Health Education & Improvement Wales

Digital and Data Strategy (2023-2028)

Contents

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1 ~ Introduction

This document sets out the Health Education Improvement Wales (HEIW) strategy and approach to digital and data business intelligence over the next five years (2023 -2028). It is recognised that technology and data will continue to advance, rapidly, digital innovation is an enabler of transformation and redesign.

Digital technology and data insight was at the forefront of the response to the pandemic, it will now be central to how health and social care services are re-built and remobilised in the recovery from Covid-19. Technology and the better use of data will influence and improve the future of work, training, education, and the delivery of care and wellbeing. It will enable responsive and continuous improvement, innovation and good decision making. The level of required transformation is set against a backdrop of increasing demand on health services from an aging population with more complex needs, a competitive workforce market, staff shortages and a workforce that is recovering from the pandemic; there is a necessity to maximise on the potential for innovation and transformation.

Research indicates that the speed at which technology is doubling is every 18 months when computing is measured. Over 89% of the worlds data has been collected in the last 2 years. The future of technology and data does not appear to be slowing down and only looks to be increasing. Advances in technology have grown at what appears to be an exponential rate throughout the past 10 years, and there has been a shift in the use and importance of data in informing business decisions and service re-design. Given the rate of change and technological advancement, this strategy is not about reaching a set intended destination. It is instead, a focus on the priority areas that will over time improve, practices, culture, processes and technologies to respond to raised expectations within HEIW.

The purpose of this strategy is to set out a vision and provide direction and clarity about the areas of priority and the aims that will guide the digital and data team in HEIW over the next five years. This strategy sets the digital vision which enables delivery of HEIWs corporate vision of *Transforming the workforce for a healthier Wales*. Detailed in the strategy are five missions, each are specialist areas required to deliver the Vision. Each mission has several objectives, and these will be delivered via implementation plans. To ensure an integrated approach, the implementation plans will form part of the IMTP process as strategic objectives and enabling plans. The approach provides a framework of measurable objectives to be delivered against which progress can be assessed.

2 ~ Organisational and Strategic Context (HEIW)

2.1 ~ Organisational Context

Health Education and Improvement Wales (HEIW) is a Special Health Authority within NHS Wales and plays a leading role in the education, training, development, and shaping of the healthcare workforce in Wales, to ensure high-quality care for the people of Wales and 'transform the workforce for a healthier Wales'.

The role of the workforce is pivotal in building sustainable healthcare for the people of Wales in the future. HEIW is an all-Wales organisation employing over 380+ core members of staff and 187 sessional staff who work for other organisations. HEIW has an annual budget in excess of £300 million. 91% of the budget is spent on education and training and associated activity. HEIW supports the education and training of a wide-ranging trainee and student population including:

~ 3,000 training-grade staff and associate specialist doctors and dentists

~ 2,700+ pharmacists, 1,600+ pharmacy technicians, 100+ trainee pharmacists and pharmacy technicians' trainees

~ 3,300 new Nursing and Allied Health professional students

~ 1,600 dentists and 3,400 dental care professionals

~ 700+ optometrists

~ 9,500 (total number) Nursing and Allied Health Professionals.

HEIW VISION - To develop a skilled and sustainable workforce that improves care and population health.zhv

HEIW PURPOSE - As part of the NHS, to work with partners to plan, develop, educate and train the current and future workforce

HEIW ADDED VALUE - Develop national strategic solutions for workforce demand and supply

2.2 ~ Strategic Context

Wales 4.0 a Welsh Government assessment suggests that we are in the fourth industrial revolution facilitated by advances in digital technologies, including AI, machine learning, robotics, biotech which has the potential to transform the Welsh economy.

Technology will play a significant role in reshaping how we work and where we work and the skills, training and education required to be successful.

The Topol Review (2019) explored how technology would impact healthcare, specifically, and concluded that the NHS should focus on "building a digitally ready workforce that is fully engaged and has the skills and confidence to adopt and adapt new technologies in practice and in context" (p.82) because within 20 years, "90% of all jobs in the NHS will require some element of digital skills", and "staff will need to be able to navigate a data-rich healthcare environment" (p.5).

However, the predicted timeframe to improve infrastructure and upskill staff has been drastically reduced as rapid transformation is catalysed by the pandemic.

The Health and Social Care Workforce Strategy was launched in 2020, developed jointly by HEIW and Social Care Wales (SCW), with substantial input from partners, it sets out the vision, ambition and approaches that put wellbeing at the heart of plans for the NHS and social care workforce in Wales.

The ambition is that we will have a motivated, engaged and valued, health and social care workforce, with the capacity, competence and confidence to meet the needs of the people of Wales.

The workforce strategy set out HEIW's ambition, that by 2030, the digital and technological capabilities of the workforce will be well developed and in widespread use to optimise the way we work, to help us deliver the best possible care for people.

This theme highlights the need to raise the profile of digital literacy, skills and capabilities as an integral part of service and digital transformation, and the parallel need to invest in education and organisational development if we are to accelerate the pace of change.

3 ~ Digital In HEIW

3.1 ~ Current Digital Service (the Digital Directorate)

The following are the core functions that make up the digital service in HEIW

Information Technology	Development	Digital Learning
Responsible for the equipment and end to end services that enable staff to carry out their role from day one.	Manage 16 application / systems and 9 websites and has specialists in business process, software systems, design and development.	Manage online learning and work with teams to ensure they have the support and guidance required for digital events and learning.
Health Education Database	**Digital Transformation**	**Cyber Security**
Manage training grade database with Health Boards to quality assure information on postgraduate medical, dental and pharmacy training in Wales	Leading the digitisation of HEIW functions in maximising the use of M365 to ensure the benefits are realised across HEIW. Working collaboratively with National Programmes to research the impact of digital transformation on the NHS Wales workforce.	Protect devices, systems, networks, services from attacks. Ensure confidentiality, integrity and availability of data/information, prevent unauthorised access, destruction, disclosure, loss or modification.
Information Governance	**Digital Capabilities**	**Data Analytics**
Ensure IG systems and processes are in line with best practice and the law when handling sensitive personal information	Delivering a Digital Capability Framework for HEalth and Care professionals. Providing a self-evaluation tool allowing individuals to assess their capability and find relevant development opportunities.	To empower and support NHS Wales staff to use workforce information to make better strategic data dri ven workforce decisions.
Planning		
Partnership Working		

Since the beginning of HEIW the digital team have grown, capability has increased and the team matured. The digital team have already been successful in delivering an ambitious work programme. These successes included the

○ Migration of all digital application to cloud native platforms,

○ Improvements in cyber and information governance of the organisation.

○ Development of robust governance, programme, performance and risk management approaches

○ Strong lifecycle management approaches to software development

○ Innovative digital learning approaches

○ Innovation and business improvement through O365 and enabling remote working

3.2 ~ Digital and Data Maturity

The digital culture of HEIW is important as a foundation that will positively impact the potential benefits and value of digital transformation. Culture and digital transformation go hand in hand. Research conducted by Gartner found that scaling the benefits of digital will continue to be elusive if the challenges associated with transition and culture are not tackled, these included organisational silos, risk averse culture, a lack of funding and the digital skills gap.

These have therefore been addressed in the strategy and will support the maturing digital and data culture of HEIW. To accelerate transformation Gartner recommend developing a culture that is focused on collaboration, empowerment and customer centric. These are in line with HEIW values and will be reinforced through the missions on implementation plans that support this strategy.

