

Blood Technology Modernisation

NHSBT Board Report – May 2022



Programme Summary – May 2022

The programme objectives are to Stabilise and Secure Blood Technology

Note from Programme Director

RAG Status	
Previous	A
Current	A
Trend	→

- We continue to make steady progress on code our code conversion** The next release go-live is planned for Sept 22 and will deliver the converted Holds Mgt, Pack Lot Mgt, Lab Workload Mgt alongside some system admin changes. Followed by releases in Jan and March taking us up to 30% code converted by FY year end
- As agreed in the 22/23 FBC we **have planned this year's deliveries** based on an estimated overall development size of 11.7k, this is a mid-range figure between the initial estimate of 8.5k 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.
- Our first release of converted code**, which went live in March performed well, in all areas apart from 1 defect in a data transfer that caused a failure. It did not cause any patient facing impacts and the fix is currently in testing to be deployed with the bug fix release of 22nd May
- A set of interventions to recover the timelines for the overall programme** and assure that we are taking the correct technical approach are underway. Our Continual Improvement activities are positively impacting the time it takes to test and deploy code and simplification activities aimed at reducing the amount of code to complete are showing some early opportunities. We are in the process of engaging with an external partner to advice on any other opportunities to increase the speed of the Programme, including whether it is possible for a partner successfully convert some of the code without in-depth knowledge of the blood systems
- We ended our engagement with our **Software partner Edge** due to their poor engagement and poor performance. We are stretching our remaining internal team whilst we work to engage a new partner.
- Work has started on the **NHSBT Data Insights (NDI)** project. This will deliver the technology and foundations for the business to create their dashboards & insight reporting.
- We **reduced the risk profile** of 3 of our very high risks: R145 relating to the budget for this year; R144 relating to the risk of recruiting, and R149, recovering programme timelines.
- Engagement and Enablement scores remain high at 5/6
- We ended FY21/22 with the **expected underspend of £267k** (exc contingency) and enter this year with a high risk of programme overspend..

Key Performance Indicators

Progress against plan			Budget/spend			Scope			Quality			Benefits			Leadership Continuity			Vendor Relationship			Engagement Scores														
Previous	Current	Trend	Previous	Current	Trend	Previous	Current	Trend	Previous	Current	Trend	Previous	Current	Trend	Previous	Current	Trend	Previous	Current	Trend	Previous	Current	Trend	Previous	Current	Trend	Previous	Current	Trend						
A	A	→	A	A	→	G	G	→	G	G	→	G	G	→	G	G	→	G	G	→	G	G	→	G	G	→	G	G	→	G	G	→	G	G	→
Release 27 delivered successfully in Mar-22. Release 29 target go-live planned for Sept 22.			As per Risk 145, there is a risk that there will be an over-spend on the FY22/23 budget			Simplification activities on-going to help constrain scope of C# conversion						Benefits defined and baseline measurements taken			Leadership vacancies now filled with onboarding commencing in May			Edge Testing have been stood down			Apr-21 – 5.1; May-21 – 4.7; Aug-21 – 4.6; Oct-21 – 5.0; Dec-21 – 4.9; Mar-22 – 5.5 (out of 6)			Apr-21 – 5.1; May-21 – 5.0; Aug-21 – 5.1; Oct-21 – 5.1; Dec-21 – 5.0; Mar-22 – 5.0 (out of 6)											

Very High and High Risks from FBC 22-23

ID	Description	Residual Score	Mitigation Actions / Resolutions	Target Score
R071	There is a risk that the programme cannot reduce the code complexity and delivery effort	V High (5x4) →	Complete the discoveries for simplification of Pulse and work with Savant to improve build productivity; Review options to engage external support to validate estimates; Implement quarterly reviews with Savant.	Moderate (Sept 22)
R149	There is a risk that the programme is unable to achieve the necessary productivity improvement targets to align cadence with quarterly C# conversion build	V High (4x4) ↓	Complete review of test phases and approach to identify opportunities to improve efficiency whilst ensuring necessary quality; Introduce risk-based testing; Re-align team to new model.	Moderate (Sept 22)
R144	There is a risk that NHSBT is unable to attract and retain quality candidates to positions	High (4x2) ↓	Continue to invest in recruitment campaign & build sourcing partnerships with agencies; Continue to utilise partner resources to fill capability gaps in order to maintain delivery progress whilst placing a cost pressure on the programme budget.	Moderate (Jul-22)
R145	There is a risk that there will be an over-spend on the FY22/23 budget	High (3x4) ↓	Re-assess plans frequently throughout the year to ensure actual costs are tracked and forecasts are monitored.	High
R076	There is a risk that unplanned leadership and team member changes may impact plans	High (3x4) →	Continuing to run a larger product centre with more third-party resource than planned whilst recruiting replacement staff will consume significant contingency; Planning in adequate knowledge transfer activity timeframes; Developing plans for retention and recruitment.	High
R146	There is a risk that our ways of working is not sustainable over a long period	High (3x4) →	Retention strategy in progress; Create a more sustainable working model; Increase frequency of engagements within the prog team	Moderate (Sept 22)
R070	All current Pulse change capacity is allocated to Blood Tech Modernisation. There is a risk that any new demand for product centre capacity i.e. PFM, Our Future Health, Testing Development Programme will impact programme timelines.	High (3x3) →	Complete impact assessments to inform prioritisation discussions; adopt formal change requests to manage BTM capacity; ensure risk is escalated to the relevant boards; costs to be re-charged to the requesting programme/directorate; Available capacity for BAU work expended by 10%, work needs to be recharged to requested business units; Use of the Blood Supply Strategy to establish the risk profile for considering required changes.	High

