

Nottingham and Nottinghamshire Integrated Care System

Data, Analytics, Information and Technology (DAIT) Strategy 2020-2024

Andrew Haw

Seconded from Notts Healthcare

What was our status & process in 2020?

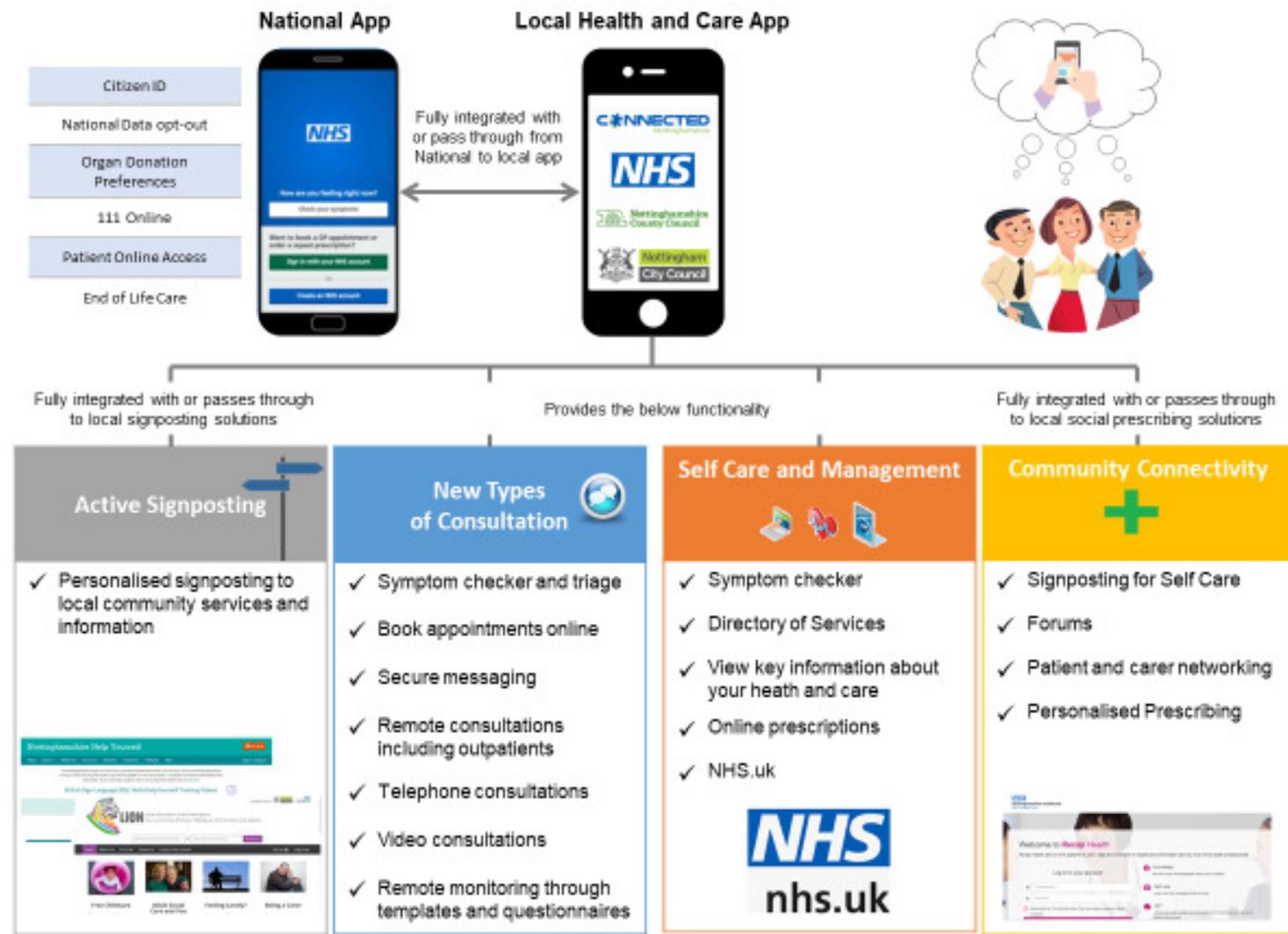
Status:

