



**CYFARFOD BWRDD PRIFYSGOL IECHYD
UNIVERSITY HEALTH BOARD MEETING**

DYDDIAD Y CYFARFOD: DATE OF MEETING:	30 November 2023
TEITL YR ADRODDIAD: TITLE OF REPORT:	Digitally Enabled Transformation
CYFARWYDDWR ARWEINIOL: LEAD DIRECTOR:	Huw Thomas, Executive Director of Finance
SWYDDOG ADRODD: REPORTING OFFICER:	Anthony Tracey, Digital Director

Pwrpas yr Adroddiad (dewiswch fel yn addas) Purpose of the Report (select as appropriate)
Ar Gyfer Penderfyniad/For Decision

ADRODDIAD SCAA SBAR REPORT
<u>Sefyllfa / Situation</u>
<p>The purpose of this report is to introduce the approach to digitally enabled transformation. The Programme Business Case (PBC) sets out the digital proposition to realise the vision articulated in the Health and Care Strategy “A Healthier Mid and West Wales: Our Future Generations Living Well” (AHMWW) and create an integrated, patient centric, community based and social model of care.</p> <p>The PBC will present an ambitious 10-year transformation programme with the use of digital as an enabler. This report provides the strategic intent, and future reports will outline the commercial arrangements, financial commitment, and the preferred partner to facilitate the enabling transformation.</p>
<u>Cefndir / Background</u>
<p>AHMWW, published in 2019, had digital enablement as a core enabler and theme throughout the document. With the advent of digital technology, healthcare providers around the world are beginning to explore the benefits of transformation with digital as the key enabler. Successful digital transformation delivers multiple benefits, from improved clinical outcomes and patient user experiences, through to improvements in productivity and efficiencies..</p> <p>All the preparatory work that we have undertaken over the last 18 months, has provided a real opportunity to build on this progress and to truly integrate health and care services.</p> <p>We want everyone to have access to the digital information, tools and services needed to help maintain and improve their own health and well-being. We want health and social care information to be captured electronically, integrated and shared securely. We want digital technology and data to be used appropriately and innovatively to help plan and improve services and ultimately improve outcomes for all.</p> <p>We will ensure we are inclusive; we recognise that the use of digital services can create opportunities for people who struggle to access traditional services, but barriers for others and, as such, should always be part of a multichannel offering that reflect the preferences and needs</p>

of individuals. For example, the Health Board is a pathfinder for the NHS Wales App, which will offer a personalised experience for users. Through our digital inclusion programme, we will look to help people, their families, unpaid carers and care providers to understand what technologies are effective for helping maintain independence and quality of life. For example, smart home technologies which give medication reminders, or sensor-based tech which provides alerts if someone has had a fall.

Asesiad / Assessment

The Challenge

The Health Board is facing several key challenges:

- There is a **shortage of skilled health and social care staff**
- An **increase in demand** for healthcare services and concurrently cost is being driven by a large and growing ageing population, an increased incidence of chronic disease, and the demand for more costly, complex and advanced procedures
- There is a **lack of sustainable digital infrastructure** to allow access to systems for primary, secondary and community staff, some of which require upgrading, also noting the lack of equipment on wards and for community-based staff
- A lack of knowledge, training and system problems has resulted in a **low uptake of digital solutions** to-date
- There are over 400 applications in use across the Health Board, covering primary, secondary and community services. However, many of the **existing systems do not support patient flow** across the organisation, and some systems are unsuitable as they are unsupported or lack key functionality
- There is **no single, shared patient record**
- HDdUHB remains paper based and as a result **information is duplicated, kept in silos** and there is a **lack of real-time data**
- It remains challenging to ensure service delivery across a **rural geography**, with services having to cover large areas, and a lack of mobile phone signal in some rural areas
- There are significant **differences in health outcomes** for poorly served groups reflecting that the digital enablement plan will need to ensure that we build digital health literacy and confidence in using digital, ensuring that no patient has difficulties accessing health services online
- Inability for digital solutions to **respond to changing** patient and citizen needs
- System complexity with multiple transformation programmes, increasing number of pilots, a lack of evaluation and clear benefits assessment

In response to these challenges, the digital enablement plan will look to increase capacity, support attraction and retention of staff and provide significant improvement through service redesign and a range of digital health tools and services.

Advanced analytics will enable our management team to use intelligent insights to deliver more efficient and effective care for our staff and the people using our services patients will be able to seek health information and support online and choose whether they speak to a healthcare professional on the phone or in person.

One of the ways in which we aim to achieve this is by speeding up the ambition for more joined-up, integrated working across health and care services to improve the health and wellbeing of people who live and work in our region.

Our business case approach will follow Welsh Government Infrastructure Investment guidance and is based on the five-case business model:

- Strategic Case
- Economic Case
- Financial Case
- Commercial Case
- Management Case

This report will cover the Strategic and Management Cases **only**; the economic, financial, and commercial case will follow after we have engaged with procurement to provide details on financial implications.

The main messages in the PBC are as follows:

Strategic Assessment and Strategic Case

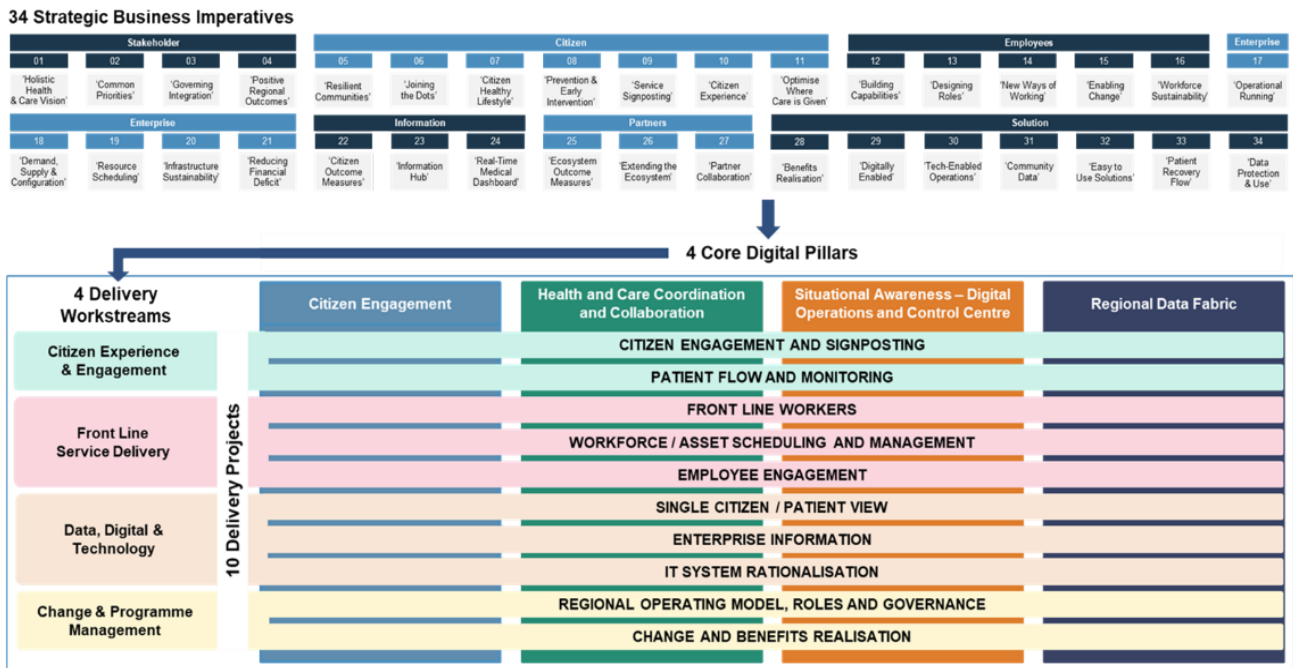
The essence of the Strategic Case is to set out the case for change and need for strategic investment within digital. Through the Digital Enablement Plan, we will look to:

- Provide digital services and tools to give people more control over their own health and the care they receive from the NHS
- Extend to everyone the NHS Wales App, where General Practitioners have agreed to become involved, as a new digital ‘front door’ to give people secure digital access to their own medical records; find trusted information about their health online; allow patients to conveniently book appointments and view test results online. In time it will also provide medical advice and consultations securely
- Give health and care staff the technology they need to help them complete administrative tasks more quickly, freeing up time to spend with patients
- Set standards that keep information secure and make sure systems talk to each other to provide health and care staff with complete access to joined up patient records

The strategic case provides the alignment to AHMWW, and other national digital strategies, which highlight the importance of digital transformation in the ongoing recovery of the NHS. The introduction of a number of new technologies will allow HDdUHB to align with key strategic aims for health and social care in Wales and provide better outcomes for patients and staff. It will also support the Health Board’s plan for a new Urgent and Planned Care Hospital, which is part of the Board’s journey to achieve its long-term strategy and improvement in population health.

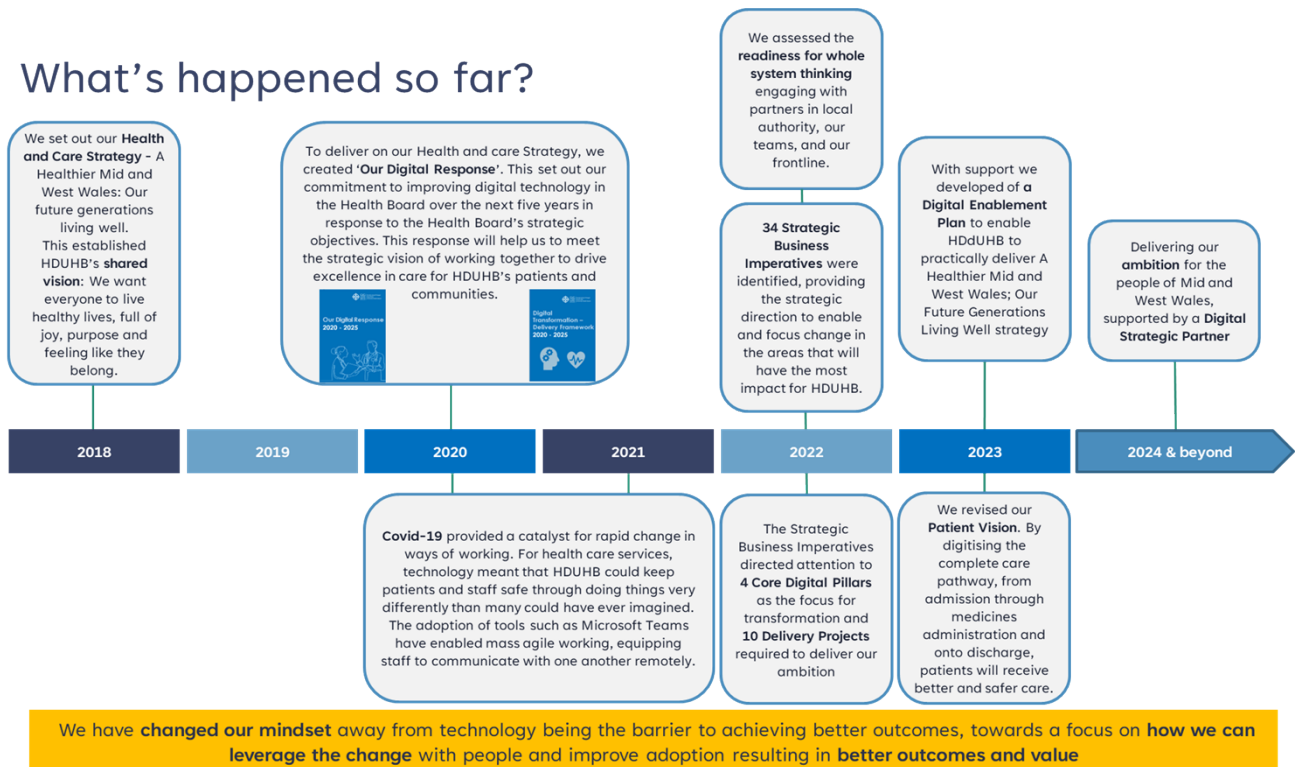
Our Digital Response, in 2020, set out our commitment to improving digital technology in the Health Board over a five-year period in response to the Health Board’s strategic objectives. In 2022, a programme of work was completed to help assess readiness for whole system thinking. Health Board, Local Authorities and Digital Health and Care Wales (DHCW) strategic leaders participated in dedicated 60 minute one-to-one semi-structured interview sessions, which gave rise to 34 strategic business imperatives (the requirement or question), included within the programme business case. Development of the imperatives provided the overarching strategic direction for the transformation programme, to enable focus in the areas which will have the most impact. To enable improved citizen, patient and employee experience and unlock value, we have identified 34 strategic business imperatives, 4 core digital pillars, 4 Delivery Workstreams, and 10 Delivery Projects (Appendix B in attached PBC, page 34). These will be the key inputs to overall transformation and provide the structure and direction.

The illustration below depicts the linkage between the business imperatives, core pillars, delivery workstreams and the resulting delivery projects.



The transformation journey that the Health Board has been on is illustrated in the figure below.

What's happened so far?



Persona and Pathway Journeys

By incorporating personas into the transformation process, we will look to enhance user centricity, improve user adoption, and increase the overall success of the transformation efforts, by relating the business change to each persona. Personas are fictional representations of target service users, created to understand their needs, behaviours, and preferences. In this context of digital transformation, personas are used to guide and inform the design and implementation of changes within an organisation.

Appendix F of the PBC (page 40) provides an example of a persona and their respective pathway journeys. A Pathway Journey (Appendix G – page 41) is a representation of the way that a patient feels as they transition from one key activity to another within a particular pathway. It shows the highs and lows of the process from the patient's perspective (drawn from one of the Hywel Dda Teulu Jones Personas) and allows us to identify digital solutions that can be used to alleviate some of the poor patient experiences seen along the pathway. We have also developed several clinical professional personas, following a number of workshops with clinical teams which will be used to test scenarios and technologies.

