Cheshire and Merseyside
Health and Care Partnership

Digital and Data Strategy 2022–2025

Investing in digital and data to enable ‘intelligence into action’

Open

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Thank you for your interest in our Digital and Data Strategy for the Cheshire and Merseyside Integrated Care System (ICS). You can navigate through to each section of our Digital and Data Strategy by using the links below. A **fully interactive version of this strategy**, containing additional features and content, can be viewed online.

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Your guide to our strategy

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Online icon

Select the online icon to access links to additional content. Please note that a **fully interactive version of this strategy**, containing additional features and content, is also available online.

Commitments

The tick symbol is used throughout our strategy to identify our commitments which will help us achieve our digital and data ambition, vision and goals.

Foreword

The decision of our Integrated Care System (ICS), here in Cheshire and Merseyside, to host Digital within the Medical Directorate speaks to our ambition that all of our digital work will be care profession led and informed to drive the best health and care outcomes for the population we serve. Our data services support this ambition and will ensure that we use the best intelligence in the planning and delivery of care to benefit those most in need.

This Digital and Data Strategy describes an ambition to improve the health and well-being of our region right now and into the long term by weaving our digital and data infrastructure, systems and services throughout the pathways of care we provide. This requires **'levelling up'** our digital and data infrastructure through investment where this is most needed to improve outcomes for individuals and the population as a whole.

This approach has a clear mandate to fulfil. We must address the significant inequalities so clearly faced by parts of our population and ensure we successfully support all we serve.

Where we have developed increasingly sophisticated ways of understanding the health and care needs of our population, we are committed to turning **'intelligence into action'**. This is our ability to bring focussed, and therefore meaningful, interventions to those who most need it. Finding and intervening for those in greatest need **'turns the dials'** on improvement in the health and care outcomes of our population in an equitable way, but we must not stop there.

There are well understood trends facing the health of our citizens by way of ageing, and medical advances that see ever more survivorship, for example those who live beyond their cancer diagnosis. Our Digital and Data Strategy must look to respond to the changes we see and future proof the health of our population by staying ahead of need and being proactive rather than simply reactive.

As we invest into 'levelling up' our digital and data systems and relentlessly drive 'intelligence into action', we will deliver high quality, safe and equitable services that underpin the health, well-being and independence of our whole population both now and into the future.

Prof. Rowan Pritchard-Jones

Medical Director,
Cheshire and Merseyside
Integrated Care Board (ICB)

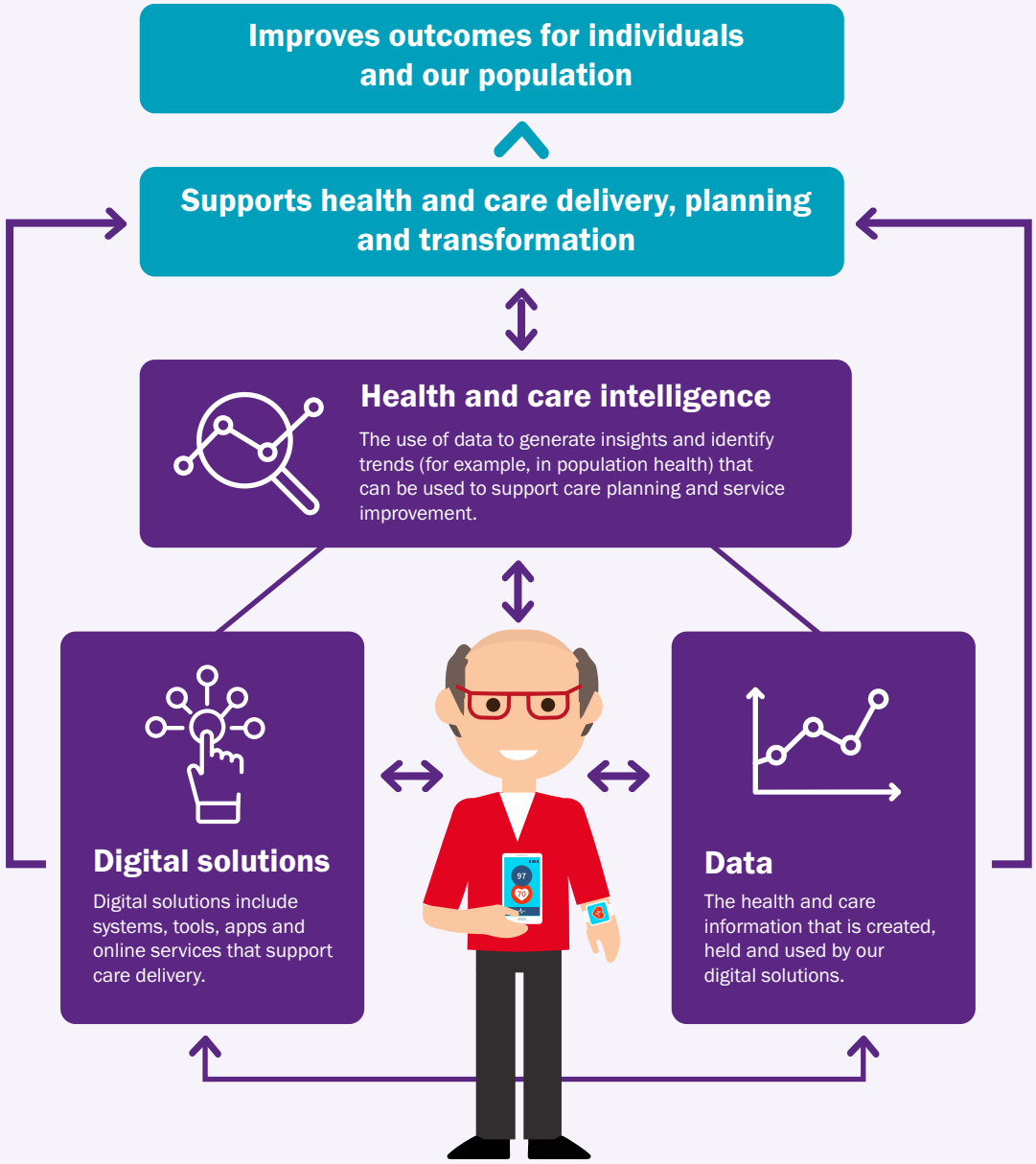
Why is digital and data important for the ICS?

Cheshire and Merseyside Integrated Care System (ICS) has a current digital strategy (called 'Digit@ll') that was written in 2018 under the Health and Care Partnership arrangements.

The Digit@ll strategy proved to be a key driver for investment in core IT systems and underpinning IT infrastructure to support health and care delivery, referenced in this strategy as **'digital solutions'**.

Read more about the North West's only heart failure 'Virtual Ward'

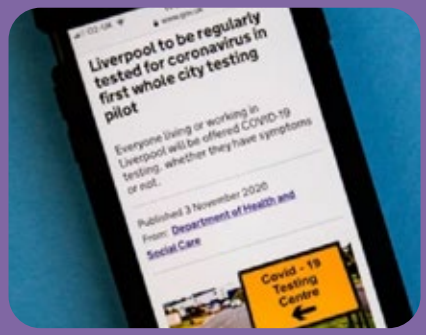
There is also increasing recognition that digital solutions should not be treated in isolation from the health and care **'data'** that is held inside of those systems. This data is then used to directly influence care delivery for a person, support reporting on service performance and future service planning and to understand the health and care requirements of the population ('population health'). When this data is used to create health and care **'intelligence'** it becomes powerful and can be used to drive action and improvements.



There has been significant change in the use of digital solutions since 2018, most notably because of the COVID-19 pandemic. Rapid adoption of tools such as team collaboration software, video consultations and remote monitoring has changed the way health and care staff work now and into the future. In addition, the public also markedly increased their use of online services because of the pandemic and because of this, public expectation of digitally enabled health and care services has expanded significantly. However it must also be recognised that alternatives will still need to be available for those who do not have access to digital tools and skills and may struggle to gain them. There is also an increasing public expectation that health and care services will be delivered with environmental sustainability at the core, and this is particularly true for digital which is a contributor towards the NHS achieving its 'net zero' ambition.

Cheshire and Merseyside has also seen an acceleration in the adoption of population health and intelligence tools since the start of the pandemic, enabling researchers to pioneer new models of care. This has been critical in terms of the health and care service response to the global crisis including:

- Management of critical care bed capacity across the system at the time of greatest demand of this scarce resource.
- Planning and delivery of the COVID-19 testing and vaccination programmes.
- Increasing the safe and effective management of care of people outside of the hospital setting.
- Use of data for COVID-19 related research (in particular for clinical trials and translational research).

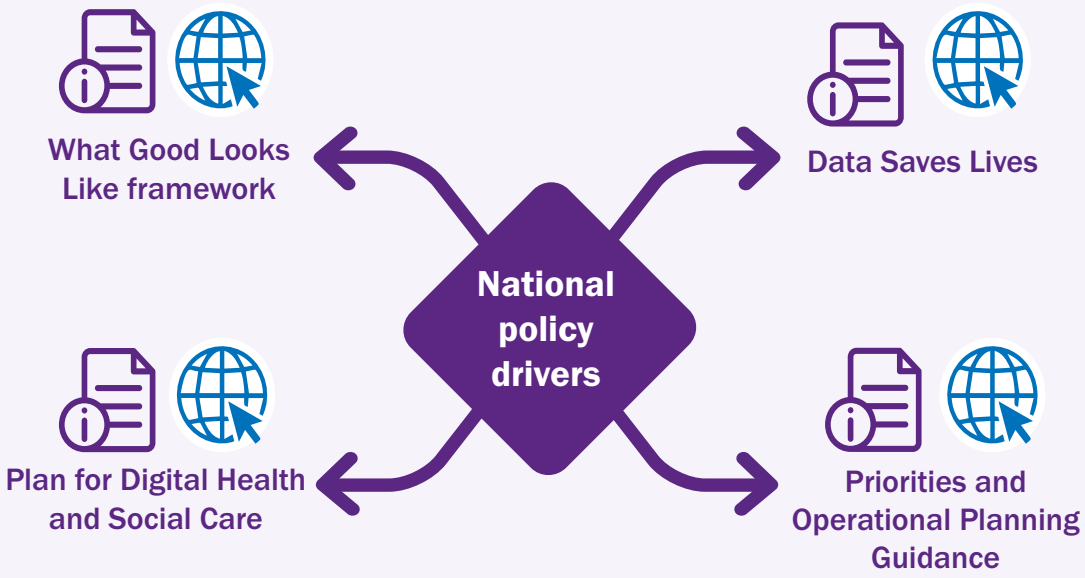


Read more about how our CIPHA population health management system was used to support our response to the COVID-19 pandemic.

Read more about how our IT equipment recycling project has delivered life changing outcomes for some of the most digitally excluded.

Read more about our live scenario-based cyber security training exercise to assess our system-level readiness to deal with a cyber-attack.

National policy has also reinforced the digital and data focus and provides clear guidance and impetus for health and care leaders to connect and transform services safely, securely and sustainably through the increased use of digital, data and intelligence. This includes:



This policy context ensures that as a system we are equally able to offer the core digital and data enablers through all services and service providers to our population. This **'levelling up'** of the digital and data provision will ensure that benefits stemming from investment will be experienced by everyone whatever their location within Cheshire and Merseyside. The public can expect at least a minimum common standard of digitisation in health and care services by 2025 and through **'digital inclusion'** initiatives will be supported in their own use of digital and data tools, widening access to care through greater choice.

Digital, data and intelligence are increasingly critical elements for the efficient and effective delivery of health and care services. The key concepts relating to digital, data and intelligence referenced in this strategy are:

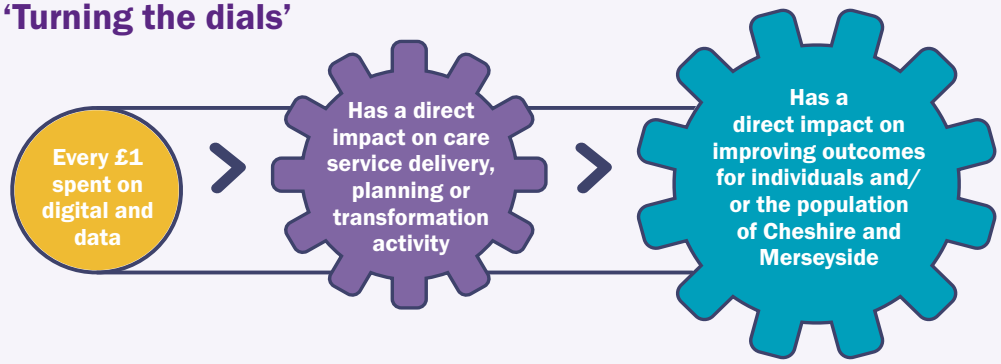
'Levelling up'

Investment in digital infrastructure, systems, tools and services so that health and care staff and the public in all of our Places can expect at least a minimum common standard of digitisation of health and care services by 2025 at the latest.

'Intelligence into action'

Investment in data and intelligence solutions and services that utilise the data from local, ICS and national systems to provide intelligence and drive change in how health and care service performance can be improved.

'Turning the dials'



In the following sections we will:

- outline the health and care challenges faced;
- describe our vision, mission and goals;
- use stories of fictional personas to illustrate what the digital and data transformation will deliver for different population groups and for staff.

Understanding the challenges in Cheshire and Merseyside

Cheshire and Merseyside ICS represents a large and diverse geographical footprint.

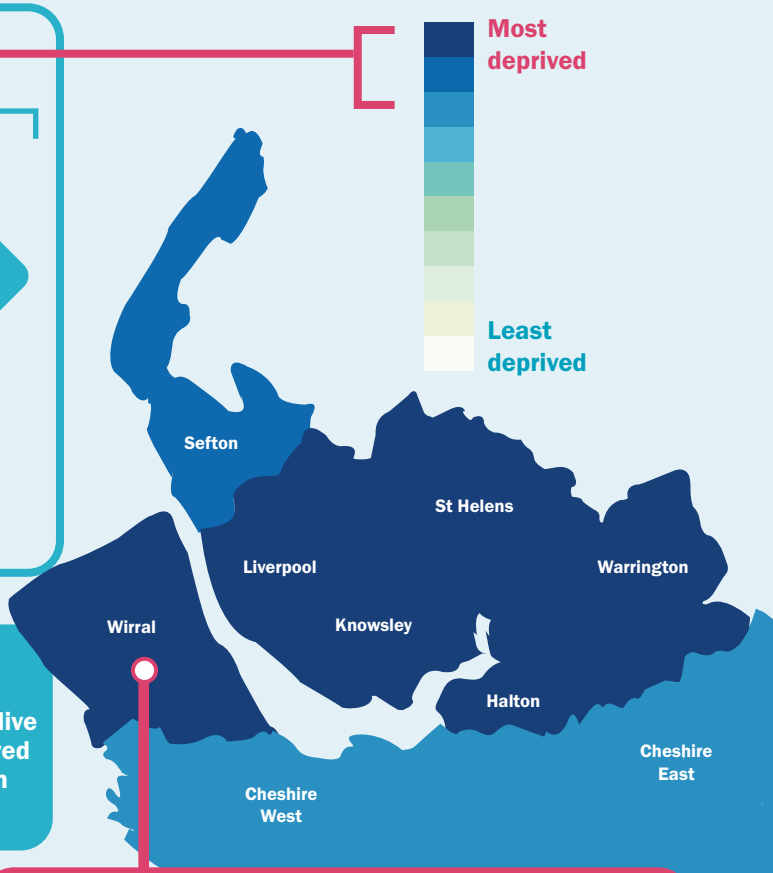
There are 2.7 million people living across areas of both significant wealth and substantial deprivation. The mental and physical health and care challenges are faced by some of the most deprived neighbourhoods with the greatest health inequalities in England.

