

North Tees and Hartlepool NHS Foundation Trust

Digital Strategy 2020 - 2025



Foreword

A key aspiration for our health and care system transformation, will be the delivery of high quality, cost effective Information and Technology Services (I&TS), otherwise known as 'Digital Services', that will enable and support our people and populations.

Our vision is to have secure, resilient, accurate and timely information at the point of patient care. This will be delivered through an integrated application suite, combining clinical and line of business applications, underpinned by a robust and cost effective information infrastructure.

Our digital services will address key health and care objectives from a, national, regional and local perspective, many of which are outlined in the NHS Long Term Plan and more recently within the NHS People Plan. These objectives will be aligned to and converged with priorities and objectives set out in the North East and North Cumbria Integrated Care System (ICS) and at an Integrated Care Partnership (ICP) level.

Our aim is to enable and deliver secure and legitimate information sharing, supporting users (Citizen, Patient and Clinician), to have "healthy lives", receive "responsive care", and as a 'system' work together to deliver "collaborative care". We will develop digital services that will shift healthcare from "isolation to integration".

Over recent years we have been laying down the solid foundations on which to build these digital services – to help us meet both the technical challenge of linking complex systems together, putting in the right infrastructure and standards.

By working collaboratively across the region, we can make far greater gains, particularly with digital solutions.



Julie Gillon Chief Executive Officer



Dr Deepak Dwarakanath Medical Director/Deputy Chief Executive Officer Chair – Digital Strategy Committee



Prof Graham Evans Chief Information and Technology Officer/SIRO

Chief Digital Officer North East North Cumbria Integrated Care System

Our Vision

We will digitally enable health and care service transformation to support our populations and the patients we serve.

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Our vision is to have secure, resilient, accurate and timely information at the point of patient care. This will be delivered through an integrated application suite, combining clinical and line of business applications, underpinned by a robust and cost effective information infrastructure.

Our key focus areas will be:

Infrastructure, integration and interoperability

- within the organisation as a result of our digital programmes delivery and continuing digital maturity improvements.
- unlocking the power of information to improve safety and decision support at the point of care.
- <u>across</u> the North East and North Cumbria (NENC) through the broader Integrated Care System (ICS) digital care programme, including the Great North Care Record (GNCR) and population health management and digital collaboration initiatives.

 keeping patient and service user's information safe, secure and up to date, and only used with appropriate governance and controls.

Workforce

 supporting a digitally enabled workforce, improving user digital literacy and competencies to maximise the benefits of digital solutions.

Personalisation

 exploiting digital technologies to enable greater self-care and independence through citizen/patient centred solutions in neighbourhoods and communities.

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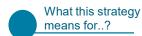


evolution















National context

The NHS Long Term Plan sets out ambitions for a future-proofed NHS with a clear focus on a digital first approach that empowers patients to get on board with this journey, furthermore, the NHS People plan makes clear reference to the use of digital systems and services to enable new and innovative ways of working, by supporting our workforce through digital flexibility, agility and utility.

The long term plan also sets a challenge to explore opportunities for closer working with partner organisations and to put measures in place to achieve a more robust workforce model. Many of the measures are already being developed, explored and in numerous cases, not least as a consequence of the COVID-19 pandemic, these solutions are already implemented within our Trust.

Our Trust is helping patients get home safer and sooner by giving them the appropriate tools for self-care as well as training our community care teams to monitor patients in their homes and other out of hospital locations, in addition, we are accelerating our focus on population health management, ultimately resulting in less hospital admissions, easing the pressure on our core services and creating a more personalised health and care offer.

Complimenting all of this, we are continuing our Global Digital Exemplar Fast Follower ambitions and utilising new technologies to digitise patient records and create a digital first model of clinical service delivery.

Furthermore, we will revolutionise the way we recruit staff, enable staff to work more effectively with digital tools and on-line services, and ensure that staffing levels and patient flow processes are more efficient than ever before.

We are a medium size NHS Foundation Trust with huge ambitions and the long term plan lays down the foundations for even further digital innovation and delivery.





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Regional context – North East and North Cumbria Integrated Care System

The North East and North Cumbria Integrated Care System (NENC ICS), is the largest ICS in England, serving a population of circa 3.2 million citizens. Our ICS is made up of four sub-regional footprints, known as Integrated Care Partnerships (ICPs).