A persona catalogue will be developed, to incorporate patient/citizen, secondary, primary, and social care. The proposed approach is to continue this work to provide a complete set of personas and patient journeys to allow patients and clinical teams to continue to feed into the transformation programme.

Clinically Led Approach

Following the clinically led implementation and adoption of the Welsh Nursing Care Record, clinical-led transformation is essential. Lessons learnt from the WNCR approach, means that engaging clinical leaders in transformation efforts will facilitate improved change management and adoption. Clinicians can influence and guide their peers through the process, addressing concerns, providing training, and promoting buy-in. Their influence will help overcome resistance to change and encourages widespread adoption of new practices or technologies.

Clinicians' deep understanding of patient needs, workflows, and challenges allows them to contribute valuable insights in shaping transformative initiatives. Utilising a clinical-led transformation approach ensures that patient needs and outcomes remain central to the decision-making process. By involving clinicians in the transformation journey, the focus shifts towards delivering high-quality, person-centered care that aligns with clinical best practices, evidence-based medicine, and patient preferences.

Management Case

The digital plan will build upon the programme structures already in place for the AHMWW programme. However, this will need to be enhanced to manage a significant number of business cases in parallel, whilst also maintaining and updating the PBC itself.

Prior to implementation and awarding of work packages, it is recommended that further analysis of current processes is carried out, to develop detailed baseline measures against which to monitor and assess benefits.

In conclusion, this programme will invest in improving NHS digital systems and in developing modern technology to provide us with data and insights to improve our decision making and deliver better outcomes. We will make sure our colleagues have the technology and data they need to do their jobs and spend more time delivering care and enable our systems to talk to each other to share vital information that supports enhanced delivery of care, promoting digital inclusion, equity, and literacy for our governance, colleagues, and patients.

Specifically, the programme will:

- Enable improved citizen, patient and employee experience and unlock value, Hywel Dda's digital enablement roadmap through the ten key programmes of work, positioned across the four delivery areas of Citizen Experience & Engagement, Front Line Service Delivery, Data, Digital and Technology and Change and Programme Management. This has the potential to

unlock c. £17m to £35m per annum of value, based on a sustained level of investment within digital solutions and capabilities.

- Delivering our digital operating model, informed by our programme charters, will allow us to incrementally unlock benefit to the organisation over the next 5 years to respond to AHMWW
- Core areas of digital investment will be aligned to the following areas within the first 1-3 years (detailed descriptions are included within the PBC Page 31):
 - Health and Care Customer Relationship Management (CRM) tool supporting **citizen engagement and health and care co-ordination and collaboration**. This will allow patients / citizens to access their patient record through a single front door. It will also allow clinical teams to view the entire patient pathway
 - Data, analytics and integration building the foundation of a **regional data fabric** that brings together health and care information across the region through single view of a person and improving the flow of data between systems
 - Establishing remote monitoring, patient flow and **digital operations and co-ordination solutions** supporting different models of care delivery across Hywel Dda and reducing pressure on acute services. Digital operations and co-ordination solutions look to provide those delivery integrated health and care with near real time or real time support and access to data

Argymhelliad / Recommendation

The Board is requested to:

- **NOTE** that, before any investment decisions are made on specific programmes, individual business cases will be developed which will:
 - Identify a source of funding, either internal or external
 - Be scrutinised by the Digital Oversight Group and Sustainable Resources Committee, for Board approval, following the 5-case approach
 - Include a full benefits realisation methodology
- **NOTE** that this transformation plan is moving the current operating model within digital to be more fully aligned with the clinical/operational models proposed in AHMWW
- **NOTE** the alignment with the regional and national strategies for planned care recovery and transforming urgent and emergency care
- **AGREE** to proceed to a Full Programme Business Case, with the identification of a preferred supplier for a Digital Strategic Partner
- **AGREE** that no commitment to a specific supplier will be made until a further review has taken place to confirm that the recommended investment decision is appropriate; before the contract is placed with a supplier or partner

Amcanion: (rhaid cwblhau)

Objectives: (must be completed)

Cyfeirnod Cofrestr Risg Datix a Sgôr Cyfredol:
Datix Risk Register Reference and Score:

Risk Register entry – 1762 (Risk Score 16)

Galluogwyr Ansawdd:
Enablers of Quality:

6. All Apply

Quality and Engagement Act (sharepoint.com)	
Parthau Ansawdd: Domains of Quality Quality and Engagement Act (sharepoint.com)	7. All apply
Amcanion Strategol y BIP: UHB Strategic Objectives:	All Strategic Objectives are applicable
Amcanion Cynllunio Planning Objectives	All Planning Objectives Apply
Amcanion Llesiant BIP: UHB Well-being Objectives: Hyperlink to HDdUHB Well-being Objectives Annual Report 2021-2022	9. All HDdUHB Well-being Objectives apply

Gwybodaeth Ychwanegol: Further Information:	
Ar sail tystiolaeth: Evidence Base:	Included within the main body of the report
Rhestr Termiau: Glossary of Terms:	Included within the main body of the report
Partïon / Pwyllgorau â ymgynhorwyd ymlaen llaw y Cyfarfod Bwrdd Iechyd Prifysgol: Parties / Committees consulted prior to University Health Board:	Digital Oversight Group Sustainable Resources Committee

Effaith: (rhaid cwblhau) Impact: (must be completed)	
Ariannol / Gwerth am Arian: Financial / Service:	The full extent of the financial has yet to be finalised, however typical positive net returns on the investment in a 2 – 4-year period. A value case assessment has been undertaken and we are validating the findings. A wider strategic benefit will be that the healthcare systems will be more efficient, processes are faster, and wasteful processes can be decreased or eliminated
Ansawdd / Gofal Claf: Quality / Patient Care:	The implementation of the digital enablement plan, will provide the following positive impact on quality and patient care: <ul style="list-style-type: none"> • Patient safety increased - Increased timeliness and availability of relevant clinical information decreased transcription errors and decreases risk to patients' safety • Positive patient outcomes increased - Easy access

	<p>increases speed and of diagnosis, care, treatment plan and onward referral</p> <ul style="list-style-type: none"> • Patient confidence increased - The availability and targeting of accurate and relevant information at the point of contact
Gweithlu: Workforce:	<p>Having a modern digital system, will attract and retain the workforce within the Health Board. A key component of this work is the assessment of operational readiness for organisational and digital change, the digital roadmap required and recommended service redesign principles for a whole system approach, that will enable the change the workforce urgently need, As part of the digital plan there will be a change management and digital enablement programme designed to co-produce and design services for citizens through a professional integrated and upskilled workforce across health and care.</p>
Risg: Risk:	<p>Without the necessary investment in digital there is a risk that the current highly complex system will become even slower stifling the innovation that the Health Board has progressed. A typical monolithic technology programme which is the current approach introduces significant technical and business dependencies across the Health Board which affects patient delivery.</p>
Cyfreithiol: Legal:	<p>Not applicable</p>
Enw Da: Reputational:	<p>The ambitious digital enablement plan will progress the Health Board forward to becoming a full integrated digital organisation, and propelling the Hywel Dda forward to become the first digital exemplar within NHS Wales</p>
Gyfrinachedd: Privacy:	<p>At the centre of the digital enablement plan will be inclusivity, and the requirement to ensure that staff, patients, and citizens are included in the development of any solutions with strong information governance and cyber security.</p>
Cydraddoldeb: Equality:	<p>Not applicable</p>



GIG
CYMRU
NHS
WALES

Bwrdd Iechyd Prifysgol
Hywel Dda
University Health Board



Transformation enabled by Digital Programme Business Case

October 2023

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1. Executive Summary

1.1 Introduction

- 1.1.1 This Programme Business Case – the “PBC” - sets out the digital proposition to realise the vision we articulated in our Health and Care Strategy “A Healthier Mid and West Wales (AHMWW): Our Future Generations Living Well” and create an integrated, patient centric, community based and social model of care.
- 1.1.2 This document sets out the Programme Business Case (PBC) for the investment in the Digital Enablement Plan for Hywel Dda University Health Board (HDdUHB). The purpose of this business case is to articulate the strategic rationale for the programme, outline its scope and breadth, and provide an indication of the likely benefits.
- 1.1.3 The Covid19 pandemic has highlighted the crucial role of digital technology in the way we live and work and has accelerated the move to online for many more patients. At the same time, it has exposed greater inequalities, including digital exclusion, and increased the risk that those who do not have access to digital devices, fast broadband and sufficient data are left even further behind. For this reason, we have produced a new digital enablement plan to refocus our priorities and better prepare us for the future. This PBC sets out the investment required to implement this approach and the benefits it will deliver.
- 1.1.4 By committing to this programme business case and the digital enablement plan, the Health Board will continue to develop as a digital integrated health organisation. We will work to ensure patients, and staff, local citizens, and partners are able to thrive in the digital future and play active roles in shaping Hywel Dda into a digital exemplar where technology is used to improve the lives and life chances of everyone.
- 1.1.5 We want everyone to have access to the digital information, tools and services needed to help maintain and improve their own health and well-being. We want health and social care information to be captured electronically, integrated and shared securely. We want digital technology and data to be used appropriately and innovatively to help plan and improve services and ultimately improve outcomes for all.
- 1.1.6 In developing the digital enabling plan approach a strategic assessment was undertaken to support the executive leadership of the Health Board and Local Authorities to understand the current challenges and priorities in each of the organisations, to understand the digital divide, overlaps and assess organisational readiness for a strategic programme of change to establish a whole system approach creating the opportunity to work better together to resolve these issues and create opportunities across our region in an accelerated and transformational way.
- 1.1.7 A key component of the strategic assessment was the evaluation of operational readiness for digital change. The digital roadmap requires and recommends service redesign principles for a whole system approach.
- 1.1.8 Following approval of this PBC, our focus will move to Full Business Case stage, where we will further develop the Economic, Financial and Commercial Cases based on results of the market testing focussed on the specification requirements outlined

within the tender for a strategic partner in order for a FBC to be brought to the Board by May 2024. This date will enable us to deliver improvements to our transformation agenda as soon as possible, and progress at pace to align with the already established AHMWW programme.

1.2 Strategic Case

1.2.1 Digital technology is a significant part of our everyday lives improving the way we socialise, shop and work. It also has great potential to improve how the NHS delivers its services in a new and modern way, providing faster, safer and more convenient care. Our Health Board approach will increase the range of digital health tools and services available. People will be able to seek health information and support online and choose whether they speak to a doctor on the phone or in person. A wide range of NHS Wales approved apps will help people get ongoing support to help them manage their health and wellbeing needs, backed up by face-to-face care when this is needed. As part of this programme will be investing in improving NHS Digital systems and in developing new technology. We will make sure staff have the technology they need to do their jobs, and our systems can talk to each other and share vital information to support the delivery of care, ensuring that everyone is digital included, and staff and patients are not excluded.

1.2.2 Through the Digital Enablement Plan, we will look to.

- Provide digital services and tools to give people more control over their own health and the care they receive from the NHS.
- Extend to everyone the NHS Wales App as a new digital 'front door' to give people secure digital access to their own medical records; find trusted information about their health online; allow patients to conveniently book appointments and view test results online. In time it will also provide medical advice and consultations securely
- Give health and care staff the technology they need to help them complete administrative tasks more quickly, freeing up time to spend with patients.
- Set standards that keep information secure and make sure systems talk to each other to provide health and care staff with complete access to joined up patient records.

1.3 Management Case

1.3.1 The Management Case addresses whether the preferred option is 'achievable'. Its purpose is to set out in more detail the actions that will be required for successful delivery in accordance with good practice.

1.3.2 To realise the benefits of these solutions, HDdUHB needs strong governance and processes in place. The overall project will be managed by a Senior Responsible Owner, who will lead the programme team. Critical to the programme will be a strong commercial relationship, so the Health Board will look to introduce an intelligent client approach to supplier management with dedicated resources allocated to the commercial and benefits realisation of the programme. The local implementation team will work closely with the supplier to implement the solution incrementally across all sites.

1.3.3 The recommendation is to set up several External Scrutiny Groups, consisting of representatives from all clinical departments, to ensure the requirements of the solution meet the needs of the users. Furthermore, the rollout will be supported by Digital Champions, clinical staff who will support their colleagues in adopting the new technologies.

1.4 Conclusion

- 1.4.1 To enable improved citizen, patient and employee experience and unlock value, Hywel Dda's digital enablement roadmap sets out **10 key programmes of work**, positioned across the **four delivery areas** of Citizen Experience & Engagement, Front Line Service Delivery, Data, Digital and Technology and Change and Programme Management.
- 1.4.2 The Hywel Dda UHB digital enablement roadmap, set across a period of five years, shows an initial view of programme phasing.
- 1.4.3 Delivering our target solution state, informed by our programme charters, will allow us to incrementally unlock benefit over the next 5 years using iterative delivery methods.
- 1.4.4 Supporting future change will prepare Hywel Dda UHB for the delivery and adoption of digitally enabled citizen, patient and employee-centric solutions and the realisation of benefits.
- 1.4.5 Core areas of digital investment should be aligned to the following areas within the first 1-3 years:
 - Health and Care CRM supporting **citizen engagement and health and care co-ordination and collaboration**.
 - Data, analytics and integration building the foundation of a **regional data fabric** through single view of a person and improving the flow of data between systems.
 - Establishing remote monitoring, patient flow and **digital operations and co-ordination solutions** supporting different models of care delivery across Hywel Dda and reducing pressure on acute services
- 1.4.6 Delivering our target solution state, informed by the development of programme charters, which will allow us to incrementally unlock benefit over the next 5 years using iterative delivery methods.

