

Digital Strategy 2017-2021



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Foreword

This document sets out the new digital strategy 2017-2021 to support the Trust deliver its clinical and business objectives.







It describes our ambition to become one of the most digitally advanced integrated care organisations in the NHS over the next three years.

The document is structured into three main sections

- **Vision** - outlines how patients and staff will use digital services to improve care, outcomes and experience
- **Where are we now ?** – outlines the current status of digital services using digital maturity indices
- **How do we get there ?** - outlines the programme of work to deliver the future vision

Digital strategy consultation

The new digital strategy has been developed through consultation with key staff to ensure it aligns with the Trust's clinical and business needs via :

- STP Informatics Governance Board  in progress
- Integrated Care Communities Information Management & Technology (IM&T) Sub Group  done
- Trust Management Board/Clinical Executive Group  in progress
- Trust Wide Clinical Governance Group  done
- Support Services Delivery Group
- eHealth Cumbria Collective Leadership Development Group  done
- National and Local strategies: Safer Hospitals, Safer Wards; Personalised Health and Care 2020; Five Year Forward View and Local Digital Roadmaps  done

Introduction

This chapter describes the policy and digital context

The NHS is facing unprecedented financial and operational pressures as it strives to deliver the vision set out in the Five Year Forward View (2014).

The current models of care and levels of funding will not address the demographic challenges of a growing population, which is living longer, often with multiple long term conditions.

To address these widening gaps in health and wellbeing, care and quality, and financial sustainability, NHS England set up :-

- **New Care Models programme** - 50 vanguards to develop blueprints for new integrated models of care
- **Sustainability and Transformation Plans (STP)** – 44 local footprints to deliver improved, sustainable health and care .

West North & East Cumbria Sustainability and Transformation Plan

In 2016/17 WNE had a deficit of £81m, which will increase to £168m by 2021 if nothing changes.

The vision for WNE Cumbria STP is:

- Everyone in WNE Cumbria having improved health and wellbeing, with reduced health and wellbeing inequalities across our communities.
- Recognised service excellence for people living in rural, remote & dispersed communities with outstanding provision of integrated services.
- A range of safe and sustainable local services linked into vibrant wider regional networks
- An economically viable health and social care community with a track record of delivery.

Alignment to National Strategies

“The goal of digitisation of health is to promote better health, better healthcare and lower cost”

...digitising effectively is not simply about the technology, it is mostly about the people”

Robert Wachter, Making IT Work (2016)

Disruptive technologies such as smartphones and cloud computing have transformed the way we consume services *e.g. on-line banking, retail, travel, social interactions*, with one notable exception, healthcare.

Our digital strategy aligns to the NHS England initiatives to embrace digitisation and takes major steps towards its vision to “operate paperless at the point of care”:

- **Safer Hospitals, Safer Wards, (2014)**
 - ◇ Sets out vision for a fully integrated digital care record (ICDR) across all care settings by 2018
- **Personalised Health and Care 2020, (2014)**
 - ◇ Real time, interoperable digital records by 2020
- **Five Year Forward View, (2015)**
 - ◇ Leverage the potential of technology and innovation, enabling patients to take a more active role in their own health and care
- **Wachter Review : Making IT Work (2016)**
 - ◇ Chief Clinical Information Officers (CCIOs) to lead adoption of digital working
- **Local Digital Roadmaps (2016)**
 - ◇ local digital strategies to support delivery of STPs

Alignment to Local Strategies

Digitisation is the transformational enabler that underpins the delivery of other strategies

