

Doncaster Local Digital Roadmap

Doncaster and
Bassetlaw Hospitals
NHS Foundation Trust



Rotherham Doncaster and
South Humber
NHS Foundation Trust



Contents

Section	Page No
1. Introduction	3
2. Vision	5
3. Baseline Position	13
4. Readiness	21
5. Capability Deployment	24
6. Universal Capabilities Delivery Plan	27
7. Information Sharing	28
8. Infrastructure	31
9. Minimising Risks Arising From Technology	34
10. Glossary	35
11. Executive Sign-Up	37

1. Introduction

The Doncaster Local Digital Roadmap (LDR) has been developed by the Doncaster Interoperability Group. This group, which is chaired by the Doncaster CCG Chief Officer, has been established to support the development and delivery of the LDR and includes clinical and informatics representatives from all organisations identified in the Doncaster LDR footprint submission of October 2015. These organisations, which have all made a significant contribution to the development of the roadmap, are:

- NHS Doncaster Clinical Commissioning Group
- Doncaster Children's Services Trust
- Doncaster Metropolitan Borough Council
- Rotherham Doncaster and South Humber NHS Foundation Trust
- Doncaster and Bassetlaw Hospitals NHS Foundation Trust
- FCMS

Lead individuals from all these organisations have met to understand the Digital Maturity Index and baseline position across Doncaster. A small multi-agency group has then collaboratively developed the plan over the next 5 years and shared the development of the LDR within their individual organisation for comments and feedback. The LDR has been shared across the system in organisational meetings and also in system wide meetings to ensure that there is a broad understanding of the direction of travel, approval of the LDR content and ambition, and commitment at a very senior level to support the implementation of the LDR.

There are strong links between the development of the Doncaster LDR and the South Yorkshire and Bassetlaw (SY&B) Sustainability and Transformation Plan. The Doncaster CCG lead for the LDR participates in and SY&B LDR leads group, which includes both of the Accountable Officer Leads for the Digital Health work stream within the Sustainability and Transformation Plan. Through this group there has been the opportunity for input into the STP Digital Health work stream and this has supported the alignment of the Doncaster LDR with the STP, which is reflected in the shared vision presented later in this document.

During development the LDR has been discussed in a number of forums for comment including the:

- Doncaster Health and Wellbeing Board
- Doncaster CCG Governing Body
- Doncaster Interoperability Group
- Doncaster LMC
- Doncaster Transformation Governance Group
- South Yorkshire and Bassetlaw LDR Development Group
- DBHFT IT Departmental Meeting

- DBHFT Pharmacy Team
- RDaSH Health Informatics sub-committee
- RDaSH Finance, Performance and Informatics Committee
- FCMS Board
- DCST Chief Executive Group

We want to engage widely with other partners within the Doncaster footprint as our LDR develops and following submission we will share the initial roadmap with Healthwatch Doncaster and local third sector organisations.

The Doncaster Local Digital Roadmap (LDR) has been endorsed by the Chief Officers of all partner organisations. Following submission at the end of June it will be further endorsed as follows

Organisation	Endorsed by	Date
Doncaster	Doncaster Health and Wellbeing Board	1 st September 2016
NHS Doncaster CCG	Governing Body	21st July 2016
Doncaster Children's Services Trust	Executive Group	July 2016
Doncaster and Bassetlaw Hospitals	Management Board	1 st August 2016
Rotherham Doncaster and South Humber	Finance, Performance and Informatics Committee	21 st July 2016
DMBC	AHWB Directorate Leadership Meeting	July 2016
DMBC	Adults Improvement Board	July 2016
DMBC	Directors Meeting	July 2016
FCMS	Board	1 st June 2016

2. Our Vision

Our vision for the health and care community of Doncaster is to join up information across care pathways and settings so that health and care practitioners have easy access to all the information they need to provide high quality, safe and effective services. IT services will be interoperable to allow practitioners access to information in all care settings.

Doncaster's digital vision has been developed in the on-going context of:

- The change in financial outlook for the NHS and the Council
- The need for enabling programmes, including information technology, to drive the delivery of increased Quality, Innovation, Productivity and Prevention
- Integration between the NHS and the Council

We know from discussions with Doncaster patients and public at various engagement events that there is a local appetite for being able to access NHS services in new, innovative ways, operating in tandem with more traditional methods.

Only by the partners working on an integrated Digital roadmap will NHS and the Council achieve the Vision as set out above.

During the development of our Choose Well Doncaster app for smartphones we consulted with students at Doncaster College. They were keen to see more real time information about local services made available and also wanted us to explore further the prospects that mobile technology offers.

Local GPs and other healthcare professionals also want to harness the opportunities that digital technology offers, highlighting, for example, the benefits of the i-nurse project, which has been trialled in one geographical area of the borough to help free up more GP time. It enables practice nurses to make patient home visits and use an iPad to be in visual contact with a GP at their surgery for any medical advice they need during the consultation.

This is Doncaster's initial draft of a digital roadmap and we will continue to refine it in line with feedback we get from local patients and public as part of our on-going engagement discussions.

The vision has been identified and developed through discussion with GPs and partners across the Doncaster Health and Social Care community. Consequently the vision impacts across primary, secondary and community and social care as well as commissioners, and will require the engagement and support of all partners to be fully realised.

We will use technology to drive forward improved communication between patients, carers and partner organisations. Our aim is to use patient information to improve commissioning decisions and use technology to improve integrated, personalised, co-ordinated care across partner organisations.

Implementation of our vision we will create a culture that promotes the sharing of accurate and useful information and will provide access to the care record, where appropriate, to practitioners, patients and carers.

Our vision will support the delivery of Doncaster’s strategic ambitions for care out of hospital, care of the frail, co-ordinated care and the provision of high quality urgent care.

In Doncaster we are committed to a programme of work to transform Intermediate Health and Social Care Services, which is central to providing care out of hospital and avoiding unnecessary hospital admission. A summary of the intended programme outcomes is shown below:

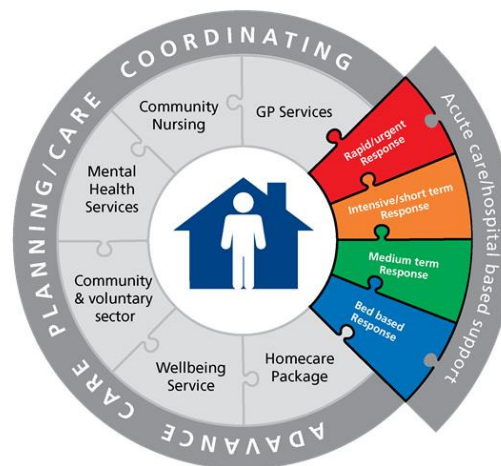
In the future intermediate care in Doncaster needs to...



1. Respond to needs and personal goals of the person and their family/carers NOT diagnosis.
2. Work collaboratively and flexibly to meet physical, mental health and social care needs.
3. Be simple to access and experienced as one seamless service.
4. Offer responsive, time limited evidence based interventions.
5. Consider all options to safely support someone in their home environment first before transferring them to a bed based service.
6. Have a single system for record keeping, sharing information and a single assessment process.
7. Focus on enablement, maximising independence, promoting self-care and maintaining social networks.
8. Ensure care is co-ordinated while a person is with the service and arrangements are in place for on-going care co-ordination and navigation where required on discharge from the service.
9. Take a multi-disciplinary approach with an appropriately skilled workforce, access to specialist skills and assessment and the flexibility to meet a range of physical, mental health and social care needs.
10. Be commissioned and lead in a way that promotes and facilitates integrated working and empowers staff.
11. Sit in the community, alongside primary care services and in-reach into acute services to facilitate discharge from A&E and hospital admissions.
12. Be monitored and evaluated on an on-going basis as a single service with a shared set of quality indicators.
13. Demonstrate value for money and sustainability

Provide 4 types of intermediate care response

1. **Rapid or urgent**
2. **Intensive, short term interventions (few days)**
3. **Medium term (up to 6 weeks)**
4. **Bed based response**



In the analysis carried out to develop the Intermediate Care case for change it has been clearly identified that there is a need to integrate and share information across health and care systems. This is a multi-level approach from business intelligence to a single patient record. The implementation of our LDR vision will deliver this integration and sharing and act as a key enabler for the required transformation. A

summary of the Recording and IT Systems analysis from the Intermediate Care case for change is shown in the following diagram:

The Case for Change
1. Complexity of current services
25

Recording and IT systems

The complexity in current intermediate care service provision is also reflected in the systems and processes for record keeping and sharing information. The review found that patient information is not always accessible or proactively shared between services.