2. Introduction

- 2.1 This document sets out a high-level Programme business case (PBC) for investment in the Digital Enablement Plan for Hywel Dda University Health Board (HDdUHB).
- 2.2 The document has been prepared in accordance with HM Treasury Green Book guidance and is structured into the sections as set out below with further information provided in appendices:
- the **Strategic Case** considers the key strategic drivers and the case for change, and
 - the **Management Case** describes the governance structure, project plan, risk management arrangements and benefit realisation approach.
- 2.3 The following sections will be completed following engagement with procurement and a successful tender process.
- the **Economic case** sets out the options and option short-listing process, benefits and risks, cost assumptions, and the total economic cost of the preferred option.
 - the **Financial Case** sets out the financial appraisal and funding options for the preferred option.
 - the **Commercial Case** provides an overview of the recommended procurement process; and

3. Strategic Case

3.1 Introduction

3.1.1 In this section the background to the project is set out alongside the strategic drivers and the case for change.

3.2 Background

3.2.1 The digital age has created a new set of challenges for healthcare. Traditional digital healthcare models are no longer effective. For example, the purchasing of siloed and unconnected systems, with limited interoperability which reduces the ability to leverage the data for secondary purposes. Therefore, we must adapt to keep up with changing patient expectations. Some of the challenges that the Health Board faces include:

- Manual processes that are time-consuming and prone to error
- Inefficient communication channels between departments and stakeholders
- Lack of data integration and analytics capabilities
- Inability to quickly respond to changing patient / citizen needs.
- Limited scalability and flexibility in business operations
- Inconsistent cross boundary interaction, communication and prioritisation increasing pressure on staff.
- Recruitment and retention challenges.
- System complexity with multiple transformation programmes, number of pilots, lack of evaluation and unclear benefits assessment.

3.2.2 AHMWW had digital enablement as a core enabler and theme through the document. With the advent of digital technology, healthcare providers around the world are beginning to explore the benefits of transformation with digital as the key enabler. Digitally enabled transformation is the integration of digital technology into all areas of a business, resulting in fundamental changes to how businesses operate and deliver value.

3.3 Key Drivers for Transformation enabled by Digital

3.3.1 HDdUHB is facing several key challenges:

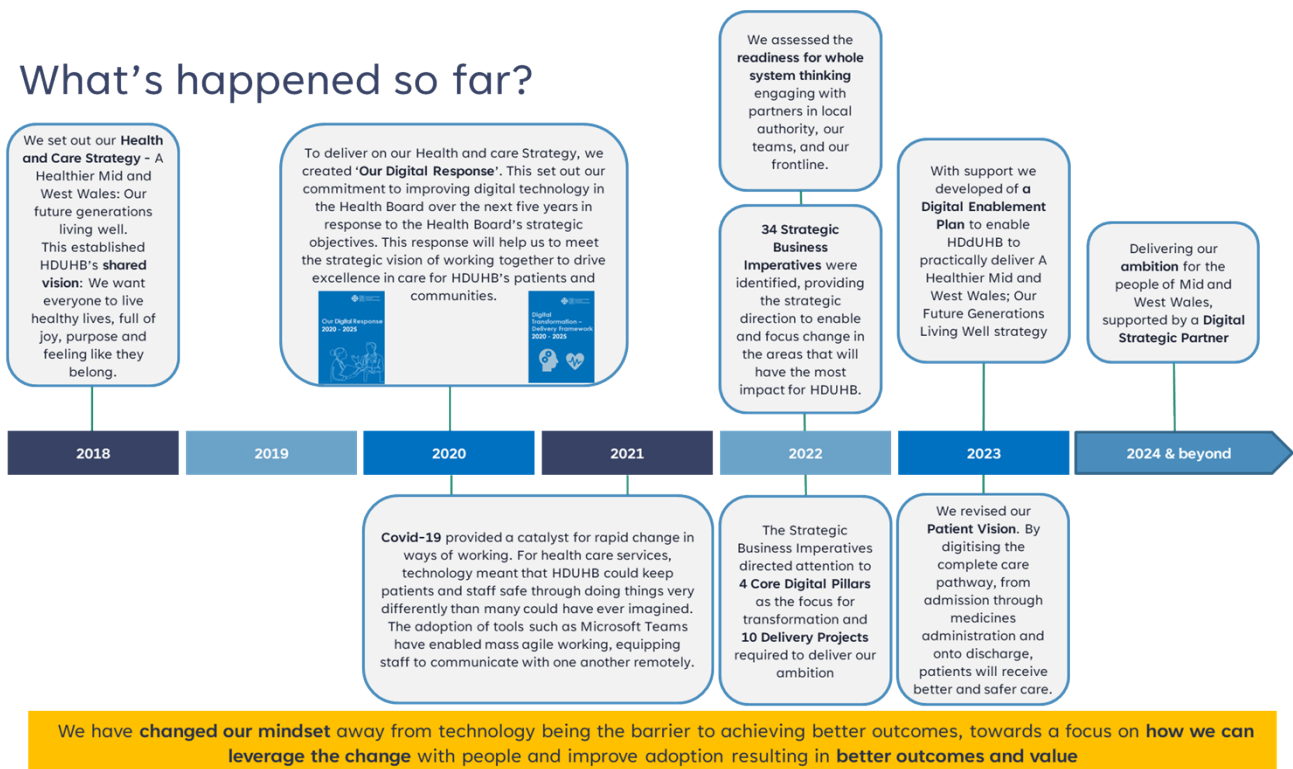
- There is a **shortage of skilled health and social care staff**.
- An **increase in demand** for healthcare services and concurrently cost is being driven by a large and growing ageing population, an increased incidence of chronic disease, and the demand for more costly, complex and advanced procedures. This has been exacerbated by COVID, which has reduced routine care appointments and increased wait times significantly, resulting in increased hospital admissions.
- There is a **lack of sustainable digital infrastructure** to allow access to systems for primary, secondary and community staff, some of which require upgrading, also noting the lack of equipment on wards and for community-based staff
- A lack of knowledge, training and system problems has resulted in a **low uptake of digital solutions** to-date.
- There are over 400 Information and Communications Technology (ICT) systems in use across the Health Board. However, many of the **existing systems do not support patient flow** across the organisation, and some ICT systems are unsuitable as they are unsupported or lack key functionality.
- There is **no single, shared patient record**.

- HDdUHB remains paper based and as a result **information is duplicated, kept in silos** and there is a **lack of real-time data**.
- It remains challenging to ensure service delivery across a **rural geography**, with services having to cover large areas, and a lack of mobile phone signal in some rural areas; and
- There are significant **differences in health outcomes** for poorly served groups reflecting that the digital enablement plan will need to ensure that we build digital health literacy and confidence in using digital, ensuring that no patient has difficulties accessing health services online
- Inability for digital solutions to **respond to changing** patient and citizen needs.
- System complexity with multiple transformation programmes, increasing number of pilots, a lack of evaluation and clear benefits assessment.

3.4 Starting the transformation journey

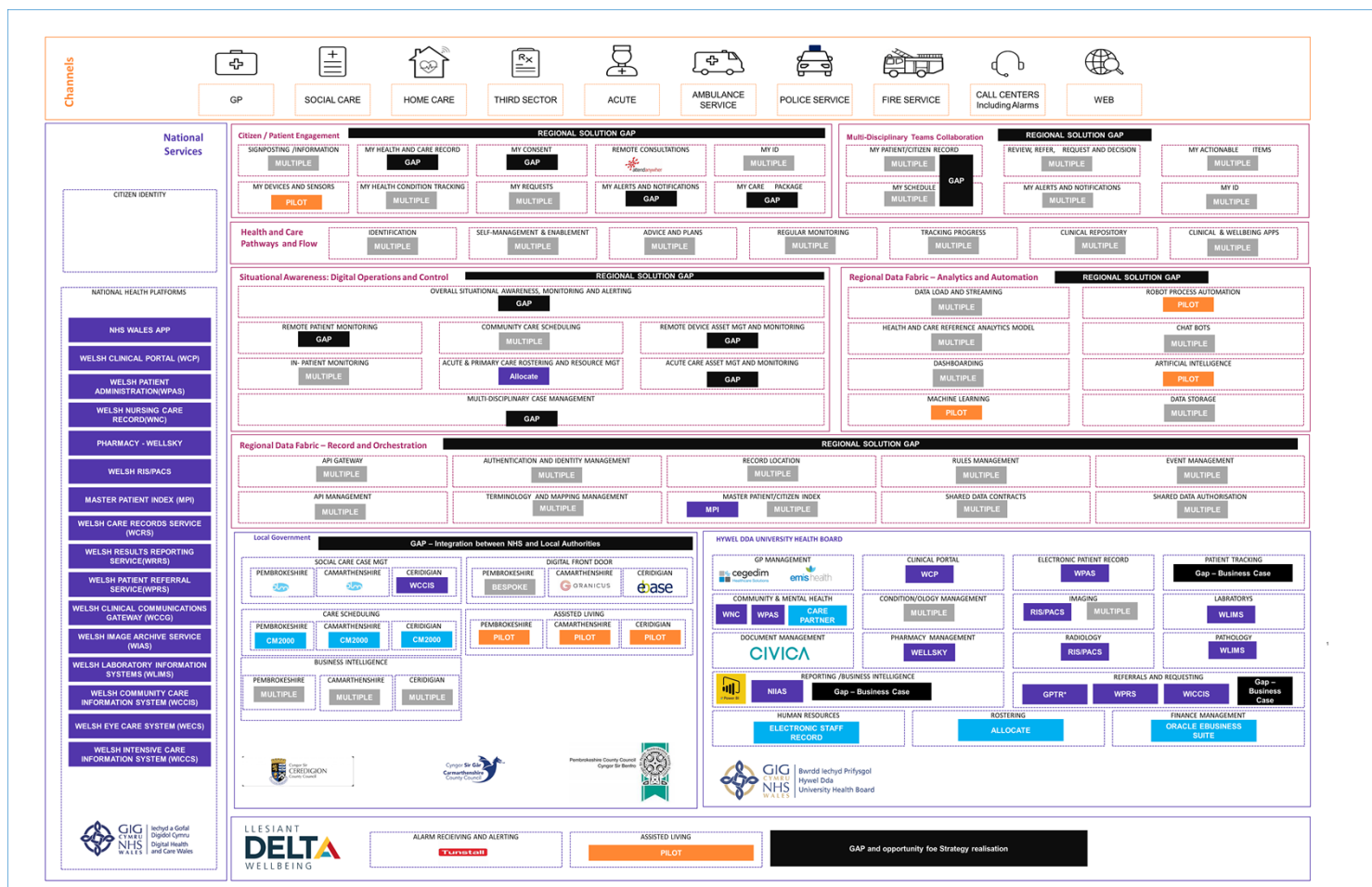
3.4.1 Since the launch of the Our Digital Response in 2020 which set out our commitment to improving digital technology in the Health Board. In 2022, a programme of work was completed to help assess readiness for whole system thinking. Chief Executives and key strategic leaders participated in a resolute sixty minute one to one semi-structured interview session, which gave rise to thirty-four Strategic Business Imperatives

Figure: 1 – Timeline depicting the transformation journey



3.4.2 The underlying architecture within the Health Board is overly complex and as such is very challenging to manage and adapt to changes in service configurations. This has led to a considerable backlog of requests to automate processes and procedures on top of an existing increased demand on services. Below is details this complexity.

Figure: 2 – Diagram showing the complexity of the digital architecture for the region that we serve



3.4.3 The workshops created a series of value propositions aligned to ten programmes of work. These value propositions have been developed to cover both quantitative and qualitative measures, ensuring that they are able to be matched back to the business imperative (need). Any digital solution will need to demonstrate value to the organisation, with the reduction of waste (i.e. reducing the number of tests requested), impact on productivity, improvements in efficiency, and in some cases cash releasing.

3.4.4 The outputs from several workshops including partners from across the Mid and West Wales region was used to arrive at a proposed target digital design and architecture. The workshops took a digital first view of the challenges and opportunities for example what is the digital vision for the region, a review of the strategic business imperatives, and desired outcomes and therefore what are the digital capabilities required.

3.4.5 Following the workshop the business imperatives provided the overarching strategic direction for the transformation programme, to enable focus in the areas which will have the most impact. To enable improved citizen, patient and employee experience and unlock value, we have identified 34 strategic business imperatives, 4 core digital pillars, 4 Delivery Workstreams, and 10 Delivery Projects (Appendix B).

3.4.6 In devising the digital plan, stakeholder engagement will need to be a core component in ensuring 'right service, right place, right time' for the benefit of the

citizens of Hywel Dda. The first stage of this journey was to identify the breadth of stakeholders with a level of interest and influence in facilitating positive health outcomes for the people of Hywel Dda. The digital plan will provide an uncommon approach to digital implementation programmes, where the technology will be removed from the discussions. The business imperative (processes), and stakeholders (people) will take prominence and the technology will be the enabler. The digital enablement plan will ensure systems (technology) is part of the solution, but that business change, behavioural and cultural change is at the heart of the transformation.

3.5 Case for Change

3.5.1 A Healthier Wales

'A Healthier Wales' sets out the long-term plan for health and social care in Wales. Fundamentally, it advocates for a shift from reactive hospital-based care and treatment to proactive community-based, person-centred care focused on health, wellbeing and prevention.¹ This is aligned to the principles of prudent healthcare, which shape the work of the NHS in Wales and call for changing the model of outpatients by shifting care to the community and improving digital connectivity.² Digital solutions are a key enabler to the implementation and adoption of the long term plan. The digital enablement plan provides the foundation for the development of a long-term approach for Hywel Dda.

