

Reference Number: FOI202223/349
From: Commercial
Date: 12 October 2022
Subject: Use of networking and communications technology

Please do provide all relevant information to the following questions, with both text and relevant links to documents.

Q1 When was your last networking (LAN, Core, edge) refresh, and when is the next refresh planned?

A1 Last refresh was in 2015, no refresh currently planned

Q2 When was your last Wi-Fi refresh, and when is the next refresh planned?

A2 Last refresh was in 2015, no refresh currently planned

Q3 When was your last telephony or Unified Communications refresh, and when is the next refresh planned?

A3 Last refresh was in 2015, no refresh currently planned

Q4 When was your last mobile devices/pagers refresh, and when is the next refresh planned?

A4 Mobile devices are refreshed on a rolling basis.

Q5 Can you confirm contract end dates and vendors for the above?

A5 December 2023 – provided by EE

Q6 Do you have an integration or workflow solution across the multiple technology systems in the trust?

A6 Yes, our EPR is integrated into many downstream systems such as our Radiology Information Systems (RIS), Picture Archiving and Communication Systems (PACs) and Electronic prescribing and medicines administration (EPMA) solution

Q7 What are the key parts of your Digital Transformation and/or Hospital of the Future strategy going forward?

A7 Please refer to the attached document: *Digital and Data Futures Strategy*

Q8 What adoption of Internet of Things has been implemented?
a. Do you have an IOT containment policy?

A8 None
a. No

Q9 What adoption of asset tracking/real-time asset monitoring or RFID has been implemented or is being considered or planned?

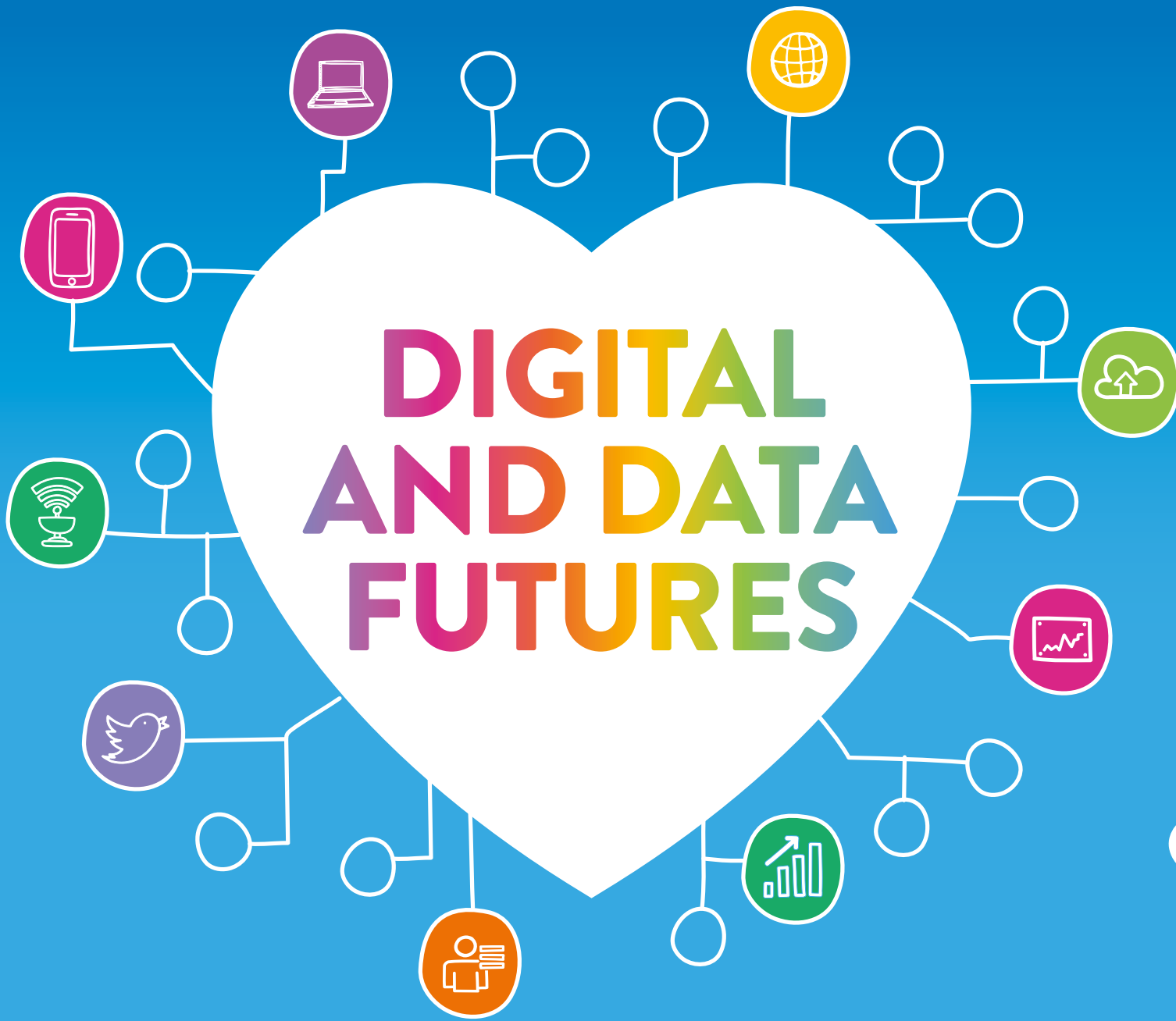
a. Does this include patient flow?

A9 Radio Frequency Identification (RFID) solution in place for medical devices.

a. No

Q10 Can you confirm contract dates and vendors?

A10 STANLEY Healthcare - 2 Maintenance End Date: 03-27-2023



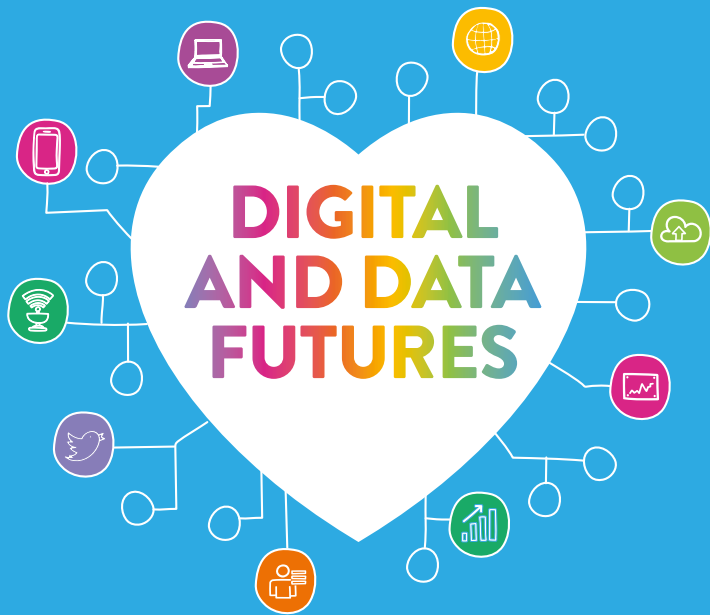
Alder Hey Children's NHS Foundation Trust Digital and Data Strategy

2022 – 2025

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Foreword

Almost everything we do in healthcare is driven by our ability to do it backed by the power of digital technology. The care we provide can be enhanced and improved through the aid that digital technology provides to deliver that care effectively and efficiently. Alder Hey set out to make the digital power central to its care in its first Digital Futures strategy published in 2019.

The impact was game changing. From the basics of delivering a high-quality user experience for Alder Hey staff to putting Electronic Patient Record delivery as the central goal of daily care we delivered a Trust-wide digital approach that provided confidence in our infrastructure and ambitions.

Today, we need to move to the next phase of our Digital Future with a strategy that locks in the benefits we have and moves forward to ensure that digital helps deliver our Vision: A healthier future for children and young people.

One key new element of that will be a focus on Data: delivering the information we need to analyse and improve upon what we do, on a day to day, minute by minute basis. This addition to our update strategy is a key

commitment. It is a pledge to ensure that every interaction, every outcome, every decision will have the capacity to be informed by real time information from which we will learn and adapt.

Delivering this new strategy will not be easy. It requires the guarantee that the future infrastructure enhances staff experience, for example Alder Care must be a success with clinical staff if it is to retain the confidence of those who use it. The detailed work by the iDigital Team must be expertly delivered continuously. The adoption of new technology and approaches by Alder Hey staff has to be with their consent and full confidence. The resources in a tight NHS budget need to be applied efficiently and transparently.

This strategy is about setting the framework for doing all of this whilst keeping our eye on the future needs of our children and young people.

Dame Jo Williams
Chair

Louise Shepherd, CBE
Chief Executive



SECTION 1

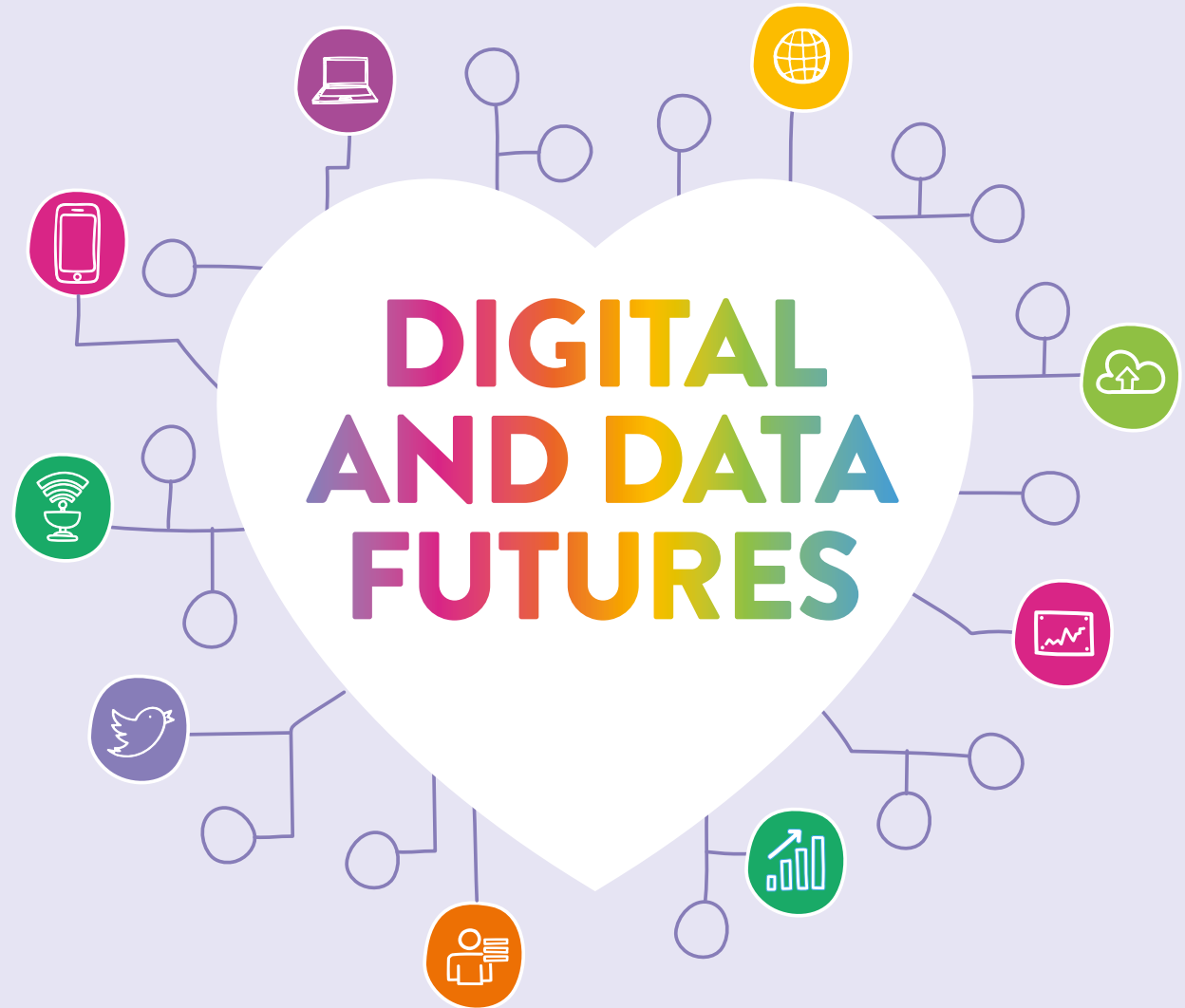
Digital and Data Futures:
A Healthier Future
for Children and
Young People



A very warm welcome to **Digital and Data Futures**. This strategy sets out the direction for the next phase of a long standing and successful digital journey for Alder Hey. It is part of a suite of components in delivering our vision to create a 'Healthier Future for Children and Young People'.