- Good experience of working together under the Local Delivery Roadmap via Connected Notts , e.g Implementing 2018 strategy for Public Facing Digital Services
- Notts County Council Locator Service, Automated referrals, live hospital tracker lead to NHSD Pathfinder status for Interoperability
- 2 shared care records, 4 years of Graphnet and in house/bespoke SQL GP Repository of Clinical Care: 10 years investment in data flowing of all patient interactions for direct care only
- Last wave of LHCRs in East Midlands

Process

- Used HIMSS Continuity of Care Model to honestly measure our maturity
- Subscribed to Gartner for a year
- Tried to get intelligence from NHSE/I/X.....
- All trusts and County Council were replacing their strategies in parallel

Public Facing Digital Services strategy 2018-2021



Digital Timeline 2020 - 2021 - beyond

Digital Transformation



- × Digital health and care services patchy and not joined up
- × Not many people using digital services
- Digital health and care now seen as valuable and talked about in national policy
- More money and time need to be put into digital technology

30% of people in Nottingham/Nottinghamshire had used digital to check their health conditions *

10% of people in Nottingham or Nottinghamshire had accessed digital consultations

45% of people in Nottingham or Nottinghamshire had accessed directories of services online *

30% of people in the region had used digital health and care services*

73% of people in the region expected this to increase in future *

Digital Evolution



- During the Covid-19 period February to May 2020 there was a change in the use of digital technology across health and care, with an extra £2.5 million invested in digital services
- This change has seen people using new digital care services

279% Increase in NHS App login from March 2020 to March 2021 **

March 2020



27.1K

March 2021



75.6k

274% Increase in online prescriptions ordered during Covid-19 **

March 2020
3,715 Online prescriptions ordered



March 2021
10,188 Online prescriptions ordered

Digital Revolution



- More online and remote consultations and checking of people's health
- Empower and enable people to self-manage, self-monitor and self-serve their health and care.

73% of people in the region would like access to digital service to manage their health *

59% of people in the region would like to access consultations online *

For a digital revolution across the system we need to increase and put in place:

- ↑ access for more people to use digital technologies to allow online and remote consultations etc.
- ↑ a single digital health and care record
- ↑ an empowered and skilled workforce
- ↑ investment in digital technology to deliver better services and greater benefits for the people of Nottingham and Nottinghamshire

* Connected Nottinghamshire public engagement and research [2018]. Insights gathered pre Covid-19 with Board commitment to re-evaluation of position post Covid-19

** Information Source NHS App Dashboard

Digital Evolution

Through work on the Notts NHS App during 2019/20, as set out below, we did what we said we would do in our Public-Facing Digital Services vision. The next phase of work aims for digital evolution of our products and services.

We used the Notts NHS App for:	We set up:	We tested and put in place new digital technology which:	Encouraged new digital services by:
<ul style="list-style-type: none"> • Online consultations in 92 of 126 GP practices • Family access to daily diaries for critical care COVID-19 patients, meaning fewer phone calls • Digital letters at Sherwood Forest Hospital Foundation Trust, keeping down post and paper costs • Giving access to others involved in care through social prescribing • Primary care appointment triage using questionnaires before booking an appointment 	<ul style="list-style-type: none"> • Primary care user groups to share good practice • A Patient Advisory Group to help us talk with with the public • A plan of work to help reduce health literacy barriers with the Patient Information Forum • Collaborative working with volunteer groups and the community • The “Get Nottinghamshire Connected” digital and social inclusion project • A dashboard to keep track of how we are doing and to monitor the benefits • A assurance system to ensure high standards 	<ul style="list-style-type: none"> • Has joined up the Notts NHS App and PKB so patients can sign on in one place. This is the first patient-held record joined with the NHS App • Makes it easier for patients who already have access to NHS online services to prove their ID • Improves communication between patients and professionals using messaging • Increases the quality of data on the national Personal Demographics Service (PDS). This can then be used to update GP records 	<p>Setting up tele-health:</p> <ul style="list-style-type: none"> ✓ to allow remote checks on women with high blood pressure after giving birth ✓ checking people's blood oxygen though the “Pulse Oximetry at Home Service” <ul style="list-style-type: none"> • Five care homes and assisted living facilities using digital GP consultations and checks on vital signs • An audit of care home IT infrastructure, hardware and digital skills to find any gaps • Agreeing as a local Integrated Care System (ICS) projects to test whether digital technology can improve frailty and respiratory services

Notts NHS App Implementation Roadmap

The organisations that make up the ICS are at different stages in the development and implementation of their Public-Facing Digital Services.

