Driving a digital future

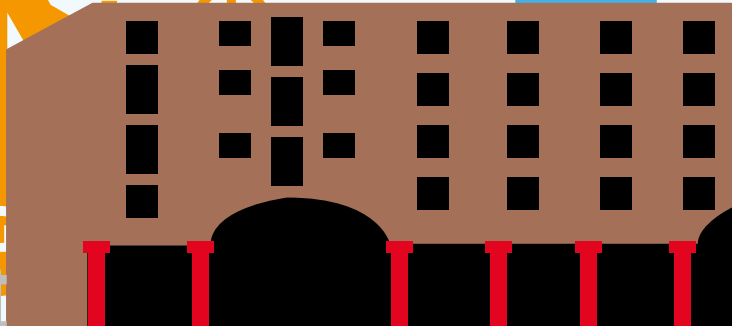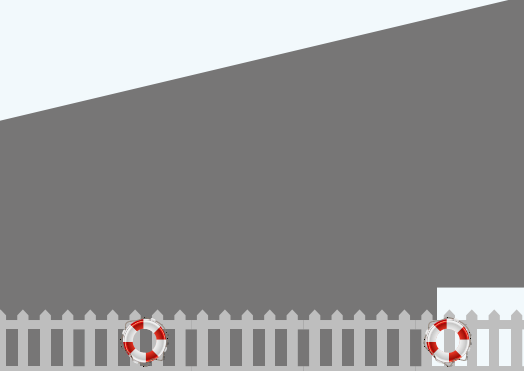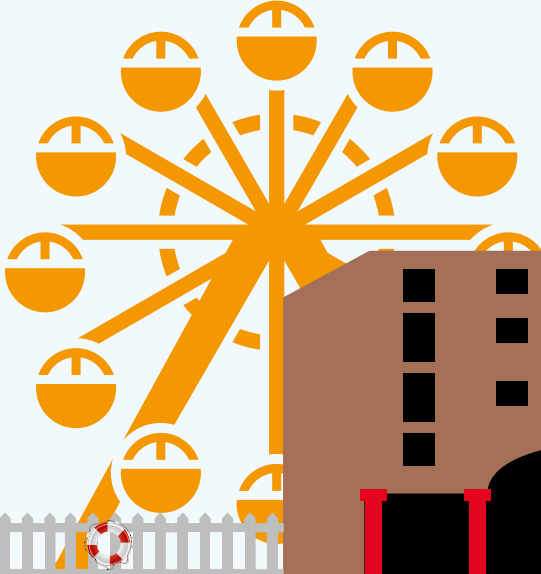## The Merseyside Digital Roadmap

2016 - 2021

Panoramic 34 is set 300 feet above sea level on the 34th floor of the West Tower in Liverpool City Centre and is one of the UK's highest restaurants. This celebrated fine dining restaurant is encapsulated by ceiling to floor windows offering breathtaking 360° views of the iconic River Mersey, city and region beyond.

Liverpool's Big Wheel is positioned on the piazza directly outside the ECHO Arena on Liverpool's historic waterfront. It includes 42 fully enclosed and air-conditioned capsules and offers riders spectacular views of the city including the River Mersey, the Welsh mountains and World Heritage Site waterfront.

Liverpool ECHO Arena opened in 2008 as part of the European Capital of Culture and is now one of Liverpool's premier entertainment venues hosting live music events and international sporting events.

Albert Dock is a complex of dock buildings and warehouses in Liverpool. Designed by Jesse Hartley and Philip Hardwick, it was opened in 1846, and was the first structure in Britain to be built from cast iron, brick and stone, with no structural wood. As a result, it was the first non-combustible warehouse system in the world. It is now home to museums, galleries and a huge range of venues to eat and drink.

The River Mersey is the lifeblood of Liverpool, shaping not just the waterfront contours but the very soul of the city. It stretches for 70 miles from Stockport to Liverpool Bay and for centuries marked the boundary between the historic counties of Lancashire and Cheshire. It gave its name to Merseybeat, the sound of Liverpool bands in the 1960s, and hit single Ferry Cross the Mersey by Gerry and the Pacemakers.

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I. Foreword

Merseyside stands out as a leader in digital care and innovation, with clinically led programmes held in high regard nationally and internationally. We have **significant achievements** with **ground breaking results** in information sharing, assistive technology and analytics delivering evidenced based patient outcomes and improved quality of care.

In Merseyside, there is a long established culture of clinical and managerial partnership approach to digital leadership. Our ethos of **'digital clinician'** unites all our staff from the various traditional digital fields around a focus on improving the health and wellbeing of the population we serve. The role of clinical leadership is paramount.

There is consensus that transformational change is necessary across all settings of care, with organisational sovereignty secondary to digital system change. Our digital leaders regularly spend time with their clinical partners shadowing delivery of day to day front line care. Deference to the front line experience drives our learning. This ensures that whatever we look to implement in the future is effective for patients and staff.

The development of this roadmap exploits the foundations laid over years of collaboration of local commissioners, providers and local authorities. Our digital relationships and leadership approach actively encourages **'digitally disruptive' conversations** and actions to drive forward change and innovation for the future.

In the development of the roadmap, we held a 'Digital Disruption Clinical Summit' where local clinicians, leaders, staff, academia and industry partners **all pledged their support and consensus** for our direction of travel.

Putting our citizens at the heart of everything we do, our aim for 2021 is to enable and empower individuals to take control of their own health and wellbeing.

We envisage a connected health and social care economy where individuals and professionals are supported by integrated systems. This will liberate them to make fully informed choices.

We will deliver three shared digital ambitions:

Digitally empowered individuals	A connected health and social care economy	Exploiting the digital revolution
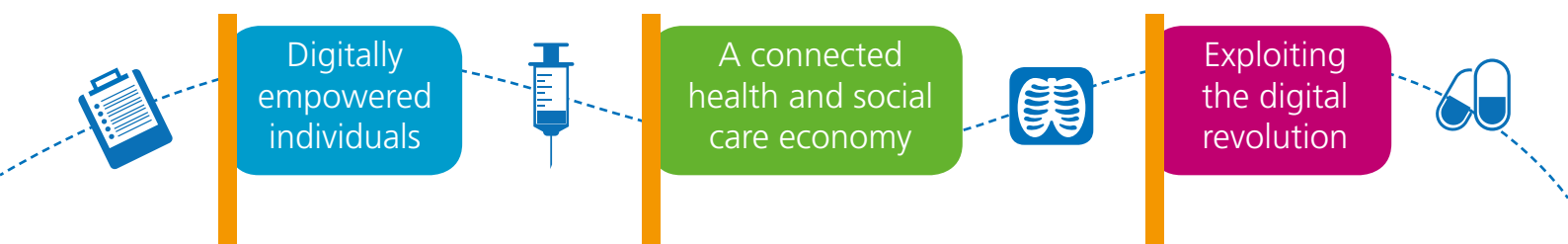
Through our **'Digital Top 10'**, we will deliver these ambitions and transform the way health and social care services are delivered through a seismic change in the use of digital technology and innovation.

2. Local context

2.1 Merseyside Local Digital Roadmap

The Merseyside Local Digital Roadmap (LDR) footprint represents the geographical areas of Halton, Knowsley, Liverpool, South Sefton, Southport and Formby and St Helens, with a population of c.1.2 million people. The Liverpool City region is resurgent, with a fast growing economy and a strong sense of optimism about the future and yet high levels of deprivation remain in parts of the region and people die younger than in other parts of England. Continued regeneration and closing the gap with other areas of the country is dependent on significant improvements in the health of our people.

The Merseyside LDR sits as one of four LDRs in the Cheshire and Merseyside Sustainability and Transformation Plan (STP). The STP is split into three Local Delivery Systems (LDS). The Merseyside LDR in this document spans six CCGs which sit within two of the LDSs within the STP. The LDR footprint does not, however, include all of the CCGs within the LDS footprints with one CCG submitting an individual LDR footprint.

The LDS' are noted below:
1. North Mersey (Liverpool, South Sefton CCGs)
2. The Mid Mersey Alliance (Halton, Knowsley, Southport and Formby, St Helens and Warrington CCGS).

NB Warrington is not part of the Merseyside LDR footprint.
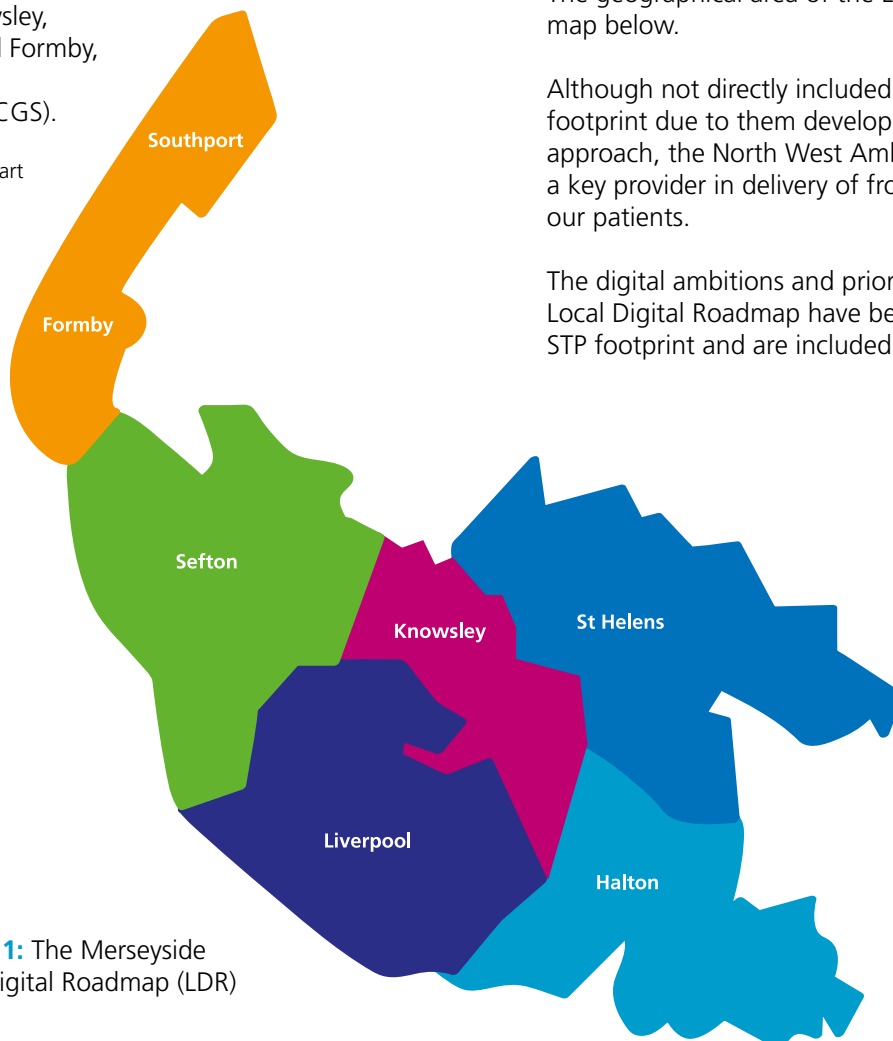
Merseyside has one of the most complex health and social care systems outside of London; with multiple providers, including three major adult acute trusts, a renowned children's hospital and real strength in our specialist services.

The commissioning landscape, and the scope of this LDR footprint is represented by six CCG commissioners – NHS Halton CCG, NHS Knowsley CCG, NHS Liverpool CCG, NHS South Sefton CCG, NHS Southport and Formby CCG, NHS St Helens CCG and, five local authorities – Halton, Knowsley, Liverpool, Sefton, St Helens and NHS England Specialised Commissioning.

This plan includes 13 provider trusts:
- Aintree University Hospital NHS Foundation Trust
- Alder Hey Children's NHS Foundation Trust
- Bridgewater Community Healthcare NHS Foundation Trust
- Clatterbridge Cancer Centre NHS Foundation Trust
- Liverpool Community Health
- Liverpool Heart and Chest Hospital NHS Trust
- Liverpool Women's Hospital NHS Trust
- Mersey Care NHS Foundation Trust
- Royal Liverpool and Broadgreen University Hospitals NHS Trust
- Southport and Ormskirk Hospital NHS Trust
- St Helens and Knowsley Teaching Hospitals NHS Trust
- The Walton Centre NHS Foundation Trust
- 5 Boroughs Partnership NHS Foundation Trust

The geographical area of the LDR is highlighted in the map below.

Although not directly included as a provider in this LDR footprint due to them developing a North West-wide approach, the North West Ambulance Service (NWAS) are a key provider in delivery of front line care services to our patients.

The digital ambitions and priorities as outlined in the Local Digital Roadmap have been aligned with the wider STP footprint and are included within the STP submission.

Figure 1: The Merseyside Local Digital Roadmap (LDR)

2.2 North Mersey Local Delivery System

The North Mersey health and social care system has a long track record of collaboration and a shared vision to achieve clinical and financial sustainability. There is strong consensus that transformational change is necessary across all settings of care, with boards putting aside organisational priorities in order to support system change for the benefit of our population. The North Mersey LDS Plan has been shaped through clinical leadership in Healthy Liverpool, the umbrella programme for hospital transformation, further strengthened by strong relationships with our local authorities around prevention and joining up health and social care.

While we have some excellent out of hospital services, many others are fragmented, lacking integration both within health and across health, social and the voluntary sector. North Mersey has high rates of emergency admissions which would be better treated out of hospital. We have to reduce unplanned hospital care if we are to succeed in our ambition to shift the balance towards a pro-active wellness system rather than a system which predominantly treats illness. We see primary care as the cornerstone of effective community services as it is an essential feature of all cost-effective healthcare systems, delivering improved outcomes at lower cost and with high patient satisfaction. In North Mersey, primary care is challenged by increasing demand and we have big variations in quality and capacity. Whilst Liverpool and Knowsley have good provision, with high primary care workforce capacity, South Sefton has one of the lowest levels of primary care workforce per head of population in the country.

North Mersey is the most complex health system outside London, with multiple providers across 7 hospital trusts including; two major adult acute trusts and four high quality specialist trusts including a children's hospital. The case for reconfiguration of hospital services is clear; we have too many providers, too much duplication and even triplication leading to unwarranted variation in the quality of care. To ensure clinical and financial sustainability we must find innovative ways to deliver better services at lower cost to create the financial and workforce capacity to enable a shift of care from acute to community settings. The current configuration of services, set alongside the challenge of delivering 7-day services, presents significant challenges for the funding, recruitment, retention and training of clinicians across all settings of care. The duplication of many services means that Trusts are competing against each other for scarce staff resources. We have an abundance of and a wide variation in the quality and functionality of NHS estate, despite significant investment, including the new Alder Hey Children's Hospital (£240m), Royal Liverpool University Hospital (£430m), new Mersey Care mental health facilities (£25m), the planned relocation of the Clatterbridge Cancer Centre to the Royal Liverpool Campus and the new Trauma Centre on the Aintree Hospital Campus. The current configuration of sites has been developed in a piecemeal way rather than by design.