We are passionate about this vision which is a big part of why we do what we do each and every day.

At the heart of this vision are a set of joined up facets including providing outstanding care, creating a great place to work, working in partnership and pioneering new innovations, research and education opportunities. All of these are underpinned by Digital and Data Futures.



1.1

Digital and Data Futures Ambition

We live and work in an era powered by digital and data in everything we do. Our ambition is to deliver '**Outstanding Digital and Data Excellence**'.

At the heart of this is our 'north star' vision and focus **on creating the best experience and outcomes**, truly empowering Children, Young People and Families, and Staff.

THROUGH THIS WE WILL STRIVE TO:

- **PROVIDE** the best possible digital technology services and systems to support, enable and drive outstanding safe care
- **DELIVER** Information Technology basics well, within an operational excellence framework that enables Alder Hey colleagues to do their very best work
- **EMBED** digital developments and innovations at scale within divisions and clinical teams to maximise the opportunity of new models of care
- **ENSURE** intelligence led analytics and data are at the heart of operational and clinical services and at the forefront of service developments
- **CHAMPION** the digital profession and collaborative working through the support and development of a talented digital workforce
- **PLAY** a critical role in advocating for children and young people digital and data priorities locally in Place, regionally and nationally



1.2

Feedback from Children, Young People and Families

In the development of Digital and Data Futures we have worked with children and young people to ensure their views are central to our plans.

We have undertaken extensive engagement with clinical and divisional colleagues and wider stakeholders internally and externally.



Our Children and Young people have told us that they want us to help them through giving them digital and innovative ways of accessing our services when they are at home. They want us to make sure that when they come to Alder Hey they can access our Wi-Fi easily on their own devices and that when they are waiting to be seen there are digital opportunities to distract them.

Our Families have told us that they want easy online access to Alder Hey services – making their experience of accessing health services as easy as other aspects of their lives. Our Families want their children and young people to have seamless care where all of our information and communications are joined up together.



1.3

Outcomes and Benefits

Through Digital and Data Futures, we believe that we will make an impact across a range of outcomes and deliver significant benefits. These are grouped into four key areas as highlighted below.

Outcomes and Benefits



Safety and Clinical Outcomes

- Improve Patient Safety
- Enhance Clinical Outcomes
- Support elective and covid recovery



Experience and Empowerment

- Continually improve staff and patient experience
- Empower children, young people and families to achieve their goals
- Empower staff to innovate and deliver new models of care



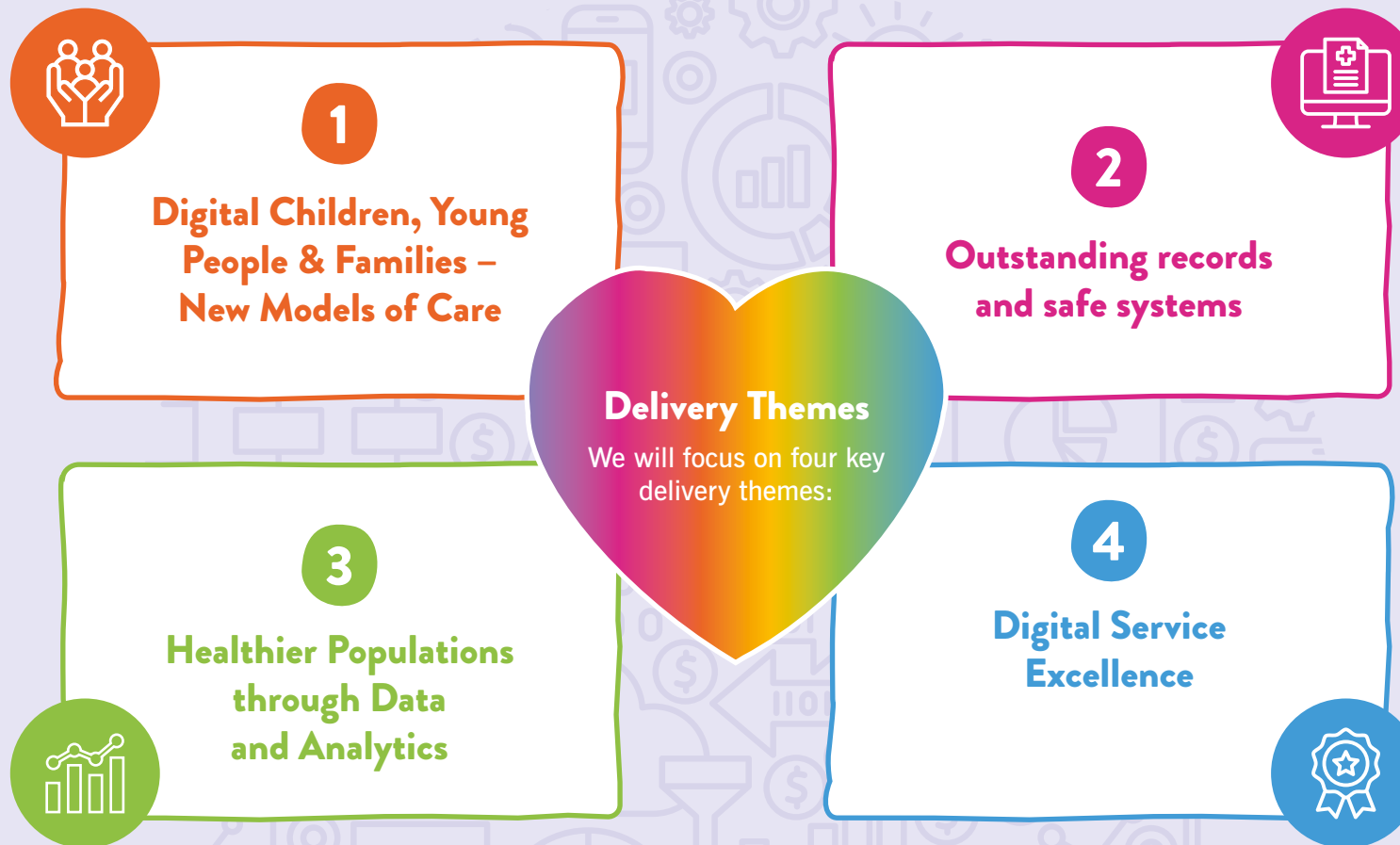
Population Health

- Improve the population health of children and young people
- Reduce Digital Exclusion
- Support the reduction in Health Inequalities



Efficiency

- Release more time for direct patient care
- Release cost improvement efficiencies
- Net zero contribution



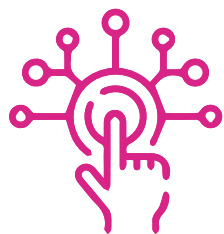
The opportunity of digital and data is immense for health and care services. It has developed exponentially over the past three years and is at the core of operational delivery, safety and innovation. The covid 19 pandemic has been a digital transformation catalyst for many businesses and health services across the globe.

This will grow and grow as we continue to innovate and deliver health and care services for the future.

SECTION 2

The Context:
Framing Digital and
Data Futures





'Digitally Enabled' is identified as a strong foundation in Alder Hey's 'Our Plan' It is a core component of our strategy which runs through our whole strategy from Brilliant Basics and Outstanding Care, supporting our people to do their best work, through to growing the future with game changing research and innovation.

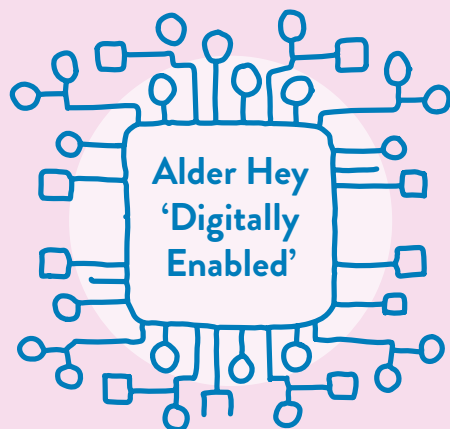
We expect and get a 'digital experience' every day and it isn't unusual, or even "digital".

It just is what we do and get - from waking up to our phone alarm, to listening to music, to using 'sat nav' on way to work, online shopping, messaging family and friends on WhatsApp etc.

In health and care services, the use and development of digital, data and technology are critical factors prevalent in much of what we do, but has way more potential and opportunity to truly support and transform the way in which we provide, plan and deliver care.

Digital healthcare in the future is an area of rapid growth and development. We anticipate major changes linked to self care, digitally enabled precision healthcare and preventative medicine, however there are also expected changes to workforce behaviours and patterns. This will be continually reviewed as we set our Alder Hey Futures 2030 vision and strategy.

There is an opportunity for Alder Hey to lead the way with this pioneering thinking including the potential development of national peer networks and internationally working with other children's hospitals.



"the use and development of digital and technology are critical factors prevalent in much of what we do..."



2.1

Alder Hey Children's NHS Foundation Trust

Digital and Data are key parts of our quality improvement Brilliant Basics approach and support all of our operational priorities.

Brilliant Basics aspires to provide care and treatment of the very highest safety and quality, in collaboration with the children, young people and their families who use our services. Each of the workstreams within the Digital & Data Strategy will align with Brilliant Basics to ensure any improvement has a big impact on our staff, children, young people and families.

The Digital and Innovation teams at Alder Hey have always worked closely together in delivering transformation through technology. The new Digital and Data Futures and



Innovation strategies have been developed together to further build on this relationship, supporting the interdependencies across the two and harnessing expertise from both teams to improve the way healthcare is delivered for children, young people and families at Alder Hey.

Looking ahead to Alder Hey Futures, in concert with research, innovation and education, digital and data are part of the pioneering powerhouse to help us meet our 2030 ambitions for a healthier future for children and young people.

Brilliant Basics aspires to provide care and treatment of the very highest safety and quality in collaboration with the children...



