Case for change
Digital

Where are we now?

Digital challenges

The current digital and IT infrastructure across Bristol, North Somerset and South Gloucestershire (BNSSG) provides us with many opportunities to exploit digital to deliver our shared vison for Health and Social Care. Across BNSSG we currently have over 125 core IT systems, managed through 200+ contracts and over 140+ IT related projects, with only 4 associated with Paperless 2020.

The current state of digital

Putting People at the Centre of our Services	• Citizen-facing digital services across BNSSG are immature. • Some projects are underway, but the lack of a whole system approach limits their scale and ambition.
Connecting / integrating Care – People, Information and Pathways (Information Sharing)	• BNSSG has an established Integrated Digital Care Record (IDCR) in place – the Connecting Care shared record portal. However, the full potential has not yet been realised.
Digital at the Core of Health and Care Delivery	• A wide range of clinical and care delivery systems are in use across BNSSG to support health and care service delivery. These include multiple case, record, patient and hospital-resource management systems. Some organisations are still using paper records, but with plans to move to electronic records.
Information Engine, Intelligence for the Whole System	• Some local systems exist but overall provision is patchy and incomplete in key areas such as population health and analytics. • Good work is taking place on common data standards and coding to support information sharing and interoperability.
Efficient and Effective Technology Foundations	• Limited use of modern communication tools except for email. • Opportunities exist to build confidence in joint working through common procurement of items such as mobile phones, devices, and other technology products. • Existence of multiple networks, server farms, storage, and data centres across BNSSG partners indicates potential for consolidation.
Essential Digital Skills for Our Workforce	• Work required to improve digital skills and capabilities, beyond current local initiatives.

Our Digital Goal – Putting the patient at the centre of care

Our shared goals are to improve patient experience and health outcomes, improve population health and well-being, make it easier for staff and clinicians to deliver efficient and effective services, all while improving the sustainability of the Health and Social Care.

- Help people make the right choice, have more control, use care services less by supporting healthier lives.

- Provide GPs and locality teams with intelligence to plan for their local population requirements supported with essential digital skills and access to all the data, information and knowledge they need to support triage and on-going management of the patients.

- Understand the system-level shifts in population health activity and associated costs to support strategic commissioning, population segmentation, risk stratification and service planning.

Current digital high priority delivery areas

Maternity	Child Health
Learning difficulties	Urgent and Emergency Care
Primary Care	Cancer
Mental health	Integrated Urgent Care
System Wide Interoperability	

"Remember me and relate to me intelligently as a single organisation"

"Let me track progress openly online"

"Give me the tools that enable me to assess my own needs"

"Enable me to do things online 24/7/365"

"Let me tell you what services are performing well and how they can be improved"

"Give me the information I need to help me deal with events in my life"

"Connect me to people who have similar needs and engage with us to improve services"

- Reduce the administrative burden for care professionals, and support the development of new medicines and treatments.

- Bring forward life-saving treatments and support innovation and growth.

- Enable emergency care providers to understand trends in their activity, service capacity and demand modelling.

- Make the quality of care transparent, transforming the cost of services when they are needed.

Opportunities to exploit Smartphones

With over 260,000 health apps worldwide, generating 3.2 billion downloads, 70% of patient groups surveyed use at least one app to manage their condition. It's clear that a digital ecosystem has developed within healthcare and the potential to improve health, with 81% of Adults in the UK using a smartphone, up from 52% in 2012.