The two new hospitals, the new Clatterbridge Cancer Centre, along with developments at Aintree and further north within Sefton, need to direct the shape of our hospital infrastructure for the next twenty years or more. North Mersey has a significant concentration of specialist hospital providers that collectively deliver a wide range of services to the value of circa £300 million per year to the city region, the North West and further afield into Wales and the Isle of Man. Working in partnership with NHS England specialist commissioning, our challenge will be to harness this collective strength and ensure these services are supported to develop further as regional centres of excellence.

The North Mersey LDS are looking at 5 key areas by which we will deliver the level of transformational change our system needs:

1. Hospital service reconfiguration
2. Demand management – out of hospital care
3. Population health
4. Digital first – delivery of our digital roadmap
5. Act as one system

North Mersey has an existing governance structure, as part of the Healthy Liverpool Programme. All providers and commissioners are members of the Healthy Liverpool Leadership Group, which is part of the formal programme governance structure.

Boards have been engaged throughout the process, both formally and informally. There is a plan to engage with boards formally from July 2016.

Healthy Liverpool has directly engaged 20,000 people on plans for physical activity, community services, hospital reconfiguration, urgent care and digital transformation. The LDS will include an integrated plan for continuous engagement over the next 5 years. Staff engagement is co-ordinated by a system-wide group delivering an integrated plan and single narrative.

There is a North Mersey Workforce Engagement Plan, which is cross-cutting around informing and engaging on all key programmes, as well as containing plans for specific service reconfiguration.

Royal Liver Building is a Grade I listed building in Liverpool, Merseyside. Built in 1911, it is located at the Pier Head and along with the neighbouring Cunard Building and Port of Liverpool Building is one of Liverpool's Three Graces, which line the city's waterfront. It is also part of Liverpool's UNESCO-designated World Heritage Maritime Mercantile City. One of the most recognisable landmarks in the city of Liverpool, the building is home to two fabled Liver Birds that watch over the city and the sea.
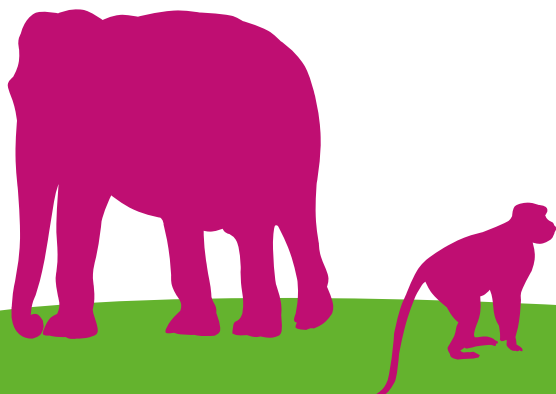
2.3 The Alliance Local Delivery System

The Alliance LDS serves approximately 900,000 patients who live to the East and North East of Liverpool in the boroughs of Knowsley, Halton, St Helens, Warrington, West Lancashire and Sefton. The Alliance footprint lies within the Liverpool City Region geography, and its constituent authorities are member of the LCR Combined Authority or Associates.

This population has significant challenges in terms of health and social care, with the following features:

- Fastest growing elderly population (up to 14.4% over 75 growth in the last 5 years and 25% over 85 growth in the next 5 years)

- The second highest per capita elderly population in England – Southport

- The second highest per capita admitting hospital in the North West – St Helens and Knowsley NHS Trust

- High morbidity and mortality (above the Merseyside, Cheshire and Merseyside and England averages)

- Variable health sector estates in hospital and community sectors

- Significant local authority cuts in funding over the last 5 years impacting on services

- Below establishment primary care provision

- Financially challenged trust provider sector

Whilst the organisations of the LDS have newly come together, there is a collective sense of purpose to meet the above challenges in a systematic and co-ordinated way. The three secondary care providers have federated to form a chain of providers to meet the sustainability challenge. Our community and mental health providers are working ever closer together to integrate their care provision with social care. The CCGs and local authorities are working to integrate service responses to these challenges within boroughs. Primary care which bears the brunt of patient access (95%) is evolving towards federated and locality ways of working with closer integration to community services.

Our plans to focus on out of hospital resilience, secondary care service transformation and re-design and "well being and prevention" will give us the best opportunity to meet the sustainability challenge.

The leadership of organisations within The Alliance have, and will, take an active role within the STP to ensure that our population benefits from the transformation of services needed to allow sustainability.

The Alliance will focus on three key areas of transformation:

1. Out of hospitals new models of care
2. Secondary care transformation
3. Wellbeing, prevention and self care

We will integrate services and core terms with a person centred approach. The LDR is key to enable these new models of care.

Knowsley Safari Park is a zoological park and tourist attraction in Knowsley, Merseyside. There is a long history of keeping animals on the Knowsley estate. In the 19th century Edward, the 13th Earl of Derby, kept one of the largest private menageries in the world with 90 species of mammals and 300 species of birds! As part of Knowsley's commitment to conservation, today's keepers are always on hand to talk about the work undertaken to protect the many species at the park, and the daily care that they give the animals.

Dream is located on the prominent summit of the former Sutton Manor Colliery in St.Helens, Merseyside. Commissioned by ex-miners and St Helens Council, the sculpture reflects the aspirations of the local community, who, far from wanting a mining monument, sought instead a forward-looking piece that would provide a beautiful, inspiring, contemplative space for generations to come.

3. A digital vision for Merseyside

By 2021, we will support better health and care for people in Merseyside by maximising the benefits of digital technology and innovation

Putting our citizens at the heart of everything we do, our ambition for 2021 is to enable and empower individuals to take control of their own health and wellbeing. In addition, we will ensure our health and social care professionals are equipped with all the digital resources they need to deliver safe, high quality and efficient care.

We envisage a connected health and social care economy where individuals and professionals are supported by integrated systems. This will liberate them to make fully informed choices. This digitally enabled culture allows innovative, efficient, safe and secure interactions.

We will create a permissive environment that facilitates use of both mainstream consumer devices yet nimble enough to adopt ever evolving technologies. This brings genuine self care to our citizens in a way that is convenient, unobtrusive and always co-designed.

We will transform the way health and social care services are delivered through a seismic change in the use of digital technology and innovation.

3.1 Digital ambitions

The Five Year Forward View sets out national challenges in relation to care and quality, health and wellbeing and finance and efficiency.

The Local Digital Roadmap guidance outlines four national digital themes which will contribute towards delivering these challenges:

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

The Merseyside LDR footprint has three shared digital ambitions for all organisations delivering health and social care services which together meet the national challenge and support the delivery of our STP. These are:

1. **Digitally empowered individuals**

2. **A connected health and social care economy**

3. **Exploiting the digital revolution**

Figure 2 highlights what these ambitions mean and how we will know if we have achieved them by 2021.

Figure 2: Digital ambitions

Digitally empowered individuals

- Enable people to utilise digital technologies to manage their own care.
- Enable people to take control and work in partnership in relation to their health and wellbeing.
- Ensure digital inclusion for all.
- Digital skills for workforce and citizens.

By 2021 citizens will be able to:

- Interact through a 'digital no wrong door' with their health and care services.
- Have online consultations with their care providers
- Book online appointments.
- Use their choice of device and app to manage their care
- Use assistive technology to manage their care and interact with professionals.
- Access information about their own health and conditions to support them to self care.

By 2021 our workforce will:

- Be digitally skilled with the appropriate technology and culture to enable rather than disable effective working through technology.
- Include professionalised Informatics staff accredited through the Information Skills and Development (ISD) Network.

A connected health and social care economy

- Ensure information is available to the right people, in the right place, at the right time.
- Improve care, quality and experience through delivery of paper-free at the point of care.
- Create and deliver an information exchange across health and social care.
- Reduce fragmentation and duplication.
- Eradicate unwarranted variation.
- Enhance care and quality, whilst ensuring greater system efficiency.

By 2021:

- Every health and social care practitioner will have the ability to directly access the information they need, in near real time, wherever it is held, digitally on a 24x7 basis.
- We will have further consolidated and rationalised our Electronic Patient Record systems moving to a direction of a common system for out of hospital care and a common system in our hospitals with interoperability between the two.
- Duplication and paper processes will be removed to make our front line practitioners' job easier rather than harder.
- We will have standardised, structured, digital clinical records across all providers in the pathways of care where it matters most.
- No patient will need to 'repeat' their story.

Exploring the digital revolution

- Exploit the benefits of existing and future technologies.
- Move towards 'intelligence led healthcare' by utilising advanced analytics, greater industrial partnership and engaging Information Governance as a structure for safe development rather than a blockage to progress.
- Move away from 'off the shelf' technology towards integrated R&D development with academic and industrial partners specifically around assistive technology and sensor development designed to address NHS issues.
- Build on the work of the North West Coast Genomic Medicine Centre to embed and normalise genomic medicine into heath and care services.

By 2021:

- Progress towards intelligence led services using a device agnostic intelligence centre to deliver patient telemetry and wider service intelligence allowing care to be delivered in the most efficient and effective manner.
- Standardised predictive analytics tools allowing for the identification of high resource users across the economy and early identification of episodes of care at a patient level.
- Emerging partnerships with the city regions universities allowing the development of increased digital skills through curriculum development for new clinicians and accessible training courses for experienced clinicians.
- Closer working relationships with academia and industry to take advantage of new, cutting edge innovation and expertise.
- Identification of sharing and best practice plus access to funding streams for the City region through links with Europe.
- Work with functional multi-omics pathways to enable advanced therapeutic innovation and enhanced clinical interpretation of whole genome sequencing.

3.2 Digital principles

In order to deliver this future state, the way in which we access, deliver and experience care services will be different. To support new ways of working in a digitally enabled environment, a set of principles have been developed by clinical and digital health and social care stakeholders across the economy. The principles outlined below build upon work undertaken with local economy health and social care organisations and industry partners and are key components to underpin the delivery of our LDR.

The endorsement of these design principles by all health and social care organisations is a key element of the delivery of our digital roadmap. Where appropriate, the principles will be incorporated into the procurement process to ensure that technology commissioned goes beyond the individual requirements of organisations and reflects the broader requirements of the digital roadmap footprint.

These principles sit at a strategic level, with a further level of detail and definition, to support delivery to be developed in line with organisational and economy-wide aspirations.

Figure 3: Digital principles

Person centred	Having the individual at the heart of care they receive, we will design our digital services around our people not around our organisations. People will only have to tell their story once.
Co-design	Digital services of the future are designed by and with the people who will be using those services ensuring an improved user experience for both patient, clinicians and practitioners.
Keep it simple	Simplify, simplify, simplify – create an amazing experience for staff by keeping it simple.
Digital leadership in partnership	Front line clinicians and digital clinicians will work in partnership with one another fostering excellent relationships. Digital leaders will 'walk the walk' with their clinical colleagues to ensure a deep level of understanding of the impact of their work. Relationships with external parties will be developed and commissioned effectively.
Share by default	When appropriate, we will share information by default asking how do we, rather than why can't we. We will sign up to the economy-wide sharing framework and agreement for record access, with options for patients to opt out. To build and sustain trust, we will ensure appropriate safeguards and audit systems are in place to monitor appropriate access to information.
Innovate	Working with industry and academia we will innovate and make best use of cutting edge technology. We will foster a 'bottom up' approach to innovation in the delivery of care.
Rationalise systems and interoperate	We aim to consolidate and rationalise Electronic Patient Record systems to achieve common systems across each care setting. We will seamlessly connect key systems together using a set of interoperability standards, ensuring that information is no more than 2 clicks of a mouse away for individuals giving them an intuitive, joined up service. Any future investment moves us closer to our strategy of reducing our systems in specified settings of care.
Gold standard digital maturity	All information is recorded electronically, consistently and contemporaneously at the point of care giving us a Gold Standard level of Digital Maturity across all health and social care organisations. We will record the data only once, with the correct information first time. We will reduce paper processes and reliance on faxing internally and externally between organisations and services.
Digital inclusion	We will support inclusion so that the digital opportunities are open to all who could benefit.
Digital skills	We will ensure increased digital skills for workforce and citizens to ensure maximum impact, effectiveness and inclusion.
Intelligence led healthcare	We will have an approach to intelligence led healthcare, supporting transformation and new models of care by utilising all appropriate forms of data to understand and predict when care will be needed, how it will be needed and identify those required interventions before the health need arises.

3.3 How will it feel different for our population and professionals?

People

The examples below centred on some key case studies and demonstrate how the above statements will translate into reality and feel different for our public. The case studies include an example(s) of a long term condition management and an example of self care. Both are key in terms of patient buy in, literacy and investment in the future.

Meet Joe

Joe is a 63 year old man who is a diabetic and has COPD. Joe is taken into hospital one evening due to increased shortness of breath. He has recently been seen by his GP who has been treating Joe's chest infection. Joe gives consent for AED staff at The Royal Liverpool University Hospital NHS Trust to see vital information contained within his shared record.

This enabled the care team to manage Joe's presenting symptoms in a more timely manner, whilst mitigating any possible clinical risks. Once Joe's health improved, the wider care team at the hospital were able to manage a safe early discharge by utilising telehealth patient telemetry. In addition to the key professionals involved in Joe's care package who can access Joe's Shared Care Plans, the health technology hub monitor Joe's vital signs specific to his condition and provide triage when needed. The data from the system can then be shared with the wider care team if Joe needs any further support. This enabled a collaborative approach across all of Joe's care providers, improving coordination of care and communication across the care team and reducing the number of times information is repeated and duplicated. Most importantly, Joe feels safe and in control. He is supported by technology providing professional support when it is needed and video education about his condition to help him self-care and manage his condition well, to stay independent and enjoy life.

Meet Dawn

Dawn is a 27 year old mother of two who is using technology to track and share aspects of her physical health information. After returning to work following maternity leave, Dawn set herself a goal of increasing her physical activity. Small changes such as walking instead of taking the car, using the stairs instead of the escalator made her feel much healthier. Dawn found that using her smart phone to record and track her weight, calories and step count helped her keep up momentum and stick to her new regime. This information now forms part of Dawn's Person Health Record, and is stored alongside her emergency health information. Should Dawn wish, her PHR can be shared with health and social care professionals seamlessly.

Professionals

With the implementation of the digital services model supporting new models of care through the wider system transformation across Merseyside, the way in which our professionals operate will be transformed by using and having access to digital technologies. The below brings this to life.

Meet Graham, Sarah and David

Graham, Sarah and David are professionals working in one of our Neighbourhood Teams. Graham is a Social Worker, Sarah a District Nurse and David is a GP. Being able to share records within the team has enabled them to care for patients differently and in a much more joined up way. The shared record and use of a consolidated EMIS system, has become a dynamic care plan aiding communications, preventing duplication, working in a joined up way and supporting a much more efficient patient journey. Everyone involved in the care of an individual can see EVERYTHING they need to make their contribution.

Meet Phil

Phil is a Doctor working in the Emergency Department in the new Royal. As part of the single service, City-wide delivery for hospital services, and to maintain his clinical skills, he rotates his shifts between the Royal and Aintree which are approximately 6 miles apart.
With the new IT systems in place, he can see a complete picture of his patients' medical and social care records at the click of a button. This allows him to ensure that he is aware of any key preferences which are particularly important in urgent care including information about resuscitation, mental capacity and end of life wishes.

