Bwrdd Iechyd Prifysgol Hywel Dda University Health Board

PWYLLGOR DIGIDOL, DATA AC ARLOESI
DIGITAL, DATA AND INNOVATION COMMITTEE

DYDDIAD Y CYFARFOD: DATE OF MEETING:	22 April 2025
TEITL YR ADRODDIAD: TITLE OF REPORT:	Current use of Artificial Intelligence (AI)
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

Sefyllfa / Situation

The primary purpose of this paper is to introduce a review that is to be conducted across the Health Board on the use of Artificial Intelligence (AI). The review will be a thorough evaluation of our existing AI systems. This involves assessing their current performance, identifying areas where improvements can be made, and exploring potential new applications. Additionally, the review aims to ensure that our AI systems comply with all relevant regulations and ethical standards. By doing so, we can develop a strategic roadmap that will guide our future AI initiatives, ensuring they are aligned with our organisational goals and contribute to our overall mission.

Cefndir / Background

The use of AI within the Health Board will be a strategic initiative aimed at enhancing healthcare delivery and operational efficiency. AI technologies can be leveraged to support various aspects of healthcare, from clinical decision-making to administrative processes. This initiative aligns with the broader digital transformation goals of the Health Board, which aims to improve patient outcomes, optimise resource allocation, and reduce operational costs

AI algorithms can analyse patient records and automatically assign appropriate codes, reducing the burden on healthcare professionals and minimising the risk of human error. This not only enhances the quality of data but also ensures timely and accurate billing and reporting, which are critical for financial management and regulatory compliance.

AI has also been utilised in radiology services, where it assists in the interpretation of medical images. AI-powered tools can analyse radiological images with high precision, identifying abnormalities and providing diagnostic support to radiologists. This has significantly improved the speed and accuracy of diagnoses, enabling earlier detection of conditions and more effective treatment planning. The integration of AI in radiology has also helped to address the shortage of radiologists by augmenting their capabilities and allowing them to focus on more complex cases.

In addition to clinical applications, AI has been employed to enhance operational efficiency within the Health Board. AI systems have been used to optimise patient flow, manage resource allocation, and predict demand for medical supplies

By analysing historical data and identifying patterns, AI can forecast patient admissions, optimise staffing levels, and ensure that medical supplies are adequately stocked. This proactive approach to resource management has led to improved operational efficiency, reduced waiting times, and better patient care.

The implementation of AI within the Health Board has also raised important considerations regarding data protection and privacy. Ensuring the security of patient data is paramount, and the Health Board has adopted robust measures to safeguard sensitive information. This includes encryption, regular penetration testing, and compliance with recognised standards such as the General Data Protection Regulation (GDPR). The Health Board is also working closely with the National AI Commission to ensure that all AI initiatives comply with legal and ethical guidelines, thereby maintaining public trust and confidence in the use of AI in healthcare.

Asesiad / Assessment

The use of AI within the Health Board is currently not governed or fully understood, therefore the Digital Director, working with colleagues has already proposed undertaking a review into the use of AI withing clinical and operational settings. This paper outlines the approach, methodology, proposed outcomes and timelines.

Scope and Objectives of the Review

The scope of this review encompasses all AI systems currently in use within the organisation. This includes systems used for various functions such as data analysis, patient services, predictive analytics, and more. The objectives of the review are as follows:

- Assess the Performance and Effectiveness of Current AI Systems: Evaluate how well our AI systems are performing in terms of accuracy, efficiency, and overall impact on business processes.
- Identify Areas for Improvement and Potential New Applications: Determine where our AI systems can be enhanced and explore new ways to leverage AI technology to drive innovation and business growth.
- Ensure Compliance with Legal and Ethical Standards: Review our AI systems to ensure they comply with relevant regulations and ethical guidelines, addressing any potential risks or issues.
- Develop a Comprehensive Roadmap for Future AI Initiatives: Create a strategic plan that outlines the steps needed to advance our AI capabilities, including resource allocation, training, and development.

Methodology

To achieve the objectives outlined above, a multi-faceted methodology that combines both qualitative and quantitative approaches will be employed. The key components of our methodology include:

1. Data Analysis: analyse performance metrics and data from our AI systems to assess their effectiveness. This will involve examining key performance indicators (KPIs) such as accuracy, precision, recall, and Return on Investment (ROI).
2. Surveys and Interviews: conduct surveys and interviews with key stakeholders, including employees, customers, and partners, to gather insights into the performance

and impact of our AI systems. This qualitative data will help us understand user experiences and identify areas for improvement.