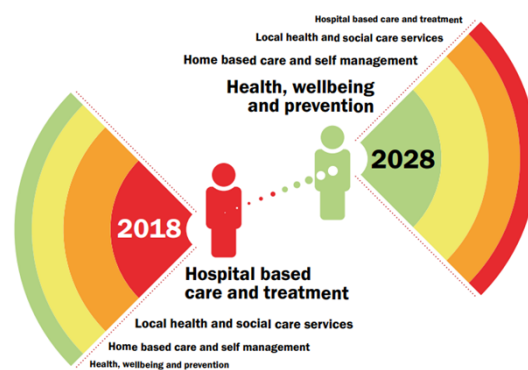


Figure 3: A Healthier Wales Vision

3.5.2 The Value in Health Programme

The Value in Health programme's strategy highlights the importance of achieving this in a financially sustainable way, ensuring that interventions maximise the outcomes that matter to people.³ To achieve this we are proposing an incremental roadmap that takes an agile approach and starts by focusing on areas where technology can have the highest impact.

Enabling person-centred, preventative care requires health and care services to make better use of existing resources and leverage available data and information to improve decision making. Staff need to be able to have access to real-time data and share it to enable collaboration across the whole system. Key Welsh Government sponsored report recommendations seek improvements in the domains of patient safety, flow management and a person's experience in hospital.⁴ Digital technologies play a key role in making this possible.

3.5.3 Once For Wales

The 'Once for Wales' approach sets standards and expectations that promote interoperability between systems, and access to structured electronic records in all care systems.⁵ It is important to note that the Welsh Government is currently refreshing the strategy for Wales and while the 'Once for Wales' approach will not be carried forward,

¹ <https://gov.wales/sites/default/files/publications/2021-09/a-healthier-wales-our-plan-for-health-and-social-care.pdf>

² <https://gov.wales/sites/default/files/publications/2019-04/securing-health-and-well-being-for-future-generations.pdf>

³ <https://vbhc.nhs.wales/files/our-strategy-to-2024/>

⁴ National ePatient Flow Management Outline Business Case (Dec 2018)

⁵ <https://dhw.nhs.wales/systems-and-services/>

HDdUHB currently use many of these national systems. Therefore, any technology introduced in the future needs to be interoperable with the existing solutions.

3.5.4 A Digital Strategy for Health and Social Care in Wales

This sets out the Welsh Government approach to digital and data through its Digital Strategy for Health and Social Care. It is a refreshed document that builds on the strategic direction set out in our 2015 strategy which has been a key enabler of A Healthier Wales. It is designed to deliver our core vision to help people in Wales to lead happier, healthier and longer lives through user-centred digital services built upon better digital skills, partnerships, data and platforms. It is in response to a number of strategic challenges.

- Ongoing recovery of the NHS and social care post-pandemic pressures
- Raising demographics across our population and more complex co-morbidities
- Financial constraints for citizens and organisations driven by cost-of-living crisis.
- Raising expectations by citizens for digital services but increased risk of digital exclusion
- A competitive market for the digital and data workforce.

The above are integral drives for the digital enablement plan, and the opportunities highlighted within the strategy are also at the core of the approach we will be taking within the Health Board.

3.5.5 HDdUHB's Digital Response and Digital Operational Plan

HDdUHB's vision is "to become the most digitally integrated care organisation in NHS Wales" while empowering "patients and staff to securely access information anytime, anyplace and on any device".⁶ The strategy to achieve this vision is outlined in the Digital Response, and further supported by the Digital Operational Plan, which provides detailed, annual plans.

In line with this, four key themes underpin the future vision of the digital response:

- **Digitally connected patients:** Empower patients to actively manage their health and care.
- **Digitally enabled workforce:** Enable staff to access shared health and care records.
- **Business Intelligence & Analytics:** Insight driven culture to improve quality, outcome and research.
- **Digital Infrastructure:** Provide secure access and interoperability.

Ultimately, introducing a number of new technologies will allow HDdUHB to align with key strategic aims for health and social care in Wales, and provide better outcomes for patients and staff. It will also support the Health Board's plan for a new Urgent and Planned Care Hospital, which is part of the Board's journey to achieve its long-term strategy and improvement in population health.⁷ Digital technologies such as eObs and patient flow will

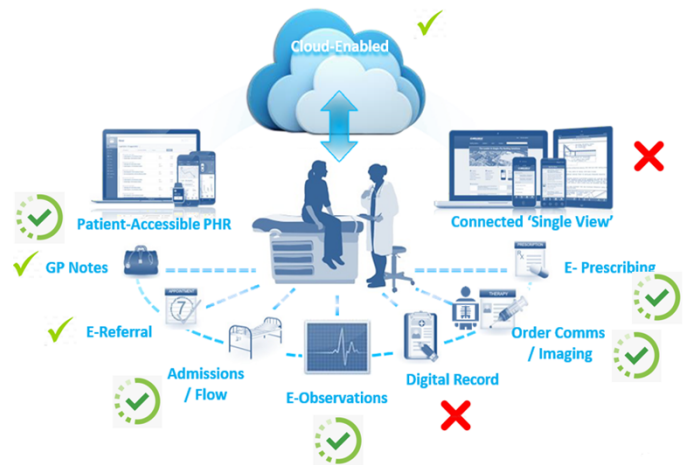


Figure 4: HDUHB Patient Vision (Digital Response)

⁶ <https://hduhb.nhs.wales/about-us/your-health-board/board-meetings-2021/board-agenda-and-papers-27-january-2022/agenda-and-papers-27-january-2022/appendix-11-digital-strategy/>
⁷<https://hduhb.nhs.wales/news/press-releases/once-in-a-lifetime-bid-for-health-and-care-investment-in-mid-and-west-wales/>

be a key component of this new hospital, and these will have to be tried and tested to enable successful implementation.

3.6 Strategic Business Imperatives

3.6.1 To ensure key Mid and West Wales partners strategic thinking and current challenges were included at the core of the development of the strategic imperatives each of the CEOs from the Health Board, Local Authorities, and Digital Health and Care Wales, along with other strategic leaders within the organisations participated in a dedicated sixty minute one to one semi-structured interview session.

3.6.2 Further context on each of pillars is outlined in Appendix A

3.7 Clinical Value

3.7.1 There are several national strategies and programmes aimed at improving clinical care and patient safety:

- The Health and Care Standards framework provided by NHS Wales establish a basis for improving the quality and safety of healthcare services.⁸
- There is specific reference to safety and dignified care for older patients in response to the recommendations made through the Andrew's report, the Older People's commissioner report 'Dignified Care' and the provisions of the Nurse Staffing Act 2016.
- The NHS Wales Delivery Framework and Reporting Guidance 2021-22⁹ lays out the aim to ensure that people in Wales "have better quality and more accessible health and social care services, enabled by digital and supported by engagement".
- The six goals for urgent and emergency care published by the Welsh Government call for optimal hospital care following admission.¹⁰
- The NICE 50 guidance 'Acutely Ill Patients in Hospital'¹¹
- The Public Ombudsman Wales report 'Out of hours: Time to Care'¹²
- The Health and Social Care (Quality and Engagement) (Wales) Act 2020, aims to strengthen the existing Duty of Quality, create a Duty of Candour on NHS service provision to ensure openness and transparency.

All of the above highlight the need to improve care of deteriorating patients.

3.7.2 Through the digital ambition set out in the health and care strategy the strategic benefits illustrated in the following table will be enabled

Table 1: Benefits

⁸ <https://nwssp.nhs.wales/a-wp/governance-e-manual/putting-the-citizen-first/health-care-standards/>

⁹ <https://hduhb.nhs.wales/about-us/performance-targets/performance-documents/2021-22-nhs-wales-delivery-framework-amp-guidance-pdf/>

¹⁰ <https://gov.wales/written-statement-six-goals-urgent-and-emergency-care-and-expectations-system>

¹¹ <https://www.nice.org.uk/guidance/cg50>

¹² <https://www.ombudsman.wales/wp-content/uploads/2018/03/Out-of-Hours-Time-to-Care.pdf>

Hywel Dda Strategic Benefits	Examples of types of outcomes and benefits
Patient safety increased	Increased timeliness and availability of relevant clinical information decreased transcription errors and decreases risk to patients' safety
Positive patient outcomes increased	Easy access increases speed and of diagnosis, care, treatment plan and onward referral
Patient confidence increased	The availability and targeting of accurate and relevant information at the point of contact
Legal compliance maintained	Requirement to comply with policy, legislation, and standards
Healthcare system efficiency increased	Processes are faster, or wasteful processes can be decreased or eliminated
Overall healthcare system costs decreased	Information management and technology improvements eliminate wasteful processes and reduce expenditure
Digital Inclusion	Identifying digitally excluded patients / citizens and providing access to devices and digital skills to enable all across Hywel Dda to safely participate in the digital world

3.8 Becoming more carbon efficient

3.8.1 Finally, the Welsh Government has committed to a NetZero target by 2050.¹³ In February 2022, HDdUHB issued a statement highlighting that decarbonisation and establishing energy efficient systems is a priority for the Board.¹⁴ In healthcare, the use of digital technology provides many opportunities to reduce the carbon impact of health and care services. For example, in the 12 months to June 2021 virtual appointments are estimated to have the saved carbon equivalent to taking 40,000 cars off the road for a year, and remote monitoring technologies are estimated, over the next 3 years to reduce patient travel by 28 million miles.¹⁵ Introducing new digital solutions are a first step towards building more efficient health and care services that can support these net zero targets.

3.9 Strategic options

3.9.1 The following are the strategic options to deliver the intended objectives of the Digital Enablement Plan.

¹³ <https://gov.wales/net-zero-wales>

¹⁴ <https://hduhb.nhs.wales/news/press-releases/our-commitment-to-carbon-reduction-and-environmental-sustainability/>

¹⁵ <https://www.nhs.uk/blogs/the-role-of-digital-technologies-in-meeting-nhs-net-zero-targets/>

Table 2: High Level Options

	Option 0 Do nothing	Option 1 Look to appoint additional resources into the digital team to accelerate delivery	Option 2 Appoint (when required) additional support from agencies to bolster the digital team	Option 3 Appoint a strategic digital transformation partner
Description	Do Nothing – Continue with a current transformation approach within the Health Board, which is reactive and lacks pace of delivery.	Appoint additional workforce to increase the number of projects that the digital team can rollout	Based on the specific programmes of work look to appoint agency staff to collaborate with the current workforce to deliver	Procure a strategic digital partner, who will provide capacity and capability that will be able to scales up quickly to allow rapid transformation alongside the current digital team(s)

3.10 Investment Objectives

3.10.1 Based on the strategic context, the following investment objectives have been identified:

- **Timeliness/ Efficiency:** To use integrated digital technology to capture, present and use real-time patient pathway information to improve the timeliness of care and reduce the length of stay.
- **Effectiveness and Patient Safety:** To achieve measurable improvement of patient outcomes by using mobile digital technology to standardise and reduce variation in the management of patients.
- **Equity of care:** To measurably improve admitted patient experience of care by ensuring patients are in the right bed at the right time to meet their needs.
- **Patient Experience:** To improve admitted patient experience by freeing staff time to care using mobile technology.
- **Economy:** To avoid unnecessary hospital inpatient costs by improving local ability to match acute bed capacity with unscheduled care demand.
- **Staff experience:** To improve staff satisfaction by providing them with the digital tools and technology they need to undertake their work more effectively.

3.11 Conclusion

3.11.1 This strategic case builds on existing work conducted. The digital enablement plan will introduce a number of key foundational building blocks and enable transformation of clinical services at pace. As outlined in the Management Case, HDdUHB will capture the benefits of introducing these systems.

4. Management Case

4.1.1 This section outlines the proposed governance approach, digital roadmap and high-level implementation plan for the project.

4.1.2 The delivery of this programme will be challenging. This will need to be supported with a robust resourcing plan and alignment with enabling programmes and as such as the first work package will be to define and scope the full programme with associated milestones.

4.1.3 This chapter sets out the approach that HDdUHB will take to implement and deliver the Programme, the programme governance, management and assurance arrangements to ensure robust oversight and scrutiny, the change management plan, the plan for infrastructure, integration and data migration, the benefits realisation strategy and approach to risk management to maximise adoption of the new solution.

4.2 Governance

4.2.1 The overall project will be managed by a Senior Responsible Owner, supported by a Programme Lead, who will lead the project team. The project team will work closely with clinical and operational staff from all sites to ensure that requirements of the solutions meet the needs of users.

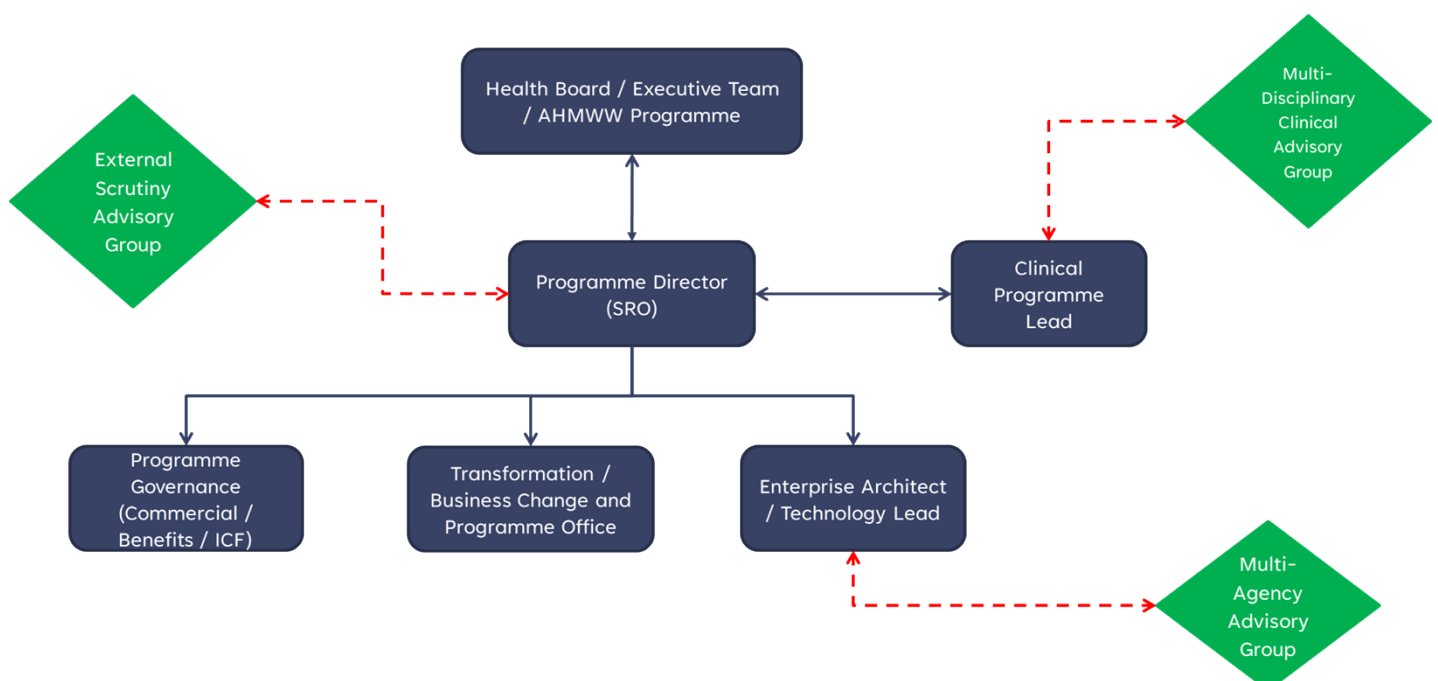
4.2.2 Future digital programmes or work packages associated with the digital plan, will be linked to the already established governance arrangements for the delivery of AHMWW.

