NHS
Blood and Transplant

NHSBT Board

Blood Tech Modernisation Programme – Status Update

30th September 2021

Status: Official

1. Summary and Purpose of Paper

The Blood Technology Modernisation (BTM) programme has been established to deliver the stabilisation and security of blood IT. This paper outlines the significant progress that has been made in reducing the risk to blood IT and provides an update on progress for the remaining activity.

Progress remains consistent with the Full Business Case as approved at the Jan 21 Board, overall risk to blood IT has reduced significantly, but the risk associated with the remaining delivery is trending upwards.

2. Action Requested

The Board is asked to note that:

- the risk to overall blood IT has reduced significantly;
- a significant release of capability went live over the weekend of 25th September;
- year one delivery is broadly on track; but
- overall programme risk is trending towards red.

3. 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 at January 2020	Status NOW
Database Infrastructure (Itanium)		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.)

4. Detail of report

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

Major milestone reached

In September a new release of Pulse went live, achieving the milestone '*100% of Delphi Code Delivered'*. This is the final release of Pulse on its current code base, it includes changes that were written as far back as 2019 and marks the end of NHSBT investing in writing new code and taking 2 years + to release it into the hands of our users. The capability includes an improved ability to manage Donor Records (merger/deletion, full blood count record management, RO profiles etc.), Full Face Product Labels and the new C# launcher (a pre-requisite for subsequent C# modules).

New code on track to go live early 2022

New releases will now go live in months and not years. We are in a position where we can meet our target of deploying the first C# pulse modules (replacing core donor management and discretionary testing capability) early in 2022.

The first two releases of new C# code were planned for January and March '22, however, previously reported resource issues have resulted in 3-5 weeks delay to each of those releases meaning they are most likely to deliver in late February and April. This minor delay is not a cause for concern at this point in the programme, but we will continue to focus on delivering these releases as close to plan as possible.

Increased risk to overall programme delivery and cost

The scheduled work to revisit initial effort estimates to convert the application has been completed. We have learned that some areas of Pulse are more complex than initially thought, initial estimates were for 8,500 development days and this has now been estimated at 13,500. So, whilst good progress is being made against this year's targets, the level of effort required to deliver the whole programme has increased. This means that the percentage of the application we have converted in Year 1 will be lower than target.

At this point we believe it is still possible to close some of the gap and we have already identified areas where effort could be reduced to an estimated 9,700 days - we are planning discoveries to validate the scope of these opportunities. We also plan to revisit the effort estimates again in March '22 when we will have had opportunity to deliver more releases and made further refinements to our estimating maturity. We should continue to expect effort

estimates to fluctuate as we deliver the early releases and embed new ways of working, levels of uncertainly should decrease in 2022/23.

As the percentage of scope delivered in-year is less than anticipated there is a risk that the duration and cost of the programme will increase. If the results of the discovery exercises prove positive the programme could still come in within contingency. In-year Programme finance continues to track a £53k overspend for 2021/21, which we expect to recover with cost measures.

Protecting the BTM programme from increased demand for Pulse change in other areas

Given the increased risk to the Programme, protecting the capacity that we have allocated to Blood Tech Modernisation is even more critical. There will continue to be additional demands placed on the Programme by the Test and Development Project, the Plasma Programme and others. To mitigate against these demands the Programme will take a proposal to the Executive Team presenting options on prioritisation and building additional capacity. Additionally, the Programme will work closely with the Plasma programme to take advantage of any changes in approaches, including changes to plans and targets.

Programme assurance

The planned Savant supplier audit has been complete with no significant issues identified and a Gate 0 Programme Assurance review has been scheduled for November.

Sign off

Next Board report November 2021. Next significant milestone: February ‘22 release which delivers Core Donor Management (26.1) and Discretionary Testing and Panel Management (27.1).

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