A recent assessment of our digital maturity by internal audit has indicated that, 'Overall, HEIW is well positioned to take forward the use of digital technologies. The organisation is well placed to enable the redesign of service delivery'. The report also recognised the need to strengthen the digital culture to ensure service users own and challenge the status quo. HEIW needs to grow and mature its Business Intelligence and advanced analytics discipline and data science to maximise the use of data internally and

externally to ensure the full achievement of its statutory functions.

4 ~ Benefits, Value, and Investment

4.1 ~ Benefits and Outcomes

Whilst digital transformation is critical to the success, the transformation isn't simple, it is multifaceted, complex, and filled with challenges. However, by aligning HEIW business strategy and technology there are positive outcomes to be gained. Depending on the programme of work this can include:

~ Financial efficiencies and cost savings – however significant research has been done that demonstrated that return on investment from digital transformation is difficult and does not immediately show as a monetary impact

~ Improved Quality

~ Employee / staff productivity

~ Encourages collaboration and improved communication

~ Creating better stakeholder and staff experiences

~ Improved business continuity

~ Enhanced security

~ Reduction of technical debt and outdated technology

~ Improved decision making, risk management, monitoring and performance management through better data and analytics. This recognises the ability of technology to generate value and is dependent on the quality of data.

~ Improved legal compliance with regulations and guidelines

~ Limits human error or eliminating time consuming manual data entry and human inefficiencies

~ Enables future digital growth - The final benefit of digital transformation is the most fundamental. Digital transformation is the initial act that sets the stage for all subsequent business growth.

It is essential that there is a strong focus on realising benefits through digital programmes is essential to ensure programme goals are achieved and that value is delivered. It is also necessary for a sustainable cycle of investment and transformation. To achieve this there will need to be collaboration and coordination with the IMTP process and business case submissions. The HEIW Digital Directorate will utilise the NHS Wales Benefits Framework to ensure benefits of all digital programmes and projects are identified, measured, and reported upon in accordance with the national framework.

4.2 ~ Investment and Resources

HEIW is committed to investment in digital systems and services to underpin the vision and strategic aims. The Board has recognised the need for increased investment in the digital capability of the organisation, and since the beginning of 2021 has invested in growing the in-house digital team and supporting business cases to investment in commercial arrangements and partnerships.

Additional funding required during the duration of the strategy will be assessed through detailed business cases or investment plans for each strategic objective, examples include business cases supporting the trainee single platform, the expansion of the data and analytics function and data infrastructure improvements. Digital investments decision making will follow a set of principles to prioritize, fund and deliver digital initiatives. The business case will need to set out a compelling case for investment.

The current capital allocation from Welsh Government will also need to be reviewed to support a technical refresh programme of hardware that was bought at the inception of HEIW as this will be coming to end of life during the period. Detailed investment plans will be drafted and taken through digital governance forums. In the current economic climate consideration will be given to digital inflation as this will place a significant increase on costs and forecasting. The Digital Team will work nationally with Welsh Government Colleagues to ensure use of the Digital Priorities Investment Fund.

5 ~ HEIW Digital Vision

HEIW's Digital Vision is

> To deliver high quality, innovative, accessible digital and data solutions supporting the development of a digitally skilled workforce which improves care and population health

HEIW's vision encompasses several component parts and includes an internal organisational focus and a national external focus.

Internally, it ensures delivery of excellent high quality innovative digital and data solutions to staff and users of HEIW services across Wales. This will deliver excellent education and training solutions, innovative and digitally enabled learning and a digitised and improved way HEIW runs its operations and functions. Digital transformation provides the opportunity to increase organisational agility, sustainability, simplify the user experience, manage security risks and balance productivity and security. At the heart of this vision will be a commitment to increase data quality, availability and usage to move towards being a data driven organisation that is informed and gains insight and knowledge from data to drive continuous improvement.

Externally, it will also prepare the wider NHS workforce with the digital skills required to work in a digitally transformed environment. HEIW will not be responsible for the delivery of digital health and care systems for front line services, that is the remit of Health Boards, Trusts and Digital Health and Care Wales (DHCW). HEIW will work with those service partners to ensure collectively we champion and build approaches to

demonstrate the transformative ability that digital has to change, improve, make more efficient and re- shape the way work is done in the NHS and therefore the shape of workforce and education and training. HEIW will also take a leading role in producing and analysing workforce data for use across NHS Wales.

Out of Scope is the development of the digital professional workforce, this work programme is being progressed for NHS Wales by Digital Health and Care Wales. Also out of scope is the development of digital system and solutions for the provision of care or only for use in Higher Education or by private contractors.

6 ~ HEIW Digital Missions

To achieve the digital vision, five digital missions have been identified in consultation with staff and stakeholders. Several organisational wide drop-in sessions were held in which staff were able to share views and opinions. The objectives have been tested and refined in several engagement sessions, including the Digital Transformation Leadership Group and a Board Development Session where all Board members were present. The missions will remain consistent across the period of the strategy. The milestones and deliverables will be detailed in the IMTP and departmental plans.

MISSIONS

1. Delivering high quality innovative digital solutions to enable HEIW to transform service delivery of its statutory and operational functions

Outcome: HEIW delivers the best technology following industry best practice standards. This will enable delivery of excellent digital solutions that will enable HEIW to transform its core business and strategic functions. This will create an organisation that has a strong technology foundation

2. Developing a digital ready and skilled workforce and championing the transformative impact of technology on the shape of work and the future workforce.

Outcome: The current and future healthcare workforce have the appropriate skills, knowledge and resources to provide quality care to the people of Wales to deliver and ensure evolving, improving and sustainable healthcare workforce

3. Delivering excellent innovative digital learning experiences for HEIW staff, students, trainees, and those providing NHS and care staff.

Outcome: Online learning experiences of the current and future healthcare workforce are innovative, challenging, engaging and streamlined to enable effective and efficient training and education. The best devices, products and tools are enabled to deliver high-quality, innovative training and education to help develop and engage the current and future healthcare workforce.

4. Delivering effective and secure data capabilities that can drive actionable insights, intelligence and improvement.

Outcome: Data is one of HEIW's most valuable assets. HEIW will increase and improve its Business Intelligence and advanced analytics capability and capacity. Data will be available to a high standard and proactively used to maximise impact and inform insight and decision making internally and externally. This will be enabled by improved data architecture and improved data skills and literacy.

5. Continuously strengthening HEIWs cyber security and information governance posture and resilience to attack

Outcome: There are established governance arrangements, engagements and improvement methodology with clear accountability enabling effective management of cyber and information governance risks at all levels. All digital and data services are monitored against recognised standards and legal directives to improve posture and responses. The level of control is commensurate to the risk profile will be deployed to ensure that risks are managed proportionately. HEIW is prepared to respond to cyber and data protection incidents organisationally and as a part of NHS Wales.

Mission One

Delivering high quality innovative digital solutions to enable HEIW to transform service delivery of its statutory and operational functions

Currently, HEIW has several siloed systems that are aging and need ongoing maintenance. modernisation and improvement. The technical debt of the organisation is growing and there is a need to transition systems and applications into newer technology and refresh the estate. This will enable HEIW to maximise the potential of its digital capability, improve the technical infrastructure and systems by following robust design and principles.