By sharing resources, developing our workforce and making better use of technology, our ambition is to significantly improve the health and wellbeing of people in all of our communities, through the provision of safe and sustainable services and the prevention of ill health.

We are designing services which suit the needs of individuals, help people to stay well and avoid unnecessary stays in hospital. We will achieve this by working alongside our communities and through our staff, and by collaborating across organisations. As an integrated care system, we need to transform population health and deal much more effectively with the operational challenges we face on a day to day basis.

More information can be found here: https://nhsjoinourjourney.org.uk/







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Doing what we have always done will result in getting what we have always got, and given the increasing demands on the heath and care services this will potentially not meet the needs of the population we serve. We all need to better manage the health of the population to ensure our communities will be healthier, fitter and less reliant on hospital services in the future.

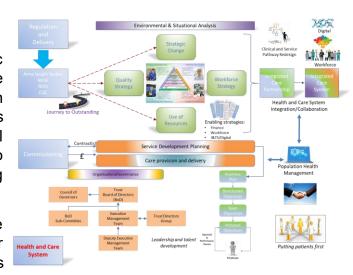
To achieve our vision, we will:

- Focus on groups in society
- Deliver interventions across an integrated health and care system
- Manage the health of our population better
- Demonstrate strong and effective collaboration, and trust
- Improve and integrate our services
- Deliver services that are clinical effective, quality and safe
- Promote innovation and inclusivity
- Maintain financial stability

As an organisation, we ensure that our strategic direction, and the decisions we take, will inform our future direction, based on solid evidence not only from within the Trust but from other external sources such as strategic partners and clinical and non-clinical stakeholders. We follow a proven methodology to develop our strategic aims and objectives, considering external and internal factors, policies and drivers.

From this our key functions develop their respective functional strategies and annual plans, resulting in our staff having their individual and personal objectives vertically aligned and fully connected.





Excellence as our standard

We will continue to focus on the key areas of our business to measure our success, whilst looking to the future and exploring how we can improve what we do, and how we operate as a successful NHS Foundation Trust.



Putting our Population First

Health and Wellbeing

Valuing People

Transforming our Services

We continually review, improve and grow our healthcare services whilst maintaining performance and compliance with required standards. This includes developing and embracing digital solutions, supporting the full integration of the Great North Care Record, and ensuring we address the ever-present financial challenges without compromising safety or quality.

Technology and Digital

A key, and significant enabler in our priority of Transforming our Services will be linked to Technology and Digital solutions.

As an organisation, we have recognised the value of technology as an enabler for transformational change over many years. The Trust has made a range of significant investments to continually improve our essential infrastructure, data and digital security services as well as clinical and line of business information systems.





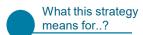


















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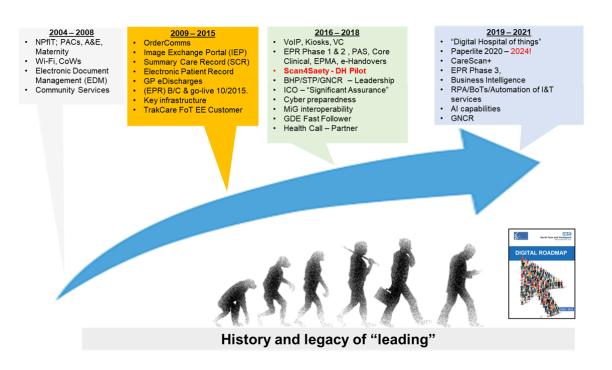
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Our journey to date

The Trust has been on an ambitious digital journey since the early 2000's. As one of the first NHS organisations to implement a range of technology solutions under the National Programme for IT (NPfIT), which was, and remains the largest civilian IT programme in history. Our digital journey has had a clear and consistent aim to make our digital and technology solutions Patient Centric whilst at the same time supporting our clinicians and broader staff groups to work more efficiently and effectively.

From 2004 up to present day the Trust has delivered some novel and ground breaking technologies demonstrating vision, foresight and committed leadership.





Clinician supported

We recognise that as we move to becoming more 'digitally dependent', technology cannot be just seen as a "cost of doing business", but needs to be considered a strategically important asset that requires continuous investment, clinical and business engagement and board level leadership.