Current successful BNSSG programmes supporting Interoperability

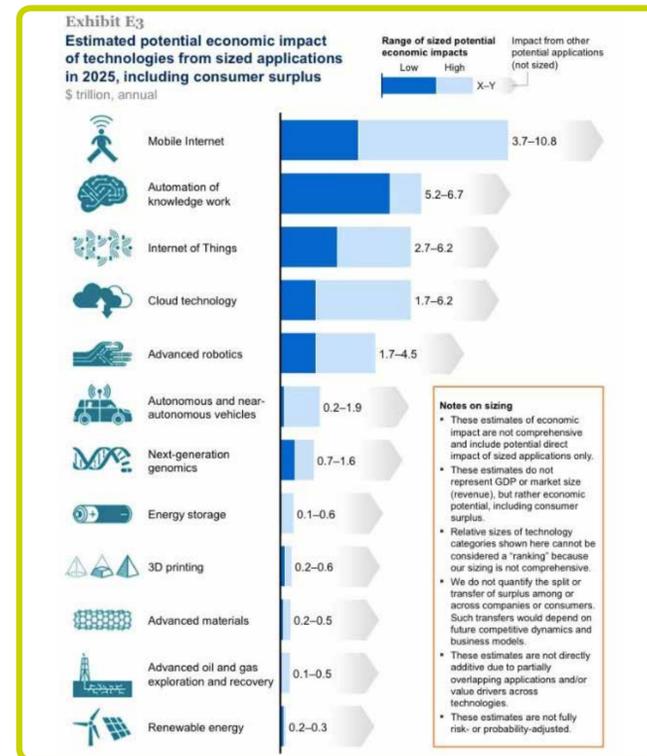|	
Connecting Care: (Cross Community, Health and social care partnership)	Over 20,000 records a month have been viewed to support effective patient triage through the Connecting Care Programme linking 342 different teams/services and 18 systems now feeding information
	Police, Primary Care, GP OOH, 999, Social Care, Community and Mental Health professionals are all now have access
EMIS Pathfinder: (GP and Community Health records)	Sharing Standardisation of EMIS and other digital solutions, including common templates and forms that support information sharing, and common recording standards to enable analytics and reporting.
Global Digital Exemplar: (UHB)	Has been selected as a Global Digital Exemplar to bring a step change in the digital capability, transforming its business through the implementation of some key digital deliverables, such as: • Introduction of a 'Clinical Workstation' on smartphones, tablets and desktops/laptops to support UHB Trust-wide decision making by clinical noting, • Alerting and task management, e-observations, and assessments • Deployment of EHR, e-prescribing and medicines administration across UHB Trust sharing the hospital record with community and social care,
One Care:	BNSSG used to have 106 practices using three different GP medical information systems. Now all practices were supported throughout the upgrade to EMIS Web. The result was that the whole primary care community is now using EMIS Web.

Digital

Our digital vision for 2023

Improving population health in 2023

In 2023 the health and wellbeing of our population has been impacted by the use of technology and digital services.

- Citizens are partners and engaged in improving their Health and Well-Being.

- Clinical staff use their digital applications on their smart devices to support decisions and prompted by evidence based clinical algorithms.

- Clinical algorithms are connected to the patient's data and clinical outcomes to
  - Identify patients at risk
  - Identify the most appropriate care
  - Service to refer into, availability and appointment times.

- The care system enabled by predictive real time analytics allowing managers to make the right decisions and see in real time the impact of initiatives, availability of beds .

- Deployment of resources is a pre-emptive, responsive and driven by evidence of what works.

- We are able to identify if patients will be able to benefit from new treatments, medicine and research from our Electronic Health Records and population databases.

- Virtual assistants help patients navigate our care system, hospitals, and avatars provide patients with information, advice and counselling.

- Our smart devices enable hospital level diagnostic in the home.

- Citizens are comfortable with how we use information to support their care.

Economic impact of technologies of the future

Exhibit E3
Estimated potential economic impact of technologies from sized applications in 2025, including consumer surplus
$ trillion, annual

60 Billion Increase in the number of Internet of Things (IOT) between 2015 to 2025 e.g. Wearable devices, wireless sensors in the home (e.g. Fridges, wardrobes, kettle, doors, and Catheter Sensor)

$6Trillion will be spent on IOT devices over the next 5 years

Internet of Things (IoT) connected devices installed base worldwide from 2015 to 2025 (in billions)
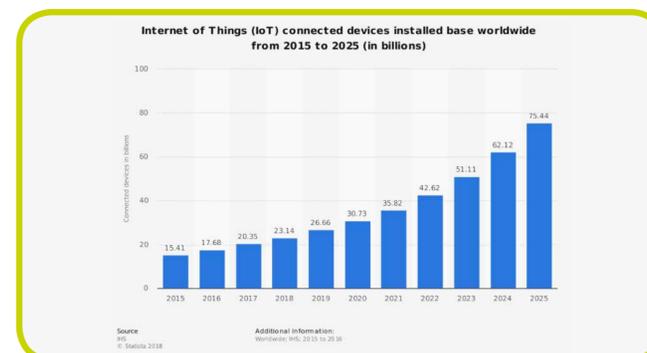
The citizen's narrative in 2023

'I have access to my own health care records, using my smart phone'

'To keep me independent, I have a 'virtual assistant' that collects data from my wearable devices to sensors in my home'

'Most of my consultations are conveniently either over video, phone or online, so I can carry on with my life'

'Prompts from a GP/nurse flag a change in my risk factors, so I have the time to do something before I get ill'

'I am part of a local digital support network and have friends both locally and across the world with the same conditions.'