4.3 Programme Team

4.3.1 During the setup of the programme, the programme will be established to incorporate a number of key roles to deliver the programme.

An example of the proposed accountability structure is attached below:

Figure 5: Proposed accountability



4.4 Evaluation User Group

4.4.1 To ensure that the requirements of the digital solutions meet the needs of users, clinical and operational staff will be involved throughout the procurement and implementation process. The proposal is to set up a number of external scrutiny groups, which would consist of representatives from all clinical departments and all sites to ensure local needs are met industry leaders as well, such as Gartner to ensure that the supplier is delivering to the agreed work package and the strategic intent is still valid.

4.5 Shared learning

4.5.1 A strategic approach to shared learning in relation to implementation and resource allocation will be considered by the Steering Group. The HDdUHB Steering Group is leading on an intentional facilitation and coordination effort with the other programmes under the A Healthier Mid and West Wales Programme to ensure synergy of programmes and an understanding lesson learnt from those implementing programmes of transformation and change.

4.6 Programme assurance

4.6.1 The Programme Team will manage the Programme Plan, the risks, issues and all programme documentation according to established good practice, using guiding principles drawn from Managing Successful Programmes and PRINCE2 Agile. As permanent programme governance is developed, it is expected that the Steering Group would be accountable for the Programme Plan but the responsibilities around management of this plan would remain with the Programme Team.

4.6.2 A standard suite of reports will be produced to ensure effective visibility of timely and accurate management information at the appropriate level to maintain momentum of the Programme. This will include fortnightly workstream progress reports, monthly Steering Group reports and regular reporting for the Steering Group and other local and national governance boards as required.

4.6.3 In addition to regular reporting, the Programme will establish a cycle of assurance reviews during the implementation lifecycle. These “Gateway” reviews, or decision points, will provide greater visibility and improved management of risk at each stage of the implementation, improve stakeholder confidence in Programme delivery, provide early warning of risks and secure expert insights for the Programme. The expected gateways are summarised below:

- Readiness – covering strategy and programme planning.
- Workflow and configuration – workflow design, operational policies & procedures, configuration and plans for technology, testing and training.
- User and system readiness – testing progress, training strategy and cutover strategy.
- End user training and cutover – training delivery and progress, detailed cutover plan and arrangements for go-live; and
- Closure – post-implementation review and benefit realisation monitoring and evaluation.

4.6.4 In addition, the programme assurance framework will align and be subject to the national assurance processes around technical and clinical design:

- Welsh Clinical Informatics Council (WCIC)
- Welsh Information Development Group (WIDG)
- Welsh Informatics Assurance Group (WIAG)
- Welsh Information Governance Board (WIGB)

- Welsh Technical Standards Board (WTSB)
- Welsh Information Standards Board (WISB)
- Application and Architecture Assurance Group (AAAG)

4.7 Implementation Plan

- 4.7.1 As per the preferred option implementation of the proposed workstreams will follow an incremental approach with the technology being rolled when required. The approach will be to ensure that all the foundational technology is in situ, to allow the benefits to be released quicker. This will mean that multiple implementation projects will be undertaken simultaneously.
- 4.7.2 Implementation will be prioritised based on work packages.

4.8 Implementation Approach

- 4.8.1 The implementation approach will be governed by each work package and will result in further business cases, and implementation plans being provided to the Board for approval.
- 4.8.2 However, we will ensure we are inclusive, recognising that the use of digital services can create opportunities for people who struggle to access traditional services, as well as barriers for others, but should always be part of a multichannel offering that reflect the preferences and needs of individuals. For example, the Health Board is a pathfinder for the NHS Wales App will offer a personalised experience for users and encourage them to engage in tailored preventative activity.
- 4.8.3 Through our digital inclusion programme, we will look to help people, their families, unpaid carers and care providers to understand what technologies are effective for helping maintain independence and quality of life, such as smart home technologies that give medication reminders, or sensor-based tech that provides alerts if someone has had a fall.

4.8.4 Skills and Workforce

- 4.8.4.1 To enable the digital plan we are aware that there will need to be improvements in the digital skills of our workforce, both in digital but also within the Health Board. As part of the enablement plan, we will look to address the specialist tech skills gap through professionalising the digital profession, bringing in talented tech graduates, increasing the number of apprenticeships offered and harnessing talented entrepreneurial and analytical clinicians through the Clinical Fellowship Programme. We will strengthen the online community of practice we have established for digital champions and for data professionals and analysts to share knowledge, learning and development, supporting the development of analytical skills for transformation.
- 4.8.4.2 To support this, we have recently undertaken a KLAS assessment, which was the first ever national Electronic Patient Record (EPR) user experience survey. This will be an Ethical/KLAS usability survey to benchmark user perception on the usability of our digital systems across Wales, and from this to plan on improvements. If we expect the clinical transformation, there is a need to drive up digital maturity and improve the usability of our digital systems across Wales. This survey forms the first tranche of evidence we're gathering to support this

work and will help to guide decisions on how we support EPR improvements nationally. At the heart of our digital vision is a belief that technology should be a powerful enabler for service improvement and transformation and nowhere is this more relevant than in the development of EPRs, which clinical teams rely on day-in, day-out, to deliver effective joined-up care for patients. This piece of research is the next step to ensuring we make their experience as good as it can possibly be.

- 4.8.4.3 Linked to this as part of the enablement plan, there will be a workstream that will undertake the Digital Technology Assessment Criteria for health and social care (DTAC) which gives staff, patients and citizens confidence that the digital health tools they use meet our clinical safety, data protection, technical security, interoperability and usability and accessibility standards.

4.8.5 **Persona and Pathway Journeys**

- 4.8.5.1 By incorporating personas into the transformation process, we will look to enhance user centricity, improve user adoption, and increase the overall success of the transformation efforts. Personas are fictional representations of target users or customers, created to understand their needs, behaviours, and preferences. In this context of digital transformation, personas are used to guide and inform the design and implementation of changes within an organisation. Below is how through the transformation plan we will use personas to show the impact on our service users and clinical teams.

- **User-Centric Focus:** Personas will enable a user-centric approach by capturing insights about the people who will be impacted by the transformation. They help ensure that the transformation efforts are aligned with the needs and goals of the users.
- **Empathy and Understanding:** Personas humanise the transformation process by providing a clear picture of the users' backgrounds, motivations, pain points, and aspirations. This will help the programme teams develop a deeper understanding and empathy towards the users, leading to better decision-making.
- **Targeted Communication and Engagement:** It is anticipated that the personas will help tailor communication and engagement strategies by identifying the specific needs and preferences of different user groups. This will allow the programme to deliver targeted messages, training, and support that resonate with each persona, increasing user adoption and satisfaction.
- **Design and Innovation:** the personas will be used as a reference point for designing new systems, processes, or services. They help identify design opportunities, prioritise features, and ensure that the transformation initiatives align with the desired user experience.

- 4.8.5.2 Appendix F provides an example of a persona and their respective pathway journeys. A Pathway Journey (Appendix G) is a representation of the way that a patient feels as they transition from one key activity to another within a particular Pathway. It shows the highs and lows of the process from the patient's perspective (drawn from one of the Hywel Dda Teulu Jones Personas) and allows us to identify digital solutions that can be used to alleviate some of the low points on the Pathway. We have also developed several clinical professional personas' following a number of workshops with clinical teams.

4.8.5.3 The proposed persona catalogue is provided below for information. The proposed approach is to continue this work to provide a complete set of personas, and patient journeys to allow patients, and clinical teams feed into the transformation programme.

4.8.6 Clinical Led Transformation

4.8.6.1 Transformation led by clinicians via the Chief Clinical Information Office (CCIO), the Chief Clinical Nursing Office, Allied Health Professionals and Therapies Teams and in partnership with Local Authorities is essential. Clinical-led transformation will play a vital role in the enablement plan as it brings healthcare professionals to the forefront of driving change and improving patient care. Healthcare professionals possess extensive clinical expertise and frontline experience, making them uniquely qualified to identify areas for improvement and innovation. Their deep understanding of patient needs, workflows, and challenges allows them to contribute valuable insights in shaping transformative initiatives. Using a clinical-led transformation approach ensures that patient needs and outcomes remain central to the decision-making process. By involving clinicians in the transformation journey, the focus shifts towards delivering high-quality, person-centered care that aligns with clinical best practices, evidence-based medicine, and patient preferences. This is reflected in the governance approach where a clinical led scrutiny group will be established to ensure that any transformation is led by the clinical teams.

4.8.6.2 As we adopt more or streamlined systems to enhance efficiency, data management, and patient outcomes. Clinical-led transformation enables collaboration between healthcare professionals and technology experts, ensuring that the implemented solutions are user-friendly, clinically relevant, and seamlessly integrated into existing workflows. More importantly engaging clinical leaders in transformation efforts facilitates effective change management. Clinicians can influence and guide their peers through the process, addressing concerns, providing training, and promoting buy-in. Their influence helps overcome resistance to change and encourages widespread adoption of new practices or technologies.

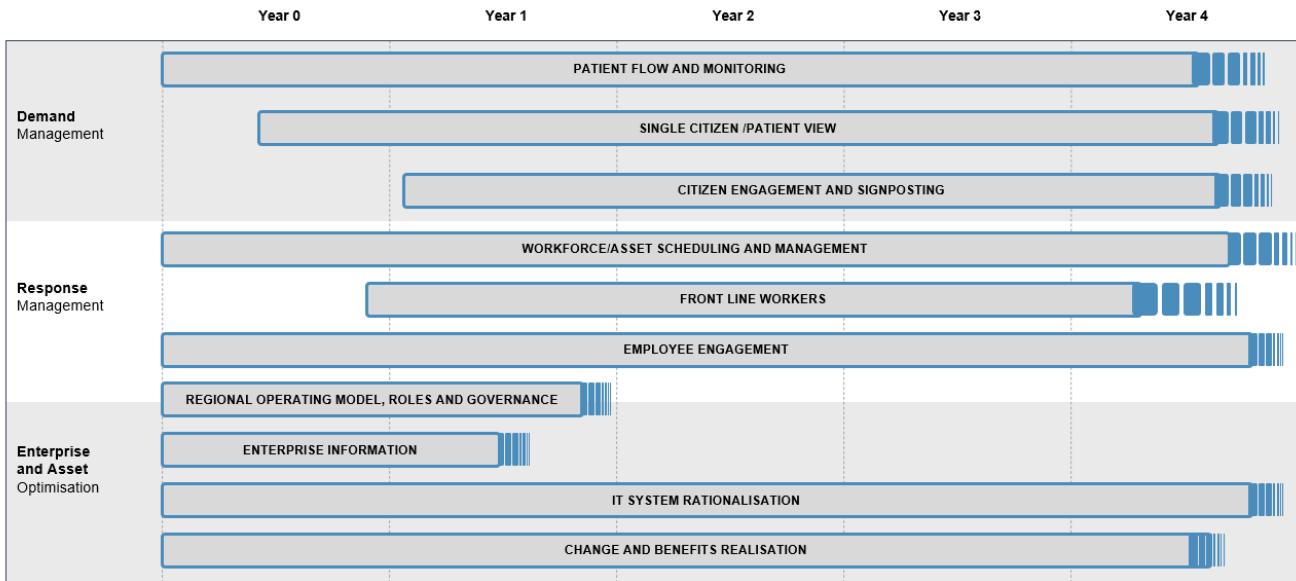
4.8.6.3 As part of the digital response to the integrated care teams' approach, the digital team brought together the clinical leads, to undertake a workshop to understand the clinical requirements, processes, workflows without considering any current or future technologies. This approach was intentional in order to move the discussion away from "systems" to a discussion around what are the needs that technology has to respond to

4.9 Draft Implementation Timeline

4.9.1 The figure below sets out the suggested implementation timeline, which sees the establishment of the programmes and proposed timelines for the workstreams.

Figure 6: Provisional Draft Implementation Timeline

Digitally delivering a healthier mid and west Wales: timeline view



4.9.2 A more detailed implementation plan will be developed with the preferred supplier as the first work package, covering the following:

- Refining the Digital Enablement Transformation Plan and associated timelines for the 10-year period of the plan.
- Refining the target Enterprise Architecture for HDdUHB
- Develop detailed implementation plans. This includes detailed Implementation Plan for Years 1-3 including the required Work Orders to deliver this activity.
- Define the Technology Roadmap and resourcing approach.
- Develop the Benefits Management Approach and, where possible, collate existing baselines.

