programme is to improve clinical effectiveness and patient experience by providing clinicians, carers and patients with a comprehensive view of patient medical/care history irrespective of source, moving away from separated information systems and data silos to a multi-system cross care setting landscape.
- F1.5 The Connected Care approach has been to introduce increasing levels of functionality and an extended set of data through a controlled, phased approach:
- ◆ Phase 1 of the project enabled the sharing of (selected) primary care data from the 54 GP surgeries in Berkshire West with Westcall Out of Hours Service, Reading Walk In Centre and pilot users in Berkshire Health Foundation Trust and the Royal Berkshire Hospital. Phase 1 went live in October 2014.
 - ◆ Phase 2 implemented a “proof of concept” integrated portal which extended the data provider organisations and the data consumers. In addition to the primary care information the pilot portal also included Admissions/Discharges/Transfers from the Royal Berkshire Hospital and community information from Berkshire Health Foundation Trust. The proof of concept ran for 6 months and was decommissioned in April 2016 (following the procurement of a different supplier for the final solution). Phase 2 also included the procurement process for the full interoperability solution.
 - ◆ Phase 3, the implementation of the full solution began in June 2016. The approach will be to deploy multiple releases (in line with the STP initiatives) during the five year contract duration.

¹ Section C1.

- F1.6 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 instant messaging, video / web-conferencing and enterprise collaboration tools. Berkshire West will use a mixed economy of solutions to meet the needs of the business.

F2 Leadership and governance

- F2.1 The delivery of the Local Digital Roadmap (LDR) is being overseen by the West Berkshire Digital Transformation Programme Board. This group was originally the Connected Care Board, but has taken on additional responsibilities for the workstreams associated with the delivery of the broader roadmap. The Senior Responsible Officer (SRO) is the CIO for NHS Wokingham CCG.
- F2.2 The West Berkshire Digital Transformation Programme Board includes representatives from each of the health and social care partners involved in the footprint. The Board has been operating since November 2013 and has overseen significant cross system digital developments.
- F2.3 The West Berkshire Digital Transformation Programme Board reports into the Berkshire West Clinical Commissioning Committee and the Delivery Group which reports into the Berkshire West Integration Board (acting on behalf of the four West Berkshire CCGs Governing Bodies). The CIO for NHS Wokingham CCG attends all meetings therefore ensuring continuity.
- F2.4 The West Berkshire LDR is one of three LDR's within the Berkshire West, Oxfordshire and Buckinghamshire STP footprint. To ensure that the STP has a consistent digital input, Lois Lere has been designated as the digital lead for the STP and has established a CIO forum to start linking the LDR's. Some early priorities that have been identified include patient portals, integrated digital clinical records and IG. Opportunities are already being explored to work at scale and to best support the STP.

F3 Clinical engagement

- F3.1 Digitally enabled transformation is an essential component for addressing the challenges faced by the local health system. Berkshire West have been very clear that "digitally enabled transformation" should not focus on the technology alone but must be driven by the end-users, i.e. those at the front line of delivering care.
- F3.2 Similar to a number of organisations in the UK who are working to implement "joined up" care across the health and social care, Berkshire (West and East) created a fictional person (Sam) to illustrate some of the issues facing care professionals in obtaining patient/citizen centric data in relation to individuals under their care.
- F3.3 Sam was created for the purpose of developing "real life" scenarios for many of the cross organisational service lines that will care for Sam during his journey. These scenarios were focussed on defining the following:
- ◆ Identification of the key issues currently facing care professionals when Sam (or a real life equivalent) presents him/herself
 - ◆ What information is required by the care professionals involved to be able to make a more informed decision
 - ◆ What are the anticipated benefits of having the relevant information available at the point of care
- F3.4 The journey, associated scenarios and information requirements were developed by front line staff and provide a broad range of issues currently facing the delivery teams and their respective organisations.

- F3.5 Over 50 members of staff across health and social care were involved in the development of Sam's story and this document acted as a focal point for clinical and care engagement. Sam's story was completed in September 2015 and was one of the key inputs to the requirements that were published as part of the Invitation To Tender (ITT) process which started in October 2015.
- F3.6 Clinical and care professionals were also involved in the ITT marking and selection process.
- ◆ Clinicians and care professions were involved in the marking and moderation of the functional and operational requirements.
 - ◆ 71 clinical and care professionals attended the two day supplier demonstrations (January 2016) and were actively involved in the final selection process. Suppliers involved in the process commented that this was the best clinical engagement they had seen during a procurement exercise.
- F3.7 To ensure on-going alignment to the needs of front line staff, the Connected Care delivery team and the chosen interoperability supplier are members of the Clinical Advisory Group for data-set definition and Care Planning. Embedding the technology team into the transformation workstream not only ensures that the business drives the use of technology but also that changes to processes take account of experience gained from other customers and any "best practice" solutions adopted.

F4 Patient engagement

- F4.1 The Connected Care Programme Board has patient representation since early October 2014.
- F4.2 Patients were involved in the ITT marking and selection process.
- ◆ Patients were involved in the marking and moderation of the patient portal requirements.
 - ◆ Patients attended the two day supplier demonstrations (January 2016) and were actively involved in the final selection process.
- F4.3 A patient group has been identified to assist the Connected Care Programme in terms of developing the requirements of the patient portal.
- F4.4 This patient group will evolve to support the wider digital transformation agenda and will play a vital role in supporting with the design, implementation and communication. This group will communicate with broader patient groups to get as broader engagement as possible.
- F4.5 Patient journeys were mapped from a clinical perspective and further work will be done to map this from the patient perspective. This is so important when designing services or technology that will have a direct impact on patients. Information governance
- F4.6 The range of service areas and the required support structures suggest that the challenge of delivering co-ordinated care should not be underestimated. It requires an integrated service model to deliver joined up care across different provider boundaries, where providers operate under different service objectives and performance criteria.
- F4.7 Information sharing is a key enabler for any integrated service model and this sharing must be implemented in conjunction with the best practice principles associated with Information Governance.
- F4.8 In September 2015 the Connected Care Programme initiated an Information Governance steering group comprising of the Caldicott guardians (or delegates) from each of the organisations involved. The purpose of this group was to ensure a strong IG management framework was developed in order to demonstrate to all partner organisations that all personal confidential data will be processed, used and shared lawfully and that all data protection requirements are being effectively satisfied. The steering group is chaired by the LMC and it represents both West and East Berkshire.

- F4.9 The steering group has developed a set of 12 key principles that all participating organisations have signed off. These principles are evidenced by a documentation suite that supports and ensures these principles are being adhered to.
- F4.10 In April 2016 the LMC wrote to all Berkshire West GPs to endorse the Connected Care programme.
- F4.11 The IG steering group will remain in place for the duration of the project.