Long Term Plan deliverables – digital interactions.

The NHS Long Term Plan outlines and signposts a range of digitally enabled opportunities, ranging from using digital technology as a primary point of access (digital by default), in order to reduce physical appointments and substitute these (were necessary and appropriate), with digital alternatives. The use of remote and virtual technologies for patient to clinician engagement is now a reality within our organisation, this has been facilitated and supported by a range of complimentary digital tools and services.

Digital Interactions

- Consultations
 - Digital first access to primary care
 - 'Digital models' to reduce outpatients *
 - Video consultations *
- Apps- NHS App- Becomes 'front door'
- Personalisation Self-Care / Remote monitoring *
 - Increased use of apps (diabetes / respiratory / maternity / online therapies)

* Fast-tracked in response to COVID-19

As an organisation, we are working collaboration with other stakeholders improve patient and citizen experience by developing tools and capabilities to promote personalisation and increase self-care.

Digitisation – paperlight 2020

Our organisation will be fully digitised ahead of the national deadline of 2024, this will not mean being 'paperless', but will be paperlight, this will compliment our "Digital Hospital of things" programme as well as our digital maturity ambitions.

Digital Infrastructure

- · All trusts fully digitised by 2024
- · Standards: info sharing and Cyber security
- Development of shared records (GNCR)



Personalisation



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COVID-19

The COVID-19 pandemic gave the impetus to develop or re-purpose a series of digital solutions from existing plans and priorities, essentially fast-tracking how we were able to interact and communicate "virtually" to protect our; staff, patients and communities whilst maintain quality and integrity of care.



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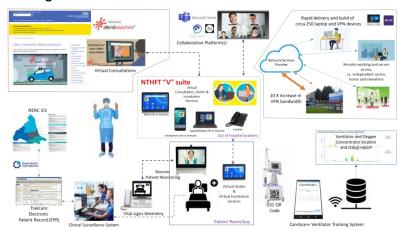


COVID-19

As a result of the COVID-19 pandemic the I&TS directorate and associated functional teams implemented a series of digital and technology solutions in response to emerging challenges. Our overarching goal being to protect our people (staff, patients and visitors), whilst at the same time, fast-track new and innovative solutions enabling; information exchange, provide collaborative communication capabilities as well as supporting staff and patient experience. The illustration below, provides a snap-shot of such initiatives.

Collaboration and communication

Our "V" suite solutions, includes a range of Virtual technologies, to facilitate staff, patient and visitor virtual communications using video, voice and content collaboration platforms. Virtual patient consultations have been supported using the AttendAnywhere national solution, together with internal team collaboration provision using tools such as Cisco and Microsoft Teams technologies.



Infrastructure and tools

During the initial phase of the pandemic, there was a high demand to facilitate remote and home working for staff. As a result, our external Wide Area Network (WAN) was promptly upgraded with a tenfold increase in bandwidth capacity.

Remote working tools, including; laptops, mobile devices and secure Virtual Private Network (VPN) services were also implemented at an unprecedented pace.

Innovations

Real-time remote clinical surveillance tools were deployed allowing patient vital sign monitoring and data flow into the EPR, remote video equipment was also installed in higher risk locations, minimising the need for staff to enter these areas unless physical attendance was unavoidable. Furthermore, the ability to access external patient information 'in record context' within the EPR from external sources via the regional Health Information Exchange part of the GNCR, took place during the early phase of the pandemic.

Finally, we re-purposed our CareScan+ platform to enable critical ventilator/oxygen concentrator asset tracking in real-time, ensuring equipment was available in the areas of greatest need.

Electronic Patient Record

Our digital transformation journey significantly increased impetus with the implementation of the Electronic Patient Record (EPR) platform, InterSystems TrakCare, the first of type EPR implementation within the English NHS. The EPR programme continues to progress enhancing patient centred care throughout the enterprise within the clinical care platform.



Digital Hospital of things

The Digital Hospital of things programme has enabled a number of key transformational change projects to be identified, prioritised and delivered using matched GDE funding opportunities. Key transformational projects planned for imminent delivery includes;

- Electronic Document Management (EDM) phase 2. as part of our Paperlight 2020 initiative.
- Expansion and EPR integration of the internal communications and collaboration platform *Vocera*.
- Further deployment of our point of care scanning solution (CareScan+) further improving patient safety, quality and process efficiency.