Multiple IT systems also add to poor communication and often lead to duplication and inefficiencies. There are currently six electronic systems that may contain information about a patient during a single episode of intermediate care; SystmOne, JACS, Symphony, EMIS, Care First and Silverlink. The chart below highlights how different organisations, teams and even professions within teams have different ways of recording information.

Electronic record keeping systems across the intermediate care pathway.	
GP services <small>(depends on practice)</small>	SystmOne EMIS
A&E and MAU	Symphony + Paper based notes
RAPT	Paper assessment- filed by RAPT
IDT	Paper based fact finds - scanned onto Care First, faxed to bed based services and filed by IDT.
Mexborough and Montagu Hospital (MMH) Rehab Centre	JACS - Nurses and Doctors only SystmOne - Therapists only Medical notes - Doctors and Therapists Ward notes - Nurses, Therapists and Support staff.
Hazel and Hawthorn	SystmOne - Therapists and Nurses Paper based ward notes - all ward staff
Positive Steps	Care First. Paper based unit notes. OPMH liaison- Silverlink
CICT	SystmOne
STEPS	Care First. Paper notes scanned into Care First

Example from data collection for the needs review: IDT fact finds

The IDT fact find is a paper based assessment document, completed by IDT members when they assess someone for discharge on an acute ward. When fully completed it provides a comprehensive summary of a person's need along with a rationale for why a particular discharge pathway has been recommended.

The fact finds have to be scanned into Care First to be transferred to social care services or faxed to the relevant bed based service. This process is dependent on the availability of admin staff and can sometimes be delayed. If CICT is involved they do not routinely receive the IDT fact find nor would the GP. The originals are filed by IDT at Doncaster Royal Infirmary separate to the person's medical records.

The result is that valuable assessment information does not travel with the patient, cannot be used to inform care planning and has to be repeated further down the pathway.

Example from in depth pathway reviews: Therapists at MMH rehab centre.

Therapists at MMH Rehab Centre record their notes in **three separate places**:

1. SystmOne - so that community colleagues can see they have been seen by a therapist at DBHFT. This can't be accessed by nurses at the centre.
2. The Rehab Centre paper based ward notes, in order to communicate with the rest of the MDT.
3. The paper medical records, to communicate with the medical team.

?

What needs to change?

Shared IT system across all intermediate care teams or interoperability between IT systems

The digital priorities for Doncaster fall within the following wider visions as set out in Doncaster Council's Digital Programme and the South Yorkshire and Bassetlaw Sustainability and Transformation Plan Digital Work Stream as detailed below.

Doncaster Council Digital Programme

Doncaster Council are delivering 4 transformation streams that complement and enable aspects of this roadmap:

- Digital Council Programme – a modern digital authority both internally and externally, with all services online, providing a modern, high quality and efficient integrated front office with resulting improved service delivery through redesigned business processes, improved technology, mobile working and higher skilled staff. Utilising the resulting business intelligence to become a more intelligent and proactive organisation.
- Digital Inclusion Strategy – working across Doncaster's community, voluntary and private sector to sign-post residents in accessing the training and skills required to get online and access services, health and employment provision. This work stream is also working across the Superfast South Yorkshire Programme to

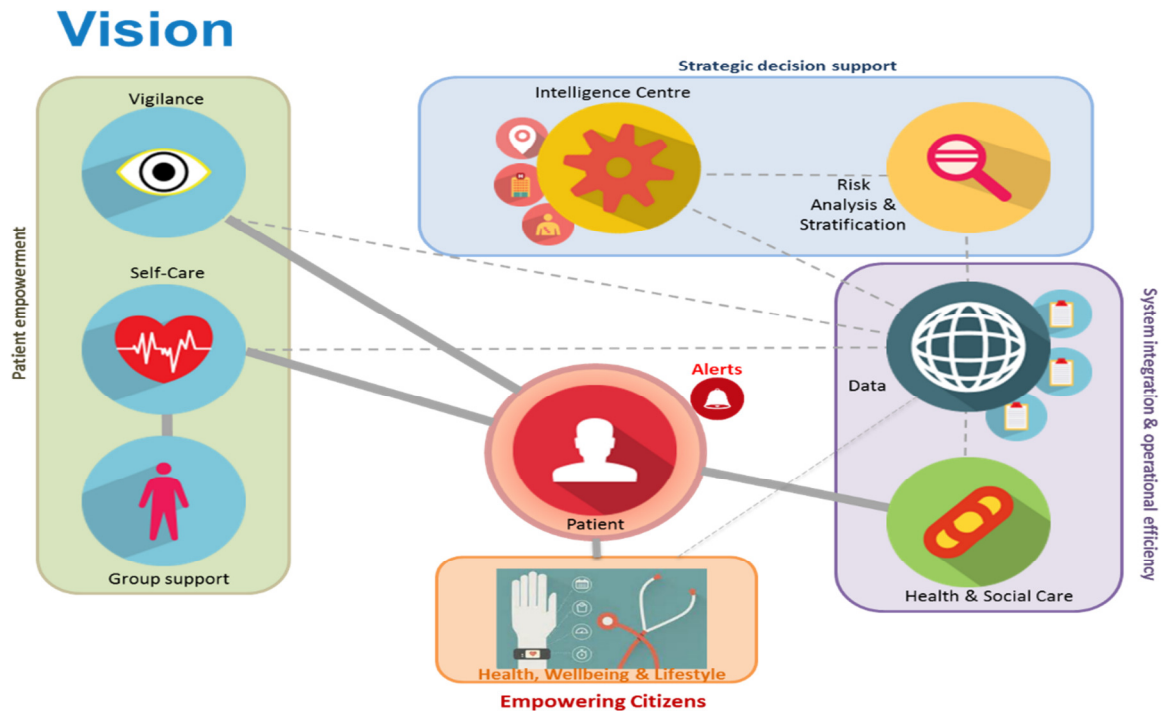
improve connectivity and access across Doncaster as well as providing improved access facilities across the Doncaster Library network.

- Adults Transformation – delivering a modern adult social care function that supports residents living at home independently for longer, directed away from traditional social care interventions, this is enhanced by a digital access platform, allowing residents to easily find information, advice and guidance early and get access and support from community, voluntary and private organisations as opposed to the traditional local authority social care provision. The transformation programme will change the focus of social work to a strengths based, community led approach and will use technology to remove barriers to allow assessments to take place more effectively in community setting as opposed to the traditional home setting.
- Social Care Systems – reviewing the existing core systems in place to support adult and child social care and exploring opportunity to deliver a single point of truth across these systems to more effectively monitor the child to adulthood as well as the ability to share appropriate records

South Yorkshire and Bassetlaw Sustainability and Transformation Plan Digital Vision

Our digital health strategy has three essential elements.

- Citizen and Patient Empowerment
- System integration and operational efficiency
- Strategic decision support



Our future technology enabled communities will therefore be characterised by:

- Enabling health and care providers' access to all patient clinical electronic data across traditional boundaries, agnostic of staff employer or organisation. Having a Shared Care Record in place, accessible to clinical staff or those who need it wherever they are, is the single most important change we need to make. As we develop our plans for clinical services across the wider SYB footprint, we will inevitably see more patients moving between organisations to receive care. Therefore it makes sense that our ambition for shared care records extends across this larger footprint. Access to Shared Care Records is particularly important for urgent and emergency care, but such a system would have significant benefits for clinical care. This ambition:
 - will require up to date hardware and wireless networks so that access to data is fast and easy for our citizens, patients, carers, staff or wider health and care communities;
 - will require us to develop clear rules within which we operate to ensure appropriate governance and security for patient data as well as interoperability of systems and technologies now and into the future. Consequently data, data management and systems will be subject to agreed national and local standards supporting ongoing interoperability;
 - will incorporate data from multiple sources (including NHS and social care as well as other public and voluntary or charitable organisations) and include citizen generated data from citizen controlled devices and innovations (e.g. Apps);

- will means citizens and patients take greater ownership for their health and wellbeing. They will be supported to do this through technology which promotes risk prediction, prevention as well as self-care and management.
- Innovation and learning will be part of our DNA, translated into rapid deployment of technology (e.g. related to access, devices, apps etc.) and signposting where helpful to achieve improved health and wellbeing outcomes. This will need us to also concentrate on improving digital literacy so that interventions help to bridge, not exacerbate, the digital health divide and health inequalities across our broad socio-economic communities. Personal health and wellbeing digital data needs to be as 'consumable' for health and care professionals as for citizens and patients in order to maximise potential.
- Robust population based analytics, supporting risk stratification and system alerts which result in rapid response and appropriate interventions tailored to the individual's needs.

