

BOARD OF DIRECTORS MEETING

Agenda Item	P1/015/19	Date	30th January 2019
Subject / Title	Business Intelligence – Progress on Real-Time Reporting		
Author	Sarah Barr, Chief Information Officer		
Responsible Director	Sheena Khanduri, Medical Director		
Executive Summary			
This paper provides a progress update on the developments within Business intelligence and progress towards real-time reporting.			
Strategic Context and background papers (if relevant)			
Enabler for Transforming Cancer care. Business and Clinical information is one of the five key workstreams supporting Connecting for the Future.			
Recommended resolution			
<p>. The Board is asked to:</p> <ul style="list-style-type: none"> • Note the contents of the report and progress of the Business and Clinical Information workstream to date. • Support the planned direction of a single data source with multiple data feeds to provide future reporting needs clinically and corporately. • Note the complexity of the work and the planned timetable. 			
Risk and Assurance			
Development of Business Intelligence solutions supports mitigations for Risk 862 “Organisation of Information Management resources Trust Wide to achieve Trust Strategic Objectives”			
Link to CQC Regulations			
N/A			
Resource Implications			
None			
Key Communication Points			
<ul style="list-style-type: none"> • The Trust’s GDE programme is a Digital programme of transformation which supports our national requirements around GDE and National Digital maturity but also supports the enabling “Connecting for the Future” pillar of our Transforming Cancer Care (TCC) programme Business and Clinical information is one of the Trust’s five digital workstreams. • A complete overhaul of the Trust’s Data Warehouse and Business Intelligence infrastructure and processes commenced in October 2018 with the aim to 			

make the Trust one of the best, compared to peers, at providing accurate, meaningful and timely data to meet the organisation's needs.

- A new data warehouse will be built by April 2019 and a new suite of reporting dashboards from October 2019.
- The new infrastructure will support a journey to a “self-service” for users with the ability to drill down to raw data and the ability to triangulate data easily.
- A three phased restructure within the IM&T Team is underway. Phase One defined the senior Leadership team introducing new leadership posts including: Head of Digital Programmes, Head of IT Operations and Head of Business Intelligence. The Head of Business Intelligence is currently out to recruitment.
- The consultation document for the business intelligence function is on target for dissemination at the end of February 2019, earlier is feasible. Business as usual will commence during this period ensuring all statutory returns are handled on time and accurately.
- Series of engagement is underway with staff for the suite of dashboards.
- There is a single governance board, Digital Board that governs the Business and Clinical Information workstream. The Digital Board is Chaired by the Medical Director, Senior Responsible Owner (SRO) for Digital within the Trust. The work is also part of the Global Digital Exemplar milestones.
- The work to develop a new Business Intelligence solution and function for the Trust is transformational and complex.

Freedom of Information Status

FOI exemptions must be applied to specific information within documents, rather than documents as a whole. Only if the redaction renders the rest of the document non-sensical should the document itself be redacted.

Application Exemptions:

- **Prejudice to effective conduct of public affairs**
- **Personal Information**
- **Info provided in confidence**
- **Commercial interests**
- **Info intended for future publication**

Please tick the appropriate box below:

✓

A. This document is for full publication

B. This document includes FOI exempt information

C. This whole document is exempt under FOI

IMPORTANT:

If you have chosen B above, highlight the information that is to be redacted within the document, for subsequent removal.

Confirm to the Trust Secretary, which applicable exemption(s) apply to the whole document or highlighted sections.

Equality & Diversity impact assessment

Are there concerns that the policy/service could have an adverse impact because of:	Yes	No
Age		✓
Disability		✓
Sex (gender)		✓
Race		✓
Sexual Orientation		✓
Gender reassignment		✓
Religion / Belief		✓
Pregnancy and maternity		✓
Civil Partnership & Marriage		✓

If YES to one or more of the above please add further detail and identify if full impact assessment is required.

Next Steps

Business Intelligence

Progress on Real-Time Reporting (Business and Clinical Information Workstream)

January 2019
v1.0 FINAL



Connecting for the future is the Clatterbridge Cancer Centre's Global Digital Exemplar (GDE) Programme for transforming cancer care through the use of world-class digital technology.



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PURPOSE

1. The purpose of the paper is to provide an update to the members of the Trust Board of the progress on enhancements to Business Intelligence and the journey towards real-time reporting Trust wide.

