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Swansea Bay University
Health Board



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Report Title	Risk Deep Dive: Level of financial and human resources required to achieve sustained digital transformation		
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Presented by	Matthew John, Director of Digital; Gareth Westlake, Assistant Director of Digital Business and Information Governance		
Freedom of Information	Open		
Purpose of the Report	The risk of insufficient financial and human resources to deliver sustained digital transformation across the Health Board (HBR 27), was increased to a score of 16 in May 2022 this year. This paper describes the reasons for the increased risk, the potential impact on service transformation and the actions being taken to address the situation moving forward		
Key Issues	<ul style="list-style-type: none"> • The risk was added to the Health Board’s Risk Register due to the Health Board’s inability to invest in digital resources and solutions to the levels recommended. • There is a range of financial factors which have and continue to impact the Health Board’s digital progress. • The Health Board has taken forward numerous actions to increase digital investment, both locally and nationally. • It is also imperative that the Health Board fully exploits the efficiency gains made possible by digital ways of working. Over recent years, there has been increased emphasis on the benefits realisation and business change disciplines within digital projects. • The paper expands on some of the limitations and risks of the digital investment challenge, the mitigation controls in place and the further planned action locally and nationally to identify the financial requirements to maximise the potential of digital transformation moving forward. 		

Specific Action Required (<i>please choose one only</i>)	Information	Discussion	Assurance	Approval
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Y	<input type="checkbox"/>
Recommendations	<p>Members are asked to:</p> <ul style="list-style-type: none"> • Note the digital financial challenges faced by the Health Board • Note the controls in place to mitigate against the risks and the planned activities, locally and nationally, to address the longer-term investment requirements 			

Risk Deep Dive: Level of financial and human resources required to achieve sustained digital transformation

1. INTRODUCTION

The risk of insufficient financial and human resources to deliver sustained digital transformation across the Health Board (HBR 27) was increased to a score of 16 in May 2022. This paper describes the reasons for the increased risk, the potential impact on service transformation and the actions being taken to address the situation moving forward.

2. BACKGROUND

The risk was added to the Health Board's Risk Register (HBRR) in 2012 due to the Health Board's inability to invest in digital resources and solutions to the levels recommended by Derek Wanless in a review of Health and Social Care in Wales nearly 20 yrs ago¹, and when compared with the levels of investment being made across other industries and leading health organisations in the UK and across the world.

There are a range of financial factors which have and continue to impact the Health Board's digital progress:

- continuous growth in the digital infrastructure and estate, inevitably results in a continuous need for more resources to support and maintain services and replace end of life devices and systems, which is a challenge for the Health Board to finance
- the need to comply with new and changing legislation e.g. GDPR, the Directive on security of network and information systems (NIS Directive)
- the increased threat on cyber security
- historical local decisions to approve business cases "at risk", i.e., no upfront identification of funding for ongoing revenue requirements, inevitably adding to cost pressures
- the Bridgend boundary change diseconomies of scale. Whilst a SLA for digital services provided by Swansea Bay UHB to Cwm Taf Morgannwg UHB has delayed the full effect, the SLA is expected to be end over the next 12 to 24 months, leading to increased cost pressures for SBUHB
- delays in project delivery timescales, often for reasons beyond the control of the Health Board, increase and prolong the investment required for implementations
- significant capital investment and adoption of digital ways of working during COVID has rapidly increased the number of devices, solutions and users requiring support without the appropriate ongoing resources being in place
- reduction in discretionary capital in 2022/23 and a poor outlook for the forthcoming years

¹ The Review of Health and Social Care in Wales the Report of the Project Team advised by Derek Wanless June 2003

- reduction in the WG Digital Priorities Investment Fund (DPIF) in 2022/23 and a poor outlook for the forthcoming years
- the opportunities of migrating from “on premise” hosting to cloud-based hosting will shift investment needs from capital to revenue over time

In addition to these financial factors, recruitment into digital roles is also becoming more and more of a challenge. Digital professionals, from project managers through to technical specialists, are in high demand and other industries, particularly the private sector, can attract existing staff and potential candidates with higher salaries.

Over the last ten years, the Health Board has taken forward numerous actions to increase digital investment and increase the pace of digital adoption. As a result of these actions the risk had been managed down to a score of 12.

In its former guise as ABMU, the Health Board was the first organisation to establish an Informatics Strategic Outline Programme (SOP), approved by Welsh Government. This set out an indicative level of investment that ABMU would require to take forward its Informatics ambition over a 5-year period. This proactive approach led to local recurring discretionary capital investment into Informatics project resources and, from a national perspective, the release of funding to ABMU by WG for a number of national pathfinder projects, such as Hospital Electronic Prescribing and Medicines Administration (HEPMA), Patient Held Portal and also funding support for digital tagging of Health Records.