F5 Data-set definition and agreement

- F5.1 The Berkshire ITT identified 20 information feeds (in addition to all GP practices) that would be required by an interoperability solution across health and social care.
- F5.2 The key determining factors in specifying what can be achieved per information feed are:
- ◆ Availability of a unique identifier across all provider solutions (health and social care)
 - ◆ What's information is required by the clinical and care professionals
 - ◆ What's stored within the existing provider solutions
- F5.3 All organisations have agreed that the NHS number will be the primary identifier. Local authorities have plans in place for an initial batch update and on-going maintenance of the NHS number within their systems.
- F5.4 The primary care data set has initially been determined by the standard information made available via Health Care Gateways MIG solution (F1.5, phase 1). Although adequate and signed-off for current purposes this data-set will be monitored and updated based on clinical and care professional feedback (via the Clinical Advisory Group).
- F5.5 The proof of concept pilot (F1.5, phase 2) helped to identify and supply key data sets from secondary care providers (ADT, community) which will be reused as we move to the full solution. Although adequate and signed-off for current purposes this data-set will be monitored and updated based on clinical and care professional feedback (via the Clinical Advisory Group).
- F5.6 An analysis of the Local Authority data-set was completed in June 2016. This identified a common set of data stored across all Local Authority systems and verified it's appropriateness with health professionals. Although adequate and signed-off for current purposes this data-set will be monitored and updated based on clinical and care professional feedback (via the Clinical Advisory Group).
- F5.7 The development of new services is being led by the Berkshire West 10 Delivery Board. Going forward, all data-sets will be reviewed by this group to ensure alignment to new working practices/processes and the long term vision of care. Any gaps in the data-sets required will be identified and solutions will be developed.
- F5.8 Patients are involved in the definition of information that will be made available through the patient portal.
- F5.9 Berkshire (West and East) is at an advanced stage of understanding and extracting the data sets required for effective interoperability. It is Berkshire's intention to make this information available to surrounding geographies in order to help standardise data sharing across boundaries.

F6 Progress and plans

- F6.1 Implementation of the full Connected Care programme is scheduled to start in June 2016. Initial planning has been completed and the lessons learned (including existing data feeds) from the initial pilot will be incorporated to ensure quick wins are achieved and momentum gained.
- F6.2 Detailed plans for Connected Care will be developed on an annual basis. These will include a detailed in-year plan and a year+1 high level plan. Plans are in place for FY2016-17 and FY2017-18.
- ◆ FY2016-17: includes data available from all GP practices, RBFT, BHFT and two Local Authorities, data consumption by all organisations, alerting and notification, patient portal design and care planning design.
 - ◆ FY2017-18: includes data available from the remaining organisations, extending exiting data-sets, implementation of the patient portal (limited cohort of patients), care plan implementation (limited) and mobile use.
- F6.3 In addition to Connected Care, a number of other initiatives contribute to the sharing of patient information between organisations:
- ◆ SCAS has plans to implement: Two-way sharing of “special patient notes”, e.g. updating records and notifying GP of adverse reaction to medication; e-Booking of appointments from 111 call into GP / OOH /minor injuries services ; e-Discharge messages 111 and 999 to GP Practices
 - ◆ WBC social care automatically receives e-assessment, e-referrals, e-discharge and e-withdrawal notices from acute care via the Health Hub
 - ◆ BHT and RBFT (for inpatients and ED only) send discharge summaries digitally, and all correspondence via the EDT/Docman hub for auto-uploading into GP records
 - ◆ End of life care plans, currently held within the Out of Hours system, are able to be viewed by authorised clinicians from trusts and elsewhere
 - ◆ End of life – Provide a single point of contact through a centralised hub, for patients, families, carers, health and social care professionals
 - ◆ OHMS Self Service Module – Citizen online services
 - ◆ Social Care Information Point – Internal and external facing repository which provides details of services, organisations and activities to support adults help live independently.
 - ◆ Family Information Service Directory – Information, advice and guidance on Ofsted Registered Childcare and other family services NB All authorities have to provide these, along with a 3rd type for SENDD children to support EHCP decisions
 - ◆ Discharge to Assess/Time to decide – DTA is a step down rehab and reablement service with the primary aims being to reduce the number of patients on the fit to go register, reduce length of stay and reduce permanent admissions.
 - ◆ Reducing delayed transfers of care
 - ◆ Neighbourhood clusters, self-care and prevention (Wokingham) – integrating long term social care delivered by Optalis, community health services and third sector organisations.
 - ◆ Community Reablement Team – A domiciliary care service which works jointly with BHFT to provide short term support
 - ◆ Step up and step down care (Wokingham), with people being actively diverted from hospital care
 - ◆ Enhanced 24 hour emergency support in a person’s home to aid late discharge from hospital and divert people from attendance at A&E as a risk prevention measure
 - ◆ Proposed co-location of teams working in Wokingham Children’s Services and BHFT to improve Education, Health & Care Planning arrangements

- ◆ Carers integrated commissioning – To validate and refine plans for commissioning carers services and assessments
 - ◆ Step Up/Step Down (Wokingham) – Delivering a comprehensive reablement service as well as an ongoing assessment service of someone's needs prior to going home.
 - ◆ Night Responder service (Wokingham) – Working with Domiciliary Care Plus service provide options where a person requires 24 hrs support without the need of going into hospital or residential home
 - ◆ Neighbourhood clusters, self-care and prevention (Wokingham) – integrating long term social care, community health services and third sector organisations in local communities. The third sector is expected to provide support in accessing appropriate services and provide social support to people living in the community
 - ◆ Child Protection Information Service (CP-IS) – Local authorities to share child protection information electronically to CP-IS for use in unscheduled care settings.
 - ◆ National systems including Choose & Book / ERS, SCR, GP2GP, EPS, Spine.
- F6.4 Appendix [E] plots, for the next few years, the potential deployment of information sharing solutions and their usage.
- F6.5 Digital technology is being used to support improved collaboration between professionals and more efficient cross organisational working. Examples of current initiatives and planned developments include:
- ◆ Tele-conferencing is already in place and most organisations plan to expand its use.
 - ◆ Secure email is used to support the exchange of confidential patient / client data between organisations, examples include child protection information shared by LAs with trusts and notifications of assessment and discharge from trusts to LAs.
 - ◆ The Multi-Agency Safeguarding Hub (MASH) (a forum for secure collaborative working and information gathering/sharing across multiple agencies/partners (Social Care, Police, Education, Health etc) provides a single, secure repository for shared information.
 - ◆ Collaborative working tools such as Huddle and GlassCubes are mainly used within organisations rather than between.
 - ◆ The implementation of N3 connections in all LAs this year will allow validation of NHS Numbers and publication of CPIS data.
 - ◆ The Connected care Project will provide a range of tools to support cross-organisational working and process, examples of the functions to be implemented include a shared dynamic care plan, a holistic patient record capturing core data from all health and social care organisations, and a business intelligence suite that will help identify patients that are at risk or need an intervention.

G Infrastructure and standards

G1 Mobile working

- G1.1 Providing a robust, secure mobile IT infrastructure not only enables flexible information access for professionals within their normal place of work, but also supports their ability to work in other care settings, patient homes, residential homes, etc.
- G1.2 The necessary mobile infrastructure components include mobile devices (laptops, handhelds, tablets, smartphones), authentication / security, device-specific user interfaces, connectivity (WiFi, 4G), mobile device management.
- G1.3 The current status and plans for the mobile working infrastructure across the footprint are summarised here, with further detail provided in Appendix [F]:
- ◆ Mobile devices – the trust DMA scores for healthcare professionals being equipped with mobile devices to access clinical applications and information at the point of care are: 75% (BHFT), 25% (RBFT), 75% (SCAS), 63% (National). Currently a variety of devices (laptops, tablets, mobile phones) are in use, with differences both within and across organisations.
 - ◆ Local Authorities are working towards mobile solutions for their workers with investment in new laptops and smartphones, application upgrades to support mobile working, improvement in WI-FI at council offices and sites along with a superfast Berkshire Broadband Infrastructure with 100% availability for 2018/2019.
 - ◆ Connectivity – The extent to which healthcare professionals have WiFi access to clinical applications across each trust has been assessed for trusts as part of the DMA – scores are: 75% (BHFT), 25% (RBFT), 50% (SCAS), 78% (National). The GP WiFi project is due to complete by October 2016. Remote connectivity with primary care systems is enabled for most practices via EMIS Mobile or INPS Vision Anywhere. Health and Social Care workers are able to access networks / systems in their own organisation from offsite locations, such as general practices, via VPN. Councils have a well-developed mobile infrastructure, but front-line social care staff are not necessarily mobile enabled.
 - ◆ Different mobile authentication / security solutions are currently deployed across each organisation, with different mobile device management (MDM) products in use or under consideration. Appendix [F] provides further detail.
- G1.4 System-wide initiatives to further develop and exploit the mobile working infrastructure include:
- ◆ Work has started across healthcare providers on providing access to Trusts applications irrespective of NHS West Berks location.
 - ◆ Further opportunities for sharing facilities and best practice will be examined. This could include evaluation of different mobile devices or MDM solutions; Ensuring any health / care professional can have secure WiFi access from any site, irrespective of organisation.