4. The digital baseline in Merseyside

4.1 Key achievements to date

Historically in terms of digital strategies and approaches, the North Mersey and Mid Mersey systems have worked as independent health and social care economies. The process of digital development has been going on for many years. 2015/16 has offered an opportunity for a significant leap forward in terms of collaboration, cooperation and level of ambition. The development of the LDR has brought the two economies together with the alignment of vision and strategy to develop a combined approach and roadmap.

In 2013, engagement took place with stakeholders across the economy and in 2014 the iLINKS Strategy was launched. iLINKS is a shared strategy and programme across our LDR footprint whereby we aim to deliver information to all health and social care professionals at the point of care. One of the first priorities as part of the stakeholder work that was undertaken was for us to 'tackle the Information Governance' issues that prevent clinicians from having access to the information they need to treat an individual at the point of care.

Hale Head Lighthouse is located in the southernmost point in Lancashire. A lighthouse was established here in 1838; the original octagonal structure was superseded by a taller cylindrical tower in 1906.

We now have an overarching Information Sharing Framework which has been signed by all organisations in the local health and social care economy. In addition, we have a single Information Sharing Agreement which spans all of the organisations in this LDR. This means that we have a solid and robust foundation to build on.

In terms of clinical systems and levels of digital maturity in each area, our care settings and providers are at varying stages and levels.

Community Based Services (primary care, community, mental health, social care) have mixed levels of digital maturity across the LDR footprint. Primary care services have high levels of digital maturity and have largely consolidated onto a common clinical information system. There are high levels of digital maturity for community and mental health services and the adoption of a common clinical information system, which interoperates with primary care, for a significant area of the LDR footprint but challenges in other parts of the footprint. Similarly a common system for social care is in use for some but not all of the footprint. The direction of travel pan Merseyside is to exploit funding and other opportunities to further this approach through rationalisation and interoperability of systems.

From a hospitals perspective, there is an unnecessary variation in digital maturity with a significant amount of hospital based clinical notes at the point of care captured on paper. Diagnostics are captured digitally and some specialist Trusts have advanced electronic patient record systems. There are 7 different strategic clinical systems in use across 9 providers with limited interoperability across our hospital settings. Through a recently completed joint procurement of an Electronic Patient Record (EPR) with three of those providers, it is planned to reduce the number of different systems in use. Our aspiration, subject to securing funding, is to extend this approach across the footprint.

This provides us with a unique opportunity to have a direction of travel to implement an integrated EPR across our hospital providers that seamlessly links with community and social care. The single EPR will allow for a locally responsive NHS able to provide value for the public in its widest sense both economically and politically.

Digital services locally have been at the leading edge for several years (see figure 4 overleaf for key achievements to date).

Figure 4: Key achievements to date

World leading scaling up of electronic patient record sharing, with over **8.5 million shared records accessed** creating a seamless process and invaluable experience with no data losses or complaints.

130,000 Merseyside patients currently enabled to book online appointments with their GP surgery.

Across Merseyside an average of **76% of repeat prescriptions are sent online** between patients, GP practices and community pharmacies.

Joined up health and social care economy wide iLINKS strategy.

Unique, large scale collaboration of information sharing involving **164 stakeholder organisations** across the LDR footprint.

One of the largest deployments of telehealth in a single health economy in Europe (3000 patients).

Advanced risk based evaluation methodologies designed to identify the impact of technology, showing telehealth services reducing emergency admissions and associated costs by 22%-32%.

Technology on prescription by GPs.

Leading 'Person Held Record' systems currently being used as a test system with NHS England, HSCIC and the Government Digital Service to design online identity verification for patient record access at scale.

Award winning 'Smarthouse' technology demonstrators in the city to provide the public with access to health and care technology in a familiar setting.

50 digital hubs for free internet access and volunteer support 'digital champions' to train those wishing to access the internet.

An NHS led 'e-health cluster' with local SME digital companies supported to work with the NHS, its procurement systems and to support innovation.

A common PACS system across Cheshire and Merseyside providers with a global work list that enables seamless and secure digital image sharing across the region.

A shared instance of a radiology information system across the Cheshire and Merseyside region.

A joint Electronic Patient Record procurement across 3 hospital Trusts.

Rationalisation of Primary Care and significant proportion of community based services onto a single clinical system.

Liverpool City Region's eHealth Cluster Ltd is the **only SME-led eHealth Cluster in the UK** delivering a new model for providing practical support to the digital and care industry through collaborative working.

Knowsley Hall is a stately home near Liverpool in the Metropolitan Borough of Knowsley, Merseyside. Since 1953 it has been designated a Grade II listed building, and is the ancestral home of the Stanley family, the Earls of Derby. The hall is surrounded by 2,500 acres of parkland, which contains Knowsley Safari Park and is now used for functions such as corporate events, conferences and weddings.

Table 1: Digital maturity assessments

Capability group	National Average	Average scores across providers			
		Baseline Score (Feb 16)	Target (end 16/17)	Target (end 17/18)	Target (end 18/19)
Records, assessments and plans	44	52.6	64.4	75.0	87.0
Transfers of care	49	55	64.7	76.9	86.8
Orders and results management	52	59.8	64.3	77.7	84.0
Medicines management and optimisation	29	42.5	59.3	73.9	84.8
Decision support	36	42.4	50.8	65.9	81.2
Remote care	33	32	44.3	60.2	74.4
Asset and resource optimisation	42	37.9	53.0	68.1	79.7

4.2 Current initiatives

Across the Merseyside LDR footprint, we are working towards the reduction of the use of paper and faxes at the point of care. Whilst our goal is to be paper-free at the point of care, it is important to ensure that this is delivered in a meaningful way that adds value and provides benefits to the delivery of care. Paper free is a means to an end, not the end itself.

Current initiatives are detailed overleaf in figure 5. The list is not exhaustive.

4.3 Digital maturity assessments

Across the Merseyside LDR, providers of care have completed and submitted both national and local digital maturity assessments.

4.3.1 National digital maturity assessments

National digital maturity assessments have been undertaken by providers against a range of nationally defined capability groups. Table 1 above gives an average of the national baseline score of the 13 providers within this LDR footprint. It also demonstrates how we perform against national average and sets out our trajectory over the next three years. The maximum achievement score is 100.

Our baseline position for the national digital maturity assessments sets us higher than the national average with a number of digitally mature provider organisations. It is important to note that the assessments were subjective as a self assessment and provide a view of organisational readiness, as opposed to a reflection of how our front line clinicians use digital technology on a daily basis.

At the time of writing, national digital maturity assessment results for primary care and social care were not available, however they are a core part of our digital strategy and roadmap delivery.

4.3.2 Local digital maturity assessments

In addition to the national digital maturity assessments, we have undertaken a local digital maturity assessment of all providers. The intention of the local assessment was to understand the totality of our current readiness to share information through our Information Sharing Framework.

It has given us a reflection on the current levels of information captured digitally across our providers as a whole, and given us an indication of each organisation's capability to share information.

As a health and social care economy, we have high levels of digital maturity with a significant amount of information captured digitally in the following areas:

- Admission, discharge and transfer information
- Alerts and flags
- All tests
- Appointments / diary events
- Care package information
- Demographics
- Diagnoses
- Discharge plan
- E-correspondence
- Elective admission
- Estimated length of stay
- Expected date of discharge
- Full Diagnostic Record
- Full primary care record
- Medications
- Routine tests

Figure 5: Current initiatives

>> An economy-wide approach to information sharing through iLINKS.

>> Implementation of the Information Sharing Framework to all providers.

>> The interoperability of our current and future systems.

>> Development of systems in community settings to enable new models of care to be delivered effectively.

>> Procurement and implementation of hospital EPR.

>> Up-scaling of telehealth and near patient telemetry systems across the economy.

>> Implementation of new digital technologies in primary care to support new ways of working and 7/7 services.

>> Digital inclusion support networks and internet access hubs.

>> European-wide professional digital skills development.

>> Consolidated infrastructure programme.

>> Use of CCG contracts and CQUIN to commission digital care as part of provider contracts.

>> Standardisation of clinical records across all providers with structured, consistent work on codes and interoperability between systems.

>> A 'digital no wrong door' approach for our patients.

>> Engagement with the North West ISD Network for Digital Leadership networking and professionalism of informatics staff and accreditation of organisations.

>> Exploration of video, online and future digital e-consultation tools.

>> Implementation of mobile technology for primary care

>> Further rationalisation of community services onto a common clinical system (subject to funding).

>> Implementation of voice recognition for primary care and (subject to funding) across community services.

>> Advanced analytics programme to predict future healthcare resource requirements and patient level episodes of care.

>> Development of national pilot for online identity verification and access to records supported by self-care applications.

>> Development of state of the art sensors for advanced diagnostics and patient monitoring.

We have medium levels in the following areas with a portion of information captured digitally, although not always in a structured and coded way, often with handwritten records scanned into scanning systems:

• Allergies
• Care plans
• Full community and mental health record
• Health status prompts
• Significant past and current events

We have low levels in the following areas with the majority of information captured solely on paper:

• Full hospital record
• Hospital care plans
• Who else is involved in my care

This analysis demonstrates that we have key areas where our readiness to mobilise information across different organisations and settings is high, however there are building blocks and developments required over the next 3-5 years to improve this as an economy. There are areas of good practice across some organisations however we need to invest in staff and technologies to mainstream this as the norm.

Our aspirations are to improve outcomes for our population through increased levels of digital maturity in the future.

We want individuals to be healthier for longer, empowered and have ownership of their own life. Through an increase in digital maturity, we expect to see an improvement in patient care and experience, an increase in efficiency, quality and safety.

Our ambitions in relation to our digital maturity will enable us to truly see integration of health and social care information that will vastly improve communication between professionals and significantly reduce costs.

Increasing our levels of digital maturity in the future will enable us to remove paper, where is is not needed and eradicate the use of fax machines in our local services.

We will use local commissioning and contracting processes to continue to develop and drive up local digital maturity with providers.

Our rate limiting factors in this area include:

• Culture change

• Plethora of systems in use that do not talk to one another

• Pace of change required from industry and suppliers to meet local requirements ahead of challenging timeframes

• Traditional approaches to security and governance often disabling rather than enabling change

• Challenging financial climate

• IT systems that are not designed or accessible in an intuitive and user friendly enough way for clinicians working in hospital and community settings of care

• Potential disincentives for industry partners for open access and joint working

Aintree Racecourse in North Liverpool is home of the Grand National steeplechase, one of the most famous races in the world. Prior to the event being held at Aintree, the race was run in the nearby district of Maghull. Steeplechasing at Aintree was introduced in 1839, though flat racing had taken place there for many years prior to this. It is regarded as the most difficult of all courses to complete successfully, with 16 steeplechase fences including renowned obstacles The Chair, Valentine's, Canal Turn and Becher's Brook.

5. Our readiness to deliver

5.1 Leadership

Merseyside LDR is a complex health and social care economy, with its plurality of organisations and stakeholders. However, there is a **long established culture** of clinical and managerial partnership approach to digital leadership. Our ethos of **'digital clinician'** unites all our staff from the various traditional digital fields around a focus on improving the health and wellbeing of the population we serve. The role of **clinical leadership is paramount**. Each organisation has a clinical digital leader either at Governing Body level at CCGs or Board/Senior Management level in providers.

We have a collaborative and transformational approach between local commissioners and providers. There is also a strong consensus that **transformational change** is necessary across all settings of care, with organisational sovereignty secondary to digital system change. This is further strengthened by strong and innovative working relationships with local authorities around the prevention agenda and integrating of health and social care. Our digital relationships and leadership style actively encourage **'digitally disruptive'** conversations and actions to drive forward change and innovation for the future.

Clinical leadership in our digital work is a **major strength** in Merseyside. Both at economy level and internally within individual organisations, our clinicians are **extremely engaged** and lead our digital initiatives both strategically and operationally. We believe that the deep level of cohesive clinical leadership that has been developed and achieved is **unique** in any economy. This provides assurance that we have capacity and capability to deliver real transformational change to improve patient and citizen experience together with the quality and safety they require.

This body of individuals who represent a large part of the Caldicott guardian network have worked to produce a **robust sharing agreement** with meaningful audit which fulfils the requirements of Caldicott 2 and maximises the potential benefits of an economy wide Electronic Patient Record. They have a wide range of skills in clinical governance, IT and patient safety able to address and manage the risks of implementation. Developing our LDR has given a remarkable opportunity and given an importance around collaboration of identified priorities, where sharing of best practice can take place at pace and scale.

In terms of clinical leadership and engagement, our core digital principle is **co-design**. Our digital leaders regularly spend time with their clinical partners shadowing delivery of day to day front line care. Deference to the front line experience drives our learning. This ensures that whatever we look to implement in the future, it is effective for all users.

5.2 Governance

We have well established joint digital governance arrangements throughout the health and social care economy, both in terms of geography and themes through our iLINKS Programme. Within this governance we have a Programme Board which is made up of the constituent CCGs and NHS England with a remit to oversee delivery of our digital strategy. The Programme Board reports into the individual CCGs and provides an annual update to the relevant Health and Wellbeing Boards.

Sitting alongside the Programme Board is a Clinical Informatics Advisory Group (CIAG). The CIAG is attended by both clinical and managerial digital leaders from all providers, CCGs, local authorities, Academic Health Science Network and links to academia through Liverpool Health Partners. The group is vibrant and active and is fundamental in shaping up key pieces of work across the economy.

Risk management is undertaken through the iLINKS Programme Board and CIAG. Risks are shared with both groups and are regularly reviewed through the programme reporting arrangements. A detailed section on risks is included in section 10 of this document.

Sub Groups of the CIAG are convened as required with a smaller number of attendees to develop specific pieces of work.

A key principle of our governance is that all groups are clinically led and clinically chaired with managerial support working in partnership. This culture and approach has fostered strong relationships and partnership working with colleagues across the economy.

The terms of reference of the Programme Board and CIAG have recently been reviewed and amended to reflect the development and delivery of the LDR moving forward. The terms of reference are included at Appendix 1.

5.3 Change management

In order to achieve success, effective leadership, support and business change is essential. Our approach includes specialist expertise in supporting clinical programmes and service redesign, understanding key operational processes and how technology can play an enabling role.

Clinical and business change activities include a requirement for an effective benefits management process to support implementation to ensure that the measurement and reporting of benefits is undertaken to the levels of quality required by the iLINKS Programme Board.

The process to be undertaken to develop a robust benefits realisation management structure is as follows:

- Engagement will take place with each organisation to determine the most appropriate internal structure for identification and management of the benefits. This may align with structures associated with existing change projects or may require a new group to be formed.

- Any chosen structure will take into account the model and time-frames for implementation and deployment across the various settings of care.

- The Programme Team will be tasked with working with clinicians and practitioners to oversee the agreed benefits management structure to ensure that specific benefits plans are developed and managed.

Once the structure has been established, the clinical informatics and business change approach for the various groups will be based upon the following principles and ultimately be captured in a Benefits Realisation Plan which will:

- Document the benefits in more detail with clear and well defined baselines. These should be documented in a Benefit Profile for each benefit or combined into a single document known as a Benefits Register (which contains details about all the benefits). Each benefit must also have a benefit owner who is responsible for the realisation of the benefit.

- Quantify both cash releasing and non-cash releasing benefits and set clear targets and action plans for delivery (using specialist financial support where necessary).