Within the next five years our system will therefore deliver a new way of supporting and working in partnership with our communities to achieve improvement in health and wellbeing outcomes and address current health and care challenges.

Gap	How we will address the Gap
<i>Care and quality</i>	<ul style="list-style-type: none"> • Shared records offering increased access to relevant, real time, information about a patient by health and care providers as well as patient authorised viewers • Improved interoperability to enable more effective and efficient transfer of care across providers (e.g. through e-referral and discharge processes) supporting reduced waiting times and access to appropriate support • Promote mobile working of practitioners through Wi-Fi accessibility and roll-out of remote working solutions for practitioners. These solutions should ensure practitioners from all partners can access Wi-Fi, e.g. health practitioners in Council buildings • Use population data to help identify and provide evidence for best practice and quantitatively assess quality outcomes • Ensure better informed clinical decisions enabling more appropriate cost effective and safe care (e.g. avoiding drug contra-indications) as well as support for safeguarding

	<ul style="list-style-type: none"> • Improved patient experience through not having to repeatedly provide clinical details and not having to undergo unnecessarily repeat clinical tests
<i>Health and wellbeing</i>	<ul style="list-style-type: none"> • Patients will have significantly more control over their care, and experience better outcomes through improved treatment and medication adherence as well signposting to appropriate services within their community • Increased citizen, patient and carer awareness of, and involvement in, health and care support and delivery will result in better knowledge about condition management, better self-care and achievement of patient determined outcomes • Increased interoperability and strategic system intelligence will support proactive care. This will reduce the frequency of exacerbation, and support co-ordination of care to address health and care needs holistically - including mental health • Promotion of remote monitoring, new forms of consultation (e.g. video, phone) and mobile health (mHealth) will also support care based in the citizen's own home, reducing the burden of routine care on patients, their carers and families, and health professionals. The council will enhance these capabilities by transforming its Telecare offering to introduce greater use of sensors and other facilities to keep people safe and well in their own home
<i>Finance and sustainability</i>	<ul style="list-style-type: none"> • We will develop combinatorial innovations (including technologies as well as service changes) to promote increased efficiency in the ongoing care and management of patients • Greater integration of care will mean increased opportunity for admission avoidance • Increased reliance on validated risk stratification and population analytics will enable more efficient case finding and targeted intervention • Remote monitoring and surveillance will mean earlier intervention to avoid unnecessary use of secondary care resources and effective use of community based resources

- | | |
|--|--|
| | <ul style="list-style-type: none">• Better tracking and scheduling of staff resources will enhance operational efficiencies• Reduced DNAs through easy access to GP booking systems, reminders, patient self-reporting/recording and active self-management• Clinicians able to use their time more effectively through the use of technology. |
|--|--|

3. Baseline Position

In preparation for development of the Local Digital Roadmap the two secondary care providers in the Doncaster footprint carried out a Digital Maturity Assessment between in November 2015 – January 2016. A summary of the results from this initial assessment of the two providers is shown in the table below:

Section	Type	Rotherham Doncaster and South Humber NHS Foundation Trust	Doncaster and Bassetlaw Hospitals NHS Foundation Trust	National Average
Strategic Alignment	Readiness	85	80	76
Leadership	Readiness	95	60	77
Resourcing	Readiness	80	70	66
Governance	Readiness	70	70	74
Information Governance	Readiness	75	83	73
Records, Assessments & Plans	Capabilities	68	30	44
Transfers Of Care	Capabilities	13	57	49
Orders & Results Management	Capabilities	15	69	52
Medicines Management & Optimisation	Capabilities	11	56	29
Decision Support	Capabilities	68	17	36
Remote & Assistive Care	Capabilities	25	33	33
Asset & Resource Optimisation	Capabilities	40	30	42
Standards	Capabilities	60	29	41
Enabling Infrastructure	Enabling Infrastructure	73	75	68
Readiness Average	Readiness	81	72	73
Capabilities Average	Capabilities	37	40	40
Enabling Infrastructure Average	Enabling Infrastructure	73	75	68

As can be seen from the table above the assessment scores for the Doncaster footprint identify that our current level of development is consistent with the national position. A key insight is that organisational readiness is strong but capabilities still need to be developed. Nationally the capability areas where it has been identified that there is particular room for growth are medicines management, decision support

and remote care. Our scores indicate that these are also key development areas for Doncaster along with transfers of care and orders and results management.

In addition to the secondary care Digital Maturity Assessment exercise Doncaster CCG submitted a Digital Maturity Assessment for primary care at the end of April 2016. Analysis of the results for this assessment will be included in future developments of the LDR.

An overview of the current digital maturity of the primary, secondary and social care providers within the Doncaster LDR footprint along with a summary of their recent achievements and current initiatives is given below:

Primary Care

All of the general practices in Doncaster have implemented the latest version of their chosen GP clinical system and use either TPP SystemOne (53% practice) or EMIS Web (47% practices).

Key recent achievements within primary care include:

- Mobile devices (laptops with 4G and software to support connectivity over Wi-Fi) have been deployed to all GPs, registrars and appropriate practice nursing staff.
- 100% Practices have been switched on for patient online services
- 77% Practices are ETP enabled
- 100% practices have had ICE software implemented to support order comms with Doncaster and Bassetlaw Hospital and allow a view of historic test results

The key initiatives currently on-going in primary care are:

- Development of an improved and extended Wide Area Network that will connect all Doncaster practices to a set of IT systems and services
- The rollout of Wi-Fi networks into all practice premises is underway
- A programme of work is underway that will help practices meet quality data quality standards for recording and sharing information and improve the utilisation of GP clinical systems and utilisation of universal and local capabilities

Doncaster and Bassetlaw NHS Foundation Trust (DBH)

DBH's current level of digital maturity for capabilities is consistent with the national average across secondary care providers. Their self-assessment indicates that growth is required in their capabilities for records, assessments and plans, decision support, remote and assistive care, asset and resource optimisation and standards.

DBH commenced a programme of work in 2012 to drive forward with a several major implementations across the Trust which delivered a new A&E system in 2014 and a

replacement pas SYSTEM 2015. Following the completion of these system implementations the Trust is now evaluating how it can move forward to better integrate a range of clinical systems across the Trust and how it can share information with partners across the wider health community.

Key recent achievements at DBH include:

- Implementation of new 'best of breed' A&E and PAS systems
- Delivery of a combined service for GU Med between RDASH and DBHFT

The key initiatives currently on-going at DBH care are:

- Implementation of an Electronic Document Management System
- Implementation of Electronic whiteboards
- Development of Trust wide clinical viewer
- Implementation of e-discharge summaries
- ICT Infrastructure Upgrade almost complete (including Wi-Fi to all areas).

Rotherham Doncaster and South Humber NHS Foundation Trust (RDASH)

RDASH's current level of digital maturity for capabilities is also consistent with the national average across secondary care providers. Their self-assessment indicates that growth is required in their capabilities for transfers of care, orders and results management, medicines management and optimisation and remote and assistive care.