Summary	
Approved budget inc. Cont (£k)	£ 4,683
April Spend	TBC
Cumulative Spend (£k)	£0
Forecast for this FY (£k)	£ 4,707
Status	Amber
Forecast for this FY includes the uplift in development days which we anticipate being recovered in year	

Green	On track with no major risks or issues
Amber	On track but major risks
Red	Issues impacting delivery
Grey	Not commenced
Blue	Complete

Budget Update

Progress against Scope

Tracking the Cumulative Delivery and Budget Over Time																		
Target v Actual by Year:	FY20/21		FY21/22		Apr '22		Jun '22	Aug '22	Oct '22	Dec '22	Feb '23	FY22/23 Forecast	FY22/23 Target	FY23/24 Target	FY24/25 Target	FY25/26 Target	FY26/27 Target	
	Target	Actual	Target	Actual	Forecast	Actual	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Target	Target	Target	Target	Target	Target
Estimated development days	8.5K	8.5k	8.5k	13.5k	11.7k	11.7k	11.7k	11.7k	11.7k	11.7k	11.7k	11.7k	8.5k	8.5k	8.5k	8.5k	8.5k	8.5k
C# Requirements Definition	15%	13%	50%	38%	39%	39%	43%	47%	51%	55%	59%	60%	80%	95%	100%			
Design and build	5%	3.5%	25%	21%	21%	21%	25%	25%	30%	34%	34%	38%	50%	75%	100%			
C# Test	0%	0%	20%	9%	9%	9%	9%	9%	17%	17%	25%	30%	45%	70%	100%			
Accept and Deploy	0%	0%	15%	9%	9%	9%	9%	9%	17%	17%	25%	30%	40%	65%	100%			
Decommission	5%	0%	10%	0%	0%	0%	0%	0%	5%	5%	10%	10%	30%	55%	80%	100%		

Non C# Conversion																		
NHSBT Data Insights	0%	0%	20%	7%	tbc	7%	tbc	tbc	tbc	tbc	tbc	tbc	75%	100%				
Database Modernisation	0%	0%	0%	1%	1%	1%	1%	1%	2%	3%	4%	5%	5%	25%	50%	100%		
Integration Modernisation	0%	0%	5%	4%	4%	4%	4%	4%	7%	7%	10%	10%	10%	25%	75%	100%		
Budget % (excl. Cont.)	n/a	12%	33%	32%	32%	tbc	35%	38%	41%	44%	47%	51%	49%	67%	83%	100%		
Budget % (incl. Cont.)	n/a	9%	27%	24%	24%	tbc	27%	30%	33%	36%	39%	43%	41%	60%	77%	95%	100%	

Key insights

- The % complete takes account of the estimated effort involved, and the complexity of the work is a contributing factor in the estimating process. Initial planning estimates within the SOC were based on 8.5k development days. Re-estimating showed this should be increased to 13.5k, however we have now agreed we would plan this year on a conservative 11.7k days development effort due to the Simplification and Productivity initiatives taking place.
- Requirements Definition** – achieved 38% complete for FY21/22, slightly behind target however this is not a concern as we have a healthy backlog of requirements which we can draw on for future releases.
- NHSBT Data Insights** - Work now accelerating with a project team stood up which is being governed by the BTM Programme Board.
- Budget** – FY21/22 spend below forecast as expected. Budget targets have been updated due to VAT being included in the original SOC targets incorrectly. Apr'22 actuals not yet available.