- Set clear time-scales for the measurement and delivery of each benefit.

- Assign clinical and managerial responsibility for the delivery of benefits to named individuals.

- Undertake regular benefits review to assess performance against baseline and predicted values.

- Monitor qualitative and quantitative benefit performance at the Programme Team and Programme Board level to provide assurance that the benefits will be delivered as a result of this programme.

It should be recognised that benefits identification and realisation is a continuous process. The benefits identified in the strategy will need to be further developed throughout the life-cycle of the programme.

5.4 'The Digital Top 10'

In order to deliver the four national themes and our three local digital ambitions, in partnership with all stakeholders, we have developed a 'Digital Top 10'. These are broad approaches and programme delivery areas which we will adopt to deliver both national and local challenges. Please refer to figure 6 for a definition of the 'Digtial Top 10'. An outline programme plan can be found in table 2 overleaf.

5.5 16/17 plans

Throughout 2016/17, linked to our 'Digital Top 10', our programmes of work are broadly summarised in table 3. Due to the sheer scale of this LDR, this is not intended to be exhaustive but focuses on areas that sit across the economy as a whole or impact on multiple organisations. Individual organisations will have their internal plans to further increase their levels of digital maturity and move towards operating in a paper free environment.

Figure 6: 'The Digital Top 10'

1. **Joint Governance & Clinical / Managerial Digital Leadership Partnerships:** working together as one health and social care economy through joint governance and collaborative working with strong continued clinical leadership.

2. **All organisations commitment and pledge to the LDR digital principles:** all local health and social care organisations signing up to the principles as set out as part of our vision for digitally enabled transformation.

3. **Delivery of our Information Sharing Framework:** implementation, at pace and scale, of the single information sharing framework and agreement to all health and social care practitioners.

4. **Digital maturity transformation of all health and social care providers including primary care:** increased digital maturity of all providers adoption and use of digital technologies and standardised records at the point of care.

5. **Interoperability programme:** joining up of key systems in use across our economy to support achievement of the information sharing framework.

6. **Digital No Wrong Door:** a means by which patients can interact digitally and online with their health and social care services.

7. **Single Adult Acute Electronic Patient Record:** a direction of travel towards a common EPR in Adult Acute hospital services.

8. **Consolidated Infrastructure:** joining together of our infrastructure, where it makes sense to do so to enable staff to work across multiple sites and patients to interact with services easily.

9. **Significant Upscaling of Assistive Technology:** delivery of health technology in peoples' homes to support them to stay well at home.

10. **Advanced Analytics Collaborative:** a joint approach to maximise the potential benefits of predictive analytics.

Table 2: 'The Digital Top 10' outline programme plan

Digital Top 10	2016/17	2017/18	2018/19	2019/20	2020/21
Joint governance and clinical / managerial digital leadership partnerships	√				
All organisations commitment and pledge to the LDR digital principles	√				
Delivery of our Information Sharing Framework					
Digital maturity transformation of all health and social care providers including primary care					
Interoperability programme					
Digital no wrong door					
Single adult acute Electronic Patient Record					
Consolidated infrastructure					
Significant up-scaling of assistive technology					
Advanced analytics collaborative					

Table 3: 'The Digital Top 10' programmes of work

Digital Top 10	16/17 Activities	Date for completion
Joint governance and clinical / managerial digital leadership partnerships	Establish joint governance. Establish joint ways of working. Launch of LDR to 600 stakeholders at local iLINKS conference - launch document included at Appendix 2.	Completed April 16 Autumn 16 July 16
All organisations commitment and pledge to the LDR digital principles	Joint digital clinical / managerial leadership forum Commitment and pledge across all health and social care organisations in the footprint to the LDR digital principles	Completed April 16 September 16
Delivery of our Information Sharing Framework	Launch of patient communications complete - Patient communications included at Appendix 3. Mobilisation of priority areas in provider organisations using technical capabilities achieved through the interoperability programme. Delivery of single sharing agreement. Implementation of economy wide e-learning package. Implement proactive audit.	June 2016 Significant progress by April 17 Winter 16 Winter 16 Winter16
Digital maturity transformation of all health and social care providers including primary care	Maximisation of existing EPR and clinical systems to facilitate joint team working in community and single service teams in hospitals. Develop provider system optimisation plans to meet digital maturity trajectory ambitions. Agree Implementation plans at the Digital Leadership Forum. Building on current digital maturity CQUINS for 16/17, adopt a common for all providers / CCGs in the LDR footprint for 17/18.	Improvement in national and local digital maturity for all providers by April 17
Interoperability programme	Ramping up our interoperability programme with the main principle suppliers in the local health and social care economy. Deliver point to point interoperability between EMIS and provider organisations to support the mobilisation of the iLINKS Tiered Sharing Model. Develop the Information Exchange Enterprise architecture blueprint for Merseyside.	Significant progress by April 17 April 17 Winter 16
Digital no wrong door	Multi-agency approach to 'no wrong door' access to common health and social care services supported by advanced digital technologies including online identity verification. Implementation of Citizen ID Project.	Scope and approach understood by April 17
Single adult acute electronic patient record	Implementation planning for the deployment of a single hospital EPR spanning multiple hospital providers.	Plans to be agreed by Winter 16
Consolidated infrastructure	Identification of areas for consolidated infrastructure across the footprint.	April 17
Significant up-scaling of assistive technology	Telehealth procurement and implementation.	Autumn 2016
Advanced analytics collaborative	Advanced analytics collaborative between commissioners and providers to leverage predictive intelligence on resource usage and patient interaction with services.	Group to be established Winter 16

5.6 Delivery model

Delivery of digital services across the LDR footprint is varied. A significant number of providers have in-house support services and a number of other organisations have their services provided through a shared service model. Within the LDR footprint, there are two shared services delivering services to a range of organisations.

Opportunities clearly exist for digital delivery and support services to collaborate, streamline and make improvements to better support shared care across the footprint and ultimately to improve patient outcomes and experience.

5.7 Sources of investment

To ensure that 'paper-free at the point of care' is a deliverable outcome, the Merseyside LDR focusses on funding the drivers of efficiency and service improvement that result in paper free, as these activities are either currently funded, can be aligned with current spend or can attract other sources of funding.

The table below indicates known, anticipated and target sources of funding, some of which is naturally forecasted where reinvestment of expected efficiency gains are anticipated.

The approach to resourcing activity is determined by the requirement for sustainability balanced against risk and interdependencies of other elements of the health economy. Fundamental requirements such as electronic patient records require sustainable funding sources whereas innovative development may attract external, time limited funding in order to de-risk the initial development. The Merseyside digital footprint is sufficiently mature in this respect to balance the resourcing equation.

Outlined below are the high level activity and resource type table and the detailed funding estimate providing forecasted investment amounts for the 2016/17 to 2020/21 period.

The growing economical challenges across all public services will require an innovative approach to attract resources and funding to support the delivery of the Local Digital Roadmap. Therefore the Merseyside economy must seek synergies with a broader range of programmes and transformation initiatives, in order to align delivery of shared outcomes and maximise funding and make efficiencies. Collaborating across a broader programme set, we will endeavour to utilise and support the delivery of transformational change programmes through strategic alignment. Such programmes are vanguards, Connected Health Cities, 100,000 Genomes Project, Northern Health Sciences Alliance and PACS.

Table 4: Investment sources

Digital Top 10 initiatives	Funding Type	Funding Source
Joint governance/ leadership	Known	Local provision funded through BAU activity and CQUIN investment.
Sharing framework	Known/ Anticipated	Combination of known support from Trusts and development funds from National Driving Digital Maturity Investment Fund, STP and local efficiency gains.
Digital maturity	Known/ Anticipated	Local provision funded through BAU activity and CQUIN investment; National Driving Digital Maturity Investment Fund and Estates and Technology Transformation Fund.
Interoperability	Known/ Anticipated/ Target	Interoperability activity on a smaller scale is funded locally via GPIT, DDMI and Estates and Technology Transformation Fund.
Digital no wrong door	Known/ Target	Combination of some localised activity supported by de-risk targeted funding from other sources (innovation/ESIF etc) and Estates and Technology Transformation Fund.
Electronic patient record	Known/ Anticipated	Currently known for phase one providers. Future phase providers based on local investment, STP and National Driving Digital Maturity Investment Fund
Assistive technology	Known/ Target	Local funding supported by innovation funding from multiple sources. Upscaling investment via Estates and Technology and National Driving Digital Maturity Investment Fund.
Consolidated infrastructure	Known/ Target	Combination of known support from trusts and development funds from National Driving Digital Maturity Investment Fund, Estates and Transformation Fund and local efficiency gains.
Advanced analytics	Known/ Target	Local funding supported by innovation funding from multiple sources.

6. Paper-free at the point of care… or is it?

6.1 Paper-free at the point of care - what do we really mean?

'Paper-free at the Point of Care' by 2020 is a **national NHS ambition**. This is an ambition which we wholeheartedly share within the Merseyside LDR footprint. Our work with front line teams and digital clinicians has led us to a better understanding of what we really mean by 'paper-free at the point of care'. If we simply digitise the systems, paper and processes that we currently have in place, there is a risk that we 'hit the target and miss the point'.

The point is that our strategic aim is to improve the quality, safety and patient experience by **eliminating paper processes** and records that cause inefficiency and delays in care.

Achievement of this goal across Merseyside is predicated on the knowledge and understanding gained through **driving change at the point of care** and listening to those front line staff responsible for that delivery. Based on this, our paper-free transformation will be centred on improving care by providing the right tools, information and technology at the front line.

Scanning in handwritten records and faxing information around our health and social care economy are an approach of the past in Merseyside. Initially we may journey into **"paper light"** if clinically justifiable risks to our aims are identified. Equally, we won't allow or avoid challenging any clinical intransigence that delays improvement in patient care.

By doing this, we focus on the aim which all Trusts, services and staff unite to achieve: better patient care. Paper free becomes a natural by-product of this process.

When talking about paper-free at the point of care, we define this as:

- Empowerment of patients to access records and support their own decision making.
- Electronic access to information for practitioners with ease of use, access and ability to share to make the care of patients easier, faster and more efficient.
- Enablement of patient interaction with clinicians.
- Removal of duplication and fragmentation in care via ruthless standardisation of pathways.
- Interoperability of systems to support sharing of structured records.
- Information displayed succinctly in a unified format.

6.2 Paper-free at the point of care national capability groups

Within the national Digital Maturity Assessments and LDR guidance, there are 7 paper-free at the point of care groups of capabilities as noted below:

1. Records, assessments and plans: ability to record patient/client/service user information in a structured electronic format which can be shared.

2. Transfers of care: facilitate the transfer of a patients care between health and social care settings in an electronic form.

3. Orders and results management: ability to electronically order diagnostic tests for an individual with results being reported to the requester in an electronic format.

4. Medicines management and optimisation: utilising capabilities to safely and effectively prescribe and dispense medications through the use of technology.

5. Decision support: providing health and social care professionals with access to the information they need at the point of care (both patient level and professional evidence based resources) with capability to alert based upon risk.

6. Remote care: provide patients with the ability to remotely access their records, book appointments and take control of their care via the use of technology.

7. Asset and resource optimisation: utilising technology to support to manage the effective use of resources (e.g. staff, bed status, assets).

6.3 Current local provider analysis by capability group

Table 5 opposite demonstrates a summary of all providers in the Merseyside LDR footprint and their baseline level of digital maturity by capability grouping in accordance with the national digital maturity self assessments as at February 2016. The maximum achievement score is 100.

Although primary care and social care are fundamental component parts of the LDR, at the time of writing, the national digital maturity assessment results for those settings of care were not available and are therefore not included in this section of the LDR.

6.4 Planned capability deployment trajectory

The tables overleaf demonstrate the planned trajectory for providers over the next three years to demonstrate an increase in digital maturity levels. A number of our providers are working towards Healthcare Information and Management Systems Society (HIMMS) Levels 6 and 7 digital maturity which supports our economy wide approach to local, national and international digital maturity aspirations.

NB: Liverpool Community Health as a provider is currently in a process with NHS Improvement whereby the organisation will transact to another provider or providers in 2017. Therefore, digital maturity trajectory may change over time when a new provider or providers are in place.

Table 5: Baseline - February 2016

Provider	Records Assessments & Plans	Transfers of Care	Orders and Results Management	Meds Man	Decision Support	Remote Care	Asset & Resource Optimisation
Aintree University Hospital NHS Foundation Trust	59	87	88	66	43	17	60
Alder Hey Children's NHS Foundation Trust	49	53	65	57	50	50	45
Bridgewater Community Healthcare NHS Foundation Trust	64	53	47	43	61	50	0
Clatterbridge Cancer Centre NHS Foundation Trust	64	No Score	50	72	33	25	15
Liverpool Community Health	18	6	No Score	10	No Score	No Score	No Score
Liverpool Heart and Chest Hospital NHS Trust	67	88	94	63	63	42	60
Liverpool Women's Hospital NHS Trust	68	74	71	69	44	33	65
Mersey Care NHS Foundation Trust	65	35	19	7	11	42	15
Royal Liverpool and Broadgreen University Hospitals NHS Trust	51	84	93	74	67	33	60
Southport and Ormskirk Hospital NHS Trust	49	74	30	24	63	17	45
St Helens and Knowsley Teaching Hospitals NHS Trust	31	34	70	7	3	25	15
The Walton Centre NHS Foundation Trust	62	57	63	54	60	50	65
5 Boroughs Partnership NHS Foundation Trust	37	15	27	6	11	0	10
Provider Average	**53**	**55**	**60**	**42**	**42**	**32**	**38**

Table 6: Provider Trajectory - 2016/2017

Provider	Records Assessments & Plans	Transfers of Care	Orders and Results Management	Meds Man	Decision Support	Remote Care	Asset & Resource Optimisation
Aintree University Hospital NHS Foundation Trust	59	87	88	66	43	17	60
Alder Hey Children's NHS Foundation Trust	67	60	80	72	55	62	68
Bridgewater Community Healthcare NHS Foundation Trust	70	60	60	43	61	50	15
Clatterbridge Cancer Centre NHS Foundation Trust	75	50	75	80	50	50	80
Liverpool Community Health	36	29	8	32	40	43	30
Liverpool Heart and Chest Hospital NHS Trust	71	90	95	70	66	47	75
Liverpool Women's Hospital NHS Trust	72	79	78	77	47	36	71
Mersey Care NHS Foundation Trust	70	40	25	20	20	54	20
Royal Liverpool and Broadgreen University Hospitals NHS Trust	60	87	95	74	75	40	60
Southport and Ormskirk Hospital NHS Trust	49	80	40	24	63	20	55
St Helens and Knowsley Teaching Hospitals NHS Trust	67	88	90	76	69	42	65
The Walton Centre NHS Foundation Trust	80	60	75	54	60	65	75
5 Boroughs Partnership NHS Foundation Trust	51	55	27	6	22	10	15
Provider Average	**63.6**	**66.5**	**64.3**	**53.4**	**51.6**	**41.2**	**53.0**