RDASH are addressing these growth areas through their 5 year strategy published in April 2016 "Information Communication and Technology Strategy – *Towards a Digitally Integrated Healthcare Environment*". This ambitious strategy which will see all Trust services transferred onto a unified EPR system has the four key strategic aims identified below:

- Improving patient experience
- Supporting agile working
- Enabling paper-free care delivery
- Reducing administrative overheads

Key recent achievements at RDASH include:

- Procurement phase for the new EPR is underway and is due to complete end of Q2 2016
- Large remote sites have been moved on to the Yorkshire and Humber Public Sector Network

- An upgrade of the Trust's core IT infrastructure upgrade was carried out during 2014-2016

The key initiatives currently on-going at RDaSH are:

- Procurement, configuration and implementation of a new EPR
- Development of an Agile working strategy
- A review of IT security and governance procedures
- A review of the Trust email services
- Investment in data warehouse capability

FCMS

FCMS use a fully electronic clinical system (AdastrA) to deliver their clinical services in Doncaster. They also have a live (refreshed daily 24 hours behind) BI portal accessible by themselves and Commissioners. FCMS staff are provided with remote working capability using toughened laptops.

Key recent achievements at FCMS include:

- Development and implementation of a new IMT strategy
- Implementation of the Business Intelligence Portal
- Cisco Jabber has been procured to support televised meetings

The key initiatives currently on-going at FCMS are:

- Implementation of teleconsultation via Cisco Jabber
- Deployment of an electronic HR record
- Data warehouse and Bi expansion
- Development of a Virtual Waiting Room
- Integration with the Medical Interoperability Gateway/SCR locally in Doncaster

Doncaster Children's Services Trust (DCST)

Currently Social care and Early Help case work is recorded on two separate client record systems. Trust staff have access to both of these systems. Partners (Health, Education, etc) can have access to the Early Help system.

Key recent achievements at DCST include:

- Upgrade of Business Intelligence application to Business Objects 4.1

- Deployment of "MOMO" mobile phone app allowing children and young people to engage with the Trust via their phone.
- Introduction of an eHelpdesk for internal support for these applications

The key initiatives currently on-going at DCST are:

- Upgrading Business Intelligence application to Business Objects 4.1 to give broader access
- A development fund is in place to improve social care pathways on the case management system
- Introduction of improved system governance arrangements
- The CP-IS project is approaching completion

Doncaster Metropolitan Borough Council (DMBC)

A formal assessment of digital maturity has been carried out by the Council considering not only the position of itself in relation to adult social care transformation but also against its wider strategic digital transformation vision. The assessment shows that good progress has been and is continuing to be made within the Council to drive forward these visions. Whilst the assessment identifies that further work is to be done, the Council have a number of core transformation programmes tasked with these and development and progress is closely monitored and scrutinised against detailed delivery plans.

Key recent achievements within adult social care transformation include:

- Review and improvements to the quality of information, advice and guidance provided to residents online to promote independent living through support across the community, voluntary and private sector as opposed to traditional local authority social care.
- The development of an online self-help questionnaire, signposting residents to the most appropriate information, advice and guidance and where appropriate, access to traditional social care assessments.
- Improvements to the Adult Social Care contact model to improve demand management, sign-posting online and the introduction of email monitoring into performance analytics allowing a reduced waiting time and those in crisis to access the help they need.
- Business process re-engineering of the assessment process, allowing the process to be delivered more effectively and efficiently whilst maintaining the quality and purpose of the processes.
- Improvements in lone working facilities and ensuring staff have the required communication and technology toolkit available to them to undertake their role within a community environment through remote and mobile working, removing

traditional papers from the process and ensuring the social care system provides live client information and the data risk of paper records and assessments is minimised.

The continuation of transformation with Adults, Health and Wellbeing will further contribute to this digital road map through the future introduction of:

- A community led support model, underpinned by digital and technology as enablers to promote independent living and local support within community setting, away from the traditional social care models delivered by local authorities.
- Review of the existing adult social care system and consideration of a cross functional case management system between children and adult social care supporting improved data sharing and collaboration between key agencies involved in a social care environment to ensure there is a single record of truth for the resident in respect of their social care needs and arrangements.

In addition to those specific digital transformations in adult social care, the Council has a wider transformation programme in delivery to achieve the strategic vision of a modern digital authority by the 31st March 2017, this programme is transforming service delivery both internally and externally, with key deliverables including:

- Modern online access to most Doncaster Council services enabling the people of Doncaster to access services when and where it suits them
- A high quality experience for those who prefer to use traditional contact channels
- The ability for customers to “Tell Us Once” for key life events and we will take care of the rest
- The resident at the heart of service design and delivery
- Streamlined, quicker and efficient services delivered behind the scenes, delivering what and when the Council promises
- The ability to route, performance manage and track service delivery
- A single customer record and joined up service systems enabling the Council to have an informed picture of need and become more proactive in providing services
- Business intelligence to inform the Council and partners of those individuals and families with the greatest need, assisting in more accurate decision making, services delivery and resource allocation
- Online access to more stream lined internal and support services so the Council operates more efficiently with increased value for money
- A higher level of digital skills across the organisation
- Improved reputation of the organisation
- Reduce the organisations operating budget by allowing Doncaster’s evolving population to operate digitally

The success of the Council's transformation programme is monitored by a number of key performance indicators including:

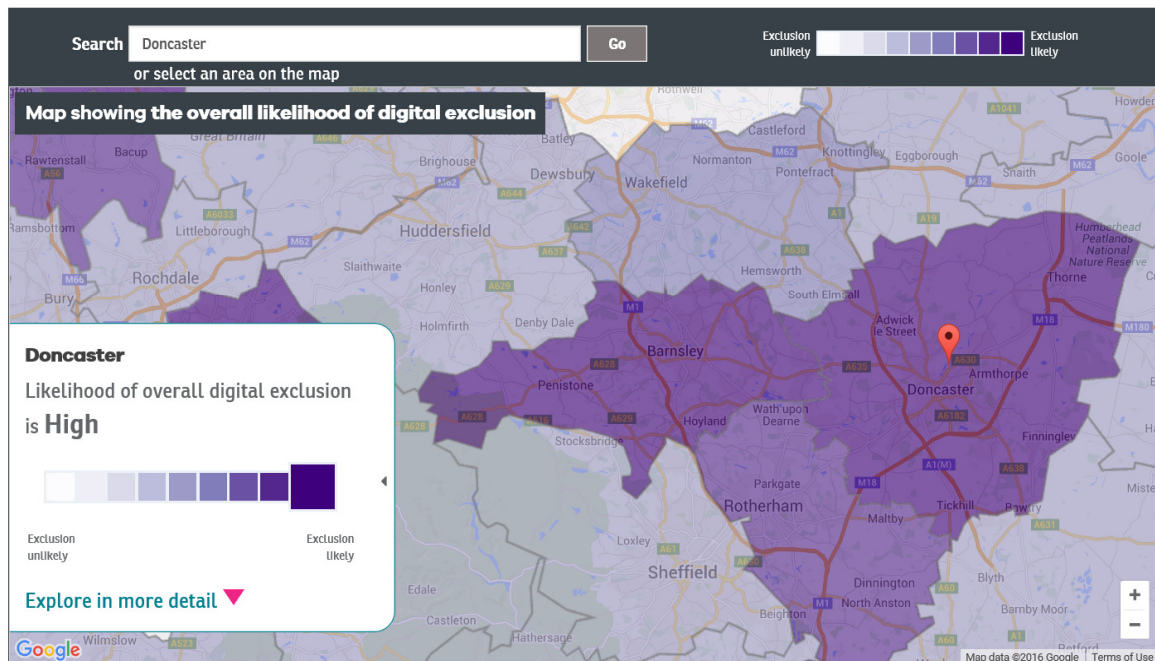
1. % Transactions online
2. % Services Available online
3. £ Reduction in operating budget

The Programme is currently reporting 20% of transactions are now undertaken online, an increase of 15% from July 2015 with 46% of Doncaster Council Services available online.