'All of my data is available, so clinical staff are aware if there is anything specific to me that needs to be considered, whilst in hospital'.

'All my prescriptions are available electronically at my local pharmacy or delivered to my door.'

'When I need to be in hospital, I am informed of my plan for discharge as soon as possible, as this has been shared with me through my healthcare record, which allows me to get my home ready.'

'My care record is updated in real time, so changes are instantly updated to my family and carers.'

2023 digital impacts on Health and Social Care

- Increased prevention of childhood illness, improve health and wellbeing and involve parents more closely in their children's care and development.

- More patients are diagnosed early e.g. paediatric depression, obesity, smoking.

- Increased support for preventive health care and reduced support for chronic conditions.

- Wearable devices reduced hospital admissions e.g. heart failure, Diabetes, COPD, Frailty.

- Improved access time, reduced travel, waiting times and inconvenience.

- Patients are able to better manage their care whilst also allowing for easier communication and evaluation of their health conditions by their communities, carers and medical teams.

- Reduced medication costs with personalised medication dose.s

- Care & quality performance.

- Population Health and Outcomes.

- Efficiency and value.

- Deliver against National policy priorities.

Progress
Digital

Delivering the local Digital Roadmap

The Local Health and Social Care Digital Roadmap is built around six themes that can provide a framework for digital transformation across BNSSG, on our journey to deliver the Five Year Forward View through:

- People at the centre of our services and in control of their health and their medical information.

- Integrating health and social care services to serve our population's health needs to improve their lives and outcomes.

- Digital as a core enabler to support clinicians, allied professionals and integrated services to support our patients to manage their care.

- Information Engine – using technology, interoperability and data to support people, process and quality care.

- Effective and efficient technology foundation to enable our staff to concentrate on caring for our population, not on carrying out processes.

- Essential digital skills to enable the health and social care workforce to maximise care through minimising inefficiency and waste.

| Collaborate | Connect | Converge |

Secondary Care Digital Maturity Assessment 2017
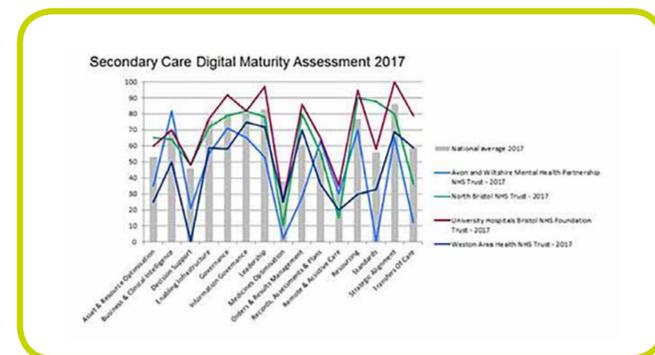
We are:

- Bringing key digital, clinical and managerial leaders through the 'Digital Delivery Board' to deliver the Digital RoadMap.

- Creating two new joint programme groups to deliver digital and technology standards and targets in the NHS, Social Care and Local Government.

- The Infrastructure Group brings together the system wide overview of our target architecture.

- The Design Authority ensures that we adopt and build digital capability, to drive convergence of technology and smarter procurement to support patient flow.

- Improving and harnessing the experience and capability in Connecting Care, GDE and One Care Programmes.

- Establishing an agile transformational capability to support digital innovation and delivery and foster a culture of continuous improvement and co-creation of digital solutions with patients and clinicians.

- Creating 'centres of excellence' across BNSSG to build a digital-enabled workforce.

BNSSG Health and Social Care Local Digital Roadmap outline Plan

- Our Digital Roadmap, maps out 45 activities by theme and anticipated date, falling into three broad groups.

- Strategic digital decisions to help transform the way we connect with, treat and support our population.

- Digital workstreams to support new clinically- and operationally-led projects to improve our patients' journeys through our whole system, jointly across Health and social Care providers, to improve their quality of life and clinical outcomes.

- Digital work streams to enhance and improve our existing projects in line with our "Target architecture" (the core digital building block of our strategy).

"Digital is at the heart of our clinical transformation programme"

There are key digital deliverables embedded into each of our clinical work streams. The technology provides us with greater opportunities to transform models of care, the ability to understand the benefits and outcomes through data and analytics and new approaches to support staff and our citizens.

Roadmap
Digital

BNSSG vision and ambition:

We have a vision of health and care services for our population that will take us into the next decade and beyond.