Table 7: Provider Trajectory - 2017/2018

Provider	Records Assessments & Plans	Transfers of Care	Orders and Results Management	Meds Man	Decision Support	Remote Care	Asset & Resource Optimisation
Aintree University Hospital NHS Foundation Trust	65	90	91	75	50	40	60
Alder Hey Children's NHS Foundation Trust	82	80	92	84	73	85	83
Bridgewater Community Healthcare NHS Foundation Trust	80	75	75	65	65	60	45
Clatterbridge Cancer Centre NHS Foundation Trust	90	75	90	90	75	75	90
Liverpool Community Health	38	31	9	33	42	44	32
Liverpool Heart and Chest Hospital NHS Trust	80	93	95	75	70	60	80
Liverpool Women's Hospital NHS Trust	80	83	84	83	53	40	78
Mersey Care NHS Foundation Trust	90	75	80	75	75	84	65
Royal Liverpool and Broadgreen University Hospitals NHS Trust	70	90	97	85	90	54	65
Southport and Ormskirk Hospital NHS Trust	60	100	100	80	75	40	80
St Helens and Knowsley Teaching Hospitals NHS Trust	74	88	90	79	75	52	72
The Walton Centre NHS Foundation Trust	90	80	80	80	100	90	90
5 Boroughs Partnership NHS Foundation Trust	68	74	27	42	42	32	45
Provider Average	**74.4**	**79.5**	**79.1**	**75.2**	**68.1**	**58.2**	**68.1**

Table 8: Provider Trajectory - 2018/2019

Provider	Records Assessments & Plans	Transfers of Care	Orders and Results Management	Meds Man	Decision Support	Remote Care	Asset & Resource Optimisation
Aintree University Hospital NHS Foundation Trust	80	95	95	85	85	75	75
Alder Hey Children's NHS Foundation Trust	98	95	99	97	97	98	97
Bridgewater Community Healthcare NHS Foundation Trust	90	90	90	85	70	70	60
Clatterbridge Cancer Centre NHS Foundation Trust	100	100	100	100	100	100	100
Liverpool Community Health	40	32	9	34	44	44	33
Liverpool Heart and Chest Hospital NHS Trust	95	96	97	88	85	75	95
Liverpool Women's Hospital NHS Trust	97	88	90	89	60	44	86
Mersey Care NHS Foundation Trust	98	90	90	90	90	94	75
Royal Liverpool and Broadgreen University Hospitals NHS Trust	85	95	100	95	100	70	75
Southport and Ormskirk Hospital NHS Trust	100	100	100	100	100	100	100
St Helens and Knowsley Teaching Hospitals NHS Trust	78	92	95	82	80	63	80
The Walton Centre NHS Foundation Trust	100	90	100	95	100	100	100
5 Boroughs Partnership NHS Foundation Trust	68	74	45	90	67	50	60
Provider Average	**86.8**	**87.5**	**85.4**	**86.9**	**82.9**	**75.6**	**79.7**

6.5 Capability deployment schedule

The capabilities and outcomes we ultimately expect to achieve, mapped against the national capability groups over the next three years are:

- All health and social care professionals have access to the information they need at the point of care by 2017/18 (records, assessments and plans; transfers of care).

- All health and social care professionals record clinical information in a consistent way, digitally, at the point of care (community, hospital) by 2018/19 (records, assessments and plans; transfers of care; remote care; asset and resource optimisation).

- All clinical correspondence between professionals caring for patients is sent digitally and integrated into core clinical systems by 2017/18 (records, assessments and plans; transfers of care; orders and results management).

- Community care teams can work as a team around individuals they are caring for with technology that "just works" by 2017/18 (records, assessments and plans; transfers of care; medicines management and optimisation; remote care; asset and resource optimisation).

- Individuals interact with their care services digitally should they choose to by 2018/19 (records, assessments and plans).

- Acute clinicians have early warning of patients that are deteriorating by 2018/19 (decision support).

- All clinicians can order diagnostic test electronically and view share diagnostics results around a patient by 2016/17 (records, assessments and plans; transfers of care; orders and results management).

- Single service teams have a single EPR to operate as a team by 2018/19 (records, assessments and plans; transfers of care; medicines management and optimisation; remote care; asset and resource optimisation).

6.6 How do we plan to get there?

Across the Merseyside LDR and the North Mersey and Alliance LDS footprints, providers are at different starting points of digital maturity, deployment of systems and adoption of technologies at the point of care.

Our **'Digital Top 10'** frame the headline areas of how we plan to deliver our trajectory, with particular reference to '**Digital Maturity Transformation** of all health and social providers including primary care', '**Interoperability**' and the '**Single Adult Acute Electronic Patient Record**'.

6.6.1 Electronic Patient Records and Interoperability

High quality electronic patient records are a key component to our digital ambitions for both empowered individuals and a connected health and social care economy. There is **huge imbalance in what is digitally captured** as clinical records across providers / settings / sectors.

In our hospitals, there is also huge variation in the procurement and implementation of EPR systems. Our strategic aim is to have a **common EPR** for all adult acute services, **seamlessly linked** with children's acute services, community based services and social care. This is seen as a key enabler for providing safe, efficient, flexible, patient-centred and cost effective care.

As well as providing the single hospital patient record, the EPR system will **collate clinical functions** currently delivered in disparate systems into a single system. Further to this, the EPR system will deliver new functionality such as clinical decision support, patient alerts, clinically coded documentation determined at the point of data entry, real time reporting, and patient record sharing with primary care.

In our community settings, we have consolidated onto a **single system supplier** across a significant part of the footprint area. Our strategic aim is to build on this further over the next three years to drive up digital maturity in out of hospital based care and provide further foundations to deliver high quality patient care.

This approach within our hospitals and community will not only enable the levels of digital maturity in our economy to thrive but it will deliver the level of service transformation articulated through our STP and support our digital ambition to truly **exploit the digital revolution**.

Our plan is to **close the gap in variability** and achieve equality across all our providers' digital capabilities. This will be attained using the following objectives:

- Information across all providers to be recorded in a consistent, structured and coded way with a ruthlessly standardised set of consistent clinical forms/templates to be used across all providers of care.

- Clinical systems designed in such a way for staff to collect the information easily with digital glue to join up organisations.

- Process change in providers to read and write into electronic health records contemporaneously.

- Further reduce the variation in EPRs and implement a single EPR system across a number of our hospital providers.

- Further exploit current systems in out of hospital settings.

- Enable sharing through true interoperability of systems across settings and pathways of care.

6.6.2 Digital maturity transformation of all health and social care providers

Lead commissioners for each provider organisation will have sight of their digital maturity plans and supporting investment proposals to provide assurance both that plans are deliverable and aligned with the principles of this LDR. Work will be undertaken to align trajectories through contractual requirements and maximise CQUIN opportunities in the future.

There are detailed plans for all 13 providers within this LDR, by capability group, our significant current and planned initiatives to **drive up our levels of digital maturity** and achieve paper-free are outlined below mapped with the capabilities we expect to achieve.

As required through the LDR guidance, a detailed capability deployment schedule and capability deployment trajectory are included in Appendices 4 and 5.

Through delivering our ambitions, the future will feel very different for our staff and citizens. Our effectiveness will be measured in patient safety, improved quality and outcomes and a better patient experience. Like all truly embedded digital transformations, it will become **invisible to the user** as this becomes simply the way we conduct healthcare.

1. Records, assessments and plans

Current Initiatives	Planned Initiatives
Out of Hospital • EMIS rationalisation across primary care • EMIS rationalisation across community • Patient online approach In Hospital • Individual Trust Digital Strategies • Joint EPR procurement • Digitisation of clinical notes • Enhancement of current processes and systems in some providers Cross Health and Social Care Economy • Single instance of ICE to facilitate diagnostics sharing	Out of Hospital • RiO implementation in Mersey Care NHS Foundation Trust and 5 Boroughs Partnership NHS Foundation Trust • Further EMIS roll-out in community services • Standardised templates across community care In Hospital • Single EPR implementation • St Helens and Knowsley Trust PAS, order comms and A&E system replacement • EPACCS pan Merseyside • Standardised templates across hospitals Cross Health and Social Care Economy • Common PACS system re-procurement • Interoperability Programme
Outcomes / Capabilities • All health and social care professionals have access to the information they need at the point of care by 2017/18. • All health and social care professionals record clinical information in a consistent way, digitally, at the point of care (community, hospital) by 2018/19. • All clinical correspondence between professionals caring for patients is sent digitally and integrated into core clinical systems by 2017/18. • Community care teams can work as a team around individuals they are caring for with technology that "just works" by 2017/18. • Individuals interact with their care services digitally should they choose to by 2018/19. • All clinicians can order diagnostic tests electronically and view share diagnostics results around a patient by 2016/17. • Single Service Teams have a single EPR to operate as a team by 2018/19.	

2. Transfers of care

Current Initiatives	Planned Initiatives
Out of Hospital • EDS consumption process optimisation (EMIS work-flow enhancements) • Managed referrals from primary care into community care teams • Maximisation of GP2GP transfer **In Hospital** • EDS from Secondary care into Primary Care **Cross Health and Social Care Economy** • E-Referrals from Primary Care into Secondary Care	**Out of Hospital** • Uplift in e-referrals usage • Electronic Referrals from primary care into Local Authority • Electronic referrals from community into Local Authority **In Hospital** • Move to structured CDA from providers (transfer of care spec) • Electronic work-flows and structured clinical data capture **Cross Health and Social Care Economy** • Unify messaging hub approach across Merseyside • EDS from secondary care into council • EDS from secondary care into community • Electronic referrals from secondary care into community care teams • Interoperability Programme
Outcomes / Capabilities • All health and social care professionals have access to the information they need at the point of care by 2017/18. • All health and social care professionals record clinical information in a consistent way, digitally, at the point of care (community, hospital) by 2018/19. • All clinical correspondence between professionals caring for patients is sent digitally and integrated into core clinical systems by 2017/18. • Community care teams can work as a team around individuals they are caring for with technology that "just works" by 2017/18. • Individuals interact with their care services digitally should they choose to by 2018/19. • All clinicians can order diagnostic test electronically and view share diagnostics results around a patient by 2016/17. • Single service teams have a single EPR to operate as a team by 2018/19.	

3. Orders and results management

Current Initiatives	Planned Initiatives
Out of Hospital • Use of ICE to request and review diagnostic tests across all providers **In Hospital** • Unified access to diagnostic tests across hospitals • PACS imaging across Cheshire and Merseyside • Digital order comms extensively used in some providers **Cross Health and Social Care Economy** • Single information sharing agreement	**Out of Hospital** • Widespread adoption in community and out of hospital teams **In Hospital** • PACS re-procurement • Cardiology Imaging incorporation into PACS model • Digital order comms fully deployed for all providers **Cross Health and Social Care Economy** • Single approach to diagnostics information sharing through single instance of ICE
Outcomes / Capabilities • All clinical correspondence between professionals caring for patients is sent digitally and integrated into core clinical systems by 2017/18. • All clinicians can order diagnostic tests electronically and view share diagnostics results around a patient by 2016/17.	

4. Medicines management and optimisation

Current Initiatives	Planned Initiatives
Out of Hospital • Primary care medicines management – utilisation of digital tools to support prescribing In Hospital • EPMA rolled out across hospital Trusts • Medicines and allergies reconciliation through information sharing • All systematic anti-cancer treatment for cancer patients in the footprint are prescribed electronically	Out of Hospital • EPMA roll-out in Mersey Care NHS Foundation Trust • MMT access to shared records In Hospital • Sharing Framework roll-out across secondary care (GP medication) • Pharmacy teams access to shared record • EPMA in use in all areas of all providers • Continued achievement of 100% compliance with National Chemotherapy Advisory Group and cancer peer review measures for prescribing of complex chemotherapy treatment protocols
Outcomes / Capabilities • Community care teams can work as a team around individuals they are caring for with technology that "just works" by 2017/18. • Single service teams have a single EPR to operate as a team by 2018/19.	

5. Decision support

Current Initiatives	Planned Initiatives
Out of Hospital • Maximisation of primary care protocols and concepts embedded in clinical systems In Hospital • Clinical observations captured digitally • Electronic early warning system • Sepsis and critical illness alerting Cross Health and Social Care Economy • Child protection information included in national summary care record	Out of Hospital • Further maximisation of primary care protocols and concepts embedded in clinical systems In Hospital • Clinical observations integrated into Electronic Patient Record Systems • Joint EPR deployment including decision support software Cross Health and Social Care Economy • Child protection information included in national Summary Care Record • Integrated 'lab in a bag' • Better use of technology to support multi site and multi organisational pathways
Outcomes / Capabilities • Acute clinicians have early warning of patients that are deteriorating by 2018/19.	

Pickerings Pasture is a local nature reserve in Widnes, Merseyside. It has acres of wild-flower meadows and wide views across the River Mersey. Until the 1950s the area was a salt marsh, grazed by cattle and home to wading birds and estuary plants. For the next 30 years however, the site was used as an industrial and household waste tip and a mountain of refuse built up on the salt marsh. The land was reclaimed in the 80's by Halton Borough Council and is now a haven for wildlife and holder of the Green Flag Award.

6. Remote care

Current Initiatives	Planned Initiatives
Out of Hospital • Telehealth deployment • Telecare deployment • EMIS Mobile In Hospital • Mobile working for provider clinicians • Virtual clinics in limited specialty areas	Out of Hospital • Up-scaling assistive technology to increase patient adoption and wider disease pathways • Use of video and online consultations In Hospital • Virtual consultations with patients • Virtual clinical in broader clinical areas
Outcomes / Capabilities • All health and social care professionals record clinical information in a consistent way, digitally, at the point of care (community, hospital) by 2018/19 • Community care teams can work as a team around individuals they are caring for with technology that "just works" by 2017/18. • Single service teams have a single EPR to operate as a team by 2018/19.	

7. Asset and resource optimisation

Current Initiatives	Planned Initiatives
In Hospital • Patient flow tracking • E-staff rostering • Use of white boards to manage patient state	In Hospital • Patient flow tracking • Location of clinical assets • E-Staff rostering • Unified order sets on admission
Outcomes / Capabilities • All health and social care professionals record clinical information in a consistent way, digitally, at the point of care. • Community care teams can work as a team around individuals they are caring for with technology that "just works" by 2017/18. • Single service teams have a single EPR to operate as a team by 2018/19.	

The Silver Jubilee Bridge crosses the River Mersey and the Manchester Ship Canal at Runcorn Gap between Runcorn and Widnes in Halton, Merseyside. It is a through arch bridge with a main arch span of 1,082 feet (330 m). It was opened in 1961 as a replacement for the Widnes-Runcorn Transporter Bridge, and was initially known simply as the Runcorn Bridge or Runcorn–Widnes Bridge. In 1975–77 it was widened, after which it was given its official name in honour of the Queen's Silver Jubilee.