Forecast delivery dates are consistent with our last progress report...

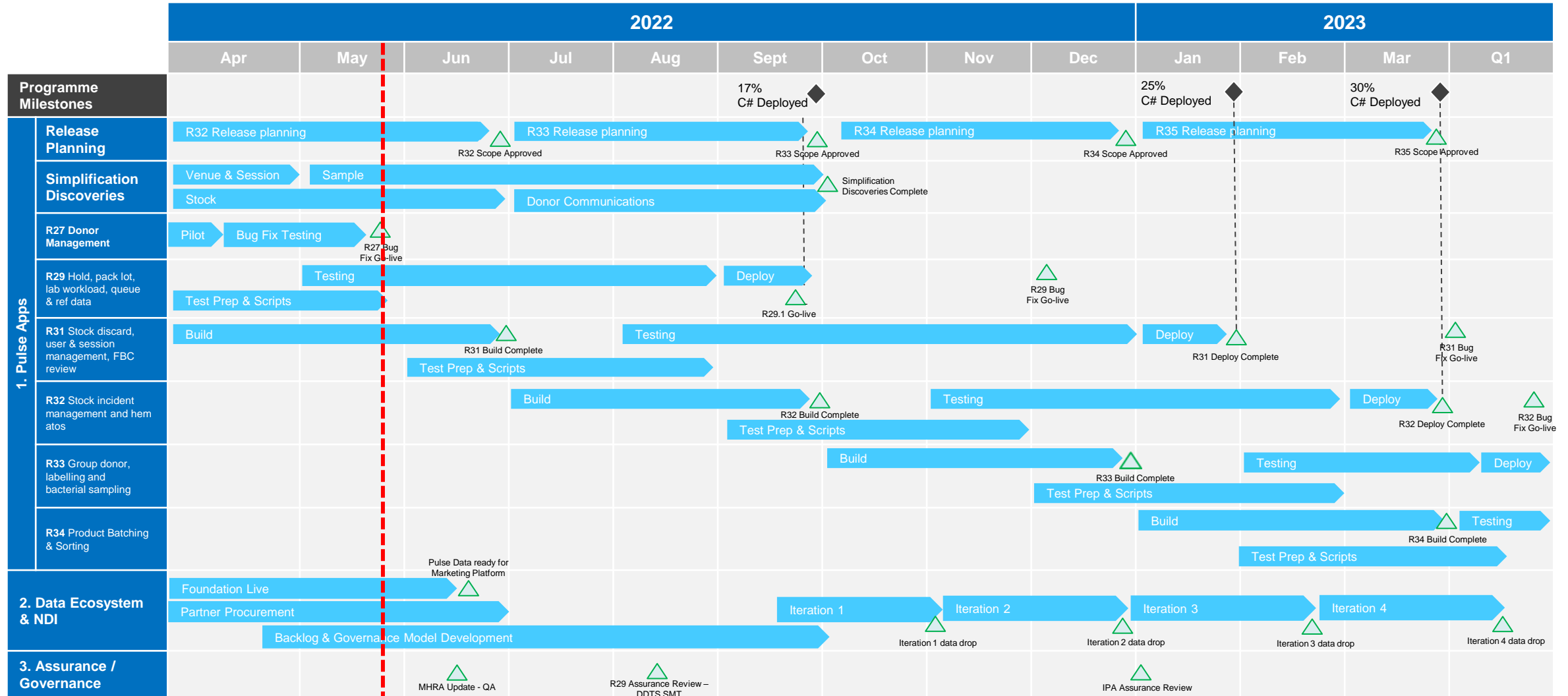
		Dev Days	Requirements Engineering	Design & Build	Test	Deploy	Baseline Date	Forecast Date
R28	Hold, Pack Lot & Queue Job Management	-	Complete	Complete	In-progress			
R29	Lab Workload & Reference Data Management	1002	Complete	Complete	In-progress	Scheduled Q2 22/23	Mar '22 FY21/22 (25 week delay)	Sep '22 FY22/23
R30	Stock Discard, User & Session Outcome Management	-	Complete	Complete	Scheduled Q1 22/23			
R31	Full Blood Count Review, Lab Donor & Referral Management	1080	Complete	Scheduled Q1 22/23	Scheduled Q2 22/23	Scheduled Q2 22/23	Sep '22 FY22/23 (19 week delay)	Jan '23 FY22/23
R32	Group Donor & Stock Incident Management & Hematos Report	540	In-progress	Scheduled Q2 22/23	Scheduled Q4 22/23	Scheduled Q4 22/23	Dec '22 FY22/23 (14 week delay)	Mar '23 FY22/23
R33	Product Labelling and Bacterial Sample & Group Donor Management	540	Scheduled FY22/23	Scheduled Q3 22/23	Scheduled Q1 23/24	Scheduled Q1 23/24	Q1 FY23/24	
R34	Product Batching & Sorting	540	Scheduled FY22/23	Scheduled Q4 22/23	Scheduled Q2 23/24	Scheduled Q2 23/24	Q2 FY23/24	

Key insights

Our plans are showing that we are recovering programme timelines through the Continual Improvement activities in progress across the programme.