HEIW will achieve this by delivering the following objectives

Objective 1.1 – Deliver Core Digital Products and Systems

In this period (2023-2028) the strategy will focus on the delivery of a core set of HEIW digital systems and services. Each service will be directed by a Senior Responsible Officer and will develop roadmaps and improvement plans. Each service will comply with the principles outlined above. The priority areas will be:

1. **Provide and maintain an integrated platform of digital functions for postgraduate students medical, dental and pharmacy trainees.**

   - HEIW will deliver an online platform to support the postgraduate training journey in NHS Wales that provides a seamless user experience. It will bring together functions from existing applications (provided by HEIW Digital and Data), and new requirements gathered via a series of stakeholder workshops. Improved access to real time data and reporting will inform new ways of planning and structuring the healthcare workforce. The platform will maximise the use of cloud for better availability, reliability, safety, security, speed and agility.

2. **Provide and maintain a national learning platform to support the delivery of excellent learning and continued professional development.**

   - Partnering with an experienced commercial supplier, HEIW in this period will implement and roll out the 'Y Ty Dysgu' learning management system (capacity 160k Health and Social Care workers). This will enhance HEIW's reputation as a provider of high-level education and training to the NHS workforce and NHS and care service providers in Wales.

   - It will provide a standardised approach of course management and delivery of online learning activities. 100% of online courses and virtual learning originating in HEIW being delivered through this system providing learning platforms and experiences that will build a compelling and dynamic experience for the learner increasing their appetite for learning

   - It will include KPI reporting and will act as a vehicle for the operational delivery of HEIW's CPD strategy and digital capabilities work.

   - Once embedded the SRO will explore opportunities of interoperability with other core NHS workforce systems in NHS Wales such as ESR.

3. **Provide and maintain a national platform to support leadership and talent management – Gwella**

   - Gwella is a modern, national leadership portal. It provides open access to compassionate leadership materials, with a learning eco-system. It offers a suite of compassionate leadership, talent and succession management resources, and development and leadership networks. Gwella is a critical digital resource to enable HEIW to achieve the creation of compassionate cultures across health and social care in Wales.

4. **Transformation and digitisation of HEIW business processes and ways of working to improve quality and effectiveness**

   - NHS Wales has invested heavily in an all-Wales Microsoft Enterprise Agreement, which brings significant opportunity to enable digital transformation. This offers the technology options to digitise departmental processes with automation and move away from paper and manual systems and allow the sophisticated reporting through the Microsoft Power Platform where data will be captured once and used many times.

   - In this period there will be assessment and review of the opportunity to transform HEIW business processes offered by Robotic Process Automation (RPA) and Artificial intelligence AI. Robotic Process Automation (RPA) which will enable people to do more value-added work, by having robots take on repetitive, time-consuming, mundane tasks taking learning from other NHS organisations. There will be a full assessment to consider future potential and opportunity.

   - Digital leads and champions will work collectively to actively horizon scan for innovative solutions to consistently review the ways of working and improve delivery in a digital first approach

5. **Deliver improved data infrastructure that enables the delivery of a data informed organisation.**

- There will need to be a review of the data architecture across all systems. Currently HEIW does not have sufficient data warehouse capacity and does not benefit from the full functionality of the Microsoft 265 Power Platform. There will be an assessment of the data architecture required to meet the requirement that HEIW becomes a data driven organisation. The defined data architecture must be fit-for-purpose and is also scalable to achieve future changes in usage. The architecture will need to support flexibility, scalability and governance whilst also mapping to other important national initiatives such as the National Data Resource (NDR) and the re-procurement of the Electronic Staff Record.

6. Deliver solutions to support the placement of undergraduate and post graduate trainees and students.

- Improving the cooperation and interoperability with partners will be a key area of development. One of these areas will be to improve the flow of information and data about the students that HEIW commissions. The digital team will work with Stakeholders to define and develop student placement systems that share information in relation to quality, capacity, and experience of student placements. This solution should provide HEIW and partners the ability to capture, store, analyse and report upon key data to improve reporting and management of placements.

7. Deliver excellent website and communication tools

- HEIW's online presence and communication will have a significant impact on stakeholder perception. The digital team will work closely with the Communications and Engagement team to ensure that the websites and communication tools support the HEIW communication and engagement strategy.

Objective 1.2 – Design and develop all applications and systems based on best practice standards and approaches.

~ User research and design - HEIW platforms, products and services will offer a joined-up and personalised experience to the users and provide intelligence to the organisation. They will be built from a detailed understanding of the perspective of the user. Built into the design will be the commitment to the Welsh Language and accessibility standards ensuring equal access to all.

~ Cloud first - HEIW will leverage the cloud platform progress that it made during the 2021/22 period and continue to build at pace and scale. This means moving away from overly complex, siloed bespoke systems to more standardised architecture that can be easily understood,

adapted and scaled out when our needs, or the needs of our users change. A cloud approach / strategy will be developed to share and direct this objective.

~ Best solutions and partners - There will always be robust technical and financial assessments conducted to ensure the right technology is in the right place. This will maximise the use of off the shelf technology where it meets HEIW needs rather than building bespoke solutions. There will be a strong partnership approach, that sees partnering with suppliers and NHS Providers to develop and maintain an ecosystem that supports the full range of technology requirements. HEIW will continue to partner with DHCW to provide desktop and network infrastructure through a Service Level Agreement so that HEIW can benefit from their national perspective and scope. There will be a considerable effort to maximise the use of Microsoft 365

~ Privacy and security - Clear and mandated standards, guidance and frameworks for this will underpin the delivery of the best services and outcomes that meet user need and are based on the General Data Protection Regulation (GDPR) and Network and Information System (NIS) Regulations. Further details are outlined in the Cyber and information assurance sections.

~ Interoperability and openness - The data and technology standards will be open so that anyone can see them, and the standards are transparent to partners and providers. Solutions will be built based on strong user authentication models which provide a means to authenticate practitioners onto the platform, and an index of users so that they can seamlessly progress their training and career.

~ Develop an agile product approach - The product approach recognises the need to maintain and develop applications through the life of the product (possibly through many iterations) until such time as the product is no longer deemed to provide value and is decommissioned or replaced. These models deliver quicker results and adapt to change in a shorter time frame to meet business and operational needs. This will be supported with a robust Lifecyle management approach and design and an agile development approach to software development.

~ Skills and Resources - Digital teams in HEIW and those that we partner with will have the right skills and opportunity

to continuously learn and improve. Skills competency and resources will be periodically reviewed, and target operating models put in place with appropriately trained and skilled resources. The skills will either be internal to the organisation or in partnership with external providers in order that digital teams can meet the organisation needs to rapidly transform. This will align with the organisation staff development approach and people and OD strategy.

Mission One Outcome

Delivering this mission will ensure that HEIW delivers the best technology following best practice standards. In turn, delivery of excellent digital solutions will enable HEIW to transform its core business and strategic functions.

This will create an organisation that has a strong technology foundation on which it can build and continue to evolve, improve and innovate. There is a strong ambition to deliver world class digital solutions based on excellent principles of governance and innovation.

Mission Two

Developing a digital ready and skilled workforce and championing the transformative impact of technology on the shape of work and the future workforce

Digital Skills, Transformation and Participation

Over the course of the pandemic the adoption of digital technologies was greatly accelerated by years, as many organisations were forced to quickly digitise products and services. This demonstrated the capacity for rapid transformation, with many long-term plans, like telehealth, executed in a matter of days or weeks. To address the challenges facing the NHS this type of transformation will need to continue at pace and scale. To benefit from the opportunity of digital transformation a digital skilled and ready workforce will be essential. HEIW will lead the development of a digital ready workforce, by developing digital capabilities of the workforce

As well as having the skills and confidence to engage in a digital workplace, individuals are also learning how to participate outside of work and given the role of friends and family in developing digital skills, leading to others around them participating digitally. In Wales this is particularly important as despite progress, 7% of the population of Wales are not online, and 23% lack essential digital skills, increasing to 64% for people over 75. This presents a real challenge for Wales as those offline are not just likely to have poorer outcomes, but the lack of access is a significant barrier to effective digital transformation. Those unable to work, learn, or access critical services online tend to be already disadvantaged, and so the increased reliance on technology has had a compounding effect on inequality, and on health and wellness. Therefore, developing the healthcare workforce could act as a catalyst to realising the benefits of digital technologies and improving outcomes, more broadly.

Objective 2.1 National Digital Capability Framework

To address and improve the digital skills of the NHS Workforce, HEIW will lead, develop and implement a digital capability framework for healthcare in Wales (for those who are not digital professionals), in partnership with healthcare professionals. A self-evaluation tool will provide individuals with the opportunity to understand and develop the skills and behaviours required to help them to succeed in the digital environment. This tool will also provide a baseline, and a range of data, which will further inform and evidence the HEIW approach to building a digitally ready workforce and help implement the national approach to digital skills capability frameworks. This work will align and be cognisant of the many existing digital skills initiatives.

The framework approach builds consensus around skills and capabilities, whilst allowing for contextualisation and repetition using different professions and contexts. It provides common language through the complex pathways in and out of the health and care sector, providing structure and cohesiveness, and makes developing digital capability accessible and actionable for individuals, mapping to a range of professions, resources, and tools. A framework approach also allows HEIW to work better in partnership with other organisations employing a similar approach, allowing for easy cross-referencing and signposting to existing resources and support. The digital capability framework,

and self-evaluation tool, will evolve into a comprehensive toolkit to support developing digital capabilities more broadly.

The toolkit will support future digital transformation programmes in Trusts and Health Boards to provide a proactive tool to baseline digital competency and training and development needs. The outcome of the assessment will identify training and skills gaps and those will feed into training and commissioning requirements.

Objective 2.2 Upskilling and Reskilling the Current Workforce

In the context of rising demand, increased health and wellbeing inequalities, higher public expectations, recruitment and resource challenges, and rapid technological advancements, the Workforce Strategy for Health and Social Care recognises the need to transform the way we work by expanding existing roles and developing new roles. If the workforce needs more opportunities to upskill and reskill, then the way training and development is delivered (and funded) must reflect that need. Technology will play a pivotal role in ensuring every individual has all the training, tools, support, and information required to perform their (existing, expanded, or new) role, to the highest standard, anywhere, anytime, from any device.

Opportunities to develop digital skills and capabilities are already available and being collated and mapped to a framework (see 2.1 above). Support to deliver training and skills development in new, and more effective, technology-rich ways is also available, with ambitious plans to expand that offering (see Mission 3).

In addition, we intend to extend our network of Digital Champions to influence and lead digital workforce transformation, beginning, in the first instance, with the Mental Health Workforce. Effective leadership is essential to ensure change is well managed, people are protected and supported, and that the benefits of digital technologies are fully realised. Digital Champions will be appropriately resourced and developed to ensure they have the skills and capabilities required to lead digital innovation and influence and inform future changes. A peer network will be set up and Digital Champions will have access to a range of training and resources including opportunities to undertake formal education.

Applications for Topol Fellows, and HEIW Leadership Fellows with a digital focus, will also be encouraged and supported, all with a view to developing and evidencing our digital capacity and capability. They will act as ambassadors for the digital strategy.

Objective 2.3 Education and Development for Next Generation Healthcare Professionals

HEIW will ensure that the next generation of healthcare professionals are highly digitally capable by mandating that students gain an appropriate level of digital literacy whilst undertaking their education. Genomics, data analytics and artificial intelligence (AI) are already requirements in undergraduate curricula, and students must understand the possibilities of digital healthcare technologies and the ethical and patient safety considerations.

Educating the healthcare current and future workforce to develop, implement and use AI effectively and safely will be a multidimensional challenge, involving undergraduate education, postgraduate training, and lifelong learning. Working in partnership across NHS Wales, industry and academia HEIW will develop a framework approach to influence, resource, design and deliver an educational offering for NHS Wales. This will address the need for all NHS staff to have widespread basic understanding and

knowledge, with a large proportion having general training and skills acquisition, whilst also establishing advanced resources and role development and career pathways for specialist technical teams.

A current constraint in the development of future healthcare professionals is the availability and quality of placements, HEIW will maximise the use of virtual placements to offer alternative methods of training. This will be subject to robust evaluation and feedback.

Objective 2.4 Strategic Workforce Planning and Next Generation Services

The coming years will see healthcare experience significant challenges in relation to increasing demand from an aging population with complex health needs, recruitment, the profile of the workforce, and accelerating technological change. These challenges are unlikely to be resolved within the current operating model of the NHS. To address these challenges, HEIW will consider the impact of digital technology on the workforce, including ways of working, job roles and responsibilities. Whilst also ensuring that all strategic workforce plans maximise the opportunity of digital change and transformation. Gartner describes three categories of technology that have the biggest impact of workforce these are:

Human Extenders

Technologies that **extend when, where and how** people do their jobs

Human Enhancers

Technologies that **enhance human intelligence** so that they can make better, faster decisions

Human Replacers

Technologies that **complete tasks or responsibilities** traditionally done by humans

This will pay attention to the transformation and opportunity happening locally, nationally and internationally, examples include:

- Telemedicine
- Smartphone apps
- Sensors and wearables
- Reading the genome / Writing the genome
- Speech recognition and natural language processing
- Virtual and augmented reality
- Automated image interpretation using artificial intelligence (AI). The 2020 KPMG survey highlights that there is work

still to be done to prepare clinicians for the adoption of AI and will require AI to be built into service design and workforce planning. There is significant potential for AI to reshape administrative workflows in which tasks are automated to support decision making and diagnosis

- Interventional and rehabilitative robotics

- National Programmes e.g., National Data Resource, Digital Services for the Patient and Public, Wales Nursing Care Record, e-prescribing (Digital Medicine Transformation Portfolio)

- Predictive analytics using AI.

Sufficient capacity for transformation also needs to be included into workforce plans and solutions, organisations need to have the capacity to transform. Too few staff, staff burnout and workload slow the pace of any transformation project. It is vital to give staff time and space to think about, prepare for and engage with interoperability projects.

This will influence and direct the future shape of work, the shape of the workforce and the training and educational requirements. HEIW will ensure the workforce implications of these changes are reflected in workforce plans and solutions.

Mission Two Outcome

The current and future healthcare workforce have the appropriate skills, knowledge and resources to provide quality care to the people of Wales. This mission also ensures an evolving, developing and sustainable healthcare workforce

Mission Three

Delivering excellent, innovative digital learning experiences for HEIW staff, student trainees, and those providing NHS and care staff.

Digital Learning

Digital learning is defined as the acquisition of knowledge or skills using technology. The COVID-19 pandemic rapidly accelerated the adoption of technology, forcing many organisations to quickly switch to delivering education and training remotely to ensure continuity. This emergency 'pivot' to online, as it was known, created several opportunities and challenges. It galvanised educators into engaging with online tools, but with mixed results. It takes time and skills to plan and deliver instruction online effectively, and well-designed online learning experiences are meaningfully different from what was offered during the pandemic. Between this and the now ubiquitous online compliance training many have a very negative impression of online learning, and yet research shows that quality online courses are as effective as face-to-face classes (DETA, 2019; CIPD/Accenture).

HEIW will capitalise on the benefits offered via digital learning, based on robust educational principles. In the context of HEIW this is specifically related to the appropriate use of technology in healthcare education and training. It will be used, where traditional methods of classroom based or out of time out of context delivery is not fit for purpose. This is even more pertinent, when the NHS is facing increasing workforce shortages, excessive pressure and a growing level of new and inexperienced staff.

Objective 3.1 Maximising the Opportunity of Digital Learning

HEIW will deliver excellent online learning (which is the use of online platforms and digital tools to deliver and facilitate learning e.g., websites, eBooks, social media and online communities, online lectures, webinars, podcasts and microblogging or a distinct piece of online learning). This will increase networking and collaborating across boundaries, across organisations, irrespective of location or complex organisational structures. This opens opportunities for participation providing a more equitable experience. Online learning will support a range of approaches from wide-scale delivery across a broad geography and large numbers, to small group or cluster-based learning, with opportunities for peer-to-peer learning. It will also be inherently more accessible than face-to-face education and training if it is well designed with accessibility and inclusion in mind. This will also ensure compliance with accessibility standards requirements and our obligation to meet the Welsh language standards and recognising and responding to any potential barriers.

A significant improvement in the quality of online learning will be driven by improved reporting and analysis providing evidence and insights into engagement and participation. At the core of good online learning will be empowering learning creators to put the learner at the centre of the content design to deliver high quality digital learning that is educationally coherent, innovative and evidence based.

The instant access to online knowledge has transformative potential, In the delivery of

- 'Just in time' instruction, where a learner can review some guidance at the time and place they need it.

- providing access to peers in your online network.

- 3D model generated from medical imaging data and projected onto the patient.

All of these applications reduce or remove the need for some instances of formal training.

All of this is absolutely dependant on equipping staff with right skills and resources. Making online learning available to unprepared and unsupported learners is unlikely to be effective. Any online learning must be appropriately resourced to be effectively designed, delivered, and supported. Access, whether that is access to the internet or access to devices, remains a critical issue, as is ensuring time to participate, and providing appropriate learner support and motivation.

With all of this in mind, HEIW's first aim is to advance high-quality, intentionally designed online health education and training. This will be driven by the central team of learning technologists who are responsible for ensuring the quality of online learning by providing advice and guidance to staff, as well as providing hands on support with more complex technical development. They oversee the learning management system and related technologies, and are experts in the latest industry standards, relevant legislation, online pedagogies, and general best practice in online learning.

Objective 3.2 Maximising the use of Emerging Technologies

New technologies have the potential to transform, or even disrupt, health education and training. For example, augmented reality is a virtual overlay onto the physical environment with applications for real-time instruction and just-in-time learning, which could replace or reduce the need for some instances of formal instruction. A nurse might use projection-based AR to view a virtual image of the underlying vasculature on the surface of the skin making it easier to locate a vein; or a surgeon might fuse digitally enhanced images directly into the microscope of a surgical device; or even superimpose the patient's anatomy in 3D directly onto the surgeon's retina. This kind of simulation and remote collaboration has implications for both learning and for placement activity. In terms of formal learning, it is now possible to give students a totally unique 3D perspective of every part of the body, and studies show that students learn in half the time as those in the cadaver lab, as well as showing a dramatic improvement in long-term retention of knowledge. Other software combines both virtual reality environment and haptics (sense of touch) to provide real-time feedback on individual medical procedures, providing a safe, virtual environment where practitioners can perform and train and develop skills, and research, again, shows this to be more effective and more efficient.

When other technologies like machine learning and artificial intelligence (AI) are added then that experience becomes highly personalised as interactions are tracked and analysed informing individualised pathways and interventions based on specific gaps in knowledge and skills analysed during the activity. Another example is when AI and natural language processing (NLP) and large language model (i.e., ChatGPT) are added to patient simulation which means the responses become much more realistic.

Another idea that has gained traction is the idea of incorporating techniques from gaming to improve motivation and engagement. Given that many games are in fact learning pathways it seems a sensible approach, however recent meta-analyses show mixed results.

There are numerous applications for the use of emerging technologies in developing technical and soft skills, as well as clinical applications. Clearly the impact on digital learning could be profound and HEIW has a role in ensuring that this technology is appropriately adopted across the sector. The challenge with emerging technology is the risk attached. Early adopters find that it is often expensive, and there is little understanding of best practice or support available to them.

HEIW has a unique position with broad oversight, capacity, and reach, to horizon scan, and research and test and evaluate new digital learning technologies to lead, support, and guide the sector. During this period the HEIW digital team will work with the simulation team to test and evaluate immersive technology in the delivery of HEIW training and education.

Objective 3.3 Maximising Innovation and Impact

Digital Learning must be an integral part of a wider learning strategy to ensure digital learning is embedded into working practice. New ways of learning will be required if we are to respond to the ever-changing skills landscape, and, in the context of resource challenges and time pressures, we must find more efficient and effective approaches to delivering scalable education and training.

HEIW will work as a system leader and partner in persuading internal and external stakeholders to move to digital learning. This will be achieved by developing and producing, guidance base evidence and good news stories. HEIW will use the new learning management system to establish communities of practice to share knowledge and guidance. Working in conjunction with the simulation team the digital team will research and evaluate new approaches and standards to delivering effective scalable education and training to respond to increasing resource challenges and time pressures.

Mission Three Outcome

Online learning experiences of the current and future healthcare workforce are innovative, challenging, engaging and streamlined to enable effective and efficient training and education.

The best devices, products and tools are enabled to deliver high-quality, innovative training and education to help develop and engage the current and future healthcare workforce.

Mission Four

Delivering effective and secure data capabilities that can drive actionable insights and intelligence to deliver improvement.

The ambition is to deliver effective data capabilities in a governed, secure manner that can drive actionable insights and intelligence for HEIW and NHS Wales. This will mean that HEIW has the right information in the right place, accessed and used effectively by the right people to make informed strategic and operational decisions about the organisation. HEIW recognises that Business Intelligence and advanced analytics are the methods and systems by which the organisation can achieve insight and deliver improvement. These methods can answer business related questions, propose new questions, learn, adapt, improve and gain actionable insights and intelligence that drive improved performance and continuous learning and adaption.

HEIW will grow and mature its Business Intelligence (BI) and advanced analytics discipline to maximise the use of data internally and externally to ensure the full achievement of HEIW statutory functions and strategic ambitions to transform the workforce of NHS Wales.

As a strategic workforce organisation this will also mean a dedicated focus on the role and importance of workforce data across NHS Wales. In the context of what has been described by a recent House of Commons document that "The National Health Service and the social care sector are facing the greatest workforce crisis in their history", the strategic importance of workforce data has never been so important and will only continue to grow. HEIW is not the data controller of workforce information across NHS Wales and therefore partnership working with employers and NWSSP will be essential. HEIW will work in partnership to ensure transparency and availability of workforce data to inform strategic workforce planning and to influence service planning and inform resource allocation, as well as contribute to workforce research. This will be based on a detailed understanding and analysis of workforce supply and demand issues.

HEIW Data Maturity and Direction

The 'Advisory Board' BI Maturity Model is a self-assessment tool that is intended to highlight organisational strengths and weaknesses in a BI programme. The model is based on four stages of maturity to improve technology and analytics capabilities. HEIW was assessed as a having Fragmented Analytics (first stage of maturity) which is dominated by local, departmental thinking and disconnected silos of data housed in what are sometimes called "point solutions." This is a result of legacy data management approach held across previous organisations that have resulted in silo data collection methods, predominately in spreadsheets or narrative documents and therefore data voids exist, and the opportunities for data linkage and more advanced technologies for data storage and analytics have not been realised.

The objectives outlined in this strategy will progress HEIW through the maturity model and over the next five years move to an environment where data is treated as a strategic enterprise asset. This will mean that there are multiple sources of data merging in

a consistent view, with measurable results. This will be done through changes and improvements in data governance, a new and approved architectural strategy that maximises the use of standardised platforms and warehousing of data from cross-departments to provide a single version of the truth. This data will be made available via easy to access dashboards maximising use of the Microsoft 365 power BI platform.

Analytic Value Escalator
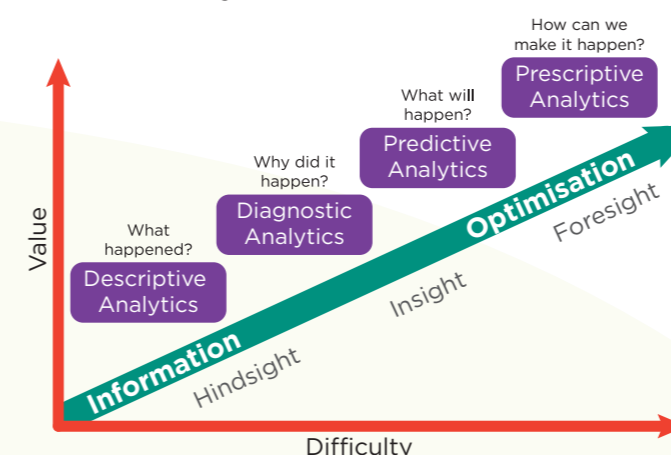
The capability will be developed internally and with external support to grow advanced level predictive and prescriptive modelling techniques. This will create high-quality models for better demand, supply, capacity, financial, and operational outcomes. Achieving this will progress the organisation to level 3 Advanced Analytics of the maturity model.

Objective 4.1 – Providing the right content, at the right time, in the right format to support users.

To improve the availability of data, there will be a review of all current data sources and reporting, to better understand the data that is available, its limitations, definitions, how it is captured, stored and transformed. Work will happen across all departments to review existing data feeds and look for opportunities to improve those data with new data items that add value. There will be a review of how data is shared and made accessible, analysed, presented and visualized. As a result dashboards will be published and readily available, making data more accessible and reducing ad hoc queries. This will create platforms and pipelines of data that allow HEIW to change rapidly and serve up the information as it is required.

This is a significant programme of work as HEIW already manages many disparate data sources and the expectation is that this number will continue to grow and become more complex. Underpinning this programme of work will be stakeholder engagement to determine requirements and gaps in current data availability. New data sources will be added to answer the strategic performance and strategic workforce planning questions of the organisation.

There will be prominent focus on data relating to supply and demand of the workforce and data required to deliver strategic workforce plans across all professions aligned to the priorities detailed in the IMTP. In relation to workforce supply information there will be a focus on data that supports attraction, education and training, redesign and retention. A demand model will be developed to consider wider determinants such as demography and population, interface with service models and performance, technology, skill mix and quality.

Objective 4.2 – Delivering Agile and Scalable Data Architecture.

To enable robust data provision there will need to be a suitable and adaptable data architecture that allows HEIW to manage the scale and type of data required. This will be achieved via an architecture review that will describe the best methods of data storage, acquisition, organisation, analysis and be robust enough to meet the needs of internal teams and existing and future needs of stakeholders. This approach will maximise the use of Power BI dashboard to make data accessible and scalable, moving the organisation away from capturing and analysing data in siloed excel spreadsheets that will lead to better predictive modelling capability.

This will move the architecture from a fragmented approach to an enterprise perspective and establish the correct data warehousing capability and techniques for handling large volumes of data. The design will align to the national data architecture that is supporting the National Data Resource to ensure that HEIW becomes an integrated part of the NHS national data architecture.

Objective 4.3 – Moving to predictive and prescriptive Analytics.

HEIW will develop its capability and capacity to carry out predictive and prescriptive analytics. Prescriptive analytics can be used to test and better understand what is now and what will happen if we change resources and/or processes. This will inform strategy and resource decisions, workforce planning and services redesign.

There will be a need to build and increase the skills internally and collaborate externally with academia, DHCW and industry to ensure we have a reliable pool of expert advisors, users and developers. This will include the need for more information analysts, data scientists, statisticians and software developers to ensure workforce analytics and predictive tools are created. These tools with suitable training will then be used to assess strategic staffing issues and provide models for the future taking into consideration supply and demand. To create a partnership between the Analytics team and Business Leaders to create data stories that inspire action. This approach will allow business leaders to clearly articulate business problems and encourage analysts to solve the problem using data driven insights. This collaboration will provide the opportunity to create compelling data stories that results in better business outcomes.

Objective 4.4 Data Standards, Quality and Governance

It is essential that the data meets recognised quality standards for use. Processes, standards, and governance will be reviewed to ensure that data used is, complete, accurate, timely, consistent and available. Data in HEIW will be effectively managed so that users understand data and its advantages and limitations as well as their own responsibilities. This will be supported by appropriate governance structure and arrangements.

Internally a data improvement plan will be developed to improve data quality and data standards. It is recognised that with the demand for data and analytics is growing at a substantial rate. It will be essential that HEIW develop a demand prioritisation framework with an agreed criteria and benefits plan.

Externally, HEIW will work with partners and in particular NWSSP, to review current governance structures. This will help to ensure the correct stakeholder representation and that reporting is fit for purpose. There will be clear lines of governance so that groups can clearly resolve, or when required, escalate defined challenges and questions. Through partnership working HEIW will review and establish mechanisms for how workforce data is shared and collated. HEIW will work with partner to inform the ESR re-procurements. HEIW will develop data sharing agreements with our partners and ensure this adheres to information governance, ethics, cyber, governance, standards and best practice.

Objective 4.5 Resource and Data Literacy

To deliver the requirements of this strategy there is a need to increase the volume, scale and skill of our data teams appropriately to provide excellent services near to real time delivery of insights and intelligence. There will be a need to grow the data literacy of the organisation. Work will happen to incorporate data literacy into the annual training and development plans for HEIW. This work will support creation of the right conditions so that the workforce can flourish in a data rich environment

Nationally, HEIW will work with partners such as the National Data Resource (NDR) programme to support education and improvement initiatives. The NDR strategy has clearly described the varying levels of data literacy across the NHS which impact the analyst and data architect ability to deliver the NDR programme. To address this our ambition is to improve the data skills of the NHS through networks of sharing and formal education programmes. This will equip staff with the ability to understand and interrogate data-driven recommendations and decision support tools, including those powered by Artificial Intelligence.

Mission Four Outcome

Delivering this mission will ensure data is one of HEIW's most valuable assets. HEIW will grow and continuously improve its Business Intelligence and advanced analytics capability and capacity. Data will be proactively used to maximise impact and inform insight and decision making internally and externally. This will improve the use of data in relation to strategic workforce planning and design. HEIW will benefit from improved data availability and standards across NHS Wales. The outputs from the data will mature towards advanced analytics and more complex data modelling. There will be improved data architecture and improved data skills and literacy.

Mission Five

Continuously strengthening the cyber security, information governance posture and resilience to attack

Good cyber security and information assurance practices will reduce the risk posed by cyber-attacks and data breaches. Cyber-attacks are a present and persistent danger to all organisations in NHS Wales and beyond in today's increasingly connected and technology-enabled world. Security of assets and information is not a technical problem to be 'resolved', it will be ever present with no definitive finishing line and therefore action and mitigation is a constant requirement.

HEIW's cyber security and information governance objectives set out the dimensions of security, resilience and information governance. The Cyber Assessment Framework (CAF) for Health provides a consistent and rational framework for the appropriate management of cyber security risk. The defined cyber security objectives are linked to those in the CAF for Health and UK Governments Cyber Security Strategy 2022-30. The Data Protection Act 2018 controls how personal information is used by organisations, businesses or the government and the Welsh Information Governance Toolkit (IG toolkit) is a self-assessment tool enabling organisations to measure their level of compliance against national information governance standards and legislation. To operate effectively there are five objectives, these include:

Objective 5.1: Manage cyber security and information governance risk

Appropriate organisational structures, policies, and processes will continue to be in place to understand, assess, and systematically manage security and information governance risks. To effectively manage security risk, HEIW must first ascertain, understand, and value its assets. Assets are considered items of value to HEIW (both tangible and intangible) and include people, processes, hardware, software, systems, devices, functions, data, information, intellectual property, reputation and so forth. Appropriate visibility and profiling of these assets is the foundation from which an accurate risk assessment can be derived. Clear accountability for risk and robust governance will ensure that risks are appropriately managed, directed and communicated throughout HEIW.

Objective 5.2: Protect against cyber-attack and information governance breaches

HEIW will ensure that there is continuous improvement and proportionate security measures in place to protect HEIW's network, information systems and data. The integrity of the information held will be assured, monitored and maintained. This will ensure that information is reliable and of the expected quality for continued use. The security of HEIW's estate and assets will be continually assured throughout their lifecycle and with supply chain and partners. This will include the deployment of security controls and measures which are commensurate with the criticality, sensitivity and value of assets and their risk profile to ensure that risks are appropriately managed. Security baselines will be established which define the minimum level of protection which is required based upon asset classification.

Objective 5.3: Detect cyber security events and information governance issues

HEIW will ensure that capabilities exist to ensure security defences remain effective to detect cyber security events affecting, or with the potential to affect HEIW's network and information systems. HEIW will develop capabilities to appropriately monitor its estate and assets (e.g., devices, networks, platforms, services, data, systems, users) to detect cyber security and information governance issues and events before they become incidents. Enhanced detection capabilities and monitoring of key data points and inputs will enable detection at pace and the ability to logically respond to cyber security events, detect more sophisticated cyber-attacks and potential information breaches.

Objective 5.4: Minimise the impact of cyber security incidents and data breaches

HEIW will ensure that capabilities exist to reduce the adverse impact of a cyber security incident or data breach on the operation of HEIW's network, information systems and the information it processes, including the restoration of those functions where necessary. Effective risk management, robust audit, reasonable and proportionate protective measures, and enhanced detection capabilities will help make HEIW a considerably hardened target. However, HEIW will also improve its ability to respond and recover from incidents when they do happen to ensure the continuity of essential functions and services it provides. There will be a commitment that systems and assets impacted will be restored as quickly as possible to minimise disruption. Lessons learned from any incidents will be documented and shared to drive forward improvements.

Objective 5.5: Develop a cyber and information governance aware workforce

HEIW will ensure that capabilities exist to ensure a cyber-aware and information governance culture is developed and driven forward, promoting an open and transparent environment, supported by continuous engagement and interaction. HEIW will work in partnership with other NHS bodies to ensure the implementation of the standards and requirements as set out in the Network and Information Systems regulations and Data Protection regulations. To assess compliance, HEIW will complete the CAF and the IG toolkit to inform assessment and continuous improvement. Cyber security and information governance requirements will be understood and supported with an effective team and capacity in HEIW. The HEIW team will be supported by a workforce development plan and benefit from strong partnership with DHCW and Cyber Resilience Unit (CRU) to deliver a collective approach to cyber skills and knowledge.

Mission Five Outcome

HEIW will have established governance arrangements, strong engagements and improvement methodology with clear accountability for effective management of cyber and information governance risks. The security of HEIW digital and data services will be continually monitored against recognised standards and legal directives to improve posture and responses. A level of control commensurate to the risk profile will be deployed to ensure that risks are managed proportionately. HEIW will be prepared to respond to cyber and data protection incidents and will be able to respond organisationally and as a part of NHS Wales

| Digital Roadmap					
	Mission One	**Mission Two**	**Mission Three**	**Mission Four**	**Mission Five**
2023-2024 Stabilise	Review digital operating model & structure & strategy launch Product Roadmap in place with Identified RO Deliver Single platform business case Continue 'Y Ty Dysgu' roll out up to 50K users health and care Deliver Gwella improved functionality Digitisation HEIW business processes Cloud strategy	Increased usage and reporting of National digital Capability Framework Launch Digital skills capability self-assessment tool with resources and training needs assessment Digital fellows in place Technology Horizon Scanning to inform strategic workforce planning and service redesign All strategic workforce plans to have digital component to describe transformation opportunities	Delivery of high-quality, intentionally designed online health education and training Improved reporting and analysis of online learning providing evidence and insights into engagement and participation ensuring the quality of online learning across HEIW providing advice and guidance and support with more complex technical development	Data gap analysis and improvement plan Increased data availability from multiple sources in easy to access dashboards Increased data sources available for reporting Workforce supply and demand modelling being tested through iterative cycles of improvement Collaboration with commercial and academic partners Growing internal and external capacity	Completion of the Cyber Assessment framework and IG toolkit Improved Digital and Data Governance and assurance model and processes Risk and assets management profiling
2024-2026 Develop and Grow	Implement Single Platform and improved trainee experience Evaluate and improve Y TY Dysgu Improved placement management solutions Scope further Gwella functions and alignment to YTD Roll out of capital IT refresh plan Data architecture review and improvement plan aligned to NDR and ESR re-procurement Ongoing review and improvement programme for websites Review of commercial partners	Ongoing base line of digital skills and training needs analysis Integrate Digital transformation initiatives into strategic Workforce plans and benefits model Align digital skills programme with national digital transformation initiatives Mature digital skills champions Assessment and guidance on new digital skills required for new ways of working Expand digital champions network Digital readiness assessments and guidance published	Improved digital learning experience based on standards and best practice Addressing barriers and constraints to excellent digital learning Horizon scan, conduct and publish research and test and evaluate new digital learning technologies to lead, support, and guide the sector development of online learning networks	Improved data architecture and data warehousing aligned to NDR. Increased data analytics capabilities and predictive analytics Increased workforce dashboard Development of Data literacy improvement programmes	Improved disaster recovery and business continuity approaches Improved protection from cyber attack
2024-2026 Develop and Grow	Delivery of benefits realisation framework Review of achievements to assess strategy refresh and revised investment model Research and development of Robotics Process Automation, establishing HEIWs Robotic Operating Model for future developments for digital first approach	Development of AI education, training and skills framework and career pathways Maximise use of virtual placements	Opportunities and impact of immersive technology on the HEIW learning experience is understood and maximised Increase delivery of excellent digital learning experiences	Improved national and HEIW workforce data standards, governance and reporting Improved data literacy in HEIW	A competent and aware cyber and IG HEIW workforce

8 ~ Governance and Decision Making

> To support the digital programmes, governance is vital to assurance and transparency. For digital, this is provided in three primary ways.