The Mersey Ferry is a ferry service operating on the River Mersey between Liverpool and Birkenhead/ Wallasey on the Wirral Peninsula. Ferries have been used on this route since at least the 12th century, and continue to be a popular and iconic means of transport in Merseyside for both local people and visitors.
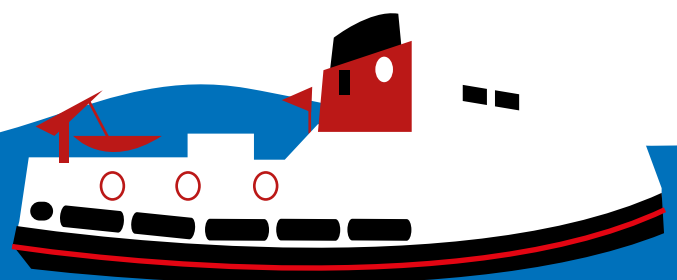
7. Universal capabilities

As part of the national LDR guidance, there are ten digital universal capabilities where local health and social care systems are expected to make progress over a two-year period. The universal capabilities are:

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

B. 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).

C. Patients can access their GP record.

D. GPs can refer electronically to secondary care.

E. GPs receive timely electronic discharge summaries from secondary care.

F. Social care receive timely electronic assessment, discharge and withdrawal notices from acute care.

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

H. Professionals across care settings made aware of end-of-life preference information.

I. GPs and community pharmacists can utilise electronic prescriptions.

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

7.1 Universal capability themes

For the purposes of local planning and implementation, the universal capabilities have been aligned to three headline areas which include shared Electronic Patient Records, e-communications and online patient services. The mappings of the universal capabilities into these themes are noted in table 9 below.

This section of the LDR will outline our baseline and ambitions grouped by theme. A detailed plan for each individual universal capability is included at appendix 6.

7.1.1 Shared Electronic Patient Records

CCGs and providers within the Merseyside LDR have a strong track record of information sharing. Whilst it is acknowledged that there are different starting points, all organisations in the footprint have an agreed information sharing framework and are moving towards a single information sharing agreement in 2016 to share information about our patients where it is needed. This is a core component part of our digital aim for a connected health and social care economy.

The content of this information sharing framework is outlined in detail in section 8 of this roadmap document. The agreement includes all of the information noted in the universal capabilities mapped to the information sharing theme for all local health and social care professionals in Merseyside. It also includes information outside of the content of the universal capabilities requirements.

Shared Electronic Patient Records Baseline (Covering Universal Capabilities A, B, G, H)

Across Merseyside, our local shared record is used extensively in North Mersey and the national Summary Care Record (SCR) is used in pockets.

At a minimum, the content of the shared record is patient diagnoses, medications, allergies, health status, who else is involved in my care, and appointments and diary events.

Table 9: Mapping universal capabilities against themes

Theme	UC No	Universal Capability Definition
Shared Electronic Patient Records	A	Professionals across care settings can access GP-held information on GP-prescribed medications, patient allergies and adverse reactions.
	B	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).
	G	Clinicians in unscheduled care settings can access child protection information with social care professionals notified accordingly.
	H	Professionals across care settings made aware of end-of-life preference information.
E-communications	D	GPs can refer electronically to secondary care.
	E	GPs receive timely electronic discharge summaries from secondary care.
	F	Social care receive timely electronic Assessment, Discharge and Withdrawal Notices from acute care.
	I	GPs and community pharmacists can utilise electronic prescriptions.
Online Patient Services	C	Patients can access their GP record.
	J	Patients can book appointments and order repeat prescriptions from their GP practice.

The content of the local shared record is compliant with the expectations set out in universal capabilities A, B and H. At a maximum the full GP record is shared with front line staff working in local community teams working collaboratively around our patients.

Our local shared record is used extensively in Liverpool, South Sefton and Southport and Formby CCGs with over 8.4 million records accessed to date. Plans are in place to further develop the local shared record pan Merseyside so that all patients in the LDR footprint have this level of sharing to facilitate their care.

Staff accessing the shared record are broadly working across urgent and emergency care settings and community care teams. Information which is shared includes patients' end-of-life preference information.

Baseline adoption figures by CCG, including patient opt out rates are outlined in table 10 below.

Ambitions

Moving forward, we have significant ambitions in this area.

By 17/18, the mobilisation of our information sharing framework and delivery of our interoperability programme of work will see every single health and social care practitioner having access to the information they need, through our shared record and, where digital maturity permits, through their native clinical or social care system. With effect from 18/19 we will ensure that our information sharing framework and interoperability standards are built into the implementation of new systems from the outset.

This will include the full coded primary care record into all settings of care for those practitioners with a role that requires them to have access to it. This includes urgent and emergency and end of life care as priority areas as set out in the national universal capability requirements.

The approach to the delivery of the shared patient record can be categorised into the phases outlined below:

- Phase 0 - Direct log-on to systems for health and social care staff (e.g. SCR).

- Phase 1A - Connect, using each organisation's main strategic system, as digital maturity permits, to an embedded view of data from another system held on a separate tab (e.g. EMIS CRV).

- Phase 1B - A message sent from hospital to primary or community systems using HL7 message standards

- Phase 2 - Connect, using each organisation's main strategic system, as digital maturity permits to a single view of all other information held outside your strategic system (e.g. Portal view).

- Phase 3 - Access a fully integrated rendered record, via the organisation's strategic systems (e.g HIE) (Delivery by 2021).

In relation to the child health protection information, 4 of our 5 local authorities are compliant with this requirement, with the final to be live by September 2016. This information will be available to services that require it through 16/17 and 17/18.

7.1.2 E-Communications

A corner stone of our digital ambition in relation to a connected health and social care economy is to improve the timeliness and quality of e-communications between different settings of care. We plan to achieve this through a number of ways, including the e-communications of key clinical messages in a coded and structured way, linked to clinical systems used by front line staff.

The areas in scope of the portfolio include, but are not limited to, e-discharge summaries, e-referrals, messaging between acute Trusts and social care to support safe and timely discharge and electronic messaging between primary care and others, including e-prescribing.

Table 10: Baseline adoption figures by CCG

CCG	Local Shared Record Usage	Patient Opt out of Local Shared Record	Number of Staff accessing Local Shared Record	SCR record views 15/16	% of GP Practice Upload to National SCR	Patient Opt out of National SCR
Halton	0	n/a	0		100%	2.1%
Knowsley	0	n/a	0	66,135	96.77%	2.25%
St Helens	0	n/a	0		97.22%	2.00%
Liverpool	8,531,854	0.18%	4525	50,844	100%	2.26%
South Sefton		0.33%			100%	0.78%
Southport and Formby					100%	

Table 11: Baseline adoption figures by CCG

CCG	Messaging Hubs E-communication usage 2015/16	% of discharge summaries delivered electronically to GP Practice within 24 hours
Halton	44,893	88.2%
Knowsley	99,571	88.3%
Liverpool	249,984	88.60%
South Sefton	79,968	
Southport and Formby	62,832	
St Helens	139,070	88.4%

E-Discharge Summaries (Universal Capability E)

In relation to e-discharge summaries, e-communication of discharge summaries within 24 hours of discharge is a core component of provider contracts.

To achieve this objective, we have a number of technologies in use across Merseyside. In the North Mersey footprint, we have a messaging hub with 7 providers and 135 GP practices connected. In mid Mersey we have a messaging hub and document management system with 1 provider and 81 GP practices connected. Both technologies are used in the main to communicate inpatient, outpatient, and emergency care discharge summaries from secondary to primary care.

A local minimum dataset has been in place since 2010. This complies with the Academy of Medical Royal Colleges Headings and is a core part of provider contract requirements.

The table above outlines the usage figures of the e-communications technologies.

Moving forward, through the LDR, our ambition for 16/17 is to unify our approach pan Merseyside and consolidate onto a single technology approach for all providers and GP practices. We aim to connect our local technologies with other LDR footprints, in particular for specialist providers to be able to send clinical notifications for patients registered in other areas of the wider region.

We aim for all providers to move to generating structured transfer of care communications using the Transfer of Care Clinical Document Architecture (CDA) messaging standard.

By 2017/18, our aim is for 80% of paper in the communication of discharges and outpatients notifications to be removed with all communications undertaken digitally and linked into core clinical systems. The anticipated benefits from moving towards a structured, coded mechanism of discharge summary transfer are:

- Improved patient care through the timely availability of consistent information at the point of use due to greater interoperability between systems.
- Increased patient safety through the availability of complete, accurate and timely information and reduction in transcription errors.
- Reduction in the risk of missing or inappropriate critical clinical information.
- Reduction in costs by removing the administrative burden of re-keying / scanning information (and maintenance of paper records).

E-Referral (Universal Capability D)

Our aim for E-Referrals is for every referral to be created and transferred electronically. Every patient will be presented with information to support their choice of provider and appointment date and time.

Our referrals sent from primary to secondary care utilise the national E-Referrals system and functionality. Our current baseline is included in the table below:

Our ambitions for e-referrals are for:

- 80% of referrals to be made electronically by 16/17 and 85% by 17/18.
- Increase in the number of directly bookable slots across all providers.
- Adoption of NHS Digital Transfer of Care CDA message specification by 17/18.

Table 12: Baseline adoption figures by CCG

CCG	Messaging Hubs E-communication usage 2015/16
Halton	28%
Knowsley	49%
Liverpool	64%
South Sefton	28%
Southport and Formby	41%
St Helens	53%
Total	**43.8%**

E-Communications between Acute Trusts and Social Care (Universal Capability F)

Our aim for e-communications between acute Trusts and Social care is to enable the sharing of hospital admission and discharge information to replace assessment notifications (previously known as Section 2 notification) and social care discharge notification (previously known as a Section 5 notification). This ambition will:

- Improve capability and capacity in primary care, community care and social care.
- Support closer working with the Community Care Team and hospital teams to plan for discharge, with people discharged as soon as it is safe to do so.
- Effective and cohesive re-ablement arrangements will be introduced, with timely assessment and deployment of community equipment and a single integrated health and social care community re-ablement team in place to support people to remain in their home.

The ambition will be met via the implementation of a message exchange facility to allow details of hospital admissions and discharges to be shared electronically between hospital and adult social care system.

The solution will replace assessment (Section 2) and discharge (Section 5) forms being faxed by hospital wards to hospital social work teams and then manually recorded into system. Instead this functionality will be embedded seamlessly within the adult social care system and, where appropriate, integrated directly into existing work-flow processes.

Electronic Prescribing between GP practices and Community Pharmacies (Universal Capability I)

Our aim for e-prescribing between GP practices and community pharmacies are for all prescriptions to be sent digitally using the national Electronic Prescribing Service (EPS) system.

Our baseline in this area can be found below in table 13.

Our ambitions for e-prescribing are for:

- 80% of prescriptions to be sent electronically by 16/17 and 90% by 17/18.
- Working with medicines management colleagues, increase the uptake of repeat dispensing.

Table 13: Baseline of electronic prescribing between GP practices and community pharmacies

CCG	% of practices signed up to EPS	Average usage of Electronic Prescribing of those practices that are enabled	Average usage of repeat dispensing
Halton	94%	59.2%	0.52%
Knowsley	96%	64%	2.41%
Liverpool	100%	70%	1.65%
South Sefton	52%	71%	0.67%
Southport and Formby	100%	86%	2.00%
St Helens	100%	64%	1.26%

7.1.3 Online Patient Services

Our digital aim of empowering our citizens includes interacting with services through a 'digital no wrong door'. This includes a number of aspirational areas including online consultations, use of assistive technology and other future innovations in health and care services.

From a primary care perspective, the 'digital no wrong door' approach will include patients being able to digitally interact with their GP practice to access their GP records, book online appointments and book repeat prescriptions through their choice of device or app.

Online Appointments and Prescription Requests (Universal Capability J)

Phase one of our 'digital no wrong door' approach includes patients being able to book appointments and order repeat prescriptions online. We have made progress in this area, our current baseline as at February 16 can be found in table 14 overleaf.

Our ambitions in relation to this are:
- By 16/17 to demonstrate a 10% increase in patient activation and by 17/18 to demonstrate a further 10% increase.
- By 17/18 to facilitate access through our local 'digital no wrong door' approach.
- By 17/18, to allow patients to be seen in a timely manner, should they wish to book appointments digitally, an increase in the percentage of GP appointments to be available for booking online.

Table 14: Baseline of online appointments and prescription requests

CCG	% of GP practices signed up for patients to electronically book or cancel an appointment	% of Patients enabled to electronically book or cancel an appointment	% of GP practices signed up for patients to request prescriptions online	% of Patients enabled to request prescriptions online
Halton	100%	9.9%	100%	9.3%
Knowsley	100%	6.1%	96.8%	6.1%
Liverpool	100%	9.1%	100%	9.0%
South Sefton	100%	11.8%	96.8%	11.4%
Southport and Formby	100%	11.7%	100%	11.7%
St Helens	100%	14.5%	100%	12.8%

Patients accessing their primary care record online (Universal Capability C)

Our aim in relation to patients accessing their GP record online is to ensure that patients who choose to, or would benefit from having access to their online record have this in place. Links to pathway and long term condition transformation workstreams understanding the potential of this in self care management are key.

Our baseline in this area as at February 16 is demonstrated in table 15 below.

Our ambitions in relation to this are:
- By 16/17 to demonstrate a 10% increase in patient activation and by 17/18 to demonstrate a further 10% increase.
- By 17/18 to facilitate access through our local 'digital no wrong door' approach.

Table 15: Baseline of patients accessing their primary care record online

CCG	% of GP practices signed up to give patients access to their online primary care record	% of Patients enabled to access their online primary care record
Halton	53%	0.1%
Knowsley	58%	0.0%
Liverpool	69%	0.3%
South Sefton	81%	0.0%
Southport and Formby	68%	0.0%
St Helens	72%	0.2%

Liverpool Metropolitan Cathedral is the largest Catholic cathedral in England and together with its sister cathedral at the other end of Hope Street plays an important part in the life of the City of Liverpool and Merseyside. Opened in 1967, the Metropolitan Cathedral is an iconic landmark boasting a modern, circular design, modern works of art and glorious multi-coloured windows.
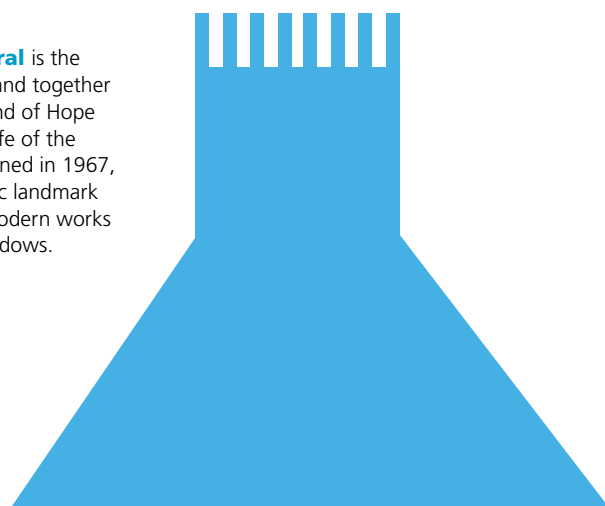
8. Merseyside's approach to information sharing

8.1 Information Sharing Framework and Agreement

A robust approach in relation to Information Governance, audit and identity are essential foundations to enable the digital ambitions within our LDR, in particular in relation to information sharing in a safe and secure way.

Over the Merseyside health and social care economy, significant collaborative work spanning over 20 organisations has been undertaken to develop a scaled Information Sharing Framework. From a risk and safeguarding perspective, the framework is based upon a number of key principles which are summarised below:

Role/Service based access: Levels of access to information will be based on roles or service profiles.