We anticipate the programme will be on track by FY 2023/24

2022-23 Programme Plan



Key performance indicators explained

KPI	Measure	Green	Amber	Red
Progress against plan	Milestone progress against plan	No significant issues or delays with delivery and acceptance of milestones/deliverables. Confidence of Level 1 milestones/deliverables delivery and acceptance on time >80%.	Minor delays, significant issues require short term attention, milestones/deliverables may miss target. Confidence of Level 1 milestones/deliverables delivery and acceptance on time 60-80%.	Major issues / delays, require immediate attention, will not meet target for milestones/deliverables. Confidence of Level 1 milestones/deliverables delivery and acceptance on time <60%.
Budget/spend	Budget remaining vs. forecast to end of FY	Finances are under control and within tolerances set. Under-spend: If no tolerances set, then any favourable variance is within 90 -100% of Budget.	Over-spend (forecast or actual): Finances require attention and may exceed tolerances set. There are issues but these can be resolved with short term action. Formal application for draw-down of any contingency fund will be required. Under-spend: If no tolerances set, then any favourable variance forecast is between 85% & 90% of Budget.	Over-spend (forecast or actual): Financial viability of the programme is under question and requires significant attention. Forecast to exceed contingency fund identified in the Business Case. If forecast spend is in excess of the lower of 10% or 100k of budget, then the business case must be revisited: additional funding is required subject to relevant approval. Under-spend: If no tolerances set, then any favourable variance forecast is below 85% of Budget or £100K under-spend whichever is smaller.
Scope	No. of major and minor CRs in last year	Scope is under control with only minor changes to a limited number of deliverables, which do not affect time, cost and required outcomes of the programme.	Changes or additional deliverables have been requested which will negatively impact time and cost or delivery of other deliverables. There is a risk that "scope creep" may threaten the programme. Formal Change Control is underway.	Changes or additional deliverables have been requested which will impact time and cost or delivery of other deliverables. These will significantly impact time and cost and other indicators beyond agreed tolerances.
Quality	Delivery to Customer's Quality expectations (including GMP & MHRA requirements)	Customer Quality requirements are clear and milestones/deliverables delivered to customer are meeting or will meet customer quality requirements	Some Customer Quality requirements are unclear or there is pushback on the quality of some milestones/deliverables, but these can be rectified without impacting overall programme delivery.	Potentially serious regulatory / quality issues which would prevent programme outcomes becoming accepted into service. Customer is pushing back on the quality of milestones/deliverables being delivered or Customer Quality requirements are unclear. This will severely impact the overall programme delivery and customer acceptance.
Benefits	Benefits progress against plan	No significant issues or delays in realising benefits - will hit or exceed the target.	Minor delays or minor reduction is expected against the benefits defined in the business case. If no tolerance set, then will be within 5% of Business Case.	Viability of the programme is under question from a benefits delivery perspective. Major delays in delivery or significant reduction in expected benefit - reduction in benefit is greater than 5%.
Leadership continuity	% change in leadership in last quarter – includes SRO and product centre LT	No or minor leadership changes	Several leadership changes over short period of time, which can be mitigated through thorough handovers. New leaders continue programme delivery as per Business Case and plans.	Leadership changes without thorough handovers, leading to loss of expertise. New leaders alter programme course, impacting on programme delivery.
Vendor relationship	Vendor relationship as scored by SRO and AD	No concerns or minor concerns.	Diversion of opinion on some topics and/or strained communications, which can be addressed without impacting overall programme delivery.	Significant diversion of opinion and strained communications, which will severely impact the overall programme delivery.
Engagement scores	Monthly programme engagement score metrics on knowledge and engagement	Good engagement scores (4.5 to 6 out of 6).	Mediocre engagement scores (3 to 4.5 out of 6) or sudden drop in scores.	Poor engagement scores (0 to 3 out of 6) or sudden large drop in scores.

Note: KPIs to be updated for the next board to follow the recently amended 5-RAG model