21.7% England average **vs** **28.1%** Cheshire and Merseyside

The Index of Multiple Deprivation (IMD) is the official measure of relative deprivation in England and uses the following indicators as part of its scoring.

- Employment
- Income
- Education
- Health
- Crime
- Barriers to housing and services
- Living environment

^ Improving Health and Wellbeing in Cheshire and Merseyside Strategy 2021-2025



What impact does this have on our people?

Deprivation is a substantial cause of Digital Exclusion

26% of our children (0-15 years) live in poverty

35% of our population live in the most deprived neighbourhoods in England

^ Improving Health and Wellbeing in Cheshire and Merseyside Strategy 2021-2025

Reduced quality of life and disability-free years

^ Age UK Briefing: Health and Care of Older People in England 2019

Increased mental health problems in adults and children

^ The COVID-19 pandemic, financial inequality and mental health

Deaths due to:

Heart disease · Cancer · Respiratory conditions · Alcohol and drugs

are **higher** than the England average

^ Comparisons and inequalities in healthy life expectancies, disability-free life expectancies and life expectancies

Reduced life expectancy

People in the most deprived areas of Cheshire and Merseyside can live 15 years less than those in wealthier areas. In one local authority, there is a difference in life expectancy at birth of 11-years (women) and 13.8 years (men) between the most and least deprived areas.

^ All together fairer: health equity and the social determinants of health in Cheshire and Merseyside

Deprivation has a direct impact on mental health and socioeconomically disadvantaged children and adolescents are two to three times more likely to develop mental health problems. One in four people experiencing a mental health problem is in significant debt, and people with mental health problems are three times more likely to be in financial difficulty*.

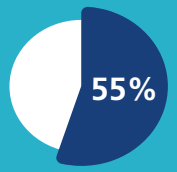
The pandemic has negatively impacted the health of the nation over and above the immediate impact of COVID-19 itself and the numbers awaiting investigations and treatments has increased significantly.

Digital exclusion is another facet of deprivation and socioeconomic inequalities. If the ICS is to drive digital and data enabled improvement to health outcomes, then it is essential to ensure digital skills and access to technologies is in reach for those most in need. This is set out in more detail in Section 8.

In this complex backdrop digital and data are key enablers to supporting aligned provision and ensure that the public experience maximum benefit from addressing the many factors that impact physical and mental health, wellbeing and independence.

* The COVID-19 pandemic, financial inequality and mental health

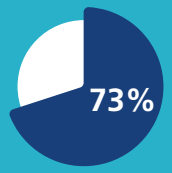
The impact of the pandemic on health



Percentage of those waiting for investigations and treatments post COVID-19

Most deprived

Least deprived



Percentage of people experiencing mental health problems

^ All together fairer: health equity and the social determinants of health in Cheshire and Merseyside

The relationship between male suicide and unemployment

10% increase in unemployment

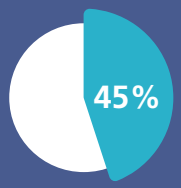
leads to

1.4% increase in male suicides

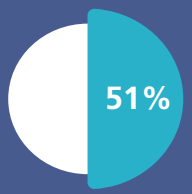
^ The COVID-19 pandemic, financial inequality and mental health

The relationship between digital exclusion and deprivation

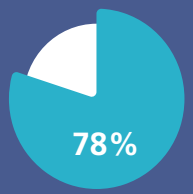
Digitally excluded people:



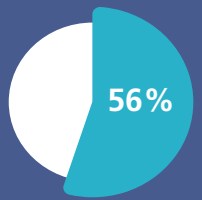
Earn less than £11.5k per year



Are over 65 years of age



Left school before 16

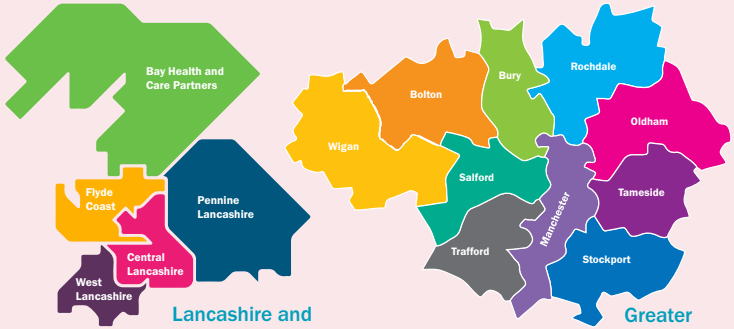


Have a disability or long-term condition

^ Digital inclusion guide for health and social care

Bringing together key participants to improve health and care

The Integrated Care System (ICS) creates an umbrella and an operating model under which this complex map of stakeholders can find new ways of working together, aligned around the needs of the local population.



Our ambulance service also supports

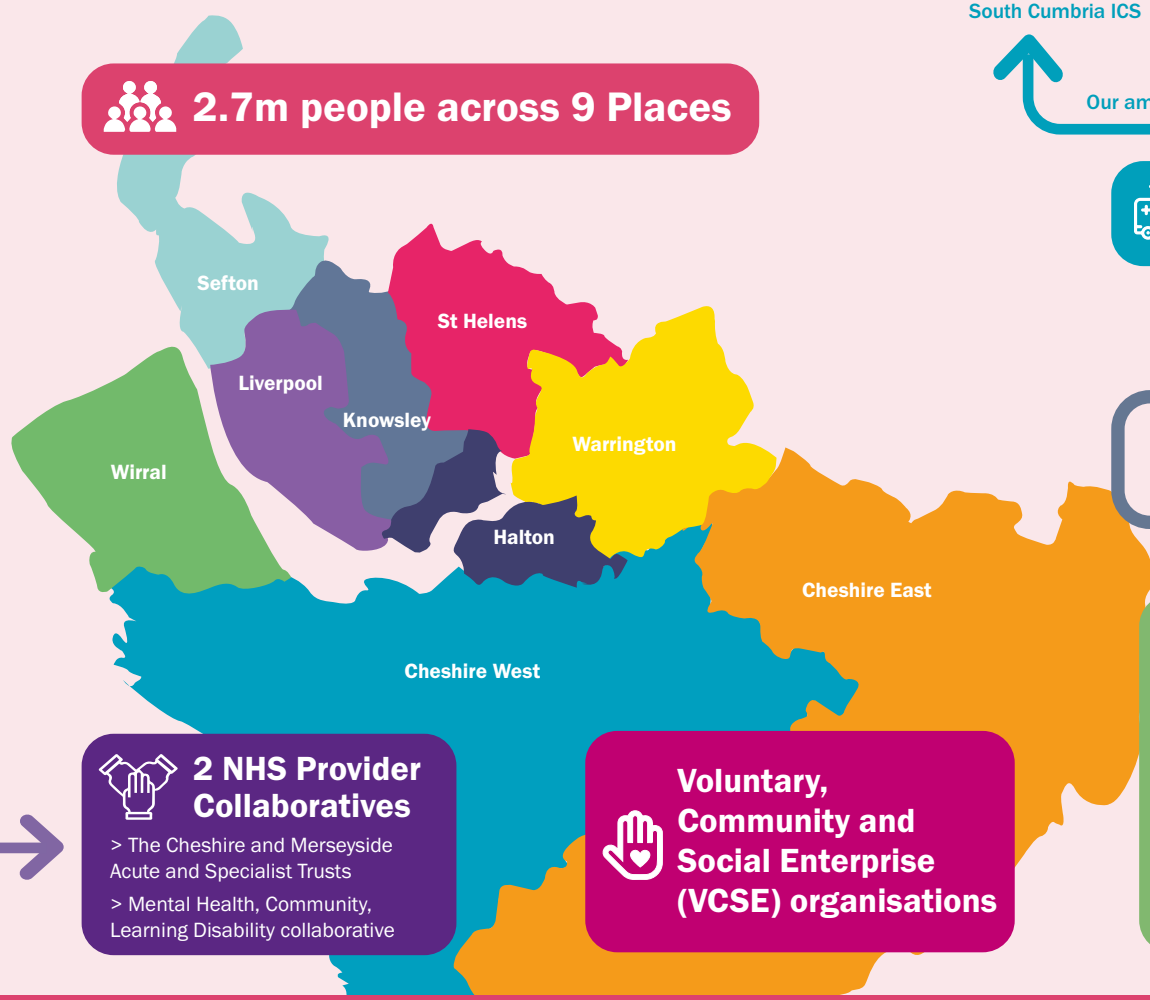
1 Ambulance Service

> North West Ambulance Service

17 NHS Providers

> Alder Hey Children's NHS Foundation Trust
> Bridgewater Community Healthcare NHS Foundation Trust
> Countess of Chester Hospital NHS Foundation Trust
> Cheshire and Wirral Partnership NHS Foundation Trust
> Clatterbridge Cancer Centre NHS Foundation Trust
> East Cheshire NHS Foundation Trust
> Liverpool Heart and Chest Hospital NHS Foundation Trust
> Liverpool University Hospitals NHS Foundation Trust
> Liverpool Women's Hospital NHS Foundation Trust
> Mersey Care NHS Foundation Trust
> Mid Cheshire Hospital NHS Foundation Trust
> St Helens and Knowsley Teaching Hospitals NHS Trust
> Southport and Ormskirk Hospital NHS Trust
> The Walton Centre NHS Foundation Trust
> Wirral University Teaching Hospital NHS Foundation Trust
> Wirral Community NHS Foundation Trust
> Warrington and Halton Hospitals NHS Foundation Trust

2.7m people across 9 Places



55 Primary Care Networks

355 GP practices

2 NHS Provider Collaboratives

> The Cheshire and Merseyside Acute and Specialist Trusts
> Mental Health, Community, Learning Disability collaborative

Voluntary, Community and Social Enterprise (VCSE) organisations

9 Local Authorities

> Cheshire East Council
> Cheshire West and Chester Council
> Halton Borough Council
> Knowsley Council
> Liverpool City Council
> Sefton Council
> St Helens Council
> Warrington Borough Council
> Wirral Council

The overarching vision, mission and objectives of the ICS are set out in the 2021-2025 ICS Strategy.

These are focussed on tackling the big issues that need to be addressed to improve health and reverse the widening gaps in life expectancy between the poorest and wealthiest in our population, with a particular emphasis on tackling the impact of the COVID-19 pandemic to ensure that there is not an irreversible deepening of poverty and health inequity across Cheshire and Merseyside.

The ICS footprint is broken down into **Places**, which are made up from a series of health and care **Providers** and other health and care organisations.

Cross provider working is also supported by the formation of ICS wide **Provider Collaboratives**.

Places and Provider Collaboratives are the key organisational structures that will enable the changes digital and data seek to support.

Our ICS Vision, Mission and Strategic Objectives

Vision

We want everyone in Cheshire and Merseyside to have a great start in life, and get the support they need to stay healthy and live longer.

Mission

We will tackle health inequalities and improve the lives of the poorest fastest. We believe we can do this best by working in partnership.

Objectives

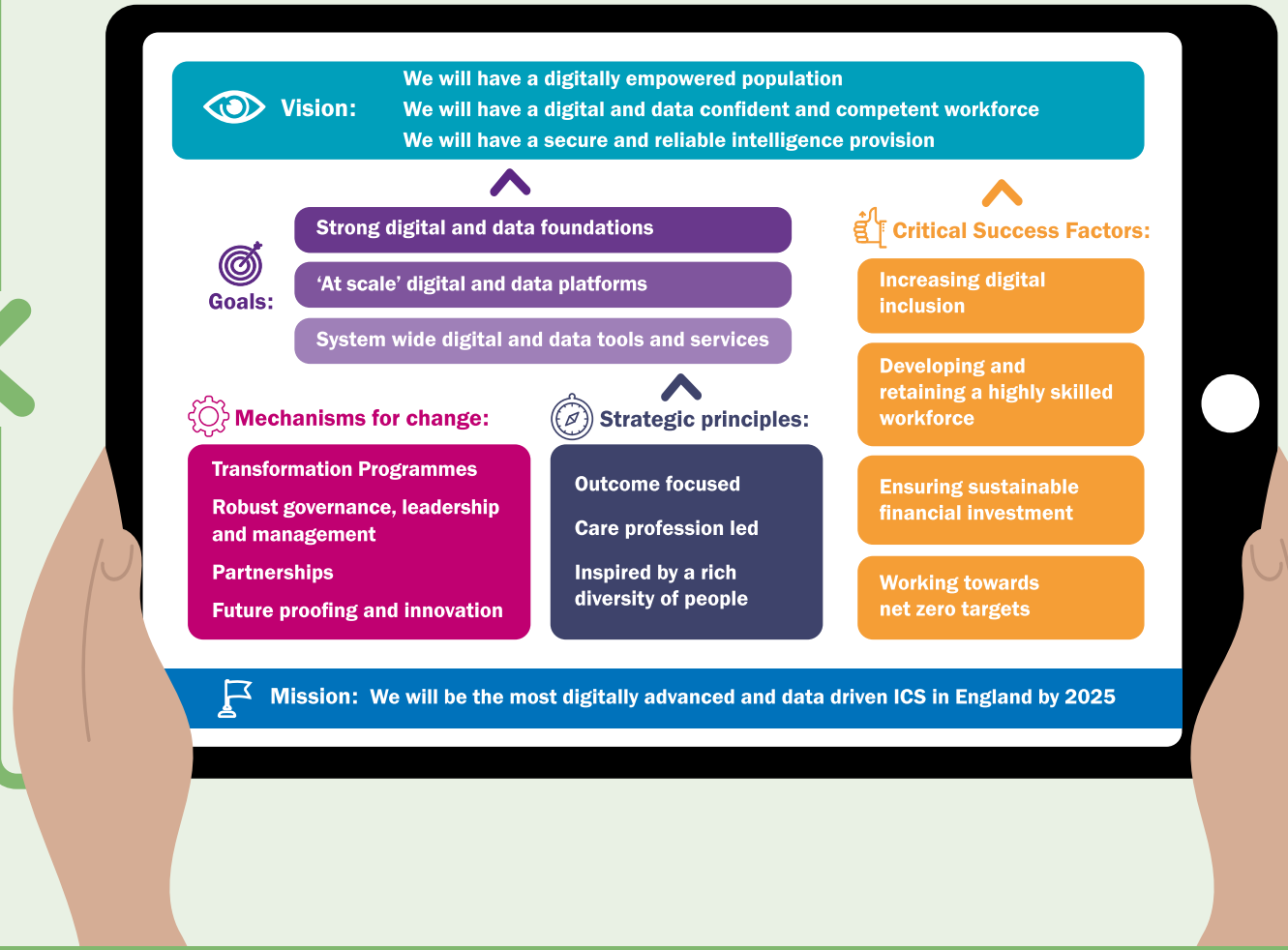
- Improve population health and healthcare
- Tackling health inequality, improving outcomes and access to services
- Enhancing quality, productivity and value for money
- Helping the NHS to support broader social and economic development

Digital and data vision, mission and goals: How digital and data can help to address the challenges

The purpose of the ICS Digital and Data Strategy is to support the achievement of the ICS vision, mission and objectives.