In understanding the barriers that residents face in getting online to access services, health and employment, the Council has undertaken significant consultation to understand the barriers facing residents. A national digital inclusion map places Doncaster as higher excluded:

Digital Exclusion Heatmap

Exploring exclusion from a digital United Kingdom



Source: <https://doteveryone.org.uk/resources/heatmap/> (June 2016)

The exclusion heat map identifies a number of social indicators across Doncaster that contribute to the exclusion:

- 18.2% of adults in Doncaster are over the 65
- 45.70% of adults in Doncaster have no qualifications and/or no Level 1 qualifications
- £19,700 is the average income per taxpayer in Doncaster
- 21.7% of adults in Doncaster have long-term illness or disability

The partners in Doncaster must collectively deliver improved outcomes to reduce the impact of these social factors. The Council is delivering a Digital Inclusion Strategy to ensure inclusion can be minimised, considering these factors and those barriers identified through public consultation. The deliverables under the Council's strategy that will produce benefits across all Doncaster residents and partners are:

1. Access to the internet and public Wi-Fi across all Doncaster Council access points and public spaces
2. One-stop information point to find training and support available in residents areas
3. One-stop information point to find free internet access in residents areas, and facilities to bring your own device
4. Working with the Superfast South Yorkshire Programme to improve internet speed and coverage across Doncaster
5. Meet regularly with residents to shape how online services are designed around their needs
6. Work with employers across Doncaster to promote and support basic ICT skills for all

Rate Limiting Factors

There are a number of rate limiting factors in progressing paper free at point of care delivery across the Doncaster footprint. The key factors have been identified as:

- The inability to share coded data between clinical systems due to APIs not being available
- Very limited capital and revenue funds are available
- Late feedback on capital funding bids delays ability to move forward with IT improvements and efficiencies in a timely manner
- Delayed decisions internally regarding planned projects
- Lack of single clinical system across Trust's can result in reduced functionality including the ability to share data
- Lack of interoperability within the health and social care community
- Limited capacity of internal system development teams
- Lack of available budget to procure additional system development
- The alignment and interdependencies of transformation projects and programmes across all Doncaster agencies including Local Government, Police and Health
- Reliance on external partners

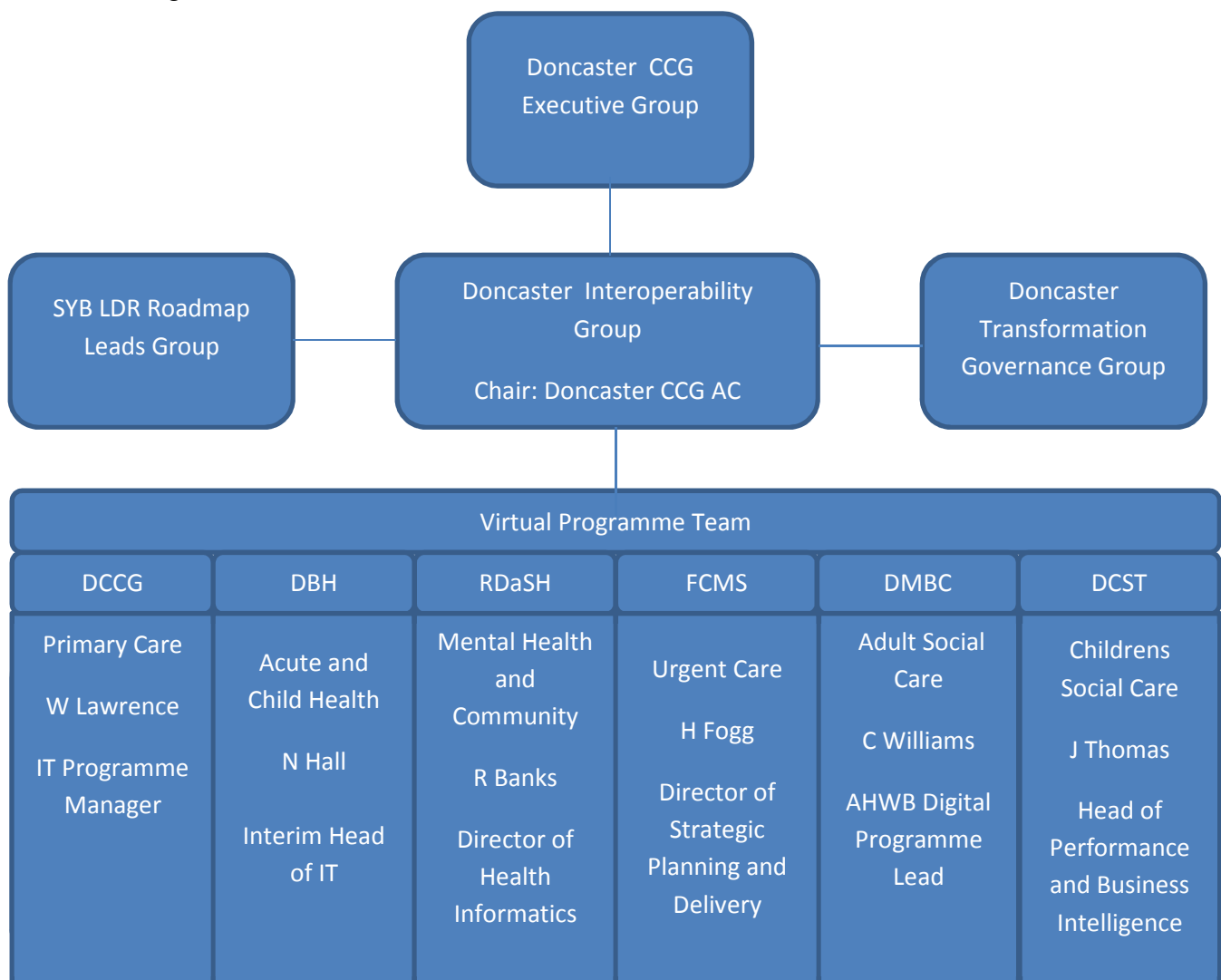
4. Readiness Assessment

As identified in section 1 we have established a new group, the Doncaster Interoperability Group, to support development and manage the delivery of our LDR. The group is chaired by the Doncaster CCG Chief Officer and has clinical and informatics representatives from all organisations. Clinical representation includes the CCG Chair, an LMC representative and the Medical Directors of both secondary care providers. The seniority of the group membership helps to provide strong leadership and links back to LDR partner organisations.

The Interoperability group is accountable to Doncaster CCG’s Executive Committee, but also reports to Doncaster’s Health and Social Care Transformation Governance Group, an executive steering group that includes the Chief Officers of all health partners and the Director of Social Services.. This link also helps to ensure that all partner organisations are clearly sighted and supportive of the roadmap objectives.

Progress on the delivery of the LDR will be reported to Interoperability Group and to existing provider informatics groups as per existing governance arrangements.

The current governance and programme structure for the Doncaster LDR is shown in the diagram below:



As can be seen from the diagram above Doncaster doesn't currently have a shared Programme Management Office or project resources. Therefore initially delivery of the LDR will be managed using the project resources of the partner organisations, working together to ensure that changes are managed and communicated effectively, including ensuring clarity of resource implications for each partner, balancing these against current projects and priorities. Monitoring and reporting on the LDR delivery will be carried out by Doncaster CCG as part of their responsibility for the Doncaster Interoperability Group. Over the course of the LDR programme we will review and assess the structure and resources required to support effective delivery through the Interoperability group and make changes as required. We will also continue to participate in the development of potential programme/project resources at the SYB STP level, to identify where resources supporting the LDR could be best shared across the wider area.

Within our LDR footprint at present there isn't a common change model or benefits management approach. Discussions at the Interoperability Group have identified that currently the approach to managing technology enabled change and benefits management at an organisational level does not follow a standard methodology. Our discussion on benefits management in particular has raised awareness that partner organisations may not currently have the required skills or resources to provide a formal benefits management programme. We are clear that to achieve benefits requires addressing three elements: people, process and technology. It also requires significant documentation of the baseline position so that variances from the baseline can be observed and accounted for. We will therefore identify appropriate change and benefits management models and implement them within our LDR community. These requirements have also been discussed at the South Yorkshire and Bassetlaw LDR Leads group and they were noted as a common requirement across several of the constituent LDR footprints. We will therefore seek to assess if these skills and resources could be provided and shared on a wider footprint.