Consent and opt out: Information shared is facilitated only when an individual has given consent to do so. An individual holds the right to 'opt out' to all or parts of their personal information being shared.

Proactive audit: The framework will result in a significant increase in information being shared, therefore there is a significant safety and security need to assure that only those that require access to data, are able to access it.

Exclusions: There are a number of exclusions which will not be included within the sharing model, unless explicitly stated due to legal/statutory requirements and sensitivity concerns.

Mandatory training: All staff will be expected to undertake mandatory training.

Monitoring and evaluation: Ongoing monitoring and evaluation of both the model and its effectiveness will be undertaken.

Patient and public engagement: Patients and members of the public will be given an opportunity to consult, debate and inform the approach to sharing for the role purposes of providing care.

With the principles in place, the Information Sharing Framework is based on a number of segments, professional groups/roles and service areas. The segments are broken down into a number of tiers with information starting at lower levels of sharing and building upwards.
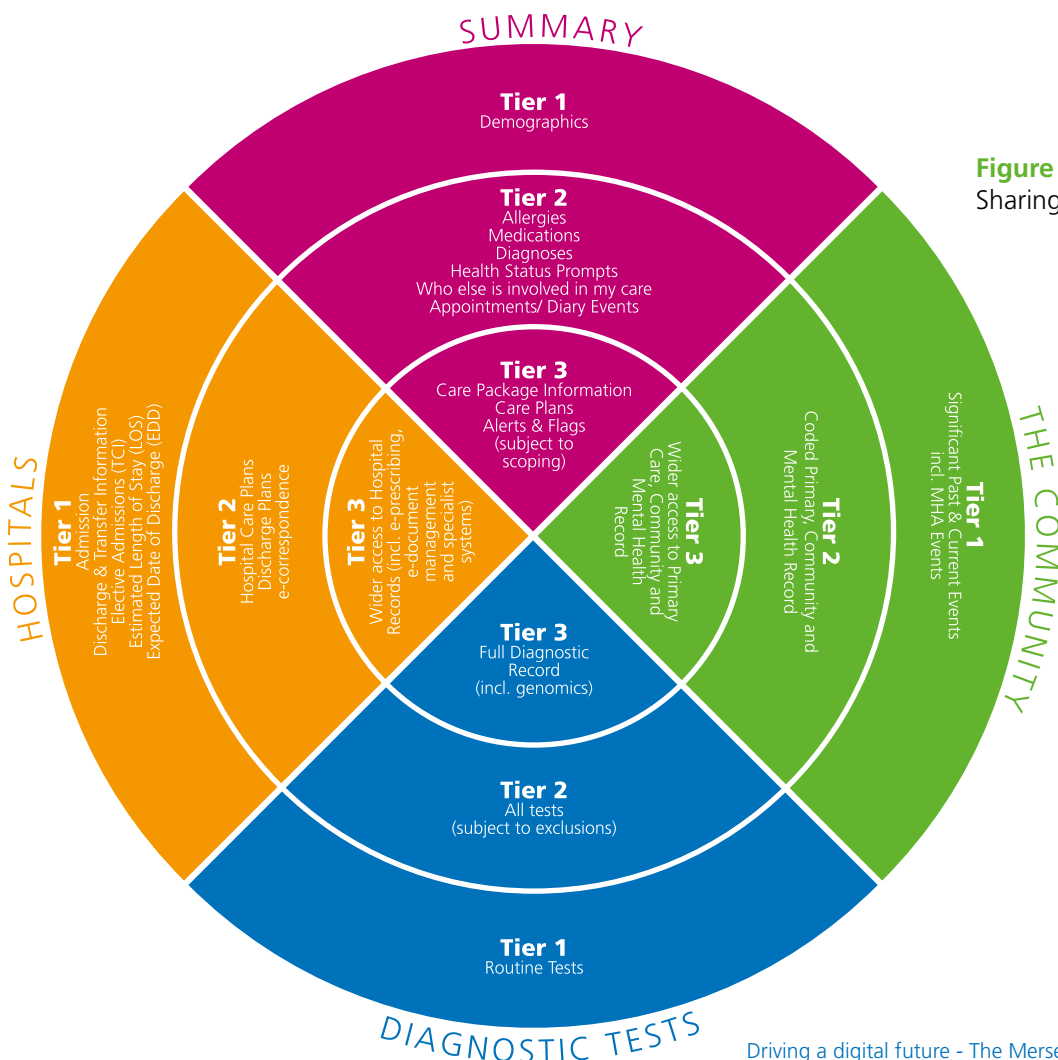

Figure 7: Merseyside Information Sharing Framework

The segments represent the following areas:

Summary Record – Summary patient information to be shared across a wide range of health and social care practitioners.

The Community – Information held outside of hospitals, across primary care, community, mental health and social care.

Diagnostics – Key diagnostic information including pathology, radiology and other tests available for North Mersey patients.

Hospitals – Information held at secondary and tertiary care level across the many acute settings of the health economy

There are 5 professional groups and 2 service areas which would have access to specified segments and tiers as described through the framework:

• Medical
• Registered Health Care Professional
• Social Care Professional
• Unregistered Professional
• Admin
• Urgent Care
• Extended Primary Care Team

The framework has been endorsed by 28 organisations.

A single information sharing agreement has been developed which all local heath and social care organisations are in the process of signing up to. This will be complete by Winter 2016.

Both documents have been reviewed from both legal and Information Commissioners Office perspectives. The Information Sharing Framework is included at Appendix 7 and the current sharing agreement is included at Appendix 8. Our information sharing approach demonstrated as a diagram is included at Appendix 9.

8.2 NHS Number and standards

Across Merseyside the current adoption of the NHS number as the primary identify for patients under the care of health providers is universal. Health organisations have adopted and adhere to the requirements as set out in the ISB0149-01 (ISN 32/2008) & ISB0149-02 information standard boards. (http://webarchive.nationalarchives.gov.uk/+/http://www.isb.nhs.uk/library/dscn/dscn2008/dataset/322008.pdf)

In some instances, there are gaps whereby a number of Trust Patient Administration Systems do not have direct connectivity to the Person Demographic Service (PDS) therefore undertake regular batch tracing of records for patients under the care of the provider. As part of any future systems procurement, connectivity to PDS is stipulated to support direct querying for the NHS Number at the point of care.

Across social care, regular batch tracing of adults services records is currently undertaken in collaboration with NHS providers to ensure that a high percentage of clients NHS Numbers are known to social care.

Across Merseyside there are 3 separate Trusts providing maternity services; Liverpool Women's, Southport and Ormskirk, and St Helens and Knowsley NHS trust. The Trusts either utilise the issuing of NHS numbers via their PDS connected PAS system or have migrated to the Birth Notification Application. As part of local processes, babies NHS numbers are notified to Community Child Health Teams to ensure continuity of service within national time-frames

Within 16/17 and 17/18, to further address any gaps and improve upon the coverage and utilisation of the NHS Number across Merseyside, a unified schedule and approach will be adopted to ensure that patient records are regularly traced against PDS to ensure full compliance.

Across Merseyside it is acknowledged that the adoption of Snomed CT is to be used as the single common terminology in all care settings. Merseyside has worked closely with key systems suppliers to ensure that all care settings products either have, or are developing, the capability to utilise SNOMED CT in line with national guidance. The iLINKS Sharing Framework supports this multilingual vocabulary by clearly defining information held within each tier'd segment and the alignment against each data definitions. In addition, SNOMED CT will be a fundamental requirement in the development of a regional health information exchange across settings of care.
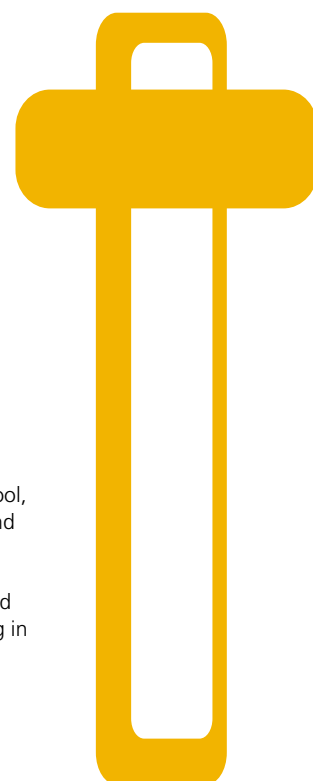
Radio City Tower
(also known as St. John's Beacon) is a radio and observation tower in Liverpool, Merseyside. Built in 1969 and opened by Queen Elizabeth II, the tower is 138 metres (452 ft) tall and is the second tallest free-standing building in Liverpool.

9. Infrastructure

Our vision for IT and infrastructure is to provide a best in class data network and connected services. The infrastructure will be focused on user requirements rather than physical location and the correct balance between new and highly effective cyber security measures will deliver secure data access in a user friendly manner.

The Merseyside infrastructure must be capable of supporting current and future requirements and ensure that care of patients and service users is not compromised. In particular, resilient and highly available networks are key, including the development of innovative and effective technologies to support business continuity measures.

Our vision for infrastructure is that it needs to enable, rather than disable our front line staff. The right balance between new and highly effective cyber security measures and ease of access are critical. By developing and enabling an infrastructure strategy for Merseyside, we will ensure all health and social care practitioners can:

- ✓ Access all appropriate clinical and corporate systems relevant to their role from any NHS or Social Care building across Merseyside using secure corporate Wi-Fi.

- ✓ Access all appropriate clinical and corporate systems relevant to their role from a none work setting e.g. patients or staff members home.

- ✓ Utilise secure end to end communication methods, such email, shared calendars across the whole Merseyside workforce (NHS Mail).

- ✓ Access to a range of services such as common unified communication platform, enabling video conferencing, instant messaging and flexible telephony solutions.

The design and configuration of technical solutions must support current organisational form, however not be tied to organisational boundaries. This as a core design principle which will ensure our critical underpinning technologies can cater for organisational changes in the future, whilst simultaneously driving down implementation and operational costs; maximising the return on investment across the economy.

A modern infrastructure must also cater for interactions with patients and public. The potential benefits of increased engagement in health and self-care are well documented, however to be successful this engagement must take place in a trusted environment that is sufficiently simple, interesting and convenient for it to

be a regular activity. Citizen access to records and the ability to carry out common health care transactions for example, booking appointments and ordering repeat prescriptions using technology are a firm component of our infrastructure vision.

Not only will our infrastructure be required to deliver information in a secure and accessible way, but it must also provide the ability to interact via consumer devices and 'wearables'. These devices such as fitbit, jawbone and the iWatch when coupled with a smartphone are becoming the primary method of generating and interacting with online health data. Therefore, a modern and accessible NHS must be capable of interacting with and utilising these devices and the data they produce when our service users wish to do so, providing them with the capability of monitoring their own health.

Current state

Currently, within the Merseyside health and social care economy, there are varied approaches in terms of infrastructure. Each LDS footprint has its own Community of Interest Network (CoIN) and there are a plethora of data centres supporting the various organisations within the footprint.

Across the North Mersey region there is a CoIN infrastructure in place which provides connectivity to over 230 sites. North Mersey CCGs, General Practices and Community Health Services (currently delivered by Liverpool Community Health NHS Trust) all utilise a shared domain and infrastructure providing a vastly reduced total cost of ownership and better collaboration. Plans are also in place to connect both Liverpool and Sefton Local Authority sites to the CoIN. Provider Organisations are also connected to the CoIN network but have their own internal corporate/clinical infrastructures, usually hosted in a data centre with a disaster recovery site located elsewhere.

Across the Mid Mersey region there is a CoIN infrastructure in place which provides network, digital telephony solutions and integrated WIFI connectivity to over 200 sites. The Mid Mersey CoIN is also directly connected to Halton, St Helens and Knowsley Local Authorities. Mid Mersey CCGs, General Practices, both local hospitals, community and mental health services all utilise a single set of resilient data centres hosting a single security domain, infrastructure, remote access and associated shared informatics support service, providing a vastly reduced total cost of ownership and better collaboration.

Work is underway with regards to joining up the two key CoIN Networks, with an aim to provide a seamless experience for staff regardless of where they are working e.g. single corporate Wi-Fi. This includes a direction of travel to join up and integrate methods of communication with a seamless, integrated approach.

Enabling a mobile workforce

Each organisation across Merseyside has traditional facilities which enable staff to work and access systems whilst off site, these are largely through accessing remote desktop environments and require multiple steps to ensure access is secure, resulting in a reduced user experience. Access to corporate resources like e-mail and calendar is also provided via corporate mobile devices e.g. smart phones and tablet devices.

Work is underway to further develop technologies to enable a truly mobile workforce. Development of mobile solutions are focusing heavily on user experience whist maintaining effective security standards. New technologies will enable staff to have a consistent and effective user experience whether accessing systems from inside or outside the corporate environment. Initiatives such as direct access coupled with state of the art consumer devices are key to providing mobile working solutions which meet the needs of a digitally savvy workforce.

Infrastructure strategy

Linked to delivery of our 'Digital Top 10', the Merseyside Local Digital Roadmap gives us an opportunity to expand this work and clearly articulate a whole economy infrastructure strategy through the establishment of a Merseyside Infrastructure Strategy Group. This approach will ensure maximum return on investment and a collaborative approach across the whole economy to enable the delivery of the LDR.

The table below identifies a number of key schemes which the group will initially focus attention on.

Table 16: Infrastructure Strategy key schemes

Initiative	Description
Strategically aligned to HSCN developments	Providing North Mersey with next generation network connectivity, using virtual switching and routing network technology, seamlessly linking health and social care along with broader public sector services and public sector network.
Enhanced mobile access solutions	Development of scalable mobile access solutions which provide a first-class user experience.
Shared Wi-Fi access	Enabling all health and social care staff to connect to corporate Wi-Fi from all health and social care locations across Merseyside.
Consolidated and strategically situated data centres	Moving to state of the art energy efficient data centres, providing scalable and cost effective solutions based on the needs and requirements of the economy.
Common mobile/agile working devices	Providing enhanced user experience through state of the art consumer devices enabled for the corporate environment, whilst maximising economies of scale through economy wide purchasing.
Common unified communications platform	Providing innovative means of communication for both staff and patients through the use of collaboration tools such as instant messaging and video conferencing.
Shared active directory	Providing the ability to log-on to any machine independent of organisational ownership of hardware and access corporate/clinical resources.
Shared corporate e-mail system	Adoption of a common and secure email solution across Merseyside, such as NHS Mail allowing the sharing of calendars.
Joining telephony systems	Exploring the provision of shared/joined telephony solutions across Merseyside, achieving efficiencies through free calling between organisations, whilst providing the facility to access calls from multiple locations.
Connectivity to wider North West Coast initiatives	Ensuring the Merseyside economy is interconnected with neighbouring economies across the North West Coast.
Online citizen identity	Enabling a secure method for patients and public to securely access health and social care services online.

10. Risk

Delivery of a strategy of this scale and ambition highlights a number of strategic risks.

1. The ambition in the programme in itself requires a significant level of investment.

2. Due to the national and international direction of travel, doing nothing is not a viable option. This programme will ensure that Merseyside is at the proactive forefront of digital developments both nationally and internationally.

3. Due to the size and scale of investment, adherence to appropriate legal, technical and other governance standards are required to ensure best value for money managed in appropriate controls.