3. Benchmarking: benchmark our AI systems against industry standards and best practices. This will involve comparing our systems to those of leading organisations in our industry to identify gaps and opportunities for enhancement.
4. Regulatory and Ethical Review: review relevant regulations and ethical guidelines to ensure our AI systems are compliant. This will include examining frameworks such as GDPR, and the EU AI Act, as well as ethical principles related to bias, transparency, and accountability.
5. Case Studies and Examples: include case studies and examples of successful AI implementations within our organisation and from other leading organisations. These case studies will provide valuable insights into best practices and lessons learned.

Regulatory and Ethical Review

Review and ensure compliance with relevant regulatory frameworks, such as GDPR, and the EU AI Act. Additionally, the Ethical Guidelines will be evaluated, with an emphasis on detecting bias , and ensuring transparency of outputs. Furthermore. review and discuss the potential of AI becoming or acting as medical device.

The steps involved in this component include:

- Regulatory Framework Review: Review relevant regulatory frameworks such as GDPR, and the EU AI Act. Identify the specific requirements and guidelines that apply to our AI systems.
- Ethical Guidelines Review: Review ethical guidelines related to AI, including principles of fairness, transparency, accountability, and bias detection. Identify best practices for ethical AI implementation.
- Compliance Assessment: Assess our AI systems for compliance with regulatory and ethical standards. This may involve conducting audits, reviewing documentation, and evaluating system design.
- Risk Management: Develop risk management strategies to address potential compliance issues. This may include creating incident response plans, conducting regular audits, and implementing mitigation measures.
- Case Studies: Include case studies of ethical AI implementations to illustrate best practices and successful compliance strategies.

Case Studies and Examples

Case studies and examples provide practical insights into the implementation and impact of AI systems. The steps involved in this component include:

- Selection of Case Studies: Identify relevant case studies from within our organisation and from other leading organisations. These case studies should highlight successful AI implementations, challenges faced, and lessons learned.
- Documentation: Document the case studies in detail, including the context, objectives, implementation process, outcomes, and key takeaways.
- Analysis: Analyse the case studies to identify common themes, best practices, and areas for improvement.
- Reporting: Compile the case studies into a comprehensive report. This report will serve as a valuable resource for understanding the practical aspects of AI implementation.

Developing a Roadmap for Future AI Initiatives

Developing a roadmap for future AI initiatives will be a critical output from the review, that will aim to strategically guide the integration and advancement of artificial intelligence within the Health Board. This roadmap will serve as a comprehensive framework, outlining the necessary steps to leverage AI technologies effectively, ensuring that they align with our broader digital transformation goals. By identifying key areas for AI application, allocating resources efficiently, and ensuring compliance with legal and ethical standards, we can create a sustainable and impactful AI strategy that enhances healthcare delivery and operational efficiency.

The first step in developing this roadmap involves a thorough assessment of our current AI capabilities and identifying areas for improvement. This includes evaluating existing AI systems, such as those used in clinical coding and radiology, to determine their effectiveness and potential for enhancement. By analysing performance metrics and gathering feedback from users, we can pinpoint specific areas where AI can drive innovation and business growth. Additionally, exploring new applications of AI technology will be crucial in addressing emerging healthcare challenges and improving patient outcomes.

Resource allocation and training are pivotal components of the AI roadmap. Ensuring that we have the necessary financial and human resources to support AI initiatives is essential for their successful implementation. This includes investing in advanced AI tools, infrastructure, and continuous training programs for our staff. By building a skilled workforce that is proficient in AI technologies, we can foster a culture of innovation and adaptability, enabling our organisation to stay ahead in the rapidly evolving healthcare landscape.

Compliance with legal and ethical standards is another critical aspect of the AI roadmap. As we integrate AI into various aspects of healthcare, it is imperative to ensure that our systems comply with relevant regulations and ethical guidelines. This involves conducting regular audits, implementing robust data protection measures, and adhering to best practices in AI governance. By prioritising compliance, we can mitigate potential risks and maintain public trust in our AI initiatives.

Finally, the roadmap will include a clear methodology for monitoring and evaluating the progress of AI initiatives. This involves setting KPIs to measure the impact of AI on healthcare delivery and operational efficiency. Regular reviews and updates to the roadmap will ensure that our AI strategy remains aligned with our organisational goals and adapts to changing needs and technological advancements. By maintaining a dynamic and responsive approach, we can maximise the benefits of AI and drive continuous improvement in our healthcare services.