The existing budgets for IT Capital and Revenue are already over committed throughout Doncaster. It is therefore expected that to drive digital maturity further and faster we will need access to additional funding. We have identified the following potential sources for this:

- The Driving Digital Maturity Investment Fund
- The Estates and Technology Transformation Fund
- Sustainability and Transformation Plan Funding
- Prime Minister's Access Fund
- Additional funding opportunities e.g. through Local Government

Working together in partnership to deliver the LDR for Doncaster will enable and require much greater engagement and co-working between the informatics departments across the footprint than before. It is expected that through this closer

working we will be able to identify opportunities to share and rationalise systems, services, skills and resources for the benefit of the whole community.

5. Capability Deployment

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

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

The current level of maturity of Doncaster's secondary care providers for the above groups of capabilities, as assessed by the digital maturity assessment, is detailed below:

Group of Capabilities	Doncaster and Bassetlaw Hospitals NHS Foundation Trust	Rotherham Doncaster and South Humber NHS Foundation Trust
Records assessments and plans	30	68
Transfers of care	57	13
Orders and results management	69	15
Medicines management and optimisation	56	11
Decision support	17	68
Remote Care	33	25
Asset and resource optimisation	30	40

The above identifies that the level of maturity across our two providers for these capability groups is variable with some low levels of maturity for both providers in certain groupings. The assessment indicates that there is further work to be done

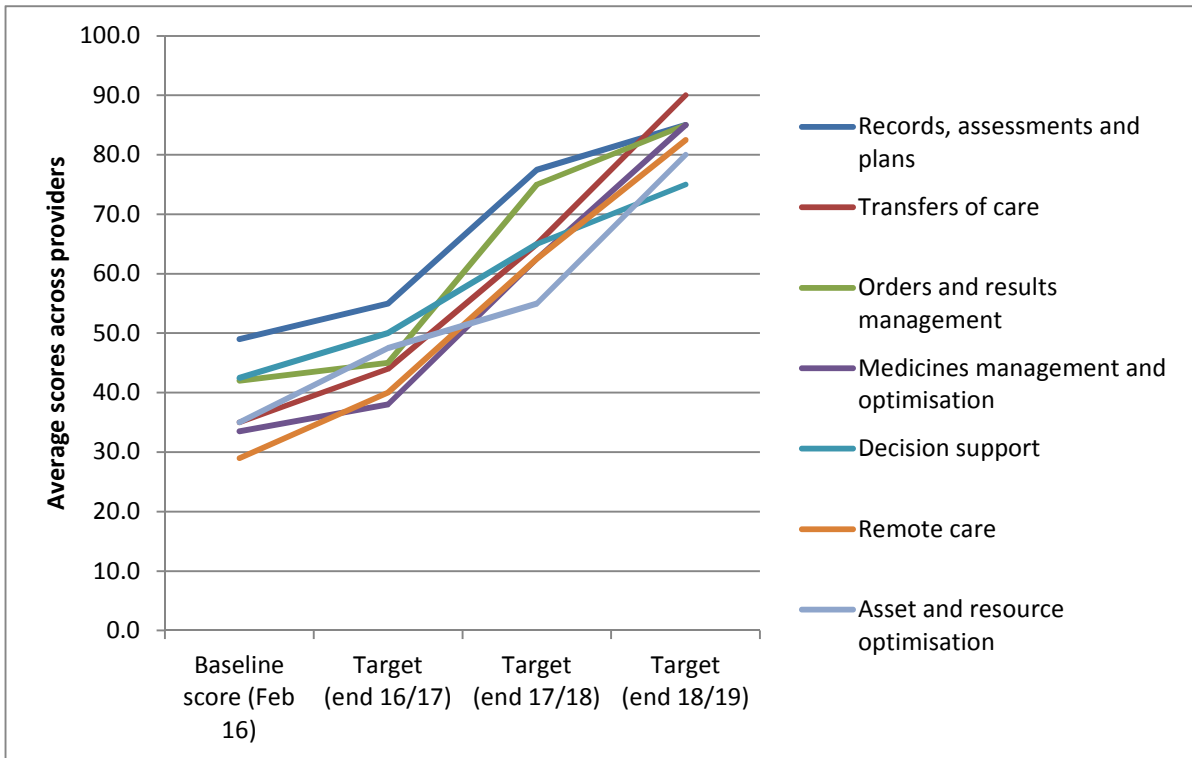
across all capability groupings to enable Doncaster to realise the ambition of operating paper free at the point of care.

As described in our vision the partners in the Doncaster LDR footprint are committed to the delivery of digitised and shared care records across Doncaster as these will be essential to the delivery of many of our strategic ambitions including the transformation of intermediate care services and the provision of care out of hospital. We are also committed to working with our partners across the wider South Yorkshire and Bassetlaw STP footprint to deliver shared care records across the whole STP footprint.

To address the growth areas above we have identified a range of projects across the LDR Doncaster footprint that will support development of the necessary capability. The outputs from these projects have been captured in the Capability Deployment Schedule shown in Appendix 1. The deliverables for 2016/17 are based on in-flight projects that will be delivered this year. Deliverables for future years are aspirational and will be dependent on approved business cases and funding. To deliver on our roadmap we will require finance and support and will make bids against the available technology funds for this.

Over the course of the next three years, as we deliver on the ambitions set out in this roadmap, our capabilities for the delivery of paper free care will be significantly increased. The estimated trajectories for the overall increase in the capabilities of our secondary care providers is shown in the Capability Trajectory diagram below (and in appendix 2):

Capability group	Average scores across providers			
	Baseline score (Feb 16)	Target (end 16/17)	Target (end 17/18)	Target (end 18/19)
Records, assessments and plans	49.0	55.0	77.5	85.0
Transfers of care	35.0	44.0	65.0	90.0
Orders and results management	42.0	45.0	75.0	85.0
Medicines management and optimisation	33.5	38.0	62.5	85.0
Decision support	42.5	50.0	65.0	75.0
Remote care	29.0	40.0	62.5	82.5
Asset and resource optimisation	35.0	47.5	55.0	80.0



6. Universal Capabilities Delivery Plan

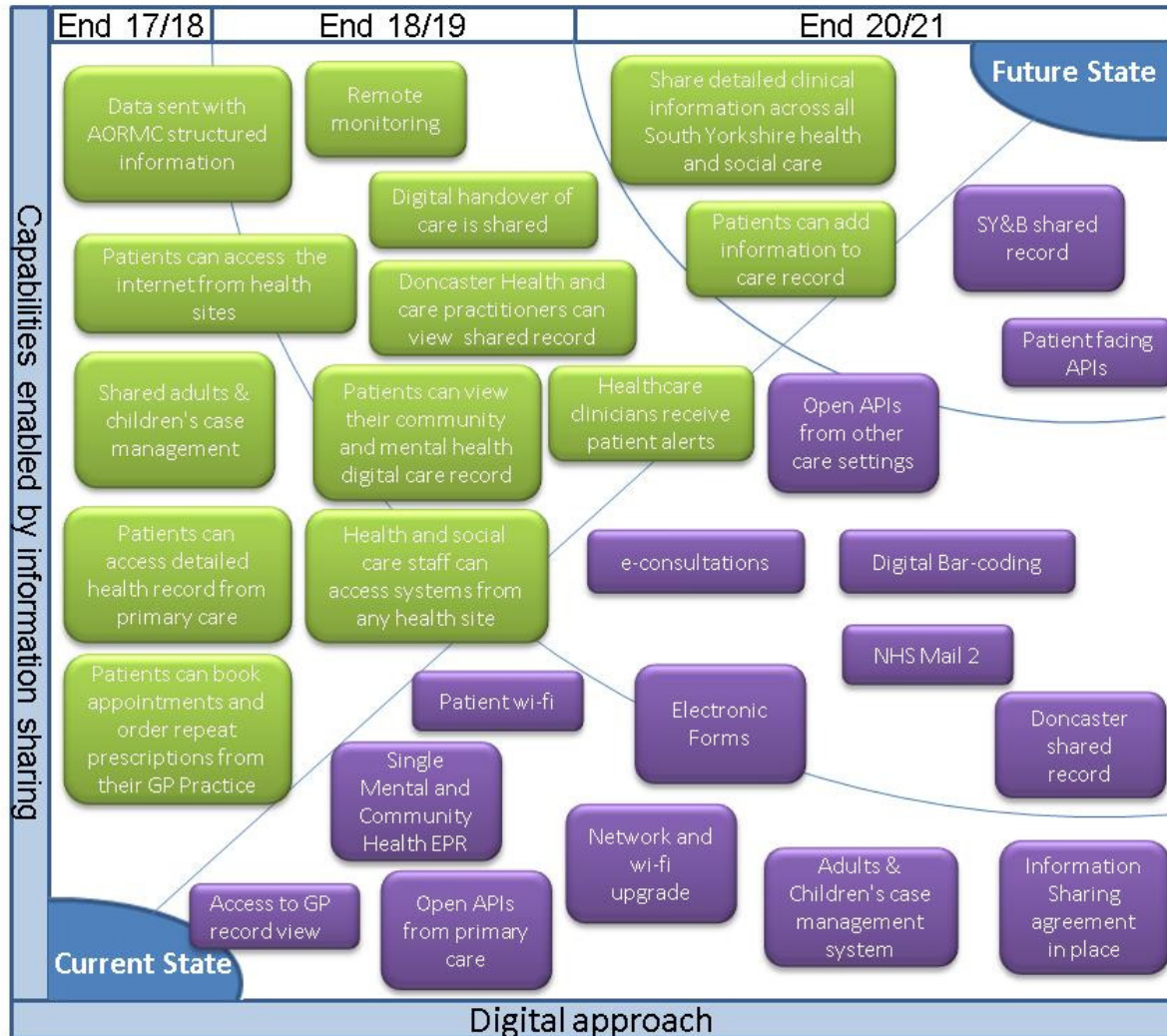
The Doncaster health and care system will make progress on the 10 universal capabilities, listed below,