This alignment is visually outlined on this page and shows how the digital and data work will put **'intelligence into action'** across the ICS and positively impact its population.

Our ICS digital vision, mission and goals



The ambition for the digital and data teams in Cheshire and Merseyside ICS is to become the most digitally advanced and data driven ICS in England by 2025. It underpins our **vision** for digital and data, where we want to see:

A digitally empowered Cheshire and Merseyside population taking increased control of their own physical and mental health and well-being.

A data and digital confident and competent workforce able to deliver safe, effective and efficient care.

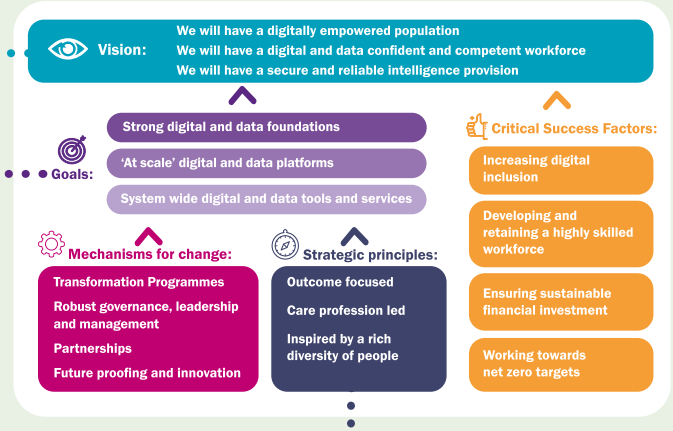
A secure and reliable insight and intelligence provision, underpinning joined up care planning and able to understand and help meet evolving population need.

To deliver this vision, our **goals** are the provision of:

Strong digital and data foundations, delivering reliable, seamless and secure digital and data infrastructure and associated support services, fundamental care records solutions and integrated data sets across the Cheshire and Merseyside health and care system.

'At scale' digital and data platforms, providing core solutions which are mainstreamed and embedded in health and care service delivery and planning at all levels. This includes platforms for shared care records, remote care, intelligence delivery and patient empowerment.

System wide digital and data tools and services, which build on those core platforms and directly support the delivery of the ICS health and care objectives. This includes the use of solutions for population health management and business intelligence and solutions and apps that meet the specific needs of one or more specific groups of the population.



There are principles that need to be held close whatever actions are taken to achieve these goals. These principles are guidance to inform and underpin change for all stakeholder across the system. These **principles** are:

Outcome focused – any digital or data solution must be laser focussed on supporting the delivery of improved outcomes for individuals, families, communities and/or the population as a whole.

Care profession led – best practice pathways must drive the digital and data approach to enhancing care outcomes, improve care safety and increase productivity, and initiatives need to have the active sponsorship and leadership of those delivering care to ensure benefits are realised.

Inspired by a rich diversity of people – the diversity in both the community cultures and the health and care needs of the population must be valued and reflected in digital and data solution development to meet those needs both now and into the future.

To deliver these digital and data goals, we need practical **mechanisms for change**, and the ICS and its stakeholder bodies will be utilising:

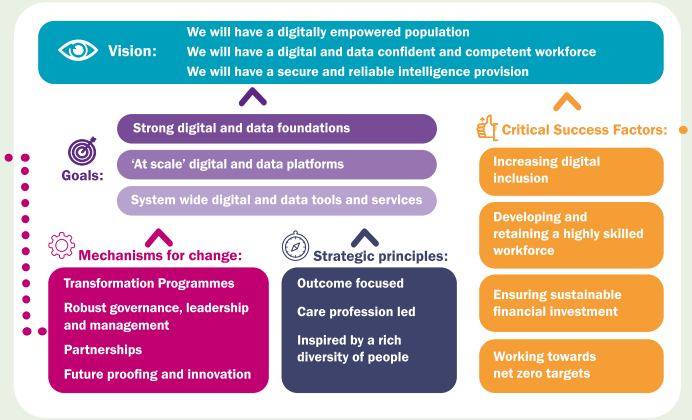
Transformation Programmes, already empowered to change care pathways and deliver improved outcomes for the population, and through which digital and data can accelerate their progress.

Robust governance, leadership and management so that the ICS can assure delivery of high quality, safe digital and data solutions that meet the needs of health and care staff and the public.

Partnerships, including the Places and Provider Collaboratives as outlined in the previous section, but also working with academia, the public, staff and others to deliver sustained change.

Future proofing approaches so that the ICS can identify, assess, and adopt any new innovations that can enhance or speed up delivery of its objectives.

It is also important that in every action taken because of this digital and data strategy we build in the parallel **Critical Success Factors (CSF)** of:



Increasing digital inclusion to ensure that as service provision becomes more digitised, more people are able to experience the benefit of digital investment in their health and care services and no-one experiences any reduction in access to services (in line with the 'Empower citizens' domain of the 'What Good Looks Like' framework).

Developing and retaining a highly skilled workforce who are digital and data confident and competent, and where our digital and data specialists working in health and care are nurtured and inspired.

Ensuring sustainable financial investment so that digital and data initiatives are invested in for sustainable ongoing use and benefit realisation, with a clear and consistent prioritisation process for investment to ensure decision making is transparent and consistently serves need across the whole population.

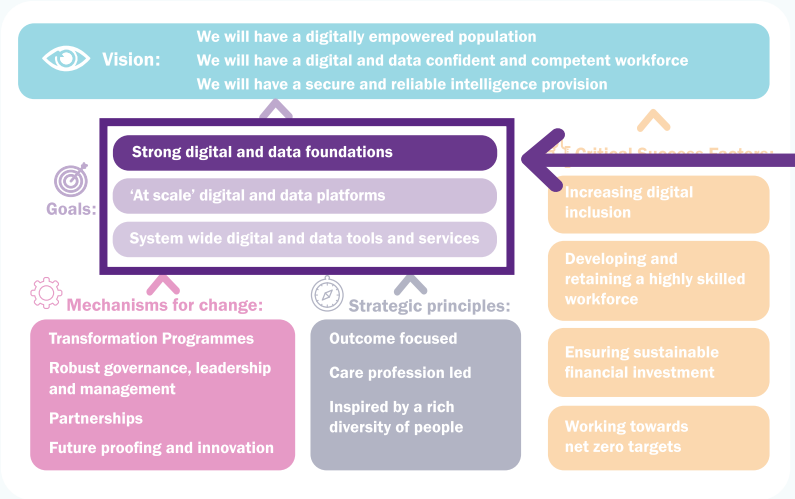
Working towards net zero targets, addressing climate change and utilising digital and data to support delivery of the ICS Green Plan deliverables.

Fundamental to the success of the strategy is that it is always clear how a digital and data programme or system is contributing to 'turning the dials' on outcomes for those of the population most in need.

Goal 1: Strong digital and data foundations

An assessment of the digital and data maturity of health and care providers and Places was undertaken to better understand the current levels of investment in digital and data. This included detailed assessments of underpinning infrastructure as well as broader assessments against the 'What Good Looks Like' success criteria.

The result of the assessment clearly shows that there is a need to invest in core technologies and services to ensure that there is increased equity of provision across the whole of the system to improve the effectiveness and safety of care for all of the population. This **'levelling up'** of the basic digital and data infrastructure and systems will ensure we build the strong foundations on which to deliver our ambition.



To level up the digital infrastructure:

We will ensure every member of health and care staff in NHS and Local Authority Adult Social Care providers that needs access to digital equipment to undertake their role will have access to reliable and fit for purpose access devices by **March 2025**.

We will ensure health and care staff in NHS and Local Authority Adult Social Care providers have access to reliable, seamless and secure network infrastructure to enable them to deliver their role, wherever they are working in Cheshire and Merseyside, by **March 2025**. This will be facilitated by working in partnership with other public services and network providers to access initiatives such as Gov Roam and the rollout of 5G through initiatives such as LCR Connect.

We will ensure for NHS Providers, 90% of NHS trusts will have a minimum standard Electronic Patient Record (EPR) by **December 2023**, and 100% by **March 2025**. Appropriate convergence of EPRs will be encouraged where possible to make it easier for staff to use them and ease the interoperability challenge.

We will ensure for Adult Social Care, 80% of CQC registered adult social care providers (residential and non-residential) will have adopted a Digital Social Care Record (DSCR) by **March 2024**. This is in line with the 'Plan for Digital Health and Social Care' requirements.

To level up the data and intelligence infrastructure:

Goal 1: Strong digital and data foundations

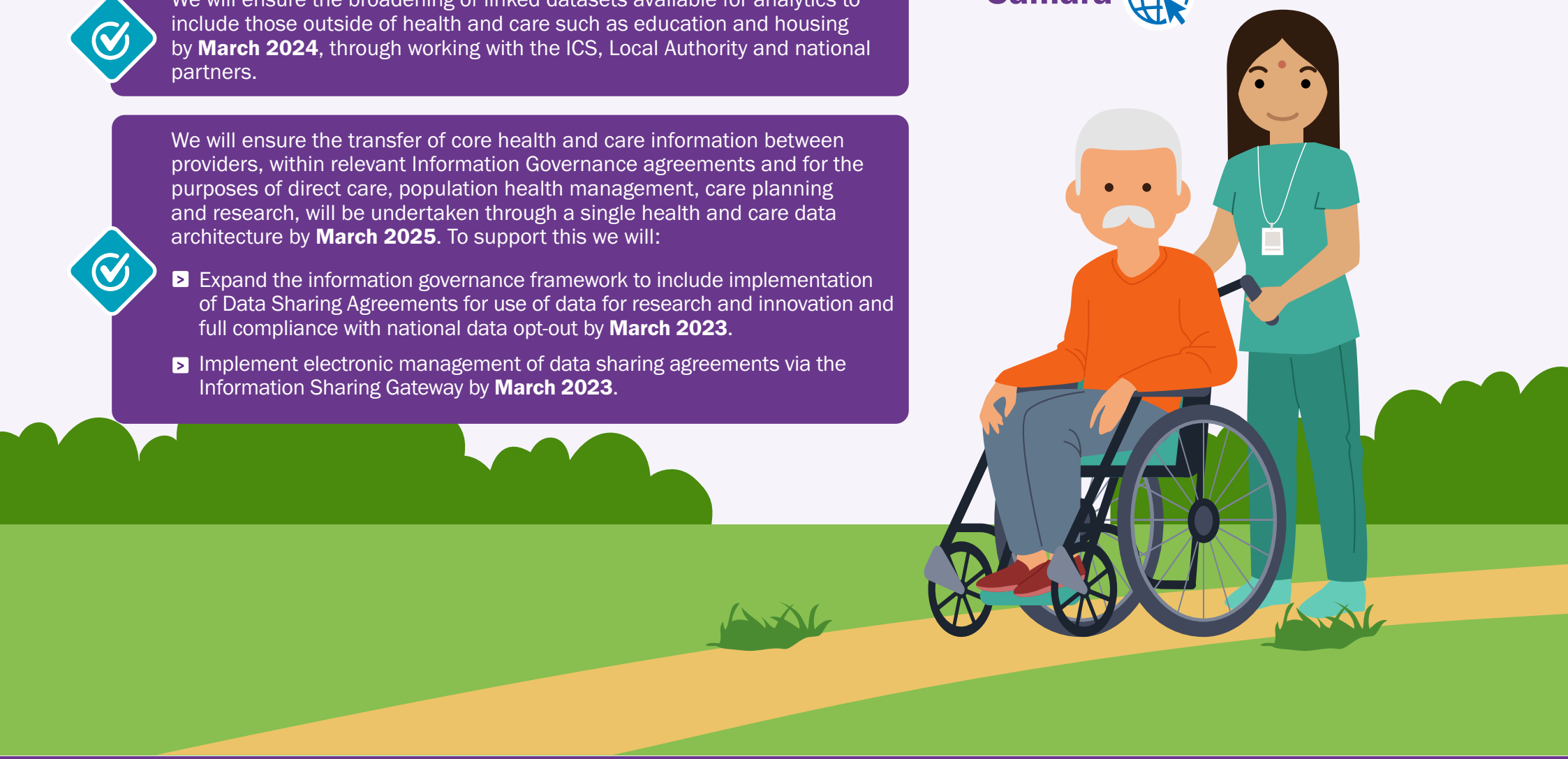
We will ensure access to ICS wide person level health and care linked datasets by **March 2023** as a corner stone for population health analytics.

We will ensure the broadening of linked datasets available for analytics to include those outside of health and care such as education and housing by **March 2024**, through working with the ICS, Local Authority and national partners.

We will ensure the transfer of core health and care information between providers, within relevant Information Governance agreements and for the purposes of direct care, population health management, care planning and research, will be undertaken through a single health and care data architecture by **March 2025**. To support this we will:

- Expand the information governance framework to include implementation of Data Sharing Agreements for use of data for research and innovation and full compliance with national data opt-out by **March 2023**.
- Implement electronic management of data sharing agreements via the Information Sharing Gateway by **March 2023**.

Samara



To level up ‘safe practice’:

Goal 1: Strong digital and data foundations

We will ensure the provision of cyber security services including cyber security operations, incident response and assurance that complements and works alongside local health and care provider cyber security functions.

We will enable access to clinical safety subject matter expertise to ensure that the digital and data solutions in use across Cheshire and Merseyside are DCB0129 compliant (i.e., have appropriate safeguards associated with clinical and care hazards) and have been implemented in line with ‘best practice’ clinical safety standards (as outlined in DCB0160).