2.2

Working with Partners

Alder Play plays an active role nationally, regionally and at Place. We work with many partners to deliver, improve and innovate how we care for children and young people. Our partners include local, regional, national and international experts in health, care, academic and industry fields. Working together in collaboration is a core part of how we deliver with impact, passion and energy.



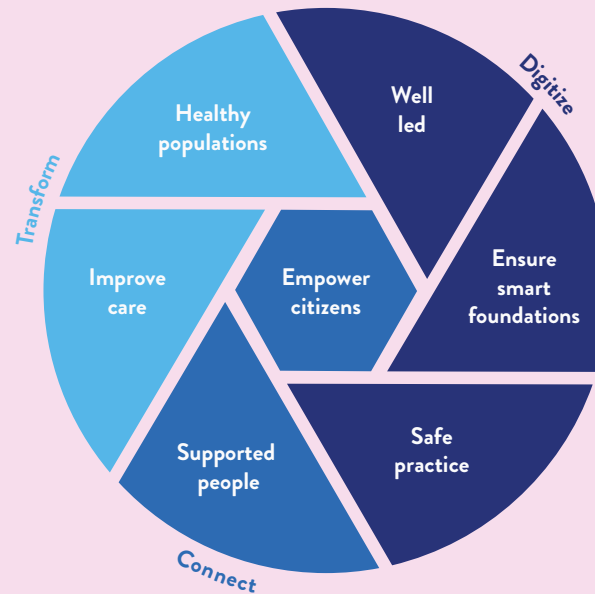
2.3

National and Regional Landscape

Nationally, there has been a significant change in the structure and priorities of digital and data. The Digital, Data and Technology (DDaT) approach, functions and profession have been significantly strengthened and integrated into NHS England / Improvement structures.

The NHS digital and data strategy is focussed into three interconnecting ambitions of Digitise, Connect and Transform. These ambitions are underpinned by the NHS data strategy and What Good Looks Like (WGLL) Framework. A more streamlined approach to investments is underway alongside the devolution of some areas to emerging integrated care systems and boards.

The WGLL framework is based around seven success measures aligned to the top line themes of digitise, connect, transform.



WGLL sets out a clear set of expectations for local systems and organisations with regards to good digital practice across health and care. Its aim is to provide clear guidance for leaders to digitise, connect and transform services safely and securely.

Sonia Patel, System CIO for NHE England and Improvement commented on WGLL at Alder Hey: “I’m overwhelmed by what I’ve seen, from the innovation work to

implementing brilliant basics. The best way to describe it is ‘awesome.’ The standout for me has been looking at the user centric digital transformations. Alder Hey have developed a culture of understanding and trust with clinical and operational staff which has forged a foundation where digital transformation has been able to flourish whilst also keeping focussed on ensuring brilliant basics.”

There is potential to work with national colleagues in trailblazing work on a paediatric minimum data set for an electronic patient record. This could include creating a blueprint for a national eRedbook making the best use of the national infrastructure to trial something locally.

Nationally, much work is ongoing with regards to the digital profession with a move to encourage professional registration and membership of digital and data professionals. ‘The Year of the Digital Profession’ has been launched in 2022.

“...Alder Hey have developed a culture of understanding and trust with clinical and operational staff which has forged a foundation where digital transformation has been able to flourish whilst also keeping focussed on ensuring brilliant basics.”

2.4

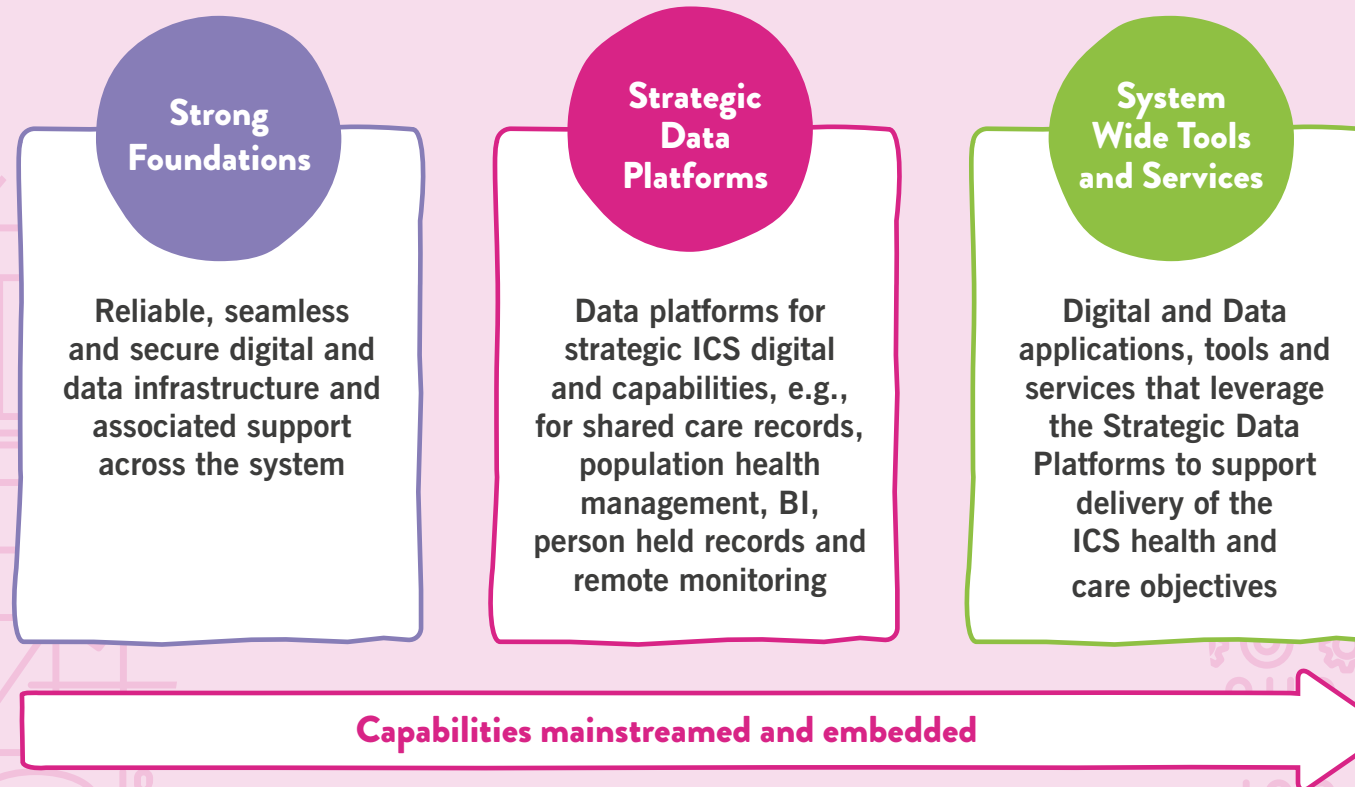
Cheshire & Merseyside Digital and Data Strategy

Across Cheshire and Merseyside, there is a wealth of talent and expertise in relation to digital and data. Cheshire and Merseyside is one of the more digitally mature Integrated Care Systems with many of its members having well established, digitally mature systems.

Cheshire and Merseyside have been working together on digital developments for many years leveraging national investments and partnerships. Successes include a vibrant cyber security community, extensive sharing of records across boundaries and a shared system wide analytics platform. The development of the **Combined Intelligence for Population Health**

Action (CIPHA) platform and the **System P** programme present opportunities for Cheshire and Merseyside to develop a system wide population health approach.

The Cheshire and Merseyside digital and data strategy is currently in the process of being refreshed. The core elements of the new strategy are referenced in the diagram below.



2.5

Liverpool Place

Within Liverpool Place, a digital and data group has been established and strategy in the process of being developed for the City.

The Liverpool Digital and Data Strategy sets out 5 integrated themes, built around 4 main pillars, that together aim to deliver a digital and data transformation for Liverpool Place's health and care sector. It sets out a framework for pursuing, up to 2025, an ambitious but realistic approach to how digital and data solutions that align with WGLL standards can contribute to improving people's health, care and well-being, raising user satisfaction with health and care services, encouraging self-care, prevention and self-management of diseases whilst tackling the considerable challenges of an ageing population and increasing demands on a health and care sector that has human resource constraints and continuing financial pressures.

THE KEY THEMES, BUILT AROUND THE 4 PRIMARY PILLARS, ARE:

- **EMPOWERING CITIZENS:** Digital access to the NHS and digital tools to self-manage health, care and well-being
- **BOOSTING HEALTH** and care service quality, capability and efficiency
- **SUPPORTING HEALTH** and Social Care Professionals
- **EXPLOITING DATA** for business intelligence, research and innovation to improve population health
- **INNOVATION,** sustainable health and social care services, economic development and high-value jobs
- **IMPROVING** the digital and data infrastructure and cyber security resilience for Liverpool's health and care system

SECTION 3

What a Journey...
Reflections on the
Last 3 Years

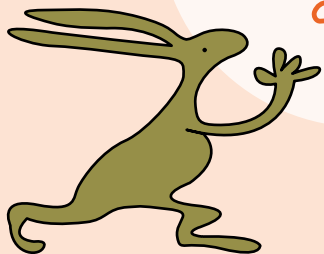
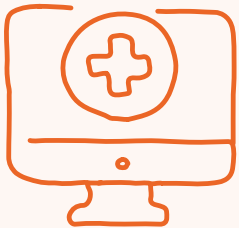


Digital Futures was launched in Alder Hey in 2019.

Digital Futures was built on a set of solid foundations.

Digital Futures strived to improve experiences for children and young people and for staff and to put Alder Hey firmly on the map with external kitemarking and endorsement of our digital developments.

Since 2019, major progress has been made with the delivery of a significant amount of digitally enabled change. To achieve this, whilst dealing with a global pandemic, typifies the culture at Alder Hey, which has embraced the technology and taken many leaps of faith along the way.



Dr Christopher Grime, Chief Clinical Information Officer reflected,

‘When we looked back at the last 3 years and our previous digital strategy, none of us could have predicted the arrival of a world-wide pandemic.

While COVID-19 has been devastating for many and is a significant challenge for the NHS in general, it has become an opportunity to develop and expand. Never before have we in the NHS been given the opportunity to stop and ‘reverse engineer’ what we do.

Thanks to the efforts put in place by our team before pandemic and generous donation from the charity allowing us to purchase new hardware, we enabled virtual working on a scale we never thought possible



before which allowed many of our services to continue uninterrupted.

Now that we are facing the recovery phase of the pandemic, we are reflecting on those new ways of working and acknowledging that many of them lead to more efficient processes and better care from patients.

With minor refinement, our new digital and data processes and pathways offer a great opportunity to improve the way we work. We are facing a very exciting future as a fully digitally enabled trust.’

Key achievements from Digital Futures include...

3.1

Safer care for children and young people

Digital Futures helped to enable much safer care through introducing a range of tools and technologies. Alder Hey staff developed a paperless programme with the increased adoption of the Electronic Patient Record and the introduction of many specialty packages through the Global Digital Exemplar programme, supporting specialties to capture key information digitally.