System-wide initiatives

North Tees and Hartlepool NHS Foundation Trust (NTHFT) is fully committed to supporting integrated care at both a system and partnership level. As a result, NTHFT are hosting a number of digital services under the NENC ICS banner of *Optimising Health Services*. Two examples of such initiatives include; Digital Imaging for Pathology and the regional Radiology Global Worklist (GWL).

The Trust is also a member of the NHS HealthCall regional collaborative (https://www.nhshealthcall.co.uk/) developing a range of clinical service pathways and applications to facilitate self-care, closer to home. A further example of regional collaboration includes the connection and adoption of the Great North Care Record (https://www.greatnorthcarerecord.org.uk/), enabling secure and legitimate clinical information exchange across the regional health and care landscape.

Going forward, Population Health Management (PHM) will be enabled digitally and fully integrated in our decision making processes to further improve patient and population outcomes.



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Programme plan and digital maturity

The Trust was delighted to have been appointed as a participant in the Global Digital Exemplar (GDE) programme as a Fast Follower (title *may become : National Digital Leader*) to the Royal Liverpool and Broadgreen NHS Foundation Trust. Over a three year period, we implemented our "*Digital Hospital of things*", programme rapidly advancing our patient centred digital transformations and being able to invest in a range of digital innovations resulting in the achievement of the Healthcare Information Management Systems Society (HIMSS) EMR Adoption Model (EMRAM) level 5.

Our aspiration is to now build on this solid foundation, and aim to achieve the independently assessed HIMSS level 6 accreditation during financial year 2021-22, and potentially move to HIMSS level 7 by 2025.



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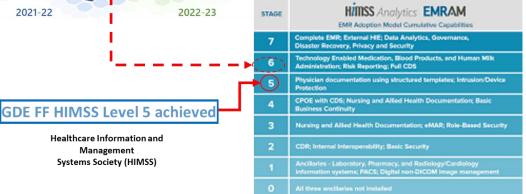
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GDE Blueprinting

One of the significant opportunities resulting from the GDE programme was the concept of "Blueprinting". The trust has uploaded a range of GDE blueprints to the national repository and welcomes all opportunities to learn from others, whilst at the same time, share with others in the spirit of collaboration.



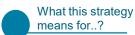
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Within the next two years.

We will build upon our foundations, to further enhance our digital services. Ahead of our EPR upgrade **TrakCare 2020**, in the spring of 2021, we will adopt a Quality Improvement methodology — **TrakCare Advance**, providing insight and analysis of EPR performance, identifying areas of improvement. During 2021, we aim to achieve a series of externally accredited standards; (a) **HIMSS level 6** EMRAM standard, which will further raise our digital maturity status and improve clinical service capabilities and delivery, (b) the **Cyber Essentials Plus** data and Cyber security standard, and (c) **ISO/TR 13028:2010** digitised records standard, as part of our

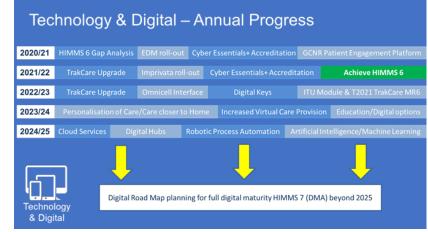




Electronic Document Management services.

Within the next three years.

We will continue to increase our vertical integration and system-wide interoperability supporting regional initiatives such as the GNCR, by contributing to, as well as consuming, patient centric information, in context within our EPR platform. This will also support the increase of our personalised care offer, with the delivery of the regional Patient Engagement Platform. Further elements of personalised care, will include further self-care and care closer to home developments as part of the NHS HealthCall platform. We also acknowledge that not all citizens and patients will have the means or capabilities to interact digitally, in such instances we intend to develop place-based Digital Hubs, to allow access to locality based services with digitally enabled virtual care solutions.



Within the next five years.

A range of clinical and line of business services will be transformed with the implementation of **Robotic Process Automation** tools together with the delivery of **Machine Learning** and **Artificial Intelligence** technologies potentially within our highly digitised diagnostic services. **Population Health Management** will be supported with digital solutions as well as providing our workforce with the tools and capabilities to work in a mobile and agile manner, building on lessons learned from the COVID-19 experience.