Strategies or Priorities	Requirement	Digital Strategy Deliverable
Better Care Together	Enable the communities in Bay health partners to deliver better population health, better quality services, delivered at a lower cost and with higher staff morale	Access to digital patient records and a connected digital infrastructure to enable frontline staff and patients to be digitally connected, regardless of geographical boundaries. i.e. patient portal, shared care records, electronic referrals, virtual video consultations, agile working etc.
WNE STP plan	Enable improved health and wellbeing underpinned by health and care services that are sustainable and effective	Access to digital patient records and a connected digital infrastructure to enable frontline staff and patients to be digitally connected, regardless of geographical boundaries. i.e. patient portal, shared care records, electronic Obs, electronic referrals, virtual video consultations , reducing travel , agile working etc.
Workforce strategy/ plan (NCUH and CPFT)	Workforce planning and performance management to maximise productivity.	Rostering and safer care system integrated with temporary staffing. i.e. eRostering, workforce planning
Estates priorities (NCUH & CPFT)	Change working practices to reduce occupancy levels, tracking of devices, scheduling and booking of locations/rooms, space utilisation and more agile working solutions.	Secure access to digital services from anywhere on any device to enable remote working, tracking and scheduling i.e. virtual consultations, video/audio conference facilities, space booking system required to control, provide visibility and improve utilisation of resources , asset tracking of medical devices, scan on demand solutions and fully integrated computer aided facilities management (CAFM) system.

Digital vision

This chapter describes how digital technology will transform healthcare of our patients and staff

Our digital vision

To ensure our staff within the WNE Cumbria health economy have access to the right digital information, in the right place, at the right time – enabling healthcare to be delivered safely and efficiently.

Our digital purpose

Foster a ‘digital first’ (paper free) philosophy to designing and delivering care services, to promote mobile, flexible, digitally-enabled services and workforce models. Our plan is to close the gap in variability and achieve equality across all our providers’ digital capabilities.

Our digital objectives

- Improve access to patient information/digital care records across multiple systems
- Information flowing digitally seamlessly between the WNE Cumbria STP and other health and care providers in Cumbria.
- Improving the technology, infrastructure and systems to support the management and operation of Integrated Care Communities (ICC)
- Reliable, robust and secure infrastructure available to support the delivery of high quality, efficient care.
- Deliver a ‘Technology Enabled Care’ strategy

- Support the continual improvement in productivity and cost reduction, working towards system financial balance.
- Right information, right person, right time.

The vision for the digital strategy is underpinned by five key digital themes:

- **Digital care records** – empower patients to actively manage their health and care and enable staff to access Digital Care Record which is shared seamless between all organisations in Cumbria.
- **Infrastructure** – provide a secure, resilient, and mobile operating infrastructure.
- **Technology enabled care** – use technologies such as telehealth, telecare, telemedicine, telecoaching and self-care apps that have the potential to transform the way people engage in and control their own healthcare, empowering them to manage it in a way that is right for them.
- **Resource optimisation** – utilising technology to support to manage the effective use of resources (e.g. staff, bed status, assets)
- **Information management and governance** - ensure information is available to the right people, in the right place, at the right time.

Digital care record

We will transform our models of care by enabling patients to manage their own health using digital services and we will transform our ways of working by giving staff access to digital services anytime, anyplace.

The digital care records theme will take centre stand and encompass several projects that are fundamental to the vision and objectives for full digital maturity in Cumbria. We aim to ensure that all patient information will be available electronically, on screen, at any location, at any time.

We are confident that this will be the catalyst to generate efficiencies within our clinical networks by providing best-in-class infrastructure and systems to support delivery of truly integrated care across health and social care boundaries in Cumbria. Our theme will also support the vision of putting the patient at the centre of their care providing the tools to support the delivery of high quality integrated care pathways within our local care health economy.

We want our patients, clinicians and workforce to...	Digital Requirement
View and input to my digital health record and develop, manage my personal care plan	Access to Patient Portal
Book and manage appointments at my convenience	Enable e-booking transactions via Strata or national system eReferrals
View a real time, accurate, and complete integrated digital care record for our patients	Optimise our digital clinical systems and have access to Integrated Care Record
Develop and share care plans across health and social care	Optimise our digital clinical systems and have access to Shared Care Record

Use decision support tools to improve patient safety and quality of care	Enable results reporting and electronic prescribing and medicines administration
Operate digitally at the point of care and stop using paper based processes	Agile working, digital dictation with eCorrespondance Hub, interoperable digital tools and development of a digital scanning strategy

Resulting Benefits to Patients and Staff

Care is improved, with service users receiving the right care in the right place, first time. The patient experience is a more positive one, with the shared records negating the need to repeat their story to different care professionals.

