



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

<b>DYDDIAD Y CYFARFOD: DATE OF MEETING:</b>	29 July 2021
<b>TEITL YR ADRODDIAD: TITLE OF REPORT:</b>	Strategic Business Intelligence
<b>CYFARWYDDWR ARWEINIOL: LEAD DIRECTOR:</b>	Huw Thomas, Director of Finance
<b>SWYDDOG ADRODD: REPORTING OFFICER:</b>	Huw Thomas, Director of Finance

**Pwrpas yr Adroddiad (dewiswch fel yn addas)**

**Purpose of the Report (select as appropriate)**

Ar Gyfer Penderfyniad/For Decision

**ADRODDIAD SCAA  
SBAR REPORT**

**Sefyllfa / Situation**

The purpose of this paper is to provide the Board with a synopsis on the current and future contract arrangements with Lightfoot Ltd.

The Board are asked to note the content and future commitments outlined within the body of the report.

**Cefndir / Background**

A key Strategic Planning Objective (3E) of the Health Board is to improve the use of Business Intelligence and Modelling, with an emphasis on real time reporting to support our clinicians and managers with day to day operational planning as well as supporting the wider strategic objectives.

In order to accelerate the use of real time reporting and analytics within the Health Board, we have partnered with several leading analytics companies, such as Lightfoot Ltd, and Microsoft (for cloud analytics), to improve the understanding and use of information and data. We have also undertaken a number of data master classes which include Executives, Independent Board Members, Operational Leaders and Clinicians, to promote the ethos of a data driven organisation. As part of the agreement with Lightfoot we have begun a transformation programme based around the outputs from Lightfoot, to identify where linked data can improve the understanding of the impact of pathway changes. Work has also started with the Planned Care Team on the possibility of using "Signals for Noise" (SfN) for recovery planning.

**Asesiad / Assessment**

The contract with Lightfoot is split over two distinct areas; firstly, the use of the Lightfoot product "signals for noise" and secondly specific consultancy support from a leading consultant who had implemented Lightfoot successfully in Canterbury, New Zealand, and also had driven the transformational change of using data/information to make the necessary service reconfigurations.

The delivery of the Lightfoot product and introduction of the methodologies into the Health Board was phased from October 2020 until April 2021. Subsequently, the Health Board extended the contract by a further 3 months to ensure that the work commissioned is completed. The initial contract was separated into a number of delivery phases, as outlined below:

- Delivery Phase 1 – Project Initiation and Data gathering (Minimum 3 years of historic data (ED & IP))
- Delivery Phase 2 – SfN Platform Build
- Delivery Phase 3 – Design SfN Patient Flow Dashboard Viewers
- Delivery Phase 4 – Baseline Analysis and Delivery Workshops
- Delivery Phase 5 – Consulting Support to 30 April 2021
- Delivery Phase 6 – Secure Hosting Provision of SfN platform for 6 months

From the initial baseline analysis, opportunities were identified and presented to the Health Board in November 2020. These were:

Opportunity	Work completed to date
<p>Strengthen and reframe existing and emerging primary/community support strategies to drive hospital avoidance</p> <ul style="list-style-type: none"> <li>• Reduce non-admitted ED attendances (could be halved)</li> <li>• Reduce short-stay admissions by half</li> <li>• Support general practice to be the point of continuity for most of the population by enhancing timely access to clinical information, diagnostics and alternative service responses</li> </ul>	<p><i>The analysis approach has been utilized to engage general practices in Ceredigion in active conversations about new approaches to A&amp;E avoidance and early supported discharge. The ability to illustrate the length of the patient journey and to provide practice level analysis was particularly supportive of the conversations.</i></p>
<p>Progress person-centred early discharge services and community-based rehabilitation services and other services for frail elderly to</p> <ul style="list-style-type: none"> <li>• Avoid admission</li> <li>• Reduce length of stay (LOS)</li> <li>• Reduce on-going need for care</li> <li>• Reduce admission to care homes</li> </ul>	<p><i>Multiple engagements at County (including Social Care), Operational Leadership, and Clinical leadership levels have led to a consensus that there are specific opportunities to address the pathways for frail elderly people and people with long term conditions exhibiting frailty. There is early evidence of patient pathways changing leading to a reduction in occupied beds despite the current increase in attendance. The analytical platform is being used to support business cases, resource planning and evaluation of existing programmes. A further refinement has been discussed to Signals for Noise that will allow greater analysis of the frailty pathway</i></p>
<p>Leverage the COVID back-log opportunity to build primary/secondary integration around new pathways of care to</p> <ul style="list-style-type: none"> <li>• Minimise the need for hospital based clinical intervention</li> <li>• Mitigate the clinical risk of the current backlog</li> <li>• Support people in a community-based setting</li> </ul>	<p><i>Active work is underway with operational teams and extending to clinical teams to plan the way forward with the COVID backlog. These will expand as new data sources become available, but the opportunity exists to support the system to ensure that the highest priority patients are addressed first. The analytical platform has also made clear the link between unscheduled care bed occupancy and the ability to address planned care challenges</i></p>
<p>Enhance the way of working by removing barriers and trusting clinical teams</p>	<p><i>Implement a framework for using data to empower clinical, operational, strategic and</i></p>

- Building a data enabled methodology linked to an outcomes framework which enables the Teams to be clear about the 'what' and free to determine the 'how'
- Using information to plan and drive service improvement incorporating quality, safety and patient experience into the core system outcomes
- Manage the short-term tactical response in the context of the long-term strategy
- Make decisions based on where services should be provided by balancing what is best for the person and what is best for the system

*resource allocation decisions, monitor progress and identify opportunities for earlier intervention.*

*This approach is also to support the development of the Improving Together agenda across the organisation.*

### **Financial Cost**

The introduction of Lightfoot into the organisation has come at a significant cost; however, the accelerated and focused use of information has also provided a platform to tangibly move the Health Board forward in achieving the 3E planning objective. As outlined above the financial commitment to date is as follows:

Table 1: Financial Cost of Initial Contract

	Commitment (ex VAT)	Expenditure to Date
Initial Contract October 2020 until April 2021) – (HDD-DCO-21948-40_Winter Planning Consultancy)	£320,437	£317,962
Extension to cover additional workstreams and data sources (Outpatients / Theatres, Waiting Lists, Referrals, Welsh Community Care Information Solution (WCCIS))	£430,300	£430,300
Extension of SfN licensing and hosting from 01 May 2021 to 31 July 2021	£48,463	£48,463
Additional workstreams (July 2021 – August 2021) *	£129,100	£59,100
	<b>£928,300</b>	<b>£855,825</b>

Table 2: Financial Cost of the Consultancy Support

	Commitment (ex VAT)	Expenditure to Date
Consultancy support for community models of care transformation (HDD-DCO-21948-25)	£299,520	£228,800
(Hywel Dda UHB have hosted this arrangement, and then invoices Cardiff and Vale UHB and Swansea Bay UHB)		
	<b>£299,520</b>	<b>£228,800</b>

The contracts were then subsequently specific workstreams, and working with the service and Lightfoot, allocated days were assigned. Thus allowing the Health Board to monitor delivery of the products and outcomes. The following are the workstreams that have been agreed and the number of days allocated, based on the financial commitment above.

1. Initial Contract October 2020 until April 2021) – (HDD-DCO-21948-40_Winter Planning Consultancy)	Days Allocated
Workstream 1 – Pembrokeshire – Reduce Urgent Care Demand	19
Workstream 2 – COPD and Frailty Initiative	19
Baseline and Analysis & workshops	24
Viewers	12
<b>Total</b>	<b>74</b>

2. Consultancy support for community models of care transformation (HDD-DCO-21948-25)	Days Allocated
Falls and Fragility – Initial Scoping of Opportunity	5
Analysis and Consulting (Pembrokeshire and UC Demand)	10
Analysis and Consulting (Carmarthen – RBFT)	10
Analysis and Consulting (Backlog and Recovery)	15
Analysis and Consulting – Program Business Case Hospital Capacity and Flow	18
Finance and Opportunity Identification	5
GP Population Data Consulting	2
Training – Early Adopters	8
<b>Total</b>	<b>73</b>

### **All Wales Approach**

Lightfoot is being utilised by a number of other Health Boards within Wales;

- Cardiff and Vale have been using the product and support for Lightfoot for 2-3 years, and have identified specific areas of improvements, such as LOS over 21 days, and outlier for certain diseases.
- Swansea Bay and Aneurin Bevan are in a similar position to Hywel Dda in that the baseline work has been completed and additional datasets are being sent to Lightfoot to improve the linkage of data.
- Betsi Cadwaladr are in the process of agreeing a contract with Lightfoot and the preparator work is underway.
- Cwm Taf have had discussions with Lightfoot, but as yet have not signed a contract.

Due to the interest from Health Boards and Trusts, Welsh Government is exploring the purchase of an enterprise licence agreement for NHS Wales. To date, we are not fully sighted on the elements of the proposed contract and what is included or excluded, which may mean additional funding is required for viewer development, new data sources and additional training and support. The discussions with Welsh Government are being led by Cardiff and Vale. If an enterprise agreement is purchased by the Welsh Government, then this will reduce the future commitment of the Health Board. The anticipated costs for continuing Lightfoot for a further 3 years are as follows:

	Year 1 (2021/22)	Year 2 (2022/23)	Year 3 (2023/24)	Total Cost
Option 3 – Enterprise Licence Costs <sup>(1)</sup>	(TBC)	-	-	TBC
Change Request Budget (if required)	£50,000	£50,000	£50,000	£150,000
Additional Training (if required)	£30,000	-	-	£30,000
Regional Partnership Board (RPB) Hosting	-	£100,000	£100,000	£200,000
<b>Total Costs</b>	<b>£80,000</b>	<b>£150,000</b>	<b>£150,000</b>	<b>£380,000</b>

(1) These costs are to be confirmed following the development of the all Wales enterprise contract

As illustrated above, if Welsh Government agree to fund the agreement, then the commitment from the Health Board will be circa £380k for the 3 years. To date, the Health Board has not committed any additional resources, past August 2021; until such time notification from Welsh Government has been received. Lightfoot have provided a commitment to continue the work outlined below.

### **Next Steps**

In order to progress the use of Lightfoot within the Health Board, the following has been agreed for the next 12 weeks, until such time that there is clarity around the all Wales enterprise agreement.

	Days Allocated
Coaching and mentoring program to support skills and knowledge transfer (Improving Together)	8
Support for Phase 1 delivery of the Annual Plan 2021/2022 through dynamic planning capability (The 50 days supports configuration & and set up, start with 1st four Specialties)	50
Configuration of additional SfN viewers (e.g. frailty)	5
Continued support of the Operational Team	8
Analysis and consulting – 200 beds out of system	10
<b>Total *</b>	<b>81</b>

\* Days that have been unallocated from Phase 1 and 2 have been reassigned to the above priorities

### **Conclusion**

Whilst Lightfoot has accelerated the use of information and data within the Health Board, this has incurred a significant investment. It is, therefore, proposed that a dedicated workshop session is undertaken as part of the Strategic Improving Together Group to begin reflecting upon and detailing what the organisation requires from strategic business intelligence and how the Health Board structures itself to deliver this more effectively, either by further exploring the use of Lightfoot, Microsoft, other third party companies or developing the product in-house with collaboration with other Health Boards and Digital Health and Care Wales (DHCW).

The Digital Team have begun examining the scoping of an in-house Advance Analytical Platform which will incorporate Statistical Process Control (SPC) charts, easy drilldown interrogation, additional data sources, removing the need for passwords, automatic refreshing, and the ability for users to design their own dashboards based on an agreed set of data. As part of this work, we will design a programme of development and mentoring for staff who require additional training/support in using data and information; however, it is anticipated that this will take 12-18 months.

### **Argymhelliad / Recommendation**

The Board is asked to:

- **NOTE** the contents of the report, and the financial commitment to date;
- **APPROVE** the continuation of our relationship with Lightfoot Ltd in principle, until further work is completed, noting the requirement for Welsh Government approval for financial commitments which exceed £1m.

<b>Amcanion: (rhaid cwblhau)</b> <b>Objectives: (must be completed)</b>	
Cyfeirnod Cofrestr Risg Datix a Sgôr Cyfredol: Datix Risk Register Reference and Score:	Not Applicable
Safon(au) Gofal ac Iechyd: Health and Care Standard(s): <a href="#">Hyperlink to NHS Wales Health &amp; Care Standards</a>	All Health & Care Standards Apply
Amcanion Strategol y BIP: UHB Strategic Objectives: <a href="#">Hyperlink to HDdUHB Strategic Objectives</a>	All Strategic Objectives are applicable
Amcanion Llesiant BIP: UHB Well-being Objectives: <a href="#">Hyperlink to HDdUHB Well-being Objectives Annual Report 2018-2019</a>	9. All HDdUHB Well-being Objectives apply

<b>Gwybodaeth Ychwanegol:</b> <b>Further Information:</b>	
Ar sail tystiolaeth: Evidence Base:	Not Applicable
Rhestr Termiau: Glossary of Terms:	Contained within the body of the report
Partïon / Pwyllgorau â ymgynhorwyd ymlaen llaw y Cyfarfod Bwrdd Iechyd Prifysgol: Parties / Committees consulted prior to University Health Board:	Not applicable

<b>Effaith: (rhaid cwblhau)</b> <b>Impact: (must be completed)</b>	
<b>Ariannol / Gwerth am Arian:</b> <b>Financial / Service:</b>	The financial impact is continued within the main body of the report.
<b>Ansawdd / Gofal Claf:</b> <b>Quality / Patient Care:</b>	The availability of real time information is essential to provide accurate real time information to clinical teams will improve decision making.
<b>Gweithlu:</b> <b>Workforce:</b>	Not applicable.
<b>Risg:</b> <b>Risk:</b>	The lack of information is a risk to the organisation in terms of clinical decisions and service planning.
<b>Cyfreithiol:</b> <b>Legal:</b>	Not applicable.
<b>Enw Da:</b> <b>Reputational:</b>	Making decision based on inaccurate information and data could affect the reputation of the Health Board
<b>Gyfrinachedd:</b> <b>Privacy:</b>	Not applicable.
<b>Cydraddoldeb:</b> <b>Equality:</b>	Not applicable.