Governance and accountability

Governance and accountability

Digital strategy development and oversight is governed by the Digital Strategy Committee (DSC) a sub-committee of the Trusts Board of Directors (BoD), in addition, a line of reporting into the Trusts Transformation Committee exists, creating a link to the *Transforming our Services* strategic aim.

Digital and information risks are managed at all governance levels, and where necessary and appropriate, are brought to the attention of the BoD via the responsible Executive Director, the Chief Information and Technology Officer (CITO) who is also the Trusts Senior Information Risk Owner (SIRO), The Board Assurance Framework (BAF) is regularly monitored for strategic risks as well as our appetite to manage such risks. Monthly I&TS progress and exception reports are also tabled on a monthly period at the Executive Management Team.

Clinical leadership is a key component of the Trusts Digital strategy, with several governance groups being

Information

Governance, Healthcare

Records and Electronic

Document Management

chaired by senior clinical leaders.

Delivery

Information and

Communications

Technology

The Trusts strategic objectives. described within the corporate strategy annual business plans, are translated into a portfolio of digital programmes, projects and on-going infrastructure business usual as activities. Specific digital programmes projects their have and own governance arrangements, and report into the Digital Programmes Steering Group.

Digital Programmes

Information and Technology Services

Information

Management, Clinical

Coding and System

Administration

Organisational Governance Trust Council of Board of Directors Governors (BoD) Executive Digital Strategy Transformation **Trust Directors** Management Committee Committee Group Deputy Executive Management Programmes Management Information Governance Steering Group Team Clinical Informatics **ICT Projects** Group Group

Structure

The Information and Technology Services (I&TS) directorate, comprises four functional teams, each support and enable the spectrum of digital services within, across, and when necessary external to the Trust.



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Information and Communications Technology

Information Communications and Technology (ICT), comprises three main areas;

- ICT Operations delivering the day-to-day running of ICT systems and services, provision of ICT Helpdesk, and specialist support. Digital, data and Cyber security.
- Infrastructure provision and support of core networks, including data centres, servers and data storage facilities, together with firewall and perimeter defence security services.
- Telecommunications management of a broad range of desktop, and mobile devices, aiding audio visual communication to the Trust, in addition to providing the Trusts switchboard services.





Key objectives

- Infrastructure developments; Cyber and data security, customer experience improvements.
- Cyber Essentials Plus accreditation.
- Regional hosting services delivery.

Digital Programmes

The Digital Programmes Team are responsible for driving forward the Trusts 'Digital Agenda' in line with the NHS Long Term Plan, including the commitment that, by 2024, there would be "fully interoperable electronic health records so that patient's records are paperless". This was supported by a Government commitment in Personalised Health and Care 2020 that "all patient and care records will be digital, interoperable and real-time by 2024.

There are a number of interrelated projects running at any one time in order to achieve these objectives, the first phase of the EPR Programme was complete in 2015, this provided the Trust with a modern, flexible Electronic Patient Record system called TrakCare, this has set the foundations for interoperability and integration to become possible.

Key objectives

- EPR and associated transformation delivery.
- HIMSS level 6 (progress towards HIMSS level 7)
- Regional interoperability programmes.



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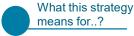




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Information Governance, Healthcare Records and Electronic Document Management

Information Governance (IG); responsible for the management, monitoring and compliance of the critically important IG agenda within the Trust, ensuring compliance with Information Commissioner's Office, Data Protection and Data Security Protection Toolkit requirements.

The **Healthcare Records** department manages the Trusts physical and increasingly electronic healthcare records ensuring the information contained within, can be used effectively when required. Ensuring we meet legal requirements for subject access requests, retention and disposal of records and child protection alerting. The **Electronic Document Management** team manage the transformation and digitisation of paper based healthcare records into legally permissible digital facsimile versions accessible electronically.

Key objectives

- Paperlight 2020 EDM2 delivery (including formal ISO accreditation).
- DSPT and Cyber essential plus delivery.
- Regulatory compliance of IG deliverables.