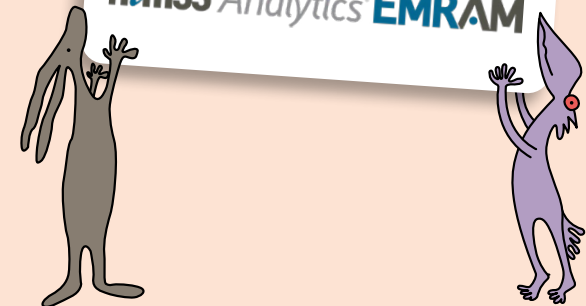
This enabled clinical records to be available from anywhere for staff, facilitating new and different models of care. Closed loop technologies were developed to support the safer administration of milk, blood and medicines and alerts and warnings were built into prescribing and clinical decision support systems.

Having achieved the prestigious **Healthcare Information and Management Systems Society (HIMSS) Electronic Medical Record Adoption Model (EMRAM) Stage 6** in December 2019, as part of the national Global Digital Exemplar (GDE) Programme, we then become the first specialist Trust in the UK and the first paediatric hospital in Europe to have been awarded **HIMSS EMRAM Stage 7** in November 2021. This international accreditation really put Alder Hey on the global map for digital healthcare demonstrating a culmination of achievements and clearly showcasing the difference improving care and services through digital in Alder Hey has made to children and families lives.

Alder Hey

HIMSS
LEVEL
7

HIMSS Analytics EMRAM

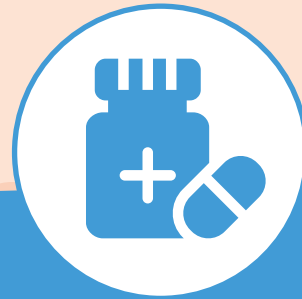


A number of analytics case studies were presented by clinical and operational leads from across the Trust as part of the accreditation. Each outlined how they had used data to identify and resolve clinical, financial and operational problems across the Trust. Example case studies included:



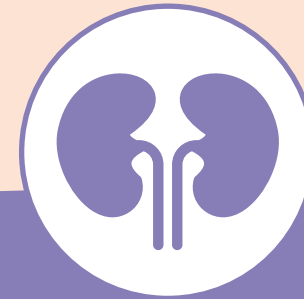
Asthma Mapping

Liverpool children and young people with asthma are 15 times more likely to be admitted to ED for a preventable asthma attack. It is evident that there are major socioeconomic determinants of health within Liverpool are present. In order to better understand the incidents of asthma attacks across Liverpool, the goal of this project was to track Emergency Department admissions in order to highlight areas within the region with higher admission rates. A heat map was produced to depict locations with high paediatric asthma morbidity and its related contributing factors, before implementing specific evidence-based interventions



Polypharmacy Ward Round

Adverse drug reactions are responsible for 3% of all paediatric admissions. In turn, adverse drug reactions lead to complications in 15% of inpatient stays. Reporting these adverse drug reactions to spontaneous reporting schemes in order to identify these suspected harms remains low. This project established a service to identify and monitor children and young people with potential problematic polypharmacy across Alder Hey and since the service began, there has been a significant reduction in children and young people taking more than 20 different medications



Acute Kidney Injury

At Alder Hey we see around 200 children and young people every year with severe AKI and just over half of these have exposure to nephrotoxic medication. This is a significant, preventable, problem locally, nationally and internationally. This project aimed to reduce avoidable harm and death for children with acute kidney injury, and to improve care for patients whether in hospital or at home. The implementation resulted in a reduction in medication errors and adverse drug reactions

The Cheshire and Merseyside Integrated Care System Digital Leadership

“HIMSS Stage 7 status is the highest level of digital accreditation a healthcare organisation can achieve and it is rare with only a few organisations globally achieving this level of digital maturity. Cheshire and Merseyside are truly honoured to have Alder Hey operating at this level, not only because they are in a continuous improvement cycle using digital and data to benefit our children and young people, but they also act as a beacon to others, sharing and supporting others in our NHS community with great humility”.

Major clinical digital improvements delivered through Digital Futures include:

- **Introduction of an Electronic Anaesthetic Record:** the implementation of a digital platform, which fully digitised the anaesthetic process in Theatres, improving efficiencies and patient care
- **Cardiology Imaging System:** A solution for Cardiology, helping them manage and report on Echos in a safer more efficient manner improving cardiac and cardiology services for our children and young people
- **Online Symptom Checker:** the demand on our Emergency Department grew exponentially during COVID recovery, the development of an innovative online symptom checker integrated into our website has meant families can glean clinical advice for their children from the comfort of their own homes.

“The electronic anaesthetic record was implemented in early November 2021. It has already delivered several of the projected benefits including improved quality and detail of the anaesthetic record and provided instant availability of historical records at all times, both for clinical use and coding/audit. I believe features such as highlighting risk factors and clinical reminders for tasks have improved safety and quality of care. The implementation of this application has revolutionised the way the Theatre & Anaesthetic department work in Alder Hey”

**Dr Harvey Livingstone, Clinical lead,
Electronic Anaesthetic Record system**

Alder Hey became one of the first Trusts in the UK to receive a formal Global Digital Exemplar accreditation from NHSX (now NHS England/Improvement). The Trust are formally nationally recognised as national ‘Digital Leaders’ in healthcare.

3.2

Improved Experience for Staff:

In the development of digital futures, a key priority highlighted by colleagues was to work on a range of service improvements for staff. These included speed of access, access to modern equipment and digital tools to support colleagues in their day to day work. A major technology roadmap was developed to support this with significant levels of investment.

This work included a major shift to create a modern workspace for Alder Hey staff. This programme saw early migration to Office 365, which we did not know at the time would become so essential as a way of staying connected during covid times. Migrating all staff to Office 365 has garnered greater flexibility, security, access to key information enabling staff to work in a more agile manner. This was complimented with a huge device refresh programme ensuring staff have the best digital tools and equipment available to do their jobs.

Behind the scenes, a refresh of the core infrastructure was completed, providing greater resilience for our Digital Systems. There has also been some great work on keeping our information secure, with some major investments in Cyber Security. This has culminated in the Trust being accredited with the national Cyber Essentials kitemark.



3.3

Digital COVID Response

When the pandemic hit, the prevalence of digital technology catapulted into new heights across the globe. This was no different in Alder Hey where we embraced a 'digital first' approach using the technology that had been developed to keeping both patients and staff safe. Over 700 laptops were distributed to colleagues alongside a mass adoption of Microsoft Teams to ensure communication channels remained open amongst staff.

With over 700 clinicians trained in 3 weeks the Trust deployed Attend Anywhere enabling us to continue to care for our patients through virtual consultations. The Trust really embraced this and has performed over 50,000 virtual appointments to date. We are proud that no child or young person had their therapy appointments cancelled as we moved to new, virtual models of care.

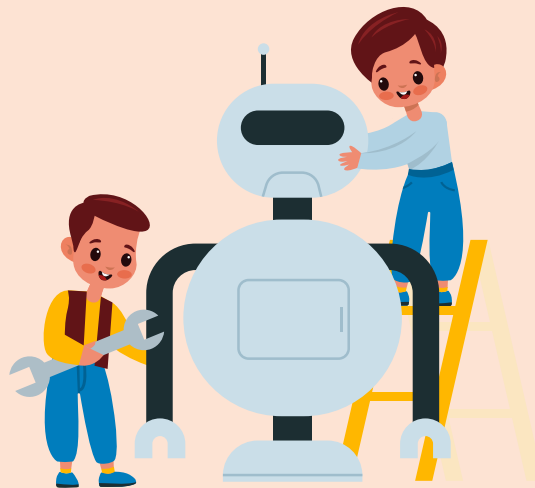
We provided virtual visiting solution with the Patient Liaison Service enabling children and young people who were inpatients to communicate with their families during the national restrictions.

"I can't even begin to tell you what a difference such a small act has made to her. She was so low earlier today and this has enabled her to keep going during this difficult time."

Feedback from an Alder Hey family member

The deployment of the 'RoboDoc', a telemedicine on wheels unit, meant shielding clinicians could still care and offer diagnosis for patients remotely, using high powered robotic camera technology. This was also deployed jointly across our partners at Liverpool Women's Hospital which enabled the neonatal teams to continue to provide safe care to their tiny patients and their families.

A mother of a premature baby said, "Under normal circumstances a surgeon would travel from Alder Hey to check on his wound regularly. A week following surgery his wound started to weep, but there was no way for a surgeon to jump in a car and go across the city like they normally do. That's where the telemedicine robots came in. We used it throughout our time in hospital, the surgeon could zoom in on the wound and you felt like they were in the room. I genuinely don't know what we would have done without the robots. During lockdown this became the norm and it saved so much time as the surgeons could see him immediately when they needed to."



3.4

Benefits Impact

The digital initiatives implemented within Alder Hey over the last three years have introduced significant benefits. Over 10,000 hours of efficiencies have been saved through the introduction of technology.

There has been a marked improvement in both staff and patient experience across a number of projects. The projects within the safety programme have seen a considerable reduction in errors, making a marked improvement to the care patients receive within the Trust.

Peter White, Chief Nursing Information Officer

Nurses in Alder Hey have benefited from continuous development to the EPR, safer medicines management and pioneering research from the DETECT study which enabled mobile observations and improvements in the management of deteriorating patients. Using data to improve care is the norm - dashboards displaying audits such as hygiene audits as well as Safe Staffing encourages staff to use data to continue delivering outstanding care to everyone. Nurses naturally have to evolve as medical practice develops. They also need to be current with the needs of their patients. For the Children and Young People accessing services within Alder Hey this involves an increasing reliance of digital solutions. Whether that is for entertainment, socialising or education, families expect the health service to keep pace and allow them to stay connected.

THE BENEFITS

A snapshot of benefits from various projects are highlighted below:



Telemedicine, virtual appointments and digitising height and weight have helped to achieve c.£115K in non cash releasing efficiencies saving patients having to travel to Alder Hey also contributing to our net zero ambitions



Approximately 11,000 hours have been saved through telemedicine, e-consent, electronic anaesthetic charts and surgery dashboard



Bedside verification, digital scales, econsent and ophthalmology digital records have helped to reduce harms by 59%



Attend Anywhere, virtual visiting and the ED symptom checker have supported an improvement in patient experience by 54%



An average £39k per month has been saved for patients not having to travel to site following the introduction of virtual consultations



Many programmes including better basic equipment, office 365, one drive have supported a 71% improvement in staff experience

3.5

Digital Service and the Birth of iDigital



The digital service has grown from strength to strength over the past 3 years. The service has grown in size and shape and has gone from being somewhat ‘back office’ to front and centre alongside our clinical teams and a true clinical support service. Some of the huge successes include:

- **The much valued Digital Drop** in Centre in Room 5 on the Mezzanine in the main hospital and in community sites. This provides a single point of access for staff to Digital Support enabling faster turnaround times and better results when solving technology issues
- **Business partnership** model with digital, clinical and analytics colleagues embedded in divisional structures
- **Digital staff** known, valued and respected across Alder Hey teams

In June 2021, Alder Hey collaborated with Liverpool Heart and Chest Hospital to form an integrated digital service; iDigital (Integrated Digital). The iDigital team now provide a joint digital service to the two Trusts and the model has brought significant benefits including collaboration, efficiencies and knowledge sharing, as well as development opportunities for staff. Feedback from the organisations has highlighted the positive impact the collaboration has had on delivery of digital initiatives.

