Lancashire's Local Digital Roadmap

Digitally Enabled Transformation:

Helping to make healthcare

faster, easier & more engaging for citizens

2016-2021

Note to the reader:

This document builds on the previous digital health strategy documentation and incorporates specific national requirements for Local Digital Roadmaps. This document will be subject to further iteration.

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Foreword

It is a well-known fact that Lancashire is the birthplace of the industrial revolution that began in the 18th Century. Our ancestors include some of the most hardworking and innovative people in the world. We have a rich and diverse heritage, culture, social capital and assets on which we have built our economy and health.

Today we are living in the midst of a technological revolution, one which has the potential to transform lives for the better. Our county is ageing and the burden of disease is on the rise. We have been adding years to our lives but not necessarily life to our years; addressing health inequalities needs action across the social gradient within our county and not just in the most deprived communities; and that protecting and promoting good health is not just a social issue but also crucial for our local and national economy.

It is common knowledge that the financial resources within the public sector, both nationally and within our county are not going to increase to meet the needs and demands of our changing demography. Having the focus on financial savings alone can distract organisations from improving health and wellbeing. Therefore, we need to relentlessly pursue the 'Triple Aim' of improving outcomes, enhancing quality of care and reducing costs.

We need a strong and longer term political will to radically upgrade our efforts on prevention; we need fully engaged individuals, families, communities and businesses in improving wellbeing; and a workforce that embraces innovation and puts people and the places they live at the centre of everything they do. I believe that technology has a key part to play in supporting this vision.

Personalised Health and Care 2020 is a framework for action by the National Information Board to use data and technology to transform outcomes for citizens and patients. It describes that in the airline industry 70% of flights are booked online and 71% of travellers compare more than one website before purchasing. A paper ticket was once a critical 'trusted' travel document, yet today around 95% of tickets are issued digitally as e-tickets. In Britain we use our mobile phones to make 18.6 million banking transactions every week; automation of particular services has helped cut

costs by up to 20% and improved customer satisfaction. More than 22 million adults now use online banking as their primary financial service.

In 2016, 71% of all citizens in the UK have a smartphone and 84% of adults use the internet; however, when asked, only 2% of the population report any digitally enabled transaction with the health and care services. There is also evidence that people will use technology for health and care, given the opportunity. There are 40 million uses of NHS Choices every month, of which some 5 million are views by care professionals who regard this service as a trusted source of information and advice. The internet based sexual and general health service, Dr Thom (now part of Lloyds online), has seen 350,000 individuals sign up as users. In Airedale, West Yorkshire, care home residents have quickly embraced an initiative that gives them the opportunity to tele-access clinicians from the local hospital over a secure video link. A reduction in local hospital admissions of more than 45% has been reported among that group of people.

Used appropriately, technology can transform care via telehealth, telecare, mobile applications and social media, and by timely information sharing between care professionals. My vision is to develop Lancashire into a safer, fairer and healthier place for our residents. Over coming years we will work collaborative with our partners to harness the technological revolution and make Lancashire the birth place for a new revolution in wellbeing in the 21st Century. Lancashire's local digital roadmap is a significant step in that journey.

Dr. Sakthi Karunanithi, MBBS MD MPH FFPH

Chair of the Digital Health Board

Executive Summary

The NHS is undoubtedly in the midst of a formidable challenge brought about by a combination of static investment, an ageing population and a high prevalence of chronic disease. Lancashire, like many other parts of the country will see significant demographic and public health changes over the next five years. There will be a 13% increase in the number of people aged over 70, whilst at the same time the health inequalities gap will rise. Meaning that more people in Lancashire are likely to die prematurely from chronic illness, in part caused by the wider determinants of health, such as low income, poor education and housing. This gives us a sense of urgency in responding to the challenges set out in the Five Year Forward View and in reforming our public services for the future.

All across the country, communities are digitally transforming to respond to increasing demand and less money. In Lancashire, this transformation has started with the introduction of a new approach to electronic record sharing. However, going forward more will need to be done to meet local need and the expectations of Government[1], who set out a clear direction for the healthcare system to:

- Seek a radical upgrade in public health
- Put patients in control of their own care
- Use technology to improve patient experience and access
- Improve local partnerships with greater integration across the system

In October 2015, NHS England issued new guidance to Clinical Commissioning Groups (CCGs) to establish Digital Roadmaps[2]; mapping out how communities will harness technology to support sustainability and transformation. For Lancashire, the CCGs have agreed to create a single countywide roadmap, coordinated through the existing Lancashire Digital Health Board. This builds on the established programme to:

- Improve the digital maturity of healthcare providers to enable them to be paper-free at the point of care by 2020
- Share electronic records across organisations to support safe, effective & efficient care

[1] https://www.england.nhs.uk/ourwork/futurenhs/
[2] https://www.england.nhs.uk/digitaltechnology/info-revolution/digital-roadmaps/

- Empower the patient to be an active participant in their care by giving them access to their health records
- Enable citizens to harness the power of assistive technology to live independent, healthy lives
- Make better use of our data to predict need and inform future service delivery
- Create a robust, affordable IT infrastructure that supports integrated working and new models of care across the public sector workforce
- Create opportunities for economic growth within the region in the digital life sciences sector

In our community, the health and wellbeing outcomes for our population are amongst the worst in the country. If we do nothing different, demand for healthcare services will continue to outstrip the available resources and more importantly, our health outcomes will remain poor or possibly deteriorate.

We need to seek out opportunities to improve efficiency, reduce variation and achieve higher quality standards. New technology and specifically digital health can help to achieve these objectives.

Across Lancashire we have a wealth of expertise and a rich asset base to harness digital health if we choose to work together. Having identified the scale of our challenge, we must now work collectively to describe how technology can help to transform the system. Making it **faster, easier and more engaging for citizens** to take charge of their health and wellbeing.

1. Introduction

1.1. The NHS is undoubtedly in the midst of a formidable challenge brought about by a combination of static investment, an ageing population and a high prevalence of chronic disease. The scale of this challenge has been documented by Simon Stevens, CEO for NHS England, who paints a clear picture on what we all need to do if we want to continue having a universal healthcare service that offers high quality care for all. In the Five Year Forward View[3], he sets out a clear direction for the healthcare system to:

- Improve local partnerships with greater integration across the system
- Seek a radical upgrade in public health
- Put patients in control of their own care
- Use technology to improve patient experience and access

1.2. For Lancashire, the challenge is manifesting itself in the form of a financial gap; the exact scale of which is yet to be determined. However, it could be in excess of £700m by 2020, if left unchecked. Tackling this mammoth problem is going to require bold solutions, effective leadership and purposeful collaboration across health, social care and the third sector. In response to the Five Year Forward View, NHS England have published a framework called 'Personalised Health and Care 2020: a framework for action'[4] , which outlines examples of how the application of technology can improve health outcomes, transform quality and reduce costs. Also contained within the framework are proposals to help, such as:

- Increasing the use of remote diagnostics and telecare
- Increasing the use of consumer health technology
- Empowering citizens to use their own health data

1.3. Stemming from the 2016/17 NHS planning guidance, there is now a requirement for CCGs to develop local digital roadmaps and define a collaborative footprint in which organisations will work together. Thus, harnessing the potential of technology and data to work for citizens and the caring professionals who serve them. Crafting a NHS that is sustainable for at least another sixty five years.

3 https://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf

4 https://www.gov.uk/government/publications/personalised-health-and-care-2020/using-data-and-technology-to-transform-outcomes-for-patients-and-citizens

2. A citizen's perspective

Michael Harding's Story

My diagnosis with COPD came after I was admitted into hospital suffering from pneumonia, that was about five years ago. I'm 81 now and I've been active all through my life; I still swim 3 times a week and in my younger days I served in the military. I guess I've led a normal and happy family life.

Along with my COPD I suffer from sleep apnoea, arthritis and I have a trapped nerve which runs from my spine and down the inside of my leg; a legacy of a hernia operation a few years back. I take lots of different tablets and require oxygen from a tank for 16 hours a day which can be a pain, it's certainly put an end to foreign holidays – the high pressure on the flights ruins me for days. It can also be difficult to sleep at night, it's quite noisy and obviously it's not that comfortable either!

I see a consultant at the local hospital once a year. It's quite a quick appointment where they check how I am getting-on and monitor any change in my symptoms. They still use paper records and so it sometimes seems like they have a lot of information to wade through. I don't think they have a complete history of my health and information about my other conditions like my GP does.

I didn't realise that all of the information that the GP holds about me, like the medication I am taking and a complete list of my health problems couldn't be shared with the consultant at the hospital. How can they properly help if they don't have all your information? That doesn't make sense to me.

I would certainly be happy for all of the health professionals that I interact with to see my medical history, at the end of the day they are there to help and treat patients and that's the most important thing. I understand that some people have concerns about the privacy of their health information but I'm sorry, I don't see it that way.

I have a computer at home and go online to order repeat prescriptions. It's great. Very useful and convenient and I've never had any problems at all. If I could access my medical records online I would, I think that's a good idea because that way I can make sure that the information about me is correct and up-to-date.

I don't use my mobile phone for anything other than a phone but I've been told about some of the new ideas that the health service is currently trying out. I take a mountain of tablets and I'm always forgetting about them so if there was a way that I could receive a reminder, like a text message or something telling me it was time to take my tablets that would be great. I don't forget on purpose so little improvements like that could make a big difference.

Innovation Agency North West Coast, Connected Health Cities

2.1. Michael's story gives a personal perspective on how technology is and can be used in healthcare, potentially dispelling some of the perceptions inside the public sector about the demand for new digital services. Technology has the potential to offer all parts of our society new, more convenient ways to access health and care services and potentially reduce health inequalities.

2.2. Across Lancashire our three Health and Wellbeing Boards have set out clear plans for starting well, living well and ageing well. Digital solutions can play a significant part in helping to achieve these plans by:

- Providing online information for citizens to improve their health literacy
- Providing technology for citizens to manage their health conditions
- Providing a platform for citizens to connect with their communities
- Providing a mechanism to improve access to traditional services

2.3. In summary, the digital ambition for Lancashire is to create a new relationship between citizens and their healthcare system, which uses digital solutions to make it **faster, easier and more engaging** to take charge of your own health and wellbeing.

3. Strategic Context

3.1. The Lancashire LDR forms part of the Lancashire and South Cumbria Change Programme and encompasses the eight CCGs outlined in the map below. The LDR covers the following health and care partners:

- Blackpool Teaching Hospitals NHS Foundation Trust (Acute & Community)
- East Lancashire Hospitals NHS Trust (Acute)
- Lancashire Care NHS Foundation Trust (Mental Health & Community)
- Lancashire Teaching Hospitals NHS Foundation Trust (Acute)
- Southport and Ormskirk Hospital NHS Trust (Acute)
- University Hospitals of Morecambe Bay NHS Foundation Trust (Acute)
- Blackburn with Darwen Council
- Blackpool Council
- Lancashire County Council

Map 1 – Lancashire LDR Footprint

3.2. Beyond these core partners, Lancashire's LDR will also take account of the need for service integration beyond geographic and organisation boundaries to ensure there is continuity of care for our patients, particularly with pan-regional organisations, such as the North West Ambulance Service. This means we will seek to collaborate with stakeholders in Bradford Districts, Calderdale, Cumbria, Greater Manchester and Liverpool. Our approach will enable the integration of Calderstones Partnership NHS Foundation Trust into Mersey Care NHS Foundation Trust later this year. It also reflects the need for the health and care system to

harness the potential of third sector providers and other regional assets, such as our borough councils and our academic institutions.

3.3. Across the North West Coast we have access to a wealth of expertise and a world-class infrastructure that we intend to harness in delivering our LDR, for example:

- Intense, cognitive computer facilities at STFC Daresbury
- Expertise in flow and capacity modelling at Liverpool John Moores University
- A thriving technology enterprise zone at Baltic Creative in Liverpool
- Digital Creative Fab Labs in Blackburn with Darwen
- Leading edge sensor technology at Sensor City, Liverpool
- A Rural Health Forum in Cumbria
- Internet of Things research hub at Lancaster University
- A learning healthcare system testbed with NWC Connected Health Cities
- A frail elderly technology testbed at Lancaster University
- A healthy ageing village at Lancaster University
- A Healthy New Town on the Fylde Coast
- A digital health park at Chorley
- A Genomic Medicine Centre in Liverpool

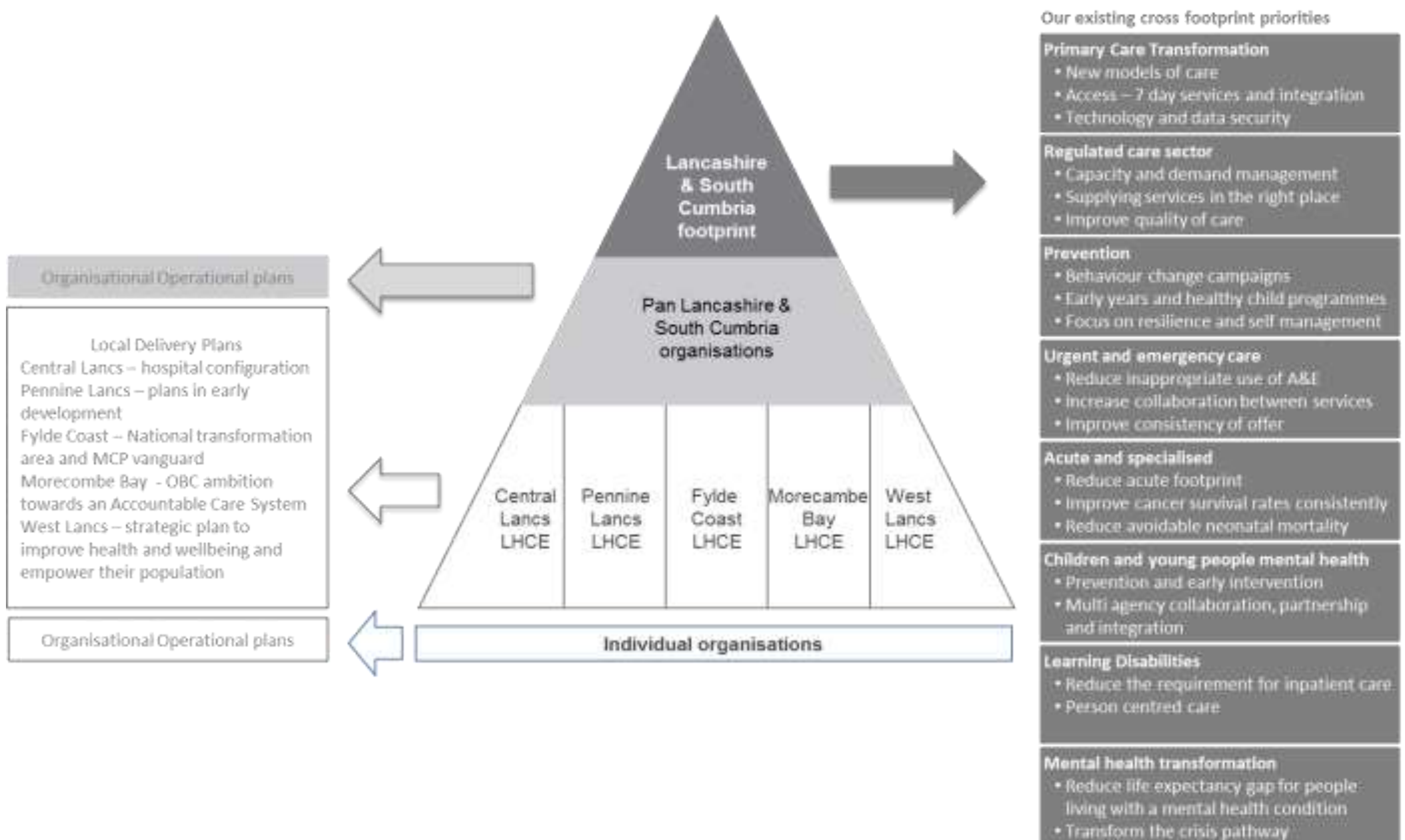
3.4. Lancashire, like many other parts of the country will see significant demographic and public health changes over the next five years. There will be a 13% increase in the number of people aged over 70, whilst at the same time the health inequalities gap will rise. Meaning that more people in Lancashire are likely to die prematurely from chronic illness, in part caused by the wider determinants of health, such as low income, poor education and housing. Unfortunately, parts of the county demonstrate some of worst deprivation in the country. This gives a sense of urgency in responding to the challenges set out in the Five Year Forward View. Typically, for Lancashire this will mean finding effective solutions to respond to:

- Twice as many people with cancer
- A 70% increase in obesity
- 175,000 more people with diabetes

3.5. To address these and other systemic challenges, organisations across Lancashire and South Cumbria (L&SC) have agreed to come together to co-design, implement and deliver the changes required to transform the health and care services within

our shared footprint. This ambition is set out in the Sustainability and Transformation Plan (STP). Alongside this, each of our five localities are developing their local delivery plans (LDPs) to drive through the underpinning changes that are required to deliver success. This digital roadmap is a key enabler to both. The diagram below outlines the relationship between local, locality and regional planning.