4.10 Risk Management

4.10.1 Risk identification and management will be a continual process in the programme to monitor the level of exposure to risk at any point and keep unwanted outcomes to a minimum, particularly given the proximity of these systems to patient care. A risk register has been developed as part of this PBC. The Programme Team will ensure that the following risk processes are in place:

- up-to-date risks register open to anyone to review. Formal updates will be made by designated individuals only.
- all risks will be reviewed regularly by the team, and key risks escalated to the Programme Lead for management by exception.
- significant risks will have mitigation plans developed and will be formally reviewed.
- a decision-making process supported by a framework of risk analysis and evaluation; and
- processes in place to monitor risk.

4.10.2 The risk management approach will follow the already established approach with the Health Board. It will be the responsibility of all team members to identify risks as and when they become aware of them, and to use the risk management processes. These processes ensure that the risks are logged and assigned to owners to manage and continually review the individual risks. The project managers will have

a key role in monitoring, reviewing and managing action delivery to mitigate or resolve risks.

4.11 Change Management

4.11.1 It will be important to minimise any negative impact on staff during the implementation period of the digital enablement plan. The Workforce and Organisation and Development approaches already in situ within the Health Board will be key to ensuring that all staff are listened too and included within any proposed changes.

4.11.2 Effective change management and visible leadership will be critical to the success of the programme in order to:

- achieve buy-in across stakeholder groups from all sites and departments.
- gain commitment from users, recognising potential disruption to services and additional effort required during the implementation period.
- support the changes in working practices that the new arrangements will require; and
- realise the benefits of implementing technical solutions.

4.11.3 To ensure effective change management HDdUHB will develop or utilise existing change management approaches to ensure that the potential impact of the proposed change on processes and people are fully understood.

4.11.4 Furthermore, the team will look to include a business change resources to oversee adoption and changes, as well as utilising local Digital Champions to support engagement and training of clinical and operational staff.

4.11.5 It is recognised that continuous change management support will be required throughout, and consideration will need to be taken to adapt change management plans to each hospital site as required as the implementation progresses and as lessons are learned.

4.12 Staff engagement and communications

4.12.1 To optimise the implementation, adoption and subsequent benefits of any new solutions, HDdUHB will ensure a comprehensive communications and engagement plan which runs in parallel to the change management workstream. Further work will need to be undertaken to develop the communications and engagement approach. Reflecting on lessons learned from previous clinical technology deployments in the Health Board, such as the recent Welsh Nursing Care Record (WNCR), the following areas will be explored in further detail:

- Approach to ensure user engagement throughout, including in the design of any innovative solutions and redesign and alignment of processes.
- Supporting adoption through close, dedicated programme leadership, and use a network of “digital champions” to provide frontline support to colleagues.
- Approach to ensure that sufficient training (and time to train) is available to staff, including a training gap analysis to inform training plans.
- Approach to ensure the benefits of digitally enabled transformation for various staff roles are clearly articulated and well communicated to bring everyone through the change journey.

4.13 In-flight programmes

4.13.1 There are several significant in-flight and planned digital programmes taking place in HDdUHB such as the eObservations and Patient Flow, and the Digital Medicines Transformation Portfolio. These include the Shared Medicines Record project, the Patient Access Project and the Primary Care Electronic Prescription Service programme. In addition, a number of national digital programmes are also taking place or planned, such as the all-Wales Electronic Maternity Record (WEMR), the Wales Intensive Care Information System (WICIS), Radiology Information System (RIS) and Picture Archiving and Communication System (PACS).

4.13.2 These programmes will consume significant capacity in resources and have direct impacts on elements of the programme and the strategic partner will be utilised to provide support to the change capacity of the organisations' staff members and teams involved.

4.14 Training

4.14.1 As previously noted, the level of change associated with the programme in HDdUHB should not be underestimated. As such, a robust training plan and approach will need to be codesigned and approved in collaboration between HDdUHB (including representation from all relevant clinical and hospital staff user groups as well as digital and technology staff) and the chosen implementation partner.

4.15 Integration and interfacing

4.15.1 HDdUHB is considering a Health Board wide approach to an integration engine. Further consideration and analysis will be required to determine how HDdUHB will deliver the integration engine. This analysis, along with the funding requirements, will be covered in a separate Health Board wide programme.

4.15.2 The integration and interfacing requirements will form part of the work packages; however, it is acknowledged that this is risk to the programme and adoption, implementation of the solutions.

4.15.3 As part of the Implementation Readiness Preparation phase, the below steps will be taken to ensure the detailed integration and interfacing requirements and design are defined:

- Conduct a thorough assessment of HDdUHB's existing systems and data sources (as-is analysis), finding key integration points and potential challenges to be addressed during the integration process.
- Outline the development of robust interfaces and APIs that enable seamless data exchange and integration between solutions and existing national as well as local systems, ensuring interoperability and smooth information flow.
- Define the methodologies and tools used to map data structures, formats, and terminologies between solutions and existing systems, ensuring data consistency and compatibility.

4.16 Data management

4.16.1 Given this is a large-scale transformation programme with complex and significant impact, it is important to understand and address data management issues. A structured and comprehensive approach to data management will enable the successful delivery of this programme. The following are the considerations to be developed further as the programme evolves:

- Define which application components in the landscape will serve as the system of record or reference for enterprise master data.
- Understand how the data entities will be utilised by the business capabilities, business functions, processes, and business and application services.
- Understand how and where the data entities will be created, stored, transported, and reported.
- Define the level and complexity of any data transformations needed to support the information exchange needs between the solutions; and
- Identify the requirements for software in supporting data migration and integration will be (e.g., use of Extract, Transform, Load (ETL) tools and data profiling tools).

4.16.2 Digitising the paper-based processes in HDdUHB presents an opportunity to define a robust approach to integration and storage of various data sources while ensuring data quality, privacy, and security measures are in place. As part of the current pre-implementation, discovery and procurement phase, the Programme Team will aim to:

- Identify the various sources of data in the Health Boards ecosystem, such as patient records, prescription data, laboratory results, and other relevant data types.
- Describe the processes and technologies that will be used to integrate data from diverse sources and ensure data consistency and integrity.
- Outline the proposed infrastructure for data storage, including considerations for scalability, security, and compliance with data protection regulations.
- Highlight the strategies and tools that will be implemented to ensure data quality, accuracy, and completeness, including data validation, data cleansing, and data enrichment techniques.
- Emphasise the measures that will be implemented to protect sensitive patient data from unauthorised access, including encryption, access controls, temporary locked viewing, and audit trails.
- Discuss the plans and mechanisms for regular data backups, as well as disaster recovery procedures to ensure minimal data loss and downtime in case of unforeseen events.

4.17 Data digitisation

4.17.1 As part of the pre-implementation, discovery and procurement phase, the Programme Team has planned to work on defining an appropriate data digitisation approach to identify the requirements for scanning, storing and archiving paper prescriptions and other relevant paper data required for the provision of care.

4.17.2 Initial planning has indicated that paper charts of patients receiving care during the go-live period will be digitised ahead of go-live to ensure.

4.18 Data governance

4.18.1 Robust data governance is paramount to establish a framework of accountability, compliance, and data management practices, enabling the organisation to maintain data integrity, protect patient privacy, and meet regulatory requirements within the new systems. There will be data governance considerations to ensure that the enterprise has the necessary dimensions in place to enable the transformation:

- Define the roles and responsibilities of individuals or teams who will be accountable for the quality, privacy, and security of data.

- Establish specific data governance policies, standards, and procedures that will be implemented to ensure consistent data management practices, including data classification, data retention, and data access controls for solutions. This would be done in-line with existing data governance processes at HDdUHB and integrates with it.
- Explain how data auditing and monitoring mechanisms will be implemented to track data usage (especially Patient Level data), identify any anomalies or breaches, and ensure adherence to data governance policies.
- Include data training programs to educate potential users on data governance principles, security practices, and data handling procedures as part of the main training programme.

4.19 Benefits Realisation and Measurement

4.19.1 The economic section will identify a number of non-financial benefits to be delivered by the implementation of the programme. Prior to implementation and awarding of work packages it is recommended that further analysis of current processes is carried out in order to develop detailed baseline measures against which to monitor and assess benefits. The benefits realisation strategy, where owners are assigned to each outcome. A proposed approach for benefits realisation is shown to the right.



4.19.2 HDdUHB has a dedicated Benefits Realisation Manager who has joined the Digital Team. They will lead on assessing whether the benefits outlined in Section **Error! Reference source not found.** are realised, and work with local teams to manage benefit realisation. As part of their role, they will assign owners to each identified benefit. Note that the preferred supplier will also provide capability to support benefit realisation and measurement.

4.19.3 It is important to note that which benefits are realised is dependent on the which programme is being implemented at the time, and also the synergy across the wider A Healthier Mid and West Wales programme.

4.20 Programme evaluation

4.20.1 The purpose of post programme evaluation is to improve delivery through lessons learned during the programme delivery phase and to appraise whether the programme has delivered its anticipated outcomes and benefits. It will further support achieving better value from future procurements.

4.20.2 HDdUHB is committed to ensuring that a thorough and robust post-programme evaluation is undertaken at key stages in the process to ensure that lessons are learnt. The Health Board will need to continue to obtain and assess baseline data in the years prior to and post implementation. This will enable the Health Board to compare current processes with post-implementation processes and identify which benefits have been achieved and which have not.

4.20.3 The evaluation will be carried out in line with best practice and will measure the programme against the following factors:

- The extent to which the programme objectives have been met.

- Measurement against the Benefits Realisation Plan.
- The cost of the programme and the extent to which it can demonstrate value for money.
- The programme outcome compared with the Business as Usual or 'Do Nothing' scenarios.
- The economic viability of the programme in comparison with BAU.
- Risk Allocation and an assessment of risks presenting during the programme.
- Suitability of the timetable.
- Functional Suitability – how the innovative approach compares to the ePMA requirements set out during the commercial.
- User satisfaction; and,
- Procurement route.

Appendix A - Digital Pillars

Citizen Engagement

Improved Citizen digital engagement is required to enable the delivery care and condition management outside of clinical settings and to support citizen self-management.

Citizen digital engagement is required to allow citizens managing or receiving care to interact more effectively across the ecosystem, for example virtually providing pre-clinical checks information, virtually requesting, and managing appointments, virtually raising requests and asks back into the ecosystem.

Citizen digital engagement should be managed through a single front door that directs citizens and their families to right place to interact. Equally it could be delivered by a series of applications orchestrated through regional application store that direct, alert and action into core platforms.

Health and Care Co-ordination and Collaboration

Workforces require a set of digital capabilities, as do citizens to allow them to digitally interact and manage their own workloads across the ecosystem and view the right information at the right time to support decision making and support citizen and patient flow across numerous pathways and across the spectrum from illness to wellness.

The engine behind citizen engagement and care co-ordination is likely to be a core platform augmented by remote condition monitoring capabilities, solutions and devices and underpinning data fabric.

Situational Awareness: Digital Operations and Control Centre (The DOCC)

Mid and West Wales has a significant opportunity to shift the dial from alarm receiving centres distinct from Virtual Wards to next general digital operations and control centres which integrate with the Welsh Ambulance Service and provide intelligent scalable region-wide real time situational awareness across the region.

The DOCC will be a global exemplar of integrated health and care delivery managing near real time or real time operations to support shifting the balance of care out of clinical settings into the community and home where it is appropriate and responsible to do so.

This approach has 5 core capabilities:

1. Region wide – situational awareness, monitoring, and alerting (new)

This is the engine at the heart of the DOCC drawing in information and data from the four areas described below. This will support the real-time planning and prioritisation of work in both clinical and community settings at regional scale.

Proposed Approach:

- Establish a Digital Operations and Control Centre / Command Centre with a focus on Virtual Wards and Assisted Living or 'in hospital' Acute monitoring and extend to Virtual Wards and Assisted Living as a seed initiative.

2. Patient and Citizen Condition Monitoring

This will be a mix of new solutions and data integrated from existing solutions. A new remote monitoring solution allowing citizens to be manage and monitor conditions in the best environment for them. This person-centred service will be established to support

the reduction of expensive hospital stays and unnecessary visits whilst empowering citizens and their families to better manage their conditions.

3. Resource workforce planning scheduling and management

Leveraging data from existing and new solutions to understand the capacity of the workforce across the entirety of the ecosystem to support the delivery of services in new and different ways. Ensuring citizens get the right help at the right time by the right service and automating transactional tasks.

4. Asset management, tracking and monitoring.

Delivering remote monitoring at scale in health and care and improving patient flow through hospitals and citizens receiving care support at home, both will require new and existing assets to be deployed. These need to be managed, tracked, and monitored and managing this effectively allows for a better understanding of the capacity and availability of those assets enabling improved patient and citizen flow through the system.

5. Request and referral tracking and management.

A transformed service model delivering enhanced care in the community, enabling citizens and the workforces to collaborate more effectively and digitally engage, will generate a central hub of requests that need to be managed, processed, and resolved. A central automated platform to manage requests, flow or work and care pathways will be established.

Regional Trusted Data Fabric

Mid and West Wales has an opportunity to address the data challenges identified in the strategic imperatives, the organisations working better together workstream and through the technology assessment to become a global digital exemplar to establish a regional trusted data fabric that brings together health and care information across the region related to three key capabilities:

1. Single integrated health and care record

An open and available set of information will enable the workforce in the health and care ecosystem to make improved decisions, focus their time on delivering high quality care and less time on routine administration of data whilst supporting the establishment of new models of care and new solutions empowering citizens.

2. Analytics, Advanced Analytics and AI

Building on the good work of all organisations to bring data together to drive insight and service direction, for example supporting elective backlog challenges.