Effective Governance

Ensuring effective governance and monitoring of AI initiatives within the Health Board is crucial for maintaining compliance, enhancing patient safety, and fostering trust in AI technologies. Here are several key strategies to achieve this:

- **Establish a Dedicated AI Governance Task and Finish Group:** A dedicated AI Governance Task and Finish Group should be established to oversee all AI-related activities within the Health Board. The Group would be responsible for setting policies, standards, and guidelines for the development, implementation, and use of AI technologies. The Group should include representatives from vari5ous departments, including digital, clinical, legal, and information governance, to ensure a comprehensive approach to AI governance.
- **Develop and Implement AI Policies and Standards:** Clear policies and standards should be developed to guide the use of AI within the Health Board. These policies should address data security, ethical considerations, and the clinical governance of AI

algorithms. Regular reviews and updates to these policies will ensure they remain relevant and effective.

- **Conduct Regular Audits and Compliance Checks:** Regular audits and compliance checks are essential to ensure that AI systems are functioning as intended and adhering to established policies and standards. The Information Governance Team, for instance, conducts audits to identify any information governance and security risks. These audits where possible will be extended to include AI systems, ensuring that they comply with data protection regulations and ethical guidelines.
- **Implement Robust Data Protection Measures:** Data protection is a critical aspect of AI governance. The Health Board must ensure that all AI systems comply with data protection laws, such as the GDPR. This includes conducting Data Protection Impact Assessments (DPIAs) for AI projects, implementing encryption and other security measures, and regularly monitoring for potential data breaches
- **Foster a Culture of Continuous Learning and Improvement:** Continuous learning and improvement are vital for the successful governance and monitoring of AI initiatives. Training programs should be implemented to equip staff with the skills needed to use AI tools responsibly and effectively. Additionally, the AI Governance Group should regularly review AI projects, gather feedback from users, and make necessary adjustments to improve the effectiveness and safety of AI systems.
- **Engage with External Experts and Regulatory Bodies:** Engaging with external experts and regulatory bodies can provide valuable insights and guidance on best practices for AI governance. For example, collaboration with the AI Commission for Health and Social Care can help ensure that AI initiatives align with national strategies and regulatory requirements. External audits and consultations with experts can also provide an additional layer of oversight and assurance.

Outline Plan

To ensure a comprehensive and effective AI review within the Health Board, the detailed steps and timeline need to be meticulously planned and executed. Here is an expanded version of the plan, which will be supported by CGI from June 2025 onwards.

Month 1-2: Formation and Initial Data Collection

- Week 1: Establish the AI Governance Task and Finish Group
- Form a dedicated AI Governance Task and Finish Group comprising representatives from various departments, including digital, clinical, legal, and information governance
- Define roles and responsibilities for each Group member to ensure a structured approach to the review process.

Week 2-4: Develop a Data Collection Plan

- Identify key performance metrics for existing AI systems, such as accuracy, efficiency, and overall impact on business processes.
- Design surveys and interview questions to gather qualitative data from stakeholders, including staff and patients.
- Develop a timeline for data collection activities to ensure all relevant information is gathered systematically.

Week 5-8: Collect Data on Existing AI Systems

- Gather quantitative data on the performance of AI systems, including system logs, usage statistics, and error rates
- Conduct interviews and surveys with stakeholders to gather insights on the effectiveness and impact of AI systems
- Compile and organise the collected data for analysis in the next phase.

Month 3-4: Performance Assessment and Compliance Checks
Week 9-12: Analyse Collected Data

- Evaluate the performance and effectiveness of AI systems based on the collected data
- Identify gaps or areas where AI systems are not meeting expectations and propose solutions for improvement
- Prepare a preliminary report summarising the findings of the performance assessment.

Week 13-16: Conduct Compliance Checks and Risk Assessments

- Review AI systems to ensure compliance with data protection laws, such as GDPR, and other relevant regulations
- Conduct DPIAs for AI projects to identify and mitigate potential risks
- Implement robust data protection measures, including encryption and regular monitoring for potential data breaches

Month 5: Stakeholder Engagement and Data Analysis
Week 17-18: Engage with Stakeholders

- Organise focus groups and workshops with stakeholders, including staff, patients, and external experts, to gather additional insights and feedback
- Document stakeholder feedback and integrate it with the performance and compliance data

Week 19-20: Analyse Stakeholder Feedback

- Analyse the feedback from stakeholders to identify common themes and areas for improvement
- Incorporate stakeholder insights into the overall assessment of AI systems
- Update the preliminary report to include stakeholder feedback and additional findings.

