NHS Blood and Transplant

NHSBT Board
January 26 2017

Core Systems Modernisation (CSM) Programme
Progress Update

1. Status – Commercial in Confidence

2. Executive Summary

2.1. This document summarises the progress made so far in delivery of the Core Systems Modernisation (CSM) programme and requests funding for the next phase of implementation. The CSM Programme will enable NHSBT to transform the way our Blood, Tissue and Eye Service (TES) supply chains operate, and support the realisation of the Blood 2020 and TES strategies. It will implement a new Operating Model and associated processes, supported by the implementation of the new IT platforms, and ultimately the replacement of the existing legacy system (Pulse).

2.2. At the July 2016 meeting, the NHSBT Board approved in principle the CSM business case to the point of decommissioning the current legacy system by the end of the 2018/19 financial year at a cost of £27.6m, including 25% contingency.

2.3. It also specifically approved £7.6m funding for the first phase of the programme covering three x three-month periods of software configuration (programme increments) from July to the end of March 2017. At this point the plan implied the programme would have:
   - Finished the development of blood donor management functionality – this will now be completed by the end of June 2017, three months later than planned with a view to 'go-live' in the three-month period after the software is built – this work is on track.
   - Commenced development of an end-to-end supply chain pilot in Blood (neo-natal platelets) and TES – work is underway for both areas in our Customer Relationship Management (CRM) and Enterprise Resource Planning (ERP) platforms.

2.4. The business case costs have been adjusted down to reflect the VAT exempt status of relevant costs now this has been clarified. By the end of PI3, the CSM programme will have spent ca £8.1m of the £8.5m total funding approved up to that point, using £0.9m of the £1.3m contingency, predominantly to cover vacant ICT posts and to provide some integration support to the ODT Hub. The forecast to completion remains unchanged.

2.5. It was also agreed at the July Board that a paper would be presented to the January 2017 Board in order to:

- Describe progress to date from the July to December period (programme increments one and two).
- Seek approval for the funding of the next phase starting in April 2017.

2.6. This paper therefore summarises the progress made and requests funding of £0.5m to complete programme increment three in the first three weeks of April, plus £6.7m for the period up to the live implementation of the first transition state (blood donor management) at the end of September 2017 (including 25% contingency). A further update on progress will be presented to the July Board meeting that will clarify:

i) Our state of readiness for the transition into live.
ii) Update the business case financials to reflect the development of the ERP elements of the programme.
iii) The latest plan for the full migration off our legacy system.

3. Action Requested

3.1. The Board is asked to:

- **Note the progress made so far in delivery of the CSM programme.**
- **Approve funding of £0.5m to complete programme increment three in the first three weeks of April, plus £6.7m for programme increments four and five up to the end of September.**
- **This will include the delivery of our first go-live for blood donor management functionality and the continued development of the end-to-end supply chain pilot for neo-natal platelets and TES.**
- **Note the intent to bring an update to the business case financials and plan to the July 2017 Board meeting, which will reflect the further progress made at that point, plus the intended ERP implementation approach.**

4. Purpose of the Paper

4.1. This paper summarises the progress made in delivery of the Core Systems Modernisation Programme and seeks specific approval for funding of the next stage in the programme.

5. Background – Progress since the July 2016 Board Meeting

5.1. Since approval of the business case in July 2016, the programme team have successfully:

- Secured approval for the business case from DH (19 August) and submitted to Government Digital Services (GDS) for approval on 25 August. Confirmation was subsequently received on 30 November that GDS have recommended approval to Minister for the Cabinet Office, with their formal approval expected in the near future.
- Completed the first two periods of software configuration (programme increments), building functionality for the first transition state.

- Completed the development of our business change approach establishing a detailed target state for the first go-live with supporting training plan, change impact assessment, go/no-go criteria, communications and engagement plan.
- Developed our data migration approach for transition state one.
- Moved from two to three functional donor (scrum) teams and commenced the early stages of the software build for transition state two – neo natal platelets and TES through establishing a customer scrum team and a small ERP prototype team.
- Worked within our agreed budget envelope, with a forecast spend of £5.9m against the agreed £6.5m phase one budget.

Table One – 2016/17 Financial Year Forecast

Category	Business Case £m	Latest Forecast £m	Variance £m
March Board - Mobilisation & Design Phase	£2.0	£1.7	£0.3
July Board - Programme Increment (PI) 1-3	£5.2	£5.9	-£0.7
July Board - PI 1-3 Contingency	£1.3	£-	£1.3
Total	**£8.5**	**£7.6**	**£0.9**
Note: ca £0.5m of PI3 costs fall into the first 3 weeks in April following the delay to the start of PI2 - this is included in the bid for funding from April 2017 to September 2017. As a result, the programme will have used £0.9m of its £1.3m contingency at that point, predominantly to cover ICT vacant posts with external resource and to provide some integration support to the ODT Hub programme.			