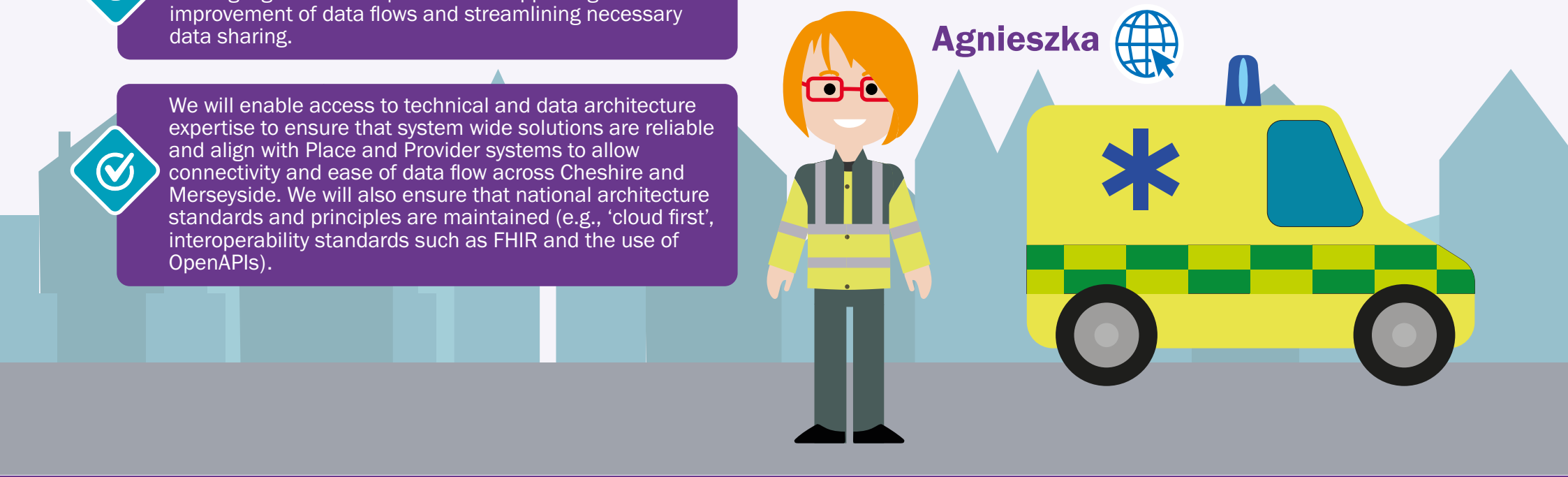
We will enable access to Information Governance subject matter expertise to enable statutory health and care providers to operate safely with regards to information sharing legislation and protocols – supporting the improvement of data flows and streamlining necessary data sharing.

We will enable access to technical and data architecture expertise to ensure that system wide solutions are reliable and align with Place and Provider systems to allow connectivity and ease of data flow across Cheshire and Merseyside. We will also ensure that national architecture standards and principles are maintained (e.g., ‘cloud first’, interoperability standards such as FHIR and the use of OpenAPIs).

We will ensure digital environmental sustainability support to ensure that any system and Place based digital and data initiatives support the ICS’ Net Zero ambitions as outlined in the ICS’ Green Plan.

We will ensure data quality to establish a common approach for improvement in data quality across the ICS so that our decisions are based on sound data.

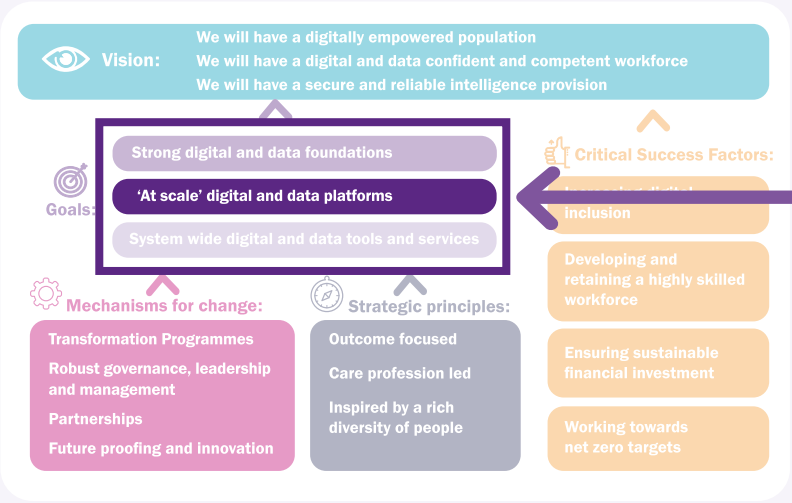
We will ensure data safety so that the public can be reassured that their data is used lawfully, with respect, held securely and that the right safeguards will be in place (through supporting adoption of the ‘Five Safes’ model and the Caldicott Principles).



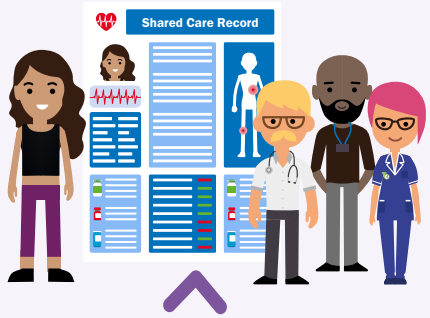
Goal 2: ‘At scale’ digital and data platforms

Cheshire and Merseyside ICS will continue to develop and expand its strategic digital and data platforms for use within all health and care providers and at all Places to leverage the benefits of at-scale investment and deliver improved outcomes for the population.

The availability of consistent access to ‘at scale’ platforms further enables **‘levelling up’** of the digital and data provision. Being able to act at scale also enhances the opportunities to deliver cross-ICS **‘intelligence into action’**.

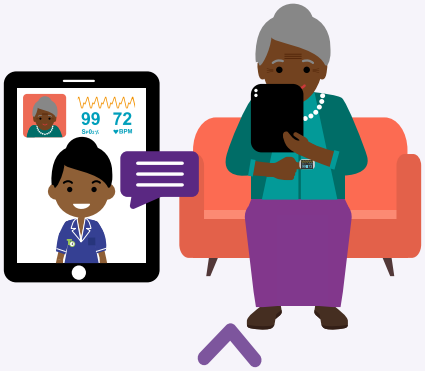


‘At scale’ solutions



Shared Care Records

Patient Empowerment Portals (PEPs) and Person Held Records (PHRs)



Remote Care

Intelligence Delivery Platforms

Shared Care Records

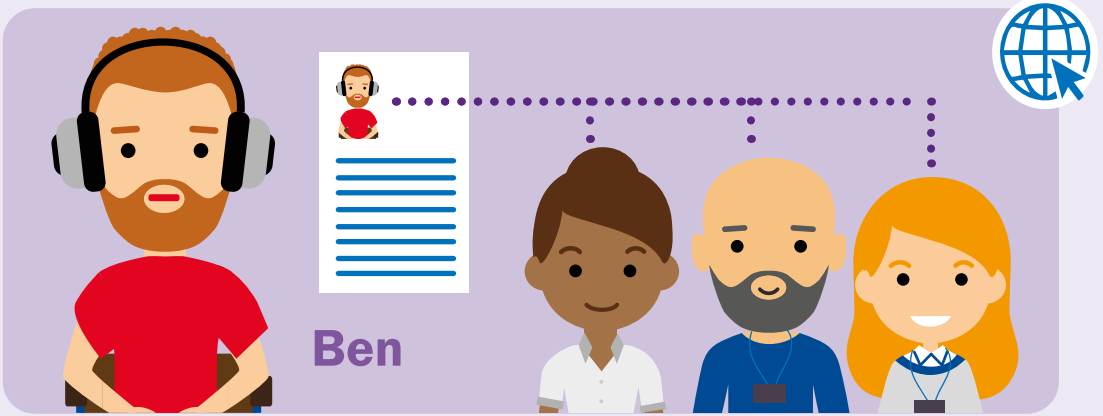
Shared Care Records allow staff in health and care providers across Cheshire and Merseyside, who are directly involved in care delivery, to securely access a digital view of an individual's health and care records. This supports **improved decision making** to help provide better, **safer care** when it is most needed.

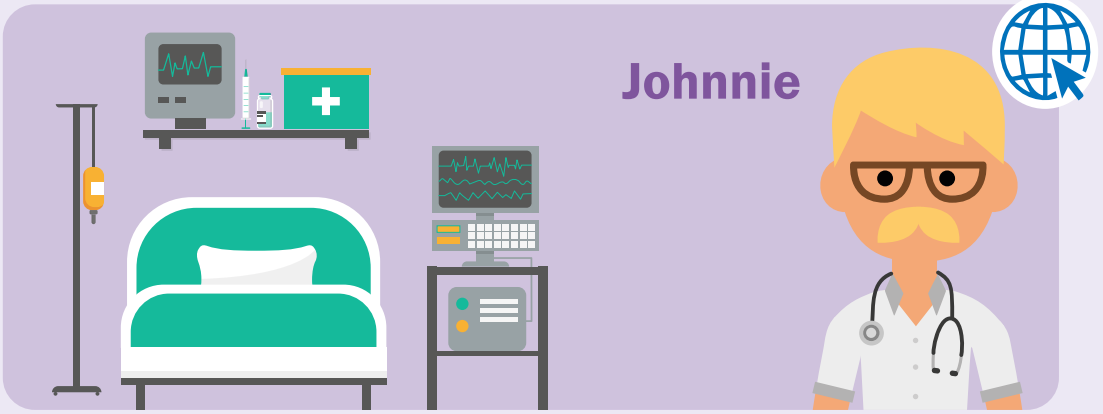
Cheshire and Merseyside ICS will continue to provide a system-wide platform (Share2Care, incorporating eXchange and the Medical Interoperability Gateway (MIG)) for sharing care documentation and structured care records, primarily from primary and secondary care, across the whole system.

We will ensure this platform is available in all NHS and Local Authority Adult Social Care providers, enabling sharing of a core set of health and care data across the whole health and care system by **March 2024**.

Wirral, Cheshire East, Cheshire West and St. Helens Places have existing Shared Care Records solutions at Place, providing a deeper level of care record information available to providers in their Place.

We will further support all Places to ensure that all NHS and Local Authority Adult Social Care provider organisations of the ICS are connected to integrated life-long health and social care records by **March 2024**, enabled by core national capabilities, local health records and shared care records, giving individuals, their approved caregivers and their care team the ability to view and contribute to the record.





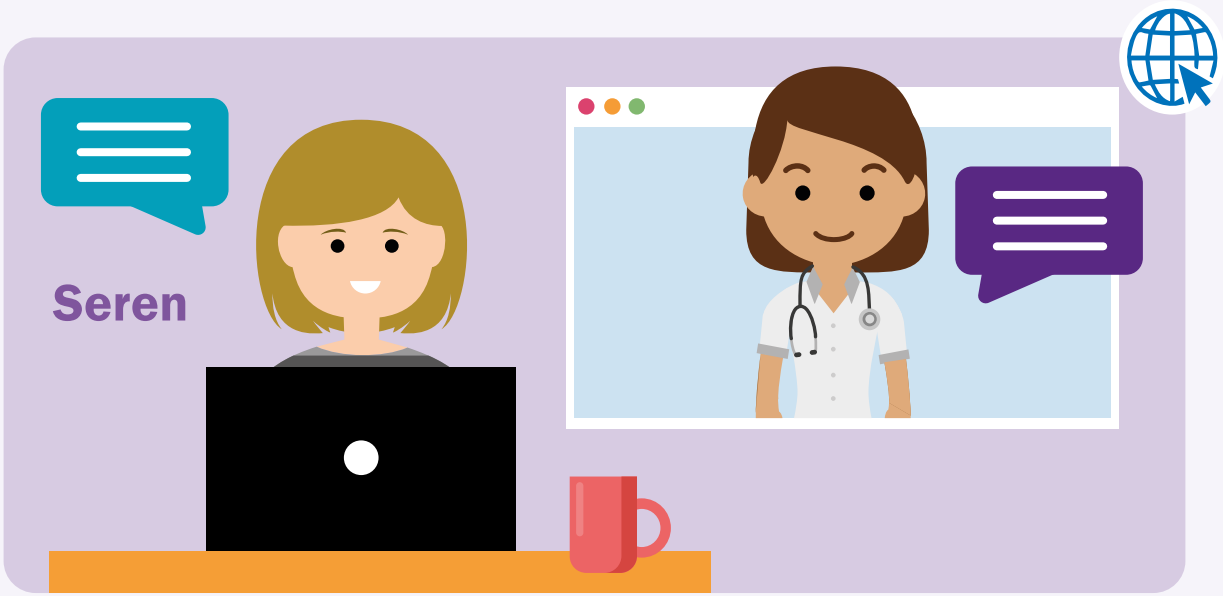
Patient Empowerment Portals (PEPs) and Person Held Records (PHRs)

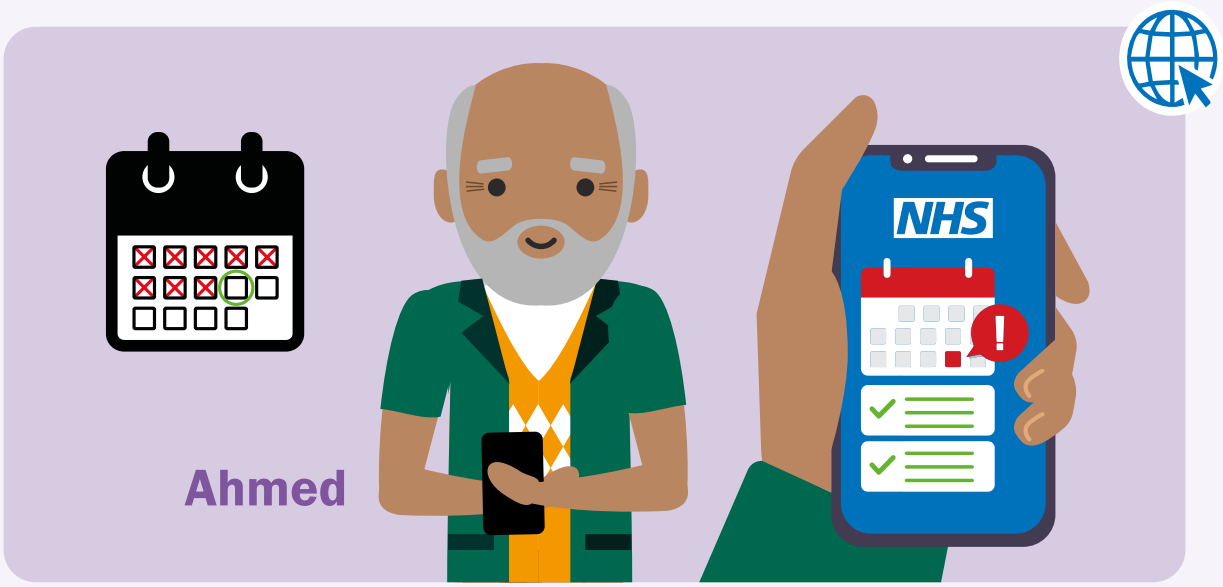
We will enable people to increasingly self-manage their long-term conditions, mental health, care plans and wellbeing by providing people access to services that best suit individual needs as well as the increasing resilience to cope with the physical and psychological demands of living with and / or recovering from illness. From a digital point of view this self-management includes being able to book and change appointments, access their health and care record and access advice and guidance on their care.