This vision is reliant on building on our key successes, by all the parts of a complex system working together to continue to transform the way we work, providing a once in a generation opportunity to develop digital tools and revolutionise the patient experience by transforming how and where they access health and care services.

All service redesign will include digital technology in the work and process flow design to:

- Improve the health and wellbeing of local people
- Improve the quality of local health and care services
- Deliver financial stability and balance throughout the local health care system
- Drive efficiency and create a simplified and more integrated IT estate, enabling digital transformation to be more readily achieved and accessible

Supporting our population   Supporting our clinicians   Connecting our services   Looking to the future
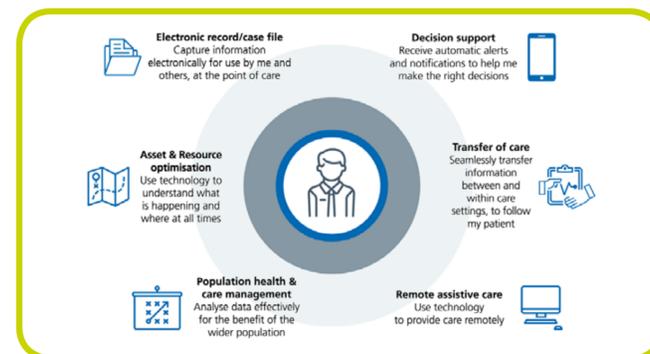
Key areas of digital transformation

Our vision will support cross working across the system and enable us to be able to meet key digital and technology standards and targets that have been set for the NHS, Social Care and Local Government adopting a shared ambition that best meets the needs of our population.

Key delivery areas are set out below:

Theme	Area
System Wide Interoperability	• Single Patient Administration System (PAS) across BNSSG • Patient Online: 30% of patients in each GP by March 2019 • Medicines management (ERD/ EPS 25% by March 2019) and ePMA roll-out • E-referrals (ERS 1st October 2018 ERS Paper Switch Off for 1st OP referrals) • Capacity, bed state, patient flow & full system view • Shared care record and plan and Population Health Analytics • Mobility, remote and flexible working Interoperability plans with 95% of tests to be digitally transferred between organisations by 2020
Maternity	• Use of digital technology to allow access to services for perinatal mental health. • Electronic Personnel Care Plan and record • Single Point of Access for bookings and capacity management • Single web-site across BNSSG • Improved patient choice of services available across BNSSG • Sharing of records through Connecting Care

Theme	Area
UEC	• 111 Online roll out • Common assessment and electronic referrals • Ability of whole system to book directly into each service (111 to GP , ED and UTCs, ED to UTC and UTC to GP) • Access to SCR or local equivalent from A&E, UTC & ePS Pharmacy • Access to primary care records, MH crisis and EOL plans in 40% of A&E & UTCs • EPS from 111, GP OOH and UTC
Cancer	• Waiting times system implementation • Radiotherapy specification • E-Prescribing for chemotherapy completion
Mental health	• Implement Mental Health Dataset • New care model for dementia across • Technology to support MHFV delivery
Primary Care	• Online Consultations roll out • Meds optimisation for Care Homes
Learning Difficulties	• Flag learning difficulty in patient records
Child Health	• Access to Child Protection Information in Child Health information Systems

Electronic record/case file — Capture information electronically for use by me and others, at the point of care

Decision support — Receive automatic alerts and notifications to help me make the right decisions

Asset & Resource optimisation — Use technology to understand what is happening and where at all times

Transfer of care — Seamlessly transfer information between and within care settings, to follow my patient

Population health & care management — Analyse data effectively for the benefit of the wider population

Remote assistive care — Use technology to provide care remotely

Six key themes to provide a framework of digital transformation

Six key themes arise that can provide a framework for BNSSG digital transformation journey within the Five year forward view.

Our agreed digital principles will guide us in this work:

- People are at the centre of our services and engaged in the design of future services and digital solutions
- Clinicians/professionals must take the lead in designing new service models and digital solutions
- Learn from others, and recognise digital is about redesigning business models to exploit opportunities technology can offer
- Prioritise investment into areas where most value is added
- Organisations must work together collaboratively, transparency and openly
- All business processes, standards, systems and technology across BNSSG must be able to work across each other and together, with digital designed at its core, not as an 'add on'
- Information must be open and shared
- Governance processes for digital must be clearly defined
- Deliver change quickly and in incremental steps. If mistakes are made, learn quickly and move forward