BACKGROUND

2. Connecting for the Future is The Clatterbridge Cancer Centre's Global Digital Exemplar (GDE) programme for Transforming Cancer Care (TCC) through the use of world class digital technology and information. The Clatterbridge Cancer Centre was recognised as a Global Digital Exemplar (GDE) partner by NHS Digital in March 2018. The programme gives the opportunity to obtain up to £5 million in central funding, match funded over three years to deliver an ambitious digital transformation programme. The Clatterbridge Cancer Centre is partnered with Alder Hey Children's NHS Foundation Trust who were awarded GDE status in 2017.
3. Cheshire and Merseyside has the highest proportion of GDEs and GDE partners in the country. The following Trust's locally are part of the National GDE Programme: Alder Hey, The Clatterbridge Cancer Centre, The Royal Liverpool University Hospital, Liverpool Women's Hospital, Mersey Care NHS Trust and North West Boroughs. Close neighbours Salford Royal are also part of the GDE programme.
4. The GDE programme has five key milestones. NHS Digital externally assure delivery against the key milestones and funding is allocated if milestones are achieved. Milestones 1 and 2 have been achieved and the next milestone will be reviewed in an external assurance visit in March 2019. The milestone delivery dates are as follows:
 - a. Milestone 1: March 2018- Completed
 - b. Milestone 2: August 2018- Completed
 - c. Milestone 3: April 2019
 - d. Milestone 4: January 2020
 - e. Milestone 5: April 2021
5. The Digital programme at The Clatterbridge Cancer Centre forms part of the wider Transforming Cancer Care (TCC) programme under the 'Connecting for the Future' as a key enabling pillar. The programme is governed internally by the Digital Board, which is chaired by the Medical Director (Senior Responsible Owner for the GDE programme). The Digital Board reports into the Infrastructure Committee.

6. The Digital Programme is managed through five distinct workstreams as displayed in figure 1 below.



Figure 1 - Clatterbridge Cancer Centre Five Digital Themes

BUSINESS INTELLIGENCE BACKGROUND

7. The Trust has an existing data warehouse which is an “off the shelf solution”. The Warehouse has been in place for 4 years and underwent significant changes in 2016 post implementation of Meditech, the Trust’s Electronic patient record (EPR) system. The current infrastructure has grown over time, is difficult to manipulate and is not an open source.
8. There is no business intelligence function in place within the organisation. The Trust’s Information Team, who deliver corporate information moved into the IM&T department on commencement of the recruitment of the Chief Information Officer (CIO). There are a number of other teams who manage clinical information.
9. There are number of different tools and different processes currently in place which is leading to difficulties in recruitment, no single source of the Truth and inefficiencies in maintenance and development of reports. There is a single interactive dashboard in place for cancer waiting times.
10. These issues were recognised by the CIO and a solution of introducing a single business intelligence function with a single set of tools into the Trust was proposed. An agreement was established with the Executive Team in July 2018 to complete a full restructure of the IM&T Team with phase one to introduce a robust senior leadership team which would encompass a new business intelligence

function and to review the current data warehousing and data visualisation tools with a view to introduce refreshed technology.

PROGRESS TO DATE

11. A three phased restructure of the IM&T department commenced in September 2018, addressing the senior leadership team for Digital to include a head of IT Operations, Head of Digital Programmes and a Head of Business Intelligence. Phases two and three of the planned restructure include a business intelligence function and functional teams below the Head of IT Operations and Digital programmes to support digital transformation for The Clatterbridge Cancer Centre.
12. A new post of Head of Business Intelligence has been introduced to the Trust and is currently out to recruitment. The consultation document for the business intelligence function is on target for dissemination at the end of February 2019, earlier if feasible. Business as usual will commence during this period ensuring all statutory returns are handled on time and accurately.
13. A complete overhaul of the Data warehouse and Business Intelligence infrastructure and processes commenced in October 2018 with the aim to make the Trust one of the best, compared to peers, at providing accurate, meaningful and timely data to meet the organisation's needs.
14. The trust is working in collaboration with a provider specialising in business intelligence and data warehousing, primarily working with the NHS. They have a proven track record of delivering high quality innovative solutions on time with a number of trusts across the UK and a high proportion within the North West.
15. The work currently in progress will deliver a new data warehouse solution using the latest technologies which will be open source and flexible and will hold a complete picture of the Trust's activity. This is on track for delivery in April 2019.
16. There is a consolidation process underway for the multiple business intelligence tools currently in place to establish a single platform. This will allow The Trust to focus on one product, saving time and resources and ultimately increasing the quality of the reporting output. This platform will also allow users to a single point to access information as a "single source of the truth". This work is currently on target for delivery in October 2019 as per the project plan, although developments for delivery is expected to happen earlier for some dashboards once data is live within the data warehouse.
17. Work is progressing well with teams within the Trust for specifications for the new suite of dashboards and a full training plan is underway to ensure existing staff are appropriately trained and developments on the data warehouse remain iterative.
18. The new infrastructure will support a journey to a "self-service" for users with the ability to drill down to raw data and the ability to triangulate data easily. The current warehouse has feeds from the Trust's Electronic Patient record (EPR) only. The new infrastructure will include feeds from Datix and ESR. The data visualisation tools will provide metrics driven reporting, providing concise and meaningful analysis to users and dashboards that are fast and responsive.
19. The dashboards will summarise complex information using infographic and score care layouts. It will enable predictive and planning analysis and include the integration of geo-mapping and site mapping and the ability to drill down to detailed and raw data. (Infographic example in figure 2)