Any solutions in place will integrate with the NHS App to allow seamless access to a variety of provider or Place led Patient Empowerment Portals (PEPs) and Person Held Records (PHRs). Some Places, such as Cheshire East, already have a well-established PEP embedded into their care pathways, whilst a number of other Places are in the process of implementing a similar solution. PEPs should also link to the ICS Shared Care Record to support access to records.

Cheshire and Merseyside ICS will continue to support rollout of PEP platforms for use by Providers where this meets Provider and Place needs.

We will ensure that all Providers have implemented a PEP that integrates with NHS App (as the ‘front door’ to health and care service for an individual or their carers) by **March 2025**.





Remote Care

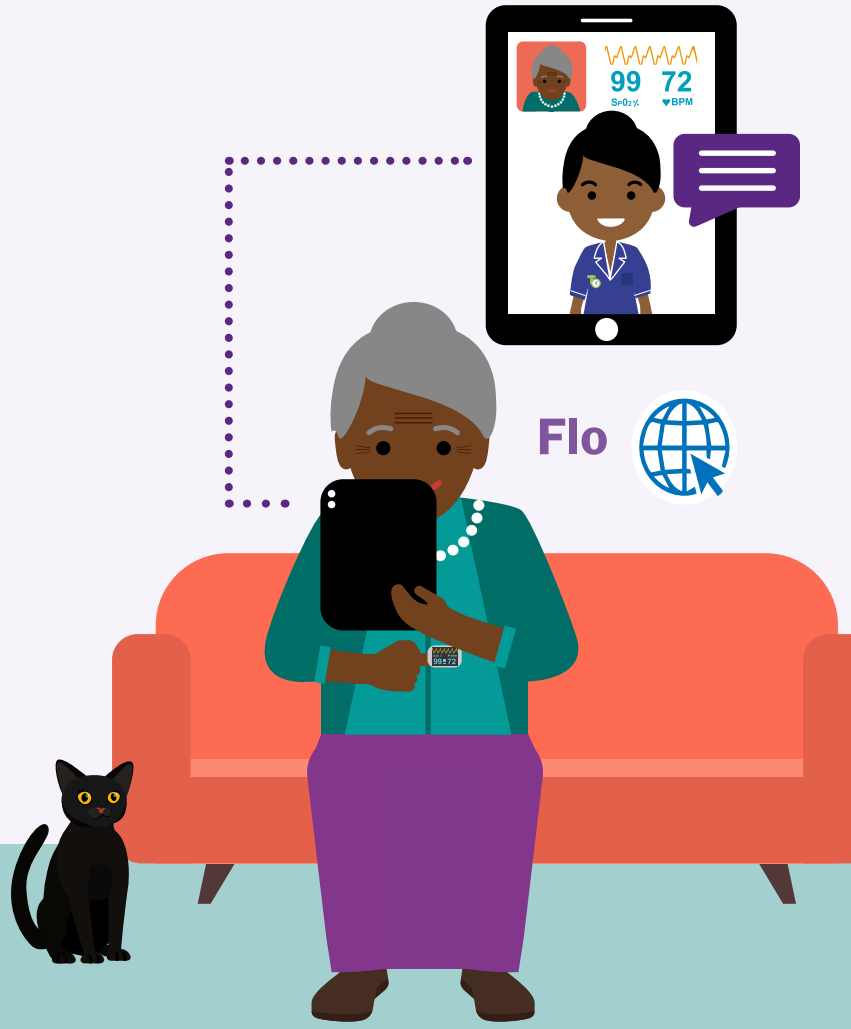
Remote Care is a way of using technology to allow an individual to monitor their own physical and mental health and wellbeing, with the support of relevant health and care workers, from their usual place of residence. Adopting easy-to-use equipment that can be provided by care teams, a person or their carer can record vital signs, as well as other useful information about their health which are then electronically and securely sent to a monitoring hub of experienced health and care professionals for review. Any moments or trends of concern are then identified, and the appropriate follow up action taken when and if needed. Evidence tells us that remote care avoids multiple GP appointments as well as hospital attendances and admissions.

We will continue to build on the existing Remote Care platform delivering virtual ward and Long Term Condition (LTC) monitoring services, and expand this offering to deliver additional virtual ward beds (40 to 50 virtual ward ‘beds’ per 100,000 of the population by **March 2024**.

We will also continue LTC monitoring for other specialties, as well as support for the wider NHS@Home programme which will drive the focus of the platform going forward. This will include:

- Supporting the availability of digital monitoring of vital signs for people in care homes and at home, contributing towards the national aim of a further 500,000 people being supported by this technology by **March 2023**.
- Develop a tech-enabled annual physical check for people with severe mental illness by **March 2023**.

We will also agree the care pathways where this platform can be used for supporting ‘Care@Home’ applications such as environmental monitoring and medicines management of those living at home (or in supported accommodation) to ensure they remain safe as part of the discussions regarding alignment with Technology Enabled Care (TEC) developments in Adult Social Care. Agreed pathways where people are supported in this manner will be in place by **March 2024** and prevention and detection technologies will be used to protect the 20% of care home residents who are identified as at high risk of falls by **2024**.



Intelligence Delivery Platforms

There are two distinct types of intelligence delivery platforms in Cheshire and Merseyside and they are both fundamental to promoting **‘intelligence into action’** across the system. There is a dedicated population health platform and then a series of platforms more focussed on the design, monitoring and improvement of service models utilised by frontline health and care services.

Population Health Platform

Within Cheshire and Merseyside, the aim is to improve the physical and mental health, wellbeing and independence of the people living in the area and to reduce health inequalities through a wider awareness of those things that can have a significant impact on health such as access to housing, employment, and education. One way to do this is by using Population Health Management to better understand people’s health and care needs and how they are likely to change in the future.

Combined Intelligence for Population Health Action (CIPHA) is the core population health management platform for the ICS, its Transformation Programmes and Places. Cheshire and Merseyside ICS will continue to develop CIPHA, which was established as part of the COVID-19 pandemic response, to help transform health and care services through the utilisation of data. As a result, of programmes of work such as System P combined with the CIPHA platform, the ICS can identify populations at risk of adverse outcomes, patterns and trends to support those with the greatest health and care needs, evaluate the success of interventions and campaigns and manage resources effectively to deliver the very best standard of care.

We will continue the development of the CIPHA Platform to include further Population Health Management reporting that enables the identification, segmentation and evaluation of cohorts for the targeting of interventions. The work here will align with the overall population segmentation approach as being developed by the System P programme, which will focus on identification of populations most vulnerable and at risk of adverse outcomes, and developing services for those population segments most in need of improved health and care outcomes. It is intended to embed CIPHA reporting in action via System P and Population Health Board Programme/Networks by **March 2023**.

Platforms for service design and performance monitoring and reporting

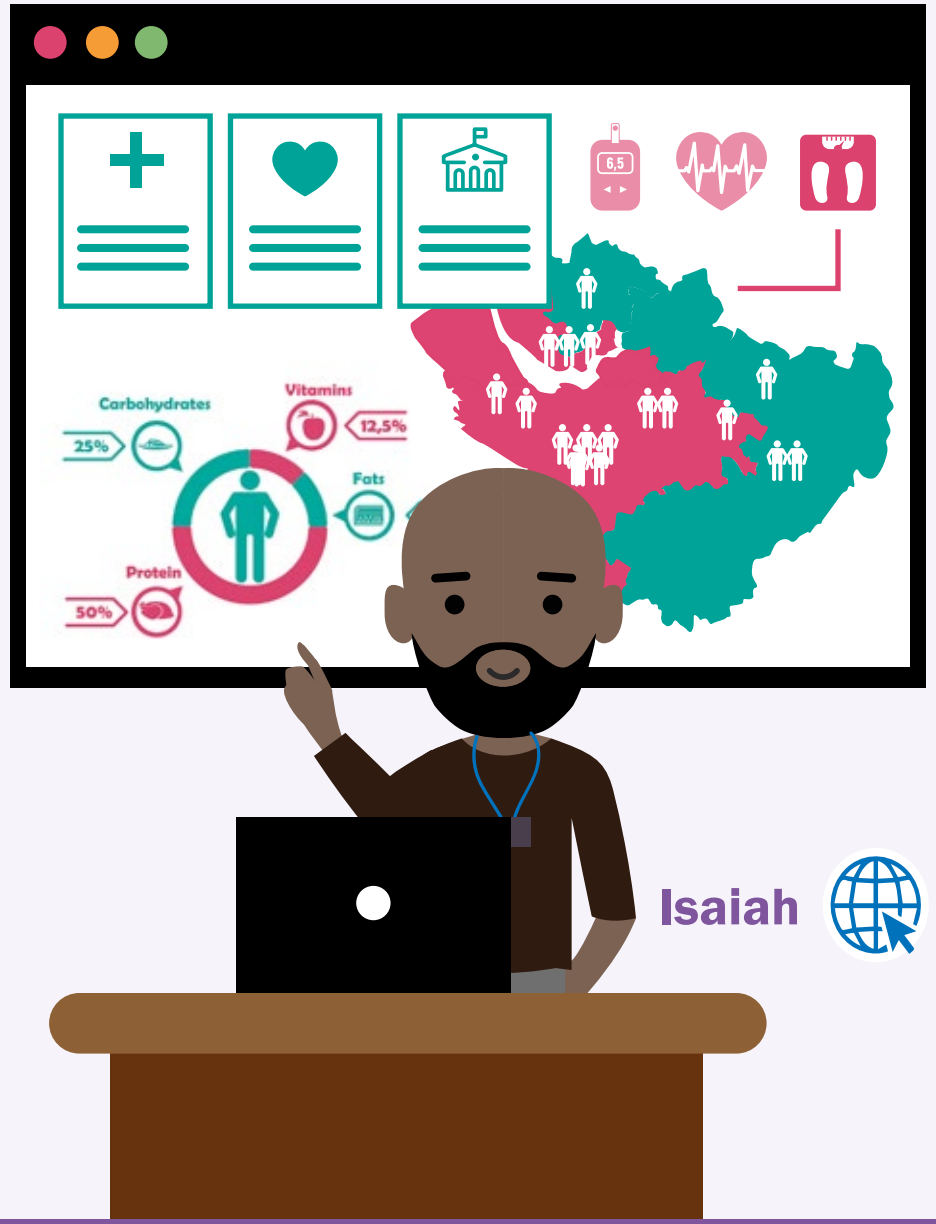
The ICS utilises a large scale and evolving picture of metrics across multiple initiatives that demonstrate activity and outcome changes and identifies the critical Key Performance Indicators (KPIs) of success. Multiple perspectives including time, cost, access, habits, ethnicity, age, treatments, in absolute and relative terms are captured to reflect the scale and variation of the initiatives that are in progress at any given time. At the time of this strategy development, the metrics across the critical ICS transformation programmes number over 200, such is the breadth of initiatives underway and the anticipated impact.

The ICS already has two key intelligence delivery platforms in place to support business intelligence and population health management services:

- Public View is the core performance tool across the ICS for national and local metrics
- Aristotle holds Performance drill down and Population Health Reporting to compliment CIPHA/Public View, but is based on the same data sources.

In addition, the ICS and its constituent organisations use DSCRO data provided by Arden and GEM CSU and the NHS National Data Platform for access to national data sets.

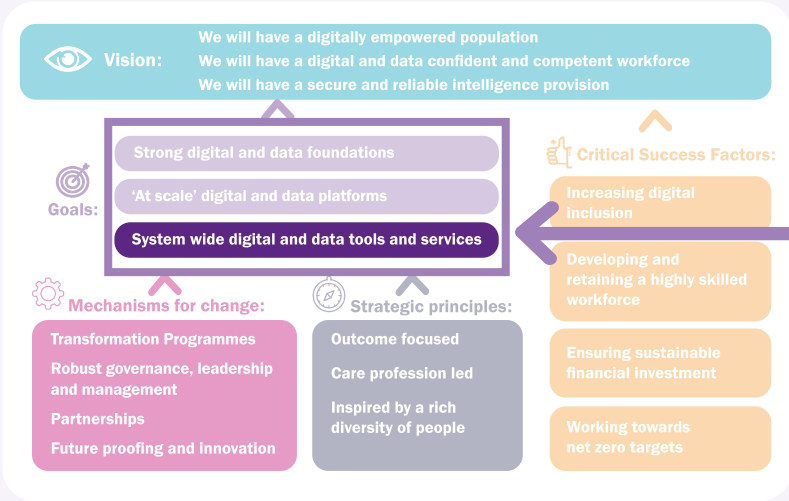
We will embed Public View across Providers and Service Planners to include access, quality, activity, outcomes and workforce, containing national and local flows and underpinned by granular detail on Aristotle by **March 2023**.



Goal 3: System wide digital and data tools and services

The ICS will further leverage the 'at scale' platforms through the development of ICS level applications, tools and services that support delivery of the ICS health and care objectives.

These solutions or services will have agreement through Place and ICS governance structures that they are best delivered across an ICS footprint, in part to ensure a 'levelling up' in terms of access and benefit across the system, and fall into two distinct areas - population health and business intelligence services and digital tools and services.



Population health and business intelligence services

ICS wide business intelligence services will create automated analytics to develop 'one version of the truth' across the ICS. To do this:

- We will implement ICS wide Capacity and Demand reporting (based on an Operational Intelligence Hub) in the areas of urgent care (inclusive of community and mental health) and elective care by **March 2023** (with further development 2023/24) to enable an ICS wide view to inform both planning and operations.
- We will implement a Trusted Research Environment (TRE) on the CIPHA platform by **March 2025** so that data can be mobilised for research and innovation for our partner organisations, particularly for Stage 3 clinical trials and translational research.
- We will implement a single, mature performance information system (activity, finance, quality and outcomes) that all partners can access by **March 2024**.
- We will work with providers to create analytical networks and assist in streamlining of data flows, processes and quality across the ICS.
- We will work with local authority and public health analytical networks and strengthen joint work programmes in delivery of the ICS objectives.

Developing **'one version of the truth'** through automated analytics will support the delivery of the six key business intelligence service areas across the ICS, namely:

Business intelligence areas

Bespoke data and analytics

To answer a specific question by utilising data from various sources that cannot be automated. Includes planning round, support to business cases on impact of changes, longer term strategic work with research partners to evaluate interventions.

Population health and inequality

To show the epidemiology of a cohort such as age, deprivation, ethnicity, protected characteristics, geography and understand the differences in the health and care status of a population.

Population health management

To stratify a population for risk of a certain outcome, enabling identification of cohorts for direct care and patient level monitoring of outcomes to understand impact.