In 2017, the Health Board approved its first Digital Strategy, which set out its vision for digital transformation for the next 5 years. Whilst the strategy did not address the funding that would be required, it provided a strong case for change and a vision for what the future could look like for staff and patients supported by excellent digital ways of working. The digital strategy provided the foundations for the IMTP and annual planning digital priorities and strengthened organisational support for individual digital business cases taken through local governance processes.

Furthermore nationally, the Health Board has continuously established and maintained close working relationships with Digital Health and Care Wales (DHCW, formerly NHS Wales Informatics Service, NWIS). This led to ABMU being the first organisation to establish a concordat for partnership working with DHCW, which paved the way for numerous collaborations on software development and implementation projects, where the health board has benefitted from additional external manpower.

Achievements like the SOP, the Digital Strategy and the Concordat with DHCW, have resulted from excellent collaboration between the Health Board’s digital and finance leads. Not only has this led to the success of these strategic goals but has also ensured that the health board is prepared and well-placed to secure and spend additional funding on digital requirements as slippage funds become available throughout the financial year. In fact, whilst not ideal, the ability of this local collaboration to spend effectively in the latter months of each FY, has enabled the health board to mitigate against the risks in its technology refresh programme.

3. GOVERNANCE AND RISK ISSUES

Governance

The Health Board has an effective governance structure in place to support the management of digital plans, priorities and risks. The Digital Leadership Group (DLG) provides oversight of the Digital Strategic plan. The DLG is supported by Service Delivery Group (SDG) digital meetings to support the prioritisation of projects and programmes. DLG reports into Management Board and the Finance and Performance committee for assurance. Business as usual services and infrastructure are governed by the Digital Services Management Group (DSMG) which reports into DLG. Both DLG and DSMG include appropriate SDG representation.

All local funding bids for Digital investment are completed with involvement from the SDGs, include ongoing revenue requirements and are submitted through the appropriate Health Board approval process (i.e. Business Case Assurance Group BCAG). Nationally developed digital system cases are presented by Digital services and the appropriate SDG to the Health Board through BCAG and the subsequent processes for approval.

To aid delivery of digital programme boards a Digital Clinical Transformation Assurance Group (DCTAG) was established in January 2022. The group provides clinical oversight on changes being introduced through Digital programmes of work, providing specific advice on clinical workflows, communication and engagement with clinical and nursing teams, while ensuring a Digital first approach does not impact negatively on patient safety and quality standards.

There is also extensive national engagement across several national digital governance groups and SBU Digital services are well represented across these. There is also national collaboration at Directors of Digital (DoDs) and Directors of Finance (DoFs) on Digital and financial priorities.

Risk

HBR 27 outlines the high level risk and consequences of failing to have appropriate investment in digital transformation and services and was raised to a score of 16 in May this year due to the reduction in the discretionary capital allocation and the reduction to the National Digital Priority Investment Fund (DPIF).

There are several sub risks and potential consequences that are highlighted below:

- Lack of resources limit the pace of development and delivery of digital solutions. This means that the benefits of the implementation of a new solution can be delayed (e.g. SIGNAL patient flow solution) or the risks inherent with having out of date or legacy solutions in place such as cyber security threats and system instability, are protracted.
- Opportunities for Digital Transformation are missed because service led requests are not able to be assessed and prioritised for delivery. This means that clinical

benefits are either not realised or key solutions are not prioritised and delayed. Digital ways of working and requirements are not considered early enough in the Services change processes so that the benefits of digital transformation are not realised, or the service changes cannot be effectively realised.

- There is limited investment within Digital Services and the wider health board in the change management processes needed to support service transformation. This limits the speed and impact of the implementation of new digital solutions and changes to ways of working. It means that the benefits of digital ways of working may not be fully realised in a timely manner (or at all).
- The service requirements of end users are not met due to inadequate resources to provide appropriate support to key digital systems, impacting on patient care. This manifests itself in such aspects as longer response times from Help Desk.

