



Digital Strategy Evaluation Report

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Table of Contents

Executive Summary.....	3
Business Drivers	4
Technology and Digital Transformation.....	6
Core Operational Systems.....	7
Infrastructure	8
Interoperability	9
Information Standards	10
Data Analytics Capabilities	11
Key Aims, Principles and Programmes	12
Strategic Analysis	14
Bibliography:	25

Executive Summary

This digital strategy evaluation report is evaluating the Welsh Ambulance Services NHS Trust's (WAST/the Trust) digital transformation strategy, 'Disruptive Excellence'. The unique health and care organisation serves 3.1 million people over 8,000 square miles and is expected to interact with every Welsh citizen at some point in their lifetime. Unsurprisingly, demand for the services provided by WAST is increasing and predicted to continue rising. In support of the organisation's long-term goals to manage the increasing demand, the Trust published a digital strategy in November 2020 that is geared towards driving the patient experience and intelligently diverting unnecessary demand from Clinical & Operational teams to make the best use of its resources. Since then, the technology status of the Trust has been evolving, in 2021 for example, the Trust began its transformative journey by changing paper records into digital systems and replacing legacy infrastructure. The end goal for WAST is to have a system-wide basis of confidence in digital to begin making systems intelligent, and there are three phases to ensure successful delivery. Already clear progress is being made with regards to digital transformation. However, to keep the focus on its goals, the digital strategy shares digital missions, i.e., key strategic aims that prioritise the patient, the workplace, its data, and its digital foundations to form the basis for continuous improvement and service development.

Using NHS Providers guidance and the PESTLE analysis framework WAST's digital transformation strategy is evaluated to highlight strengths, weaknesses and gaps to the existing strategy and offer solutions. Overall, 'Disruptive Excellence' is a strong strategy that delivers against majority of the characteristics of a good digital strategy as identified in the NHS Providers guide, however, it offers only a high-level overview of the key aims and does not consider risks. The unfortunate consequence will be outcomes that provide little to no value derived from a strategy that is geared towards providing value and cutting waste. On a positive note, the digital strategy successfully puts its patients and its people first, aims to streamline services and cut unnecessary waste for better experiences, and clearly defines how it intends to deliver it. The expectation is that an updated version of the 2020 strategy includes the realism the current strategy is missing.

Business Drivers

The Welsh Ambulance Services NHS Trust (WAST/the Trust) is a unique organisation in Wales. Unlike its health board counterparts, WAST serves 3.1 million people over 8,000 square miles of varied terrain: from busy cities to remote and mountainous locations. It is expected that WAST will interact with every Welsh citizen at some point in their lifetime, and it achieves this with over 3,500 dedicated members of staff and hundreds of volunteers. In addition, WAST is one of few NHS Wales organisations that deals with every other health and care provider in Wales. As an emergency service provider, WAST also partners with other emergency services such as the Police and Fire and Rescue, through the All-Wales Joint Emergency Services Group (JESG).

Examples of the activity WAST has seen across its services in a year (2021/22), in comparison to two years prior (2019/20), can be seen in the table below.

	2019/20	2021/22	% +/-
Verified incidents:	477,971	483,273	+1.1%
999 calls:	515,751	575,739	+12%
111 calls:	503,473	1,031,655	+105%
NEPTS journeys	670,353	550,251	-18%

* Non-emergency patient transport services (NEPTS)

Unfortunately, this is a consequence of the landscape of health and care becoming increasingly complex, creating an increased demand of the Trust's existing services and coincidentally creating a requirement for new. As stated in the Trust's November 2020 digital strategy document (the most recent), ambulance demand is projected to increase 2-3% every year (Haywood, 2020). In addition, by 2030 those aged over 65+ is projected to increase by 24.9% and the population is set to grow to circa 4% to 3.24 million by 2030. These statistics alone portray the inevitability of the increase in demand. Ageing populations, successful management of chronic illnesses, and increased life expectancy are, of course, examples of the NHS's successes, however, they also pose significant challenges (*NHS England » Our ageing population presents the NHS with its greatest challenge, no*

date). Also shared in the Trust's digital strategy is a statistic stating currently more than 40% of people aged 75+ live with two or more longstanding illnesses, i.e., more complex conditions, and 62% of people aged 16+ are projected to be obese or overweight by 2030, posing new clinical challenges for the Trust's workforce. In addition, a significant portion of ill health can be attributed to mental health, respiratory, and musculoskeletal disorders, which create an immense burden on the NHS and other care providers (Steel *et al.*, 2018), and in Wales, 1 in 4 people will experience a mental health problem/illness in their lifetime.

With these challenges in mind, in 2020, WAST published its long-term organisational strategy 'Delivering Excellence – Our Vision for 2030' which supports the wider NHS Wales strategy, 'A Healthier Wales'. Within it, the strategic aims identified were to:

- Provide the right care in the right place at the right time.
- Help patients more easily access our services at the right time.
- Help patients and staff to stay healthy.