COVID

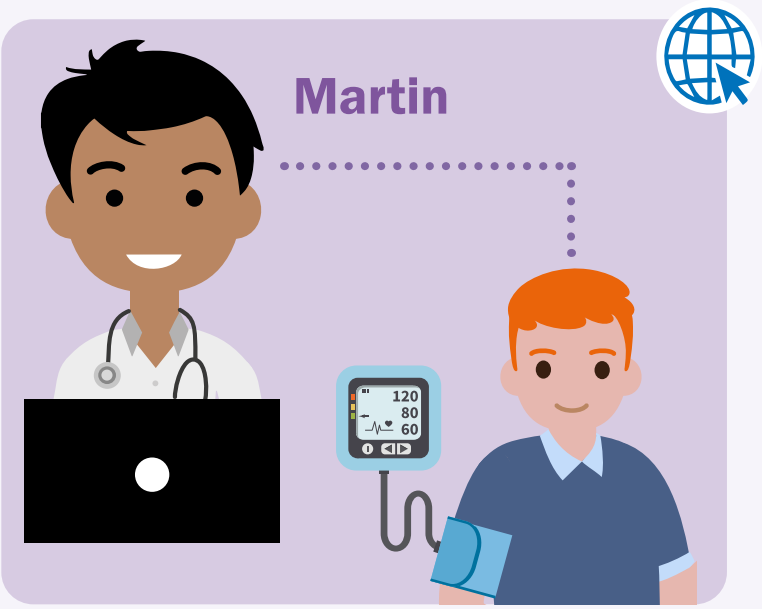
To monitor and model capacity and demand to support covid and long covid. Examples includes testing, vaccinations and tooling to manage covid services and enable elective recovery.

Performance

To monitor the performance of a system in terms of a set of Key Performance Indicators against targets, peers and over time. Examples include indicators that measure finance, activity, workforce, access, process or outcome.

Capacity and demand

To predict the future demand for services and monitor the capacity against current demand in currencies such as activity, occupancy and workforce.

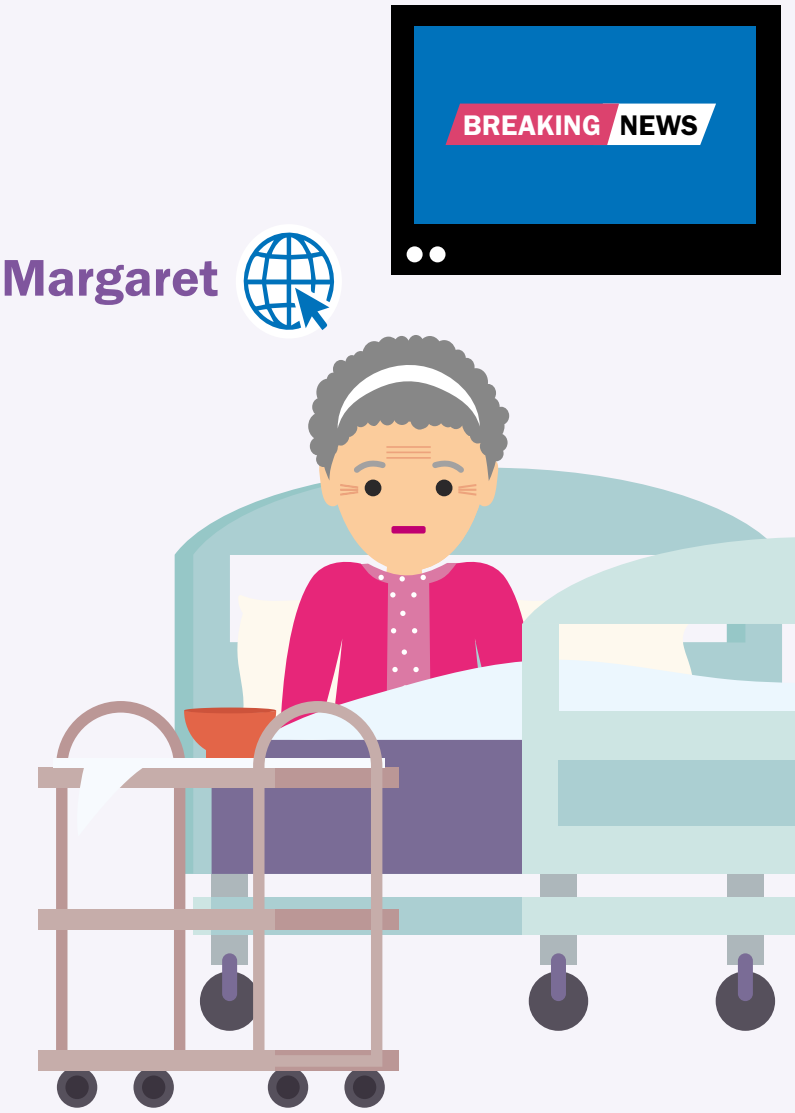


Digital tools and services

Goal 3: System wide digital and data tools and services

The ICS is supporting the delivery of digital system-wide tools and services that are used by all relevant stakeholders in Cheshire and Merseyside to ensure equity of provision and leverage economies of scale. These include:

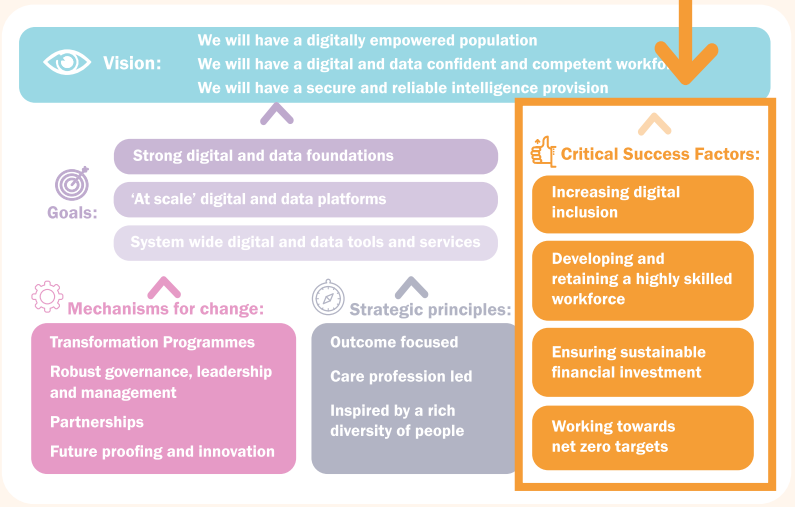
- The implementation of Robotic Process Automation (RPA) to perform and automate high-volume repetitive tasks (using process flows), to free up time for their clinical and/or non-clinical workforces, through a rollout plan in line with a clear evidence base of productivity benefits by **March 2024**. This builds on the work done by Trusts such as Alder Hey, who are establishing an RPA Centre of Excellence.
- The delivery of Office 365 optimisation and training services to frontline health and care staff to support the use of these business-critical tools by **March 2023**.
- Supporting the on-going development of primary care through the establishment of a common online and video consultation platform, implementation of high-quality clinical decision support tools and the rollout of accredited apps for people to support management of their own physical and mental health and wellbeing by **March 2023**.
- To safely refer patients directly from community optometry services to hospital specialists and to share diagnostic imaging between primary and secondary care to support diagnosis without the need for additional scans or photos by **March 2023**.
- Support the rollout of electronic care records into care homes and other providers of social care including domiciliary care by **March 2024**.



Critical Success Factors

The implementation and delivery of this strategy can only be regarded as successful if, alongside the technical developments, a small number of additional critical conditions are met.

We define these as the Critical Success Factors (CSFs) for the strategy. These conditions are outlined below. This section will outline the ICS' approach to addressing these Critical Success Factors.



Critical Success Factors

Developing and retaining a highly skilled workforce

Increasing digital inclusion

Working towards net zero targets

Ensuring sustainable financial investment

Developing and retaining a highly skilled workforce

Workforce development and providing leadership to change process and culture is critical to the success of this strategy. The benefits for the public will be achieved through the skills and dedication of the workforce to implement change, both the digital and data specialists who will be implementing and supporting the tools, and the wider workforce who will be using them to transform care. This will require:

- Ongoing skills investment
- Time and space to learn
- Environments to share and develop best practice

This means the ICS is committing to supporting the development of enhanced skill sets and new practices for both the technical experts and the health and care professionals who lead the change. This is in line with the requirements of the 'Support people' domain of the 'What Good Looks Like' framework.

For our digital and data specialists, this will mean:

- Adopting professional standards in digital and data services and ensuring professional accreditation of digital and data staff.
- Attracting new talent into the digital and data professional body in the health and care sector.
- Retaining and developing existing talent.
- Pooling talent from across the system.

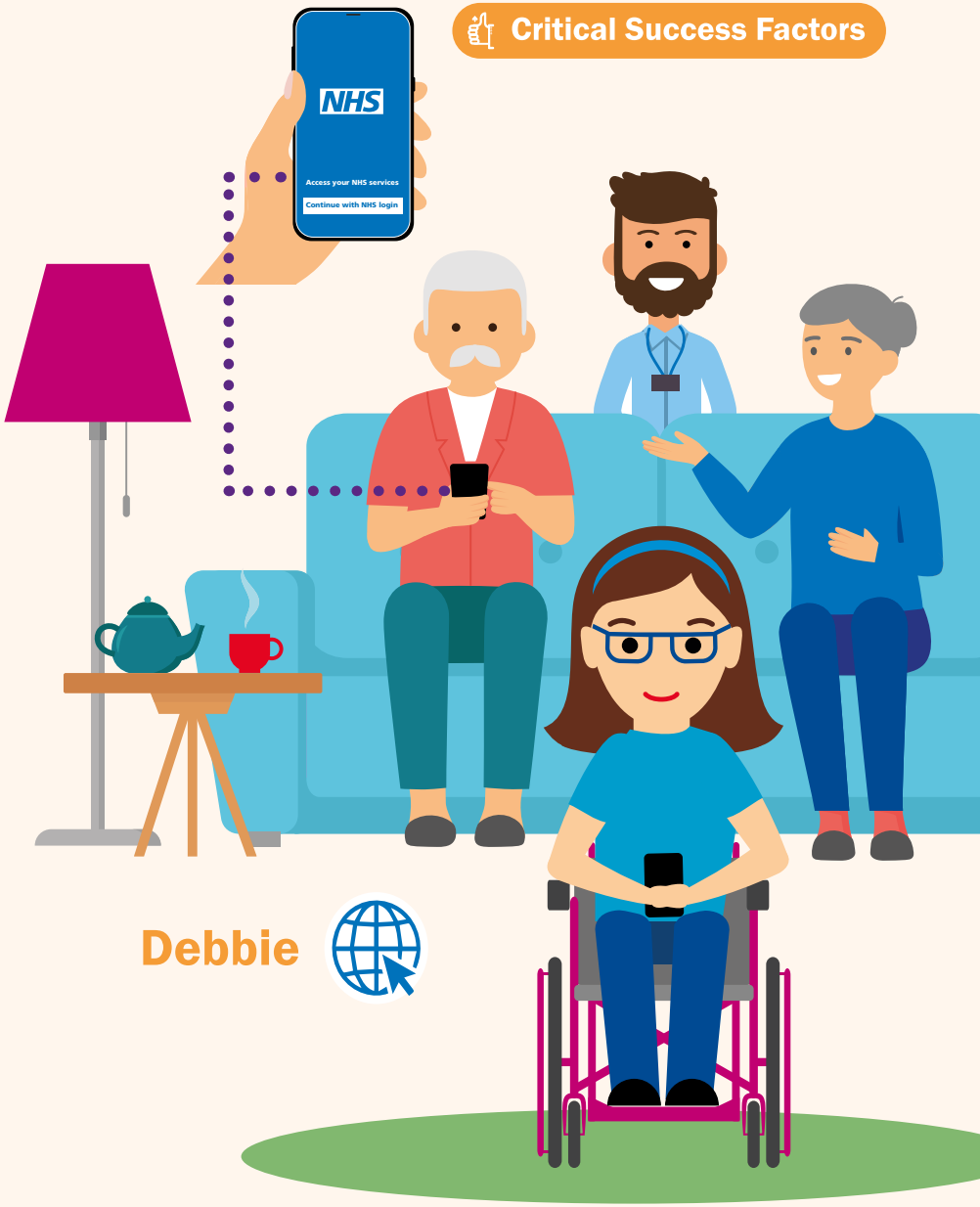
For the wider workforce, the focus will be on:

- Provision of digital and data skills training at scale.
- Development of Digital and Data Champions.
- Identifying future clinical and care digital and data leaders.

Increasing digital inclusion

People will need skills to utilise digital and data platforms and be able to benefit from them. The 2019 figures show that 11.3m people nationally still lack the skills to effectively navigate the Internet. The ICS will work with all providers and at Place level to ensure that everyone who struggles to access and engage with digital has the opportunity to do so or is provided with an alternative means of service. To ensure we retain equity of provision those who cannot or prefer not to access digital services, traditional services will remain. Enabling improved access to digital health and care services will be done via:

- Understanding the need – research will be undertaken by **March 2023**.
- Ensuring widespread adoption of the Digital Inclusion Impact Assessment by **March 2023**.
- Providing access to connectivity and equipment for the most digitally excluded groups by **March 2024**.
- Targeted support to get people using the NHS App as the digital 'front door' to health and care services by **March 2025**.
- Development of skills for individuals and their carers through development of digital buddies and digital carers hubs by **March 2025**.



Working towards net zero targets

The ICS is committed to the NHS environmental sustainability ambition.

The ICS Green Plan commits to: a focus on (digital and data enabled) ways to streamline care and support service functions; to improve the use of resources; and to reduce carbon emissions.

The Rethink / Reduce / Recycle and Reuse concept drives innovation and practical objectives in digital and data that support the overall drive towards net zero.

Ensuring sustainable financial investment

Resources in the system are constrained, and health and care services remain under considerable pressure. The commitment is to return to pre-COVID levels of activity and to address the impact of pent-up demand.

Investment in digital and data during a financially constrained period is a challenge but it is a key way to deliver against these key NHS pressures by focussing on where care is needed the most through **'levelling up'** and applying evidence-based **'intelligence into action'**. In this way the investment can demonstrably show the benefit and **'turn the dials'** on outcomes.

Within this context, there are 2 key aspects of sustainable financial investment for the purposes of this strategy - accessing investment and the prioritisation of investment funds.

Accessing investment

The 'Who pays for What?' policy will consolidate national funding for transformational digital and data projects into a single fund and will support ICSs as they are increasingly given control over the financial resources with which to deliver their digital and data plans. As funding is devolved down to ICSs to invest in their systems through 'Who pays for What?', the funding principles and the associated business case and assurance processes will ensure this investment is focussed on delivering tangible outcomes. At the time of writing of the strategy, 'Who pays for What?' is still in consultation and financial allocations to support delivery of the objectives outlined in this strategy are unclear.

An approach to sustainable financial planning and a more robust sustainable investment plan is expected to be completed by **December 2022**.