The technology enables care providers to see who else is involved and ensure that the professionals work together in wrapping care requirements around the service user, putting them at the centre of their care.

Health and social care experts across the county will have access to a service user's records from anywhere at any time, reducing administration time, reducing medication errors and ensuring a more accurate and dynamic record.

Digital transformation programme

Digital Care Records

Digital Objectives	Digital Goals
<ul style="list-style-type: none"> • All providers move from paper to interoperable electronic records • Information flows digitally seamlessly between primary, secondary and social care • Improve the technology infrastructure and systems to support the management and operation of ICCs 	<ul style="list-style-type: none"> • Records, assessments & plans • Medicines Management & Administration • Decision Support • Orders & Results • Use of NHS Number in Social Care • Transfers of Care

	Year one	Year two	Year three	Beyond
Digital care records	<ul style="list-style-type: none"> • Child health (RiO) • EMIS web community MSK & neuro physio • Short-stay paediatric assessment unit (SSPAU) EPR • Correspondence Hub (CHUB) • Clinical portal • GP radiology requesting • eObservations • RiO DCRv2 • RiO interface to Strata • Strata Pathways 	<ul style="list-style-type: none"> • Clinical portal • eObservations • EMIS web community feed through to the MIG • Discharge summaries • Strata resource matching • Community hospitals EPR (RiO & EMIS) • EMIS web CDB consolidation • PACS replacement (radiology) • Home First GP notification process • Strata Pathways • Healthy child information strategy • Participation in the Great North Care Record 	<ul style="list-style-type: none"> • Sexual health EPR replacement • Strata Pathways • Order communications & results reporting • Electronic prescribing & medicines administration 	<ul style="list-style-type: none"> • Acute EPR (paper-lite hospital)

Infrastructure

We will transform our Information Technology (IT) infrastructure by implementing a secure, resilient, and mobile operating platform.

The Infrastructure theme of our digital strategy 2017-2021 will include in our plans enhancing the provision of IT and support services that are robust and highly reliable to meet the demands of our clinical and administrative systems.

The digital 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 and highly effective cyber security measures will deliver secure data access in a user friendly manner.

Our vision for infrastructure is that it needs to enable our front line staff. The right balance between new and highly effective cyber security measures and ease of access are critical.

Resulting benefits to patients and staff

The infrastructure programme will deliver benefits in terms of time released back to care, improved patient flow, mobile access to patient records, and improved productivity and efficiency.

Additional benefits to the Trust will be more robust and reliable infrastructure that is joined up regardless of location, which is fully secure and data that is recoverable.

We want our IT infrastructure to...	Digital Requirement
Protect the Trust's information assets from cyber security threats e.g. ransomware, malware	Robust cyber security platform
Provide enhanced user experience through state of the art consumer devices enabled for the corporate/clinical environment, whilst maximising economies of scale through economy wide purchasing.	Common mobile/agile working devices
Enable virtual communication and collaboration enabling video conferencing, instant messaging and flexible telephony solutions	Common unified communication platform
Provide resilience with near 100% availability with all services moving to robust data centres	Real-time data replication
Enabling network access across all sites for all partners, so that our staff can work anywhere	Health and social care network (HSCN) and wireless access
Moving all services to state of the art data centres, providing scalable and cost effective solutions based on the needs and requirements of the economy.	Rationalising to our data centres