The ambition for the long-term strategic framework is to continue to provide high quality care that meets the needs and expectations of the Trust's patients and stakeholders today and for future generations without overwhelming the service. The aims are geared towards managing the increasing demand experienced by the Trust, all while ensuring quality, value and efficiency. By making sure that demand is directed to the most appropriate place, the Trust can make the best use of its resources. To supplement this, WAST's individual directorates – of which there are eleven – produced a series of strategies which align themselves to the framework to work together towards a common goal. The digital strategy, 'Disruptive Excellence', which is the focus of this report, was built to drive the patient experience and intelligently divert unnecessary demand from Clinical & Operational teams. It was developed through the Emergency Ambulance Services Committee (EASC) to detail three clear aims underpinned by four strong foundations, with two golden threads that run through it all, see Fig.1.

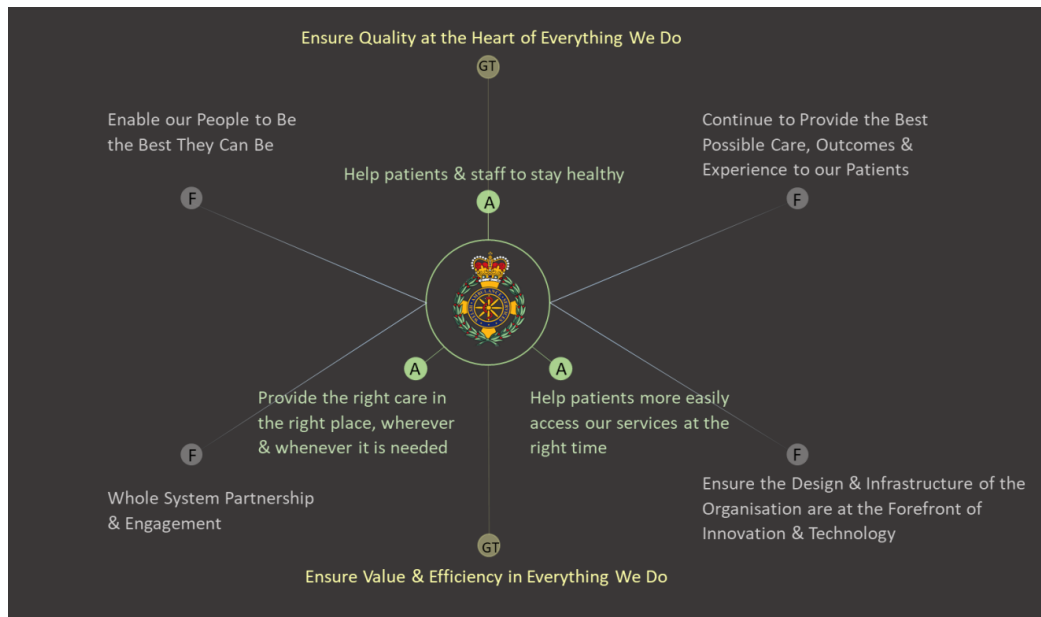


Fig.1. Screenshot of the EASC strategic drivers.

It was uncovered during the development of the strategy that users of WAST’s digital service could be broken into three main groups: Our People, The Patient, and Welsh Health and Care. As you can see from the content of Fig.1 (see ‘F’), these groups underpin the content of the strategy as its four strong foundations. A continuous cycle of engagement with the user groups is promised to better understand and service their needs as the strategy progresses to remain focused on its goals.

Technology and Digital Transformation

Over the past two years, the Trust’s technology status has evolved. Since 2021, WAST has been transforming paper records into digital systems and began replacing legacy infrastructure. A transition to cloud services, namely Microsoft Office 365, also commenced. This year, as told by the Interim Director of Digital Services, the focus will be on insight and integration to connect systems, automate processes and organising knowledge to inform decisions (Smith, 2023). In future years, once the Trust has a connected and resilient digital ecosystem, it will look to begin optimising and innovating priority areas and building up the capability and confidence in digital amongst all staff. Then, once there is a system-wide basis of confidence the Trust can start to make systems ‘intelligent’.

These plans echo the digital strategy's three phases to ensure successful delivery; to stabilise, to optimise, and finally to sustain, see Fig.2.

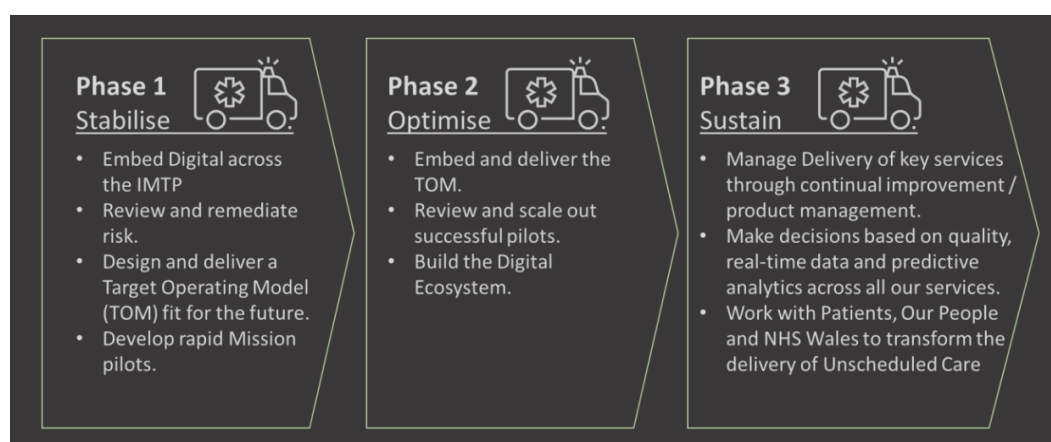


Fig.2. Three phases for successful delivery taken from WAST's digital strategy.