Diagram 1 – Relationship between LDP & STP



4. Baseline Position

4.1. The Lancashire health and social care system spends in excess of £3 billion annually to provide services for its citizens, with most provider organisations typically spending an average of 2% of their revenue on provisioning their information communication technology (ICT) infrastructure. Whilst our LDR partners have made good progress, in many areas (of digital maturity) over the last few years, there is still a long way to go in delivering the ambition of the Five Year Forward view. In Lancashire today:

Our Citizens

- Very few have access to their electronic care records
- Very few can access on-line booking or virtual clinics
- Very few use technology as part of their care needs

Our Workforce

- Struggle to understand the potential of technology
- Still capture large amounts of clinical documentation on paper
- Do not have all the information they need at the point of care

Our Systems

- Are not interconnected or standardised
- Are not maximising the value of our data to improve health outcomes
- Are not as cost effective as they could be

4.2. In reality, Lancashire is not that different from any other part of the health and social care system in how it operates. It is anticipated that the success of this LDR in addressing the current state will be determined by our citizen's demand for new digital-enabled services and our workforce's ability to deliver them.

4.3. All of our secondary care providers have reported a level of digital maturity (see Table 2) that is broadly in-line with the national average, except Calderstones Partnership which will integrate with another Trust later this year.

4.4. All providers have plans in place to improve their digital maturity through the implementation of electronic health records (EHR). Whilst each acute provider has a different solution, there may be scope for some consolidation within the timeframe of this LDR. The provision of primary care and community systems is less complex,

with EMIS Health Solutions in use across all GP practices, half of the county's community services and its planned use as the county-wide child health information system (CHIS). Medicines management and e-prescribing are also largely delivered through EMIS solutions. In addition to EMIS, other key systems in use are:

- IMS Maxims in Fylde Coast
- CSC Lorenzo in North Lancashire
- CSC Continuum In East Lancashire
- Harris Quadramed in Central Lancashire
- System C Medway in West Lancashire
- Servelec Rio pan-Lancashire for mental health (& some community)

Table 2 - Summary of baseline digital maturity in secondary care

Question	National (Dataset)	East Lancashire ([illegible] Partners)	Blackpool Teaching Hospitals NHS Foundation Trust	Calderstones Partnership NHS Foundation Trust	East Lancashire Hospitals NHS Trust	Lancashire Care NHS Foundation Trust	Lancashire Teaching Hospitals NHS Foundation Trust	Southport and Ormskirk Hospital NHS Trust	University Hospitals Of Morecambe Bay NHS Trust
	Average Score	Average Score	Score / Answer	Score / Answer	Score / Answer	Score / Answer	Score / Answer	Score / Answer	Score / Answer
Organisation Demographics									
Strategic Alignment	76%	75%	90%	44%	75%	70%	90%	85%	65%
Leadership	76%	71%	70%	30%	85%	70%	100%	70%	75%
Resourcing	66%	58%	80%	35%	75%	55%	75%	35%	55%
Governance	74%	65%	85%	20%	80%	50%	85%	60%	75%
Information Governance	74%	73%	94%	71%	72%	70%	66%	57%	85%
Records, Assessments & Plans	44%	46%	43%	71%	24%	52%	36%	49%	45%
Transitions Of Care	48%	43%	29%	47%	56%	18%	44%	74%	33%
Orders & Results Management	51%	52%	77%	30%	55%	46%	62%	30%	58%
Medicines Management & Optimisation	27%	25%	11%	5%	40%	30%	29%	24%	28%
Decision Support	35%	27%	6%	39%	17%	19%	19%	63%	25%
Remote & Assistive Care	32%	38%	25%	33%	17%	58%	25%	17%	33%
Asset & Resource Optimisation	41%	50%	30%	65%	40%	60%	65%	45%	45%
Standards	40%	39%	42%	17%	49%	29%	25%	56%	54%
Enabling Infrastructure	68%	71%	70%	84%	61%	80%	70%	64%	68%

4.5. In social care, councils use:

- Servelec CoreLogic in Blackburn with Darwen and Blackpool
- System C Liquidlogic within Lancashire County Council

4.6. The provision of diagnostics is delivered through a range of solutions and suppliers. However, within the timeframe of the LDR it is anticipated that clinical experts will

drive forward consolidation to support new models of care and increased operational efficiency. One example being the development of 'lab in a bag', which is exploring near-patient testing alongside a review of pathology services in general.

5. Key achievements

5.1. Prior to arrival of the LDR, Lancashire already had a strong record of collaboration on enabling technology. Through a collaborative partnership called the North West Shared Infrastructure Service, health and social care providers have delivered:

- A health information exchange[5] to allow organisations to share relevant data for the benefit of citizens and frontline staff
- Created a new information governance tool that improves the transparency of record sharing and reduces bureaucracy
- A community of interest network that provides a sustainable infrastructure to support all forms of digital technology
- Used telemedicine for new models of care with stroke and renal patients
- A shared staff Wi-Fi system that operates throughout Cumbria and Lancashire
- Established a number of proof of concepts to test new digital health tools for managing remote and complex care
- Mapped out the digital health assets that exist across South Cumbria and Lancashire and supported the development of regional growth schemes
- A shared free public access Wi-Fi service across all our hospitals
- A shared Active Directory Service that is the largest of its kind in the NHS
- Enabled around 10,000 staff to use tablet and smartphone technology to deliver paper-free solutions at the point of care
- A number of collaborative service contracts

5.2. Within our individual organisations, providers have successfully delivered:

- Video and messaging technology, clinician to clinician or patient to clinician, in North Lancashire to improve access to specialist advice and overcome problems caused by rurality

5 https://en.wikipedia.org/wiki/Health_information_exchange

- Real-time reports and dashboards supporting direct care and underpinning the changes being implemented through the Vanguard - Project Better Care Together
- A patient observations system successfully deployed in West Lancashire, to all Acute Wards to monitor fluid balance, nutrition, infection control and many other aspects of care
- Integrated primary and community electronic records throughout large parts of Lancashire, supporting transitions of care across organisational boundaries and enabling real-time information sharing
- A Trust-wide clinical portal integrating the hospital PAS, GP record, Clinical Correspondence and results reporting in East Lancashire and on the Fylde Coast.
- An integrated electronic patient tracking system with ward based electronic displays supporting clinical review and observation management.
- Electronic medicine administration and medicines management systems in all our providers, improving patient safety and reducing pharmacy costs
- Widespread use (2/3^{rds} of the workforce) of mobile technology and agile working across community-based staff in Lancashire Care
- Mature utilisation of skype (video) for business for clinical consultations in Adult Mental Health and Speech and Language Therapy

"*The structure of the health and social care health informatics 'family' has meant that Lancashire has been able to draw on the skills and knowledge of experienced individuals from a variety of organisations around the county. This has resulted in a shared vision of how we should use information technology to help deliver care and support health to the citizens of our county. I have also been lucky to work alongside and learn from experienced and helpful colleagues in health informatics to support my role as Chief Clinical Information Officer. This collaborative approach is echoed in the attitude to delivering a solution to record sharing in our health and social care economy.*"

Nick Wood, Consultant Gynaecological Oncologist & CCIO, Lancashire Teaching Hospitals

6. Vision for the future

6.1. So what might a digitally enabled future look like? The innovation charity, Nesta recently published a vision for the NHS in 2030[6] that sets out how technology might underpin delivery of healthcare in the future. The report highlights key themes, such as:

- Precision care from precision medicine, using genome mapping to deliver more precise interventions
- Real-time telemetry from biometric and passive sensors, which constantly monitor people for signs of disease
- Patients and their carers actively involved in their care, using easily accessible knowledge to inform their decision making
- More health professionals actively engaged in research, utilising automated diagnostic tests and health analytical tools to inform their practice

6.2. Whilst the healthcare system in 2030 might seem intangible, there are clear indicators emerging today that suggest Nesta's predictions maybe a reality sooner than we think. For example, the use of mobile and tablet technology is growing exponentially in the UK. This year Ofcom reported[7] that 93% of UK adults have a mobile phone, of which 71% are smartphones. This has increased 27% since 2012. This year the smartphone has overtaken the tablet or PC as the preferred device to access the Internet. With this proliferation of access, public attitudes and behaviours are changing:

- Seven in ten (69%) internet users say that technology has changed the way they communicate and six in ten (59%) say these new communication methods have made life easier
- More than seven in ten adult internet users (72%) have a social media profile
- A quarter of adults with a Twitter account use it to air complaints or frustration
- 78% of households have access to the internet, with 30% being superfast

6.3. Undoubtedly citizens are becoming digitally enabled and subsequently expectations around digital services in the public sector are growing. Accordingly, Lancashire's

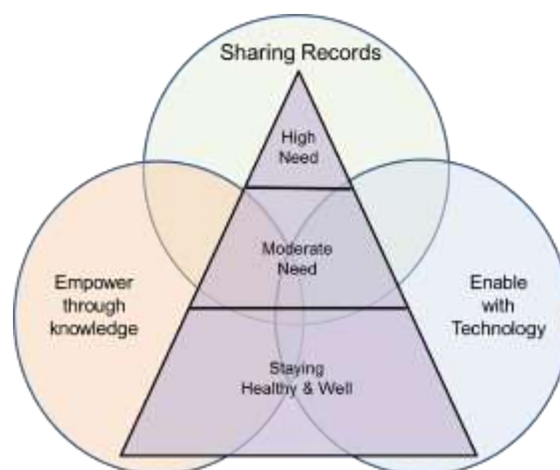
[6] http://www.nesta.org.uk/publications/nhs-2030-people-powered-and-knowledge-powered-health-system
[7] http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr15/CMR_UK_2015.pdf

LDR needs to address the ongoing societal change and the anticipated exponential growth and convergence of technology that is anticipated over the next 10-15 years.

6.4. In context of this roadmap, there are three broad themes for digitally-enabled transformation, the Venn diagram below outlines how these initiatives align to population health need.

- ***Sharing*** of electronic records is primarily focused on supporting safe, integrated care for those with the highest need. Typically, this is the same group of people who have the most interaction with healthcare services. In a more general sense, record sharing underpins all digitally enabled services.
- ***Empowering*** people through the sharing of knowledge is aimed at helping those people with moderate to low need. These people may have one or more long-term condition but are otherwise well. Here technology is used to give them access to information about their condition and allow them to be actively involved in managing their own care, as Michael describes in his story.
- ***Enabling*** people with technology is utilising a range of technologies, including lifestyle and consumer devices to help people stay healthy and well, access services in new ways and to bring care closer to home. Whilst there will be many scenarios for technology to support those with the highest need, the transformational priority here will be to use technology to promote health literacy, prevent illness and improve the accessibility of healthcare.

Diagram 2 – The alignment of digital health technology to population need



6.5. Encompassed within these themes, Lancashire's LDR specifically aims to respond to the three national challenges (the triple aim[8]) through county-wide collaboration on:

Addressing Care Gap

- Ensuring we have a standardised approach to electronic clinical / care documentation based on professional standards where they exist.
- Ensuring our systems & processes will support new models of care.
- Ensuring our workforce is able to work across organisational boundaries and provide care closer to home.
- Ensuring we have the capability to share electronic care records across organisational boundaries.
- Ensuring the workforce have access to and can use data in the context of a learning healthcare system[9]
- Ensuring technology-enabled care is deployed to the maximum benefit of the patient / citizen
- Ensuring we harness innovation in precision medicine, new sensor technology, predicative analytics & cognitive computing to support new models of care

Health & Wellbeing Gap

- Ensuring patients / citizens can access and use their care data to be active partners in managing their health and wellbeing
- Ensuring our workforce has the necessary skills to deliver digital care in partnership with patients / citizens
- Ensuring we have a standardised approach to patient-held records
- Ensuring we maximise the potential of our care data to improve health outcomes for the whole population

Finance Gap

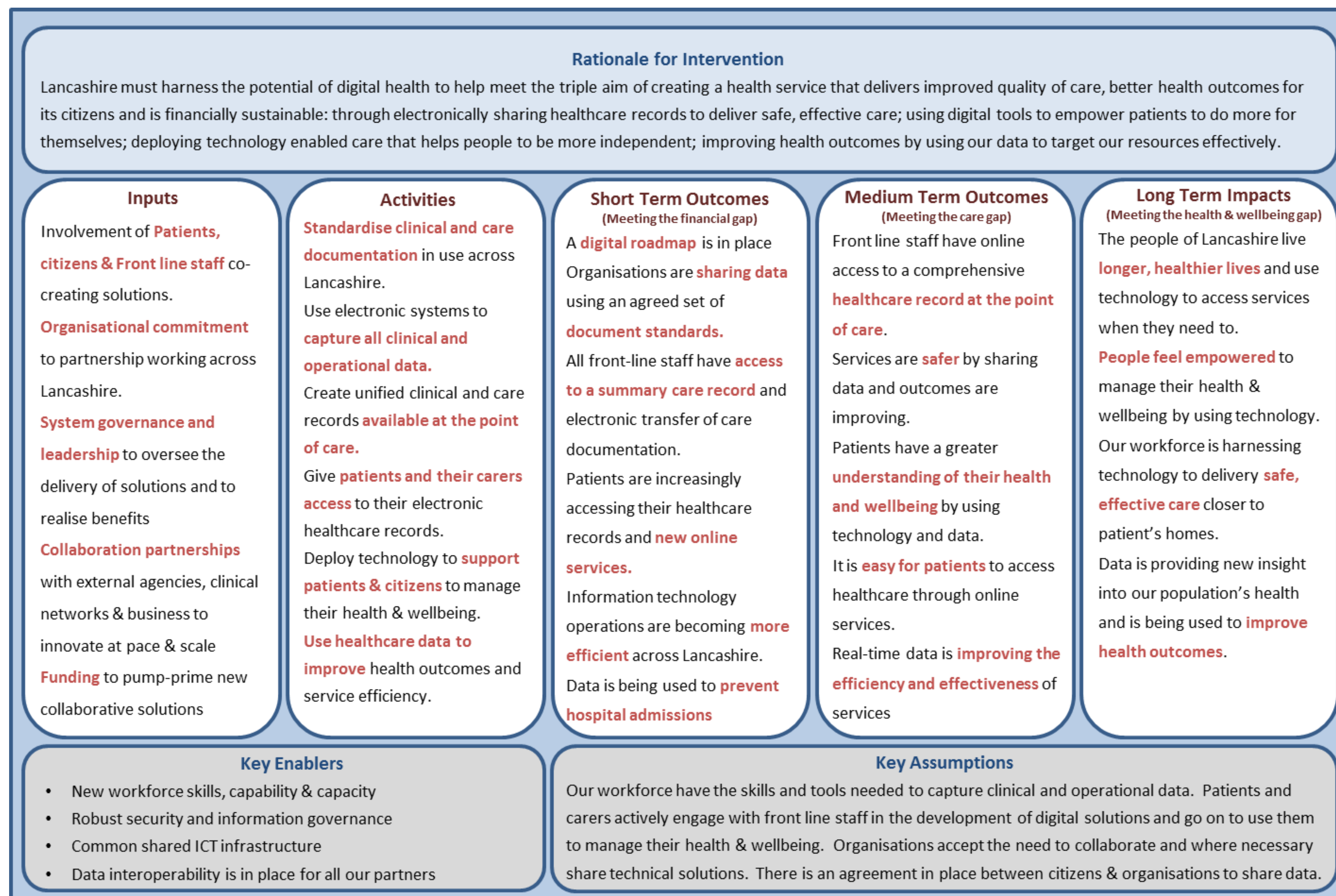
- Ensuring the L&SC transformational programme effectively exploits technology to manage capacity and demand
- Ensuring we consolidate and share IT systems to reduce cost and complexity
- Ensuring we utilise cost effective cloud-based solutions
- Ensuring we leverage procurement through scale and standardisation
- Ensuring we collectively maximise the benefits of technology

6.6. The logic model below summarises the vision of Lancashire's LDR as an integral part of a system-wide transformation programme.