Digital transformation programme

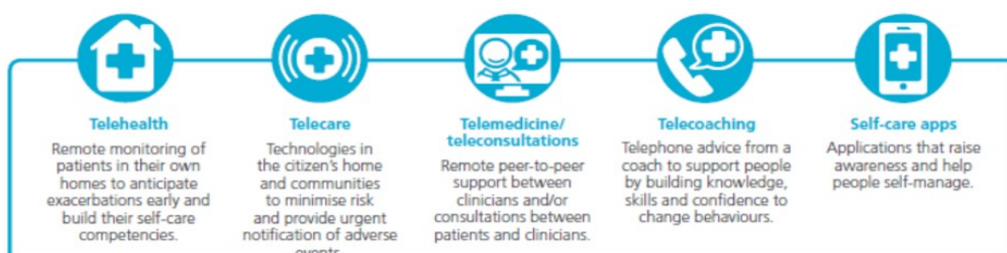
Infrastructure

Digital Objectives	Digital Goals
<ul style="list-style-type: none"> Reliable, robust and secure infrastructure available to support the delivery of high quality, efficient care Improve the technology infrastructure and systems to support the management and operation of ICCs 	<ul style="list-style-type: none"> Convergent infrastructure Enabling Infrastructure Standards

	Year one	Year two	Year three	Beyond
Infrastructure	<ul style="list-style-type: none"> COIN Wireless access – guest & NHS Lot 3E data centre infrastructure Disaster recovery plan & test IP telephony Security information/event management Fax machine replacement 	<ul style="list-style-type: none"> Digital dictation (acute) Agile working for community staff NCUH infrastructure Lot 2E data centre infrastructure – desktop rollout End user device strategy Mobile device management Audio-video conferencing Upgrade strategy SharePoint strategy 	<ul style="list-style-type: none"> Single sign on Data centre rationalisation 	<ul style="list-style-type: none"> NHS mail Active directory

Technology-enabled care (TEC)

This theme aims to deliver better outcomes to patients by maximising the value of technologies that enable better communication between the patient, their carers and their care team. These technologies include



TEC involves the use of technology to enhance care by capturing and sharing information in new ways. There are two important aspects within the definition that need to be expanded:

- TEC should support person centred care within a broader range of support and care services with the focus shifting from the technology (the means) to the care outcomes. Therefore, TECs should be considered within the service redesign cycle as part of placing the right tool at the right point in a chosen pathway – a key ambition of the new National TEC Strategy.
- TEC should support the focus on preventative and anticipatory care, recognising that while TEC can be appropriate at all levels of need there is greatest scope to make an impact at the high volume, lower care needs level.

TEC is relatively simple: technology does what technology is good at (constant monitoring and automatic feedback), freeing staff to do what they are good at; person to person interaction. TEC is not just about equipment; it should be embedded and supportive of a complete service which includes providing assessment, care planning and a proactive appropriate response. The aim being to support the achievement of agreed personal outcomes.

TEC has been successfully implemented in a number of limited care settings but has not been widely adopted across Cumbria. The focus of the TEC program is the delivery of the strategy across Cumbria in appropriate care settings and with patients and clinicians at the heart of redesigning which care pathways are the most appropriate to use the technology.

Digital transformation programme

Technology enabled care

Digital Objectives
<ul style="list-style-type: none"> Develop a Technology Enabled Care strategy

Digital Goals
<ul style="list-style-type: none"> Support areas which wish to pilot something Agree areas to prioritise re: potential beneficial impact Develop strategy/action plan for development and implementation

	Year one	Year two	Year three	Beyond
Technology enabled care		<ul style="list-style-type: none"> Develop strategy Pilot of remote consultation Patient portal/patient facing application 	Patient portal/patient facing application	<ul style="list-style-type: none"> Directory of service

Resource optimisation

Resource optimisation is one of the components of the capabilities theme in the Digital Maturity Assessment. It highlights that NHS providers should be utilising technology to support and manage the effective use of resources.