Organisation	Usage	In Use	Apr-June 2021	July-Sep 2021	Oct-Dec 2021	Jan-Mar 2022
Primary Care	Online consultations (92/126 practices) Remaining practices	✓	✓	✓	✓	✓
Exemplar GP sites	Secure messaging, online consultation, measurements	✓	✓			
• Middleton Lodge	Routine consultation questionnaires		✓			
• Hucknall Road	Routine consultation and long term condition questionnaires			✓		
• Roundwood	Secure messaging and online consultations	✓				
• Stenhouse						
Primary Integrated Community Services	Social prescribing support plans Pain management questionnaires			✓ ✓		
CityCare	Muscular skeletal pain management questionnaires			✓		
Sherwood Forest Hospitals	Outpatient digital letters(1) Other digital letters(2) Outpatient appointments Paediatric epilepsy Pre operative questionnaires Gastroenterology questionnaires	✓(1)		✓(2) ✓ ✓ ✓ ✓		
Nottinghamshire Healthcare	Perinatal care plans Primary Care Psychological Medicine			✓	✓	
Nottingham University Hospitals	Integration with existing public facing digital services	To be Confirmed				
Local Maternity and Neonatal Services	Library, questionnaires and Care Plans			✓		
Care Homes	Secure messaging, measurements, symptoms and files	1		3 planned	✓	✓
Pharmacies	Affiliation			✓		
Our population	Varied to support their own self management Use case promotion	✓		✓	✓	✓

Our Refreshed PFDS Model to 2025

The refreshed Public-Facing Digital Services plan talks about four things we want to deliver so that we can have outstanding digital health and care in our region.

Support for self-management and self-care by providing a range of TEC that is easy to access. This will be through a single entry point using an 'Internet of Things' approach. This will include remote consultations and checking, telecare services, and using smart and connected home technology.

Work with staff, the general public and volunteers to design and produce services. We will use the power of shared data and knowledge to spark great new ideas. This approach means that both services and people using them become far more effective agents of change.



Reduce health inequalities and make sure people are not left out of digital services because of socio-economic factors. We will support people to get online and become more confident and capable of using digital tools that support their health, care and wellbeing. We will look for new and exciting ways of doing this.

Enable people to use their knowledge, skills and experience to manage their own health and make informed decisions about their care and treatment. Support people to improve their health, giving them the best chance of leading the life they want.

Current stats of Nottingham App

- **275,011** have registered for the NHS App, completing the proven identity process.
- **87,947 (7%)** of our citizens have registered for a PKB record (as of 18/10/2021).
- During September 2021, **patients sent 489 messages** via PKB to practices.
- **3,684 digital appointment letters** were read before print date in September 2021, meaning that this has **saved Sherwood Forest Hospitals from posting those letters**
- **18,379 repeat prescriptions** were ordered via the NHS App during September 2021.

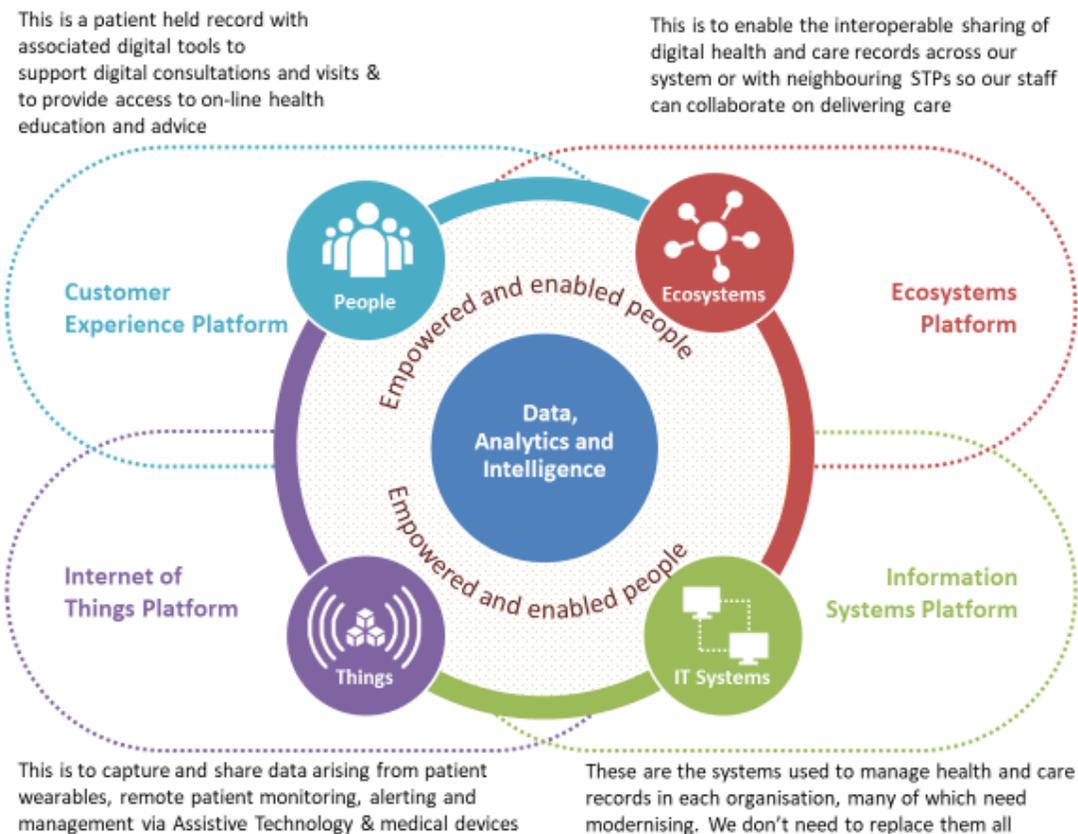
See:

<https://www.nottsnhsapp.nhs.uk>

What is the basis of our DAIT strategy?

What do we mean by 'DAIT'

We have developed our definition of Data, Analytics, Information and Technology (DAIT) from Gartner – the well-respected global digital research company - in the picture below. It encompasses the business context, the technology, the data management, the information creation and the analytics to deliver the best customer experience to the people we serve.

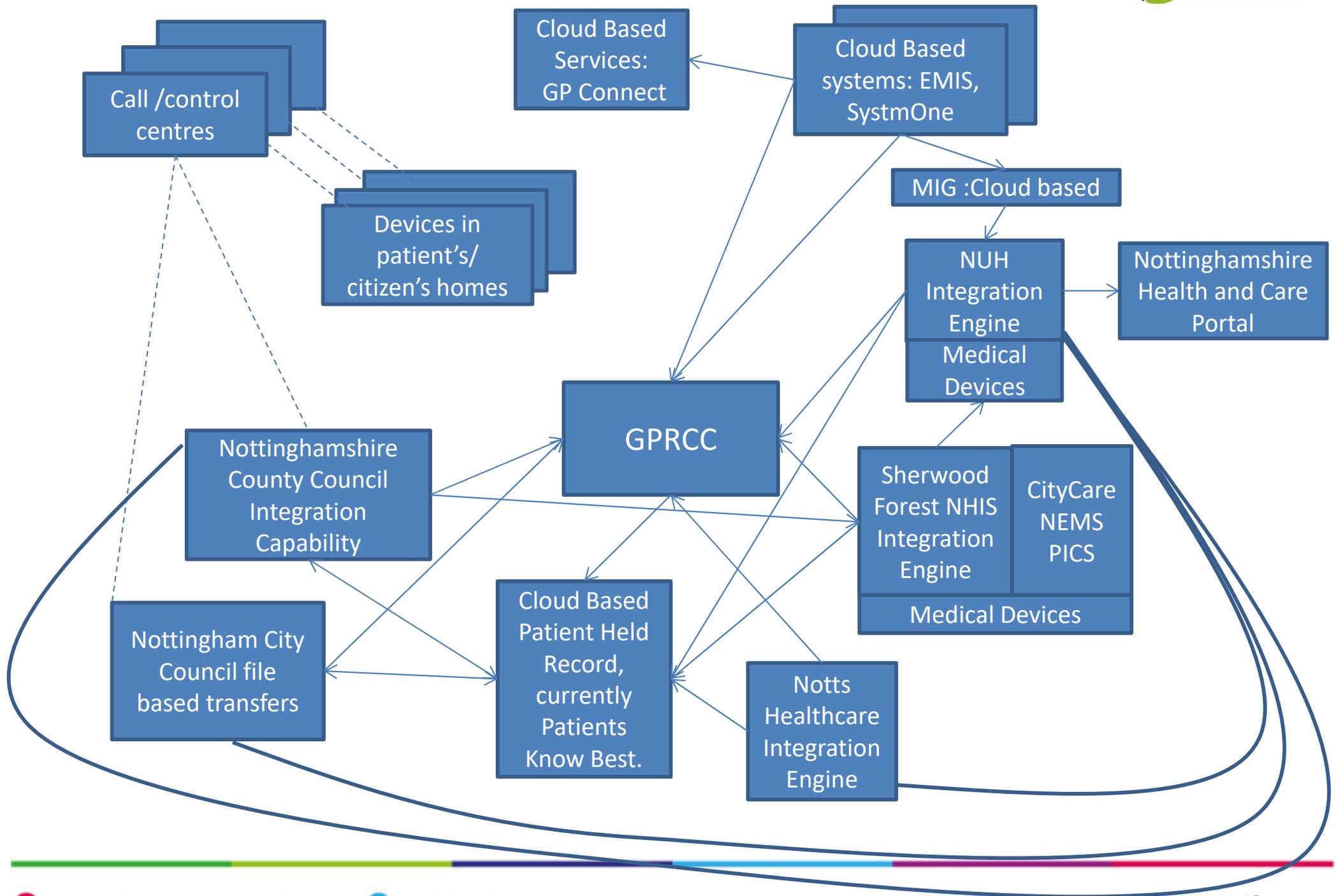


Our DAIT strategic initiatives

In line with our definition of DAIT, the challenges we face and the known expectations on our health and care systems partners we have defined five strategic initiatives to drive forward our strategy.

DAIT Strategic initiative
1. Develop our Public Facing Digital Services
2. Develop our Population Health Management capability, aligned with powerful Analytics and Intelligence to support all initiatives
3. Complete the digitisation of providers by 2024
4. Develop a single summary health and care record and supported workflows, by interoperability of our health and care data and systems
5. Improve the digital literacy of the workforce and the capability and capacity of our digital and informatics specialists and develop our culture, investment and governance

Current level of integration in Nottingham and Nottinghamshire



Why an Ecosystem (1)

- Graphnet Notts Health and Care Portal ends November 2022 - possibility to extend, but ICS need a plan for replacement regardless. No funding after April 2022
- Additional integration/data sharing required to support East Mids Ambulance, ReSPECT Form, Document Sharing, regional opportunities etc

We are seeking to:

- ✓ Reduce duplication and cost of integration