- Professionals across care settings can access GP-held information on GP-prescribed medications, patient allergies and adverse reactions
- 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)
- Patients can access their GP record
- GPs can refer electronically to secondary care
- GPs receive timely electronic discharge summaries from secondary care
- Social care receive timely electronic Assessment, Discharge and Withdrawal Notices from acute care
- Clinicians in unscheduled care settings can access child protection information with social care professionals notified accordingly
- Professionals across care settings made aware of end-of-life preference information
- GPs and community pharmacists can utilise electronic prescriptions
- Patients can book appointments and order repeat prescriptions from their GP practice

Our approach for addressing each of these capabilities is detailed in the Universal Capability Delivery Plan in appendix 3. The delivery plan details the baseline, ambition, key activities and approach to evidencing progress for each of the capabilities.

7. Information Sharing

A diagram showing how new information sharing capabilities will be deployed in Doncaster over the next 5 years and the corresponding solutions that will enable this information sharing is shown below (and in appendix 4):



Doncaster CCG is currently signed up to the Yorkshire Inter-Agency Information Sharing Protocol. This protocol covers the sharing of person-identifiable confidential data, with the individual's express consent, unless a legal or statutory requirement applies.

Locally across Doncaster, we have developed an Information Sharing Agreement to enable the sharing of real time clinical information across health organisations. This is a framework on how we will share information with all the agencies involved in our patients' care. For each new information sharing objective we will supplement the protocol with specifics regarding what and how the information will be shared and who with. A privacy impact assessment will be put in place to ensure we have measured all the risks associated with the information sharing approach. It is the trusts duty to share information for effective patient care with all legitimate parties. As part of the local digital roadmap we will aspire to deliver a clinical portal technology,

incorporating existing information sources, across the Doncaster health community in line with other health community successful models including the Bristol and Leeds Care Records. We will ensure we comply with all the regulatory requirements to ensure the safe interoperability of information throughout the health community and beyond whilst recognising that we have a duty to share information to enable the provision of safe care to our patients.

As part of our work within the wider SYB footprint we recognise the need to have a shared approach to information sharing (through both an information governance framework and technical solutions). Our intention is to engage in a wider joint approach across all SYB (or wider) health and care organisations and we will be seeking to take this work forward within the SYB STP governance arrangements.

The current level of adoption of the NHS Number across health and care providers in Doncaster is shown in the table below:

Provider	% records in key systems with NHS number	Action Plan
DBH	84.2%	Since the Trust adoption of their new spine connected PAS in October 2015 the % of records with a verified NHS number has risen to 98% for records with activity since system implementation.
RDaSH	99.9%	None required
FCMS	80.0%	FCMS have approximately 80% coverage due to staff in the previous service not having smart cards. They have now secured a local RA agent and the staff are rotating through the process. They plan to have full coverage of new cases by August 2016.
DCST	43.0%	43% of children's social care records have an NHS number although the proportion differs dependent upon the level of care. 63% of Looked after children have an NHS number. As part of the CP-IS project, matching activity is taking

		<p>place to improve the rate of children in care or subject to a child protection plan with an NHS number in order to facilitate information exchange. This is currently with HSCIC.</p> <p>There is no statutory requirement to hold this information for children in need, and the requirement to hold an NHS number will depend upon the level of support that is being delivered.</p>
DMBC	80.0%	Adult social care will be undertaking work to improve the number of records with the NHS number in 2016/17

In order to extract the most value from the sharing of information, the SNOMED-CT and Dictionary of Medicines and Devices (dm+d) information coding standards will have to be rolled out across the local health and care system. Our plans and milestones for the adoption of these standards are summarised in the table below:

Provider	Action Plan
Primary Care	<p>SNOMED is already implemented in EMIS Web. We will seek confirmation from the GPSoC programme of when it will be available in SystemOne.</p> <p>dm+d is already available in EMIS Web and SystemOne.</p>
DBH	The Trust are currently establishing how SNOMED-CT can be supported in their CaMIS PAS system
RDASH	The implementation of SNOMED and dm+d will be facilitated by the new EPR system
FCMS	Adastra is ready to support the adoption of SNOMED-CT codes as and when the standard is introduced into everyday use

8. Infrastructure

The development of network connectivity between sites and mobile infrastructure has been developed significantly in Doncaster over recent years. We have been working to rationalise and deploy network connections from the Yorkshire and Humber Public Sector Network (PSN) across primary care, secondary care and local authority sites for several years. These network connections are now fully deployed in DBH, RDaSH and DMBC and continue to be rolled out into primary care, giving us increased capability to share information and services across providers. Doncaster has supported the development of the NHS Roam Wi-Fi solution, developed under the Working Together Partnership, and this has been implemented in sites at DBH, RDaSH and the CCG allowing staff to move and work across sites. In the future we aim to further develop this capability to allow seamless mobile working for health and care practitioners across all health and care sites in Doncaster.

A summary of the current mobile working capability in Doncaster and plans to develop this further is shown below:

Primary Care	<p>All GPs and Registrars and identified practice nurses within Doncaster practices have been allocated a laptop with mobile provision. The mobile connection is delivered by a solution that provides access over 4G and Wi-Fi networks helping to maintain a secure and reliable connection to system.</p> <p>To support mobile connectivity in GP practices we have invested in a GP practice Wi-Fi solution for all sites and plan to deploy it at 50% of sites in 16/17 and the remaining sites 17/18.</p>
DBH	<p>DBHFT operate an AirWatch MDM solution with 500 device licenses and 300 + Apple iPads / iTouch / iPhones. This is underpinned by a new ac wifi network installed to RFID standards in clinical areas.</p> <p>In future with the mass deployment of RFID surveyed ac Wireless in progress, the Trust expects that it will have complete Trust coverage for wireless working. External to the Trust, DBHFT utilises the NHSRoam wireless and leverages the functions within AirWatch (through the Secure AirWatch Browser) to access internal applications (including clinical systems). As part of the plans to deploy Electronic Whiteboards and e-obs, the Trust anticipates a further deployment of hand-held devices to support the recording of patient details and vitals at the bedside</p>
RDaSH	<p>Infrastructure to facilitate mobile working (3G/4G plus VPN) is available. Staff have the ability to access this infrastructure depending on need. Wi-Fi is deployed to areas across the Trust.</p> <p>A Mobile/Agile programme is now in place to support the Trust wide Transformation Programme. This will include extending Wi-Fi coverage across the whole Trust.</p>
DMBC	<p>DMBC delivers wide and varied remote and mobile working solutions across its workforce based on the needs of the individual and their role. The Council utilises the ability to allow staff to access systems remotely and issues appropriate devices as required.</p>