3. Integration and Interoperability

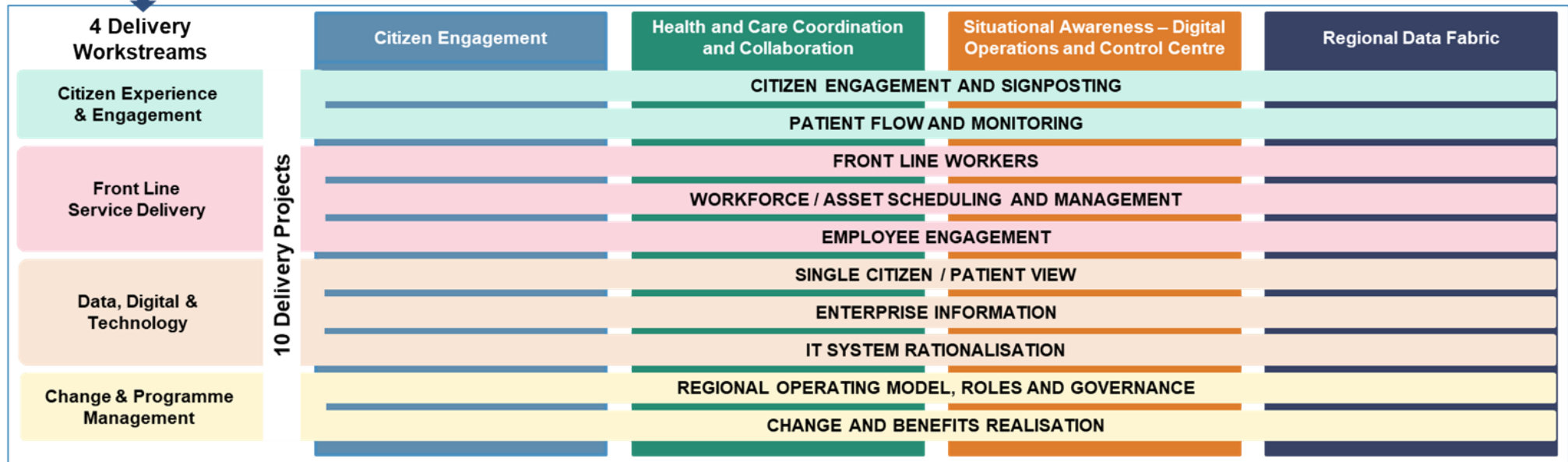
An implicit and required capability to drive integration and interoperability of data between existing and new solutions and enable an open data architecture that can be opened to national solutions and external parties to promote innovation and sharing and creating a single view of the citizen.

Appendix B – Programme Delivery Approach

34 Strategic Business Imperatives

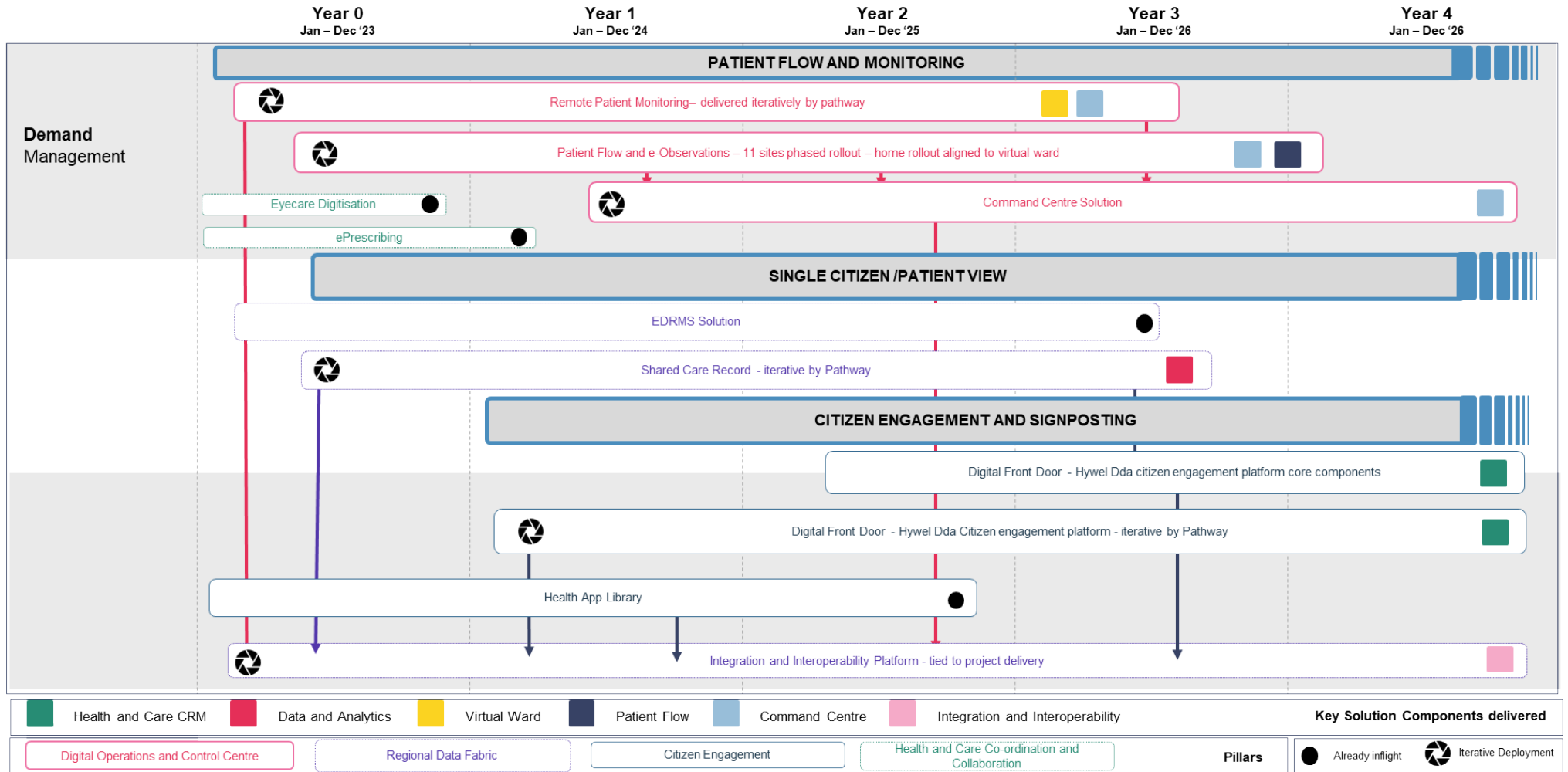
Stakeholder				Citizen							Employees					Enterprise
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17
'Holistic Health & Care Vision'	'Common Priorities'	'Governing Integration'	'Positive Regional Outcomes'	'Resilient Communities'	'Joining the Dots'	'Citizen Healthy Lifestyle'	'Prevention & Early Intervention'	'Service Signposting'	'Citizen Experience'	'Optimise Where Care is Given'	'Building Capabilities'	'Designing Roles'	'New Ways of Working'	'Enabling Change'	'Workforce Sustainability'	'Operational Running'
Enterprise				Information			Partners			Solution						
18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
'Demand, Supply & Configuration'	'Resource Scheduling'	'Infrastructure Sustainability'	'Reducing Financial Deficit'	'Citizen Outcome Measures'	'Information Hub'	'Real-Time Medical Dashboard'	'Ecosystem Outcome Measures'	'Extending the Ecosystem'	'Partner Collaboration'	'Benefits Realisation'	'Digitally Enabled'	'Tech-Enabled Operations'	'Community Data'	'Easy to Use Solutions'	'Patient Recovery Flow'	'Data Protection & Use'

4 Core Digital Pillars

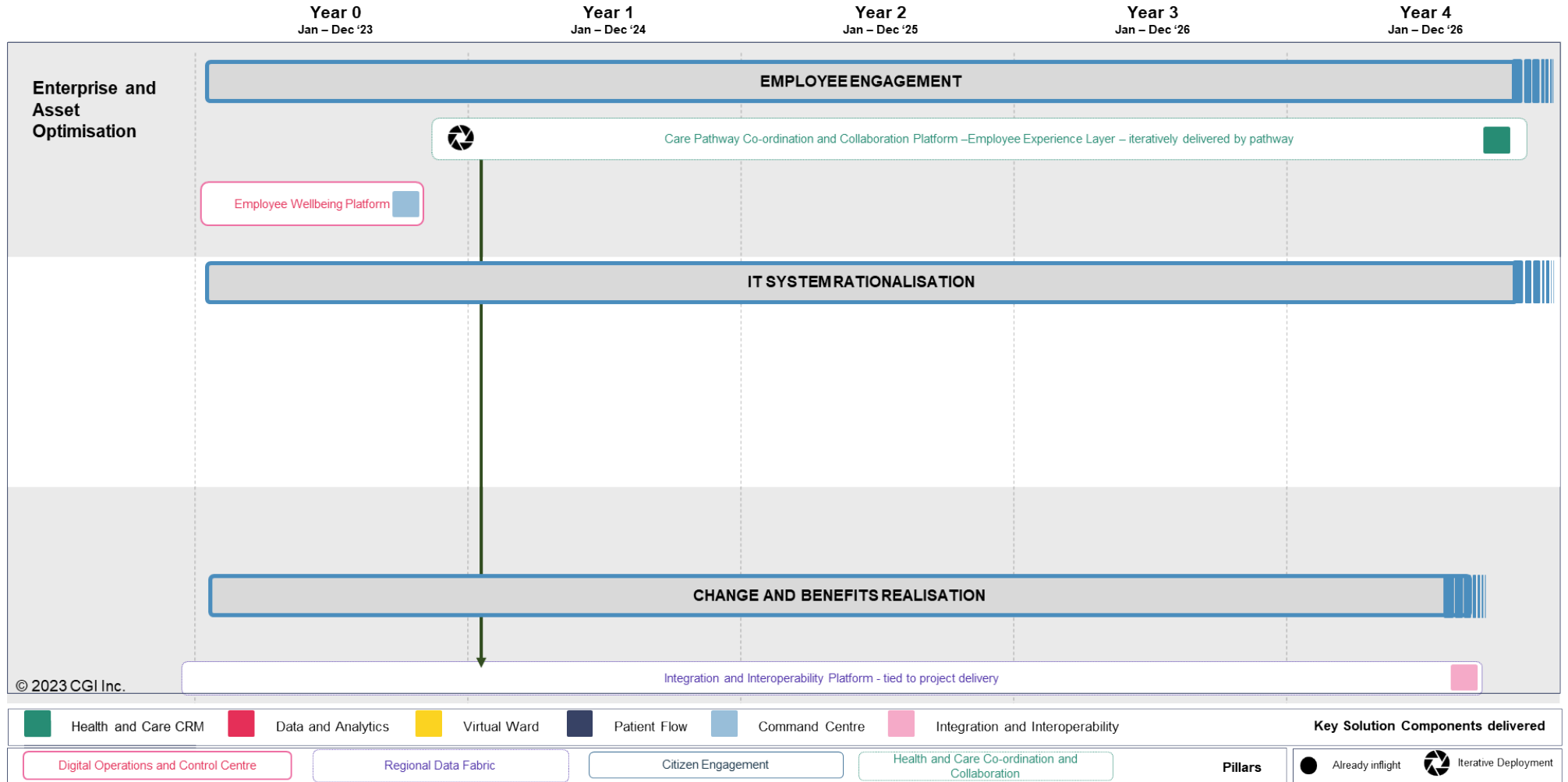


Appendix C – Proposed Timeline

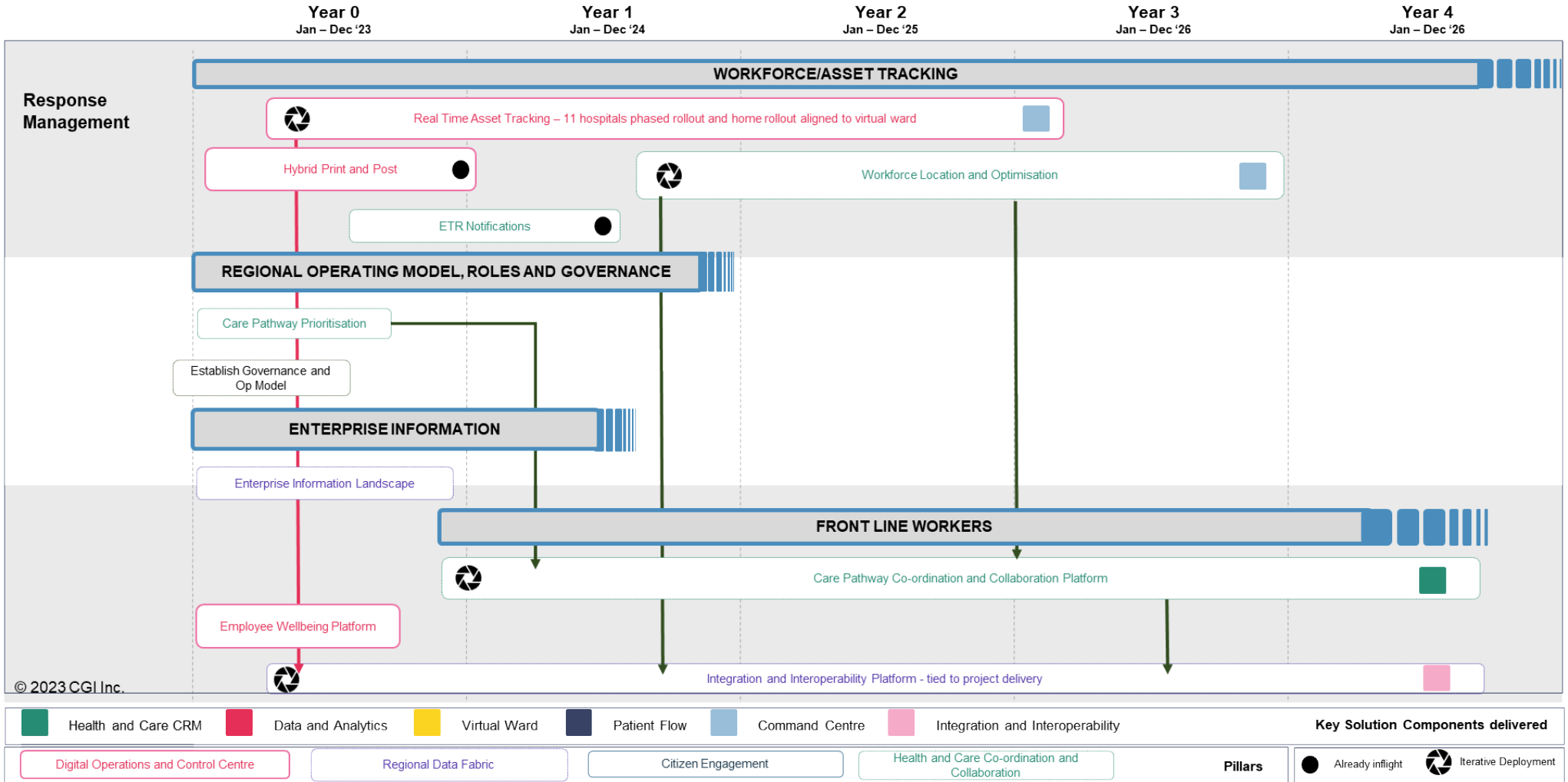
Digital roadmap




Digital roadmap



Digital roadmap

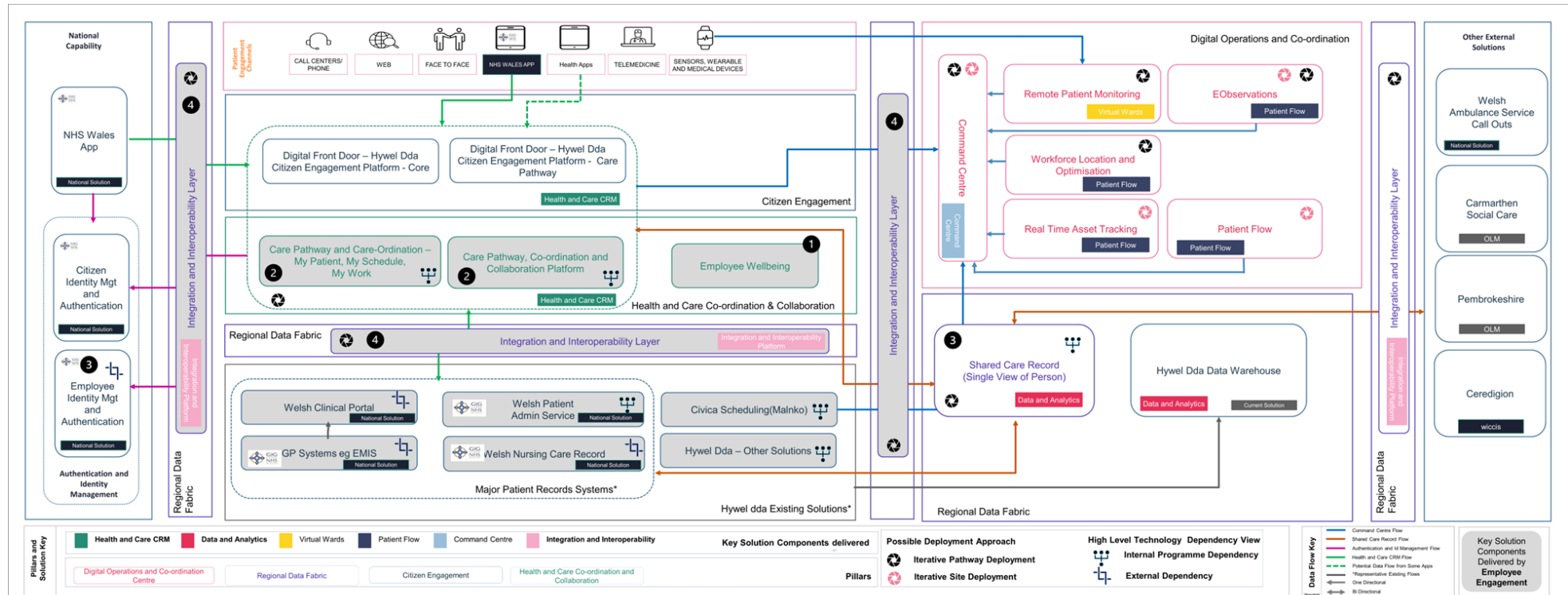


Appendix D – Example of Charter approach

Employee Engagement																	
Organisation Need (Objective)																	
Attract and enable employees with modern easy to use technology to support onboarding, learning and operational running																	
Programme Overview (Background)																	
Provide technology solutions which enable employees in their day-to-day roles and support ongoing career performance, development and retention																	
Programme Outline (Proposal)	Target Outcomes																
<p>Identify key employee categories for inclusion in phase one of the project</p> <ul style="list-style-type: none"> Assess and benchmark current engagement levels e.g., key attraction and retention engagement focus areas Identify future potential benefits/outcomes e.g., impact on recruitment and retention of employees Generate change enablement analysis e.g., vision, communications, participation and readiness <p>Define solution options (people, process & technology)</p> <ul style="list-style-type: none"> Generate solution blueprint e.g., people engagement strategy Create Return on Investment analysis e.g., attraction and retention Define implementation plan e.g., market campaign and in-house solution approach <p>Implement and run solution (people, process & technology)</p> <ul style="list-style-type: none"> Create project/programme governance e.g., identify key participants (users, owners and suppliers) Mobilise implementation team, project delivery & measure impact 	<ul style="list-style-type: none"> Attract the right employees to join and grow careers at Hywel Dda UHB Improved employee engagement, satisfaction and wellbeing More efficient operational running Improved citizen and patient experience and outcomes Reduced operating costs due to easy-to-use solutions 																
Solution Capabilities	Related Imperatives	Technology Pillars															
<table border="1"> <tr> <td>My Client Shared Care Record</td> <td>My Cases</td> <td>My Wellbeing</td> </tr> <tr> <td>My Schedule</td> <td>My Alerts and Notification</td> <td>My Schedule</td> </tr> <tr> <td>Shared Care Record</td> <td>Workflow and Orchestration</td> <td>Scheduling</td> </tr> </table>	My Client Shared Care Record	My Cases	My Wellbeing	My Schedule	My Alerts and Notification	My Schedule	Shared Care Record	Workflow and Orchestration	Scheduling	<table border="1"> <tr> <td>16</td> <td>17</td> <td>32</td> </tr> <tr> <td>'Workforce Sustainability'</td> <td>'Operational Running'</td> <td>'Easy to Use Solutions'</td> </tr> </table>	16	17	32	'Workforce Sustainability'	'Operational Running'	'Easy to Use Solutions'	<ul style="list-style-type: none"> Health & Care Co-ordination & Collaboration Citizen Engagement Regional Data Fabric Digital Operations and Control Centre
My Client Shared Care Record	My Cases	My Wellbeing															
My Schedule	My Alerts and Notification	My Schedule															
Shared Care Record	Workflow and Orchestration	Scheduling															
16	17	32															
'Workforce Sustainability'	'Operational Running'	'Easy to Use Solutions'															
Solution Components	Change Adoption	Financial Summary*															
<table border="1"> <tr> <td>My Wellbeing App</td> <td>Health and Care CRM</td> <td>Integration & Interoperability Platform</td> </tr> <tr> <td>Employee ID and Authentication</td> <td>Data and Analytics</td> <td></td> </tr> </table>	My Wellbeing App	Health and Care CRM	Integration & Interoperability Platform	Employee ID and Authentication	Data and Analytics		<p>Lower levels of support for change adoption are anticipated across:</p> <ul style="list-style-type: none"> Vision Communication Participation Readiness <p>Supporting target outcomes.</p> 	<ul style="list-style-type: none"> Benefit value ROM: £2,173,000 – £4,346,000 p.a. Solution ROM: £2,667,264 									
My Wellbeing App	Health and Care CRM	Integration & Interoperability Platform															
Employee ID and Authentication	Data and Analytics																
		Key Dependencies															
		<ul style="list-style-type: none"> Access to key data across the ecosystem Front Line Workers Single Citizen/Patient View 															

Appendix E - Example of Proposed Architecture Journey:

Employee engagement – architecture journey



1

Establish real time employee experience platform to listen to what's important to your employees and get meaningful insights to improve the way you work together.

2

Establish by pathway digital health (and care) co-ordination and collaboration platform. Improving colleague experience by

- Surfacing a single view of a patient into a core platform
- Facilitating digital collaboration across the health board through by orchestrating work and integrating with core solutions

3

Dependencies on

- Shared Care Record
- Employee Identity and Access Management: External
- National Systems integration

4

Likely to require bi-directional integration into core systems and Shared Care Record.

Appendix F – Persona Example

Mari Jones, age 78



Age: 78

Role: Citizen

Mari lives at home with Alun, her husband of 50 years.

She is a retired teacher and is former President of the local Women's Institute which she still attends.

She loves cooking, especially baking cakes.

In recent months, Mari has developed mild dementia and has become increasingly frail.

She is becoming more confused and has often been found wandering.

"I enjoy being active, meeting people and seeing the family when I can but sometimes I get confused and end up somewhere else."

Regular activities

- Cooking and baking
- Seeing family, especially Sioned who acts as her carer
- Attending Women's Institute
- Food and clothes shopping

Good looks like

- Living independently with Alun
- Being active, meeting people and seeing family, especially her great-grandchildren
- Being able to see her care team and consultant quickly and easily



Pain points & frustrations

- Getting confused from mild dementia
- Finding herself wandering outside the house
- Having to remember to tell Sioned when something goes wrong
- Worrying about Alun's heart
- Worrying about falling over

Digital solutions

- Easy to use medication reminders and requests for confirmation, via smart speaker or tablet
- Home sensors, and notifications to family, if Mari goes wandering
- Smart lighting if Mari gets up in the middle of the night
- Sensors to detect increasing frailty
- Signposting to social and cognitive activities to keep Mari's brain active
- Sharing Mari's care record and upcoming appointments with family
- Easy access to care information, and appointment reminders



General health and wellbeing



Attitude to health and wellbeing



Digital preference



Access to digital devices



Accessibility



Covid recovery



9

Appendix G - Pathway Journey Example



Pathway Journey Guide

A Pathway Journey shows how a particular pathway currently operates from a patient's perspective

Pathway name

Frailty Journey: Mari

Persona name



Persona picture

Persona background

Mari Jones is 78 and lives at home with husband Alun. She is a retired teacher and attends the local Women's Institute. Mari has recently developed mild dementia and become increasingly frail. She has often been confused and found wandering.

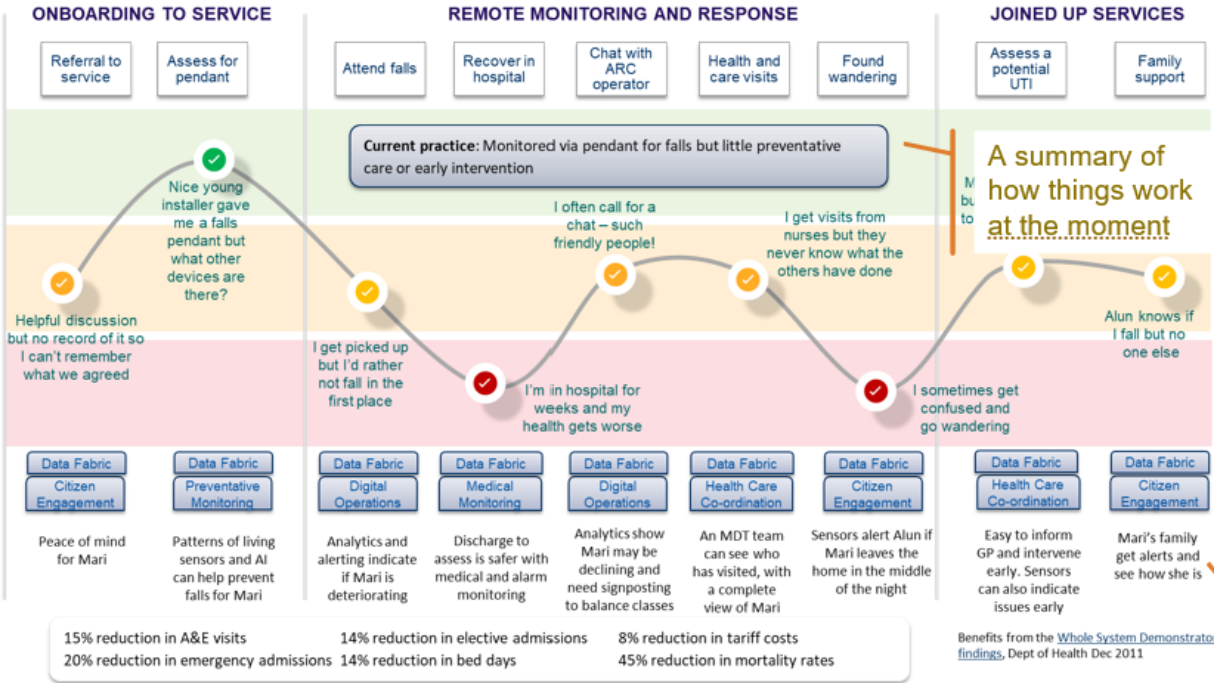
Key Pathway phases

Green row: descriptions of things that are going well

Amber row: descriptions of things that are not going well

Red row: descriptions of things that are going badly

- PHASES
- POSSIBLE ACTIVITIES
- NEEDS EXPECTATIONS
- PILLARS AND SOLUTIONS
- BETTER OUTCOMES
- BENEFITS



Key patient activities (not necessarily in order)

The wavy line shows the emotions felt by the patient

IT solutions that can make things better

How things would be better with new IT

Benefits or references