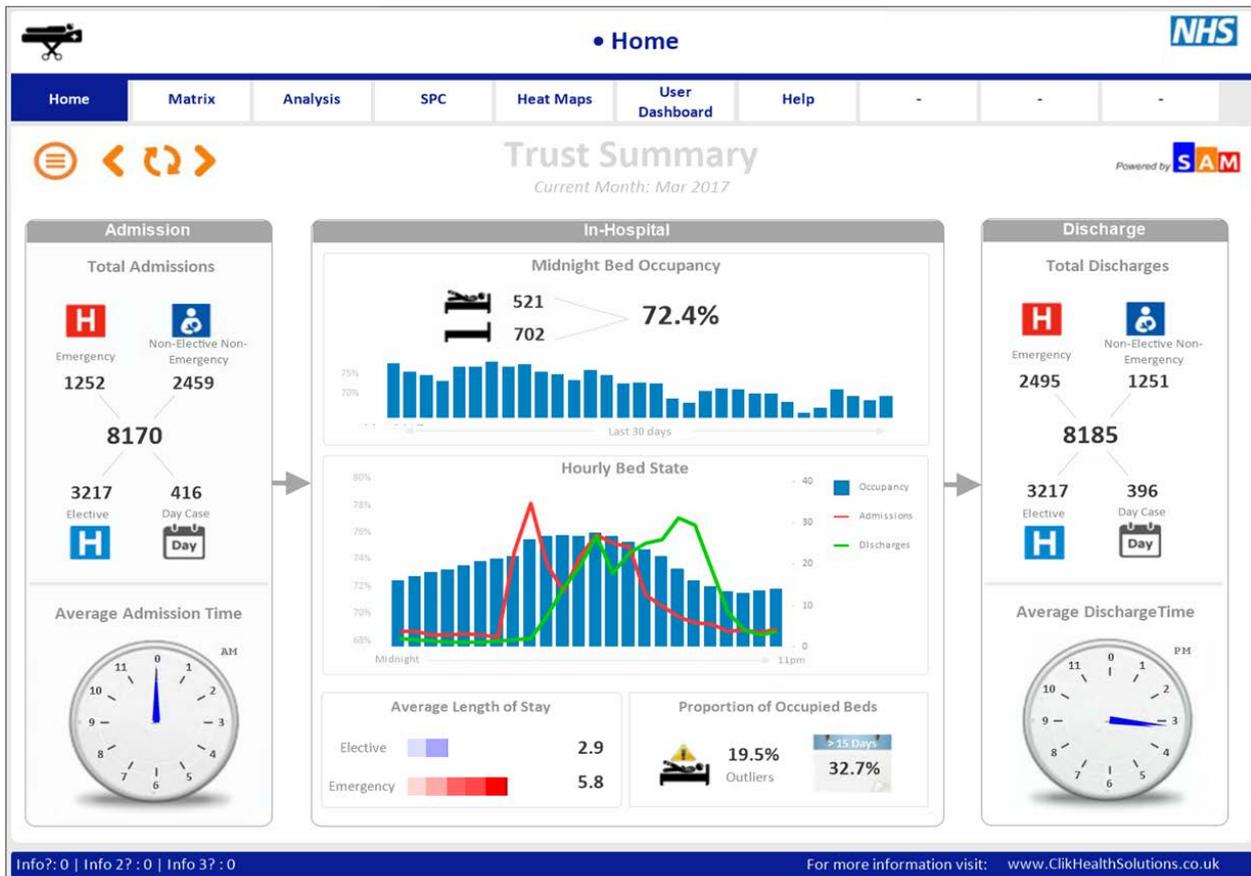


Figure 2 - Infographic Example

20. The programme of work is governed by the Digital Board which meets monthly and is chaired by the Trust's Medical Director, who is the Senior Responsible Owner (SRO) for Digital within the Trust. The work also forms part of the Trust's GDE Milestones.
21. The work to develop a new Business Intelligence solution and function for the Trust is transformational and complex.

RECOMMENDATIONS

The Board is asked to

22. Note the contents of the report and progress of the Business and Clinical Information workstream to date.
23. Support the planned direction of a single data source with multiple data feeds to provide future reporting needs clinically and corporately.
24. Note the complexity of the work and the planned timetable.

SHEENA KHANDURI
MEDICAL DIRECTOR, DIGITAL SENIOR RESPONSIBLE OWNER
JANUARY 2019