	<p>A majority of DMBC sites provide public and organisation Wi-Fi supporting multi agency site location as well as the ability for staff to access core systems outside of council estate also. The infrastructure solutions also provide the ability for the workforce to access 3G/4G connectivity through the Council unified communications provider.</p> <p>The Council delivers a PSN compliant network with security compliance to standards with encryption and data security protocols.</p>
DCST	<p>The majority of case holding staff have access to a laptop and mobile phone. Remote access to the case management system is possible. Wi-Fi is available across most sites (delivered by DMBC through SLA).</p> <p>In future DCST aims to provide access to laptops and mobiles for all key workers. In addition DCST's case management system suppliers (Liquid Logic) are developing a mobile APP for case management system. This solution is not currently scheduled in the DCST development plan, however it may be considered future.</p>
FCMS	<p>All FCMS mobile clinicians use Aداstra Aremote to access the full Aداstra record remotely. The ability to embed MIG/SCR within this system is available now and awaiting local implementation.</p> <p>FCMS are currently implementing VMWare Horizon as a Business Resilience system to allow clinicians to be on call and work from home. They are also investigating the possibility of using this system at allow staff to connect to work resources using personal devices.</p> <p>FCMS already provide telemedicine services in other areas and the FCMS infrastructure in Doncaster for the provision of teleconsultations is ready to go live.</p> <p>FCMS are looking at rolling out Cisco Virtual Waiting room. This will be only the second site in the country to be live. The system will provide a virtual waiting room for televised consultations as opposed to visiting or bringing the patient into a site.</p>

As detailed above the providers in Doncaster have implemented connectivity to a common wide area network infrastructure (PSN) and have discussed how this could be used to support collaboration and shared infrastructure in the future. There are currently no agreed plans for tools to support collaboration across the Doncaster footprint but adoption of the NHSmail2 service is currently under consideration for primary care, RDaSH and the CCG and we are keen to see how the development could support a future collaboration platform. In addition to this DCST is currently in deployment of "Professional Portal" that will allow professionals access to their case management system.

In Doncaster we have some areas of shared infrastructure in place across groups of organisations. RDaSH provide an IT service that covers themselves, all General Practices and the CCG. This service has significant areas of shared infrastructure and this continues to develop as the IT services grow and are rationalised across organisations, including the recent development of a shared storage area network. Similarly the IT services for DCST are provided by DMBC on a shared infrastructure and they share client case systems allowing joint access for lead professionals on open cases.

As our LDR programme develops and the partner organisations develop their digital maturity we will use the opportunities provided by working in partnership to identify where infrastructure, systems and IT services could be shared across the Doncaster footprint or possibly wider across the STP or Working Together areas. Working with our partners across the STP footprint we aim to encourage the development connectivity of IT systems and services that will enable practitioners to work seamlessly from any health and social care location with full access to all the information they need.

9. Minimising Risks Arising from Technology

All partners within the Doncaster LDR footprint have their own well established Information Governance functions and will remain responsible for minimising risks associated with data security, clinical safety, data quality, data protection, privacy, business continuity and disaster recovery.

The routine reporting of risks and issues has been established at the Doncaster Interoperability Group and we will use this process to ensure that key risks to LDR delivery and operation are communicated across the footprint and mitigated as appropriate. In addition as part of our LDR development we have commenced discussions on the establishment of a footprint wide Information Governance Group, operating as sub-group to the Interoperability Group. We have also recognised that there is the opportunity for working more collaboratively on the wider STP footprint to support this agenda and we will continue to engage with partners across this wider area.

DBH and RDASH are both developing plans for the GS1 standards. DBH have confirmed that they intend to implement GS1 standards on patient wristbands during 2016/17.







10. Glossary

A&E (Accident and Emergency)	A medical treatment facility specialising in acute care of patients who present without prior appointment.
CCG (Clinical Commissioning Group)	Clinical commissioning groups will cover the whole of England and will be responsible for commissioning the majority of healthcare for their local population. They will work with partners including NHS England and local authorities, who have responsibility for commissioning areas such as specialised services, primary care and public health, to commission integrated care for patients.
DMA (Digital Maturity Assessment)	The Digital Maturity Assessment measures the extent to which healthcare services in England are supported by the effective use of digital technology. It will help identify key strengths and gaps in healthcare providers' provision of digital services at the point of care and offer an initial view of the current 'baseline' position across the country.
EPS (Electronic Prescription Services)	The Electronic Prescription Service is an NHS service that allows a GP to send prescriptions directly to a patient's chosen pharmacy. This means that patients can choose to have a paper-free prescription.
GP (General Practice)	General practice (GP) General practitioners (GPs) treat all common medical conditions and refer patients to hospitals and other medical services for urgent and specialist treatment. They focus on the health of the whole person combining physical, psychological and social aspects of care.
GPSoC (GP Systems of Choice)	GP Systems of Choice is a programme through which the NHS funds the provision of GP clinical IT systems in England.
Local Digital Roadmap (LDR)	Local health economies are required to produce Local Digital Roadmaps detailing the actions they will take to deliver the ambition of being paper-free at the point of care by 2020. Local Digital Roadmaps will generate momentum and drive transformation across local health economies, inform local investment priorities and support local benefit realisation strategies.
NHS Digital (HSCIC)	The national provider of information, data and IT systems for commissioners, analysts and clinicians in health and social care. NHS Digital (HSCIC) is an executive non-departmental public body, sponsored by the Department of Health.
NHS e-RS (NHS)	NHS e-Referral Service replaced Choose and Book in 2015. This

e-Referral Service)	service is used to manage all appointments referred to secondary care from primary care
PF@POC (Paper Free at the Point of Care)	Paper free at the point of care means that all authorised care givers can access a patient's relevant digital records when and where they need them.
PSN (Public Services Network)	The Public Services Network (PSN) is the UK government's high-performance network, which helps public sector organisations work together, reduce duplication and share resources.
SCR (Summary Care Record)	The Summary Care Record is an electronic record used to support patient care. The SCR is a copy of key information from a patient's GP record, such as medication, allergies and adverse reactions. It provides authorised healthcare staff with faster, more secure access to essential patient information
Social Care	Social care in England is defined as the provision of social work, personal care, protection or social support services to children or adults in need or at risk, or adults with needs arising from illness, disability, old age or poverty.
SNOWMED	SNOMED CT (Systematized Nomenclature of Medicine -- Clinical Terms) is a standardized, multilingual vocabulary of clinical terminology that is used by physicians and other health care providers for the electronic exchange of clinical health information.
Sustainability and Transformation Plan (STP)	Local health and care blueprints for accelerating implementation of the Forward View.
Working Together Programme (WTP)	Working Together is a partnership involving seven hospital Trusts in South Yorkshire, Mid Yorkshire and North Derbyshire. Collaborating on a number of common issues will allow the Trusts to deliver benefits that they would not achieve by working on their own.

11. Executive Sign-Up

The signatories below confirm that their organisation is in agreement to the Doncaster Local Digital Roadmap and is committed to its delivery:

<p>Signed on behalf of NHS Doncaster Clinical Commissioning Group</p>	<p>Name: J PEDERSON Signature:  Designation: Chief Officer 24/6/16</p>
<p>Signed on behalf of Doncaster and Bassetlaw Hospitals NHS Foundation Trust</p>	<p>Name: SEWA SINGH Signature:  Designation: MEDICAL DIRECTOR</p>
<p>Signed on behalf of Rotherham Doncaster and South Humber NHS Foundation Trust</p>	<p>Name: NAVJOT AHLUWALIA Signature:  Designation: EXECUTIVE MEDICAL DIRECTOR</p>
<p>Signed on behalf of FCMS</p>	<p>Name: GILLIAN GREGORY Signature:  Designation: DIRECTOR OF QUALITY & PERFORMANCE</p>
<p>Signed on behalf of Doncaster Metropolitan Borough Council</p>	<p>Name: KIM CURRY Signature:  Designation: DASS 24/6/16</p>
<p>Signed on behalf of Doncaster Children's Services Trust</p>	<p>Name: Paul Moffat Signature:  Designation: CL DOST</p>