8 https://www.england.nhs.uk/2015/12/long-term-approach/

9 http://healthaffairs.org/blog/2013/01/14/new-approaches-to-learning-in-the-learning-healthcare-system/

Table 3 – Logic Model for Lancashire's Local Digital Roadmap



7. Roadmap development process

7.1. Prior to the launch of the LDR process, Lancashire had already established a collaborative approach for digital health that has overseen many of the achievements described above. The LDR will build on the endorsed initiatives that were agreed by the Digital Health Board in late 2014 – see below:

Table 4 – Digital Health Board Scope:

Enabling outcomes, experience, empowerment, efficiency, sustainability and innovation			
SIS stakeholder board	E prescribing	Online access	Shared records platform
Sharing good practice	Exploring patient held records	Promoting a digital first approach	Assisted independent living
E-Growth & commercial partnerships	Promoting digital literacy	Infrastructure	Telehealth/Telecare

7.2. In the context of the existing Healthier Lancashire Digital Health Programme , this first iteration of the LDR aims to:

- Refine and reframe the current Digital Health Board agenda based on the feedback and insight gained from stakeholders over past 12 months.
- Ensure there is a mechanism to allow the roadmap to respond to the emerging transformation agenda
- Identify opportunities within digital health to address the wider determinants of health, including economic growth in the digital sector across the region
- Ensure there is a robust governance structure in place that oversees the delivery of the LDR and meets the needs of the L&SC transformation programme
- Enable Digital Health Board members to effectively prioritise initiatives going forward
- Ensure there is a shared understanding of what digital health is and the opportunities it presents to transform the system
- Ensure the LDR continues to be developed and is supported by partners

7.3. Also influencing the development of Lancashire's LDR has been an analysis of current (both provider and commissioner) strategic plans, highlighting a number of common themes that are relevant to the LDR:

- Holistic person-centred care, in-part utilising personal budgets
- Supporting a broad health and wellbeing agenda
- Ensuring right care, first time, every time
- Self-management with care closer to home or available digitally from home
- Seamless care, shared records and partnerships across agencies
- Enabling 7-day services and extended services
- Easy access to the most services, using signposting and information
- Telehealth, remote diagnostics / consultations and patient decision aids
- Simple processes and systems to improve productivity
- Using data to target resources, improve quality and reduce variation
- Creating safer communities

7.4. The engagement process, post publication of the LDR guidance has been intense and will continue beyond the submission date on the basis that the LDR is a living document. Numerous meetings have been convened, bringing together clinical and non-clinical professionals and other LDR stakeholders. In summary, the LDR has been developed through engagement with the following groups:

- Members of the Digital Health Board
- Members of the Digital Health Clinical Advisory Group
- Provider Chief Information Officers Group
- Provider Executive Teams
- CCG GP IT Leads
- Chief Finance Officers & Directors of Finance Group
- Local Transformation Leads
- Council CIOs & Leaders
- Healthwatch Lancashire
- The Innovation Agency North West Coast
- Several strategic supplier forums
- North West Coast Connected Health Cities Partnership

8. Governance Structure, Leadership & Clinical Engagement

8.1. The proposed governance structure supporting delivery of the roadmap will be integrated into the L&SC STP governance model. There will be three tiers within this structure reflecting the need for broad community engagement in developing our strategic direction whilst at the same time managing the delivery of a complex and technical agenda. The broad function of each tier is as follows:

The Digital Health Board

- Set the strategic direction though engagement with a wide range of stakeholders
- Provide programme oversight and ensure there is alignment with the STP
- Set the priorities for the programme, establish partnership commitment and monitor risks, escalating where necessary to the L&SC Programme Board
- Representation is drawn from health, social care, police, fire and rescue, academic institutions, the academic health science network, third sector and business partnerships

Chief Clinical Information Officers (CCIO) & Chief Information Officers (CIO) Group

- Drive the delivery of the LDR within and across organisations, ensuring opportunities for collaboration to close the finance gap are seized
- Setting and implementing standards and performance metrics, drawing on professional guidelines where they exist
- Establish mechanisms for meaningful co-creation with the frontline workforce
- Advise the Digital Health Board and acting as a catalyst for change within the STP work streams
- Contribute to the case for change and ensure the LDR's solutions are aligned for the benefit of the whole system
- Representation is drawn from both the public and private sectors and represents primary, secondary and social care

The Shared Infrastructure & Services Group

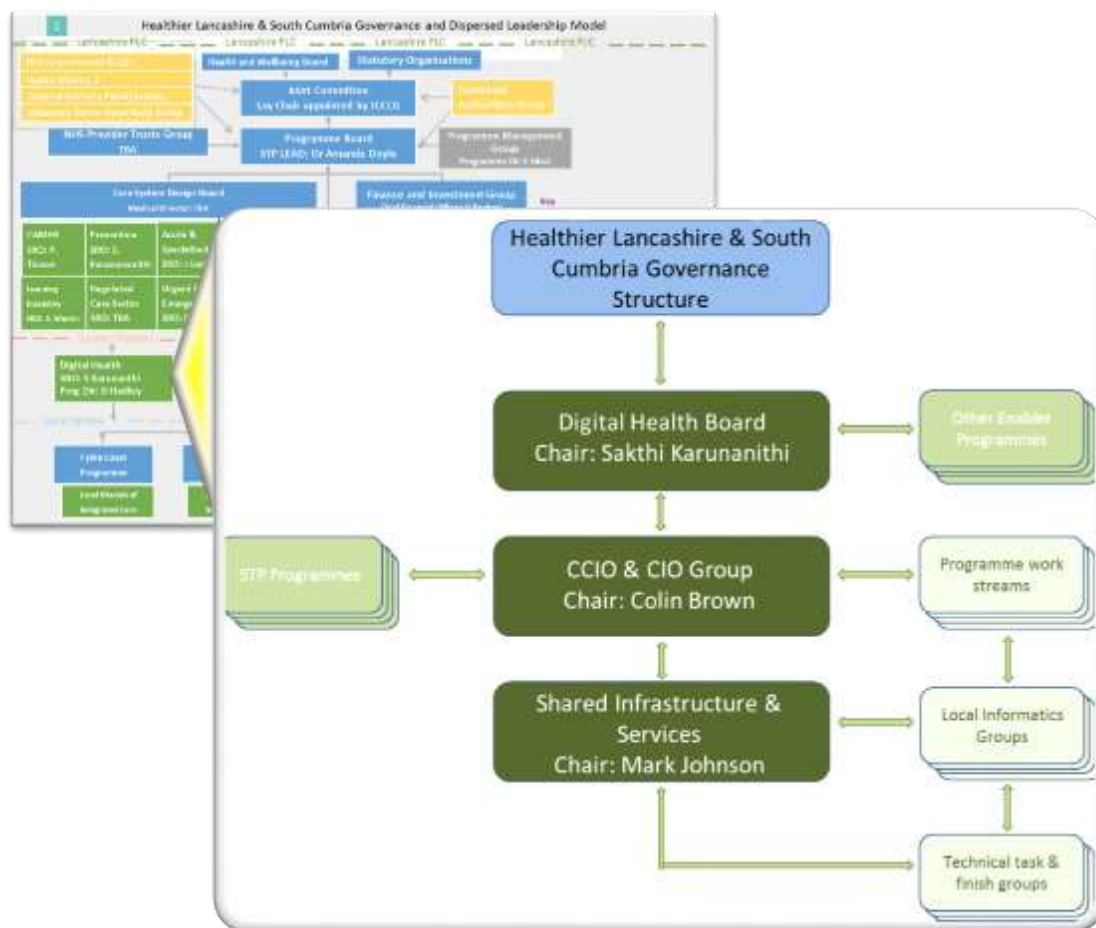
- Identifying and scoping collaborative opportunities, building on previous successes and driving forward the Carter recommendations
- Deploying technical solutions and enforcing standards
- Working in partnership with suppliers to bring innovations into the LDR

- Engaging with the Informatics workforce to co-create collaborative solutions
- Representation is drawn from primary, secondary and social care

8.2. The CCIO & CIO Group will also act as the aggregation point for work stream activities led at a Lancashire level, delivered through a series of task and finish groups, which will be led by clinical representatives wherever possible (see Diagram 3).

8.3. Implementation work which is relevant to the digital roadmap but not delivered at a pan-Lancashire and South Cumbria level will report into the Digital Health Board as appropriate and in line with the leadership approach for the LDR.

Diagram 3 – LDR Governance model integrated into the STP



8.4. Both the Digital Health Board and the CCIO & CIO Group will aim to meet quarterly, the Shared Infrastructure and Services group will meet monthly. The terms of reference and membership of all three committees will be reviewed annually. The constitution of task and finish groups will be determined on a case-by-case basis by the governing committees above.

8.5. The implementation of pan-Lancashire activities within the roadmap will be coordinated and managed through a Digital Programme Team aligned / integrated with the Lancashire and South Cumbria Programme Management Office.

8.6. To avoid the potential pitfalls of top-down planning, the preferred collaborative approach for the LDR and the Digital Health Board can be defined as:

- **Aligning** initiatives across the partners to ensure delivery of the LDR
- **Supporting** local organisations to drive forward their plans
- **Facilitating** collaboration across organisational boundaries on common issues
- **Leading** pan-Lancashire initiatives where there is a clear mandate from stakeholders

8.7. In addition to this approach, there is a firm commitment from system leaders in digital health to ensure that this roadmap embeds a principal of co-creation[10] with citizens, clinicians and the wider workforce from the outset. Whilst some mechanisms are already in place to fulfil this principle, further work is required over the coming years to really achieve meaningful engagement.

8.8. All three of the committees described above have strong clinical leadership and are chaired by either a practicing clinician or someone with a clinical background. Going forward, the aim is to further strengthen clinical and other professional leadership in the LDR by seeking to engage more frontline workers; threading the LDR into the STP transformation work and by offering a mechanism for developing digital skills and capabilities within the workforce.

10 http://www.stakeholderdesign.com/co-production-versus-co-design-what-is-the-difference/

9. Workforce development

9.1. The success of Lancashire's LDR will be fundamentally determined by our workforce's ability to adapt and change working practices. Having a roadmap document alone will not bring about change. What it can do is act as a catalyst to bring people together to start the dialogue about what the future could look like. The scale of the challenge that lies ahead requires us all to commit to bold, effective, large-scale change. However, first and foremost we need to achieve a common understanding of what we want to change and why.

9.2. With the support of Lancashire's Workforce and Education Group (LWEG) and the Innovation Agency North West Coast we have established a digital skills development framework to engage the frontline workforce in the digital agenda. Although still in its infancy, a first cohort of people have started to learn how to deliver technology-enabled change and will be embarking on work-based projects later this year. The course is run by the University of Cumbria as part of a consortium of delivery partners, including the North West Informatics Skills Development Network.

9.3. Over the life of the LDR we will be seeking to expand and develop this programme into a Virtual Digital Academy (VDA), that offers blended learning opportunities to a range of stakeholders and brings together the technical (informatics) and non-technical (care) professionals in to a space where they can:

- Improve their digital skills and knowledge
- Undertake continued professional development in digital transformation
- Co-create new digital solutions with both industry and academia
- Identify and adopt translational research in digital at pace and scale
- Create a peer support network to share good practice in digital innovation across the North West Coast – Linked to the Innovation Agency's Scout Network

9.4. The consortium is led by Lancaster University, which over the last two years has forged strong links with Lancashire's digital agenda and will play a key role in driving digital innovation over the next five years through the VDA. The University offers academic expertise in:

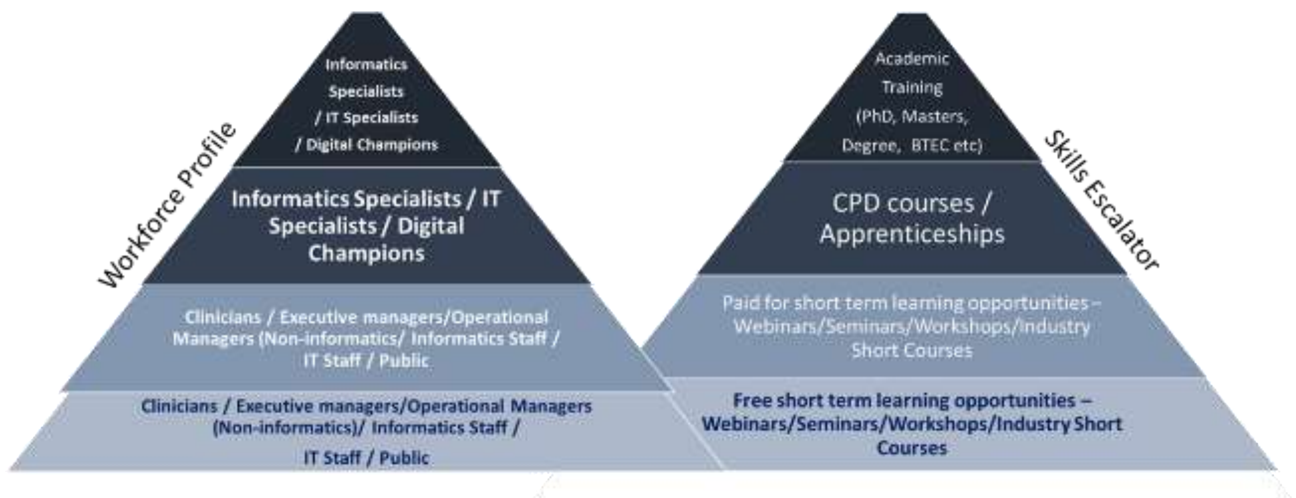
- Data science, cybersecurity & digital health

- Information systems, operational research & management
- Whole systems design
- Human computer interface
- Data analytics, forecasting & simulation
- Partnerships for funding (ESIF Digital impact)
- Health innovation, design & evaluation

9.5. In addition to Lancaster, we will be actively seeking to engage with the University of Central Lancashire and other academic institutions to join the VDA and play a part in co-creating the digital transformation of healthcare.