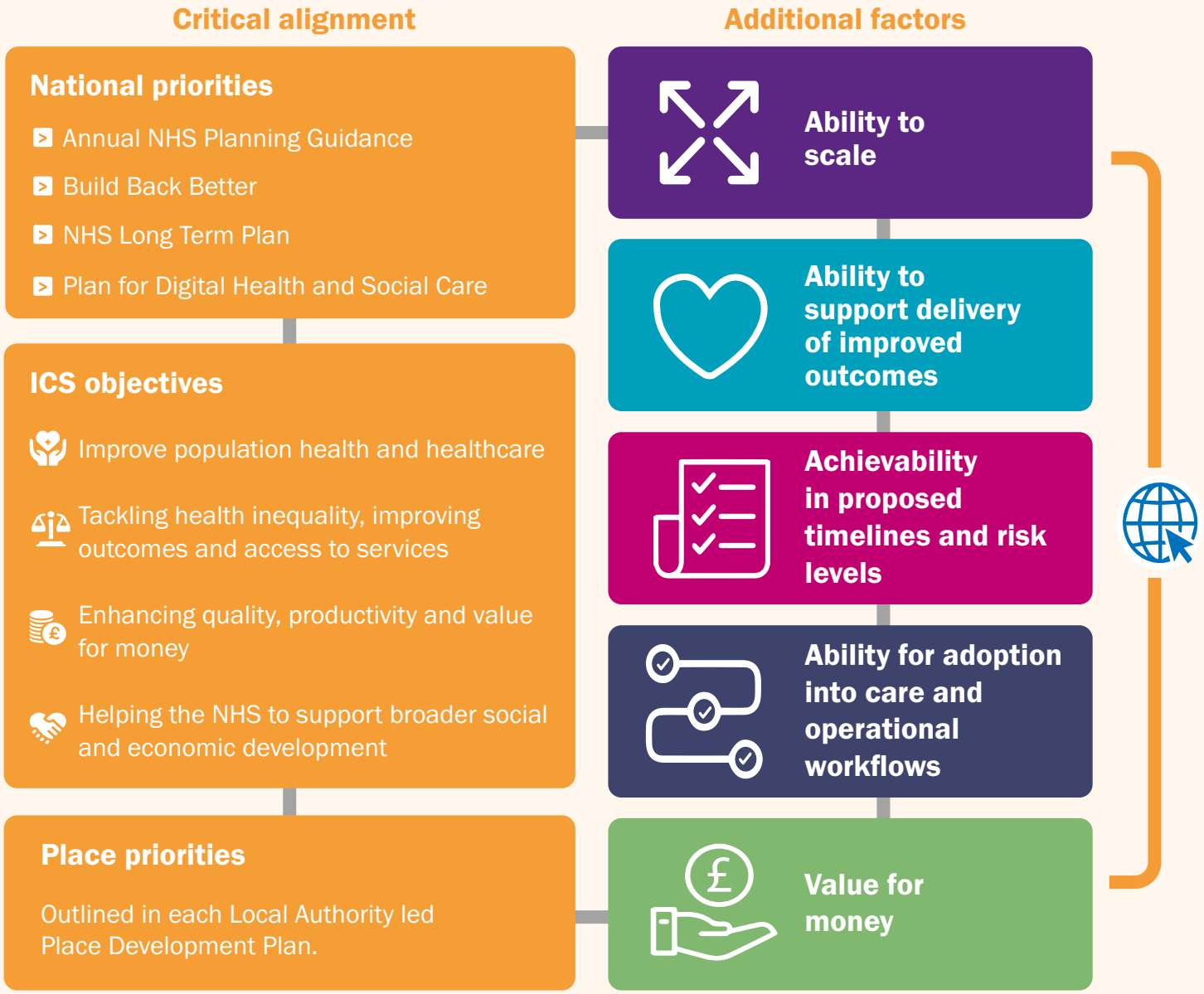
Prioritisation of investment funds

The ICS will make future investment decisions and an approach to prioritisation that will create most impact in the **'levelling up'** and **'intelligence into action'** agendas.

We can look to 'level up' digital maturity across stakeholders in the system whilst ensuring that we remain at the forefront of digital and data utilisation to improve outcomes where possible. Initial work is seeing a range of investment in digital and data by NHS Providers in Cheshire and Merseyside. As a % turnover, this is between 1.7% – 6.1% and thus illustrates the additional work needed by some to ensure a match to those that are 'leading edge' in terms of their digital and data utilisation.

We will make sure that all our investments are **informed by public involvement** and **aligned with key national and local priorities** and take into account **additional factors that will affect overall impact**.

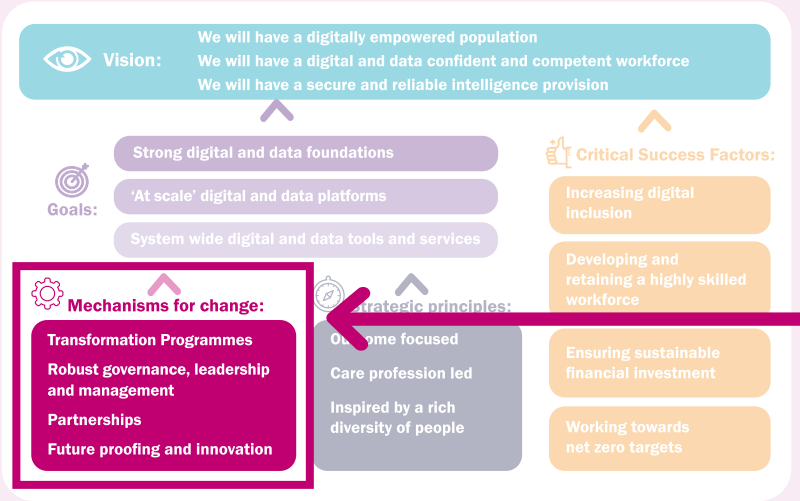
As ICS access to investment and decision-making increases then the **prioritisation approach will evolve and consolidate to deliver a flexible and transparent process** for the allocation of funds to digital and data programmes. This will ensure ongoing visibility of benefits realisation for the public.



Mechanisms for implementing transformational change

Creating momentum to drive 'intelligence into action' and positively impact the population outcomes requires explicit mechanisms for change and for ongoing monitoring. Perhaps most particularly with digital and data solutions, it is important to acknowledge they cannot be successful in 'turning the dials' in isolation.

This strategy outlines four key mechanisms for implementing the required change, which are outlined below.



Transformation Programmes

Robust governance, leadership and management

Partnerships

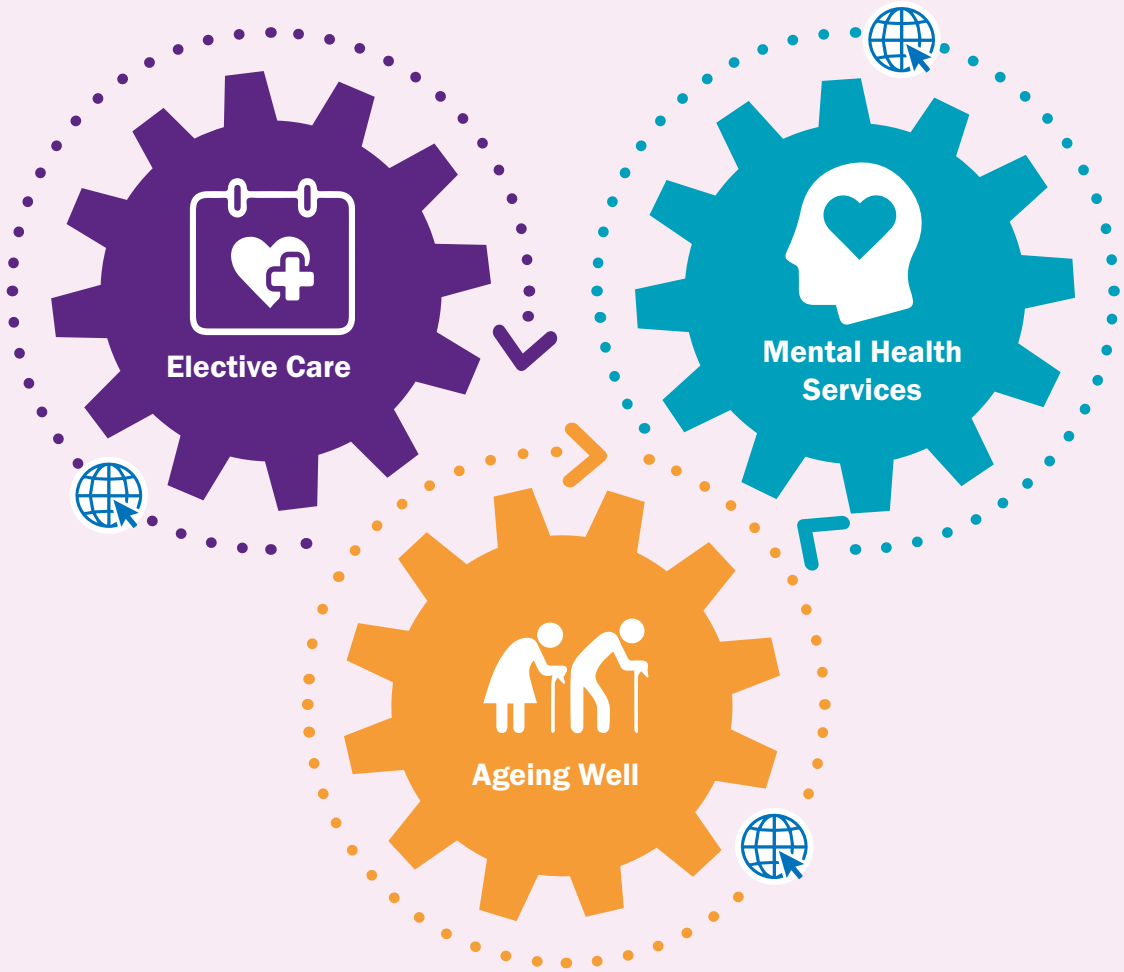
Innovation and future proofing our Digital and Data Strategy

Transformation Programmes

One of the critical mechanisms for delivering digital and data informed change are the ICS Transformation Programmes. These represent a combination of existing ICS and nationally funded programmes that work through individual Providers, Provider Collaboratives and Places to deliver critical change including digital and data solutions.

A significant amount of work has been undertaken to understand the outcomes these programmes have been established to achieve and the initiatives in place to deliver those improved outcomes. We have rigorously assessed where digital and data initiatives support transformation now and in the future. These 'outcome maps' provide the basis to understand how the investment in digital and data can positively impact on individual and population level outcomes. Click on the information icon against three of our key transformation programmes to find out more.

The ICS Transformation Programmes do not represent the full extent of transformation activity across the whole Cheshire and Merseyside system as there is a vast level of change activity being led at Place and organisation level. However close working with the ICS level Programmes is essential to ensure the more local programmes are well placed to take advantage of what digital and data have to offer and to create meaningful feedback loops on digital and data requirements and future ambition. This process will develop and evolve over time and be managed through collaborative working and strong governance.

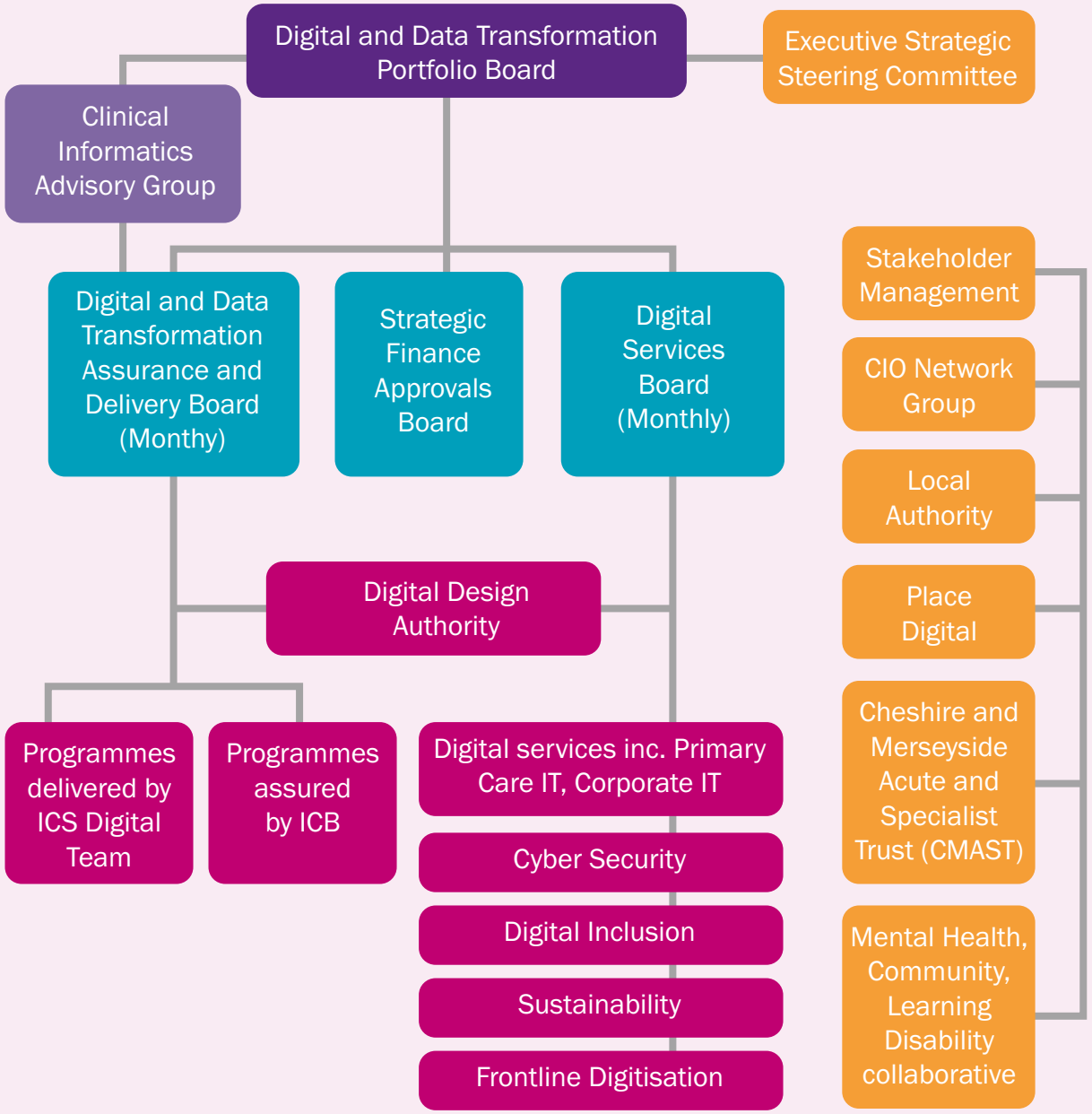


Robust governance, leadership and management

The governance arrangements for digital and data, reporting through the ICS Transformation Board is visually summarised on this page.

The governance represents a commitment to care profession leadership as part of the Medical Directorate and a strong oversight of ICS delivered digital and data programmes and services with robust assurance to ensure alignment with ICS-wide standards and plans.

Draft Target Operating Models (TOMs) for both digital and data / business intelligence services have been developed and are expected to be agreed before the end of 2022. The governance and associated target operating model of the ICS digital and data teams also supports the 'Well led' domain of the 'What Good Looks Like' framework.