This strategic theme will implement wherever possible technologies that support asset and resource management and optimisation, it will provide all healthcare providers in Cumbria with timely access to quality information that supports patient flows, bed availability and location of clinical assets

Resulting benefits to patients and staff

To patients: Better, safer and more appropriate care, less time in hospital, more quality care time with care staff.

To staff: Smoother and safer transfer processes, less administrative work, more time with patients, improved patient data quality.

To Trusts and CCGs: Integrated patient records and improved patient data, more coordinated and accessible care across the region, savings from reduced hospital time and stationary/administration costs, improved patient and staff wellbeing

We want our staff to...	Digital Requirement
Maximise use of our resources by driving productivity and financial benefits for the system.	Agile working to enable virtual consultation/conf meetings, room utilisation and booking, asset tracking of medical devices, managing capacity of staff resources and central system for scheduling maintenance.
Optimize software licenses & reduce costs by providing insight & control of software consumption across all devices & platforms and tracking of medical devices.	Software Asset Management and Radio-frequency identification (RFID)
Provide safer care system by bringing together in one central place, management information on shift patterns (including individuals' preferred shift patterns), annual leave, sickness absence, staff skill mix and movement of staff between wards.	E-Rostering, Resource management of programmes/projects and fully integrated computer aided facilities management (CAFM) system
Use real-time availability of resources and beds and pro-actively match these to patient needs	Strata Resource Matching

Digital transformation programme

Resource optimisation

Digital Objectives
<ul style="list-style-type: none">• Support continuous improvement in productivity & cost reduction, working towards system financial balance

	Year one	Year two	Year three	Beyond
Resource optimisation	<ul style="list-style-type: none">• Integrated support service	<ul style="list-style-type: none">• eRostrering• Scanning & MFDs• Programme planning & resource management• Printing	<ul style="list-style-type: none">• Review/rationalisation of application landscape• Software asset management	<ul style="list-style-type: none">• ESR optimisation

Information management and governance

Information is a vital asset for the Cumbria health economy, supporting both day to day clinical operations and the effective management of services, resources and performance. Therefore it is essential that all information is managed effectively within a robust governance framework. In addition all health providers have a statutory responsibility to patients, public and NHS staff to ensure that it has effective processes, policies and people in place to deliver its objectives in relation to holding and processing of information in a confidential, reliable and available manner

The programme's aim is to enable decision-makers, in particular Executive Directors, clinicians and managers, to make better decisions by providing them with actionable information, with right information at the right time.

We want our staff to...	Digital Requirement
To develop innovative ways for our staff to recognise importance of data quality	Data quality strategy
To comply with the General Data Protection Regulation (GDPR) with everyone responsible for the management of the data cycle	General Data Protection Regulation
Record information once, at first contact, and shared securely, supported by consistent use of information standards that enable data to flow whilst keeping our confidential information safe and secure.	Information sharing
Allow decision-makers to be able to find the information that they want quickly	Real time access to performance, outcomes and effectiveness data
Shift from a reactive response to historical data to proactive management using predictive data	Data mining and modelling tools

Resulting benefits to patients and staff

Better protection of confidential information from unauthorised staff. Well protected records are less likely to fall into the wrong hands and are less likely to be misused. This is of particular significance to personal information - i.e. personnel records or patient/client-identifiable information.

High quality of information for decision making and reporting, provides a basis to make the best decisions, and will result in a reduction of wasted effort correcting mistakes that benefit patients and staff.

Adherence to various NHS legislation and relevant guidance ensures better assurance of business continuity and increased confidence in the organisation to handle patient/staff data.

Staff have the ability to access in real time detailed management information which will empower them to make decisions without having to rely on others, thus improving patient and staff well being.