Month 6: Reporting and Strategic Roadmap Development
Week 21-22: Compile Findings into a Comprehensive Report

- Prepare a detailed report summarising the findings of the AI review, including performance assessments, compliance checks, and stakeholder feedback
- Include recommendations for improvement and innovation in the report
- Ensure the report is clear, concise, and accessible to all relevant stakeholders.

Week 23-24: Develop a Strategic Roadmap for Future AI Initiatives

- Create a strategic roadmap outlining the steps needed to advance AI capabilities, including resource allocation, training, and stakeholder engagement
- Set KPIs to measure the impact of AI on healthcare delivery and operational efficiency
- Present the report and strategic roadmap to the AI Governance Group and other relevant stakeholders for review and approval

Summary
The review aims to evaluate the performance of existing AI systems, identify areas for improvement, and explore new applications. It emphasises the importance of compliance with regulations and ethical standards, aiming to develop a strategic roadmap for future AI initiatives. The integration of AI within the Health Board is positioned as a strategic initiative to enhance healthcare delivery, operational efficiency, and patient outcomes

Argymhelliad / Recommendation

The Committee are requested to consider:

- **NOTE** the content of the Current use of Artificial Intelligence (AI) Report

- **APPROVE** the establishment of an AI Governance Task and Finish Group to provide the appropriate governance around the use of AI within the Health Board
- **ACKNOWLEDGE** the initiation of a review of AI within the Health Board

Amcanion: (rhaid cwblhau) Objectives: (must be completed)	
Committee ToR Reference: Cyfeirnod Cylch Gorchwyl y Pwyllgor:	2.1.3 That the Board's arrangements for information governance including creating, collecting, storing, safeguarding, disseminating, sharing, using and disposing of information is in accordance with its stated objectives; legislative responsibilities, listed in Appendix 1; and any relevant requirements, standards and codes of practice.
Cyfeirnod Cofrestr Risg Datix a Sgôr Cyfredol: Datix Risk Register Reference and Score:	Not applicable
Parthau Ansawdd: Domains of Quality Quality and Engagement Act (sharepoint.com)	7. All apply
Galluogwyr Ansawdd: Enablers of Quality: Quality and Engagement Act (sharepoint.com)	6. All Apply
Amcanion Strategol y BIP: UHB Strategic Objectives:	All Strategic Objectives are applicable
Amcanion Cynllunio Planning Objectives	9 Digital plan 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:	Not applicable
Rhestr Termau: Glossary of Terms:	Contained within the report

Partïon / Pwyllgorau â ymgynhorwyd ymlaen llaw y Pwyllgor Digidol, Data ac Arloesi Parties / Committees consulted prior to Digital, Data and Innovation Committee:	Not applicable

Effaith: (rhaid cwblhau) Impact: (must be completed)	
Ariannol / Gwerth am Arian: Financial / Service:	The financial impact of AI use within the Health Board includes both significant initial investments and potential long-term savings, from an efficiency and cash releasing perspective.
Ansawdd / Gofal Claf: Quality / Patient Care:	The use of AI within the Health Board has a profound impact on quality and patient care. Internally, AI enhances service delivery, reduces clinician workloads, and improves patient outcomes through continuous observation and effective management of conditions. Externally, AI fosters innovative medical treatments, enhances clinical workflows, and ensures equitable and transparent patient care
Gweithlu: Workforce:	The use of AI within the Health Board has a significant impact on the workforce. Internally, AI initiatives focus on educating and upskilling the workforce, automating content creation, and maintaining data quality for informed decision-making. Externally, AI addresses workforce shortages, enhances diagnostic accuracy, and improves treatment planning, ultimately leading to a more efficient and effective healthcare workforce.
Risg: Risk:	Outlined within the paper
Cyfreithiol: Legal:	Not applicable
Enw Da: Reputational:	The use of AI within the Health Board has a significant impact on its reputation. Internally, the adoption of trusted AI frameworks, robust data protection measures, and ethical clinical practices ensures transparency, trust, and compliance with regulatory standards. Externally, aligning with best practices in AI transparency, informed consent, and health equity can further enhance the Health Board's reputation as a leader in ethical and innovative healthcare
Gyfrinachedd: Privacy:	Not applicable
Cydraddoldeb: Equality:	This will be included within the review, and will be a crucial element of the outputs