Additional significant progress for the Trust's digital acquisition has been made this year. For the first time, the integrated medium-term plan (IMTP) will embed digital with the wider organisation's plans. In previous years, digital had its own separate section as though it were a single entity. This shows its progression within the Trust, and how it is now a prerequisite for the way it aims to develop.

Core Operational Systems

WAST has a number of core operational systems as an emergency services provider. Listed in the table below, in no particular order, are the National systems used by the Trust.

Name	Description	Introduced
Adastra	Supports NHS 111 Wales with GP out-of-hours. Also used in England.	
Microsoft Office 365	Its cloud-based services and apps are in use by all of NHS Wales.	2020
Electronic Staff Record (ESR)	Supports the delivery of national workforce policy and strategy.	2008

In addition to the National systems, given WAST's unique operating nature, majority of its core operational systems are Local, i.e., are not used by other NHS Wales organisations.

Name	Description	Introduced
Computer Aided Dispatch (CAD)	Used by 999 call takers to prioritize calls. Emergency responders can receive messages initiated by CAD systems via their mobile data terminals.	2017
Medical Priority Dispatch System (MPDS)	MPDS is a way of categorizing and prioritizing EMS incidents.	2015
Electronic Patient Clinical Records (ePCR)	Enables crews to capture information on an iPad and share patient information with healthcare partners.	2022
Emergency Communication Nurse System (ECNS)	Is a comprehensive nurse triage system comprised of over 200 protocols to support clinicians to triage 999 callers remotely.	2022
Clinical Assessment Service (CAS)	Is a dedicated clinical hub that supports the operations of our NHS 111 Wales call centres.	2019

Majority of the core operational systems listed belong to the Operations Directorate at WAST, because they enable the front-line staff of the ambulance service to deliver its often time-critical services. It's typically the National systems, such as ESR and the cloud-based services of Microsoft Office 365, that are used by all-staff.

Infrastructure

Digital Health and Care Wales (DHCW), a Special Health Authority appointed by the Welsh Government, is a national organisation that is building and designing digital services for health and care in Wales that subsequently provide some of the NHS Wales technical infrastructure. The technical infrastructure of NHS Wales, as described on the DHCW website, is the framework of network connections, services, datacenters, support

systems, maintenance, and upgrades that provide Wales' health and care systems with strength, security, and stability (*Providing the Infrastructure - Digital Health and Care Wales*, no date). Areas of WAST that are managed by the NHS Wales infrastructure include email and directory services and the National Active Directory & Exchange (NADEX) which the 6,348 current WAST users rely on to log in.

WAST's own infrastructure begins with its 120 sites, 90 of which are ambulance stations, that each have a router provided by BT using a Public Sector Broadband Aggregation (PSBA). It manages 7 nodes, and 150+ virtual servers across multiple sites that are backed up to a system on a live site and duplicated for safety. These manage door access, building management, alarms, departmental drives, and telephony (VOIP) among others.

Unfortunately, details on the security and reliability of WAST's infrastructure cannot be disclosed as it's confidential information due to the sensitivities and risks associated with it.

However, the capacity of the servers is extendable and the Central Processing Unit (CPU), Random-access Memory (RAM) and disk space can be increased. Although, the capacity of the team supporting WAST's infrastructure and offering around-the-clock ICT support services currently has 12 vacancies, which highlights a weakness in the infrastructure.

Department	WTE Budget	WTE Actual	Vacancy
ICT	46	34	12
Health Informatics	24	18	6
Digital Directorate Total:	70	52	18

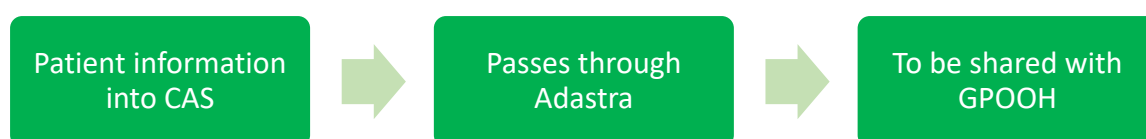
Interoperability

A core interoperable function is that of Microsoft's Active Directory and Nadex. As a result, NHS Wales employees log in details are NHS-wide meaning that NHS Wales colleagues can log in to a device at any NHS Wales site using their unique username and password. In addition, whenever the username or password is updated, it reflects across the entire system. This is key to staff having access to their emails, intranet, personal and

departmental drives, and access to particular software. Without it, it'd be impossible for staff to do their jobs.

ePCR, the core operational system mentioned earlier that was introduced in 2022, enables crews to capture information on an iPad and share patient information with healthcare partners. The information entered into the electronic patient clinical record (ePCR) is also shared with the Welsh Clinical Portal, a product that gives NHS health professionals in Wales access to patients' digital health records, for recording. Additionally, the Trust is in the process of creating an application programming interface (API) for ePCR to have interoperability with other systems. Similarly, CAD, also described earlier as a core operational system, shares patient details with hospitals so that they can expect and prepare for the patient's arrival.

Whilst exploring interoperability with both the Interim Director of Digital Services and ICT Service Delivery Manager, it became clear that the maturity of the service impacts interoperability. As a service that has been core to the Trust since the beginning, 999 has mature interoperability in contrast to NHS 111 Wales that is in its infancy and as a result is less interoperable. For example, the Clinical Assessment Service (CAS) used by NHS 111 Wales call-handlers shares its data with Adastral, which shares it with GP out-of-hours (GPOOH).



However, whilst writing this report, this system is in the early stages of being changed to a single system for all (NHS 111 Wales and GPs).

Information Standards

NHS Wales use an NHS Wales Data Dictionary which contains the nationally agreed data standards adopted by the NHS in Wales. The NHS Wales Data Dictionary is maintained and

published by the Data Standards Team, part of Digital Health and Care Wales (DHCW). At present, data definitions/dictionaries are being developed for NHS 111 Wales and ECNS.

WAST also follow the Clinical Data Interchange Standards Consortium (CDISC) Controlled Terminology standards. The CDISC Terminology gives clinical research data context, content, and meaning. It also offers a consistent semantic layer across all operational contexts, enabling the CDISC Standards to be interoperable (*Terminology / CDISC*, no date). The standards depict how you should submit a particular data item collected into an electronic dataset.

WAST is proud to have a good understanding of its own data, particularly within 999, which is attributable to its Health Informatics team.

Data Analytics Capabilities

As shared by the Trust's Interim Director of Digital Services, the goal this year for WAST is to use data and analytics to drive improvement (Smith, 2023). This is to begin working towards a greater aim, which is to develop the Trust's analytics maturity from 'diagnostic analysis' to predictive, prescriptive or optimised analytics. Where the Trust can pro-actively manage and predict issues as opposed to being reactive. At present, the Trust resorts to manual data analysis of programs such as Qlik sense, Power BI, and SharePoint. However, the Trust is able to generate reports on almost anything.

In addition, WAST has adopted an information lifecycle with data quality and data protection as the drivers, to: Acquire, Store, Process, Use, Share, Dispose. However, the capacity of the team supporting data and analytics within the organisation needs improving. There are currently 8 vacant positions across 5 departments in need of either foundational, analyst or developer roles, see Fig.3.

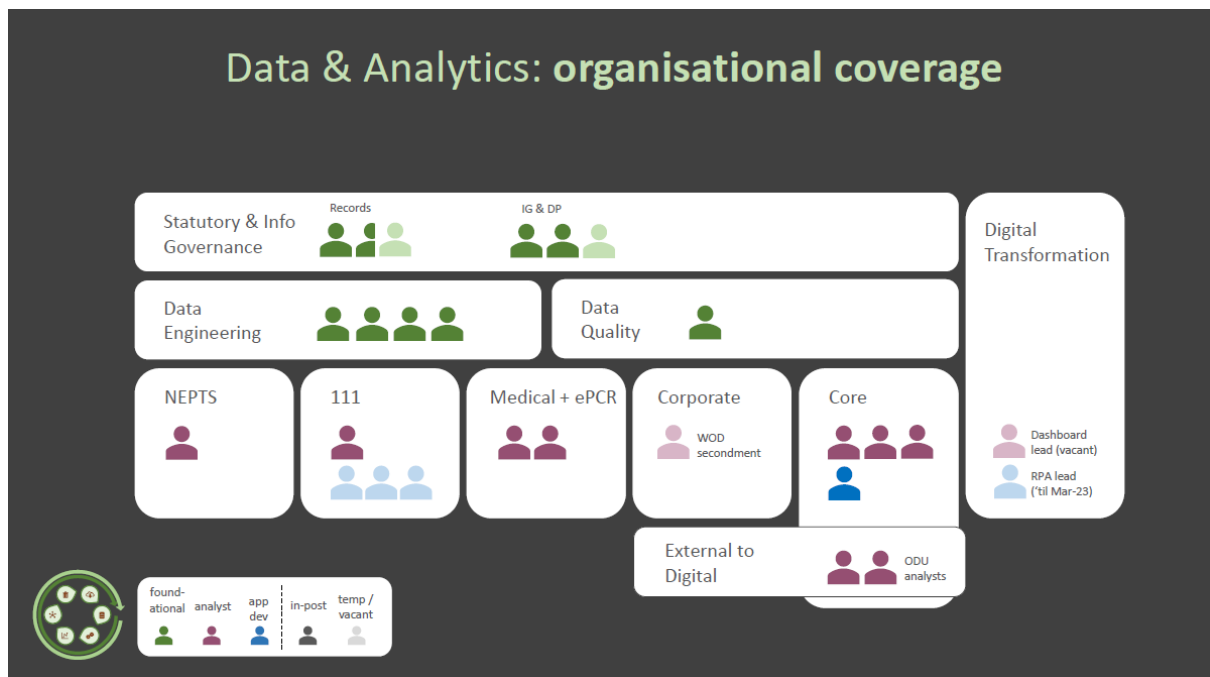


Fig.3. An infographic of the current organisational coverage

Key Aims, Principles and Programmes

The key aims of the digital strategy, aptly named 'digital missions' have been formulated into a pyramid structure with patients being identified as the focal point for WAST, closely followed by their staff who service the patients, followed by the data and technology required to fulfil those duties. The structure is depicted to show that nothing can effectively be delivered for patients without having development of the supporting layers beneath them, otherwise there is risk to the top of the pyramid becoming imbalanced and unsustainable, see Fig.4.

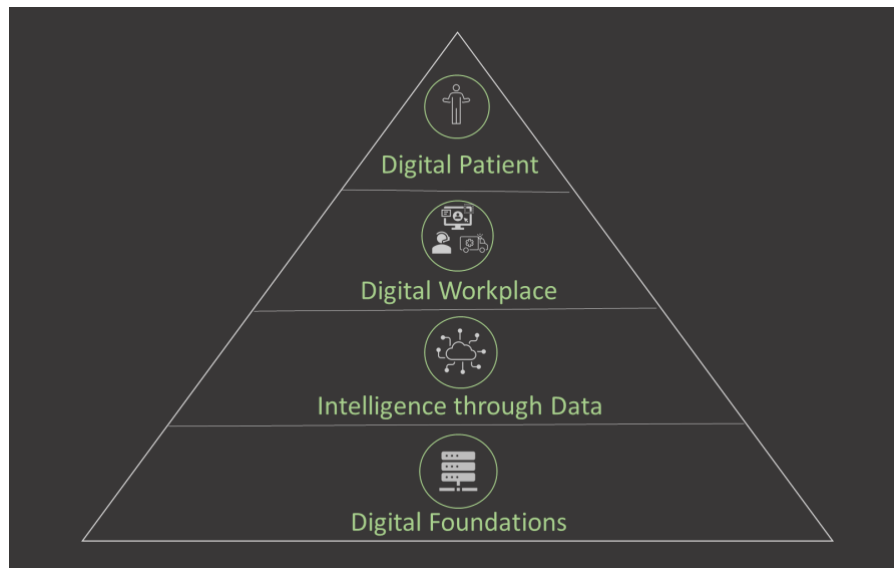


Fig.4. Screenshot of WAST's digital missions pyramid structure

In order of priority, mission one which for the purposes of this report will be renamed 'the first key aim', is to empower the digital patient. Its principle is to empower more patients to independently manage their own care and reduce unnecessary conveyance to hospital. Some of the programmes listed to achieve that aim is to deliver new pathways and care frameworks, improve data and tools available to clinicians and operational staff, and to collaborate with other care providers to explore digital solutions for care closer to home.

The second key aim is to build the digital workplace. The principle behind this mission is to align with the Topol Review, a report commissioned by the Secretary of State for Health and Social Care that explores how to prepare the healthcare workforce, through education and training, to deliver the digital future (*Preparing the healthcare workforce to deliver the digital future The Topol Review An independent report on behalf of the Secretary of State for Health and Social Care*, 2019). Therefore, WAST aim to train their healthcare workforce to use new digital tools to allow them to be the best they can be. The programmes to help realise this goal are plans to review any wellbeing, cultural or organisational development considerations that arise from the use of new technology, deliver training and skill development to adopt new technology, and to expand the role of 'Digital Champions' within the Trust.

To achieve intelligence through data is the third key aim. The principle is to get the most value from data to drive the best decisions. The programmes listed to achieve this mission are to pilot new ways of handling, storing and securely sharing data across NHS Wales in real time, to review the architecture of WAST's data to make it more accessible and understandable, and to scale and skill data teams to provide first-class insights.

And finally, the fourth key aim of the digital strategy is to improve the Trust's digital foundations. The principle being that there is a requirement for a flexible, resilient, and secure digital infrastructure fit to carry the ambition. Its programmes to realise the aim are to move away from overly complex and bespoke systems to more standardised architecture that can be understood, adapted, and scaled, to build a Target Operation Model to review service support, and to develop and deliver a Service Improvement Plan.

Four realistic aims that will undoubtedly form the basis for continuous improvement and service development within the Trust to build upon as WAST moves through its the long-term strategic framework to provide the right care in the right place at the right time, help patients more easily access our services at the right time, and help patients and staff to stay healthy.

Strategic Analysis

To critically evaluate the Trust's digital transformation strategy, it must be measured against relevant evaluation tools. NHS Providers and Public Digital developed a guide through good practice and peer learning to raise the profile of digital among boards. Part of that guide is a list of key characteristics that indicate a good NHS digital strategy (Building a digital strategy, 2021). To evaluate WAST's strategy, the list will be used as a measure to compare against the strategy's content to identify its strengths and weaknesses.

	Description	Score 1= low, 5= high	Justification
Integrated	To succeed, digital transformation can't just be a bolt-on. Digital should be	5	This characteristic is declared on page 6 of the strategy, whereby it is noted that it's a 'journey as an

	integral to system and trust-level strategies and business plans. It is an enabler for wider improvement.		organisation and the whole team is involved’. • For the first year, digital is integrated throughout the IMTP. • The strategy states its missions and phases of delivery will be tracked at the WAST Strategic Transformation Board. • An objective to create a Target Operating Model (TOM) that integrates digital to fulfil it exists within the strategy.
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The Trust’s strategy has successfully taken into account integration. The notion is weaved throughout the document, and since it’s publication in November 2020, there has been a steady adoption of naturally integrating digital. It’s goal to ‘empower all of our existing visions, strategies and plans’ is gradually becoming a reality showcasing the strength of the strategy to support it.

	Description	Score 1= low, 5= high	Justification
User-centred	Digital transformation should address the most important needs of patients, service users and staff.	5	• Being user-centred is included within the Chief Executive’s foreword which introduces the strategy. • Positive transformation is identified as being rooted in solving a need for people. • A guiding principle says to ask yourself, ‘who is this for?’, ‘what is the need that it addresses?’, ‘how will it address that need and have I checked with the user?’. • The key aims of the strategy begin by identifying patients as the focal point, closely followed by ‘our people’.

As identified in the business drivers’ section of this report the foundation of the strategy is underpinned by the needs of its three main groups: Our People, The Patient, and Welsh Health and Care, and it encourages a continuous cycle of engagement with the user groups

to better understand and service their needs. Throughout the entire document there are references to always address the needs of the patients, service users and staff.

	Description	Score 1= low, 5= high	Justification
Useful to teams	Digital strategies can't detail everything you're planning to deliver. Instead, focus on providing guiding principles to help people make the right decisions.	4	• Five clear principles exist within the strategy to delivery digital activity successfully. • Each principle features a series of questions to help guide activity. • The principles enable the organisation to react effectively to existing or short notice change.

The guiding principles listed within the strategy vary from empowering people, ensuring access for all, and delivering value from data to working in partnership with all of NHS Wales and delivering sustainable change. The additions of questions to consider supporting people to make the right decisions is beneficial and will help to keep the activity focused. However, if positive transformation is rooted in solving a need for people, the need must be identified. What appears to be missing, is a guiding principle to discover a need before activity commences. The risk for the organisation if a user need hasn't been unearthed first, is a waste of time, energy, and money. Precious resources the Trust hope to preserve potentially being utilised on an undesirable product. Yes, the strategy does note in its opening pages a continuous cycle of engagement will be needed with the user groups to better understand and service their needs, however, if this notion isn't carried through into the guiding principles, there is a risk it will be overlooked.

	Description	Score 1= low, 5= high	Justification
Mainstream	The best strategies are widely understood and widely adopted. Successful digital transformation in healthcare depends on close alignment across many teams, not just the IT department.	3	• The digital transformation strategy document has not been updated or recirculated since 2020. • WAST's digital strategy is progressively integrating into other strategies that are renewed annually.

			• Priority programmes, which now naturally consider digital, are shared with staff at CEO Roadshows which everyone is encouraged to attend. • Most projects have a form of a Digital Champion to aid change management.
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From lived experience, it is clear that the digital strategy of the Trust is not widely understood and widely adopted. Change management to digital remains an issue across the organisation, and the age of the document has buried it under a ream of other strategies that are typically renewed annually. Digital transformation programmes, however, are widely discussed at Board, on internal communication channels and at CEO Roadshows which all staff are encouraged to attend for updates direct from the Chief Executive.

	Description	Score 1= low, 5= high	Justification
Realistic	It is important to build trust - many staff have experience of being let down by the promise of new technology. Talk about what you've already delivered and set realistic goals.	2	• This digital strategy was the first of its kind, therefore there is no mention of what's already been delivered. • Realistic objectives are listed. • Promises to ensure existing digital programmes are delivered successfully within the next three years.

As the first ever digital strategy for the Trust, there isn't another to compare it to. Therefore, listing achievements would be less effective in building trust because WAST is without a document that promised to deliver them. This strategy document was also the kick-starter for WAST to begin laying its digital foundations to begin building upon. In the next version of the digital strategy, we would hope to see talk about what has already been delivered and realistic goals for the next set of activity.

WAST has, however, created a set of realistic objectives to reach its key aims and included them within the strategy to begin building that trust through transparency with staff.

	Description	Score 1= low, 5= high	Justification
Focused	A good digital strategy is selective. Making trade-offs is difficult but essential to free up the bandwidth required for digital transformation.	1	There is little to no evidence within the strategy of any trade-offs.

The strategy document has a very positive outlook towards adopting digital transformation, there is no mention of making trade-offs in return for gains in other aspects. It may be fair to assume that since this is the first of its kind for the organisation, they needed to drum up support for the adoption of digital which could have been limited by the notion of making trade-offs.

Overall, from the NHS Providers guidance of what makes a successful strategy, WAST has delivered. In some instances, the key characteristics scored low, however, the justification of the strategy being the first of its kind outweighs the need. Particularly in the case of sharing the organisations digital deliveries to date and trade-offs.

An area that does need revisiting in the next iteration of the strategy is how mainstream it becomes. By utilising support from other teams and executive management groups it will be possible for the strategy to be widely understood and adopted. Also, by involving additional teams the close alignment across many teams, identified in the 'Mainstream' description, naturally begins.

To continue the strategic analysis of WAST's digital strategy, the PESTLE analysis framework will be utilised to hypothesise future trends that could have an impact. It will provide valuable insight into the external factors that the strategy might have overlooked (PESTLE Analysis | CIPD, 2023). The simple framework will help to facilitate an understanding of the wider business environment for a fair strategic analysis of the strategy's strategic thinking.

	Factor	Implications	Impact 1= low, 3= high	Likelihood 1= low, 3= high	Risk Score (Imp x Likeli)	Mitigating Actions
Political	Commissioners, stakeholders and/or funding groups reducing investment.	Restrictive budgets will put pressure on the Trust to make cutbacks, potentially putting a stop to innovation/exploration of new software or services.	3	3	9	Consider the repercussions of limited investment and plan a series of programmes that are financially viable in any situation.
	Industrial action regarding pay or other unfair working conditions.	During the most recent round of industrial action, WAST stopped any activity not directly related to the strikes, effectively halting any digital progress.	2	1	2	Create a business case that highlights the importance of progressing with digital transformation to continue the work during periods of industrial action.

Above it has been identified that some Political factors could have an impact on the strategy, particularly the Political factors that influence investment into the service. The mitigating actions that the strategy may benefit from are relatively simple solutions, however, in the case of finances, an argument can be made that the digital strategy is in itself a cost saving exercise. By working smarter with data and automation, and using digital to ensure value and efficiency, it cuts the waste that is a financial burden on the Trust. For example, it would prevent sending resource to unnecessary incidents/emergencies, having too many control-room staff on a day with a decrease in demand, or hiring additional team members for mundane admin work.

	Factor	Implications	Impact 1= low, 3= high	Likelihood 1= low, 3= high	Risk Score (Imp x Likeli)	Mitigating Actions
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Economic	Economic instability; cost of living increase, interest rates climbing, high inflation.	Will see a knock-on effect to investment awarded to the Trust and prices to procure new estates, fleet, and technology will rise too.	1	3	3	The risk here is lower than navigating budget cuts, because price rises are for individual departments to manage. Including a list of priorities within the digital strategy will help to ensure any available budget is used wisely.
	Long-term sickness absence remaining an issue for the Trust.	Training a healthcare workforce to use new digital tools will be challenging if many remain on long-term sick.	1	2	2	Work with Occupational Health and Wellbeing who are exploring ways to keep staff healthy and helping to get people back into work, to explore development options.

The greatest economical factor that needs to be considered is the current economic instability of the UK and the potential for a recession, and whilst there isn't a direct statement about the economy within the digital strategy, there is a paragraph that understands 'the shifting landscape' post-COVID and a need to be flexible and agile. A potential recession, however, links back into what was evaluated previously under political influences, that an argument can be made that the digital strategy is a cost-saving exercise, therefore, it is not recommended to delay its progress. However, to mitigate the risks associated with rising inflation, the strategy must be clear on its priorities to resource their programmes and projects appropriately.

	Factor	Implications	Impact 1= low, 3= high	Likelihood 1= low, 3= high	Risk Score (Imp x Likeli)	Mitigating Actions
	Welsh Language Standards promote and facilitate the Welsh language to ensure	There will be a need to ensure new technologies, services, software or other is bilingual. The	3	3	9	By considering the Welsh Language Standards requirement throughout, it is possible to

Social and cultural	it is not treated any less favourably than English.	Welsh language cannot be an afterthought.				manage expectations and plan effectively.
	More of the workforce are remotely working from home.	Developing a remote workforce into a digital workforce will present challenges. Particularly with regards to training.	2	3	6	Briefly mentioned in the objectives of its second key aim, 'to build the digital workplace', careful consideration will be required to effectively inspire behaviour change from home. Consider developing a communications strategy with the Communications Team and Workforce and Organisational Development teams.

The Welsh Language (Wales) Measure gives official status to the Welsh language in Wales, and the Welsh Language Commissioner governs the Standards that over 120 public bodies have implemented. People have the right to contact the Commissioner to make a complaint if they have not been able to receive a service in Welsh, whereby the Commissioner may give a 'compliance notice' to an organisation, therefore, it is important that the Welsh language is not treated as an afterthought. Unfortunately, these measures nor the need for dual-language services is present within the digital strategy, as a result it is not reasonable to assume that the planning process has considered the need to manage expectations and plan effectively.

The strategy has, however, referenced its support of the wider NHS Wales strategy 'A Healthier Wales' which aims to deliver improved population health and wellbeing, better quality and more accessible health and social care services, higher value services and additionally a motivated and sustainable workforce. The strategy states that its content builds on these intentions to create 'A Healthier Wales'. The social and cultural factors here are the promise of improving the health of an entire population and better accessibility for all. To strengthen this, the

strategy includes a digital principle to 'ensure access for all', which includes the digital illiterate and tech-poor groups. Everyone, regardless of their digital ability, is entitled to the same level of care from WAST. A critical user need identified within the strategy is the ability to understand and use the Trust's services. Of course, this should apply to Welsh language users too.

	Factor	Implications	Impact 1= low, 3= high	Likelihood 1= low, 3= high	Risk Score (Imp x Likeli)	Mitigating Actions
Technological	Blockchain	The untapped potential of blockchain could change the way data is interpreted, shared and gathered.	1	1	1	Keeping abreast of blockchain developments and being prepared to introduce ways to adopt it later if necessary.
	5G	Bringing faster and more reliable internet connections among other benefits, however, the expectation will be for everything to become faster.	3	2	6	Communication with stakeholders, staff and the public will be key to manage expectations.