Digital transformation high level plan

Information Management & Governance

Digital Objectives	Digital Goals
<ul style="list-style-type: none"> Right information, right person, right time 	<ul style="list-style-type: none"> Data Quality NHS Number usage Records Management Reporting General Data Protection Regulations Compliance

	Year one	Year two	Year three	Beyond
Information management and governance	<ul style="list-style-type: none"> Directory manager ICC information requirements Data sharing Data quality strategy GDPR 	<ul style="list-style-type: none"> Coding strategy Data quality strategy Archiving strategy – corporate and health records Reporting strategy Integrated performance dashboards/BI GDPR 	<ul style="list-style-type: none"> Data quality strategy Predictive Analytics 	

The digital transformation programme will include other initiatives which are not highlighted in the current strategy but are in the WNE STP Objectives, Goals, Initiatives and Metrics (OGIM).

Where are we now ?

This chapter describes the current status of our digital services

Current IT Services

IT provides Trust wide services and some shared services for our partners:

- Information systems (interoperability and integration team, application delivery, clinical/non clinical and applications training and *PRIMIS)
- Information governance (*Registration Authority services, *IG performance information right -incl. information sharing / privacy, health records and data quality)
- Information technology (*IT service, IT risk - security and policy/cyber security, IT network & systems and IT support)
- Programme management office (EPR programmes, infrastructure programmes, *CCG programmes, IT communications and business support/admin)

* denotes shared services



8,600 + number of devices



170 + IT staff



10.1M + budget



★★★★★
90 % excellent user
rating



500,00 + users



100 + services



90 + sites



8,000 + users

Where are we now ?

Digital Maturity Indices

There are three different Digital Maturity Indices available to assess the current status of our services. In this digital strategy we will use NHS England Digital Maturity Assessment (DMA) which will show how the Trust to have digitally advanced solution.



The Clinical Digital Maturity Index (CDMI) is a benchmarking tool managed by Digital Health Intelligence to assess digital maturity by measuring the implementation of a number of core and advanced modules.



The Health Information and Management Systems Society (HIMSS) is recognised as the global leader for assessing digital maturity using a comprehensive survey to measure the adoption of technology to improve care and is independently validated on site with end users.



The Digital Maturity Assessment (DMA) is a self-assessment tool managed by NHS England to measure the effective use of digital technology against three key themes : organisational readiness, capability and infrastructure