4. Individual organisational strategic plans and funding to meet the ambitions of the LDR.

There are many large scale, digitally enabled transformation programmes taking place across the Merseyside health and social care economy. Major changes across systems and processes at this scale will naturally introduce additional risks into the economy. It is therefore important that a robust approach to risk management is in place.

Risks associated to the Merseyside Local Digital Roadmap will be managed both via existing individual organisation or cross economy programme governance arrangements.

The iLINKS Transformation Programme monitors and manages risks across a range of digital programmes at an economy level, providing a cross economy platform to share, escalate and manage risks and issues collaboratively. This function is carried out via the iLINKS Informatics Transformation Programme Board and the associated iLINKS Clinical Informatics Advisory Group (CIAG), both of which have representative attendees from across the Merseyside economy.

Table 17 below presents the current risks across the Merseyside Digital Roadmap, these have been aligned to the following risk categories:
• Strategic
• Implementation
• Clinical safety
• Data security
• Data quality
• Data protection and privacy
• Accessible information standards
• Business continuity and disaster recovery

Table 17: Current risks across the Merseyside Digital Roadmap

Category	Description	Impact	Mitigation / Progress
Strategic	There is a risk associated with the geography of the Merseyside Local Digital Roadmap, particularly as this is not aligned to the STP LDS footprints and some provider organisations sit across boundaries.	Provider organisations may have to enable differing strategies, which are geography dependent rather than patient facing or within the LDR partnership.	Closely monitoring of risk, and regular updates into the STP / LDS development/ delivery process. Good communication and engagement with other Digital Roadmap Leads. Regularly reviewing issues and risks with 6 Merseyside CCGs (via iLINKS PB). North Mersey iLINKS Governance has been broadened to include mid Mersey organisations.
Strategic	Digital plans must be flexible enough to meet change in local organisational form either through clinical service or organisational changes.	Digital services and plans may not be agile or developed enough to meet time-scales of potential organisational changes.	Closely monitoring of risk, and regular updates into the STP / LDS development/ delivery process. Close links and direction from community and hospital programmes of work.
Strategic, Clinical Safety	A lack of ownership and engagement by health and social care organisations could cause significant issues if organisations elect not to share information.	Clinical Information is not available to health and social care professionals in a consistent way, resulting in clinical risk to safety and quality. Professionals become disengaged with the iLINKS Programme.	Organisational clinical and informatics leaders represented at various governance groups and regular engagement sessions are in place. Links to local IG/IM&T boards in place. Strong clinical and informatics relationships across all organisations and with key stakeholders.

Implementation	Strategic risk that the programme does not satisfy clinical requirements and is business rather than clinically driven and led.	Direction of programme will not meet the transformation requirements of the Merseyside economy.	Strong clinical leadership across all iLINKS Programmes. Strong strategic links into CCG Transformation Programmes.
Strategic, Clinical Safety, Change Management	Information will not be available on care provided to patients outside the Merseyside boundary.	Dual processes for practitioners, two tier system for patients.	Develop strong links with neighbouring health and social care economies. Utilise common technologies, enabling interoperability standards.
Strategic, Clinical Safety	The scale of business change across the economy is considerable and cannot be underestimated. There is a significant risk that economy fails to deliver the changes in working practice required to deliver the benefits of shared records.	Maximisation and exploitation of benefits and the level of required transformational change will not be achieved.	Organisations clinical and informatics leaders represented at various governance groups and regular engagement sessions are in place.
Strategic, Clinical Safety, Change Management	Systems accessed through the information exchange do not use the NHS Number as the main patient identifier, or have incomplete NHS Number information on patients.	Inability to successfully match patient/service user records across the information exchange.	NHS Number use to be mandated for cross economy integration projects.
Data Quality, accessible information standards	Organisations are at differing starting positions in terms of ability to share information due to differing levels of technical or digital maturity. There is a delivery risk if organisations are not able to share information or do not have electronic systems to provide information in the appropriate format.	Clinical Information is not available to health and social care professionals in a consistent way, resulting in clinical risk to safety and quality. Professionals become disengaged with the iLINKS Programme. Inability to remove paper at the point of care.	Organisations clinical and informatics leaders represented at various governance groups and regular engagement sessions are in place. All organisations that have elected to participate in CQUIN have a digital maturity CQUIN in place.
Implementation, data quality, accessible information standards, data protection and privacy	Organisations may select to purchase and implement systems that are not compliant with the guiding principles or requirements of the information exchange.	Procurement of systems that do not comply with the guiding principles or requirements of the information exchange will not be able to share information effectively across North Mersey.	Organisations clinical and informatics leaders represented at various governance groups and regular engagement sessions are in place. Links to local IG/IM&T boards in place. Strong clinical and informatics relationships across all organisations and with key stakeholders.
Implementation	The responsiveness, timeliness, prioritisation and commitment of existing and new strategic Merseyside system suppliers could hinder progress with the development and implementation of the digital programme.	Unable to share information as set out in the interoperability roadmap.	Early engagement has commenced with a number of suppliers in relation to the interoperability roadmap. Pathfinder relationship with EMIS for Merseyside. Input into specification for current procurements in relation to interoperability.

Continued...

Implementation, accessible information standards	There is a risk that strategy and use of existing systems remains focused on organisational silos as opposed to cross organisational requirements.	Inability to meet iLINKS strategy objective in relation to system wide leadership approach to informatics.	Organisations clinical and informatics leaders represented at various governance groups and regular engagement sessions are in place. Links to local IG/IM&T boards in place. Strong clinical and informatics relationships across all organisations and with key stakeholders.
Implementation, clinical safety, Change Management	There is a risk that the clinical ambitions in relation to information sharing will not be met due to individual organisations interpretation of Information Governance and legal requirements.	Programme would be unable to be delivered at it's current scale or ambition.	Information Sharing Framework developed and signed off across all Merseyside provider organisations.

GS1 Standards compliance

GS1 standards incorporated within bar-codes and RFID technologies are increasingly used to provide improved patient safety, deliver greater regulatory compliance and drive operational efficiencies. The GS1 compliance table below shows North Mersey Provider Organisations current baseline state in relation to GS1 standards, and highlights future plans to further deploy and develop the use of this technology. Primary care and social care organisations are out of scope for the GS1 standards compliance.

Table 18: GS1 compliance table

GS1 Compliance		
Provider	**Baseline**	**Plans**
Aintree University Hospital NHS Foundation Trust	The trust is in the process of implementing the GS1 standard	Expect full compliance following EPR procurement
Alder Hey Children's NHS Foundation Trust	Not compliant	Expected full compliance by the end of 2016
Bridgewater Community Healthcare NHS Foundation Trust	No current requirement	Review as part of future development plans
Clatterbridge Cancer Centre NHS Foundation Trust	Not compliant	Moving towards full compliance
Liverpool Community Health	Not relevant	Not relevant
Liverpool Heart and Chest Hospital NHS Trust	Not compliant	Expect full compliance by September 16
Liverpool Women's Hospital NHS Trust	LWH Partially compliant with the GS1 standard	Expect full compliance following EPR procurement by Feb 18
Mersey Care NHS Foundation Trust	EPMA and RiO currently using font 3of9	Planned deployment for EPMA by Dec 16 RiO GS1 compliance date has been requested
Royal Liverpool and Broadgreen University Hospitals NHS Trust	Fully compliant	Fully compliant
Southport and Ormskirk Hospital NHS Trust	Implementation of GS1 compatible bar-codes on patient wristbands underway	Patient Identification will be GS1 complaint within Medway EPR post upgrade 2016
St Helens and Knowsley Hospitals NHS Trust	GS1 compliant for Patient ID	Steering Group established to support the full implementation of the standard
The Walton Centre NHS Foundation Trust	Currently adopted in Theatres RFID ready in terms of wireless access points	Reviewing deployment elsewhere. Trust reviewing capability of Bluetooth-Low-Energy (BLE) for tracking internally
5 Boroughs Partnership NHS Foundation Trust	Not used	No plans currently

II. Governance

11.1 LDR development

This LDR has been developed in partnership and collaboration with all provider, commissioning and social care organisations in the LDR footprint.

The LDR builds on our well established strategy, direction and approach across the local economy. Its development has had input through the governance outlined in section 5 and below. The content has been developed in partnership with clinicians, front line staff and digital leaders.

A range of local workshops have been held including a 'Digital Disruption Clinical Summit', where over 140 local health and social care staff pledged their consensus and support for our LDR. This included a local definition of 'paper free at the point of care' being branded as 'delivery of seamless care through the eradication of dead trees and fax machines'. In addition, the development of this LDR has been undertaken with full alignment with our STP development.

As a local shared service provider, Informatics Merseyside has supported the coordination and design of the LDR in partnership with our CCGs and providers.

11.2 LDR governance

At the point of submission, the LDR has been endorsed by the iLINKS Programme Board on behalf of the health and social care economy. In addition, the LDR has been endorsed by Knowsley CCG, South Sefton CCG, Southport and Formby CCG and Liverpool CCG. Plans are in place for the LDR to be presented and signed off by all organisations and relevant Health and Wellbeing Boards over the Summer months.

Table 19: LDR governance and sign-off

Governance	Date
Economy Wide Governance	
STP / LDS	June 2016
iLINKS Programme Board	June 2016
iLINKS CIAG	July 2016
CCGs	
Halton	Governing Body July 2016
Knowsley	Executive Management Team June 2016
Liverpool	Healthy Liverpool Digital Board June 2016
South Sefton	CCG Senior Leadership Team June 2016
Southport and Formby	CCG Senior Leadership Team June 2016
St Helens	Executive Management Team July 2016
Providers	
Aintree University Hospitals	Informatics Strategy Group: September 2016
Alder Hey	Clinical Systems Steering Group: September 2016
Bridgewater	Senior Management Team: August 2016
The Clatterbridge Cancer Centre	Transforming Cancer Transformation Board: July 2016
Liverpool Community Health NHS Trust	Technology and Innovation Sub Committee: August 2016
Liverpool Heart and Chest Hospital	Digital Healthcare Committee: September 2016
Liverpool Women's Hospital	Executive Team: July 2016

Governance	Date
Providers cont'd...	
Mersey Care NHS Foundation Trust	Digital Board: July 2016
Royal Liverpool and Broadgreen University Hospital	Executive Team: July 2016
Southport and Ormskirk Hospital NHS Trust	IM&T Board: July 2016
St Helens and Knowsley Trust	Executive Team: July 2016
The Walton Centre for Neurology NHS Foundation Trust	Digital Programme Board: September 2016
5 Boroughs Partnership NHS Trust	Informatics Programme Board: August 2016
Local Authorities	
Halton	September 2016
Knowsley	September 2016
Liverpool	September 2016
Sefton	September 2016
St Helens	September 2016
Health and Wellbeing Boards	
Halton	September 2016
Knowsley	September 2016
Liverpool	September 2016
Sefton	September 2016
St Helens	September 2016
Other Governance	
Mid Mersey HIS Board	July 2016

12. Summary

This LDR represents a seismic cultural and technological transformation plan. As with other industries, it will liberate and disrupt our health and social care economy. Whilst it represents huge collaborative efforts in the last 2 years, we recognise this LDR demands a scale, pace and impact of a magnitude yet seen in the NHS.

The shape of the health and social care economy over the lifetime of the digital roadmap will change. The transformation work through the STP builds on work undertaken by local economies. This work is co-designed with front line clinicians and has a relentless focus on patient benefits.

The development of the LDR has been a **collaborative approach with significant contributions made by all local health and social care organisations** in the footprint outlined in section two of this document.

The LDR is a cornerstone of our service transformation work. Without high quality digital care, our system simply will not be able to operate or achieve the level of transformational change we aspire to.

Our fundamental aim is to improve the health and wellbeing of the population we serve. The LDR gives us the opportunity to do this.

Royal Birkdale Golf Club is one of Britain's finest golf clubs and is among the best in the world. Nestled amid Southport's spectacular sand dunes, Royal Birkdale, with its distinctive art deco clubhouse, has staged eight Open Championships - the first in 1954 and the most recent in July 2008. It has also hosted the women's tournament five times, the Ryder Cup, the Walker Cup and the Curtis Cup.

Sefton Park Palm House is an octagonal, 3 tiered, Grade II listed Victorian glasshouse which was designed and built by MacKenzie and Moncur of Edinburgh in 1896. During the Liverpool Blitz of May 1941 a bomb fell nearby and shattered the glass. The Palm House was fully restored and reopened in September 2001 and is now a popular visitor attraction offering free and paid-for public entertainment and hire.

13. Appendices / Supporting Documents

A list of the appendices referenced within this document are detailed below. An electronic copy of The Merseyside Digital Roadmap and the appendices detailed below can be viewed online at: www.ilinksmersey.nhs.uk

Additional printed copies of The Merseyside Digital Roadmap are available on request from the above website.

- Appendix 1: iLINKS Programme Board and CIAG terms of reference

- Appendix 2: 'Driving a Digital Future, The Merseyside Digital Roadmap' launch document

- Appendix 3: Patient Communication materials

- Appendix 4: Capability Deployment Schedule

- Appendix 5: Capability Deployment Trajectory

- Appendix 6: Universal Capabilities Delivery Plan

- Appendix 7: Information Sharing Framework

- Appendix 8: Information Sharing Agreement

- Appendix 9: Information Sharing Approach

'Another Place' by Antony Gormley consists of 100 cast-iron, life-size figures spread out along three kilometres of Crosby beach in Sefton. The figures - each one weighing 650 kilos - are made from casts of the artist's own body standing on the beach, all of them looking out to sea, staring at the horizon in silent expectation.

Notes
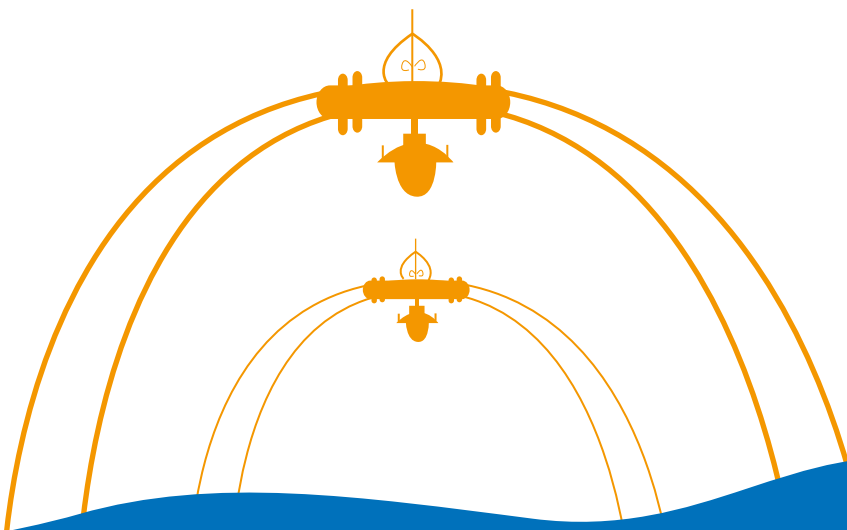
Southport Pier is a Grade II listed structure and is the second longest pier in Britain. First opened in 1860, the pier now stands at 3,650 ft in length and is open every day except Christmas Day.

iLINKS

informatics enabling connected care

NHS