Over the last 5 years Digital Services have been careful to ensure that the revenue requirements of specific bids and business cases submitted for funding have included the ongoing revenue implications within the internal approval processes eg HEPMA, SIGNAL, mobilisation etc. However, there continues to be growth in digital adoption over and above formally submitted bids. This includes some of the national developments such as Welsh Nursing Care Record (WNCR) and Welsh Clinical Portal (WCP) as well as the impact of COVID (over 2,000 new devices issued) and general changes in working practises. The growth in digital ways of working increases the number of systems, devices and people that need to be supported. This is demonstrated by the increasing number of calls logged with the Health Board service desk. In 2018/19 there were 60% more calls logged to the service desk when compared to 2013/14. In the first 6 months of 2022/23 there were 6% more calls logged than in 2018/19, despite calls relating to Bridgend/PoW now being handled by CTM.

- Furthermore, service users provided outside of normal working hours Mon-Fri will be impacted by the limited out of hours digital support service as reliance on digital solutions and digital ways of working increases.

Currently Digital Services support is only provided during core hours with a limited on-call system in place to address major outages. However, the greater reliance on digital systems to support the provision of clinical care has meant that is and increased requirement to support these systems out of hours. The options of a more appropriate out of hours service model is currently being developed for consideration.

- System availability is low or data is lost due to aging/unsupported infrastructure. This could be mass system unavailability/loss due to server/network failure or individual unavailability/loss due to failure or inability to provide specific devices.
- Support services such as Information Governance and Business intelligence are not able to provide adequate services arising from the increased demand for, and adoption of, digital services.

Mitigation

There are plans and actions in place to address the digital financial challenge on a year-by-year basis and also focussing on the longer-term strategy.

In the short term, the governance mechanisms in place, as described above, and the close working between digital and finance leads, are ensuring that the “in year” risks are mitigated appropriately and the costs and benefits of the digital priorities within the organisations IMTP are signed off.

Clearly the driver for investment in digital solutions is to deliver benefit across the organisation. Whilst huge importance is placed on patient quality and safety benefits, it is also imperative that the Health Board fully exploits the efficiency gains made possible by digital ways of working. Over recent years, there has been increased emphasis on the benefits realisation and business change disciplines within digital projects. Activities such as multidisciplinary benefits workshops are undertaken to inform digital business cases, ensuring that cost and benefits for the full life of digital solutions is understood at business case approval. The Digital Directorate has recently appointed a Business Change lead and the team have been providing business change training to colleagues across the service.

The Digital Services Directorate also places significant focus on introducing improved ways of working supported by digital tools, to streamline the effort required to maintain and support an ever-increasing digital estate.

There are a number of strategic digital activities that the Health Board is collaborating on nationally to determine the way forward for digital investment (below). In recognition of the importance of digital financing, a coming together of Directors of Finance and Directors of Digital is planned for Q3 to discuss the challenges ahead.

- **HIMSS Maturity Model** – during Q3/Q4 the Digital team will lead on digital maturity assessment of the organisation in collaboration with DHCW and NHS organisations across Wales. HIMSS (Healthcare Information and Management Systems Society) is a global advisor, thought leader and member-based society committed to reforming the global health ecosystem through the power of information and technology. The HIMSS EMRAM Model (Electronic Medical Record Adoption Model) is used extensively by health organisations across the world to assess current digital maturity levels. DHCW are funding all NHS Wales organisations to undertake the assessment which will provide a comparative digital maturity status across Wales. This play a huge part in informing organisations and policy makers for digital planning and investment moving forward.
- **Cloud Strategy** – As outlined above, models of providing digital solutions and infrastructure are shifting from an on premise to cloud models. This process will take a number of years and NHS Wales are developing a Cloud Strategy to outline the principles for how this will happen. The Health Board are developing a local strategy to sit alongside this. This will mean that expenditure for Digital Services that was traditionally Capital led will shift to a Revenue led “pay as you

consume” model. Whilst this will help alleviate some of the pressures on the Capital funding requirement, it is highly likely that a hybrid model will be required with some services continued to be provided on premise; greater emphasis required on network capacity/capability; and investment still required for user devices. Cloud services will mean a significant increase in the revenue costs for Digital services provision and, due to the pay as you consume model, decrease the certainty of monthly costs.

- **All Wales 10 year investment requirements** – At the start of 2022/23 NHS Wales organisations were asked to submit 10 year estimated digital investment requirements to DHCW for coordination and sharing with WG. A detailed summary of the SBUHB submission is presented in the finance section below. Once the digital maturity assessments and have been completed and cost implications from the Cloud Strategy are understood, there will be further refinement in line with emerging priorities.