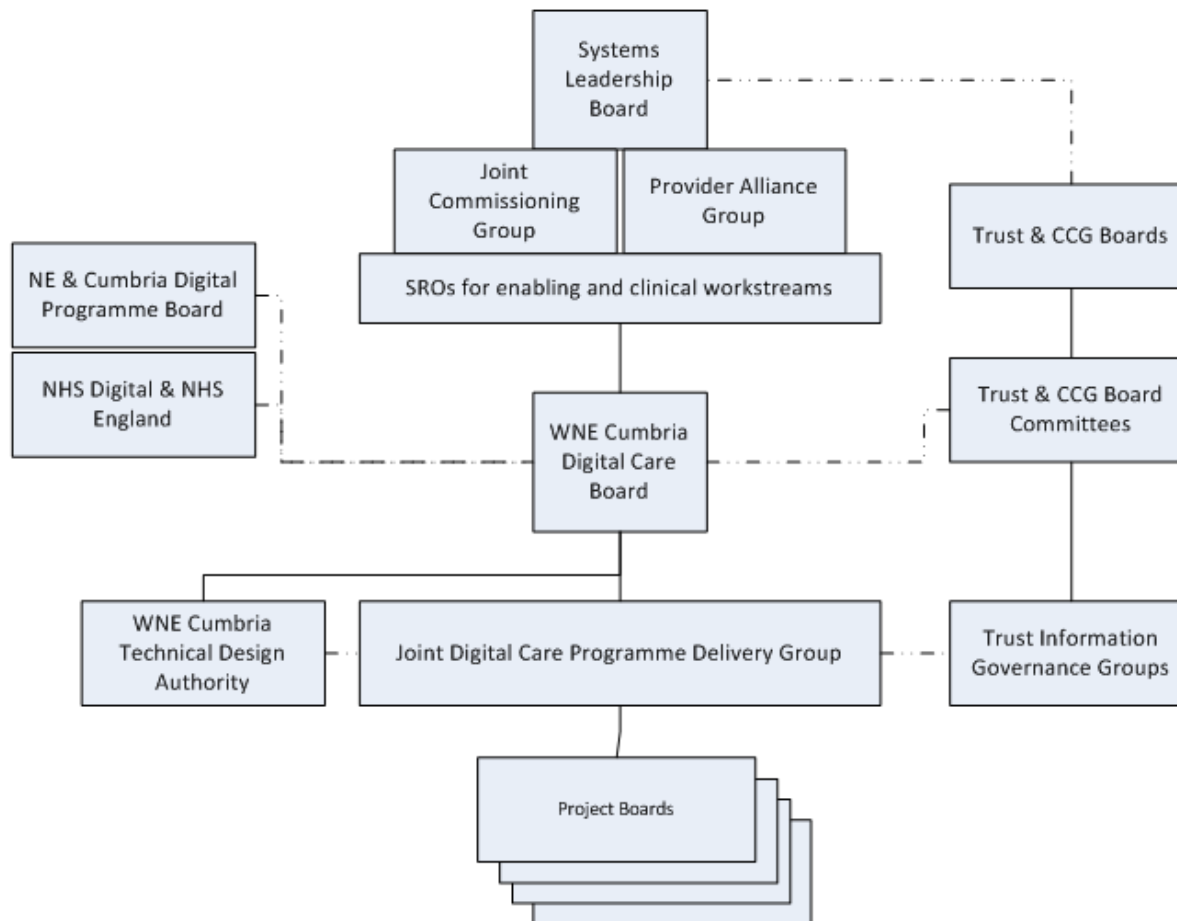
The table shows Cumbria's Digital Maturity Assessment (DMA) for and October 2017. This strategy endeavours to close the gaps and realise the benefits to patients and clinicians.

Section	Theme	National Benchmark	North Cumbria University Hospitals Trust	Cumbria Partnership NHS Foundation Trust	CCG	Adult social care.
Asset & Resource Optimisation	Capabilities	55	32	11	*	*
Business & Clinical Intelligence	Capabilities	71	57	27	*	88
Decision Support	Capabilities	54	17	10	*	65
Enabling Infrastructure	Enabling Infrastructure	77	55	60	*	75
Governance	Readiness	84	75	92	*	58
Information Governance	Readiness	84	81	82	*	80
Leadership	Readiness	85	69	84	*	78
Medicines Optimisation	Capabilities	*	10	5	*	*
Orders & Results Management	Capabilities	*	41	28	*	*
Records, Assessments & Plans	Capabilities	*	39	49	*	45
Remote & Assistive Care	Capabilities	43	25	25	*	65
Resourcing	Readiness	82	40	85	*	69
Standards	Capabilities	*	31	22	*	*
Strategic Alignment	Readiness	90	65	100	*	79
Transfers Of Care	Capabilities	61	18	37	*	69

* Information not available

Governance

The proposed governance structure to oversee the delivery of the digital strategy :-



What next

- Final approval of digital strategy
- Investment case for digital strategy
- Outline benefit realisation plan
- Outline programme plan with timelines.

Document Control

Category	Description	Date
Authors	Farouq Din, Associate Director of eHealth & IT Dave Dagnan, Chief Clinical Information Officer (CCIO CPFT) Graham Putnam, Chief Clinical Information Officer (CCIO NCUH) William Lumb, Chief Clinical Information Officer (CCIO North Cumbria CCG) Integrated IT Cumbria Collective Leadership Group	
Approval	Trust Board/ Joint Trust Board Trust Management Board/CEG Trust Wide Clinical Governance Groups STP Informatics Groups IM&T Group Joint Operational Programme Board	February 18 January 18 January 18 Oct 17 Nov 17 July 17
Status & Version	Draft - 11	17/01/2018

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Acknowledgements

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