G2 Comms/Networking/etc

- G2.1 Currently, all NHS organisations have full access to the NHS secure network, N3. All three LA's are in the process of implementing an N3 connection whether this is through the indirect route of the Public Service Network (PSN), or directly through the BT connection. All organisations will migrate from the existing N3 service by end of March 2017, to the successor Health and Social Care Network (HSCN) services, capable of supporting both the health and social care system.
- G2.2 In terms of offering free WiFi to patients, the position across the footprint can be summarised as follows;

- ◆ BHFT - Currently offer free WiFi to long stay patients. Offering at all 200 community sites will require additional funding to upgrade bandwidth
- ◆ RBFT - Currently available at main hospital site.
- ◆ Primary care - Planned to be available by October 2016 as part of the GP WiFi Project.

G2.3 In terms of Unified Communications e.g. the integration of real-time communication services such as instant messaging, presence information, voice (telephony), video conferencing, shared desktops and interactive whiteboards with non-real-time communications services such as voicemail, email, SMS and fax. NHS Mail2 is currently being deployed as a replacement to NHS Mail and will offer standard features such as:

- ◆ Instant Messaging and Presence
- ◆ Mobile Device Management
- ◆ And additional or top-up features such as:
- ◆ Audio and Video calling
- ◆ Desktop Sharing
- ◆ Advanced Mobile Device Management

It is anticipated that all Primary and Secondary Care organisations will replace their email systems with NHS Mail2 to take advantage of at least the basic features offered.

As new and updated workflows and pathways are developed that demand the additional functionality of unified communications such as desktop sharing and video calling these could be added from the functions available from NHS Mail 2 or other 3rd party solutions could be procured.

SMS capability is not part of NHS Mail2 and is provided via 3rd party solutions, such as iPlato or Mjog.

Fax is being phased out.

- ◆ Maytech secure file Transfer – Secure File Transfer Protocol solution to share documents electronically and securely
- ◆ Glass Cubes Migration - It provides teams with a strategic and efficient way to collaborate, by sharing and storing information in the cloud that's secure, accurate and accessible from anywhere

G3 Standards & Policies

G3.1 The implementation of certain standards and agreed policies across the footprint are essential enablers for sharing information. The current coverage of NHS number in key systems across organisations is summarised in Table [G1]. The current status and plans for the adoption of other key national standards (SNOMED-CT, GS1, Dictionary of Medicines and Devices) is summarised in Appendix [G].

Table [G1]. % patient / client records which have NHS number

Organisation	% coverage	Comments
BHFT	99%	On-going data quality audits & monitoring
RBFT	>95%	In EPR & Spine linked systems. Ongoing batch tracing & audit
SCAS	86%	999 Matching NHS Number to Patient Records
	98.2%	111 Matching NHS Number to Patient Record
Primary Care	100%	
RBC	63%	Initial matching was completed in 2015 and process in place to capture NHS numbers. A further matching to be completed prior to connecting to the N3 network
W Berks C	98%	Process in place to capture NHS numbers and once upgrade to new social care system is complete then will be looking at a direct connection to N3.
WBC	75%	Initial matching exercise completed (Autumn 2015) and another bulk matching exercise planned. In process of data cleansing involving the NHS numbers.

G3.2 Each organisation has plans, policies and procedures in place to minimise risks associated with increasing dependence upon technology. The summary, below, outlines the current status, identifies important gaps and some of the proposed steps to address these for each of the relevant areas. Further detail is provided in Appendix [H]. (Organisations are aware that the National Data Guardian Review of Data Security is underway, and that this is likely to require a review of local plans, especially in relation to responsibilities and data security standards.)

G3.3 IG, Data Protection and Privacy - DMA scores relating to IG are summarised in Table [G2]. This shows that RBFT, in particular, needs to make further progress – one area of concern being assurance in relation to suppliers' assets security. The Connected Care Programme Board for interoperability has an Information Governance subgroup which develops and recommends for approval policies in relation to the sharing of information, including Information Sharing Agreements and patient consent (to sharing) models.

Data Security - Footprint healthcare organisations follow the DH guidance "*Information Security: NHS Code of Practice*" in all processes, both those deployed and managed internally and those from managed service providers. Managed service providers have a formal information security risk assessment and management programme covering key information assets, including a documented information security incident reporting and management procedure. Procedures to prevent information processing being interrupted or disrupted through equipment failure, environmental hazard or human error and business continuity plans are up to date and regularly tested for all critical information assets.

All systems have appropriate access control functionality and documented, managed access rights are in place for all users of these systems with monitoring and enforcement processes to ensure NHS national application Smartcard users comply with the terms and conditions of use. Transfers of hardcopy and digital person identifiable and sensitive information are mapped and risk assessed and technical and organisational measures adequately secure these transfers.

Managed service providers have successfully completed the IG Toolkit at the level required to retain Accredited Safe Haven (ASH) status, allowing the processing of Personal Confidential Data.

Cyber security status and threat levels are continuously monitored and policies and procedures including education and awareness communication programmes are regularly reviewed and updated.

- G3.4 Business Continuity and Disaster Recovery (BC&DR) – DMA scores relating to this area are summarised in Table [G2]. This shows that each trust, except RBFT, is above the national average, but none are at 100%, indicating that further work is required in developing and testing BC&DR plans, as described in Appendix [H]. For example, RBFT has about 300 IT applications and systems in use. Of these, only 31 remain to be transformed to a fully resilient platform.
- G3.5 Clinical Safety - Clinical risk management is mandated by HSCIC in order to promote and help embed clinically safer working practice methods and patient safety solutions, enabled by IT, applied consistently across the NHS.
- Berkshire West organisations commissioning Health IT systems follow a rigorous and robust clinical risk management cycle and conduct all required clinical safety activities. The commissioning organisations must be in receipt of a clinical safety case report from any Health IT system supplier. This is in compliance with the requirements of ISB 0160: management of clinical risk relating to the deployment and use of health software.
- All identified hazards, including any residual hazards handed over by a supplier, must be documented in a hazard log. Any hazards are assessed according to their likelihood and severity and allocated a risk score, using the standards set down by the National Patient Safety Agency.
- G3.6 Where there may be residual clinical risk, evidence must be provided that mitigation has reduced that risk to be as low as is reasonably practicable. The clinical risk management cycle builds upon and contributes to an overall clinical risk safety case for any IT health system project. This report must be reviewed by senior clinical leads and must be formally approved before deployment of any IT Health system is undertaken
- G3.7 Data Quality and Information Standards – it is recognised that robust, standardised data must underpin most of the strategic objectives that this LDR aims to address (e.g. sharing of information across organisations, enabling patients / clients to view and add to their own health records). Each organisation has its own data quality improvement procedures. In addition, Connected Care will begin to identify areas where data are not fit for purpose, which will need to be fed back to the supplying organisation. Wherever these exist, organisations will, increasingly, adopt national / international standards of data recording / coding, and standardised data sets for transactions such as referrals and discharges.