Information Management, System Administration and Clinical Coding

Information Management; responsible for data accuracy, completeness and associated processing, ensuring fit for purpose information can be transmitted to national collection centres and also examined locally for trends and target compliance. This role is a crucial part of service commissioning and activity payment process. **Clinical Coding**; responsible for coding patient clinical notation which get converted, along with other factors into payment groupings and determine how a patient's treatment is costed, this is a crucial role in ensuring the Trust is recompensed for the clinical activity provided. In addition, codes are also crucial to the GPs in ensuring continuity of care for their patients.

System Administration; responsible for the configuration and systems management end-user support, training and day-to-day operational administration of a wide range of mission critical clinical systems within the Trust, including ERP and diagnostic service platforms.



Key objectives

- Clinical coding and active clinical noting.
- Automation of analytical IM services.
- Strategic reporting capabilities.

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....patients and population

....organisations and staff





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"I will not be excluded,
I have a choice to use
digital services if I want
to and am able to"

"I can use assistive technology to help me manage my care."

"I know my information is stored securely and only shared when and where it is needed."

"I have a choice to use online, audio and video consultations when I need them."

"Digitally maturity enables service transformation and improved patient care"

"Improved patient experience and outcomes."

"Technology is seen as an investment, not a cost" "Reduction in the duplication of work for staff."

"Improved and integrated data and information, helps me to make better clinical decisions"

not a cost

....ICP

services.."

"I can use my own

device to manage my

care and interact with

(Integrated Care Partnerships)



"working in a digitally connected health and care partnership, will enable staff to become more mobile and agile, and patients will receive more integrated and joined-up health and care services" ...ICS

(Integrated Care System)



"Patients are not restricted to geographic boundaries for their health and care services, interoperable digitally enabled health and care services can be delivered where they are needed, allowing workforce and estate opportunities to be strategically managed and delivered, moving our system from **isolation to integration**"

"As a member of staff, I will need to take some personal responsibly with digital adoption".



It's not just technology

Awards

Digital awards and accolades

The Trust is very proud to have been recognised for a range of national awards and accolades relating to digital systems, services and innovations, some examples of these are listed below;

InterSystems: Client Reference Site – 2017 – 2019

Department of Health and Social Care: Scan4Safety: Accreditation – 2018

AHSN: Bright Ideas Awards: CareScan+: Finalist – 2018

NHS70 Parliamentary Awards: NHS - Futures - Dr Graham Evans: Nomination - 2018

InterSystems: Client Reference Site – 2019 - 2021

Heath Technology News (HTN) - Impact of the year : Winner - 2018

Heath Technology News (HTN) - CareScan+ Supporting Healthcare Teams : Winner - 2020

Heath Technology News (HTN) - Best use of EPMA: Winner – 2019

Heath Technology News (HTN) - Team of the year: Winner - 2019

Health Services Journal (HSJ) – Patient Safety Award : Finalist - 2020

GS1 UK – CareScan+ - Approved Product - 2020













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Our digital evolution and history affirms our commitment to continuous improvement and transformational change, we see challenge as opportunity, through our open appetite to risk and our ambition to deliver

patient centred care enabled by technology and digital innovations.

and whilst we can take pride in our achievements to date, there is so much more to do.

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Our success so far has been a function of strong and committed leadership, from the board of directors and our critical mass of inspirational clinical leaders, who, working in partnership with our information and technology services teams, enable our clinical and service transformations to be delivered for the benefit of the people and populations we serve.

North Tees and Hartlepool NHS Foundation Trust continues on an ambitious digital transformation journey,

Governance and accountability.

Our digital aims and ambitions can only be achieved, when we have constancy of purpose, a clear compelling vision and the determination to deliver world class information and technology services, we recognise that we may not always get it right first time, and on occasion accept that be may make mistakes, but we will learn from our mistakes and move forward with our continuous improvement ethos.

I&TS functions

As an organisation, we are a key part of the emerging integrated care system and partnership and our part is to ensure we have, secure interoperable digital systems and services, that support our clinical services, patient pathways and workforce agility and mobility requirements.

What this strategy means for..?

An integrated care system will only be as good as the weakest link, our links, like our organisation and our people, are robust, resilient and reliable.

Awards

The next five years will see even greater digital innovations, whatever opportunities or challenges arise, we will respond and continue to move from **isolation to integration**.