5.2. The programme delivery plan presented in July represented a best estimate based on early assumptions about the structure of the programme increments and the number of scrum teams that would be required. It was heavily caveated and remained subject to change until we learned from the early periods of development and the team had established a sustainable velocity in the configuration of software.

5.3. During the first period of software build (programme increment one) we experienced several challenges and in September moved the programme to 'Red' status. As a result, we also delayed our second planning event and second period of software development by one month. The challenges encountered were:

- The later than planned on-boarding of our CRM partner, and the team's initial inexperience in the agile process, meant we under estimated the effort required to deliver the blood donor management software. We have subsequently overcome this by developing our process maps in more detail and worked with our delivery partner to generate a more granular estimate of the effort required.
- The initial software build did not proceed at pace because the interim Wi-Fi solution at Birmingham New Street proved inadequate, despite the best efforts of the ICT team to provide various solutions. To overcome this, we have leased interim offices with robust Wi-Fi

arrangements near to New Street since November 2016, to allow our three donor scrum teams to operate more effectively.

- In addition, the software build was slower than planned as it took time for the scrum team's way of working to become established. Various adjustments have been required to better balance speed of delivery with the need for regulatory compliance. As a result, we have now improved the velocity and are proceeding in line with plan during the second period of configuration (November to January).

- The programme team did not complete the procurement of the delivery partner for our manufacturing software (ERP) as planned due to the risk of a supplier challenge. We are now considering alternative approaches. Planning in this regard, has been informed by our CTO and CDO engagement with the Finnish Blood Services core system implementation partner and one of Microsoft's recommended 'gold' standard ERP partners. It has also been informed by the ongoing work on an ERP prototype. As a result, we delayed the procurement of the partner into early 2017. It is anticipated that the additional intelligence we will have gained will better inform both the procurement and ERP plan, allowing us to accelerate delivery of transition states two to five and potentially reduce overall programme costs.

- We have faced some leadership and resource challenges, with additional operational resources (product owners) sourced to drive delivery within the development teams and the swapping out of some external partner resource where performance has warranted it.

- We concluded that our automated testing tool was inadequate for the testing of cloud based IT platforms. We have therefore implemented an additional tool.

5.4. As a result of the learning to date, we have now established a more robust plan. Although we expect our first transition state go-live to be completed approximately three months later than the business case roadmap, we believe that the remainder of the programme can be delivered within the approved timescale and budget for the total programme. This is obviously not without risk, but will be subject to further review and Board scrutiny as we proceed.

Table Two – Business Case v Latest Forecast Cost

Category	Business Case £m	Latest Forecast £m	Variance £m
Programme Definition & MaD Phase Actual	£2.6	£2.3	£0.3
Parallel running license / environments	£2.0	£2.0	£-
Programme Costs – PI 1-5	£11.2	£11.3	-£0.1
Programme Costs – PI6-11	£9.0	£9.2	-£0.2
Exit current core system (MVP)	**£24.8**	**£24.8**	**£-**

5.5. The programme is trending Amber and working towards a formal move to Amber status during February, once the detailed plan for delivering the first transition state has been fully defined.

6. Proposal – Next Steps

6.1. The priority of the programme remains to deliver a minimum viable product, which will enable NHSBT to decommission the existing Pulse system as soon as possible without compromising the safety and security of the Blood and TES supply chains.

6.2. The key next steps are focused on:

- Completing the software build and implementation into live operation of blood donor management functionality (transition state one). In support of this, we are currently assessing the feasibility of taking one small, relatively self-contained area (venue management) live in July to test our transition process.
- Completing development of our integrated test plan to ensure we can effectively stress test the CRM interface with the legacy system Pulse.
- Deploying our business change readiness plan as we build towards a go/no-go decision for July and September.
- Completing the build of an ERP prototype and the procurement for the ERP delivery partner.
- Continuing with the software build of the end to end supply chain for neo-natal platelets and TES (transition state 2).

6.3. As a result, the Board is asked to approve funding of £0.5m to complete programme increment three in the first three weeks of April, plus £6.7m for the next two periods of software build (programme increments four and five), which will cover the period up to the end of September. This includes 25% contingency.

6.4. An update to the business case financials and plan will be submitted to the July 2017 Board meeting that will reflect the further progress made at that point and our intended ERP delivery approach.

6.5. It will also clarify our state of readiness for the September transition into live and seek approval to fund and commence the next programme phase from October 2017 onwards.

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