- ✓ Bring greater flexibility and independence
- ✓ See data from outside Notts e.g. South Yorkshire, East Midlands
- ✓ Speed up development/change
- ✓ Knowledge and data shared in near real time, in multiple applications

Why an Ecosystems (2)

- a) Without an Ecosystems Platform (EP), interfaces between organisations will proliferate proportionately to n^2
- b) With an EP, we could allow providers to 'send' data anywhere in the form that they find easiest, and for this data to be translated at the EP to the agreed logical information model so that all other organisations can understand it. As organisations develop at different paces, some will want data in READ codes, others in SNOMED, others in DM&D, others in a locally developed code
- c) With an EP we can build an event driven architecture so that data are only pushed from A to B on an event trigger, eg, when a cancer patient's white cell count falls too low, eg when a patient enters a very low Blood Pressure reading into PKB or another Assistive technology device. Business rules in the EP can ensure that organisations receive only those triggers and data items that they need for their services and staff, so there is no data overload and no unnecessary sharing of data
- d) With an EP, we could surface data about gaps in care or overdue interventions that are locked in GPRCC, and make them available everywhere
- e) With the EP, providers can maintain one channel to push data out of their organisation and one channel to receive data – leading to the lowest maintenance effort/cost
- f) From the EP there would be one inbound connection to East Midlands OneCare and one outbound connection
- g) From the EP there could be one channel to receive data from the Internet of things platform