The first pillar is the Information Governance and Information Management Group (IGIM) providing oversight of issues relating to Information Governance and Cyber, the group is chaired by the Board secretary in his capacity as Senior Information Risk Officer (SIRO) and chair assurance reports are presented to Audit Committee.

The second pillar of governance is the Digital Transformation Leadership Group (DTLG). Reporting to the Executive Team and informing Audit Committee when appropriate. The purpose of the DTLG is to provide robust governance and assurance for the delivery of HEIW's digital vision. DTLG, is charged with steering, governing, supporting and performance managing the planning and execution of the Digital Roadmap and Strategic Plan. This governance mechanism guards against silo working and reduces the impact of 'shadow IT', it ensures full advantage of the digital opportunity across HEIW. this is supported by a Digital Services Management Board and Digital and Data Change Advisory Board, these boards will ensure the appropriate governance and assurance is in place around all digital and data products and services, with Service Catalogues, Service Level Agreements and Business Continuity Plans all in place.

The third pillar is the Digital Risk Management Group, this manages the digital risk of the organisation and escalates issues to DTLG when required. The overview of the risk register is a standard item on the agenda of DTLG. In addition to these three mechanisms there is robust integration with the HEIW IMTP planning and performance frameworks.

Digital Governance Framework
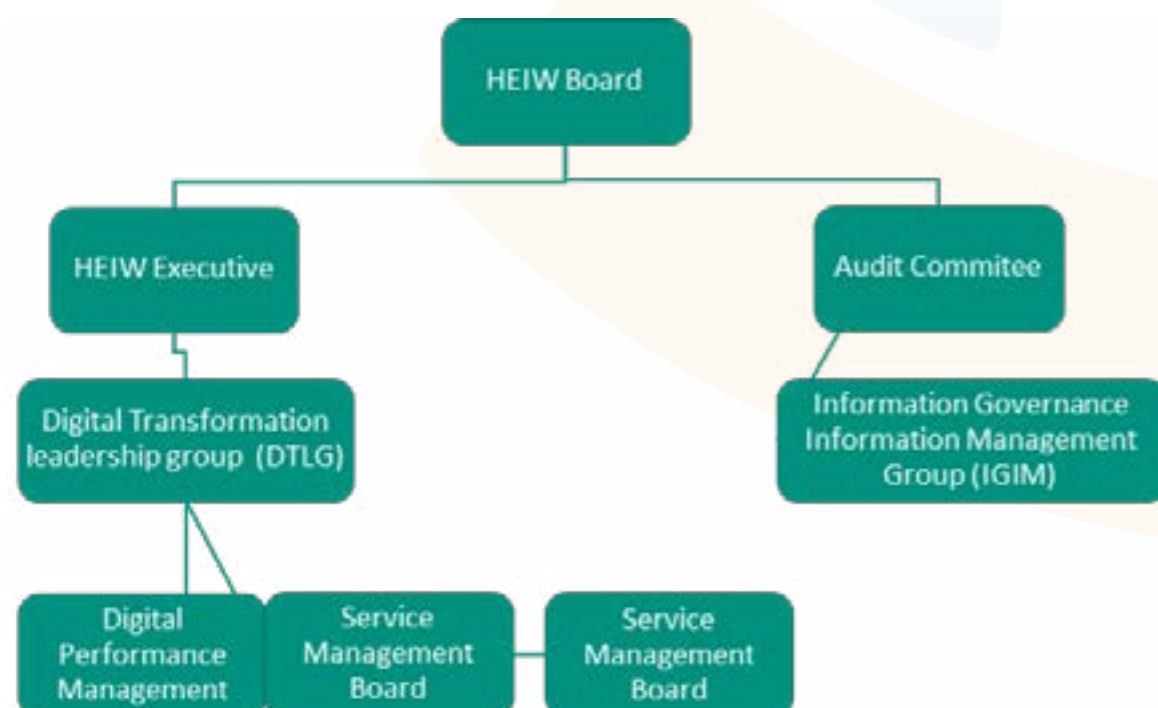
9 ~ Roles and Responsibilities

9.1 ~ HEIW Digital team

is a moderate sized internal team that is continuously learning, whose skills and experience is improved and enriched through partnership and procurement relationships with external private, public and academic organisations. The team will leverage procurement services to engage providers to free up internal IT capacity for transformational work and find partners capable of supporting innovation and transformation. The team have responsibility to:

~ Deliver the strategy

~ Deliver effective digital operational services and solutions

~ Work with partners that are responsible for delivering digital transformation in health and social care

~ Integrate implementation into the IMTP and departmental planning process to ensure performance management of delivery against the objectives

~ Ensure governance and monitoring is in place to regularly review implementation and ensure delivery remains responsive to needs

~ Ensure financial resources (including skills and capability), technical plans and strategies are in place to support delivery

~ Evaluate the impact of the strategy on stakeholders

9.2 ~ HEIW Digital Champions

Digital Champions across HEIW will hold an important role in ensuring their Directorates are kept abreast of digital developments and changes, ensuring best practice and local level support for certain digital products, including, but not limited to:

~ SharePoint – team level administration, permissions, support, and training

~ MS Teams – team level administration, permissions, support, and training

~ Power Platform – team level training and initial support

Champions will play a role in linking the digital team with the wider staff group and ensuring alignment of digital goals and plans with the needs of the organisation. HEIW have recognised the role of digital champion and accountable officer at Board

level with the Digital Director being part of the Executive team reporting to the Chief Executive and the digital portfolio being assigned to a named Independent Member.

9.3 ~ Health Boards, Trusts and DHCW:

~ To acknowledge the strategy and work in collaboration on the national initiatives detailed in the strategy

~ To support, evaluate and feedback on the impact of the strategy on staff, learners and service users

~ To share knowledge and best practices

10 ~ Partners and Collaboration

As a strategic organisation it is important that HEIW builds strong and effective partnerships to deliver the vision. HEIW takes proactive steps to be recognised as an excellent partner, influencer and leader. The implementation and success of the digital strategy will require excellent partnership working. There will be collaboration with all HEIW partners to deliver the best solutions for our stakeholders. There will be proactive steps taken to learn from each other and share ideas and experiences so that the digital technology that is offered benefits from a wide-ranging perspective of views and opinions. Through the course of the strategy, it is expected that partnerships are developed and strengthened with a range of stakeholders including those referenced below (not an exhaustive list):

- Patients and Service users
- Health Boards, Trusts
- NWSSP
- Trainees. Trainers, students and Staff
- Digital Health and Care Wales
- Social Care Wales
- Health Technology Wales
- Value Based Health and Care Academy
- Centre for Public Digital Services
- National Data Resource Programme (NDR)

- Improvement Cymru
- Education providers across all sectors
- Royal collages and governing bodies
- Life Sciences Hwb / Digital Health Ecosystem Wales (DHEW)
- Providers of digital services to HEE and NHS Scotland
- Commercial technology providers
- All Wales intensive learning academy for innovation In Health and Social Care

11. Conclusion

The strategy sets out an ambitious and transformative direction of travel for digital and data over the next five years. Progress will be reviewed through reporting through governance structure and the HEIW Board.

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