

NHSBT Board

Blood Tech Modernisation Programme – Status Update

25th May 2022

Status: Official

1. Summary and Purpose of Paper

The Board is asked to note progress of the Programme

The programme is progressing steadily with the first release of converted code in live. This release was overall, very successful. However, one major defect was detected in live. This had no impact on patient safety and a fix is with us for testing and will be deployed 22nd May.

The next set of converted code is now in the testing phase, and on track for deployment in Sept 22, at which point 17% of the Pulse code will have been converted and deployed. Two more releases to live will follow within this financial year, bringing the total code converted to 30%. This is below what was set out in the Programme (45%), but in line with the forecast set out in this year's Full Business Case (FBC) (30%).

This year is very focused on effort to recover overall programme duration, and early interventions are resulting in improvements to the pace at which we can test and deploy code. Further interventions are underway, and by September we will know more about the impacts that the agreed interventions are having. This includes whether there are any other viable options to reduce the programme duration, such as working with additional software development partners.

Since the last report we have initiated the NHSBT Data Insights (NDI) project to deliver against the programme's objective to 'Enable access to real-time data for improved decision making (PowerBI)'. The NDI Project will deliver the technology and foundations to teams so they can start to access the data they need, when they need it.

Staff Engagement and Enablement remains very high at 5/6

The programme ended FY21/22 with a £267k overspend (as forecast). As presented in the FBC the programme entered FY22/23 with a Very High risk of budget overspend. Mitigations have already reduced this risk and further mitigations are planned.

2. Background

Pulse is the critical system that powers blood supply. Two years ago Pulse was a significant risk to the organisation due to the ageing nature of the technology that it was built on. Over the last 18 months significant progress has been made in reducing that risk.

Pulse Technology	Status Jan 2020	Status NOW
Database Infrastructure (Itanium Servers)		Replaced June 2020
Compute & Storage (Cisco Hyperflex)		Replaced August 2021

Database (Mimer)		Upgraded Q1 2020*
Application (Delphi)		In progress

*Database is still on Mimer which is a niche product that currently limits cloud first strategy. Options will be developed as part of the programme.

The BTM programme has been approved as a 5-year programme to deliver the stabilisation and security of blood IT set out in the Blood Technology Strategy. The programme has established a new blood technology product centre to:

1. Grow existing and establish new capabilities to deliver releases in months not years
2. Convert the application to a supported language (C#)
3. Re-platform the database from Mimer to a mainstream database
4. Enable access to real-time data for improved decision making (PowerBI)
5. Improve the integrations between Pulse and other applications (Donor Portal, OBOS, SO99, etc.)

The programme is now focussed on building the capability within the product centre and converting the application to a supported language.

3. Detail of report

Progress in Year 1 (FY21/22)

Last year we grew our team, established new capabilities and proved that we can deliver working converted code, but we found that our initial time to deliver estimates increased significantly. We also found that the pace at which we converted the first set of code was slightly behind where we had predicted. This has put the programme duration and associated cost at risk.

Planning Assumptions Year 2 (FY22/23)

As agreed in the FY22/23 FBC, this year's delivery is based on an estimated overall development size of 11.7k days, this is a mid-range figure between the initial estimate of 8.5k days and the re-estimated 13.5k development days. The figure of 11.7k development days reflects the predicted success of our continual improvement and simplification activities.

This year our focus has shifted to recovering the overall programme duration. Efforts to reduce the amount of code to convert (Simplification) and speeding up our ways of working (Productivity Continual Improvement) are well underway.

Progress since last report

We continue to make steady progress on code conversion, FY22/23 is on track for this year's objectives. The next release go-live is planned for Sept 22 and will deliver the converted Holds Management, Pack Lot Management, Lab Workload Management alongside some system admin changes. Subsequent releases will follow in Jan and March, delivering 30% of converted code by the end of FY22/23.

Our first release of converted code, which went live in March performed well in all areas apart from 1 defect causing a data transfer failure. It did not cause any patient facing impacts and the fix will be deployed with the bug fix release 22nd May.

This month we have ended our engagement with our Software testing partner Edge. This is due to ongoing issues, which we have highlighted at previous boards. We are stretching our remaining internal team whilst we work to engage a new partner.

NHSBT Data Insights project

The NHSBT Data Insights (NDI) project will provide the technology and foundation to get data into the hands of people who need it, when they need it, and not locked away in systems, spreadsheets and proprietary databases.

By the summer we aim to have delivered a data platform with all the data required to run the new Marketing Platform, and raw Pulse data, which will be available to a few key business users, who can start to develop their own dashboards. Over the rest of the year we will iteratively expand on that capability so that more business users can have access to, and create their own dashboards.

The project is going to deliver the data feeds, report ready data and tools that you need to create next level dashboards & insights

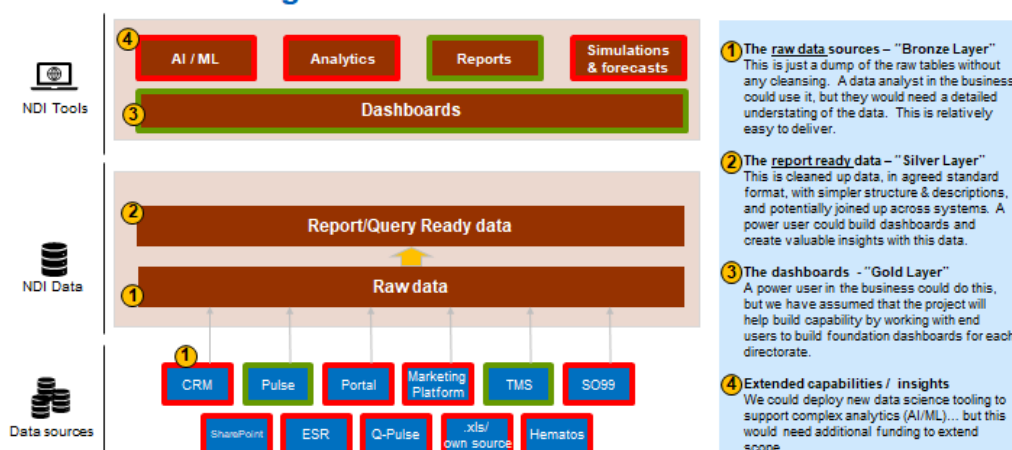


Figure 1 NHSBT Data Insights Project

Risk to overall Programme delivery

A set of interventions to recover the timelines for the overall Programme and assure that we are taking the correct technical approach are underway (Action Ref SB28). Our Continual Improvement activities are positively impacting the time it takes to test and deploy code. Activities aimed at reducing the amount of code to complete are showing some early results such as the successful deployment of code using DevOps, which will reduce each release total length by 4-6 weeks.

We are in the process of engaging with an external partner to assist us with technical assurance and insights on any other opportunities to increase the speed of the Programme

including proving whether it is possible for a partner to successfully convert some of the code without in-depth knowledge of the blood systems.

The risk profile of three of the Very High risks is improving:

- **Failure to attract permanent staff to replace externals (R144)**
Reduced from Very High to High as a result of converting some of our Fixed Term Contracts to Permanent roles and successfully recruiting an internal candidate to replace partner resource in the Programme Leadership Team.
- **A risk that there will be an over-spend on the FY22/23 budget (R145)**
Reduced from Very High to High due to an agreement to cross charge other programme for Pulse change and reduction in Partner costs due to recruitment. This will be closely monitored as we progress through the year.
- **A risk that the programme is unable to achieve the necessary productivity improvement targets to align cadence with quarterly C# conversion build (R149)**
Whilst this is still Very High, we have reduced the likelihood slightly due to work progressing well with improving efficiencies (DevOps). However, we need to await the outcome of further improvement initiatives before we see significant improvements in this risk.

Programme Finance

We ended FY21/22 with the expected underspend of £267k (exc contingency) and enter this year with a high risk of Programme overspend. This is partially due to us increasing Pulse development capacity to accommodate other strategic (non BTM) change. It is also in part due to the increase reliance on external partners. However, early interventions have reduced that risk from Very High to High.

Sign off

Next Board report July 2022. Next significant milestone: September 2022 release which delivers Holds Management, Pack Lot Management, Lab Workload Management.

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Date: May 22