4. FINANCIAL IMPLICATIONS

Swansea Bay has been comparatively forward thinking in the requirement to invest in Digital Services in order to support service transformation. In 2018, the Health Board committed to a recurrent capital investment from the Discretionary Capital allocation of £1m per year into the programmes and projects team to support the delivery and implementation of new digital projects and have supplemented this by actively seeking and securing funding from WG to support the implementation of local and All Wales Pathfinder solutions. However, the growth in digital adoption and utilisation has outstripped the ongoing investment available to maintain sustainable digital services. In addition, the lifecycle of investments into digital infrastructure and solutions is on average 5 years, meaning that continued growth in capital investment is required to replace existing infrastructure and solutions as well as for new investment to support transformation. The introduction of the DPIF within WG has meant the national funding focus is placed on the introduction of new digital solutions with an apparent growing expectation that ongoing and replacement costs will be absorbed by the Health Boards.

The capital requirement for the replacement of Digital infrastructure is increasing year on year, driven by the increase in digital adoption. Whilst Digital Services and Finance work closely together to include high risk replacements in the annual capital plan, the capital requirement is higher than the funding that is available to the Health Board at the start of each financial year. The risk is mitigated by Finance and Digital services working closely together to utilise slippage opportunities in capital funding from WG and the discretionary capital plan to fund following year refresh priorities. For example, at the start of 21/22 the allocation for technology refresh in the discretionary capital allocation was £0.6m, however this was supplemented by bids to WG slippage of £2.4m (secured in Jan/Feb 2022) and £1.4m from discretionary capital slippage. This additional funding was utilised to offset the key (high risk) technology refresh requirements in 22/23 including the Morryston WiFi, device replacement and storage capacity. Whilst this has worked successfully in the past it is completely reliant on the availability of slippage funding and the ability for suppliers to provide the hardware prior to the end of the financial year. The £3.8m of slippage

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funding provided in 21/22 did not include the replacement of the HB Storage Area Network (SAN), as described in HBR 86. The SAN needs replacing in January 2023 at a cost of £1.8m and a bid to WG for slippage funding in 22/23 has been approved as of 7th November 2023. Bids have also been submitted for other Technology refresh requirements of c£2m.

Capital investment over and above the recurrent provision is also required for investments in large scale new digital solutions. An example of this would be the Welsh Community Care Information System (WCCIS). Although the initial procurement of the system and the central team are funded by WG, the Health Board will need to provide implementation and ongoing support costs. The implementation of WCCIS is expected to cost £3m Capital over 3 years and was originally agreed to be funded from Discretionary (subject to business case approval). The reduction in capital allocation by 25% means that this is no longer viable and Digital Services, SBU Finance, the WCCIS central team and WG are exploring alternative ways in which this can be resourced. As part of the business case development for WCCIS extensive benefits work has been carried out and significant quality and efficiency benefits have been identified. PCTSDG and MH&LD SDG will, however, need to identify mechanisms to convert these benefits into cash releasing savings to offset the £750k pa required to cover the system and support costs.

The decision whether to move to Cloud services will not necessarily be in the control of the Health Board and is likely to be driven, in some part, by 3rd party providers. This is the case in the biggest shift to cloud-based services that NHS Wales has made to date with the introduction of MS365, whereby Microsoft have effectively withdrawn the traditional procurement of their licences to a subscription model to include Cloud based services and storage. In 22/23 the annual cost of the MS365 subscription for SBUHB is £2.9m (although this is likely to increase as new licences are required). This represents over 21% of the Digital Services annual budget (excluding Health Records and Clinical Coding). The cost in 23/24 will be well over £3m. Prior to MS365 there would have been no revenue requirement for Microsoft licencing with licences have to be procured on a 3-5 year cycle through capital. It should be noted however that, even though SBUHB is a leader in the adoption of MS365 services across Wales, the migration to MS cloud services is still ongoing on is still likely to take several years to fully complete.

In 2019/20 Bridgend services disaggregated from SBUHB (then ABMU) and were transferred to CTM. Due to the integrated nature of digital services provision and shared infrastructure it was not possible to disaggregate all of these at the time of transfer and an overarching SLA was implemented to ensure that the Bridgend area received the same level of Digital services as they did prior to the disaggregation. Since then further services have transferred to CTM including the provision of the service desk, mobilisation team and onsite support teams. The current value of the remaining SLA is £1.5m. As with all Corporate directorates at the time of disaggregation it was flagged that a 28% budget reduction to enable to the transfer to CTM was not possible due to economies of scale and minimum levels of resources required to continue service provision in SBU. (During the disaggregation process it was estimated that 11-12% reduction/transfer of Digital Services budget would be possible). The majority of the budget reduction that was estimated has now

been enacted and it is estimated that £1.3m of the remaining £1.5m SLA would not be able to be released due to the nature of the services being provided. The disentanglement process of these services is complex and, although funding is being provided by WG to CTM and DHCW to conduct part of the process, it is envisaged that further funding will be required to complete it.