The key portfolios for digital services, and their alignment to the 'What Good Looks Like' framework are summarised below.

Chief Digital Information Officer

Associate Director of Digital Operations	Chief Technology Officer	Transformation Programme Director
Policy: Data Saves Lives, Who Pays for What, What Good Looks Like (WGLL) - Well Led, Ensure Smart Foundations **Statutory:** Robust governance and financial management	**Policy:** Data Security and Protection Toolkit (DSPT), Technology code of practice, What Good Looks Like (WGLL) - Safe practice, Fundamental Technology capabilities **Statutory:** Data protection	**Policy:** Data Saves Lives, Digital, Data and Technology standards, What Good Looks Like (WGLL) - Improve care, Empower citizens.
Function: > System-wide strategic finance > ICS Business Plan, finance management, procurement and HR > Policy, investment and approvals > ICS internal transformation/ transition programme governance > Communications > Business case development and approval > Administration, logistics and events > Market and supplier management (incl. commercial/ procurement) > ICS digital governance and reporting > Digital Performance Management oversight and KPI > Cheshire and Merseyside ICS executive and national engagement	**Function:** > Enterprise, business and technology architecture > Information Governance (Deputy SIRO) > BI information and data architecture > Portfolio run, service and change management (ITIL) > Live services and supplier performance > Business continuity and disaster recovery > Preventative and responsive support services (Emergency preparedness) > Digital capability and maturity framework (incl. WGLL)	**Function:** > Transformation programme management delivery > Strategic clinical networks > Long Term Plan programme > Digital transformation programmes > ICS wider digital transformation portfolio management (Assurance) > Shared programme management office (incl. funding distribution and programme finance) > User and product led design > Change and campaign management > Benefits management, knowledge, insight and learning

Partnerships

There are a number of key partners that are critical to changing process and culture through digital and data. Multiple organisations form the landscape to support an individual's health and care experience. These key partners include:

The public

Increased engagement with the public drives digital and data innovation that better reflects the needs of the population. This ensures greater long-term alignment with public expectation in the areas that matter most.

Valuing and being inspired by the diversity within Cheshire and Merseyside is a principle underpinning this work and the ICS has already engaged widely with care and business professionals working in health and care services as well as representatives from the public through adult and children and young people (CYP) panels. This has informed and continues to inform the development of digital and data enabled services.

A further focus of the public engagement will be as part of the Civic Data Co-operative (CDC) to ensure the ICS understands how the public expects their data to be captured and then used, particularly in relation to the opportunities of working with other system-wide stakeholders to support wider innovation and research.

Activities are to include:

- Innovation in public participation and communication around the use of health data in care and research.
- A GP engagement programme around the sharing and use of data.
- Creating an open framework for research and digital partnership.

To ensure that digital and data meets the public expectations on an ongoing basis through the ICS led programmes of work, we commit to:

- Effective and inclusive communication with the public.
- Early engagement on initiatives.
- Co-design of front-end functionality.
- Assessment of usability and accessibility of systems.
- Creation of easily accessible feedback loops.
- Deep dives into un/successful functionality factors.
- Use of public engagement initiatives to help us reach specific, seldom heard groups.

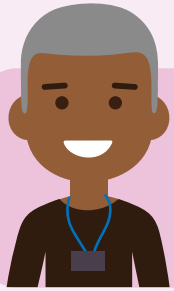
Health and care staff

A core principle of the development of this strategy has been that it is care profession led. Going forward, the involvement of care professionals will continue to be critical to ensure that digital and data driven change is meeting need and is embedded into working practices to ensure that 'fit for purpose' solutions are commissioned and delivered to support achievement of the ICS objectives.

Other health and care providers

A number of key health and care providers do not form part of the Provider Collaboratives. Therefore, we will pay particular attention to working with the following groups of providers who play a critical role in delivering health and care services in our system:

Primary care



Social care

Voluntary, Community and Social Enterprise (VCSE) sector

Academia

We will work closely with our academic partners to:

- Embed digital and data skills into pre- and post-registration education and training.
- Embed a culture of learning, research and innovation across the system.
- Gain access to early thinking and opportunities for transformational change across the system.
- Support our on-going public engagement and digital inclusion activities to ensure they are effective.
- Leverage the use of our core platforms for research purposes (particularly for clinical trials and translational research), with a particular focus on developing the Trusted Research Environment (TRE) on the CIPHA platform, for which academia will be a core development partner.
- Leverage existing translational research assets such as the North West HealthTec Cluster in Daresbury and the Digital Innovation Facility at the University of Liverpool.
- Support citizen-driven data innovation through the Civic Data Cooperative (CDC).
- Support independent evaluation of the effectiveness of benefit and outcome delivery.

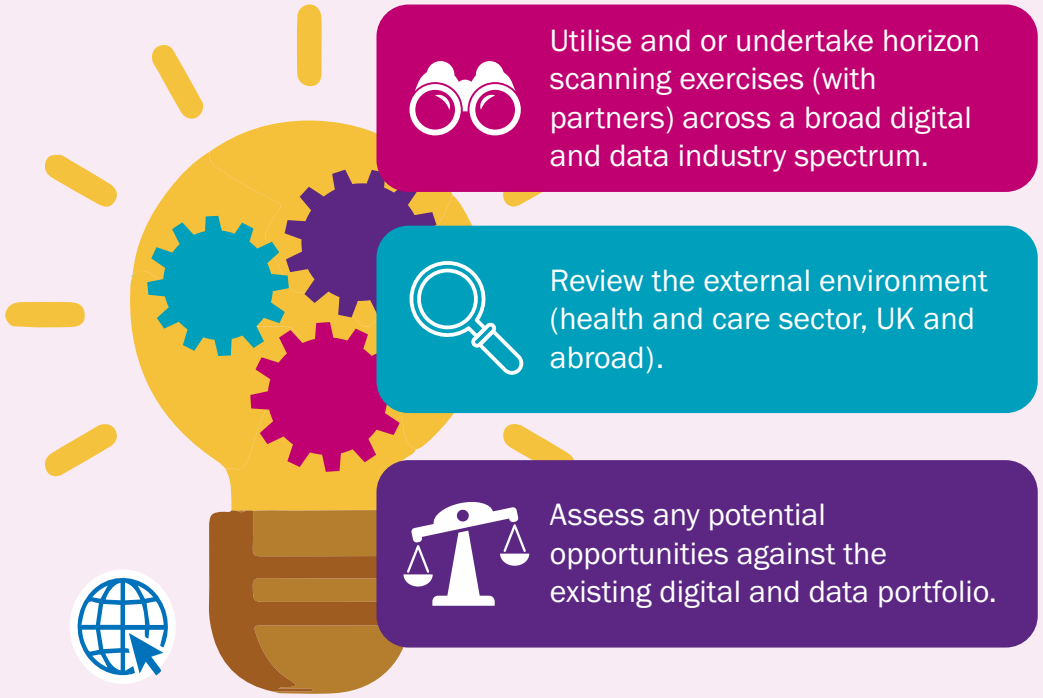
Innovation and future proofing our Digital and Data Strategy

Innovation is a core part of future proofing the digital and data strategy. Cheshire and Merseyside has a long history of digital and data innovation, driven by care professionals to address unmet needs. Alder Hey Hospital, for example, has a well-established innovation hub which focusses on the development of digital platforms, wearable devices, pre-emptive Artificial Intelligence (AI) and immersive technology to solve real world health and care problems children and young people face today. Other Trusts such as Liverpool University Hospital and the Walton Centre also have innovation functions in their Trusts which are focussing on developing 'ground up' digital and data innovations for wider spread and adoption. In conjunction with the Innovation Agency (IA), the ICS will actively support its health and care providers in sharing ideas and developing innovative digital and data solutions collaboratively. Both will also support sharing best practice around adoption and embedding innovation into organisational culture.

The ICS will also work locally with LyvaLabs (established by Liverpool City Place) to create strong connections between health and care organisations innovation teams to develop a pipeline of digital and data innovations for potential commercialisation by **March 2024**.

As innovation continues to actively evolve, we also need to better understand and proactively manage additional opportunities. To future proof our digital and data strategy over the next 3 years and to manage risks associated with uncertainties in the external environment, the ICS will implement an innovation pipeline process that seeks to identify medium and long-term risks and opportunities and manage their evolution and impact on Cheshire and Merseyside digital programmes.

The process will regularly:



Future proofing the digital and data strategy requires the monitoring and management of both opportunities for further improvement and risks to the current thinking that could come from many sources. We will develop a defined process, supported by the ICS wide stakeholder group, that will ensure that the ICS is well placed to assess, implement and assure investment into future digital and data innovation for the benefit of its population.

Summary

Cheshire and Merseyside ICS has set a challenging and compelling ambition for digital and data.

We are committing to the levelling up of infrastructure to ensure all our population can derive the same benefit from technology. We are committing to turning 'intelligence into action' to focus on purposeful and evidence-based interventions. Through targeted resourcing and delivery, we will 'turn the dials' on improvement in health and care outcomes.

We have a great starting point and targets for delivery that will support the ICS to meet its stated ambition, vision and goals.

The story so far...

- Through CIPHA we have been able to harness patient level linked datasets to identify populations at risk of certain outcomes and embed the use of this data in clinical pathways for proactive care.
- Advanced population health management tools have been used to gather intelligence on where to focus key system wide public health programmes such as mass COVID testing and the COVID vaccination rollout.
- System P programme established to address multiagency, multisector challenges that negatively impact population health and to identify population cohorts to address need across the system.

Looking ahead...

March 2023

- Provide access to ICS wide person level health and care linked datasets.
- Embed CIPHA reporting in action via System P.

March 2024

- Broaden the linked datasets available for analytics to include education and housing.

ICS Objective:
Tackling health inequality, improving outcomes and access to services

The story so far...

- Some Places and Providers already have an established Patient Empowerment Portal (PEP) in place.
- The ICS has an existing Remote Care platform in place which is delivering virtual ward and Long Term Condition (LTC) monitoring services.
- To support the elective recovery programme, there has been a significant investment in transforming outpatients through the use of online and video consultation and tools to support patient initiated follow up of their own care.
- Research has been undertaken to identify the areas of our population that are most likely to be digitally excluded.
- Some initial work on getting recycling IT equipment out to digitally excluded groups has taken place.

Looking ahead...

March 2023

- Increase the availability of digital monitoring of vital signs for people in care homes and at home to support national targets.
- Develop a tech-enabled annual physical check for people with severe mental illness.
- In primary care, establish a common online and video consultation platform, implement high-quality clinical decision support tools and rollout accredited apps for people to support the management of their own physical and mental health and wellbeing.
- Ensure widespread adoption of the Digital Inclusion Impact Assessment for all existing and new digital and data initiatives.
- Embed existing tools to support elective recovery including online and video consultation and PIFU support.

March 2024

- Additional virtual ward beds (40 to 50 virtual ward 'beds' per 100,000 of the population in place.
- Prevention and detection technologies will be used to protect the 20% of care home residents who are identified as at high risk of falls.
- Provide access to connectivity and equipment for the most digitally excluded groups.

March 2025

- All NHS Providers will have a Patient Empowerment Portal (PEP) that integrates with NHS App.
- Targeted support to get people using the NHS App as the digital 'front door' to health and care services.
- Develop digital buddies and digital carers hubs.

The story so far...

- Investment in digital equipment and infrastructure has been variable across health and care providers.
- Digitising care records has also been variable across Providers. We have previous successes in Cheshire and Merseyside through national programme investment, and our system has one of the most digitally advanced hospitals in the UK (Alder Hey NHS FT). However, we still have hospitals with no Electronic Patient Record (EPR) which are predominantly paper based in their processes, and although Adult Social Care providers have electronic case management systems, Digital Social Care Records (DSCRs) generally do not exist in other providers of adult social care.
- eXchange / Share2Care has been established as the common platform to share care documentation between health and care providers.
- Four Places have their own detailed Place based Shared Care Record in operation.
- Through the Digital Diagnostics Capability Programme (DDCP), a diagnostics IT Network suitable for Radiology Imaging, Pathology and all other diagnostics has been established and cloud storage infrastructure to reduce reliance on on premise storage has been implemented.
- implementation of a Vendor Neutral Archive (VNA) and common Picture Archiving and Communications System (PACS) viewer across Cheshire and Merseyside to enable image sharing and remote radiology reporting more easily.
- Pilot activity on the ability of Robotic Process Automation (RPA)) to perform and automate high-volume repetitive tasks.
- Public View has been implemented as the core performance tool across the ICS.

ICS Objective: Enhancing quality, productivity and value for money

Looking ahead...

- eXchange / Share2Care platform available in all NHS and Local Authority Adult Social Care providers.
- 80% of CQC registered adult social care providers (residential and non-residential) will have adopted a DSCR.
- All NHS and Local Authority Adult Social Care provider organisations connected to integrated life-long health and social care records.
- Implement and oversee delivery of RPA with an expanding rollout plan in line with a clear evidence base of productivity benefits.
- Implement a single performance information system that all partners can access.

March 2023

- Implement e-referral and image sharing for community optometry services.
- Implement ICS wide Capacity and Demand reporting for urgent care (inclusive of community and mental health) and elective care.
- Embed Public View across all Providers and Service Planners in the ICS.

December 2023

- 90% of NHS Provider trusts will have a minimum standard EPR.

March 2024

- Every member of health and care staff in NHS and Local Authority Adult Social Care providers will have access to reliable and fit for purpose access devices.
- Health and care staff in NHS and Local Authority Adult Social Care providers will have access to reliable, seamless and secure network infrastructure to enable them to deliver their role, wherever they are working in Cheshire and Merseyside.
- 100% of NHS Provider trusts will have a minimum standard EPR.

March 2025

ICS Objective:
Helping the NHS to support broader social and economic development

The story so far...

- Digital has developed a clear set of objectives as part of the overall ICS Green Plan.
- Discussions are ongoing regarding the establishment of a single architecture for data and intelligence, as well as a single platform for data for research purposes.
- Liverpool City Region have established LyvaLabs to help exploit innovation arising from health and social care providers through commercialisation and business development support.
- Wider digital skills development of the health and care workforce has been undertaken on a variable basis by health and care organisations.

Looking ahead...

March 2023

- Rollout the Office 365 e-learning service and expand the amount of training available through this hub.

March 2024

- Develop a pipeline of digital and data innovations for potential commercialisation.

March 2025

- All staff in NHS and Local Authority Adult Social Care providers have a core set of digital and data skills and competence to underpin the increased use of digital and data in their 'day to day' work.
- Deliver against each of the specific targets outlined in the digital and data section of ICS Green Plan.
- Transfer of core health and care information between providers for direct care, population health management, care planning and research, through a single health and care data architecture.
- Implement a Trusted Research Environment (TRE) to support clinical trials and translational research.

Find out more

You can download print friendly and easy read versions of this strategy by visiting our website:

www.cheshireandmerseysidepartnership.co.uk

For more information about our digital and data plans to enable 'intelligence into action' connect with us online: