

Digital Strategy

For BaNES, Swindon, and Wiltshire Partnership

2023-2028



1. Executive Summary

To meet the current and future needs of our population we need to make significant changes in the way we deliver services. Technology is an important enabler to make these changes. Digital solutions give us the potential to work differently, facilitating better, safer care and experience and more efficient and effective use of resources – both financial and time. No more so has this been demonstrated than through the BSW System’s response to COVID19.

The Bath and North East Somerset, Swindon and Wiltshire (BSW) Digital Strategy describes our priorities and a summary of the associated work plan, all supporting the overarching vision of BSW: “*Working together to empower people to lead their best life.*”

The document summarises

- The national and local context, including challenges where digital solutions may support change
- Our digital programme and three priorities (Information Sharing; development of our Digital Workforce via a portfolio of projects; and ensuring contemporary cyber security is in place)
- Our response to the NHSX What Good Looks Like Framework
- How Digital enables the BSW Care Model

The journey will not always be straightforward, but with the vision, ambition, focus, investment and commitment from our organisations we aim to achieve significant changes in service experience to meet the expectations of our population and facilitate people to lead their best life.

Health and care organisations across BSW mobilised their response to the COVID-19 pandemic. This has featured significant digital transformation. In a short space of time, thousands of consultations have been conducted by video that would have been previously held face to face; entire teams have moved out of offices and started working remotely; remote monitoring services introduced; interoperability between systems has been increased, and an Integrated Care Record rolled out.

A challenge for the BSW and the NHS more widely post-COVID-19 is to retain the best aspects of these changes whilst ensuring equitable access and building on these changes, including the ability to deliver at pace. As we learn and reflect on new ways of working, an expectation of using digital technologies to improve access to services and enable efficiency gains will be a key design and system principle as part of our future plans. We know that digital exclusion is an issue for many people who cannot access digital services and this can be for a wide variety of reasons. We will find ways to help people access care recognising that some are unable to use digital means or require additional support to do so.

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3. Background

3.1 Demographics

Bath and North East Somerset, Swindon and Wiltshire has a combined population of around 923,000 people (BSW System Intelligence Report, 2021). Life expectancy across the three areas varies from 73 years to 91 years according to sex and geographical location.

Figures 1a-c (taken from BSW system Intelligence Report; BSW, 2021) highlight population sizes, breakdown by age group, life expectancy, healthy life expectancy, and inequality in life expectancy.

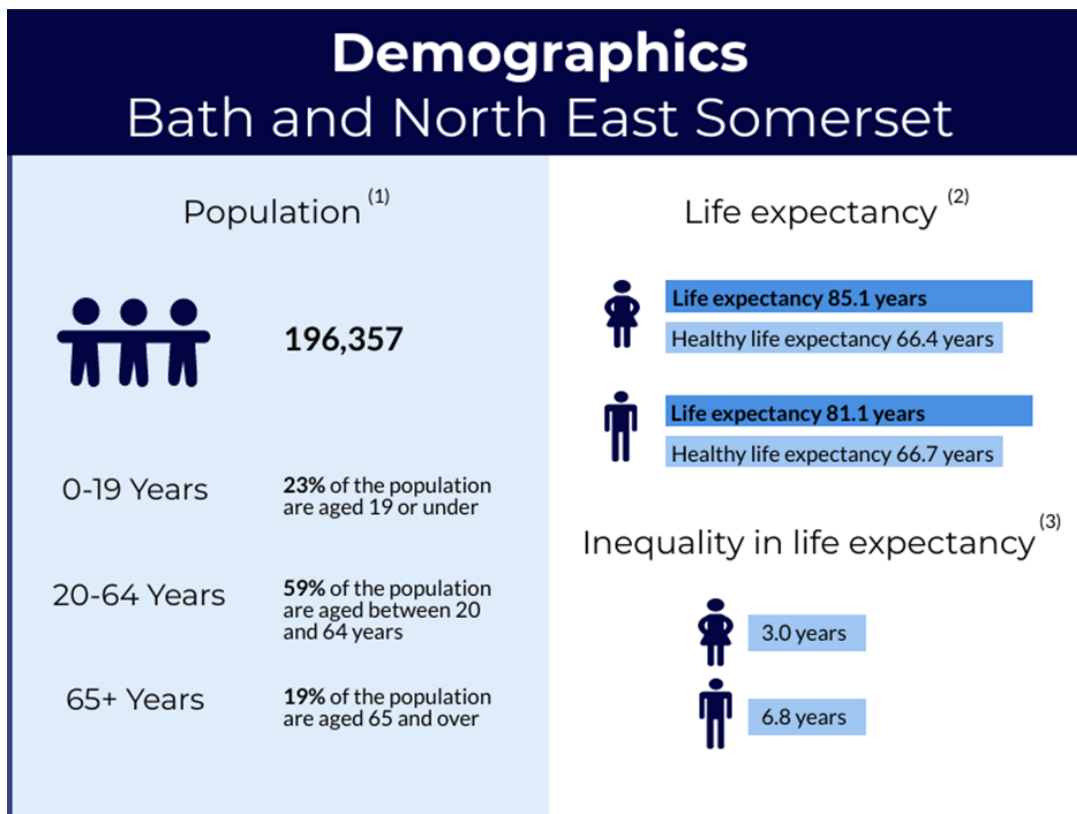


Figure 1a: Demographics BANES (BSW Partnership, 2021)

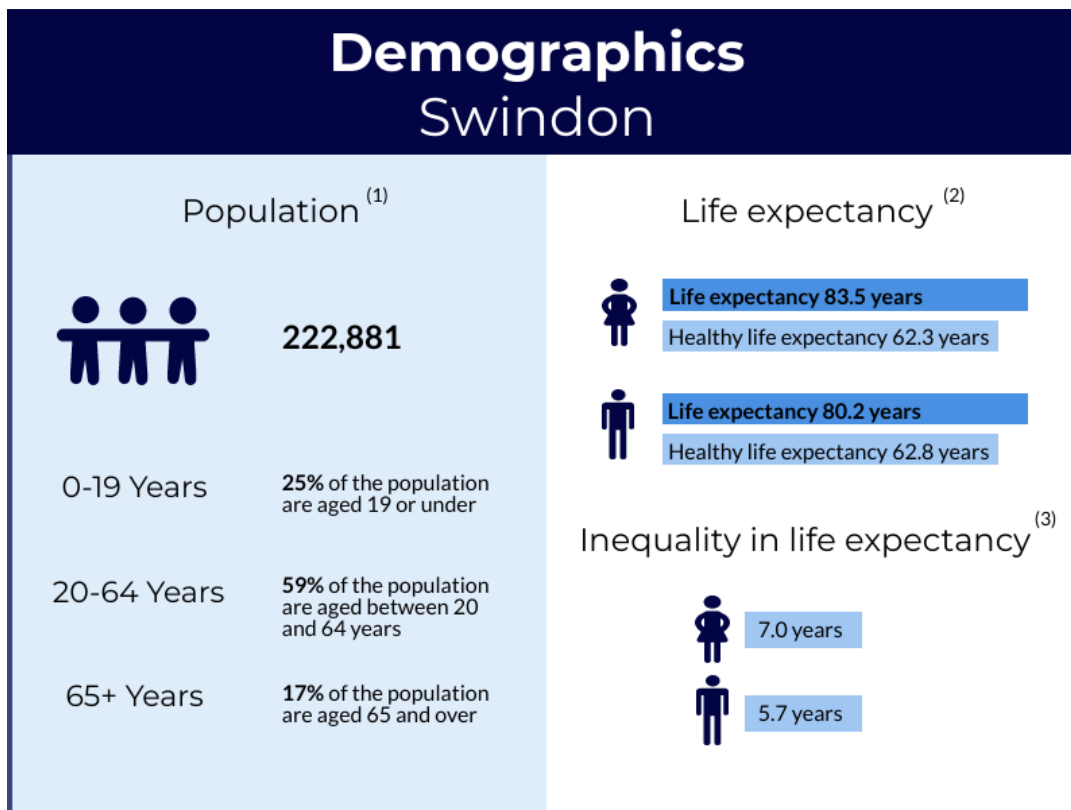


Figure 1b: Demographics Swindon (BSW Partnership, 2021)

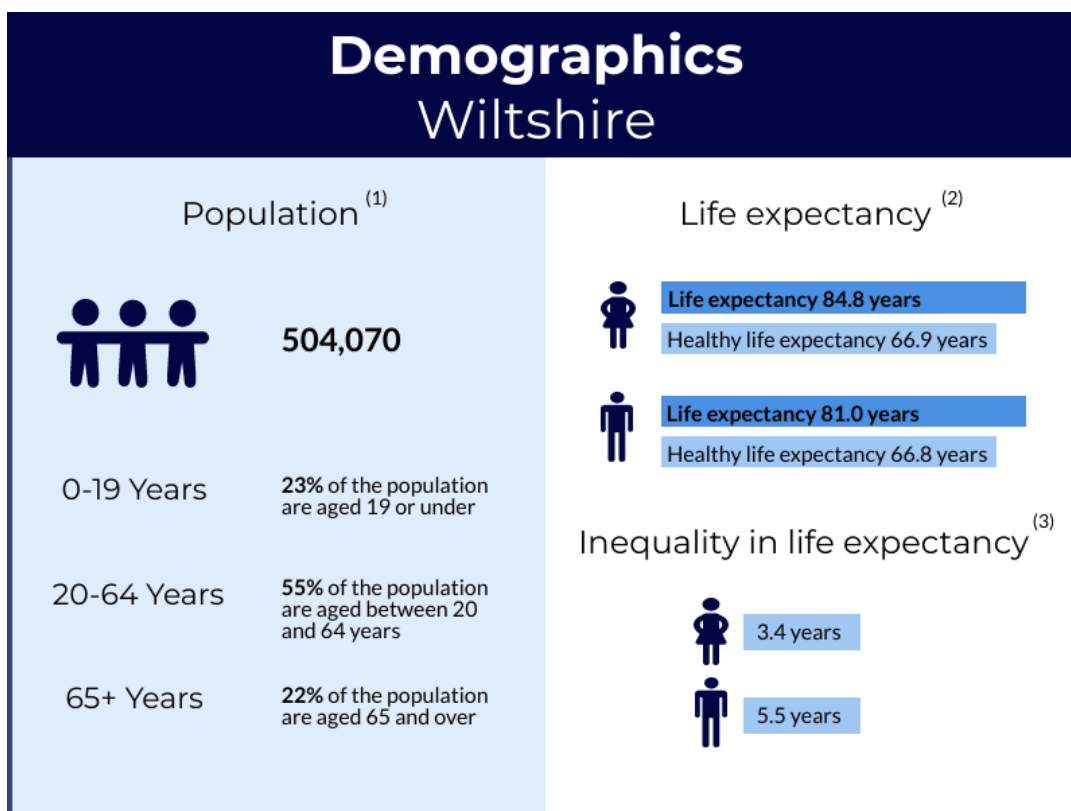


Figure 1c: Demographics Wiltshire (BSW Partnership, 2021)

According to the IMD (2019), Bath, North East Somerset, Swindon, and Wiltshire remains one of the least deprived parts in the country. However, this overall average masks pockets of deep deprivation and inequality within each area, including two neighbourhoods within the most deprived 10% nationally. Swindon has a higher level of deprivation compared to Wiltshire and Bath and North East Somerset.

Ethnicity also has a large and complex effect on health. There are approximately 100,000 people from Black and Minority Ethnic (BME) communities living in BSW (ONS, 2017). Swindon has significantly more residents from a black and ethnic minority group: 10.2% in Swindon, compared to 5.4% in BANES and 3.4% in Wiltshire (ONS, 2011)

3.2 Context

In April 2020 the BSW Partnership Board approved the first digital strategy for the BSW system. This strategy was developed in partnership with all BSW organisations and recommended for approval by the BSW Digital Board. It identified several priorities and a costed digital portfolio to cover the period 2020-2025.

Strategy	Aims
Digital First	Supplementing existing services with digital where efficiency or quality improvement is evidenced or can be evaluated e.g., online consultations
Integrated Care Records	Consolidate integrated care record solution across BSW to link in with LHCR Enhancing care pathways with improved access to patient information at point of care
Shared Diagnostic Information	Share, view images and results within BSW and across the South West
Digital workforce	Provide digital tools to enable a more efficient and effective workforce
Information and Data	One consistent model across CCG. Decision making informed by population centric data using ICR Cloud based Data Warehouse
Digital Innovation	Engaging with AHSN to adopt innovation e.g. AI opportunities
Infrastructure	Enabling digital change through a reliable foundation that protects against cyber attack

Figure 2: strategic aims of BSW Digital strategy 2020

Since the development of the 2020 strategy a number of factors are critical for consideration in its revision.

The BSW digital programme has continued to develop at pace to support the health and care system and the impact felt from Covid-19. This has included significant projects going live as organisations began to deliver against the digital strategy.

In December 2020 BSW was formally designated an Integrated Care System and in July 2022 the CCG disbanded and BSW Integrated Care Board formally came into existence. Work to develop the BSW Care Model has taken place across the system over that period. This Care Model both influences, and is in turn influenced by the

Digital Strategy, with digital solutions seen as a crucial enabling function to deliver efficient and effective care for our population that helps minimise our impact on the environment.

The Care Model describes the clinical and care challenges and addresses them under five headings as per the below image.

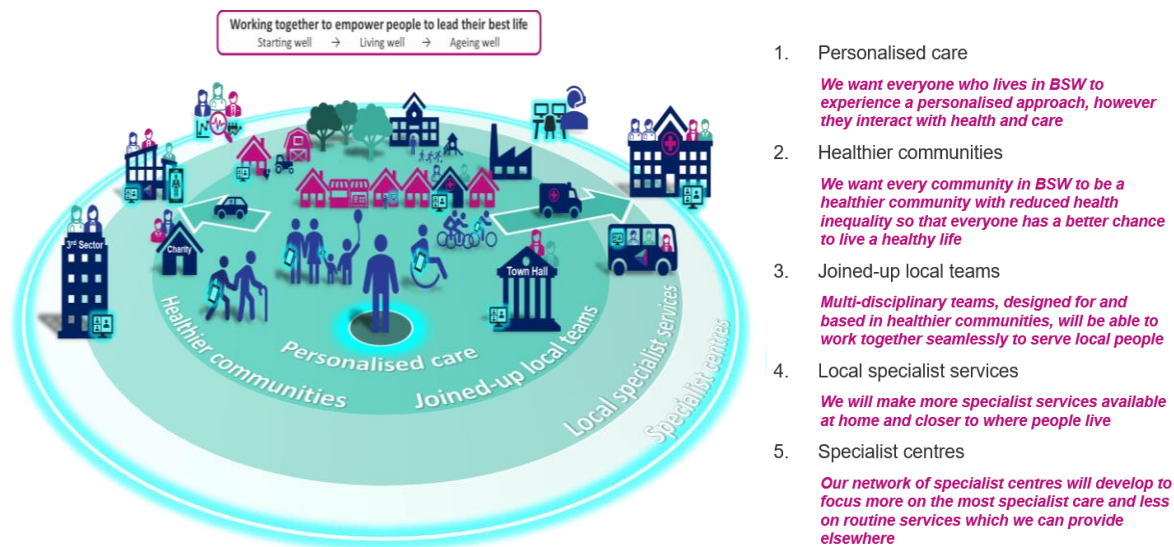


Figure 3: BSW Care Model

In October 2021 NHSX published the ‘What Good Looks Like’ framework ([WGLL](#)). Set within the context of both the [ICS Design Framework](#) and the [NHS Operating Planning and Contracting Guidance](#) it describes the national standards of how an ICS should accelerate digital and data transformation.

The WGGL programme is intended to build “on established good practice to provide clear guidance for health and care leaders to digitise, connect and transform services safely and securely. This will improve the outcomes, experience and safety of our citizens.”

It describes seven success measures listed below and the BSW response to these measures are elaborated on in this strategy document:

1. Well Led
2. Ensure Smart Foundations
3. Safe Practice
4. Support People
5. Empower Citizens
6. Improve Care
7. Healthy Population

The strategy itself is underpinned by a costed digital programme that identifies the key digital projects over the period 2023-2028. The digital programme includes live

projects and those that remain unfunded and at the planning stage but have been identified as requirements to deliver this strategy.

4. System wide approaches

A key design principle of the BSW Digital Strategy is to avoid system proliferation and to aim for a simplification of the digital estate. To that end collaboration, shared working, joint roles and procurements will increasingly become the norm in order to maximise efficiencies of scale and to harmonise use of technology and systems by colleagues and the public we serve. These system wide approaches are described across five themes below.

4.1 Electronic Patient Record

An Electronic Patient Record (EPR) is recognised as a critical building block to digital maturity for an organisation and provides massive opportunities for digital transformation in efficiency and improvements to care. The most significant planned development in this sphere is the work underway to develop a business case for a single EPR across the Acute Hospitals Alliance. Whilst the change itself will be for the acute sector the impact and benefits will be felt across the system including community pharmacy, primary/community/tertiary/social care, diagnostic services and mental health.

A summary of the current EPR position and future direction for each sector is described below.

Sector	Current	Strategic Direction
Primary Care	87/90 Practices on TPP SystemOne	Further consolidation to a single primary care system. Monitor the NHSE New Market Entrant Programme.
Community	TPP SystemOne System C	Explore tactical gains of bedded capacity moving to acute EPR. Align bedded capacity to acute EPR programme with remaining (non-bedded) services aligned with primary care
Mental Health	Servelec Rio	Consolidation of use of EPR.
Urgent & Out of Hours	Adastra & SystemOne TPP	Adastra integration with ICR to support IUC All other services align with primary care
Acute	Cerner, Lorenzo, System C	Business case creation for single EPR across acutes Function/service level exploration of where alignment with primary care would be beneficial
Social Care	Liquid Logic, OLM, Care Director	Consolidation of use of social care system and alignment to other council services. Integration with ICR

System Wide	Graphnet	Integrated Care Record to include all BSW partners. Alignment to national tools (NRL, GP Connect) for cross border sharing.
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Figure 4: EPR summary

4.2 Infrastructure

There are clear opportunities to develop shared infrastructure across BSW in terms of efficiencies and enabling flexibility in ways colleagues work across our organisations. Any programme of work to enable this will need to be developed with a long timescale in mind to take into account existing contracts and the life cycle of existing infrastructure.

Two ways forward have been identified:

- A network infrastructure joint procurement framework exercise led by the Technical Design Authority that builds on the successful software and hardware approaches already completed
- Reviewing the existing system wide network architecture including recommendations as to next steps for short term and long term

4.3 Service level solutions

Whilst an EPR covers a huge array of the functionality required to run clinical and care services there inevitably remain elements that are out of scope. These service or functional level requirements still form a critical element of the digital capability of an organisation. We plan to complete a critical review of these requirements and the solutions aligned to them against the current and future capability of the EPR and the current solutions deployed.

4.4 Digital Design Principles

As part of the development of the BSW Care Model the BSW Digital Board agreed a set of design principles. These principles set out an agreed system-wide approach to the use of technology and digitally enabled transformation that are relevant for all professionals.

- Cyber Security at the centre of all digital solutions based on modern robust infrastructure.
- Use of the Cloud as default starting position for new solution design.
- Information governance and data privacy considered from the start (not an afterthought at the end).
- Clinical Safety and DTAC requirements considered from the start .
- Ability to measure and maintain good consistent data quality
- Avoid data silos by considering the ability of any new system to be able to share data via open APIs and feed data into the BSW ICR (Integrated care record)
- Make the most of centrally funded national and regional solutions where practical and possible before considering local ones e.g N365, NHS App, NHS login etc.
- Minimise the number of different systems where possible, avoiding system proliferation and encourage digital estate simplification.
- Ensure existing tools can't provide the solution before looking for new solutions.
- Avoid solutioning "we have this tool let's implement it" and be clear on the need.
- Don't reinvent the wheel - Look for good practice elsewhere.
- Use evidence & case studies from elsewhere, if new plan your evaluation in advance.
- People, clinicians, patients and colleagues don't always know what is possible so digital needs to inform the art of the possible.
- Transformation and design should be led by the service, digital needs to enable.
- Collaborate on procurements of new or replacement services where a single system wide product is appropriate

Figure 5: Digital Design Principles

4.5 BSW shared services

The formation of the ICB offers opportunities for the sharing of resources across organisations to realise efficiencies of scale and improved effectiveness. These resources could be our people, our expertise or our contracts with third parties. One of the agreed Digital Design Principles referenced in 4.4 is that BSW will collaborate on procurements of new or replacement services where a single system wide product is appropriate. This organic approach enables alignment as any and every opportunity arises. While this will realise benefits more slowly than a dedicated alignment programme it will avoid the costly and time-consuming removal of still serviceable equipment or contracts ahead of their natural end of life.

Alongside this design principle BSW organisations have agreed to look at proactive opportunities to align services, systems or contracts. This will review themes across the digital structures to realise efficiency or effectiveness gains beyond those identified above.

Strong positive working relationships and behaviours already exist across BSW digital teams and these initiatives will build on these. Examples of shared resources already exist across cyber, O365, ICR, BI and others described in appendix 1. While the design principles will increasingly deliver an aligned digital offering to support BSW organisations, places and the system wide care model it is recognised that these changes will evolve slowly. Capacity for strategy and thought leadership within the digital sector is stretched due to the size of the programme across all organisations, not all of which attend the Digital Board and as such pace of change will be impacted.

5. What Good Looks Like Framework

5.1 Success Measure 1 – Well Led

This section of the strategy looks to address how the board will be equipped to lead digital transformation and collaboration into the new BSW system.

The Digital board meets monthly to review digital operations, current matters of importance raised from sub boards and look at future pipeline work within BSW. The Board is also increasingly taking a leadership role in prioritising spend and project focus that underpin the digital strategy and support the strategic priorities of BSW. To achieve effective use of board members time there is a focused agenda based on the agreed digital strategy, sub-board subject reporting, and current BSW digital work. There is representation from across BSW at CIO level and includes CCIO representation, links to System Transformation, and the Executive lead for Digital.

To allow for the movement of information up to board level to aid discussion on key points, there are a set of sub boards that will meet in-between the monthly board meetings. Figure 6 shows the governance structure and the flow of communication.

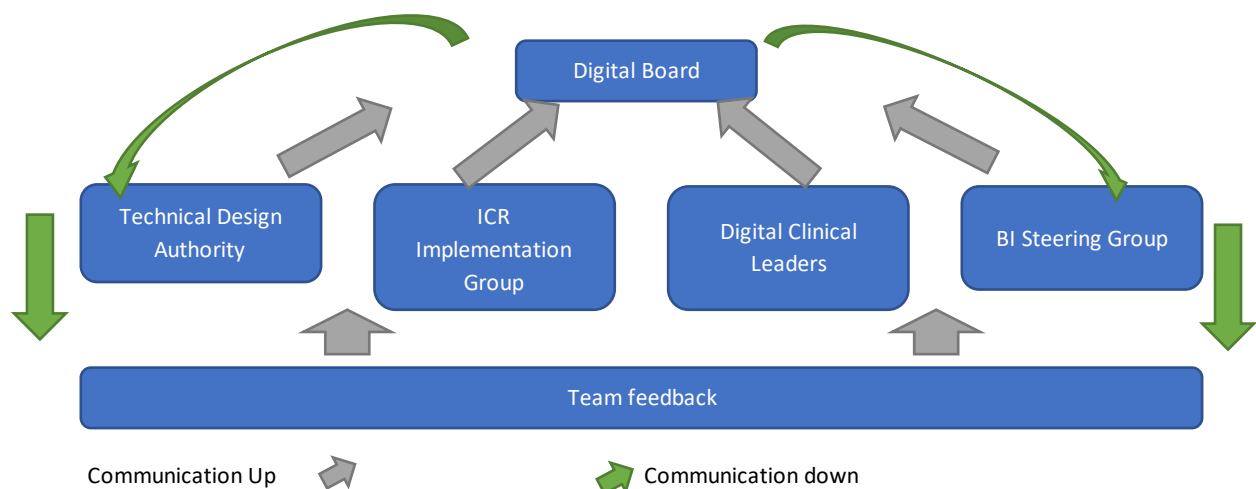


Figure 6: Digital Governance

Allowing for the information to flow up from the different areas and subjects from across BSW will allow the board to have visibility of cyber, programmes and BI whilst giving space for detailed discussions to take place across the system. Clinical engagement in the Digital Programme will be through the Digital Clinical Leaders group to develop our CCIO, CNIO, CSO and general digital leads community.

The information will flow back down from the board level to the sub board level and out to the Place level to increase visibility of board and BSW digital direction. In addition to the sub boards, there will be a connection made to the wider leadership

boards within BSW, this will allow for communication of the current digital development and to receive feedback from across the BSW.

The structure of communication will look to bring together System, and Place levels to integrate one digital strategy and a method of feedback from all areas of BSW to prevent gaps in knowledge in any areas of the Digital structure.

Across BSW, there are other strategies that digital leaders will assist with developing such as in clinical and estates. Digital leadership will be involved at the start of discussions on strategy, new projects and initiatives across BSW to allow for the art of the possible to be understood and that requirements are in line with the digital strategy.

The model outlined in our Digital Principles is one where leadership for a transformation is sourced from the most appropriate profession and is enabled by other disciplines. As examples, where a redesign of clinical services is made possible through the use of digital tools, the leadership should come from a clinician supported by digital, along with appropriate colleagues in finance, HR, operations, Information Governance etc. If the digital transformation related to data warehouse infrastructure, the leadership should come from a BI professional, again with appropriate and relevant support.

The Care Model and the engagement with the BSW population will improve the discussion with wider stakeholder, partners, citizens and front-line groups around how Digital is currently used and how it can open up opportunities. The BSW People Panel is a valuable tool for the digital leadership to hear the views of a representative sample of the population we serve whilst not removing the need to engage with specific cohorts of the population as required.

A key leadership role within the new BSW system is that of the CCIO, CNIO and CSO roles. These will be supported through the Digital Clinical Leaders group and through the investment in wider clinical leadership for specific programmes. Where possible BSW organisations will standardise the roles with the same job descriptions, highlighting the importance of the leadership role and create a CCIO, CNIO and CSO triumvirate in each organisation that could support one another, and provide a strong digital clinical leadership team.

It is important that all relevant partners are included in the decision-making processes mentioned in 4.5. For the meetings highlighted in figure 6 Terms of Reference exist and are reviewed regularly to ensure that all relevant partners are included.

This strategy development and the creation of the costed investment plan will give the foundation for the ability for Digital to be levelling up across BSW, giving the board and everyone involved in the digital work a clear view on the strategy.

5.2 Success Measure 2 – Ensure Smart Foundations

To deliver this strategy organisations must have sufficiently resourced teams who are competent to deliver modern digital and data services. To support the BSW care model the delivery of the digital strategy must be collaborative with colleagues across organisations and professions. The Digital Principle of establishing multi-disciplinary teams with appropriate leadership, as described in section 5.1, will prevent silo working and enable successful transformation.

Digital colleagues will work with the BSW Academy and the Transformation and Change Centre (TCC) to ensure that there is a support structure for the Digital programme. This provides opportunities to input into how colleagues across the system develop their individual digital literacy and opportunities to embed digital as part of the transformation agenda.

This digital strategy is a key enabler as to how BSW will deliver on its ambition to reach net zero carbon emissions by 2040 for the emissions it controls directly. Organisations will align themselves to the Sustainable ICT & Digital Services Strategy and contribute to the Green Plan being developed within BSW ICS.

Specific initiatives within the strategy that have carbon reducing benefits include:

- Agile working initiatives that reduce commuter miles through supporting virtual working and collaboration
- Virtual and remote consultations that reduce the need for patients to be physically present to receive care
- Advice & Guidance tool roll out which provides primary care clinicians with specialist patient centric advice that may remove the need for onward referral or make sure any referral is sent to the correct organisation/team
- A cloud first approach to new initiatives, where the cloud supplier is identified as using sustainable energy sources
- The use of refurbished equipment has been reviewed and identified as neither cost nor environmentally effective. As a consequence, focus will be directed to the supply chain, making sure the equipment procured best minimises the impact to the environment.

Through an approach coordinated within the Technical Design Authority BSW will work as a single system when retiring old equipment and bringing together modern infrastructure instalments. Organisations across BSW have differing levels of technical debt with regard to age of their hardware and aspire to reach a system wide 5 year refresh cycle the cost implications of this are detailed in the digital programme appendix.

Collaborating across BSW for procurement of IT hardware and software has already proven to provide efficiency of scale with regard to buying power and the ongoing support requirements. When appropriate BSW will continue to collaborate across the widest range of BSW organisations possible to benefit digital transformation at scale.

This will leverage short term financial benefits and over the medium term deliver a simplification of infrastructure and contracts. Over the long term aligned infrastructure opens up potential opportunities around shared resources, such as the current BSW Cyber post and shared learning through communities of practice.

A key feature of the Digital Board will be to continue to explore the potential to align individual organisational need with system wide approaches.

The Shared Care Record Strategy has been agreed in some detail at digital board. National funding has been secured to deliver the NHSX Minimum Viable Solution 1.0 using the Graphnet Carecentric solution with the priority on on-boarding BSW partners and developing on the use of the tool via a clinical lead model. Further detail is provided across many of the next sections.

5.3 Success Measure 3 – Safe Practice

In order to manage a system-wide plan for maintaining robust cyber security, a Cyber Lead role is being recruited to manage and coordinate this across BSW. This role will head up a sub group dedicated to reviewing ATP and cyber risk developing on the limited processes in place across BSW currently. To support organisations in the ICS to comply with requirements in data security and protection frameworks the Technical Design Authority will provide oversight and direction on how this will be formulated.

BSW will make full use of national cyber services provided by the NHS when appropriate, all providers are on ATP, are part of the SIEM (or at least engaging) and have had on-site assessments. This will be coordinated and developed moving forward under the guidance of the Cyber Lead.

Under the leadership group for cyber security a full and robust system wide process for reviewing and responding to relevant safety recommendations and alerts including NHS Digital, NHS England / NHS Improvement, the MHRA and HSIB will be developed. A number of these areas are already covered and the BSW Cyber Lead will coordinate alignment and improve knowledge sharing to develop on this baseline.

As part of making sure that there is an adequately resourced team the digital board will be looking at approaches including a network CSO team, aligning Digital Clinical Safety under the Patient Safety governance process and connecting organisational CSOs to support the ICS in meeting the digital safety standards and requirements.

To maintain safe practice the digital team will continue to make sure across the ICS there is compliance with NHS national contract provisions related to technology-enabled delivery, for example, clinical correspondence and electronic discharge summaries.

5.4 Success Measure 4 – Support People

The NHS People Plan states that “*the NHS needs more people, working differently, in a compassionate and inclusive culture*”. Digital tools will be key to realising that ambition as we deliver efficiencies that release staff time for care and enable new ways of working.

The ICR provides the strategic solution for the sharing of summary information to support cross-organisation, patient centric decision making based on a joint understanding of current medications, recent test results, medical history, and recent correspondence. This will ensure that front line staff across the system have access to information to do their job safely and efficiently at the point of care and will complement other information sharing solutions such as image sharing and national solutions (e.g. Summary Care Record, National Record Locator).

The focus of the ICR programme will be of extension and embedding. The ICR will be extended to include organisations not yet on-boarded to share data, and to access the record in patient context from within their ‘host’ system, with a minimum number of clicks. Those organisations to be onboarded will include our partners in social care.

To further unlock the benefits of information sharing the ICR needs to become embedded in ways that organisations work. In line with our digital principles BSW will ensure this has funded and dedicated clinical leadership within each organisation to shape how the ICR is used and influence its development.

To encourage a digital first approach across BSW the network of CCIOs, CNIOs and CSOs is supported by the Digital Clinical Leaders group to share information and knowledge on approaches for digital innovation. This structure ensures front line clinicians have a clear way of engaging with the digital strategy and feeding back on live programmes. This links to the earlier strategy points of having consistent descriptions of roles to allow CCIOs, CNIOs and CSOs to be able to have a clear role in encouraging a digital approach.

A number of different elements of the digital strategy and programme will support colleagues work across organisations. The digital design principles of minimising system proliferation and joint procurements of new digital technology will simplify how a colleague can work from an alternate organisation. The business case exploring a single acute EPR will be the largest example of this. Tools that will be utilised to assist groups with movement and collaboration will include online booking systems for office space, working with Estates to align this vision. Digital will look to support the movement of staff with software that supports staff to transfer their statutory and mandatory training across organisations.

Through the Digital Board BSW organisations will coordinate approaches to formal professionalisation of the colleagues who work in Digital and so grow the opportunities across BSW for colleagues to be involved in qualifications including CIO accreditation.

This will be aligned with an appropriate structure for staff across BSW to have access to digital development with training suites offered depending on the role of individuals and the pathways for CPD.

Pooling resources, people and teams offers the opportunity to deliver digital services and support that are at a scale to achieve improved return on investment, more robust services and, greater development opportunities for colleagues. It won't always be the right answer for every service but will be a consideration as new services are introduced or as the system wide infrastructure develops.

Our BSW network of CCIO and CNIOs will provide valuable insight into understanding areas that digital can help enhance the working environment through their own experiences and through contact with clinical and operational teams.

5.5 Success Measure 5 – Empower Citizens

For any service transformation to truly flourish it must be designed with users at its heart. Led by communications and engagement professionals BSW developed an engagement strategy in April 2022 that includes a framework for how we will involve local people and communities in service developments. This includes the adoption of new digital innovations. This work continues to be developed as part of the People and Communities Engagement and Inclusion strategy.

To support patients with a consistent experience of NHS services across organisations BSW will look to make use of national services wherever appropriate before complementing with local commissioned tools. The NHS App for example has been downloaded by over half of over 13s across the ICS and along with NHS Login will provide the account management for the BSW Maternity Personal Health Record (PHR) My Care Hub. Access to the NHS App, supported by local initiatives, will increase our patients' ability to manage their own health care.

BSW will benefit from the Orcha app library to provide patients and clinicians with a consistent front door to health and care apps that support self-care.

ICS-wide procurement of digital services and tools improve the consistency of the patient offer across organisations. They also support colleagues to work across organisations through a consistent user experience. Key examples of this are:

- the (colleague facing) advice and guidance service being deployed across all BSW organisations
- the (colleague and public facing) video conferencing and appointment management tool jointly specified across a number of provider organisations

BSW organisations have identified the Integrated Care Record as the strategic solution to integrate data for onward sharing of information to our patients and public via a PHR. This has been launched in maternity. Use cases that involve transactional management of EPR information are not best served via the ICR and as such a solution for appointment management is implemented for the acutes via Dr Doctor. The NHS App provides mirror functionality in primary care services. As future use cases emerge their requirements will be tested against the current functionality available through the ICR, Dr Doctor and the NHS App or with minor enhancements before additional solutions are considered. This approach is in line with our digital design principles [section 4].

This Digital Strategy will enable more health and care services to be delivered to our population, but it is recognised that this can act as a barrier to some. New digital services offered to patients will have an equality impact assessment and consideration given to the impact on the digital disengaged. Partners across BSW will develop the use of facilities to allow wider access to digital services, for example online access via libraries and community centres.

BSW has, as part of its engagement strategy, a patient panel that is designed to be representative of the BSW population. This is a valuable tool in engaging with our population on digital initiatives to be used alongside targeted survey and conversations with relevant patient and public groups.

5.6 Success Measure 6 – Improve Care

Section 3 describes the BSW care model which has digital as a cohesive, enabling tool that brings our health and care system together. Service transformation will be clinically and operationally led across organisational boundaries enabled by digital tools and expertise to support patient care in the right setting.

In addition to the video/virtual consultation deployment described in section 5.5, BSW will support primary care in enabling online consultant tools for their registered population. Clinical safety and Information Governance requirements for these tools will be provided via a system wide resource enabling PCNs to focus on selecting and deploying the correct tool for their population.

A remote monitoring solution to support virtual wards and enable care closer to home supported via technology will be scoped.

Collaborative and multidisciplinary care planning will be enabled by the BSW ICR. Pilots have commenced in:

- Frailty with an Integrated Care and Support plan conforming with PRSB standards
- End of Life Care with Electronic Palliative Care System conforming with SCCI 1580 standards

As further use cases emerge that require care plans these will be assessed against the functionality of the ICR and the learning from the EOL and Frailty in line with our digital principles of avoiding system proliferation.

Decision support tools and analytics can be deployed to support clinicians follow best practice and reduce unwarranted variation. Artificial Intelligence, Robotic Process Automation and User Centred Design also provide a field of exciting potential. Exploration of these and other innovations will be service and clinically led in line with our Digital Principles. Our established links with the AHSN will support the discovery, development and deployment of innovative digital technologies.

5.7 Success Measure 7 – Healthy Population

BSW current has two data stores which operate as intelligence platforms with fully linked, longitudinal data-sets. Each offers differing benefits and are at different stages of development. Both are integral parts of the PHM work that BSW undertakes which continues to grow our capability. Through the work of the BSW ICS Business Intelligence programme BSW embedded its approach to Population Health Analytics during 2022 and now PHM is managed as a Business As Usual activity.

The Graphnet ICR includes linked data from a mix of health and social care organisations across BSW, with a roadmap for additional data to flow over the coming months. Graphnet enables population health reporting to be developed in Power BI as well as 'out of the box' reporting. The system has established some initial reports. The tool allows patient identifiable information to be made available for direct care and can be accessed by clinicians and analysts across partners with the relevant role-based access.

The ICB Data Warehouse includes linked data from all national data sets and several local ones, including primary care. The ICB warehouse has been the data source for the Optum PHM programme. It allows linkable reporting to be developed in BI tools to support population health, operational management and healthcare planning. Some reporting exists within Tableau but the direction of travel for reporting is via Power BI. Data sets must flow via DSCRO for re-ID, and can be re-ID'd but via CSU DSCRO with work underway to allow access to all partners.

As part of the Optum programme the BSW system developed a plan for 'spreading and sustaining' the work on PHM. The system is starting from a good foundation given both Graphnet and a platform based on the ICB data warehouse provide PHM solutions based on the existing linked data sets they contain. We continue to develop an approach which allows access to the platform to a wide range of organisations, and we consider co-development where feasible. To support our general work together as ICS BI services we commissioned an independent review of the data architecture across organisations (including Graphnet), and the results of this informed a business case for a shared ICS data platform.

Building on the Optum programme will be key to ensuring this data and analytics is used to support prevention initiatives and care redesign. The development of the right tools and the skills and techniques learned by BSW analysts will be a focus of the Business Intelligence teams. As part of the dedicated workstream to spread and sustain the programme we'll work with other system leaders to ensure effective tools and BI support are aligned to wider PHM programmes giving them timely population health insight and BI support.

The BSW system has work to do around making data available in support of clinical trials and AI, and the ICS BI workstream will look to address these in reviewing our collective data architecture.

There are some collaborations being developed between BSW and academia or industry with a particular focus on demand and capacity modelling with university and third-party organisations. Through the ICS BI programme we will look to establish these links in more innovative areas, whilst building our own capacity and capability too. We will also seek to build collaboration with neighbouring systems to operate at scale or share learning.

6. Digital Priorities

6.1 Introduction

A fully costed digital portfolio for the period 2023/24 to 2027/28 has been developed by the BSW partner organisations to describe the programme and projects that will deliver this strategy and is available as a separate Digital Transformation Investment Plan.

Not all the identified projects have an identified funding source, but this represents the scale of investment required to deliver the ambitions described in this document. Funding will be identified via a mixture of national funding streams such as the Unified Technology Fund and where appropriate local business cases.

The key projects and programmes can be described under the below themes which have been identified as the priorities for progression by the Digital Board:

- Information Sharing and the Integrated Care Record
- Digital Workforce
- Cyber Security

6.2 Information Sharing and the Integrated Care Record

Key projects within the programme are:

- Continued roll out of the technical ICR solution, Care Centric by Graphnet to include all BSW partners.
- Options appraisal and associated business case for the end of the current contract
- Extension and embedding of use cases underpinned by recruitment of clinical leads
- Pilot of Personal Health Record in maternity as extension of functionality within Care Centric. Exploration and roll out of further use cases
- Development and roll out of shared care plans including Frailty and End of Life
- Development and embedding of PHM tools within ICR BI data marts to support the BSW PHM programme
- Diagnostics, image sharing & the ability to request and view results across the system

6.3 Digital workforce

- Development of a Full Business Case for a single EPR across the acute Trusts and bedded capacity
- Development of the Advice & Guidance service to include further technical integration and wider roll out across services
- Procurement of an acute Video Consultation and appointment management tool
- Online consultations and digital front door to primary care

- Maximising use of O365 central NHS tenant in a coordinated joined up way across the ICS (e.g common DPIA, policies and configuration)
- Exploration of an ICS model to deliver Robotic Process Automation and roll out of a single tool across BSW organisations
- Refresh of devices to modernise estate and general migration away from PCs to laptops where appropriate supported by ICS wide procurements to ensure maximum value and standardisation
- Replacement of pathology LIMS
- Development of ICS Data Infrastructure

6.4 Cyber Security

- Creation of a dedicated ICS wide cyber security lead
- Creation of ICS wide cyber security strategy
- Coordinating ICS wide Cyber projects via the TDA (Technical Design Authority)
- Creation of ICS wide dedicated cyber group reporting into the TDA (Technical Design Authority)
- Increase ICS wide links into central cyber teams (NHS D and E) and NHS Digital's CSOC (Cyber Security Operations Centre)
- System wide cyber risk register that can feed into organisations wider risk registers
- Maximise use of nationally provide cyber security solutions and services e.g secure boundary, Microsoft EDR (End Point Detection and Response) and onsite assessments.
- Further operationalise and expand use of the NHSE SW SIEM (Splunk) across BSW organisation
- Procure and deploy as PAM (Privileged Access Management) solution across the ICS
- Increased use of the NHSx Digital Technology Assessment Criteria (DTAC) within procurements to ensure cyber security as key requirement.

7. Conclusion

Digital transformation is a journey. It takes vision, ambition, focus, requires investment and commitment from organisations and people to work together, differently, and it takes time.

The BSW Digital Strategy will support our vision to empower people to lead their best life and the BSW Care Model. The digital solutions we have selected are anticipated to deliver care more effectively and efficiently, therefore contributing to the financial stability of services and the quality of care.

The organisations in BSW have committed through the Digital Board to deliver digital transformation as collaborative, system wide initiatives wherever feasible to maximise efficiency and effectiveness.

This strategy outlines a number of developments in terms of approach, ways of working and specific projects that will raise individual organisation and collective digital maturity. In turn this will enable improvements in care for the patients for whom we deliver services.

8. Appendix 1: Collaboration Opportunities

8.1 Table One

Title		
Procurement of equipment	All orgs	Procurement of equipment including hardware and software.
Video Consultation	WHC RUH, SFT	Procurement of VC and appt management solution.
Robotic Process Automation	All orgs	Named on existing contract Development of ICS model
Advice & Guidance	All orgs	Single service & contract across BSW
Health App	All orgs	Single BSW health app library
Information governance	All orgs	Development of shared documentation resources
Office 365	RUH/CCG	Shared implementation
Cyber Lead	All orgs	Joint strategic role