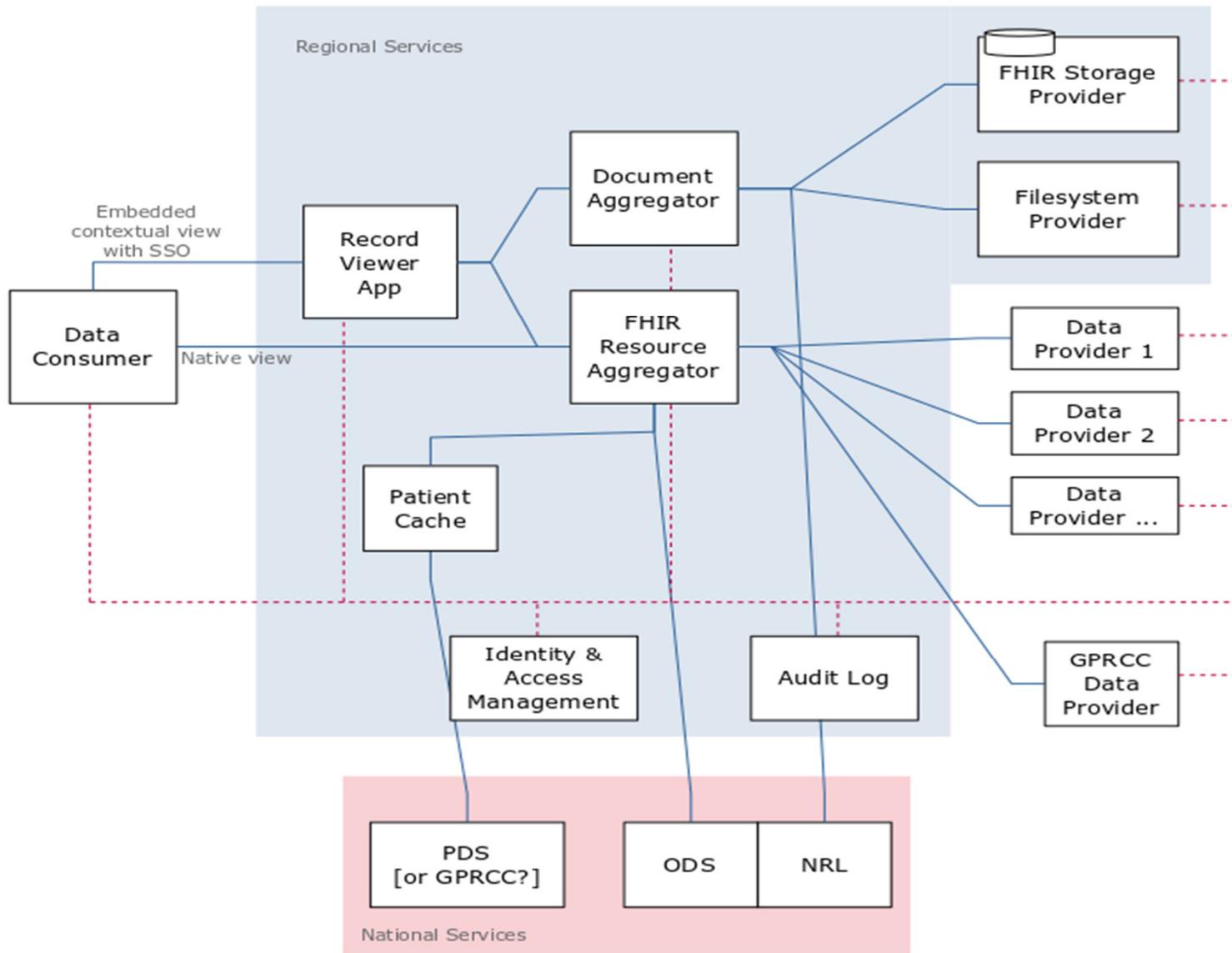
So what was the big issue?

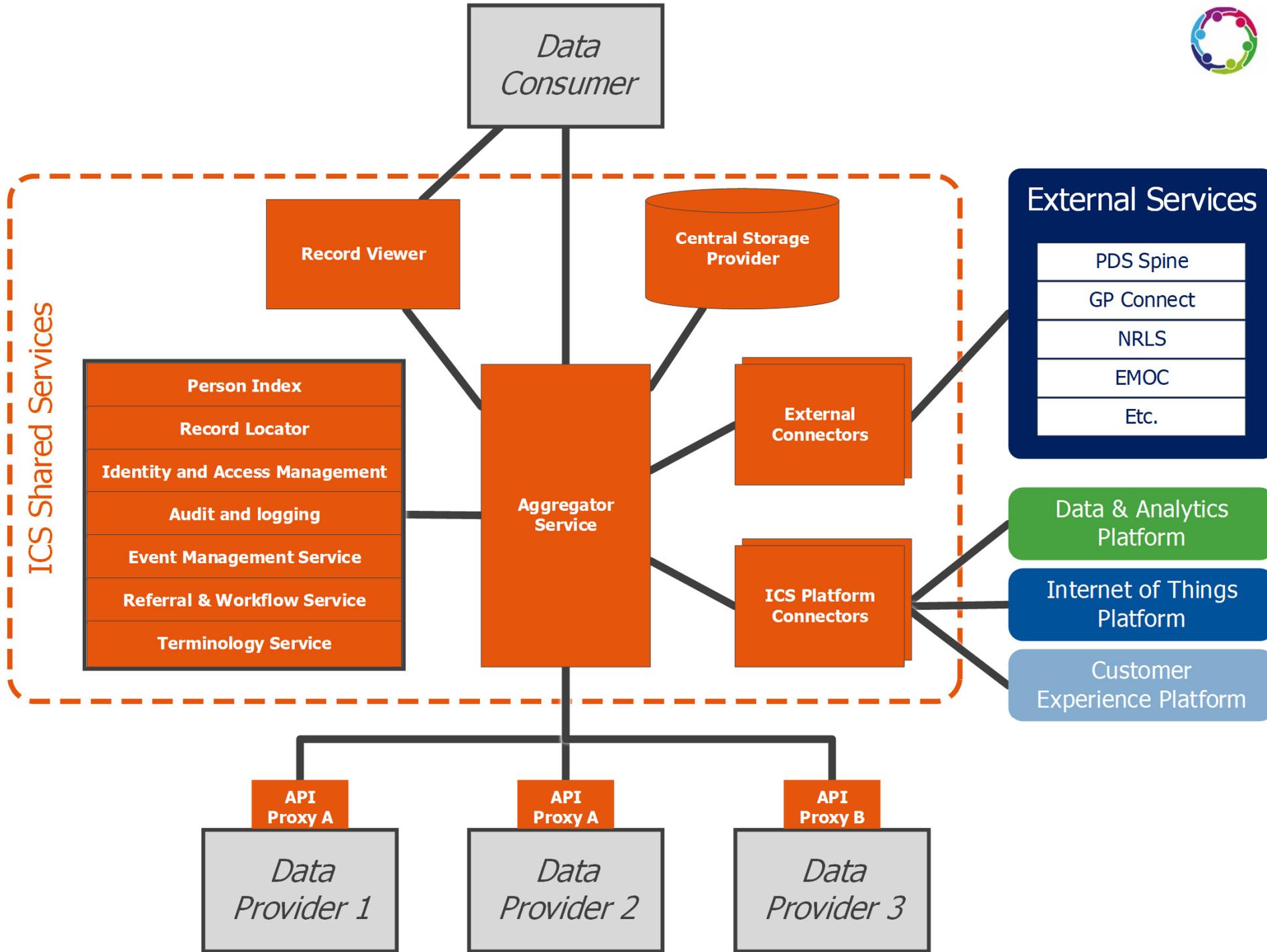
4 options under consideration:

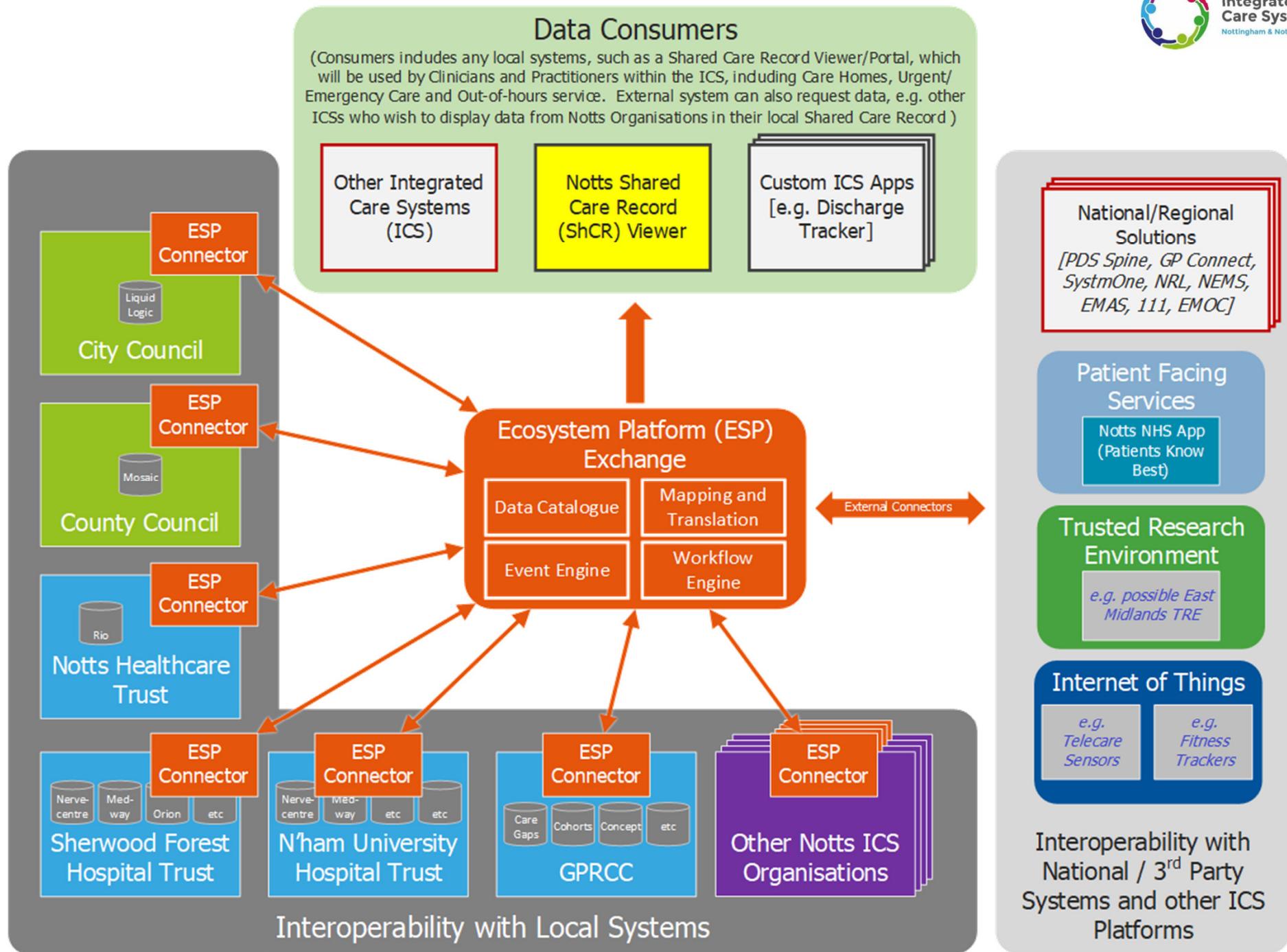
- A. Procure it all:** from a software supplier
- B. Partner:** with an established ICS/Regional ESP such as Yorkshire and Humber
- C. Build** one ourselves
- D. Hybrid:** mix B with C

Difficult to obtain agreement, so bid for & obtained NHSX funding to build a Proof of Concept

Initial Proof of Concept goal







If we get this right how will it feel for people

As a citizen living in Nottingham and Nottinghamshire this means:

- We will support our population by providing them with the skills, training and tools to access digital health and care services in order to empower and enable them to manage their health and care and reduce health inequalities and social isolation.
- We will not worsen digital inequalities; we will work to reduce them
- We will provide our population with public facing digital health and care service to enable them to access health and care services digitally from a single trusted place and provide them with the information they need about their health and care and community services.
- We will reduce the number of times people have to repeat themselves to health and care services - by making the right information available at the right time.

As a person receiving support from our health and care system:

- You will be able to communicate with health and care professionals through a single secure application, the NHS App. You will be provided with a range of information and online services to support the delivery of your health and care services.
- We will improve how we proactively identify the health and care needs of our population in order to identify and put in place support and treatment that our population need in order to stay well.
- Your data is captured by electronic health and care systems which will be interoperable to make clinical information visible to professionals and service users where required. Information will be held and moved safely with regular testing to ensure that the systems are secure.

As a person working in our health and care system:

- We will provide support and training to our health and care professionals to develop the skills that they need to use digital technology in order to enable them to undertake their job to the best of their ability.
- All health and care professionals will have the right tools to do their job and will be supported by digital infrastructure to deliver services in any of our buildings, community and people's homes.
- We will provide the people involved in providing health and care with the information they need in one place to enable them to provide the most appropriate health and care to our population.

Our vision for DAIT is therefore for our citizens and service users to engage with us digitally and for our front line professionals to be supported by digital systems to make their work easier by giving them access to everything they need

Questions and ANSWERS