Table [G2]. DMA scores for IG and business continuity / disaster recovery

Standard	Description	National	BHFT	RBH	SCAS
Information Governance	IGTK accredited, IG understanding by Board, workforce, 3rd party suppliers, cyber security, active monitoring	73%	96%	50%	75%
Business Continuity & Disaster Recovery	BC&DR plans, processes, procedures; Multi-site redundancy for business-critical systems	71%	100%	50%	92%

G3.8 In respect to the Local Authorities the results are displayed in the table beneath:

Table [G3] DMA score for IG and business continuity/disaster recovery for the Local Authorities

Issue	Description	National Average	RBC	WBBC	WBC
Information Governance	IG Understanding by board, workforce, 3rd party suppliers, cyber security with active monitoring	76.33%	79.17%	87.5%	83.33%
Business Continuity & Disaster Recovery	Business continuity/disaster recovery processes & procedures have been tested and audited.	61.78%	75.00%	75.00%	100%

G3.9 SNOMED-CT – Within West Berkshire we recognise that the use of SNOMED-CT standards will enable improved sharing of information between Primary and Secondary Care providers. BHFT systems currently partially support the standard, it should be noted that the areas where they do not support the standard are due to their systems suppliers roadmaps not including the standard adoption in those areas. RBFT have aspirational plans to adopt the standards, but do not have any fixed plans currently. Primary Care systems suppliers are planning to implement in 2017/2018. This standard is not applicable to Local Authorities.

G3.10 GS1standards – Within West Berkshire, we recognise that the use of GS1 standards will enable, through standard identifiers and bar codes, the local health and care system to identify, capture, and share information on medicine, medical devices, consumables, assets and returnable equipment automatically.

The standards will help identify patients and staff as well as delivery and requisition locations to improve patient safety and supply chain efficiency, whilst saving on costs and enabling recording the full service line costing of procedures and patient care.

Across West Berkshire only RBFT has aspirations to implement RFID and this is dependent on funding. RBFT are currently using bar coding.

G4 Opportunities for shared infrastructure

G4.1 It is recognised that there are potential economic, strategic and operational benefits from further sharing of the IT infrastructure across the footprint or beyond.

The LDR has already acted as a vehicle to ensure collaboration between organisational IT teams. This has led to exploration of where existing systems can be linked to enable stronger collaboration between partners. This includes linking networks to aim for any health and social care professional being able to access their core systems from any NHS site. It also ensures that future, provider specific, procurements will take the LDR into consideration. This will ensure the systems are compatible with wider system procurements.

A final benefit is that joint procurements can be explored to achieve economies of scale, and make best use of the local IM&T professionals across the health and social care system. This could include cloud based data storage, Sharepoint, Microsoft Office 365, teleconsultations and other IT solutions where there are clear advantages of procuring at a system level.

G4.2 SCAS are working on a couple of initiatives:

- to implement NHS Mail 2, which not only brings a secure mail solution but adds Skype for Business, which both will introduce cost savings relating to cost and time of off-site meetings;
- to implement SCAS Clinical Cloud, which is a project that has been scoped to introduce Cloud hosting technologies that will improve remote system access for off-site working and reduce capital expenditure on hardware.

H Roadmap

H1 Whole System Transformation

H1.1 The preceding analysis of the identified strategic LDR priorities (see Section C) and Current Situation (see Section D) indicates that the individual organisations and the footprint as a whole have made considerable progress in relation to many of the issues considered in this LDR especially with regard to inter organisational whole system intelligence. However there are opportunities to target and accelerate the closure of the gaps and facilitate user engagement to move from the current state to delivering the strategic LDR priorities:

- ◆ Strategic goals of Paper Free at Point of Care and of universal information sharing capability – to achieve the planned capability trajectories outlined in Figure [E5] and [E6], and to execute and realise the benefits of the interoperability initiatives outlined in Section [F]
- ◆ Universal capabilities - mainly by realising further benefits from existing systems, increased utilisation, initiatives, and through improved organisation and patient awareness and benefits communication.
- ◆ Other strategic needs - especially citizen / patient / client-facing technologies, and whole system analytics
- ◆ Investment in essential underpinning infrastructure components, e.g. mobile capabilities.

H1.2 Table [H1] summarises some of main gaps that appear to exist between the current situation and the strategic goals (not just the shorter-term Universal Capability targets) outlined in Section C.

Table [H1]. Gaps in relation to strategic goals

<p>Patient / Client Records (includes Universal Capabilities, PAPER FREE AT POINT OF CARE, Information Sharing / Interoperability, professional digital collaboration)</p>	<ul style="list-style-type: none"> • Several Universal Capabilities requirements to be addressed (see above) • Limited digital support, currently, for many Paper Free at Point of Care capabilities (see DMA) • Comprehensive interoperability solution in development and yet to be deployed(Connected Care) • IT solution for federated working across practices to be deployed for South Reading • NHS Number Compliance and verification not yet at 100%
<p>Citizen / Patient / Client-facing Digital</p>	<ul style="list-style-type: none"> • Use of remote & assistive care technologies limited in scale, uniformity of solutions and deployment • Diversity of apps deployed in different sectors, but no overarching strategy/plan • Limited use by patients of online services such as appointment booking • Very limited access by patients to their detailed digital records • Diverse person demographics across West Berkshire and therefore skills and ability to use technology will differ
<p>Analytics & Decision Support</p>	<ul style="list-style-type: none"> • Not routinely using primary care data for whole system intelligence • ACG risk stratification tool available, not universally used (?) • DXS pathway support tool available, level of usage varies per practice/GP • Limited digital clinical decision support in trusts (see DMA scores)

Infrastructure	<ul style="list-style-type: none"> • Mobile IT access limited for some – e.g. no firm plans to provide mobile working to practitioners in social care (Wokingham BC); Poor mobile signal in some patches • Wi-Fi generally available, but not yet in every general practice (but final rollout underway) • Unified communications across Health & Care professionals to be developed. • Little sharing of technical resources / expertise across organisations • All Local Authorities are currently working towards the N3 Connection and are at different stages of implementation
Readiness, Governance	<ul style="list-style-type: none"> • LDR Implementation Programme not yet defined (to be based on this LDR) • workflow/pathways layered over digital platform • General digital awareness and familiarity of workforce need development

H1.3 Many different current and proposed initiatives are referenced in this report and its appendices. Although each has a role to play in meeting the stated goals, they need to be prioritised and strategically aligned as part of a multi-agency whole systems intelligence approach across the entire footprint.

H1.4 The criteria for agreeing priorities across the footprint include:

- ◆ Universal capabilities - is this initiative a significant contributing factor to the successful realisation of these?
- ◆ STP – are there specific objectives that will rely upon this initiative?
- ◆ Whole system working – will this initiative directly or indirectly facilitate a shared approach across the footprint (and possibly beyond)?
- ◆ Paper Free at Point of Care - is this initiative an essential enabler within a single organisation? Across several organisations?
- ◆ Will this initiative deliver significant patient/client/citizen benefit?

H1.5 Furthermore, in determining overall priorities, clearly it 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” through change management and benefits realisation programmes and basic digital skills of the workforce.

H2 Emerging Priorities

H2.1 With reference to the identified gaps to achieve the roadmap and by applying the above criteria, those initiatives that are considered particularly high priorities within the LDR Implementation Programme for 2016/17 and for 2017 and beyond are summarised in Figures [H2] and [H3] respectively.

H2.2 The proposed LDR Implementation Programme structure is summarised in the next Section.

Figure [H2]. 2016/17 Priorities

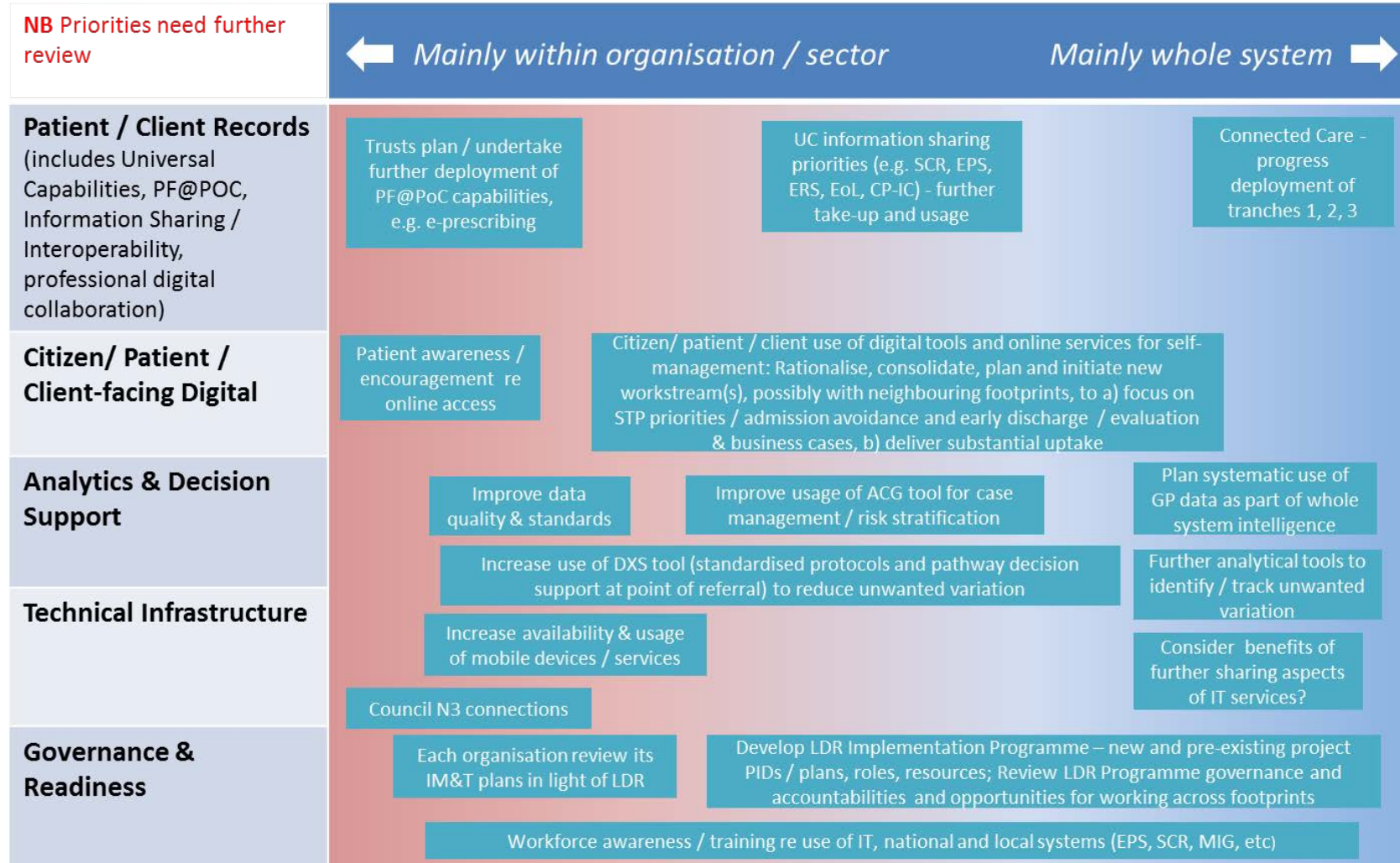
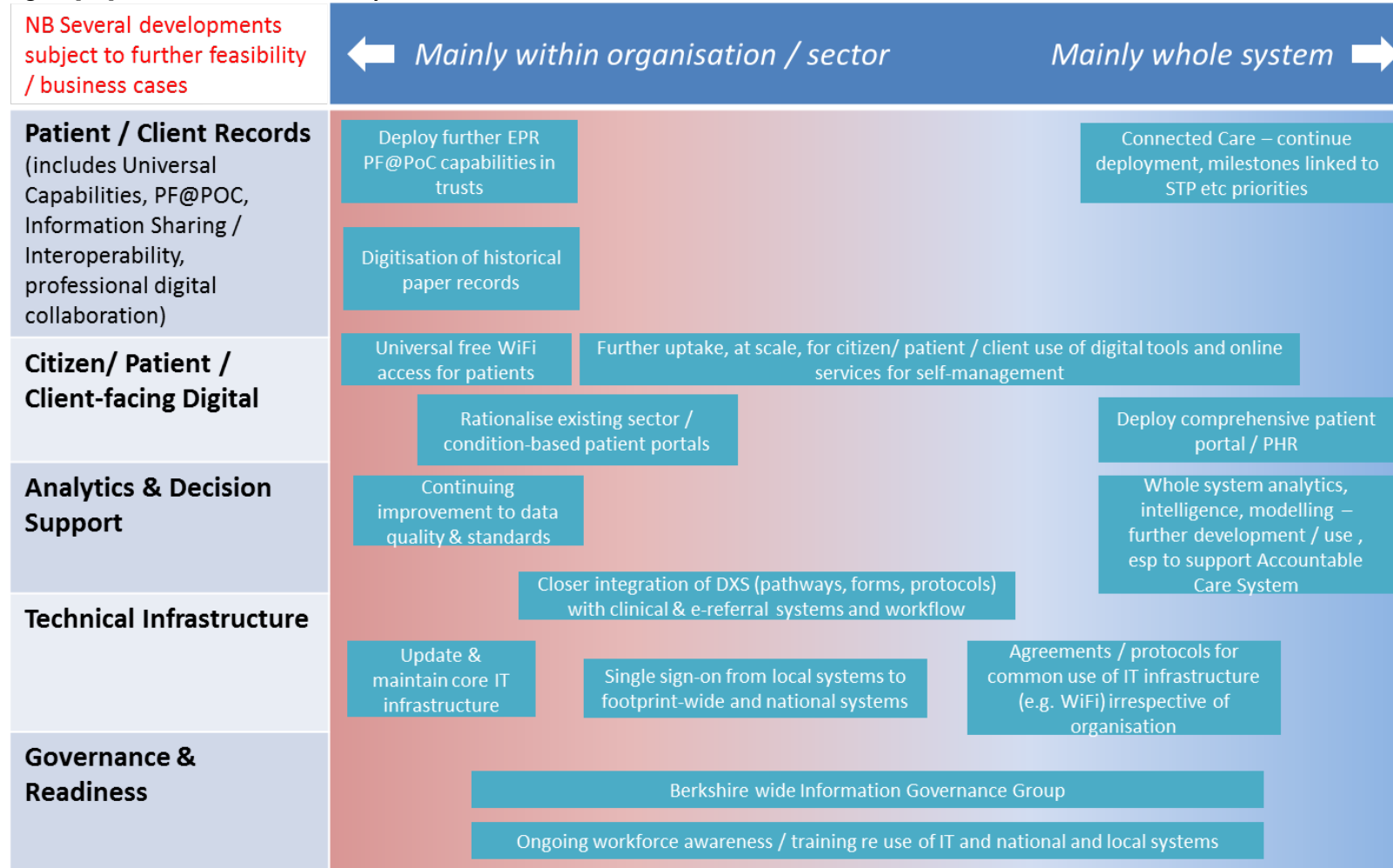


Figure [H3]. Priorities for 2017 and beyond



I Readiness

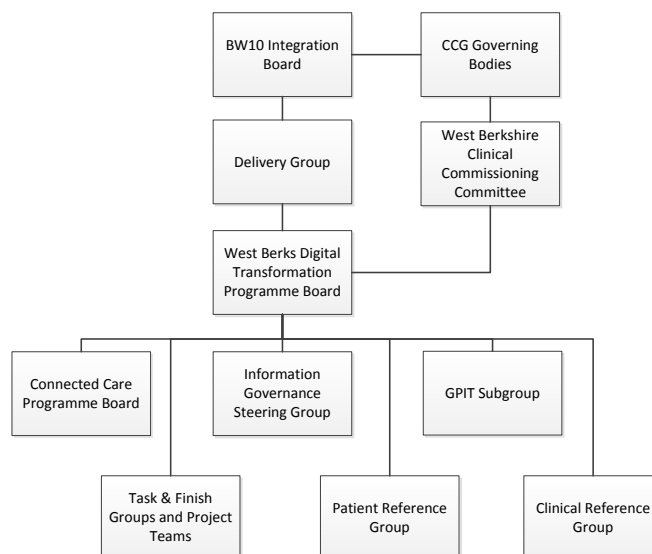
I1 Introduction

- I1.1 This report outlines ambitious plans and identifies several likely challenges in meeting the plans. Therefore, to succeed the LDR Implementation Programme requires strong leadership and clarity regarding governance and accountabilities.
- I1.2 In order to deliver the anticipated benefits, there needs to be a robust approach to change management and to benefits management.
- I1.3 This section outlines the approach that will be taken to these issues, as well as highlighting overall resource requirements / funding priorities.

I2 Leadership, engagement and governance

- I2.1 The delivery of the Local Digital Roadmap (LDR) is being overseen by the West Berkshire Digital Transformation Programme Board. The Senior Responsible Officer (SRO) is the Interim Director of Operations for the Berkshire West Federation.
- I2.2 The West Berkshire Digital Transformation Programme Board includes representatives from each of the health and social care partners involved in the footprint. The Board has been operating since October 2014 and has overseen significant cross system digital developments.
- I2.3 The West Berkshire Digital Transformation Programme Board reports into the Berkshire West Clinical Commissioning Committee and the Delivery Group which reports into the Berkshire West Integration Board (acting on behalf of the four West Berkshire CCGs Governing Bodies. The CIO for NHS Wokingham CCG attends all meetings therefore ensuring continuity.
- I2.4 The Board meets bi-monthly and by exception, if required. The accountability and links for the group are shown in Figure [I1]. The Patient Reference Group set up to provide support to the Connected Care programme has agreed to take an overview of the Digital Roadmap as a whole. The LDR SRO is the Interim Director of Operations / Chief Information Officer (Wokingham CCG, South Reading CCG, North and West Reading CCG, Newbury and District CCG) and the LDR Lead is the Head of Digital Transformation, South Central & West CSU.

Figure [I1]. LDR Programme Management Arrangements



12.5 The proposed structure for the LDR Implementation Programme, which will be the vehicle for delivering the whole system Paper Free at Point of Care goals, along with other priorities for 2016/17 and beyond, is summarised in Figure [I1]. NB Those Paper Free at Point of Care goals which relate primarily to developments within an organisation will continue to be managed as part of that organisation’s IM&T Programme with the intention of aligning workstreams through oversight by board level structures formed by the LDR and STP processes. Figure [I2] summarises the programme structure for the delivery of initiatives under way in 2016/17 that are key enablers for the realisation of the paper free at Point of Care ambition.

Figure [I2]. LDR Implementation Programme Structure

LDR Implementation Programme 2016/17				
	Capability	Workstream	Focus	Governance
Records, Assessments and Plans	Cross care access to GP held information	SCR	Communications, change management	CCG IM&T Committee
		Connected Care	Deployment	Connected Care Board
	Cross care access to enhanced GP held information	Enhanced SCR	Communications, change management	CCG IM&T Committee
		Connected Care	Deployment	Connected Care Board
	Electronic Referral	Cerner	Upgrade	RBH Transformation Board
		DXS	Deployment	CCG IM&T Committee
	Electronic Discharge Summaries	EDT	Deployment	RBH Transformation Board
		EDS to social care	Deployment	Connected Care Board
	Social care integration	Fax decommissioning	Deployment	RBH Transformation Board
		CPI5	Deployment	Connected Care Board
End of Life preferences access	SCR	Deployment	CCG IM&T Committee	
	Connected Care	Deployment	Connected Care Board	
Patient/client Services	Patient access to transactional GP services	Enhanced SCR	Communications, change management	CCG IM&T Committee
		Patient Online	Communications	CCG IM&T Committee
	Patient access to medical records	Patient Portal (CC)	Deployment	Connected Care Board
		Patient Online	Communications, change management	CCG IM&T Committee
Infrastructure	Electronic Prescription	Patient Portal (CC)	Deployment	Connected Care Board
	Single Sign On	EPs2	Communications, change management	CCG IM&T Committee
	Mobile Working	Single Domain	Deployment	CCG IM&T Committee
Analytics and Decision Support	Risk stratification	Local Authority N3 Connection	Deployment, communications	Connected Care Board
		IT N3 PSM	Deployment, communications	Connected Care Board
		Eclipse	Expansion	CCG IM&T Committee
	ACG Tool	Communications	CCG IM&T Committee	

12.6 The self-assessment of IM&T leadership and governance of trusts, as defined in the recent DMA exercise, is summarised in Table [I3].