Staff development is a key priority of the iDigital service and over the last three years, each Trust has achieved the Northwest Informatics Skills Development Network accreditation for Excellence in Informatics. This accreditation assesses staff development opportunities, governance, and leadership value.

3.6

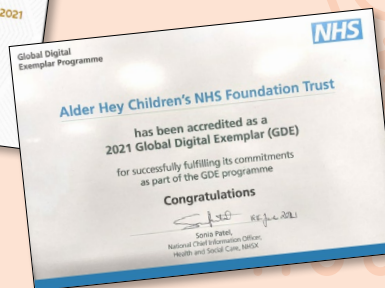
Celebration and Recognition

The Digital team were awarded a number of accolades for work in support of the pandemic response, and work more widely. This included a prestigious HSJ Award in the ‘Digitising Patient Services Initiative Award’.

Chief Digital and Information Officer, Kate Warriner

“An extraordinary amount has been accomplished in the digital space at Alder Hey, and we are thrilled to achieve this award in recognition of that. In the face of unprecedented challenges, our Digital teams worked together with clinicians, innovation colleagues and other internal and external partners to achieve the seemingly impossible; delivering what was required to support our children and young people, their families and our staff.”

In 2020, Alder Hey was named Overall Winner at the Health Tech Awards hosted by Health Tech News. The team were also nominated for the Tech Project of the Year Award and the Delivering at Pace Award and were highly commended within each category.



SECTION 4

The Difference is Digital:
A Bright Digital
and Data Future



4.1

Our Ambition

We live and work in an era powered by digital and data in everything we do. Our ambition is to deliver 'Outstanding Digital and Data Excellence'.

At the heart of this is our 'north star' vision and focus on creating the best experience and outcomes, truly empowering Children, Young People and Families, and Staff.



Through this we will strive to:

- **Provide the best possible digital technology services** and systems to support, enable and drive outstanding safe care
- **Deliver Information Technology basics** well, within an operational excellence framework that enables Alder Hey colleagues to do their very best work
- **Embed digital developments and innovations** at scale within divisions and clinical teams to maximise the opportunity of new models of care
- **Ensure intelligence led analytics and data** are at the heart of operational and clinical services and at the forefront of service developments
- **Champion the digital profession** and collaborative working through the support and development of a talented digital workforce
- **Play a critical role in advocating for children and young people** digital and data priorities locally in Place, regionally and nationally

Our vision for data through our strategy refresh is to establish a world leading Digital, Data and Insight Service.

Our digital and data strategy will support us to use data and analytics not just as management information but at a personal level. The step change in strategy and approach will support our efforts in population and preventative health. We have never been at more risk of excluding people in our populations, a streamlined effort will help to minimise this risk and work in a system of inclusivity with a concerted effort to tackle health inequalities.





As part of the strategy, we will help citizens to improve their digital skills and remain mindful of digital inclusivity in all that we do.

Processes will be in place to ensure the strategy initiatives do not introduce digital exclusion through their delivery, whilst also embracing areas where digital and data can facilitate inclusion, for example digital letters allowing patients to translate into other languages or use screen readers.

The digital and data approach will support education and training coming together in a way that enables us to move forward, harnessing our data and intelligence to inform us where interventions and proactive support is needed. This will help with workforce skills, capability and capacity.

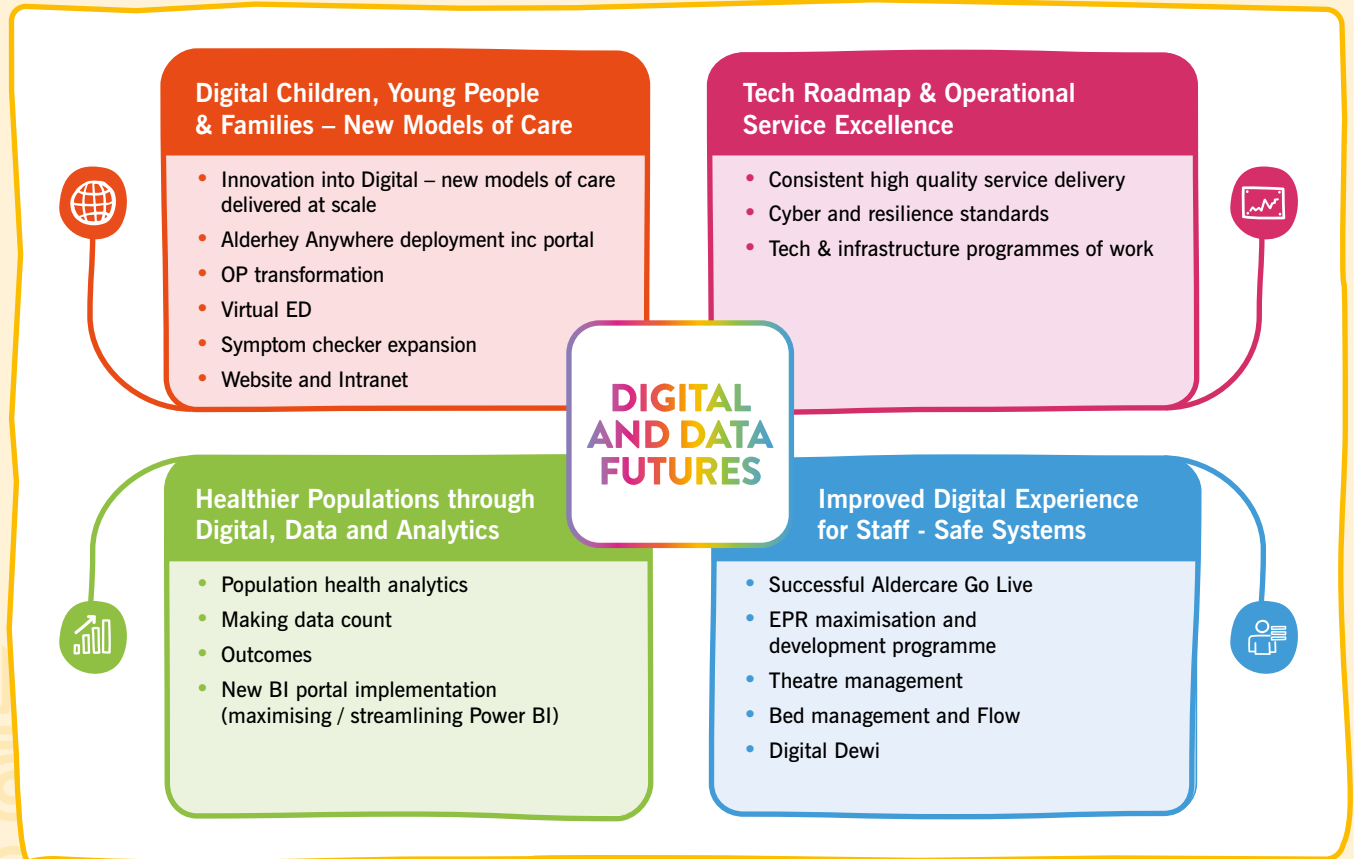
A real focus on data quality and data entry is vital including a move to automation and maximising the potential of innovation at scale leveraging all opportunities within our gift.

Integration with our research and innovation framework and research programmes is crucial, particularly in supporting the next generation of precision medicine and new therapies and treatments.

4.2

Digital and Data Futures Themes

Digital Futures will be delivered through 4 core themes. Within each of these themes will be a number of distinct Programmes of work, which will each align and contribute to achieving overall outcomes of strategy.



Theme 1:**Digital Children, Young People & Families – New Models of Care**

At Alder Hey our Children, Young People and Families are at the heart of everything we do and this theme strongly supports that value.

When the pandemic hit, we delivered care differently in order to keep our Children and Young People safe. This was largely enabled by digital technology, which was rapidly adopted by clinical services, facilitating remote care through a number of different vehicles.

Post pandemic, we are now in a recovery phase and we need to build on some of the successful models, growing our capability to care for more patients virtually, creating physical capacity for those that need it most.

When the pandemic hit, we delivered care differently in order to keep our Children and Young People safe.



Through our virtual services, digital technology will support new models of care at scale including key priorities such as elective recovery and enable the reshaping of clinical services. Through solutions like remote monitoring and the expansion of our online symptom checker, children and young people can receive care and be kept safe remotely, reducing the need for unnecessary attendances or follow ups.

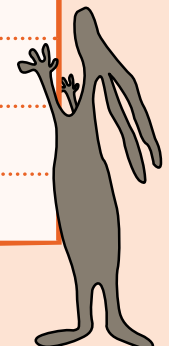
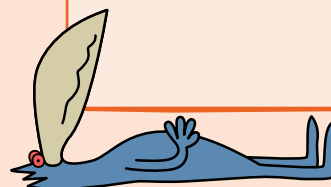
The main focus of this theme is providing patients with a portal; delivering one, central 'digital front door' to all of the virtual services within Alder Hey, improving access and modernising the way healthcare is delivered to children and young people.

Working alongside the Innovation Team, the successful delivery of **AlderHey@nywhere** platform will allow this portal to be developed. This solution will combine with the modernisation of the Trusts website and provide children and young people with a single point of access to a plethora of digital services and education. For clinicians, it will deliver an integrated platform, to monitor and patients' conditions in real time from any location enabling them to only bring patients to hospital when absolutely necessary.

Within Outpatient Transformation we will deliver a wide range of initiatives to improve the utilisation and efficiency of the service. This will support key priorities such as Patient Initiated Follow Ups, helping manage waiting lists more efficiently ensuring we see patients most in need more quickly.

Providing children, young people and families with greater access to clinical services, advice, guidance and subset of their medical record we will aim to empower our children, young people and their families to be able to take more ownership of their care and improve their experience and outcomes.

Programme	Deliverables / Projects	When
Virtual Services	Expansion of Online Symptom Checker	22/23 – 23/24
	New Intranet and Website	22/23
	Virtual Consultations for Emergency Care	23/24 – 24/25
	Advice & Guidance Consolidation	22/23 – 23/24
	Patient Portal/ Alderhey@nywhere	22/23 – 24/25
	Virtual Wards/Clinics	22/23 – 24/25
	Digital Community and Mental Health	22/23 – 23/24
Outpatient Transformation	Optimising Virtual Consultations	22/23 – 23/24
	Paperless Outpatients	23/24 – 24/25
	Remote monitoring	22/23 – 23/24
	Patient Initiated Follow Ups	22/23 – 23/24



Theme 2:**Outstanding Records and Safe Systems**

This theme focusses on making a step change improvement in the usability of our digital systems and electronic patient records.

Our digital platforms support our staff to do their best work in delivering outstanding care to children and young people, so its vitally important they are optimised to meet the evolving needs of the Trust.

The theme will be delivered through 4 key programmes:

- AlderC@re
- Digital Safety
- EPR Optimisation
- Divisional Digital Programme

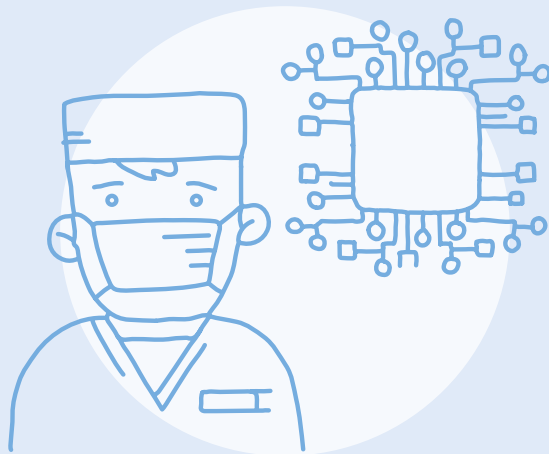
The successful delivery of **AlderC@re** is one of the main components of the strategy. This will see the move to the latest version of our Electronic Patient record which will provide a more modern and intuitive user interface along with improved functionality in key areas. We will work in partnership with clinical and divisional colleagues to ensure the transition is as seamless as possible.

Alongside this we will continue to develop and deliver our **Digital Safety Programme**. Reviewing and expanding on existing technologies, building on our current levels of clinical decision support and responding to divisional priorities will continue to contribute to a reduction in errors and improved outcomes.



Following the successful implementation of AlderC@re, a continuous optimisation programme will be established. We recognise that the needs of our services continuously evolve and our digital systems must be capable of responding to the changing needs. Through this programme we work collaboratively with the Divisions to create a mechanism for capturing and coordinating the delivery of prioritised system improvements.

It is pivotal that the digital and data strategy is shaped by the priorities of each of our clinical divisions. We will work together as 'one team' to provide a joined-up service to staff. Through our assigned Digital Divisional leads, we provide a single point of contact ensuring our service is fully integrated and aligned to clinical and operational needs.



Programme	Deliverables / Projects	When
AlderC@re	Go Live of AlderC@re programme	22/23 – 24/25
Digital Safety and Efficiency Programmes	Closed Loop Technology Phase 3	23/24 – 24/25
	Paperless Pharmacy and automation	23/24 – 24/25
	Digital ECGs	23/24 – 24/25
	Integrated observations	23/24 – 24/25
	E-Handover	23/24 – 24/25
	EMRAM HIMSS 7 Re-accreditation	23/24 – 24/25
	Facilities Improvement Projects	22/23 – 24/25
EPR Optimisation	Optimisation Strategy	23/24 – 24/25
	EPR Optimisation Group	22/23 – 24/25
Surgery Digital Programme	Digital Theatre Management Solution	22/23 – 23/24
	Digital Outpatient Room Booking and Utilisation	22/23 – 23/24
	Bed Management and Patient Flow	23/24 – 24/25
Medicine Digital Programme	Remote monitoring solutions	23/24 – 24/25
	Virtual Emergency Department	22/23 – 23/24
	Integration of Telederm with GP practices	22/23 – 23/24
	Expansion of symptom checker	22/23 – 23/24
Community and Mental Health Digital Programme	EMIS Optimisation	23/24 – 24/25
	Sunflower House	22/23 – 23/24
	Tier 4 In Patient Unit Digitisation	22/23 – 23/24

Theme 3:**Healthier Populations through Digital, Data and Analytics**

Data is an integral part of the NHS, effective use of data at all levels of the NHS, and beyond, can deliver better care for our children and young people. The reliance on data and analytics for our clinical and operational services at Alder Hey has never been greater. The use of data at Alder Hey Children's NHS Foundation Trust has increased dramatically over the past 2 years in line with the pandemic, the alignment of Digital and Data is key to taking the next steps.

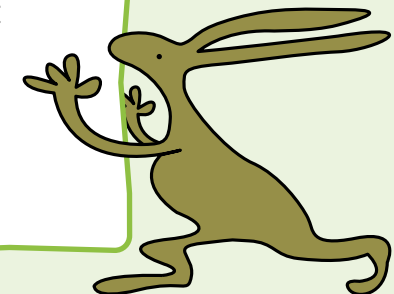
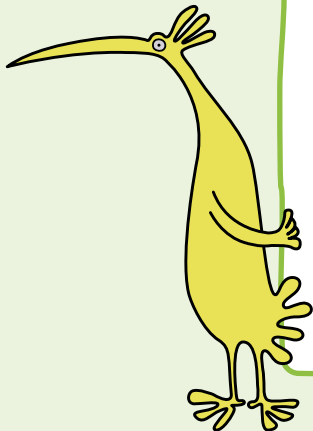
It is important we empower our staff, children, young people and families by making information as accessible, digestible and accurate as possible, for them to make key decisions and transform service delivery. Working with education and children's services, this work has a huge role in supporting outreach and promoting better health and wellbeing for children and young people.

This theme will also stretch beyond our virtual walls and strengthen our impact on population

health, connecting our data up with other providers and sectors, adding value to the rich data we already possess. The analysis of this combined data can lead to more targeted and preventative care across the region, improving the overall health of our population and reducing attendances and admissions to hospital.

The 4 key programmes to support this theme are:

- 1. Clinical Outcomes:** our vision is to collect data that allows us to measure changes in health, function or quality of life that result from our care.
- 2. Population Health Management:** we want to better understand our communities and the differing health and wellbeing needs of children and young people by analysing available data.
- 3. Making Data Count:** we will implement the principles of Making Data Count for all relevant reports and update our performance reporting narrative
- 4. Access to Data:** all staff members will have appropriate access to timely analysis or data that enables them to provide the best care to our children and young people

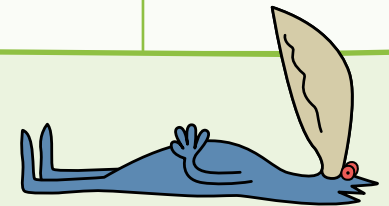


We will use the **HIMSS Adoption Model for Analytics Maturity (AMAM)** to provide an external kitemark assessment of our analytics capability and utilise the maturity model to govern the data aspect of the Digital Strategy.

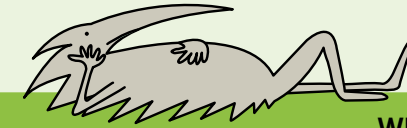
Our approach to data and analytics will include a blend of internal developments and resources, working in partnership with universities and co-innovating with industry. We will play our part as a partner within our **Integrated Care System** linking into the **CIPHA** and **System Programmes** of work. With the Innovation Centre, we will exploit the benefits of artificial intelligence, automation, machine learning and digital twin opportunities.

Programme	Deliverables / Projects	When
Clinical Outcomes	Optimising data capture for clinicians	22/23 – 24/25
	Analyse our data and work with clinicians to improve outcomes	
	Benchmark ourselves nationally and globally using the HIMSS AMAM model	
	Establish a patient reported outcomes measures service	
	Enable and support research and innovation data priorities	
Population Health	Linking our data to the ICS, working with system programmes to advocate for children and young people	23/24 – 24/25
	Improving data collection to better understand our children and young people	
	Analysing data to identify and reduce health inequalities	
	Work with partners such as strasys to embed a population health approach for children's transformation	
	Develop a strategic intelligence function	

(Table continued on following page)



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Programme	Deliverables / Projects	When
Making Data Count	Redeveloping all corporate reporting	22/23 – 23/24
	Upskilling Analysts via ApHA	
	Developing the organisations understanding of SPC Corporate and Divisional Dashboards	
Access to Data	Implement a new Analytics Portal	22/23 – 23/24
	Enable self service	
	Widen the Analytics community within the organisation	
	Improve the breadth and standard of content	
	Data Warehouse Optimisation	



Theme 4:**Tech Roadmap & Operational Service Excellence**

Our Digital Service Excellence theme builds on much work delivered to date and underpins our Brilliant Basics ethos. It focusses on ensuring the service maintains a consistent level of high-quality service delivery.

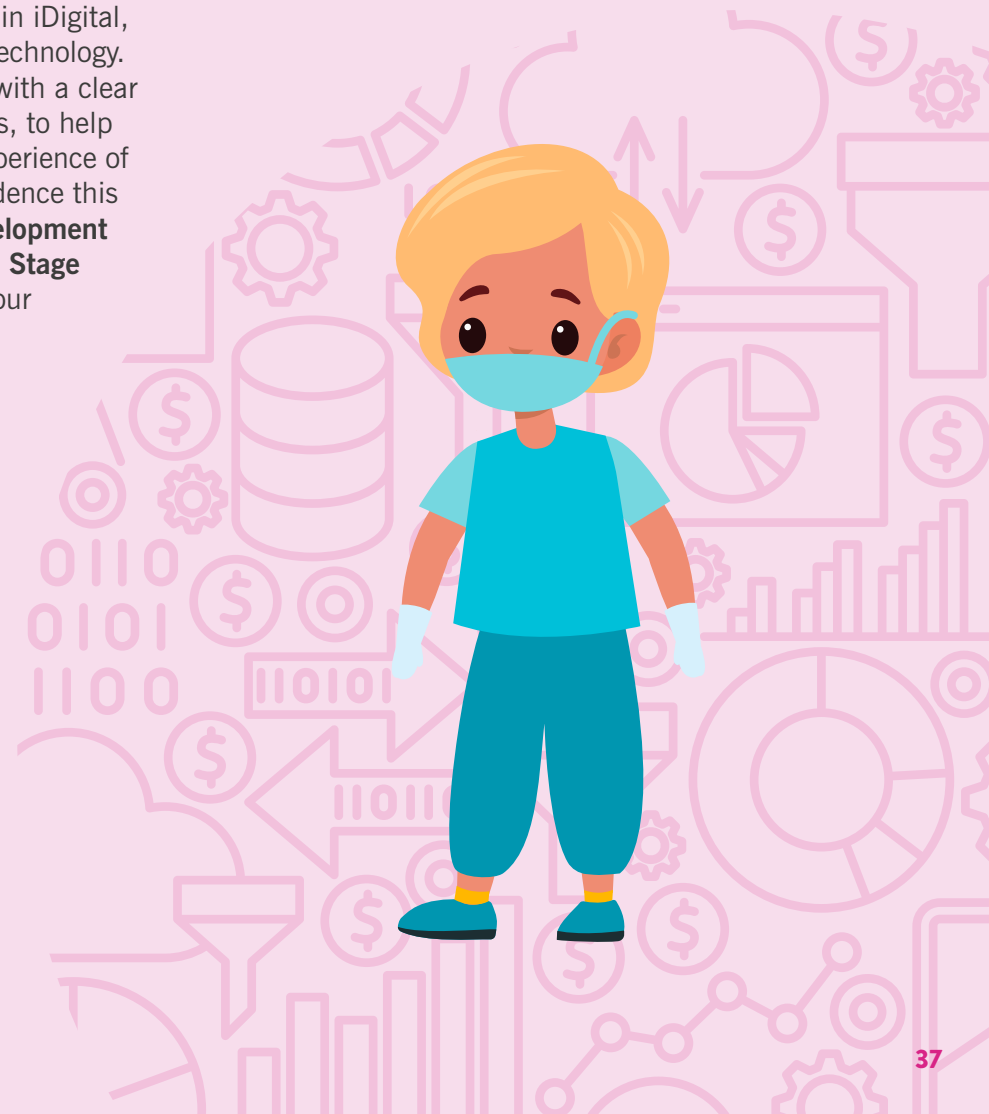
Our overall technology roadmap outlines a clear plan to improve our security, infrastructure and devices, providing our staff with the best tools to do their jobs. We will continue to take a proactive approach, through our device refresh programme, replacing ageing equipment on a rolling basis.

Learning from the successes of new support models such as the **'IT Drop in Clinic'**, we will look to further expand our digital support services, making them more accessible, reducing response and resolution times for our staff across all locations and sites.

Cyber Security is a major focus of our **Delivery and Assurance** function. It is important we continue to invest and enhance our preventative solutions and seek independent assurance through accreditations such as **Cyber Essentials Plus**.

Within this theme will also be a focus on digital service excellence for our staff within iDigital, investing in our people as well as technology. Our staff forum will be revamped, with a clear set of initiatives for the next 3 years, to help create solutions, to improve the experience of working in our service. We will evidence this through our Informatics **Skills Development Network Excellence In Informatics Stage 3** accreditation and strengthening our connections with the British Computing Society.

Work is also required to fill a gap in the workforce with the required skills to support becoming 'digitally enabled'. This theme supports the growth of a sustainable and skilled digital, data, technology and informatics workforce

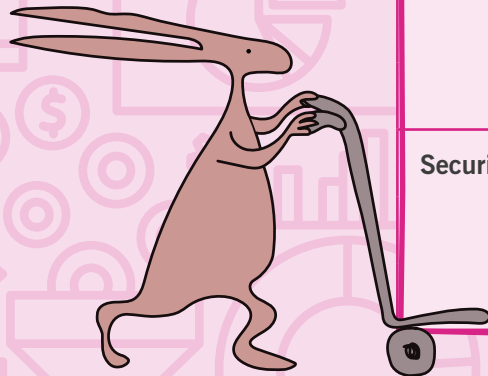


This theme will be delivered through 3 Programmes:

- Service Improvement
- Security and Resilience
- Digitally enabled staff



Programme	Deliverables / Projects	When
Service Improvement	Device strategy and refresh programme	22/23 – 23/24
	Maintenance of a robust network in line with KPIs	22/23-24/25
	Infrastructure Strategy	23/24
	Cloud data hosting	24/25
	Single Sign-On Optimisation	22/23
	Removal of historical technologies	23/24-24/25
Service Excellence	ISD Accreditation Stage 3	22/23
	Staff Forum Strategy	22/23
	Digital Professional Body	23/24
	Alignment to the national sustainable ICT Strategy	22/23-24/25
	Workforce skills development	22/23-24/25
	ISO Accreditations	24/25
Security and Resilience	Digital Theatre Management Solution	22/23 – 23/24
	Digital Outpatient Room Booking and Utilisation	22/23 – 23/24
	Bed Management and Patient Flow	23/24 – 24/25



SECTION 5

Our Approach: Making IT Work

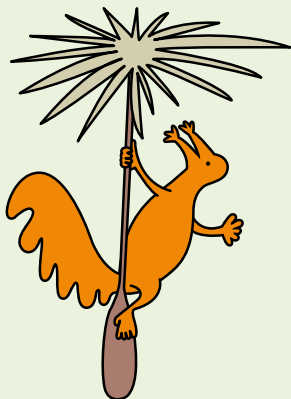







OUR APPROACH

Our approach or our ‘how’ are of crucial importance in delivering Digital and Data Futures. This includes our values, our team, our governance and how we work with colleagues and partners internally and externally to deliver our goal in creating a healthier future for children and young people.

5.1 Values Pledge

Our values and culture importantly set out how we will achieve our ambitions. We will commit to a digital pledge linked to the Alder Hey values in the delivery of Digital and Data Futures. We are proud to highlight this pledge (right):



Trust Value	Design Principle / Values Pledge
Excellence 	Simplify – we will create a great experience for staff and our population by keeping things simple and not unnecessarily overcomplicating our approaches or duplicating effort ----- We will work with Empathy ----- We will have a customer focussed service model with feedback loop and confidence in resolution
Innovation 	We will work in partnership with our Innovation Centre to deliver digital innovations at scale ----- Licence to Succeed, Permission to Fail – we will create an environment and culture where we encourage innovation and learning and accept that with innovation there can be projects ----- It’s ok to be a geek or a nerd – unleash the inner nerd!
Respect 	No ‘Badges on Speedos’ – we will not use our credentials or level of hierarchy to undermine the views of others, we will be respectful of all opinions and input, and work together for our population ----- We are digitally responsible – for the Children and Young People we are here to serve, we will operate a digitally responsible environment
Together 	One Team Ethos – we will work together as ‘one team’ with our divisions in order to provide a joined up service to staff. We will work together, not in silos ----- Will ‘Do With not To’ Co-Design and Co-Produce with the Person at the Centre – We will work with our population and staff to ensure that the services we develop are designed around people not organisations ----- Work in Partnership – we will work together as a collaboration, build and lead our digital programmes together. Digital leaders will ‘walk the walk’ with their clinical colleagues and vice versa, to ensure a deep level of understanding of the impact of their work ----- Pool efforts and assets – working together to leverage best value, drive economies of scale, avoid duplication and unnecessary competition
Openness 	Share our Learning – We will share our work openly and transparently with one another and with external colleagues, creating learning from best practice approach. Where appropriate, we will share, co-commission or jointly procure systems

5.2

Service Model and Approach

Building on the early successes of iDigital, our service model and approach will have a focus on working together as one integrated service. The model has recently undergone significant changes, based on a more streamlined professional digital portfolio model, underpinned by a single operating model. It supports further integration of teams and responds to the current priorities of Alder Hey and is the next stage of the evolution of iDigital.



THE MODEL PREDOMINANTLY OPERATES
WITHIN 2 CORE FUNCTIONS:

DATA & CHANGE

This function includes taking data and analytics to the next level both operationally and strategically.

DELIVERY AND ASSURANCE

This function has a major role in ensuring operational excellence in core delivery across a range of areas critical to the day to day running of services in both trusts.

Our approach will be one of creating a great experience for staff and delivering with a smile, positive and can do 'how can I help' service and culture.

We will have an uncompromising approach to delivery models for staff. We will continue to strengthen our proactive support model with daily ward rounds and visits to clinical areas to ensure equipment, systems and technologies operate as per our ambition – and resolving issues quickly where there are issues that do not meet this standard.

We will work with staff, children, young people, families and other stakeholders to support the adoption of digital innovation and technology. We will also play our part in the wider City and system in relation to digital inclusion and digital skills.

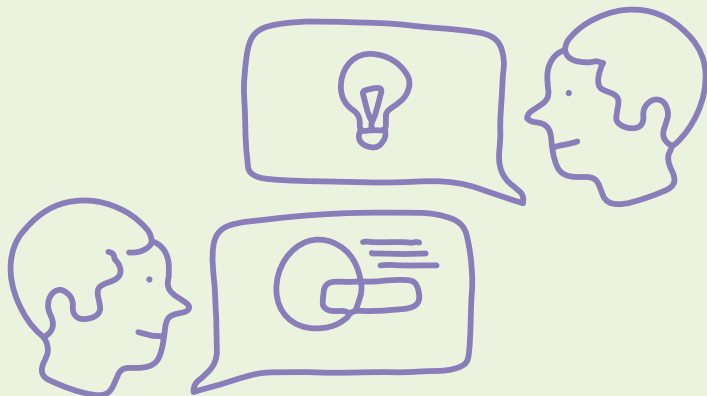


5.3

Clinical Leadership

We will build on the fantastic leadership and expertise of the Alder Hey clinical digital team. This will include further developing and strengthening roles within this team including the **Chief Clinical Information Officer, Divisional Chief Clinical Information Officers, Chief Nursing Information Officer, Digital Nursing & AHP Team** and individuals working in Trust programmes with digital leadership or activities identified as part of job planning or objectives. This team will continue to work together supporting day to day activities across the Trust in terms of operations and advice on more strategic development.

Our iDigital team will support our clinical ambitions with expertise and specialist skills in their field.



5.4

Working in Collaboration

As digital is such a fast paced area, often with areas of scarce specialist skills, we will work with partners to develop services together, attracting and maintaining talent and expertise ensuring value.

We will also work with other partners locally, nationally and internationally including:

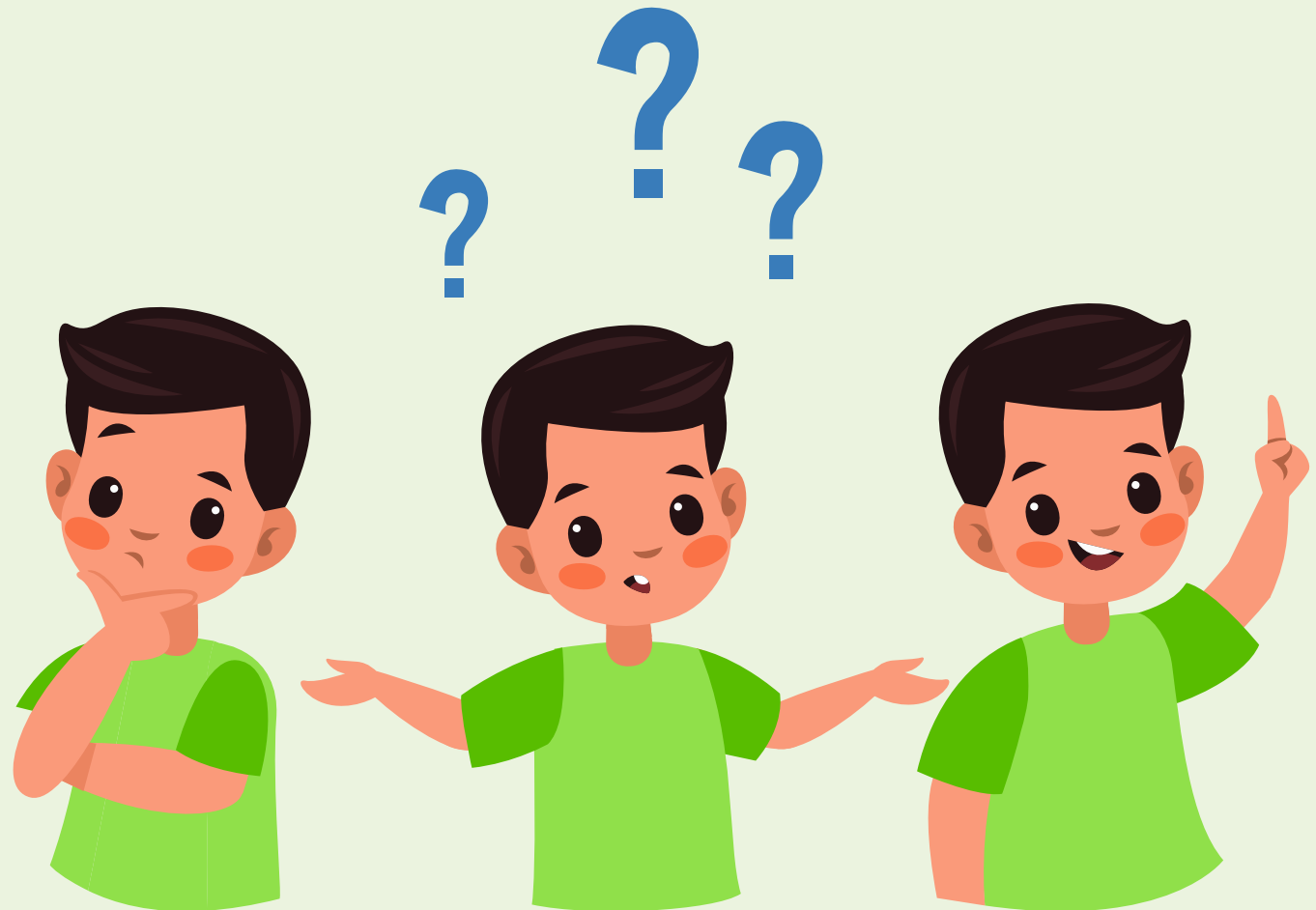
- Local Health and Social Care Organisations
- Cheshire and Merseyside Health and Care Integrated Care Board / System
- Academia / Higher Education Partners
- National Regulators
- NHS E/I Transformation Unit
- NHS Digital
- Industry Partners
- Small and Medium Enterprise organisations
- Public Health

5.5

Investment and Statement of Planned Benefits

A significant level of investment will be needed in order to effectively deliver the Digital & Data Futures strategy. A detailed piece of work around this investment is underway, including the identification of internal and external funding sources to progress proactively.

Planning around the Digital and Data Futures statement of planned benefits has also begun, ensuring robust, measurable benefits realisation is in place for each deliverable proposed. All significant projects will have business cases drafted and approved through the relevant governance structures in place across Alder Hey.



5.6

Governance

A robust governance structure will continue to support the delivery of the strategy ensuring it continually meets the needs of the organisation and Children, Young People and Families.

The Digital Oversight Collaborative will remain the core function and will report into to the Board of Directors via the Resource and Business Development Committee.

Underneath the DOC, there are range of groups in place to support the day to day running of the different digital components in conjunction with providing assurance on performance, delivery, and benefits realisation.



More strategically Digital and Data Futures will align to the emerging Alder Hey Futures 2030 programmes of work and associated governance.

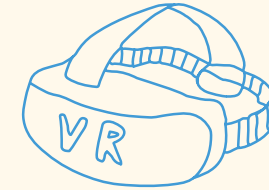
SECTION 6

Digital and Data Futures: So What?



We describe an exciting future with Digital and Data Futures, but what difference will all of this actually make...

Here we describe what 'A Day in the Life' could look like for our children, young people, families and staff in the future...



Young Person

*I have been a patient at Alder Hey for a number of years now. I used to have to come to site for every single appointment and phone up if I needed to rearrange or ask any questions. I can now do some of my appointments virtually, saving me and my family a huge amount of time! **I love my online video appointments with my Consultant, they save me so much time and I really like being able to see her on the screen. I can manage all of my appointments on my phone and communicate with my clinical team if I need advice.** I can record results remotely, giving my clinical team assurance that I'm okay between appointments.*

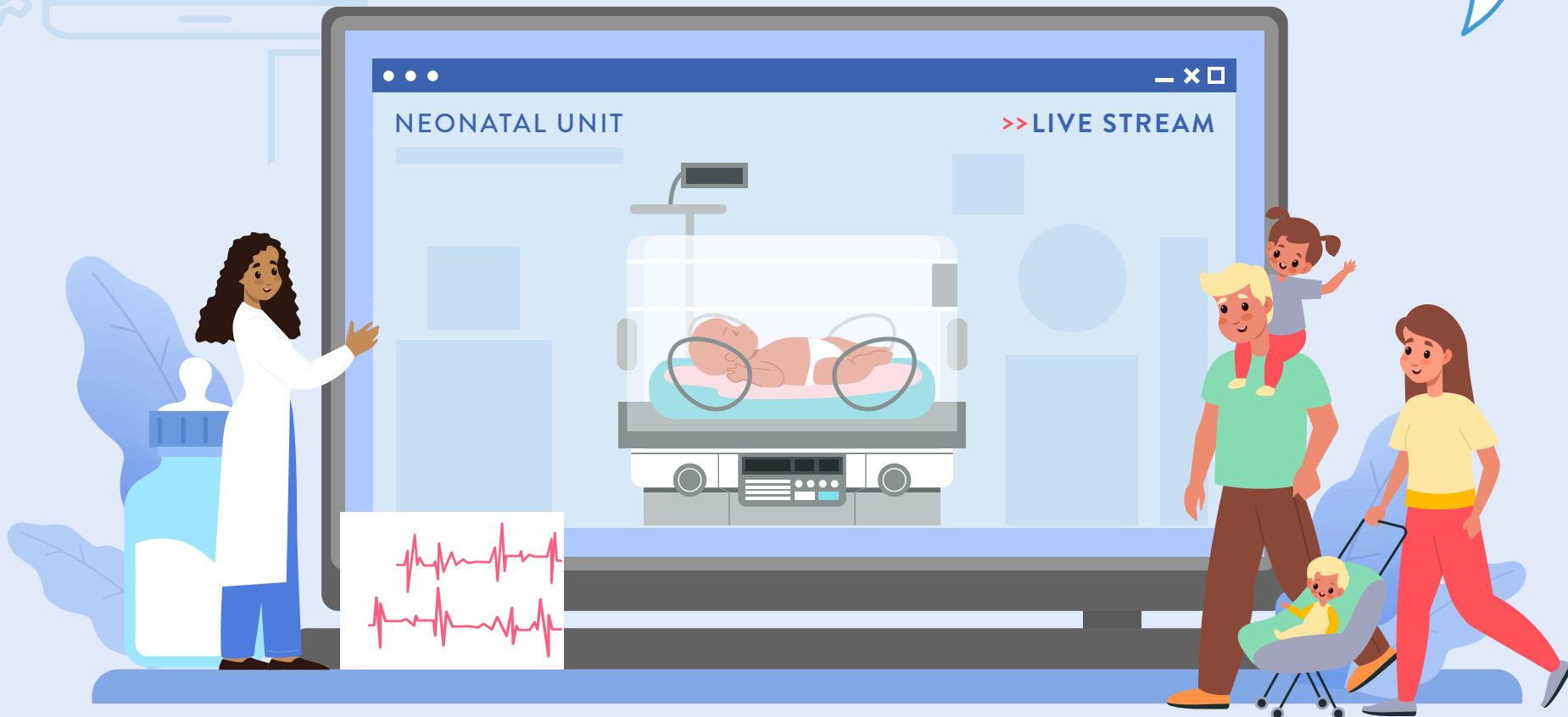
*When I do need to go in for various procedures, the equipment in the rooms is just great and keeps me entertained. When I had to stay in critical care, the access to technology there made my stay pass much more quickly and I was pleased to be able to listen to my favourite music and see my family and friends whilst I was in hospital. **I feel so much more independent and in control of my condition thanks to the technologies that have been put in place. It is so much better than it used to be :-)***





Mother of Neonatal Baby

We have 2 children, a 5 year old and a tiny premature baby who is being cared for in the neonatal unit at Alder Hey. My husband and I are having to split our time between our new-born and his sibling which is so difficult for us. **The neonatal virtual visiting solution has provided us with 24/7 access to see our baby which would have been impossible had it not been for the technology in place.** The concept is brilliant and is allowing us to bond with our baby and share the new-born with others during a really challenging time. The new unit is exceptional and the staff are fantastic. Even though we can't be there together, our experience has been incredible and we feel truly connected to each other, our baby and the staff at Alder Hey.





Ward Sister

We used to record all referrals on paper, it was a nightmare. The process took a really long time and there was no record of the referral anywhere centrally, causing delays and safety concerns. The implementation of Alderc@re across Alder Hey has really benefitted us. It has meant that within the Burns unit receiving our referrals is much easier. It facilitates a far more robust process for our patients and is making life so much easier. It is saving staff significant amounts of time on writing referrals on paper forms. **Our IT devices and equipment just work for us these days and families having access to their records really helps them to be involved in their care.** Safety is considerably improved for a particularly vulnerable group of patients - it's just brilliant!





Community Speech and Language Therapist



*When I started this role I could have never imagined the progress we have seen in such a short period of time. The digital infrastructure which has been developed means the Community & Mental Health division can now support hybrid working for nearly all staff within the division. They have been provided with the right equipment, use of virtual consultations and a single referral platform for all mental health referrals for CYP in Sefton & Liverpool, designed by young people for young people. **The support from the iDigital team is brilliant, they are always one step ahead and willing to work together to problem solve.***





Consultant

It's incredible to see where we have come from and what we now have in place. I remember someone saying 'noone ever says they hate their iPhone' – and we really hoped our work systems would have the same approach. I never thought I would see the day where remote video consultations are largely the norm. I love having access to everything I need via my own device – far more usable than previous clunky processes of having to be at the hospital for everything! The systems are so intuitive, prescribing and clinical decision making are supported by the EPR with links to clinical resources, care pathways are implemented, and

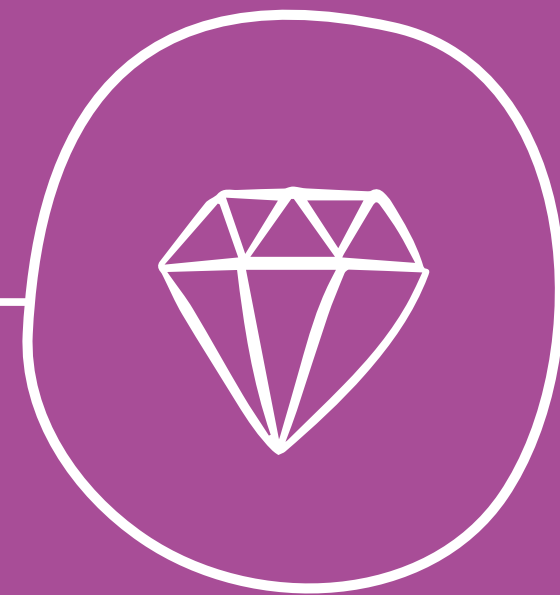
I have access to everything I need to care for my patients – wherever I am. Including our regional Share2Care Record. Everything is there, it is safe and secure and easy to access.

The implementation of the Digital and Data Futures strategy over the next three years will improve the safety of our children and young people, as well as their experience whilst under the care of Alder Hey. Much of the focus also surrounds improving experience for staff, ensuring they have the right technology at their fingertips to deliver outstanding care at every opportunity. It will introduce efficiencies that will support staff in releasing time for direct patient care and enhance

clinical outcomes through technology. Many of the deliverables are designed to support recovery following the pandemic, which is a main priority at a Trust and national level. It will ensure digital inclusivity is a common thread throughout implementation. Furthermore, aims to reduce health inequalities within the region, transforming the way the health of our population is managed.



SECTION 7
Summary



Alder Hey is a wonderful place, a jewel in the crown of an iconic City. We deliver world class services to our Children and Young People. Building on our digital and technology developments and investments, it is a pivotal time for our next stage of delivery through Digital and Data Futures.

The alignment of key strands of work will ensure we maximise the sum of many parts working together playing to our talents and expertise. It will both liberate and disrupt our ways of working to improve the care we give to Children and Young People. It will put us at further at the forefront of global digital and data leadership. We believe that our relationships, support, leadership and talents of our staff will enable us to deliver our aspirations.

Our Digital and Data Futures is very bright and exciting.



Find out more...

You can download a copy of Digital Futures from our website www.alderhey.nhs.uk

Alder Hey Children's NHS Foundation Trust
Eaton Road
Liverpool L12 2AP