Noted within the digital strategy is a consideration and admiration for modern technology, particularly the software and applications that have changed the way the general population live their lives. There is also an understanding that these technologies, like artificial intelligence (AI), speech recognition and the internet of things (IoT), have the potential to transform the Trust's clinical model. In Appendix B of the digital strategy is a list of new and emerging technologies and its potential use cases within the Trust, which is indicative of the desired level of digital adoption within the organisation. However, the impact of 5G in particular has not been considered and although the strategy recognises digital's ability to transform WAST's clinical model, the digital strategy unfortunately does not dovetail the Trust's Clinical strategy. It is clear that each directorate strategy was developed individually, unfortunately creating silos.

	Factor	Implications	Impact 1= low, 3= high	Likelihood 1= low, 3= high	Risk Score (Imp x Likeli)	Mitigating Actions
Legal	General Data Protection Regulations (GDPR)	Failure to comply to the legislation can result in temporary bans of processing data and large fines.	1	1	1	Involve the Data Protection and Information Governance team in the strategy and continue to engage with them as the strategy progresses.

The digital strategy makes a brief mention of the Data Protection and Information Governance team who protect the Trust's information assets and should be the first point of contact when considering any change or new implementation involving WAST or patient data, however, it does not clearly state its responsibility towards data protection or how it intends to promote it. In contrast, however, the strategy does include an objective focused on reviewing the digital risks to service provision inclusive of technology, systems, processes, support and workforce requirement to create an Infrastructure Improvement Plan. Although improvements to the infrastructure will improve its security, the Trust's responsibility towards data protection still needs to be recognised and clearly stated, especially with regards to patient confidentiality.

	Factor	Implications	Impact 1= low, 3= high	Likelihood 1= low, 3= high	Risk Score (Imp x Likeli)	Mitigating Actions
Environmental	Reducing the carbon footprint of the Trust	Servers consume huge amounts of energy and contribute substantially to e-waste when they are discarded.	1	1	1	WAST already use a number of virtual servers. This could be an avenue explored to conserve energy in data centers.

WAST's digital strategy refers to its Environmental Strategy, but only in Appendix A, within its 'Strategic alignment and references'. There does not appear to be ownership over its impact on the environment or a desire to deliver green digital advancements. The risk here is needing to back-track and/or change products and services when the Trust acknowledges its responsibility to becoming eco-friendly, potentially delaying digital progression and costing time and money. However, there are several objectives listed within the strategy document that will subconsciously impact environmental issues, such as treating more people at home which will result in less Co2 emissions. Although we'd like to see this acknowledged in future editions of the document.

It is clear from the PESTLE analysis that the strategy is a high-level overview of the key aims, it does not consider risks, nor does it discuss financing the process. There are key external factors that have not been considered that will highly likely impact on progress (Welsh language requirements/responsibility to data protection) and other factors identified that may influence projects and programmes in future (environmental). The unfortunate consequence of these missing pieces will be devaluing a strategy that is geared towards providing value and cutting waste.

For a first ever digital transformation strategy WAST have produced a stellar document that echoes the organisations commitments and purpose. It puts its patients and its people first, aims to streamline services and cut unnecessary waste for better experiences and clearly defines how it intends to deliver it. The strategy is the perfect document to arm a digital champion as it only focuses on the best parts of the journey. Metaphorically speaking, it's a cheerleader for digital transformation. However, there is a need to be realistic (not referencing the very realistic objectives), the strategy needs to acknowledge the risks, give mitigating actions, and be frank about the hurdles the journey to transformation is expected to encounter. That way, the strategy manages expectations, doesn't over-promise and starts to sound attainable. In addition, if important external factors such as the Welsh language and the environment are seen to be considered, those who care for and are passionate about them will be more inclined to engage. Remember, this strategy document will require the support of a huge number of stakeholders, therefore clarity, transparency and honesty will be key to build confidence in the strategy and receive the required support.

Bibliography:

Building a digital strategy (no date). Available at: <https://nhsproviders.org/building-a-digital-strategy/what-makes-a-successful-strategy> (Accessed: 26 May 2023).

Haywood, A. (2020) *Disruptive Excellence: WAST Digital Strategy*. Available at: <https://ambulance.nhs.wales/files/publications/strategies-and-plans/digital-strategypdf/> (Accessed: 26 May 2023).

NHS England » Our ageing population presents the NHS with its greatest challenge (no date). Available at: <https://www.england.nhs.uk/blog/martin-vernon/> (Accessed: 21 May 2023).

PESTLE Analysis / CIPD (no date). Available at: <https://www.cipd.org/uk/knowledge/factsheets/pestle-analysis-factsheet/> (Accessed: 26 May 2023).

Preparing the healthcare workforce to deliver the digital future The Topol Review An independent report on behalf of the Secretary of State for Health and Social Care (2019).

Providing the Infrastructure - Digital Health and Care Wales (no date). Available at: <https://dhcw.nhs.wales/providing-the-infrastructure/> (Accessed: 21 May 2023).

Steel, N. *et al.* (2018) 'Changes in health in the countries of the UK and 150 English Local Authority areas 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016', *The Lancet*, 392(10158), pp. 1647–1661. doi:10.1016/S0140-6736(18)32207-4.

Terminology / CDISC (no date). Available at: <https://www.cdisc.org/standards/terminology> (Accessed: 21 May 2023).

Smith, L. (2023) 'Digital Strategy Chat', *MS Teams*.