9.6. The diagram below outlines the skills framework and its target audience within our workforce.

Diagram 4 – Digital Skills Framework



9.7. Alongside our focus on 'bottom-up' capability building and service-led redesign, the VDA will seek to raise awareness and understanding at board level. This builds on recent experience of a board development programme run by Mersey Care NHS Trust, in partnership with NHS England. Through the VDA, all the senior leaders engaged in the STP will be invited to participate in a digital health development programme that aims to:

- Help leaders understand the 'art of the possible'
- Encourage leaders to think creatively about digitally-enabled transformation
- Describe how simple, effective 'off the shelf' solutions can be utilised
- Build confidence around digital transformation

9.8. Ideally, this would be externally facilitated to bring in perspectives from other industry sectors[11].

9.9. In summary, workforce development (top to bottom) is critical to the success of the LDR. Attitudes and behaviours around digital will dictate how quickly we adopt paper free at the point of care and how quickly we see citizens using technology as part of their care. Through the development of the VDA we are seeking to ensure the L&SC healthcare system:

- Is at the forefront of science, research and digital innovation
- Is learning from combinatorial innovation in the testbed and other schemes
- Is embracing breakthroughs in genomics, precision medicine and diagnostics

11 https://leadingedgeforum.com/what-can-lef-do-me/

10. Change Management & Benefit Realisation

"Healthcare organisations cannot continue to do more of the same and remain viable. Clinical transformation of clinical services and cross-organisational care pathways need to be transformed and linked up across organisations. This should be a clinically-led planning process:

- *Clinical information needs to be presented at different care points along those clinical pathways, so that we have "Better Information" to support "Better Decisions" at point of care or other clinical decision points such as MDT's, and lead to Better Outcomes for patients.*
- *We need better electronic records, connected up and supporting pathways of care.*
- *We need organisations to be brave, with collaborative, strategic leadership to put patients first and not persist in organisation-centric thinking.*

All of this will support safer patient care, good clinical decisions and lead to more affordable care across a large footprint.

Agreeing on a Digital Roadmap Strategy will support the development of cohesive electronic health and social care records, which are securely linked and underpinned by IT infrastructure which supports sharing and helps to break down technological and electronic 'walls' "

Colin Brown, Consultant Gastroenterologist & CCIO, University Hospitals of Morecambe Bay

10.1. To succeed in bringing about change, Helen Bevan suggests ten key principles[12]:

- Move towards a future vision that is fundamentally different from the status quo
- Identify and communicate key themes that people can relate to and that will make a big difference
- Do lots of things and seek to amplify these small changes ('lots of lots')
- Frame the issues in ways that engage and mobilise a lot of different people
- Mutually reinforce change across different parts of the system
- Continually refresh the story and attract new, active supporters
- Adopt an emergent planning and design process, adapting as you go
- Enable many people to contribute to the leadership of change, moving beyond organisational boundaries
- Transform mind-sets to deliver sustainable change

[12] http://www.institute.nhs.uk/leading_large_scale_change/general/leading_large_scale_change_homepage.html

- Maintain and refresh leaders energy to sustain them over the long-haul

10.2. Lancashire's LDR change management approach will link that of the broader STP, that is:

- Everything we will do together will be for the benefit of all of the people of Lancashire. We will build upon the collaborative change programmes that we are already delivering, within which we have undertaken extensive engagement on planning changes to service delivery. However, we are now looking for a step-change in that involvement so that our people become part of the change. Collectively we will co-create strategies, working towards a radically different, people-centric preventive system, addressing the wider determinants of health and so become less reliant on costly infrastructure.
- We recognise that changes over the next five years can only be made by common consent with patients, the public, staff, local media and system partners – so everyone will need to be fully engaged to collectively develop the system-wide solutions needed to tackle system-wide problems. Consequently, we have designed a L&SC involvement communications and engagement (ICE) programme.
- Our ICE programme will create widespread understanding of the need for radical change; raise awareness of what individuals and communities can do to improve their health, resilience and behaviours;

10.3. In addition to the ICE programme, we will seek specific support from external agencies such as, the Strategic Clinical Networks, Health Education England and the Innovation Agency North West Coast to:

- Engage clinical leaders and networks
- Learn from other areas
- Increase the diversity and creativity of our thinking
- Accelerate change

10.4. Benefits within the LDR will be managed using the principles and tools associated with the Management of Portfolios (MoP) and the Managing Successful Programmes (MSP) methodologies. A Benefits Management Strategy will outline the framework for how benefits will be quantified and measured, the roles and

responsibilities for benefits management and the associated governance arrangements. To manage the complexity of Lancashire's partnership, the approach will outline:

Who will benefit from the change

- This is about being clear who the stakeholders are in the project, what is the current issue that they are trying to solve, are there also associated dis-benefits of the change that will affect other stakeholders?

How will they benefit from the change

- Look at current and potential future states, where does the organisation see the most benefits coming from, where are the points in the service that implementing this change will impact on and will this change make the service more efficient , increase productivity and save the stakeholder money.

What are the defined high level benefits

- Once the stakeholder fully understands who will benefit and how, they can be more specific about the benefit they want to measure and this can form the case for change.

When will the benefits be realised for the client or wider community

- Some benefits are immediate and some benefits can take more than a year to show. Looking at all the benefits a stakeholder wishes to realise will identify quick wins and which benefits are likely to be longer term gains.

10.5. A Benefits Register will be developed at the start of each project that will contain details of all the quantitative cash releasing and non-releasing benefits, as well as the qualitative benefits associated with the project. Each benefit will contain (as a minimum):

- A description of the benefit and when it is expected to occur, and over what period of time
- Details of benefits ownership
- Measurement criteria
- Any dependencies and risks

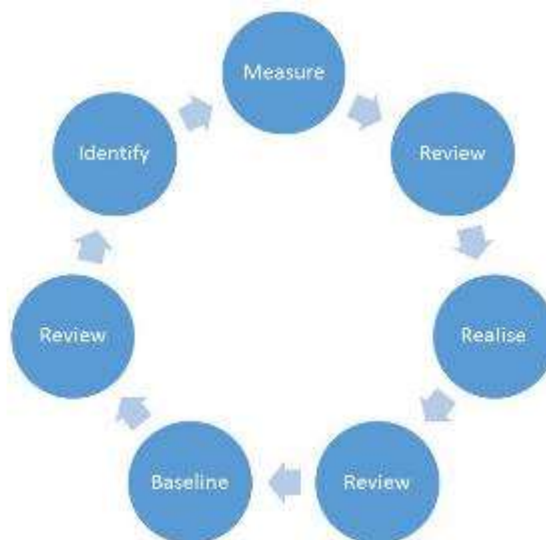
10.6. The broad definition of benefit outcomes for the LDR will be:

- Cash Releasing = Financial returns that can be legitimately put back in the budget, e.g. Staff costs

- Non Cash Releasing = Financial returns that are put back into the system e.g. Clinical time saved that can be put into other areas such as developing a new system or clinic.
- Qualitative = A benefit to the patient or staff that cannot be quantified in financial terms e.g. improved clinical interventions for a patient or improved work life balance for staff

10.7. The approach we would take when managing benefits across the programme would follow the diagram below, starting at Identify.

Diagram 5 – The LDR benefits realisation process



10.8. Within the LDR the list of benefits is expected to be substantial, and therefore the programme will focus on a small number of key benefits that will be pro-actively tracked and managed throughout the LDR lifecycle. These key benefits will be reported through the Benefits Realisation Plan which will show how benefits are realised, measured and delivered. It will also show appropriate milestones when benefits reviews will be carried out to ensure the project benefits delivery remains on track. This will be supported by a Benefits Tracker tool which outlines on a month by month basis progress for each benefit against its planned target.

10.9. This list will be regularly reviewed and updated to ensure that all benefits arising as a result of the programme are captured and reported through the governance described above and aligned to the wider L&SC programme.

11. Information Sharing

11.1. Back in April 2015, the Cumbria and Lancashire Information Governance Group began work on the development of an electronic information sharing platform that would underpin the introduction of an Integrated Digital Care Record (IDCR).

11.2. For Lancashire, this IDCR solution is based on an international standard called Integrating the Healthcare Enterprise (IHE)[13]. This technology allows organisations to retain control of their data and *publish* records for others to *consume*. This creates a mechanism to allow the real-time viewing of care documents within local systems without frontline staff having to access multiple systems.

11.3. To support the IDCR, our information governance experts created a common information sharing mechanism that ensures the flow of documents is governed appropriately. The solution is called the Information Sharing Gateway (screenshot below). The online tool, creates a trusted network which forms a tier 1 information sharing agreement. Linked to this, organisations can register the types of data they are publishing (sharing) and request details of the types of data they wish to access (consume). In doing so, organisations have to demonstrate they have complied with legislation.

Screenshot – Information Sharing (IS) Gateway summary screen

UNIVERSITY HOSPITALS OF MORECAMBE BAY NHS TRUST Switch

Home | Organisation | Inventory | Data Sharing | Resources | Ian Zimm | About | Contact | Log off

Data Sharing List | Data Sharing Summary | Data Flow List | Data Flow Detail | Ad-hoc Requests

Data Sharing

Filter / search...

View / Edit	Data Flows	Data Share Name	Asset Name	Added	Added By Organisation	Review Cycle (Yrs)
	2	Data 1		13/05/2015	UNIVERSITY HOSPITALS OF MORECAMBE BAY NHS TRUST	1
	1	Data 2		20/05/2015	UNIVERSITY HOSPITALS OF MORECAMBE BAY NHS TRUST	3
	1	Blackpool Test Sharing Summary		28/05/2015	BLACKPOOL TEACHING HOSPITALS NHS FOUNDATION TRUST	1
	1	Record Lookup	Data	15/06/2015	DALTON SQUARE PRACTICE	1
	0	test		16/07/2015	UNIVERSITY HOSPITALS OF MORECAMBE BAY NHS TRUST	1
	1	MIG 2	Healthcare Gateway Server	29/07/2015	UNIVERSITY HOSPITALS OF MORECAMBE BAY NHS TRUST	1
	1	MASH		04/08/2015	UNIVERSITY HOSPITALS OF MORECAMBE BAY NHS TRUST	1
	1	IZ_Demo1		19/08/2015	UNIVERSITY HOSPITALS OF MORECAMBE BAY NHS TRUST	3
	1	IZ_Demo2	EPR	19/08/2015	UNIVERSITY HOSPITALS OF MORECAMBE BAY NHS TRUST	1

[13] http://www.ihe.net/

11.4. The tool has been incredibly successful to date, with over 400 organisations registered. During 16/17, resources have been committed to further develop the functionality of the IS Gateway, linking it electronically into Lancashire Person Record Exchange Service (LPRES), which is the local name for our IDCR. This creates three layers of automated control for our information sharing approach:

- Access control via our shared active directory
- Legitimate use via a transactional flag, referral or other assignment
- Electronic information sharing agreement in place between both parties

11.5. In response to CCG maturity assessment (Line 13, Annex D), work has started to bring on all GP practices onto the IS Gateway by Q4, 16/17. As of June 2016, six CCGs are now actively engaged in migrating legacy information sharing agreements.

11.6. Over the next couple of years a fourth layer will be developed in partnership with the Innovation Agency's Connected Health Cities Programme. This seeks to create an electronic mechanism for federating a citizen's explicit 'consent to share' preferences. Whilst it is acknowledged that this is ambitious, it is undoubtedly something we should aspire to, as more sensitive personal data is captured digitally and processed for secondary uses. In addition to building a technical solution, this particular development will require significant investment in communications and engagement with the public to build confidence, inform and educate. Lancashire's LDR would see Healthwatch and similar agencies playing a pivotal role in this process.

11.7. LPRES is key to the success of Lancashire's LDR, it provides an enterprise approach to sharing information between our stakeholders and with our citizens. The solution will be deployed to all our LDR partners by Q3 16/17, with an expectation that police, fire and rescue and borough councils join in 17/18 (as part of transforming lives). Once connected an organisation can:

- Share tests, documents and images
- Pull data together to create an integrated shared record view
- Replace legacy integration solutions to reduce cost and complexity
- Send and receive data with patient-held records / applications
- Send and receive data with patient-held technology (BMI, blood glucose etc)

11.8. Over the life of the LDR, LPRES will transact 90% of the record sharing requirements for Lancashire. To fulfil the remaining 10%, we will link into the Connected Health Cities Programme, which is developing an inter-regional patient information exchange to federate data across the North of England. The LPRES solution has been part-funded by NHS England's IDCR Technology Fund.

11.9. Beyond our technical solutions, stakeholders have expressed a need to establish a formal agreement (known locally as the Watling St. Agreement) between organisations that sets out the principles of our information sharing ambition. This would be a memorandum of understanding signed by stakeholder boards, committing to:

- Ensure shared care documents are:
  - Timely
  - Accurate
  - Relevant
  - Fit for purpose
  - Captured electronically
- Ensure the processes for sharing information are aligned to new models of care

11.10. This agreement will be in place by Q3 16/17 and will commit organisations to the delivery of their paper-free trajectory and to uphold the principles of sharing.

11.11. In summary our information sharing approach is central to the delivery of our LDR. We have made good progress to date in harmonising our information governance processes onto the IS Gateway and we have deployed a regional health information exchange. Going forward we intend to accelerate the use of these strategic initiatives to underpin paper-free at the point of care, to enhance our universal capabilities and most importantly, to empower citizens to access and contribute to their healthcare records. The timeline for our information sharing capabilities is set out in Annex F.

12. Resources

12.1. It is anticipated that significant investment will be required to meet the full ambition of this LDR in delivering transformational change at pace and scale. The application of this resource will primarily be in the areas of business change, citizen and clinical engagement. Fortunately, most of our secondary care providers already have plans or solutions in place to improve their digital maturity. However, all have identified potential gaps. Typically in the areas of business change capacity (to meet new timescales), meeting regional interoperability standards and providing digital solutions for citizens.

12.2. Current levels of investment in digital vary between organisations. In total Lancashire has over 1100 people working across the professions associated with health informatics.

12.3. Secondary care providers spend in excess £37m on the provision of ICT related services and have a planned capital spend of £14m in 16/17. The total recurrent spend on ICT in secondary care equates to just under 2% of the total spend on healthcare for those organisations. A figure which has remained largely unchanged for several years and is broadly in-line with other parts of England. This falls someway short of the historic expectations outlined in Wanless'[14] fully engaged model

12.4. In primary care we spend approximately £4m providing ICT systems and services, with a further £1.3m spent on equipment (15/16 capital spend). In addition, the Lancashire health system benefits from two Prime Minister's Challenge Fund projects (which have digital elements) and two Vanguard sites bringing in a further £3m of non-recurrent investment into the LDR footprint.

12.5. Beyond our health partners, there are many other institutions with collaborative schemes operating in Lancashire that we can draw on to support our LDR. These schemes typically have elements of translational research, academic evaluation and supplier partnerships that if connected together through the LDR will drive innovation within the broader STP. Typical examples being:

[14] http://si.easp.es/derechosciudadania/wp-content/uploads/2009/10/4.Informe-Wanless.pdf

Test Bed

- The Lancashire and Cumbria Innovation Alliance (LCIA) Test Bed will be delivered through two neighbouring Vanguard sites (Fylde Coast Local Health Economy and Morecambe Bay Health Community) supported by Lancaster Health Hub (LHH), an established NHS/University partnership comprising 10 local organisations. Over 2 years, this £1.7m initiative will implement and evaluate a combination of innovative technologies and practices aimed at supporting the frail elderly, people with dementia and other long term conditions to remain well in the community, avoiding unnecessary hospital admissions.

Health Innovation Campus (HIC)

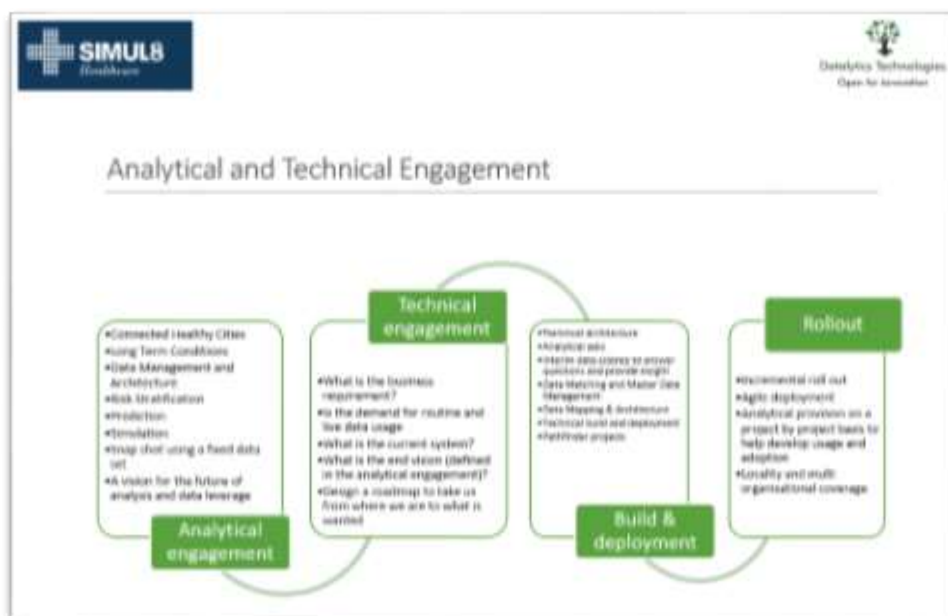
- The HIC based at Lancaster University creates a distinctive national centre of excellence focused on innovation for health and healthcare. The HIC £41m Phase 1 investment includes an 8000m2 new signature building and the enabling works and infrastructure. Four distinctive features of the HIC will include:
    - Innovation in processes and services at scale, with digital solutions as an initial theme. Drawing particularly on health and social science (rather than laboratory science) it will concentrate on driving macro-level system-wide innovation.
    - Stakeholder engagement and collaboration to enable co-creation and co-evaluation ('doing with' rather than 'doing to'), including a particular emphasis on effective engagement and involvement of the public
    - Bringing a wide range of perspectives to address health problems (not just biomedical solutions) and creating market opportunity across a broad spectrum of key sectors – creative & digital, design, advanced manufacturing, construction, environmental, health & care
    - Supporting SMEs through knowledge exchange and innovation programmes to create transformational economic impact, growth and new jobs, through collaboration on product, process and service development and delivery, allied to support for enhanced leadership, management and organisational development.

Connected Health Cities (CHC) North West Coast

- The CHC is a £20m Northern Powerhouse initiative. At its heart is a programme of innovation to use data to deliver new insight and a more connected health system for the benefit of staff and citizens. Led by the Innovation North West Coast, the programme has been awarded £4 million to deliver the CHC in the North West Coast. Locally, Lancaster University leads on the 'People Ark' component of the project. The People Ark will:
  - Develop our region's Health Service by enhancing the capacity of frontline staff to utilise digital tools and data analysis in their day to day work
  - Engage with industry to create a better supply of relevant product offerings to the Health Service.
- The initial areas of clinical focus for the programme are urgent unplanned care associated with Chronic Obstructive Pulmonary Disease and alcohol misuse, both of which have a high prevalence in Lancashire.

Wider Ark Partnerships

- Through collaborative contracts and partnerships created locally or leveraged through the CHC programme, Lancashire is attracting significant investment from industry, such as the example below; two data analytical companies are working with the Vanguards to develop new population health tools. This and other partnerships, represents matched investment in the millions.



- European Social Investment & Innovation Funds
  - Digital Impact (Di3) is a 4 year, £10m European Structural and Investment Fund (ESIF) initiative led by Lancaster University with the Innovation Agency as a delivery partner. The underlying ambition is to increase the growth and absorptive capacity of Lancashire's priority sector SME's, including those wishing to develop digital solutions for the NHS. It supports SMEs to develop new or improved high quality digital and data-driven products, processes and services, centred on three thematic areas:
    - Data exploitation (relevant to all sectors)
    - Cyber security (relevant to all sectors)
    - Digital Healthcare

12.6. In 16/17, the focus of effort around LDR resources will be to firm up the governance structure (see section 8), ensuring that digital resources are encapsulated into new STP governance arrangements. Plus, contributing to the STP Case For Change to describe:

- What changes digital (LDR) will deliver to citizens
- How technology will be used
- How we intend to operate & structure digital solutions
- How stakeholders will interact with digital solutions
- What resources will be required
- What benefits 'digital first' is likely to bring

12.7. To deliver progress on the LDR in 16/17, an investment of £577k is sought to:

- Back fill clinical and informatics resource to coordinate delivery of the universal capabilities
- Engage STP stakeholders in the co-creation of the case for change
- Deliver the enabling activities outlined in section 15
- Finesse the LDR plans for 17/18 & 18/19

12.8. Approximately £220k of this investment could be met through contribution in-kind from our partner organisations and in-part, through the reassignment of resources currently supplied through the Commissioning Support Unit contract. However, the balance will require cash for the procurement of products and services. It should

be noted that there is a potential risk of contributions in-kind, in that individuals often struggle to free up their time to deliver the additional tasks.

12.9. Over the life of the LDR, the level of investment required to deliver the full vision is anticipated to be well in excess of £50m. However, a proportion of this spend is already accounted for within existing budgets. To deliver the LDR over the next four years will require a mix of new non-recurrent funding (STP & grant funds) and re-allocation of existing budgets, although not necessarily exclusively from the current ICT spend.

12.10. During 16/17, we will seek agreement between the LDR partners to put in place a mechanism to align major capital and revenue expenditure to the delivery of the LDR plan, this will leverage procurement opportunities. We will also explore opportunities for pooling a proportion (up to 10%) of ICT spend (across the system) into an LDR Transformation Fund and bid for moneys from the Driving Digital Maturity Investment Fund.

12.11. Once the scope and scale of the L&SC STP is fully agreed a more detailed LDR resource and applications profile will be established. This will be informed by Case for Change and will seek to identify how a ‘digital first’ approach will contribute to meeting the triple aims and more specifically, the £700m financial gap outlined in section 4.

Chart 1 – Developing the business case for digital transformation

12.12. In summary, by the end of 16/17, L&SC will have described (see Chart 1) how the effective utilisation of digital solutions will empower citizens and care professionals to have the capability to radically transform services, thus delivering long-term sustainability.

13. Building Capability

13.1. Over the next three years secondary care providers are planning to substantially improve their digital maturity from their baseline positions (see section 4, table 2) through deployment of new or existing functionality within their electronic health record (EHR) systems. All of our secondary care providers are at different points in their system refresh strategies; meaning some EHRs are firmly embedded in to an organisations, while others are planning replacements or embarking on a new deployment. This presents a degree of risk to the planned deployment trajectories across the LDR. The tables below outlines the pan-Lancashire targets for the next three years:

Table 5 - LDR Digital Maturity Trajectory

Lancashire Revised Trajectory	**Average scores across providers**			
Capability group	**Baseline score (Feb 16)**	**Target (end 16/17)**	**Target (end 17/18)**	**Target (end 18/19)**
Records, assessments and plans	42%	52%	68%	93%
Transfers of care	**42%**	**75%**	**90%**	**100%**
Orders and results management	55%	68%	87%	100%
Medicines management and optimisation	27%	45%	79%	99%
Decision support	27%	32%	54%	83%
Remote care	29%	38%	57%	87%
Asset and resource optimisation	48%	57%	73%	94%

13.2. This trajectory profile has been risk adjusted based on LDR discussions with CCIOs and GP IT Leads. The baseline trajectory and risk profile can be seen in Annex C.

13.3. In delivering these ambitious targets on digital maturity LDR partners will be:

- Agreeing document standards to be implemented into EHRs
- Aligning their deployment strategies to the STP & new models of care
- Seeking opportunities to consolidate clinical support systems
- Identifying funding sources to accelerate deployment
- Using LPRES to publish care documentation
- Linking deployment activities across the provider landscape to the LDR
- Engaging with independent & the third sector providers to incorporate their records into the Lancashire Share Care Record (via LPRES)
- Seeking opportunities to optimise the record sharing process

13.4. For the Universal Capabilities (UC) outlined in Annex B most of the supporting technical solutions are in place. The challenge for the next three years will be driving uptake and adoption. From a technical perspective Lancashire has already achieved:

- All GP practices have patient online services activated
- All have practices and pharmacies able to transact electronic prescribing
- All secondary care providers accessing the summary care record & an enhanced local summary care record
- A pan-Lancashire deployment of free public access Wi-Fi
- A single workers Wi-Fi network that spans from Ormskirk to Sedbergh

13.5. Consequently the emphasis of the UC delivery plan, is primarily centred on sharing good practice, building stakeholder confidence in the technology and driving demand for on-line services with citizens.

13.6. The maturity of social care providers is broadly aligned with that of our secondary care providers. Improvements in paper-free systems on either side of the partnership will have a positive impact on the overall level of digital maturity across Lancashire. Going forward, the implementation of LPRES will significantly improve the flow of data between organisations and increase the coverage of the NHS number in social care.

13.7. From patient risk perspective the deployment of Child Protection Information is an area that Lancashire needs to address promptly, with central Lancashire being the only area currently actively using the solution. To respond to this challenge, the LDR will seek to align ongoing work on the Child Health Information System with the child protection agenda.

13.8. Another area that requires significant improvement is sharing End of Life (EOL) preferences (UC8). Whist there are pockets of good practice across Lancashire, there is still considerable work to do in mapping out processes and ensuring any care professional along the pathway can view and contribute to the record. There is also a desire to ensure the patient and their carers are involved in the process and can contribute to the electronic shared record. The CCG maturity assessment (Annex D) highlights in question 7, that only 4 out of the 8 CCGs have a working system in place.

13.9. To maximise the use of our resources and accelerate delivery of the LDR, secondary care organisations have formally agreed to collaborate by signing up to a Memorandum of Understanding (MoU) that covers:

- Sharing quality indicators
- Liberating data and putting it to work
- Adopting shared digital health record systems
- Shared digital infrastructures
- Shared learning
  - promoting the exchange of expertise and organising events
  - sharing procurement knowledge and expertise
  - sharing knowledge and capability in design, architecture and standards
  - collaboration to ensure effective capability for work stream efficiency
  - conference and showcasing
  - formation of joint working groups and networks
  - shared Health Informatics Operational Plans and Digital Roadmaps

13.10. The MoU is intended to improve working relationships between provider teams and enshrine the following principles:

- Promoting best practices, patient safety and high quality care
- Respecting each other
- Using our resources efficiently and effectively
- Keeping each other fully informed about developments

13.11. Key to delivering success on digital maturity and the universal capabilities is being able to monitor progress against the delivery of key milestones. The development of this initial LDR has highlighted the challenge of getting robust performance monitoring data. Whilst many of the data discrepancies have been ironed out through the development of this document, there is still more to do in the coming months, typically in the following areas:

- Building a LDR delivery dashboard for automated performance monitoring
- Aligning local referral booking slots to national eRS reporting
- Working with the CSU to improve practice level reporting on
  - Patients with active live accounts
  - Patient online appointments transacted vs bookable
  - Repeat prescriptions transacted outside EMIS

- EPS transaction data
- End of Live EPaCCS

13.12. In 16/17, in addition to delivering improved digital maturity and the Universal Capabilities described above, Lancashire will continue to progress a number of ongoing enabling activities that will support the objectives of the LDR and the emerging STP. These are described in the next section; the relationship between these activities and the new LDR requirements is outlined in the table below:

Table 6 - Alignment of enabling activities to LDR & STP

LDR & STP Capabiilties	16/17 Enabling Activities				
	Record Sharing	Empowered Citizen	Enabled Citized	Learning Healthcare System	Enabling IT
LDR Paper free at the point of care					
Records, assessments and plans	✓	✓			✓
Transfers of care	✓	✓			
Orders and results management	✓				✓
Medicines management and optimisation	✓				
Decision support	✓	✓		✓	
Remote care	✓	✓	✓		✓
Asset and resource optimisation	✓				✓
LDR Universal Capabilities					
C1 - Access to GP Information	✓				✓
C2 - Access to GP data for high risk patient	✓			✓	✓
C3 - Patient can access their GP record	✓	✓			
C4 - GPs Can refer electronically to secondary care	✓				✓
C5 - GP receive timely electronic discharges	✓				✓
C6 - Social care receive electronic ADWN	✓				✓
C7 - Clinicians can access CPIS in unscheduled care	✓				
C8 - Professionals can access EOL preferences	✓	✓			✓
C9 - Electronic Prescriptions in place	✓	✓			
C10 - Patients can book appointments / meds online	✓	✓			
STP Universal Capabilities / Workstreams					
Acute care transformation	✓	✓	✓	✓	✓
Integrated place-based out of hospital care	✓	✓	✓	✓	✓
Prevent & rehabilitation	✓	✓	✓	✓	✓
Supporting placed-based care / Multispecialty Community Providers	✓	✓	✓		✓
Sample workstream 1 - Urgent Care Transformation	✓	✓		✓	✓
Sample workstream 2 - Children & Young People's Health & Wellbeing	✓	✓	✓		

14. Enabling activities

14.1. As stated previously, this LDR will require further iterations over the coming months as new requirements emerge from the L&SC programme and elsewhere. Nevertheless, there are enabling activities already taking place or being planned that will underpin these emergent requirements. Principally, these activities have been initiated under the banner of the Digital Health Board to either tackle current operational issues or develop new approaches for future transformation. The funding for these activities is either in place or will need to be addressed in the coming months as part of the STP planning process.

14.2. Once this LDR is approved the activities below will form a baseline programme for 16/17, including delivery of the universal capabilities and aspects of paper-free at the point of care not already incorporated. These are cross-cutting activities spanning LDR partners and in addition to organisational activities. Alterations or amendments to the programme will be subject to a change control process.

Record Sharing

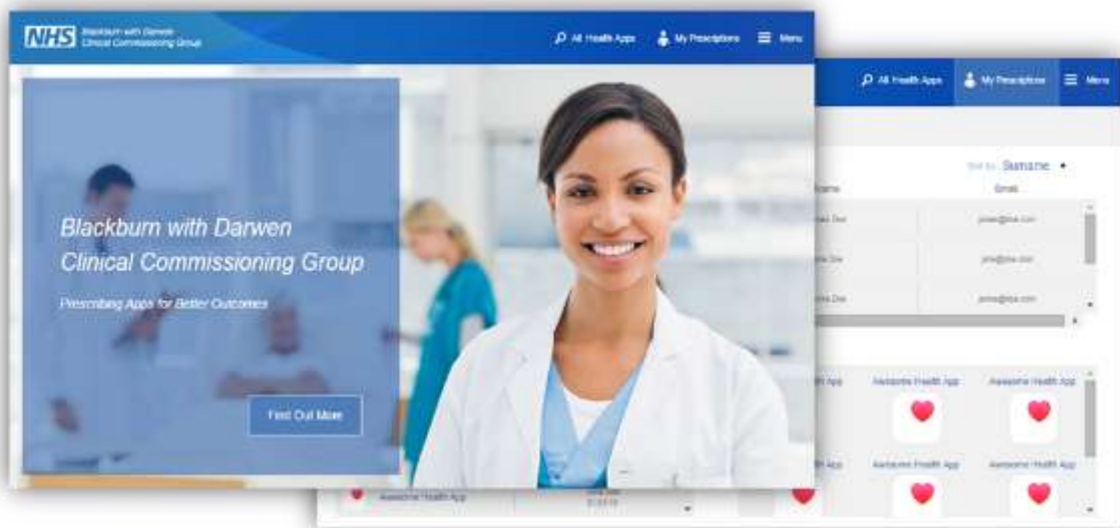
- Continue to roll out Local Person Record Exchange Service (LPRES) to stakeholders, expanding the portfolio of standardised documents for exchange within the system
- Explore solutions for using technology to support adherence to clinical guidelines and workflow
- Work with stakeholders to seek opportunities for clinical systems consolidation and to expand the breadth / depth of digital records
- Continue to support collaboration and further development of the Cumbria & Lancashire Information Sharing Gateway Tool
- Explore opportunities to develop a federated data sharing model that allows data to be shared with tertiary and specialised services outside of Lancashire

Empowering Patients / Citizens

- Explore an approach to use LPRES as a mechanism to provide citizens with unified access to their care records
- Map out clinical App usage and identify any common approaches.
- Explore mechanisms to standardise App usage in clinical pathways (see portal mock-up below)
- Establish a common set of clinical standards and protocols for App usage

- Learn from others and test out solutions with patients, clinicians and citizens

Screenshot – Example of a Clinical App Portal



Enable Patients / Citizens

- Develop care professionals' skills in delivering digital care in partnership with Lancashire's workforce development network
- Create a 'digital first' resource kit for teams seeking to transform their services, based on a proof of concept with sexual health and obesity services
- Promote digital literacy for citizens by supporting doteveryone and similar
- Support stakeholders developing digital channels for generating, collating and acting on patient feedback (Twitter, Facebook & Skype etc.)
- Engage the public, patients and staff in testing new digitally enabled services, particularly solutions that harness third sector community-based assets. Evaluate tests of Rallyround[15] and online patient participation groups
- Develop digital solutions that improve health literacy and empower patients to be active participants in their care. Engage with Public Health leads to develop the design principles
- Encourage peer to peer support amongst patients using social media, supported by clinicians.
- Explore the potential for digital social prescribing

15 https://www.rallyroundme.com/welcome

- Exploit new technologies that help deliver care closer to home and near patient testing. Test, evaluate and where appropriate link to transformation initiatives

A Learning Healthcare System

- Map out the use of patient decision aids and clinical decision support tools with a view to sharing good practice across Lancashire
- Coordinate / integrate with regional initiatives and groups, such as the Lancashire Testbed[16] and the Connected Health Cities programme[17]
- Work with the Information Governance network to develop a consent to share model with citizens that supports secondary uses
- Work with Lancashire's workforce development network to improve the informatics skills within the workforce

Enabling IT Infrastructure

- Continue to expand the availability of public access Wi-Fi across Lancashire
- Collaborate and optimise across the stakeholder's IT estate, to reduce cost and share expertise. In particular, collaborate on solutions that support workforce mobility, such as:
    - Simple, fast logons using shared Wi-Fi
    - Consolidated data centre compute & store facilities
    - Expand the use of open source solutions
    - Expand the use of cloud-based solutions (e.g Office 365)
    - Link telephone, instant message and video solutions
- Explore opportunities to rationalise clinical support and operational systems in line with emerging new models of care, for example - pathology, radiology and workforce rostering
- Explore collaborative opportunities for the procurement and accelerated deployment of patient identification technology using GS1 standards
- Expand the use of solutions that allow multidisciplinary teams to work seamlessly, e.g. the Advice & Guidance App developed in North Lancashire
- Create a common catalogue of telehealth / care solutions for stakeholders

16 https://www.lancashirecare.nhs.uk/test-bed

17 http://connectedhealthcities.com/

14.3. The list above contains a mix of projects, large and small. Some projects will be delivered at an organisational level, others across a community and a few at a Lancashire level and beyond. Further work will be required to define specific resource requirements and to align investment being made elsewhere in the system. The primary outcomes for these projects are to:

- Support safe, effective care
- Share knowledge and experience
- Co-create design principles and common standards
- Create capacity for innovation and service redesign in the digital space
- Build relationships and trust around digital innovation
- Reduce cost where possible

15. Managing risks and opportunities

15.1. All health and social care partners have achieved a satisfactory rating for their information governance assessment in 15/16. This demonstrates they have policies and procedures in place to manage data in a safe and secure manner.

Table 7 - Information Governance Assessment 2015/16

Organisation Name	Score	Rag Rating
Blackpool Teaching Hospitals NHS Foundation Trust	83%	
East Lancashire Hospitals NHS Trust	71%	
Lancashire Teaching Hospitals NHS Foundation Trust	81%	
Southport and Ormskirk Hospital NHS Trust	76%	
University Hospitals Of Morecambe Bay NHS Trust	78%	
Lancashire Care NHS Foundation Trust	78%	
Blackpool Borough Council	66%	
Blackburn with Darwen	79%	
Lancashire County Council	95%	
M& L Commissioning Support Unit	77%	
Blackpool CCG	91%	
Blackburn with Darwen CCG	91%	
Chorley & South Ribble CCG	92%	
Fylde & Wyre CCG	91%	
Greater Preston CCG	92%	
East Lancashire CCG	91%	
North Lancashire CCG	91%	
West Lancashire CCG	91%	

15.2. The established LDR governance structure described in section 8 will monitor compliance with current and emerging standards for security and patient safety associated with technology (including addressing the gap identified in CCG Maturity Assessment Line 8, Annex D). The governance groups will also:

- Oversee accessible information standards through the LPRES programme
- Oversee the application of new data security and encryption standards across common infrastructure (e.g. WAN, Active Directory & Cloud)
- Seek out opportunities to improve business continuity through collaboration

15.3. All risks and issues associated with the delivery of the LDR will be managed using an enterprise risk management methodology, meaning the programme will not only seek to manage and mitigate risk, it will also seek out opportunities. All projects delivered within the LDR will:

- Identify risks
- Allocate an owner
- Evaluate the impact of the risk
- Plan and implement mitigation
- Assess effectiveness

15.4. High-level risks will be reported through the LDR governance structure to the Digital Health Board and where appropriate on to the STP Programme Board. Individual organisations will manage their own risks associated with delivery of digital maturity. Except where a risk impacts on the cross-organisational delivery of the LDR, in which case it will be reported on the LDR risk register.

15.5. All provider organisations have committed to the deployment of GS1 Standards and are exploring collaborative approaches to accelerate deployment of solutions. This work falls into the Enabling Infrastructure work stream outline in section 14.

15.6. By far the biggest opportunity presented by the LDR is working together. By the very nature of our current state, our working practices and approach are not achieving a sufficient pace of change.

16. Measuring the success of our Local Digital Roadmap

16.1. Going forward into the next three years this roadmap will create a number of work streams that will support the strategic ambitions of the stakeholders. The exact definition and scope of these will form through continued discussion with stakeholders. At this stage in the process, the foundation of the roadmap is based on the following broad themes:

Table 8 – Capabilities deployment success metrics by theme

LDR Theme	Measures of success
Sharing records across organisations to support direct care giving: • Working with stakeholders to deliver paper-free at the point of care, building the capability and coverage of systems that capture healthcare data • Establishing standards that enable the flow of data between organisations and to the patient • Ensuring record sharing meets legislative standards and that the citizen is actively involved in any decision to share • Seeking out opportunities to reduce the burden of administration for our workforce	• A process is in place adopt standard care documentation across our STP footprint (16/17) • All LDR partners have signed up to the Watling St. Agreement (16/17) • All LDR primary & secondary care organisations have signed up to Information sharing Gateway (16/17) • Citizens will be able to manage their consent to share preferences online (18/19) • All health & care organisations (Inc. NWAS & 111) are connected & sharing care documents via LPRES (17/18) • We have plans in place for connecting police, fire & rescue, independent providers, local councils and third sector to LPRES (16/17) • An electronic shared care record is in use by health & care professionals (16/17) • LDR partners are publishing 80% of relevant care documents to LPRES (17/18) • We will have demonstrated improved administration processes freeing up more time to care (17/18) • All relevant care documentation is captured electronically (18/19) • All relevant electronic care documentation has been standardised (18/19)

LDR Theme	Measures of success
Empowering the patient to be an active participant in their care: • Creating a mechanism for patients to readily access and contribute to their electronic care records in a consistent and meaningful way • Promoting the use of patient health applications in a standardised way using both mobile and web technologies • Exploring how technology can be used to help improve health literacy across the population • Utilising digital health technologies to support the prevention and the health promotion agenda	• Citizens in Lancashire with a long term condition will have accessed their online primary care record, booked an appointment online or ordered a prescription (30% Q1 17/18, 75% Q1 18/19) • Citizens can access their documents published on LPRES (Q4 17/18) • All citizens with a long term condition can access applications to help manage their health and wellbeing (20% Q2 17/18, 75% Q4 18/19) • All citizens have online access to personalised health promotion information (17/18) • Citizens can access on-line health and wellbeing tools that are linked to their care records (17/18)
Enabling citizens through the use of technology to live independent, healthy lives: • Harnessing care professionals' skills in designing and delivering technology-enabled care • Engaging with, and involving, the public and service users of health & social care in service design of technology-enabled care services • Expanding the use of technology-enabled care in a safe and consistent manner • Encouraging peer to peer support networks for patients, that harness the power of communities and use social media and other tools (supported by frontline workers)	• All residents in care homes have access to remote telemedicine to prevent unnecessary admission to hospital (17/18) • All new services offer a 'digital first' approach, where appropriate, that encourages citizens to use technology as part of the their self-care and to interact with care professionals online (17/18) • Patients with long term care needs are offered technology that allows them to be treated / use services in their home or near to home (25% 17/18, 75% 18/19) • Care professionals managing long-term conditions understand the potential of and routinely offer technology-enabled care (18/19) • Digital solutions are in place to support peer networks and social prescribing (17/18)

LDR Theme	Measures of success
Using data to create a Learning Healthcare System: • Building skills and capability in the analysis and interpretation of healthcare data • Create an approach that allows data to be brought together for the purpose of improving health outcomes • Increasing the breadth and scope of patient decision aids and clinical decision support tools • Working with academic partners to accelerate the diffusion of research into practice • Developing a citizen consent to share model that supports appropriate secondary uses for healthcare data	• Agreed plan for the consolidation of our data and the associated business intelligence resources (Q4 16/17) • New analytical tools in regular use to support families with complex needs and other multi agency initiatives (17/18) • A regional (nationally compliant) child health information system is in place supporting a multi-agency children & young people's health & wellbeing (17/18) • Frontline professionals can use predictive analytical tools to manage citizens with long term care needs (17/18) • Frontline professionals can access real time analytical tools to monitor professional standards, manage capacity and demand (17/18) • Citizens actively engaged in managing their consent preferences to share data for healthcare research (18/19) • A mechanism is in place to systematically analyse cross-agency population data in near real-time (18/19)
Creating a robust, affordable technical infrastructure that supports the clinical and operational workforce: • Ensuring stakeholders exploit opportunities to reduce costs on ICT infrastructure • Designing ICT that allows the workforce to deliver care closer to home and across organisational boundaries • Exploiting technology to improve communications between organisations and to the patient	• All staff can seamlessly access online systems and services from any public sector building (16/17) • Telephony, instant messaging and video consultation is ubiquitous, with clinicians using it for multidisciplinary meetings / advice (& guidance) and citizens using it to contact care professionals (17/18) • All staff have the ability to access care records at the point of care (17/18) • All care record systems, including departmental solutions are linked to the shared care record (18/19)

LDR Theme	Measures of success
Creating a robust, affordable technical infrastructure that supports the clinical and operational workforce - continued	• All LDR partners have an agreed approach for Cloud Service Adoption where applicable to the LDR (16/17) • All providers have deployed a patient identification technology, to GS1 Standards (17/18) • All LDR partners align major ICT capital investments to the LDR plan (16/17) • All LDR partners seek to align major ICT service contracts to the LDR plan (16/17) • All opportunities for collaboration and consolidation of internal ICT services are actively pursued (16/17)
Exploring how the LDR can support economic growth within the region: • Connecting and aligning our regional digital health assets • Exploring opportunities for collaboration between the public sector in Lancashire and local businesses (*see example below) • Creating an environment for digital innovation to flourish in the region • Working collaboratively across public, private and third sectors to seek out digital solutions that address the wider determinants for health	• LDR partners support regional growth schemes in partnership with the Local Enterprise Partnership (16/17) • LDR partners actively engage local businesses in the co-creation of new digital solutions to support the STP (17/18) • LDR partners work with regional universities and the Innovation Agency NWC actively engaging researchers in the service transformation process (16/17) • LDR partners working in partnership with universities and businesses to successfully bid for innovation grants (16/17)

**"A specific example of how digital health can support economic growth in the region is the proposed Digital Health Village development at Chorley. This innovative project, aimed at creating over 700 jobs, will bring together office and data centre provision with a 40 bed step down care home, a mix of 125 affordable and private houses, and the adjacent district hospital to create a hub focused on supporting start-ups and small companies developing and testing digital health solutions. "*

Gary Hall, Chief Executive, Chorley Council

17. Sign-off and next steps

17.1. Having a roadmap document alone will not bring about change. What it can do is act as a catalyst to bring people together to start the dialogue about what the future could look like. The scale of the challenge that lies ahead requires us all to commit to bold, effective large-scale change. However, first and foremost we need to achieve a common understanding of what we want to change and why.

17.2. Alongside our commitment to change, we also need to be united in our desire to use technology, which has the potential to transform the way we do things. If we choose to embrace it, it will improve services and empower our citizens to live longer, healthier lives. To make it happen, going forward we need to:

- Continue to develop the vision for the future and closely align it with stakeholder strategies
- Determine the scope and scale of our collaboration
- Have a shared understanding of what activities are best done at scale and those that are best delivered locally
- Ensure we invest time and resources across our partnership to achieve true and meaningful co-creation
- Frame and reframe the roadmap, communicating the vision in a clear and concise way to the citizens and the workforce
- Build partnerships with business that maximise our investment and sustain regional growth
- Seek out a diverse range of stakeholders with a view to incorporating and aligning our transformational agendas
- Be bold in our ambition and harness the creativity and diversity of our workforce
- Make sure we have a clear case for change, including a shared understanding of the realisable benefits, and ultimately ensure that the programme is financially viable

17.3. The mechanism for signing off this LDR has been aligned with the local STP process. It is a working document that will be subject to change as new requirements emerge from the STP work streams. This first iteration has been approved by the all the partners through the following process:

✓ Publication of draft versions to all stakeholder organisations inviting comment

- ✓ Sign-off by CCIOs, CIOs and CCG GP IT Leads
- ✓ Sign of at Lancashire's Digital Health Board
- ✓ Sign-off at Lancashire & South Cumbria STP Programme Board

18. Summary

18.1. The Lancashire care system is facing a formidable challenge, one which leaders must rise up to. New technology and specifically digital health, has the potential to transform the way we deliver services.

18.2. Across our community we have a wealth of expertise and a rich asset base to harness digital health if we choose to work together. Having identified the scale of Lancashire's challenge we must work collectively to describe how technology can help and set about to transform the system.

18.3. Over the coming years through delivery of this LDR, L&SC community aims to ensure:

- Its citizens are able to use technology to actively manage their health and wellbeing.
- Its workforce is able to harness technology to deliver new online services and provider care remotely
- Its systems support safe, high quality and cost effective care

18.4. To quote Rosabeth Moss Kanter from Harvard Business School:

> "*Leaders must wake people out of inertia. They must get people excited about something they've never seen before, something that does not yet exist'.*

18.5. This first iteration of our LDR refines and reframes the existing digital health agenda, moving us forward towards a unified digital roadmap for Lancashire. One that leads to a true digital transformation making the healthcare system faster, easier and more engaging for citizens.

Annex A - Capability Deployment Schedule

The table below brings together all the elements of this LDR. The table provides timeframe for the delivery of new capabilities. It is envisaged this will develop significantly as the STP plans mature in the coming months. The capabilities have been categorised in relation to paper free at the point of care and represent the system rather than specific organisations.

Who	What	Year	Capability group
Frontline staff	Will have access to new analytical tools to support families with complex needs and other multi agency initiatives	16/17	Decision support
Frontline staff	Can access a shared record view from LPRES	16/17	All Care Documentation
All LDR partners	Will have an agreed approach for Cloud Service Adoption	16/17	Enabling Infrastructure
Citizens	Will have access to free public access Wi-Fi in hospital buildings	16/17	Enabling Infrastructure
Citizens	Can access their primary care record	16/17	Online access
Citizens	Will be able to order their repeat prescriptions online and have them delivered electronically to their pharmacy of choice	16/17	Online access
All LDR Partners	Have an electronic information sharing agreement in place	16/17	Standards
Urgent care staff	Will be able to identify high risk patients and access a relevant case management plan electronically	17/18	Records, assessments and plans
Urgent care staff	Will be able to access and update child protection notifications electronically	17/18	Records, assessments and plans
Frontline staff	Will be able to access End of Life Preferences at the point of care	17/18	Records, assessments and plans
GPs	Will receive timely electronic discharge notices for their patients receiving in-patient care in Lancashire	17/18	Transfers of care
GPs	Will receive timely electronic notifications of care given in secondary care	17/18	Transfers of care
All LDR Partners	Will use the NHS number on electronic document exchanges	17/18	Transfers of care
Frontline staff	Will be able to access a range of diagnostic test results at the point of care	17/18	Orders and results management
Frontline staff	Will have access to regional child health information system to support children & young poepl's health & wellbeing	17/18	Decision support
Frontline staff	Can use predictive analytical tools to manage citizens with long term care needs	17/18	Decision support
Citizens	Care homes will have access to remote telemedicine to prevent unnecessary admission to hospital	17/18	Remote care
Citizens	25% of patients with long term care needs are offered technology that allows them to be treated / use services in their home or near to home	17/18	Remote care
Frontline staff & Citizens	Will use telephony, instant messaging and video consultation for multidisciplinary meetings / advice (& guidance) and consultations	17/18	Remote care
Frontline staff	Will be able to access an App portal for the selection of appropriate technology solutions	17/18	Remote care
Police, Fire and Rescue & Others	Can access a shared record view from LPRES	17/18	All Care Documentation
All LDR partners	80% of relevant care documentation is published to LPRES	18/19	All Care Documentation
Frontline staff	Will have the ability to access care records at the point of care	17/18	Enabling Infrastructure

Annex A - Capability Deployment Schedule - Continued

Who	What	Year	Capability group
All Secondary care partners	Will have deployed a patient identification technology, to GS1 Standards	17/18	Enabling Infrastructure
Citizens	Can access secondary care records	17/18	Online access
Citizens	20% can access applications to help manage their long-term care needs	17/18	Online access
Citizens	Have access to personalised online health promotion information	17/18	Online access
Citizens	Can access online health and wellbeing tools that are linked to their care record	17/18	Online access
Citizens	Digital solutions are in place to support peer networks and social prescribing	17/18	Online access
Citizens	Will be able to book appointments online to see practice-based staff	17/18	Online access
Citizens	Will be able to conduct appointments online (web, chat, skype, email etc.)	17/18	Online access
All LDR Partners	All new services offer a 'digital first' approach, where appropriate, that encourages citizens to use technology as part of the their self-care and to interact with care professionals online	17/18	Policy Framework
Healthcare professionals	Will use electronic systems to correctly identify patients based on GS1 Standards	17/18	Standards
Citizens	Will be able to access and amend their online palliative care record and share it with others as they see fit	18/19	Records, assessments and plans
Social Workers	Will receive timely electronic notifications of care given in secondary care (ADWNs)	18/19	Transfers of care
Healthcare professionals	Will routinely order standardised diagnostic tests online	18/19	Orders and results management
Citizens	Will be able to undertake certain diagnostic tests close to /in the home	18/19	Orders and results management
Citizens	Will be able to access diagnostic test results (in a meaningful way) relating to them through online tools	18/19	Orders and results management
Healthcare professionals	Will be automatically alerted to abnormal test results through their EHRs	18/19	Orders and results management
Citizens	75% of patients with long term care needs are offered technology that allows them to be treated / use services in their home or near to home	18/19	Remote care
Healthcare professionals	Will be able to access telemetry from monitoring devices both in the hospital and within the patient's home	18/19	Asset and resource optimisation
All LDR partners	Relevant care documentation has been standardised	18/19	All Care Documentation
Citizens	75% can access applications to help manage their long-term care needs	18/19	Online access
Citizens	Will be able to book appointments online to see secondary care staff	18/19	Online access
Citizens	Will be able to actively engaged in managing their consent preferences to share data for healthcare research	18/19	Standards
Healthcare professionals	Will be able to access a complete online view of a patients medications / prescriptions	19/20	Medicines management and optimisation
Healthcare professionals	Will use digital solutions to help prescribe and administer medications and prescriptions	19/20	Medicines management and optimisation
Healthcare professionals	Will be prompted by electronic solutions to monitor and report adverse prescribing events	19/20	Medicines management and optimisation
Healthcare professionals	Will be able to order and allocate hospital beds electronically	19/20	Asset and resource optimisation
All LDR partners	Will have enabled care record systems, including departmental solutions to be linked to the shared care record	20/21	Enabling Infrastructure

Annex B – Universal Capabilities Delivery Plan

Capability 1

Professionals across care settings can access GP-held information on GP-prescribed medications, patient allergies and adverse reactions.

Baseline

The Summary Care Record (SCR) is active in 100% of GP Practices. All secondary care providers have the ability to view the SCR. Uptake is typically highest in Pharmacy and the Emergency Care Departments. All providers are able to use Healthcare Gateway's MIG Viewer, which is believed to be more accurate and complete for summary data. Access to these data by all professionals is estimated to be at 30%. A constraining factor on uptake is accessibility to data at the point of care. Generally data is not embedded within clinical systems. The data is not currently accessible to social care.

Ambition

- To improve the quality of shared data
- To improve the accessibility of data at the point of care
- To improve the coverage

Activities

- Establish a reciprocal partnership agreement between primary and secondary care (The Watling St. Agreement). To set local standards for the timeliness, accuracy and quality of shared records. Complete & signed off by Q4 16/17
- Improve the mechanisms for monitoring the uptake of SCR & MIG access by Q3 16/17
- Publish summary view in LPRES to all providers by Q4 16/17
- Get all GP Practices registered on the IS Gateway by Q4 16/17

National Services / Infrastructure / Standards

- Lancashire will continue to use the national solution and Healthcare Gateway's MIG whilst developing capability within LPRES to surface relevant GP data into health and care systems in real-time. The LPRES programme will also oversee the implementation of national and local document standards.

Evidencing Process

- An LDR dashboard will be developed to present traffic analysis from LPRES
- Traffic Data will be sought from SCR & the MIG
- Audit of service / departmental access
- Auditing frontline staff to seek their perspective and opinion on progress

Annex B – Universal Capabilities Delivery Plan - Continued

Capability 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)

Baseline

As stated previously, the technical capability exists for the urgent and unplanned workforce to be able to view GP data, however this is not universally deployed. Also the identification of patients with particular conditions likely to present in U&EC is not federated into secondary care EHRs. Some work has been undertaken to share condition flags for frail elderly and mental health patients. This has not been scaled-up across the system

Ambition

- To have a consistent risk stratification mechanism in order to appropriately identify patients with specific conditions
- To have a mechanism for federating condition flags across systems
- To identify appropriate data related to each condition flag and make it accessible at the point of care

Activities

- Identify and prioritise the relevant patient groups for condition flags through discussion with the U&EC STP work stream by Q3 16/17
- Establish data sets / anticipatory care document standards associated with condition flags Q4 16/17
- Through LPRES, federate two condition flags and the anticipatory care documents by Q4 16/17
- Seek to integrate with the North West Ambulance Service by Q4 16/17

National Services / Infrastructure / Standards

- Lancashire will continue to use the national solution and Healthcare Gateway's MIG whilst developing capability within LPRES to surface relevant GP data into health and care systems in real-time. The LPRES programme will also oversee the implementation of national and local document standards.

Evidencing Process

- An LDR dashboard will be developed to present traffic analysis from LPRES
- Traffic Data will be sought from SCR & the MIG
- Audit of service / departmental access
- Auditing frontline staff to seek their perspective and opinion on progress

Annex B – Universal Capabilities Delivery Plan - Continued

Capability 3

Patients can access their GP record

Baseline

All GP Practices in Lancashire have the capability to make patient's records accessible on line. However at the start of 16/17, only 14% of the population had an active on-line account.

Ambition

- To significantly improve the uptake of patients accessing their GP Record
- To establish the reasons why uptake is low and establish any remedial actions
- To educate the public around the benefits of on-line access
- To ensure all patients with long-term care needs are aware of, and offered use of, online services, including accessing their GP record and associated secondary care documents

Activities

- Improve the process for monitoring uptake with EMIS & CSU by Q2 16/17
- In partnership with Healthwatch(s) to better understand the reasons why access is low by Q3 16/17
- Engage GP Practices to identify any barriers to improvement by Q3 16/17
- Align the LDR requirements within the primary care transformation work stream by Q2 16/17
- Seek to increase uptake to 30% by Q1 17/18 for patients with a long term condition
- Establish an approach for publishing all LPRES records to patients by Q2 17/18
- All patients with long-term care needs are made aware of and routinely offered online services by Q4 17/18

National Services / Infrastructure / Standards

- Lancashire will continue to use the EMIS Access solution and seek the support of the national team to improve access

- Lancashire will harness LPRES to enhance to content of online records for patients, ultimately to encompass all published documents

Evidencing Process

- LDR dashboard will monitor access
- Data extracts form EMIS enterprise reporting
- Healthwatch audit to gauge patient opinion

Annex B – Universal Capabilities Delivery Plan - Continued

Capability 4

GPs can refer electronically to secondary care

Baseline

All GP Practices in Lancashire have the capability and make electronic referrals. During 2015/16, an average of 67% of referrals from primary care were made electronically. During March 2016, approximately 55% of the available (secondary care) 1st out-patient appointments were directly booked electronically.

Ambition

- To improve the quality of information exchanged between care providers at the point of referral
- To establish a mechanism to reduce unnecessary referrals
- To reduce the administrative burden of frontline workers
- To make 90% of referrals electronic by 17/18

Activities

- Improve the mechanisms for monitoring progress by Q2 16/17
- Align the LDR requirements within the out of hospital transformation work stream by Q3 16/17
- Identify barriers preventing all referrals being made electronically by Q3 16/17
- Build on the experience of North Lancashire's Advice & Guidance tool in reducing unnecessary referrals. Seek to scale by Q4 16/17
- Identify opportunities for streamlining the e-referral process by Q4 16/17
- Work with hospital out-patient providers to identify mechanisms to achieve a 20% increase in e-referrals by Q416/17

National Services / Infrastructure / Standards

- Lancashire will continue to use the e-Referral Service and explore the use of the Strata application deployed in Cumbria for community and other services. The use of LPRES will be explored for exchanging referrals not currently in scope for e-Referral Service (eRS)

Evidencing Process

- LDR dashboard to monitor access
- Data extracts from eRS & local validation process
- Audit work to gauge progress and identify new issues

Annex B – Universal Capabilities Delivery Plan - Continued

Capability 5

GPs receive timely electronic discharge summaries from secondary care.

Baseline

Across Lancashire providers have deployed a mix of solutions for delivering electronic discharge summaries and have achieved varying degrees of maturity. On average 50% of discharges are sent electronically. Recent work in Central Lancashire with LPRES has created an opportunity for a county-wide approach which overcomes issues with boundary GP Practices. It has also highlighted issues with the MIG and EMIS that means summaries can easily be missed.

Ambition

- To improve the quality of information exchanged when transferring care
- To ensure the mechanisms for electronic discharge summaries are safe and effective
- To make 90% of discharge summaries electronic by 17/18

Activities

- Improve the mechanisms for monitoring progress by Q2 16/17
- Align the LDR requirements within the acute / specialised care and mental health transformation work streams by Q3 16/17
- Establish a reciprocal partnership agreement between primary and secondary care (The Watling St. Agreement). To set local standards for the timeliness, accuracy and quality of shared records. Complete & signed off by Q4 16/17
- To establish LPRES as the standard mechanism for sending discharge summaries, integrating with Messaging Exchange for Social Care and Health (MESH) and other services, as appropriate
- Identify opportunities for streamlining the discharge summary process by Q4 16/17
- Work with hospital providers to identify mechanisms to achieve a 25% increase in discharge summaries by Q416/17

National Services / Infrastructure / Standards

- Lancashire will continue to develop (& incorporate) the document standards for discharge summaries
- LPRES will seek to federate with other regional exchanges through an inter-regional exchange to achieve 100% uptake. This work is being developed through the Connected Health Cities Programme

Evidencing Process

- LDR dashboard to monitor transactions with data from secondary care providers
- Audit work to gauge progress, data quality and identify issues

Annex B – Universal Capabilities Delivery Plan - Continued

Capability 6

Social care receive timely electronic Assessment, Discharge and Withdrawal Notices (ADWN) from acute care.

Baseline

A process for exchanging electronic Care Act 2014 compliant ADWN is not in place in Lancashire. Hospitals largely rely on paper-based processes and secure email. Work has started through the LPRES programme to create interoperable links between health and social care systems.

Ambition

- To have standard electronic exchange process in place for ADWN
- To improve the quality of information exchanged when transferring care
- To ensure the mechanisms for electronic ADWN are safe and effective
- To achieve 100% uptake by 17/18

Activities

- Align the LDR requirements within the care homes transformation work stream by Q2 16/17
- Identify opportunities for streamlining the ADWN process by Q3 16/17
- Improve the mechanisms for monitoring progress by Q3 16/17
- Establish a reciprocal partnership agreement between health and social care (The Watling St. Agreement). To set local standards for the timeliness, accuracy and quality of shared records. Complete & signed off by Q4 16/17
- To establish LPRES as the standard mechanism for ADWN, with integration in place with the three care providers by Q1 17/18
- Utilise LPRES to federate (fill gaps) the NHS number into social care systems Q1 17/18
- Work with hospital providers to achieve 50% electronic ADWNs by Q2 17/18

National Services / Infrastructure / Standards

- Lancashire will comply with the Care Act 2014 standards when deploying electronic ADWNs

Evidencing Process

- LDR dashboard to monitor transactions with data from LPRES
- Audit work to gauge progress, data quality and identify issues

Annex B – Universal Capabilities Delivery Plan - Continued

Capability 7

Clinicians in unscheduled care settings can access child protection information with social care professionals notified accordingly.

Baseline

Only Lancashire County Council and Lancashire Teaching Hospitals have deployed the national Child Protection Information System (CPIS). The two unitary authorities and Blackpool Teaching Hospitals are either committed to, or planning to go live. All other organisations have not started implementation.

Ambition

- To ensure all vulnerable children have a child protection plan and information relevant to their care is shared appropriately
- To align deployment work on CPIS with the deployment of Lancashire's Child health Information System (CHIS)
- To align CPIS plans into our broader Children & Young Persons digital plans
- To achieve 100% deployment in all urgent care centres by March 2018

Activities

- Explore options for connecting LPRES with CHIS & CPIS by Q4 16/17
- Work with Child Protection Teams to ensure child protection plans are timely and accurate Q4 16/17
- Establish a deployment plan for all providers currently not planning to deploy
    - Complete provider implementation checklists by Q3 16/17
    - All providers deployed by Q4 17/18

National Services / Infrastructure / Standards

- CPIS & Mini Services for PDS

Evidencing Process

- Readiness Assessments Complete
- NHS Digital CPIS data reported through the LDR Dashboard
- Audit work with Child Protection Teams

Annex B – Universal Capabilities Delivery Plan - Continued

Capability 8

Professionals across care settings made aware of end-of-life (EOL) preference information.

Baseline

The availability of EOL preferences at the point of care varies considerably across the county. Communities in North Lancashire and the Fylde Coast have in place good mechanisms for sharing EOL preferences. However, even in these places the aspiration of sharing a full electronic palliative care co-ordination plan has not yet been achieved, largely down to technical delays with the GP system supplier in Lancashire.

Ambition

- To ensure EOL preferences are shared with all those who need them
- To ensure care plans accurately reflect patients & carers preferences and are updated as required
- To have a fully populated electronic care plan in place for anybody receiving palliative care
- To enable patients and their carers to access their care plans on-line

Activities

- Conclude the EOL current and future state mapping work by Q3 16/17
- Ensure the EOL plan is accessible across primary and secondary care Q4 16/17
- Integrate the EOL plan into LPRES by Q4 16/17
- Connect North West Ambulance Service to LPRES by Q4 16/17
- Ensure Hospice and other relevant 3rd sector partners can access relevant EOL data by Q2 17/18
- Work with the Strategic Clinical Network to effectively deploy solutions by Q2 17/18

National Services / Infrastructure / Standards

- SCCI1580 Palliative Care Co-ordination: core content
- Use of LPRES to federate data

Evidencing Process

- Audit work with the SCN
- Provider systems can share an EOL data set based on SCCI1580
- LDR dashboard to monitor transactions with data from EMIS & LPRES

Annex B – Universal Capabilities Delivery Plan - Continued

Capability 9

GPs and community pharmacists can utilise electronic prescriptions.

Baseline

All GP Practices in Lancashire have the capability to issue electronic prescriptions. However 10 practices (5%) have not yet gone live. Across the county approximately 67% of prescriptions are issued electronically through the electronic prescription service (EPS). Uptake in Lancashire is higher than the national average (59%).

Ambition

- To ensure that every patient who wants an electronic prescription has one
- To ensure patients can easily order a repeat prescription online
- To ensure patients have choice about where there electronic prescription is sent

Activities

- To promote EPS within Lancashire through Healthwatch(s) by Q4 16/17
- To ensure all practice are live by Q4 16/17
- Explore options for increasing uptake by Q4 16/17

National Services / Infrastructure / Standards

- Electronic Prescription Service

Evidencing Process

- LDR dashboard to monitor uptake and activity with data from NHS Digital
- Audit work from Healthwatch

Annex B – Universal Capabilities Delivery Plan - Continued

Capability 10

Patients can book appointments and order repeat prescriptions from their GP practice.

Baseline

All GP Practices in Lancashire are able to offer online appointments and repeat prescriptions. In 2015/16, approximately 40,000 appointments and 60,000 repeat prescriptions were transacted online through EMIS Patient Access. However this figure excludes the transactions that GP Practices enabled through practice-based online solutions. While there has been progress made in offering online transactions, the availability varies dramatically between practices. Although it is difficult to determine the exact number of appointments on offer in GP Practices, it is likely to be in the region of 6m per year based on national statistics.

Ambition

- To offer every patient the opportunity to book appointments online
- To offer every patient the opportunity to order repeat prescriptions online
- To make available 25% of all appointments bookable by 17/18
- To encourage patients to order repeat prescriptions online
- To ensure all patients with long-term care needs are aware / offered online services
- To routinely offer and conduct appointments online (web, chat, skype, email etc)

Activities

- To improve the monitoring mechanisms for both metrics by Q2 16/17
- To work with Healthwatch(s) to communicate the benefits of online services for patients
- Establish a local team to help practices publish more online appointment slots by Q3 16/17
- To quantify the number of appointments that are offered through unified communications (webchat, video consultation, instant message, email and telephone) by Q3 16/17
- To share good practice and develop a common approach by Q4 16/17
- Continue to drive uptake throughout 17/18

National Services / Infrastructure / Standards

- Professional Standards, seeking support from the national Patient Online Team

Evidencing Process

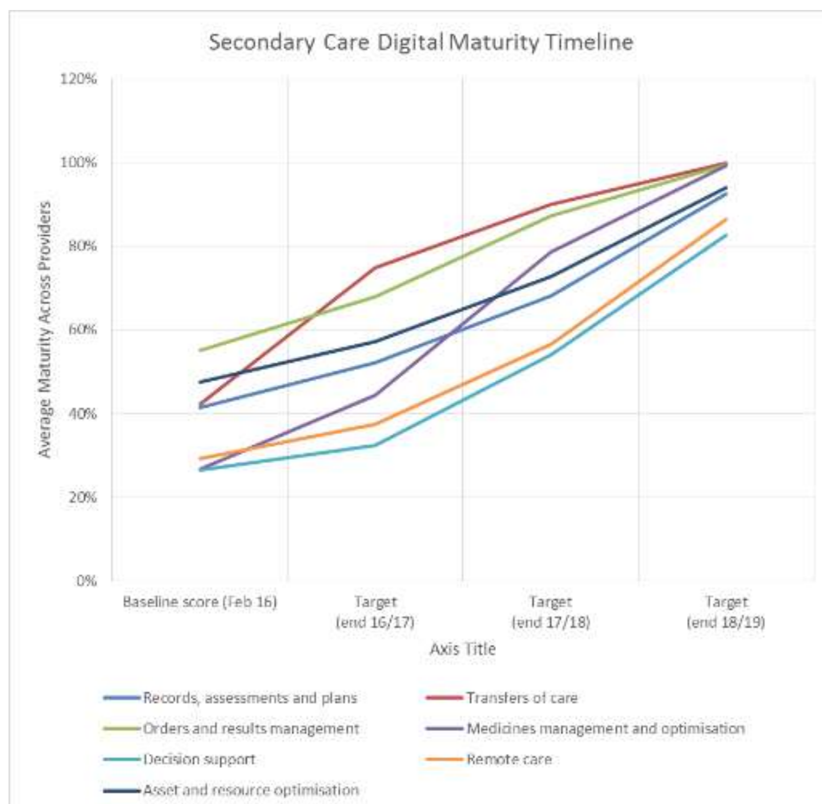
- Audit work and patient engagement
- LDR dashboard to monitor transactions from EMIS
- Monitoring other data sources

Annex C – Capability deployment trajectory (secondary care)

The table below shows the assessed risk against each capability. This assessment was made by local, digital clinical leads based on local knowledge. This means Lancashire will be prioritising the digital maturity in Transfers of Care first and foremost.

Capability Risk Profile

Baseline	Average scores across providers				Risk Profile			
Capability group	**Baseline score (Feb 16)**	**Target (end 16/17)**	**Target (end 17/18)**	**Target (end 18/19)**	**Care Gap**	**Health & wellbeing Gap**	**Finance Gap**	**Gross Risk**
Records, assessments and plans	42%	52%	68%	93%	2	3	2	14
Transfers of care	42%	52%	72%	94%	3	2	2	15
Orders and results management	55%	68%	87%	100%	3	1	2	13
Medicines management and optimisation	27%	45%	79%	99%	3	1	3	14
Decision support	27%	32%	54%	83%	2	2	3	13
Remote care	29%	38%	57%	87%	1	3	2	11
Asset and resource optimisation	48%	57%	73%	94%	1	1	3	8



Annex D – CCG Digital Maturity

		Clinical Commissioning Group							
	Questions	West Lancs	Bwd	Gtr. Preston	E. Lancs	Chorley	Blackpool	Fylde & Wyre	Lancs. North
1	All practices have access to SMS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	All NHS owned GP IT equipment is recorded in an accurate asset register	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	All NHS owned GP IT equipment is subjected to an approved IT reuse & disposal policy and procedure	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	There is a locally agreed WES (Warranted Environment Specification) for GP IT equipment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	All health & care organisations (including GPS) can access their principal record systems from all local commissioned provider locations.	100%	<95%	<95%	<95%	<95%	100%	100%	<25%
6	The CCG commissioned service provider for GP IT services will have an annually reviewed tested Business Continuity Plan and validated IT Disaster Recovery Plan for services critical to GP service continuity	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	A local Electronic Palliative Care Co-ordination System (EPaCCS) supporting the recording and sharing of people's care preferences and key details about their care at the end of life which is integrated with principal primary care clinical systems and meets the requirements of ISB 1580 (End of Life Care Co-ordination: Core Content) is available	Yes	No	Yes	No	Yes	No	No	Yes
8	The practices have access to a formal Clinical Safety System (ISB 160) and qualified clinical safety office	No	No	No	No	No	No	Yes	No
9	All local providers of health & social care sharing patient digital information have systems which maintain a full automated audit of read and write access to individual patient records	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	The CCG completes a formal review of the IT Services with each Practice at least once a year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
11	The commissioned GP IT services include formal P3M (Project, Programme and Portfolio Management) methodologies which are recognised and used in the deployment of GP Clinical systems, local implementation of national solutions and major primary care IT infrastructure changes or upgrade	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	Formal governance arrangements are established which ensure the effective mapping and provision of digital enablers that will support delivery of locally identified health and care priorities. Business cases (where necessary) are shared with, and agreed with relevant partners in the local area. Business cases where required for Informatics-enabled programmes with cross-community impact are approved by a relevant cross-community Board	Yes	No	Yes	No	Yes	Yes	Yes	Yes
13	All local GPs and providers of health & social care sharing patient digital information agree to a consistent information sharing model	No	No	No	No	No	No	Yes	Yes
14	All software (including operating systems) used on NHS owned GP IT infrastructure by the practice must be approved and recorded on an software asset & licence register which must confirm the software is appropriately and legally licenced for such use	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
15	The CCG has appointed a Chief Clinical Information Officer (CCIO) or equivalent accountable officer who will provide (clinical) leadership for the development of local IT strategy including the development of primary care IT services.	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes

Annex D – CCG Digital Maturity – Part 2

		Clinical Commissioning Group							
	Questions	West Lancs	Bwd	Gtr. Preston	E. Lancs	Chorley	Blackpool	Fylde & Wyre	Lancs. North
16	There is a local GP IT strategy and programme with roadmap annually reviewed and aligned with local commissioning priorities	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17.1	There is a comprehensive ongoing training and clinical system optimisation service to support GP Principal clinical systems and national clinical services available to all practices	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17.2	There is support available to all practices for deployment, training, technical issues, tracking database maintenance and supplier liaison and escalation for GPSoC (lot 1) clinical systems	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	GP IT services are commissioned and contracted with robust and clear service specifications	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
19	All CCG commissioned GP IT support services are supported with KPI reports (at least 4/year) and there are annual service performance and contract review meetings	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
20	There is a clear agreed local (CCG) budgeted plan for the full funding of all core GP IT requirements for the next 2 year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
21	The GP IT infrastructure estate supporting core GP IT (includes desktop, mobile, server and network equipment) has a fully documented plan for refresh and replacement. This must include a local WES (Warranted Environment Specification) for such equipment which as a minimum will meet the WES for the principal clinical systems used and any NHS mandated national systems and infrastructure	Yes	Yes	Yes	N/A	Yes	Yes	Yes	Yes
22	All general practices have secure data storage services available for all electronic data other than that stored in their GPSOC clinical systems and NHS Mail to a standard not less than tier 3 data centre	<95%	100%	<75%	<95%	<95%	<50%	100%	100%
23	CCG Commissioned GP IT support provides consistent support for core GMS contracted hours	No	Yes	No	No	No	No	Yes	Yes
24	The GP IT support service desk has current formal accreditation through a recognised (industry or NHS) scheme or meets the requirements for GPIT service desk in the GP IT Schedule of Services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
25	GP IT services available include IT Security advice and oversight, including configuration support, audit, investigation and routine monitoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
26	Where there is a local community network wholly or part funded through GPIT and used in addition to, or in place of, N3 by general practices AND other locations and care settings the costs are shared between these organisations	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
27	CCG Commissioned GP IT support Service supports general practice to provide extended hours (DES) services	Rest	Rest	Rest	Rest	Rest	Rest	Rest	Rest
28	CCG Commissioned GP IT support Service supports general practice to provide 7 day week services to patients where these are offered	Rest	Rest	Rest	Rest	Rest	Rest	Rest	Rest
29	There is an agreed local strategy and plan for core GP IT infrastructure & software investment to meet the needs of (i) practice organic/incremental growth (ii) practice developments eg mergers (iii) significant primary care developments e.g. new builds	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
30	Within primary care locations Wi-Fi access is available to GPs and primary care delivery staff.	<95%	<95%	<75%	<95%	<95%	<95%	<75%	100%

Annex D – CCG Digital Maturity – Part 3

		Clinical Commissioning Group							
	Questions	West Lancs	Bwd	Gtr. Preston	E. Lancs	Chorley	Blackpool	Fylde & Wyre	Lancs. North
30	Within primary care locations Wi-Fi access is available to GPs and primary care delivery staff.	<95%	<95%	<75%	<95%	<95%	<95%	<75%	100%
31	Access to Wi-Fi services is available to general practice clinical staff across local commissioned provider locations	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
32	There is clearly defined Executive Leadership (CCG) to ensure that digital technology maturity is recognised as a key enabler to achievement of core objectives in the effective commissioning and delivery of quality health and care and future service transformation	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
33a	Formal governance and accountability arrangements clearly articulated and embedded, which effectively engage strategic partners, with terms of reference and reporting responsibilities clearly defined, including the following forums/structures	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
33b	The commissioner (CCG) owns the strategic digital direction and ensures that this is driven by local commissioning objectives	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
34.1	Commissioning of clinical services, routinely includes clinical (CCIO) consideration of digital technologies/systems, together with associated benefits	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
34.2	Service specifications for commissioning of clinical services, include core digital requirements, including, but not limited to data management and reporting, data security, data sharing, systems access, digital technology requirements	Yes	Yes	Yes	NO	Yes	Yes	Yes	No
35	Clear standing financial instructions must be established between commissioners and delivery organisations. Clear reporting, monitoring and review arrangements established to ensure CCG oversight of GPIT funding and expenditure, with clear escalation points agreed	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
36.1	CCG has secured a service that meets or exceeds the 'core' standards outlined in the GPIT Operating model/framework with clearly define local IM&T requirements in the form of a detailed service specification that will ensure local IM&T delivery partners are clear on service needs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
36.2	Negotiate and contract for IM&T services ensuring value for money through effective use of national framework contract (e.g. Lead Provider Framework - LPF) and procurement mechanisms in accordance with NHSE procurement rules	Yes	Yes	Yes	No	Yes	Yes	Yes	No
37.1	The CCG ensures that appropriate IG and information standards/requirements are clearly specified within any local IM&T service specification and associated service level agreement (SLA) and contractual arrangements with IM&T delivery partners. Able to evidence level 2 compliance for commissioned GPIT delivery partners	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
37.2	Currently NHS England are responsible for commissioning a local IG support service as described in section 6.4 - GPIT Operating Model. GP Practice IGT compliance is being monitored locally to ensure effective delivery of GP IGT support services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
37.3	IGT compliance is assured through the standard contractual routes with wider health economy providers	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
38.1	The CCG as local commissioner, through formal local governance arrangements, is responsible for ensuring benefit realisation from local investment in digital technology	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
38.2	Benefits are explicitly defined, tracked and captured within individual projects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
39	CCGs have appropriate mechanisms in place to effectively manage risks and issues in accordance with system wide procedures to help ensure the safe and successful delivery of outcomes associated with digital investment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
40	CCGs actively promote take up and utilisation of national strategic systems, such as SCR, e-Referrals, GP2GP, EPS2, Patient Online, to enable more integrated care across all care settings and achieve operational benefits for patients and clinicians	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
41.1	There is a comprehensive data quality advice and guidance service is available to all GPs, including training in data quality, clinical coding and information management skills	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
41.2	A formal and structured data quality accreditation programme is commissioned by the CCG and available for GP sites to ensure continuous review and improvement of data quality within General Practice	No	No	No	No	No	No	No	Yes
41.3	Calculating Quality Reporting Service (CQRS), General Practice Extraction Service (GPES), A proactive support service is in place locally to support Quality and Outcomes (QOF) data collection and reporting, which includes review, report management and remedial action planning, particularly around exception reporting, to ensure appropriate data quality within GP sites to enable effective QOF reporting	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Annex E – Social Care (Local Authority) Digital Maturity Assessment

The table below represents a local comparison of capabilities. The RAG assessment is assessed locally and **not** against any national benchmark scores (the assessment is drawn from a PDF output). Summary findings from the assessments are:

- Social care providers are broadly aligned with secondary care providers digital maturity
- The delivery of LDR paper-free trajectories will support increased digital maturity in social care
- Deployment of the LPRES solution will help improve maturity and propagation of the NHS number
- Blackburn with Darwen has identified gaps in the NHS number (standards section) for adults

	*RAG Rating		
Maturity Domain	Blackpool	Blackburn with Darwen	Lancashire CC
Strategic Alignment			
Leadership			
Resourcing			
Governance			
Information Governance & Management			
Records, Assessments & Plans			
Transfers of Care			
Decision Support			
Remote Assistive Technology			
Standards			
Infrastructure			

Key
Satisfactory level of maturity
Gaps in maturity or seeking to improve

Annex F – Information Sharing Approach - Lancashire

The table below outlines the capabilities trajectory associated with information sharing. It represents the on-going deployment of Lancashire's Health Information Exchange (LPRES), which is the enterprise solution for sharing records across public sector bodies, independent healthcare providers and directly with the citizen through apps and other online tools.