At the start of 2022/23 HBs were asked to submit 10 year digital investment requirements to DHCW for coordination and sharing with WG. A summary of the requirement provided to DHCW by SBUHB is summarised on the table below and includes the pressures outlined above.

	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	Total
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
Capital	5.0	11.5	10.1	6.0	4.4	6.6	4.6	5.6	10.9	5.6	70.3
Revenue	6.0	10.2	11.0	11.6	12.2	13.1	13.6	14.6	15.4	16.0	123.8
Total	11.0	21.7	21.1	17.6	16.6	19.6	18.4	20.2	26.2	21.7	194.1

The table shows that there is a total estimated investment requirement of £194m over the next 10 years by SBUHB alone. The £194m is split by £71m capital and £123m revenue. The estimate is based on several high-level assumptions around the pace of digital transformation, the transition to cloud services etc but it believed to give a reasonable estimation of the requirement going forward. It should be noted that the ongoing costs of centralised services currently being funded by DPIP have not been included in the above and these costs were added by DHCW as part of the total submission. The work so far does not include the opportunities of cash releasing benefit.

5. RECOMMENDATION

Members are asked to:

- **Note the digital financial challenges faced by the Health Board**
- **Note the controls in place to mitigate against the risks and the planned activities, locally and nationally, to address the longer-term investment requirements**

Governance and Assurance	
Link to Enabling Objectives <i>(please choose)</i>	Supporting better health and wellbeing by actively promoting and empowering people to live well in resilient communities
	Partnerships for Improving Health and Wellbeing
	Co-Production and Health Literacy
	Digitally Enabled Health and Wellbeing
	Deliver better care through excellent health and care services achieving the outcomes that matter most to people
	Best Value Outcomes and High Quality Care
	Partnerships for Care
Excellent Staff	

	Digitally Enabled Care	Y <input type="checkbox"/>
	Outstanding Research, Innovation, Education and Learning	<input type="checkbox"/>
Health and Care Standards		
<i>(please choose)</i>	Staying Healthy	Y <input type="checkbox"/>
	Safe Care	Y <input type="checkbox"/>
	Effective Care	Y <input type="checkbox"/>
	Dignified Care	Y <input type="checkbox"/>
	Timely Care	Y <input type="checkbox"/>
	Individual Care	Y <input type="checkbox"/>
	Staff and Resources	Y <input type="checkbox"/>
Quality, Safety and Patient Experience		
Implementation of digital systems in healthcare can have a significant positive impact on quality, safety and patient experience. Critical to success is the wide scale adoption of an effective business change model, digital service team capacity and capability, workforce digital skills and clinical leadership		
Financial Implications		
This paper is not seeking approval of further financial investment. However, since the purpose of the paper is to provide an overview of the financial digital challenge, there are many references to the need for longer term investment to maximise the benefits from digital transformation in enabling efficient and sustainable health and care services.		
Legal Implications (including equality and diversity assessment)		
None.		
Staffing Implications		
Increasing numbers of staff will be required to deliver the digital change programme in SBUHB. This will be detailed in future workforce plans, individual business cases and digital priorities and plans. The workforce will be required to continuously adopt further digital ways of working through appropriate training and support.		
Long Term Implications (including the impact of the Well-being of Future Generations (Wales) Act 2015)		
<ul style="list-style-type: none"> • Long Term – Health and Social Care “A Healthier Wales” (2018) sets out a long term future vision of a ‘whole system approach to health and social care’, which is focussed on health and wellbeing, and on preventing illness • Wellbeing of Future Generations Act (2015) <ul style="list-style-type: none"> - Focus on prevention, not service provision. - Prevent ill health, reduce impact of illness or injury and delay onset of frailty. - Provide services to carers that prevent, reduce, or delay them developing a need for support. • Primary Care Model for Wales (April 2019) <ul style="list-style-type: none"> - Focuses on a whole system approach that integrates health, local authority and voluntary sector services, and is facilitated by collaboration and consultation. - A more preventative, pro-active and coordinated care system which includes general practice and a range of services for communities - Technological solutions to improve access to information, advice and care, and to support self-care. • SBU HB’s Clinical Services Plan (2019-2024) <ul style="list-style-type: none"> - Adoption of digital solutions and technology. - Create a mobile workforce that is digitally connected to ensure staff work seamlessly to ‘Make Every Contact Count’. <p>Technology to support care closer to the patient’s home or in the community.</p>		
Report History		

Appendices	
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