Table [I3]. Trust DMA scores for Leadership and Governance

Standard	Description	National	BHFT	RBH	SCAS
Leadership	Board level ownership, clinical leadership, digital tech horizon-scanning	77%	90%	80%	85%
Governance	Board-led IM&T programme, project management, business cases, follow best practices	74%	100%	65%	75%

Table [14] Local Authority DMA Scores for Leadership and Governance

Issue	Description	National Average	RBC	WBBC	WBC
Leadership	Board level ownership	78.52%	78.13%	78.13%	87.50%
Governance	Board led IM&T programme, project management, business cases and follow best practice	76.33%	79.17%	87.50%	83.33%

- 12.7 All organisations have a Chief Information Officer (CIO) or equivalent, with the exception of RBC where the functions of a CIO are fulfilled by the ICT & Technology Services Manager, Digital & Website Manager and Social Care Heads of Service.
- 12.8 There is a patient representative on the West Berkshire Connected Care Workstream and a patient group has been established to link with Digital Transformation Programme Board. Patients will be involved in establishing priorities and the delivery against the strategy. Patients were involved in the Connected Care ITT marking and selection process.
- ◆ Patients were involved in the marking and moderation of the patient portal requirements.
 - ◆ Patients attended the two day supplier demonstrations (January 2016) and were actively involved in the final selection process
- 12.9 Engagement with the Programme of clinicians and other care professionals will build on existing arrangements. Each NHS organisation has appointed a Chief Clinical Information Officer (CCIO), and the Heads of Adults & Children’s Services fulfil an equivalent role for the LAs.
- 12.10 Over 50 members of staff across health and social care were involved in the development of Sam’s story (see F3 for more details) and this document acted as a focal point for clinical and care engagement. Sam’s story was completed in September 2015 and was one of the key inputs to the requirements that were published as part of the Invitation To Tender (ITT) process which started in October 2015. Clinical and care professionals were also involved in the ITT marking and selection process.
- ◆ Clinicians and care professions were involved in the marking and moderation of the functional and operational requirements.
 - ◆ 71 clinical healthcare and Social care professionals attended the two day supplier demonstrations (January 2016) and were actively involved in the final selection process. Suppliers involved in the process commented that this was the best clinical engagement they had seen during a procurement exercise.
- 12.11 In terms of leadership, governance and engagement Berkshire West is well prepared to implement the Local Digital Roadmap.

13 Implementation capability

- 13.1 The organisations across Berkshire West have been working together for the past 18 months, developing solutions, investigating options and learning how to work successfully with each other. The relationships developed during this time are critical to the successful implementation of the LDR.

- 13.2 In September 2015 the Connected Care Programme initiated an Information Governance steering group comprising of the Caldicott guardians (or delegates) from each of the organisations involved. The purpose of this group was to ensure a strong IG management framework was developed in order to demonstrate to all partner organisations that all personal confidential data will be processed, used and shared lawfully and that all data protection requirements are being effectively satisfied. The steering group is chaired by the LMC. The steering group has developed a set of 12 key principles that all participating organisations have signed off. These principles are evidenced by a documentation suite that supports and ensures these principles are being adhered to. Information Governance will continue to be actively managed throughout the duration of the LDR implementation.
- 13.3 All organisations have agreed that the NHS number will be the primary identifier. All Local Authorities have a process for capturing NHS number in their databases and are actively working towards acquiring the N3 Connection in order to connect to the Person Demographic Service (PDS) and the Demographic Service (DBS) to be able to update and validate NHS numbers.
- 13.4 Significant advances have been made in terms of cross organisational information sharing however, to-date, these have been mainly technology led.
- ◆ Phase 1 of the Connected Care project enabled the sharing of (selected) primary care data from the 54 GP surgeries in Berkshire West with pilot users in Berkshire Health Foundation Trust and the Royal Berkshire Hospital. Phase 1 went live in December 2015.
 - ◆ Phase 2 of the Connected Care project implemented a “proof of concept” integrated portal which extended the data provider organisations and the data consumers. In addition to the primary care information the pilot portal also included Admissions/Discharges/Transfers from the Royal Berkshire Hospital and community information from Berkshire Health Foundation Trust. The proof of concept ran for 6 months and was decommissioned in April 2016. Phase 2 also included the procurement process for the full interoperability solution.
 - ◆ Multi Agency Safeguarding hub (MASH)- Inter-agency initiative between the Council, NHS and Police services, requiring secure communications and data transferred.
 - ◆ Rapid Response & Treatment for Care Homes – Provide a consistent and coordinated health and social care multi-disciplinary team.
 - ◆ Integrated Hub – single point of access for adult services which is also accessible by the public and professionals.
 - ◆ Integrated Hub – single point of access for the Integrated Short Term team, which is also accessible by the public and professionals.
 - ◆ Integrated short term team – The WISH team joins up the social care hospital liaison team, the START reablement team, the Council’s social care assessment team and BHFTs intermediate care team
 - ◆ BW10 Workforce planning – Inter organisational workforce planning across health and social care to deliver more integrated and efficient services
 - ◆ Neighbourhood clusters, self-care and prevention – integrating long term social care delivered by Optalis, community health services and third sector organisations.
 - ◆ Joint Care Pathway/7 Day Working – Integrated hospital discharge service staffed by both health and social care to deliver prompt responses to referrals and avoid delays in discharge from hospital
 - ◆ Patient Recovery Guide – To develop a dedicated personal support service to assist patients through the care pathway so patients do not remain in hospital longer than they should do.

Community Reablement Team – A domiciliary care service which works jointly with BHFT to provide short term support

Many of the organisations across Berkshire West are undergoing major system upgrades while at the same time facing severe budgetary constraints. These two factors are driving behaviours that are detrimental to the long terms success of the LDR, they are:

- ◆ Organisations are focussing on “run the business” functions as opposed to cross organisational initiatives.
- ◆ Technical staff with highly desirable integration skills are being asked to perform other roles or are being released, i.e. it is more difficult to get the people with the right technical skills.
- ◆ Front line clinicians and carers are less able to participate in design, configure and testing.

Berkshire West is looking at pragmatic solutions to these problems including shared resource pools across organisations, however It is essential that funding is made available to assist in this area.

- 13.5 Berkshire West has successfully implemented a number of information sharing projects. The cross organisational relationships are in place and mature, there is clarity in terms of organisational interdependencies and there is a shared vision. There is a proven mechanism for managing information governance, all organisations are fully supportive and the LMC has endorsed our approach. In terms of deployment capability Berkshire West is well prepared to implement the Local Digital Roadmap.

14 Change management & benefits management

- 14.1 The Local Digital Roadmap identifies a number of capabilities that have been identified as enabling and assisting in the delivery of better care. The achievement of the aims set out at the beginning of this report is critically dependent upon changes to relationships, to workflows and to pathways, with appropriate clinical engagement, training and support.

Only by looking at people, process and technology will we be able to drive usage and utilisation across the capability areas.

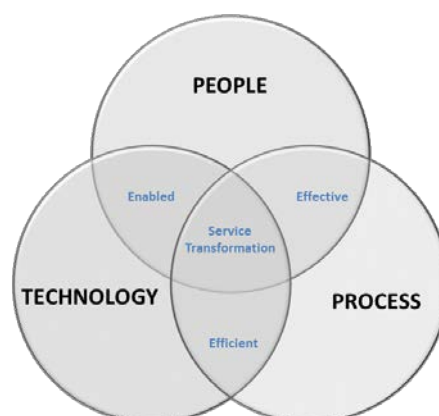


Figure [I5] Transformation Dependency Components

- 14.2 “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)
- 14.3 Hence achievement of the aims set out at the beginning of this report is critically dependent upon changes to relationships, to workflows and to pathways, with appropriate clinical engagement, training and support.
- 14.4 Benefits management and the change management work that delivers the desired patient, staff and financial benefits are identified, planned, delivered and monitored on a system-wide basis and using a combination of input and output metrics and performance indicators. This integrated approach ensures that the change initiatives are consistent across the dimensions of people, process and technology and coordinated across all participating organisations, projects and programmes. The methodology to be employed in delivering and managing the benefits and transformational changes has evolved from pioneering work done in NHS IM&T in the early 1990s drawing on and enhanced by Managing Successful Programmes (MSP) and by work done with Cranfield University and the former NHS Institute for Innovation and Improvement.
- 14.5 A key driver that has been proven to drive usage is the ability to access cross organisational information from within a clinician/care professional’s source system, i.e. not having to log in to a 3rd party system. The Connected Care solution has a specific requirement to ensure that this functionality is enabled in 13 different source systems within the first 24 months of deployment.
- 14.6 The Connected Care solution along with the other supporting technology solutions will monitor a number of standard measures and report these back to the West Berkshire Digital Roadmap Board, these include:
- ◆ Total number of active users.
 - ◆ Active users split by profession, organisation, etc.
 - ◆ Total number of records accessed.
 - ◆ Trend analysis.

14.7 In addition to use and utilisation, the Connected Care and supporting technology solutions will also be used to monitor progress against specific benefits realisation, for example:

- ◆ Reduction in length of stay.
- ◆ Reduction in admissions.
- ◆ Reduction in unnecessary and duplicate tests.

The Connected Care Full Business Case contained a detailed benefits realisation section and the final Key Performance Indicators will be part of the Board updates. Berkshire West has already had discussions with organisations outside the STP footprint to learn lessons and better prepare for this work.

During the initiation phase (June/July 2016) baseline measures will be made and the data required to perform the appropriate analysis will be determined. Results will be reported to the West Berkshire Digital Transformation Board.

14.8 All organisations have arrangements in place to ensure that IM&T / digital developments are driven by, and aligned with organisational and service transformation priorities, and linked to change management and benefits management programmes. These include ensuring business cases clearly identify benefits and change management arrangements, that benefits are assigned to business owners, strong project and programme management for all developments, rigorous approval and gateway processes at key stages in the project/programme lifecycle, user involvement from concept to delivery and utilising qualified change management professionals to redesign processes and support implementation.

14.9 Organisations provide a range of training opportunities for users focussed on the digital agenda, covering usage of systems and services, core PC skills (including ECDL or equivalent), Information Management, Security & Confidentiality. Training delivery methods include traditional courses and one-to-one training, floor walking, e-Learning portals and NHS England online training resources (including "medaiwikis" developed to cover main system functions and usage). Training & Development programmes are informed by Training Needs Analyses which are completed annually in organisations. As well as developing the skills of the existing workforce, organisations ensure that sufficient levels of IT competency are included in job descriptions and recruitment processes for new staff.

14.10 Given that the analysis in sections D and E has identified workforce readiness and change management as critical to delivering the required outcomes, the approach to these issues across the whole footprint should be re-evaluated, and opportunities for collaboration considered, e.g. shared resource pools.

14.11 Due consideration must also be given to the significant challenges around patient/citizen readiness and acceptance of the major changes that will affect how they communicate and interact with their healthcare and social services and start to take a greater role and responsibility in managing their own wellbeing with digitally enabled self-care.

15 Resources

15.1 The plans outlined in this LDR clearly will require substantial further financial investment. Each organisation has an IM&T capital programme, with supporting revenue streams. The CCGs manage capital and revenue funding for IT on behalf of general practices, and for certain whole-system initiatives. These resources are summarised in Appendix [I]. It is anticipated that the majority of core organisation-specific developments will be funded through these existing programmes.

- 15.2 However, this LDR has identified several new priorities, and has brought forward the required investment timescale for some pre-existing priorities, leading to a likely substantial funding gap. For some of the priorities highlighted in Section H which will require substantial investment, Table [20] identifies likely capital and revenue funding requirements, along with known, anticipated and target sources of investment.

Table [16]². Funding requirements and sources for key priorities

Berkshire West LDR finance schedule	2016/17 £(000)			2017/18 £(000)			2018/19 £(000)			Funding sources (see note)
Organisation	Capital	Revenue one-off	Revenue recurrent	Capital	Revenue one-off	Revenue recurrent	Capital	Revenue one-off	Revenue recurrent	
Berkshire Healthcare Foundation Trust ³	569	14	562	0	0	562	0	0	562	Funded
Berkshire Healthcare Foundation Trust	248	0	178	519	281	208	2,025	185	335	Unfunded
CCGs (GPIT and other commissioner led projects)		1,000	1,150			1,150			1,150	Funded
CCGs (GPIT and other commissioner led projects)			600		2,500	1,000		1,500	1,000	Unfunded
Royal Berkshire Foundation Trust				3,200			3,200			Funded
Royal Berkshire Foundation Trust			500	3,000		800	3,000		800	Unfunded
SCAS Foundation Trust										Funded
SCAS Foundation Trust		800	100	4000	12600	3050	4000	13800	3880	Unfunded
Reading Council	815		304							Funded
Reading Council	800			1,000		100	1,400		250	Unfunded
West Berkshire Council	1,400		462							Funded
West Berkshire Council	700			1,500		250	1,300		400	Unfunded

² These figures are draft and will be ratified and signed off over the following 2 months

³ BHFT – only initiatives that will deliver Paper Free at Point of Care

Wokingham Council	733	101	1,065							Funded
Wokingham Council	700			1,200		200	1,200		300	Unfunded
Total across footprint	5,965	1,915	4,921	14,419	15,381	7,320	16,125	15,485	8,677	

Note: Potential funding sources include - each organisation's budget, re-investment of benefits, GPIT / GPSoc funds, CCGs' whole system project funds, Estates Transformation & Technology Fund (ETTF), Better Care Fund, other national funds and Not Known.

16 Equality and Diversity

16.1 Promoting equality and equity are at the heart of our values – ensuring that we exercise fairness in all that we do and that no community or group is left behind in the improvements that will be made to health outcomes across the country.

We will continue to work internally, and in partnership with colleagues within the Department of Health and the wider NHS, to ensure that advancing equality and diversity is central to how we conduct our business as an organisation

16.2 Public bodies were required to prepare and publish objectives by 6 April 2012 to meet the general equality duty as outlined in the Equality Act 2010. These objectives need to be specific and measurable and refreshed at least once every four years. The primary purpose of the objectives is to focus organisations on the outcomes to be achieved through advancing equality, rather than the written documents and processes to evidence legal compliance.

We have set ourselves four Equality Objectives for the period April 2014 to March 2016:

- ◆ We will oversee and support the implementation of the Equality Delivery System (EDS2), so that by 31 March 2016 there is a minimum of 95% implementation across all NHS Trusts, NHS Foundation Trusts, and Clinical Commissioning Groups across England.
- ◆ During 2014/15, we will help support CCGs to plan and commission for equality by embedding equality at the heart of key system levers identified by the Equality and Diversity Council, including the CCG assurance regime and the corporate governance statement.
- ◆ By March 2015, we will have developed an Accessible Information Standard to help disabled patients, service users and carers to receive accessible information and appropriate communication support when in contact with healthcare services, to be implemented by March 2016.
- ◆ NHS England is committed to implementing the Equality, Diversity and Inclusion in the Workplace Strategy 2013 to 2015, to ensure an engaged workforce that is more representative at all levels

The Equality Objectives set above will help to ensure that our policy-making, decisions and activities are compliant with the public sector Equality Duty, and will provide system leadership to Clinical Commissioning Groups and other parts of the NHS.

Appendices (in separate document)

Appendix A – Glossary

Appendix B - Summary of universal capability baseline and plans

Appendix C - Capability deployment trajectory – secondary care

Appendix D - Capability deployment

Appendix E - Information sharing approach

Appendix F - Use of mobile technologies

Appendix G – Use of national standards

Appendix H - Addressing risks associated with increasing dependence upon technology