

# Blood Technology Modernisation

NHSBT Board Report – July 2022



# Programme Summary – July 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 first release had its bug fixes delivery successfully deployed and it is stable in live operation.
  - Testing has commenced on the next release with a planned go-live for Sept 22, which include the changes needed for OBI (Hep B testing)
- 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.
- A set of interventions are in progress or planned 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 have contracted with Accenture to advise 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. That review will start in early July.
- 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 are working with an initial partner to turn the previous Proof of Concept into a live foundation service, whilst in parallel running a procurement to select a strategic delivery partner
- Forecast spend for the 22-23 year is £71k within contingency.

Trend Key	
↗	Upwards trend predicted for the next reporting period or a reduction in risk score
→	No change predicted for the next reporting period or no change in risk score
↘	Downwards trend predicted for the next reporting period or an increase in risk score
Green	On track with no major risks or issues
Amber	On track but major risks
Red	Issues impacting delivery
Grey	Not commenced
Blue	Complete

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	Engagement			Enablement					
A	A	→	A	A	→	G	G	→	G	G	→	G	G	→	G	G	→	G	G	→	G	G	→	G	G	→	G	G	→
Release 27 bugfix delivered successfully in May-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 continuing						Apr-21 – 5.1; May-21 – 4.7; Aug-21 – 4.6; Oct-21 – 5.0; Dec-21 – 4.9; Mar-22 – 5.5; May – 5.3 (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; May – 5.4 (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 capacity; 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 (3x3)
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)	£ 4,683k
May Spend	£246k
Cumulative Spend (£k)	£484k
Forecast for this FY (£k)	£ 4,612k
Status	Amber
Forecast for this FY includes the uplift in development days which we anticipate being recovered in-year	

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	FY22/23	FY23/24	FY24/25	FY25/26	FY26/27
	Target	Actual	Target	Actual	Forecast	Actual	Forecast	Actual	Forecast	Forecast	Forecast	Forecast	Forecast	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	11.7k	8.5k	8.5k	8.5k	8.5k	8.5k
Requirements Definition	15%	13%	50%	38%	39%	39%	43%	45%	47%	51%	55%	59%	60%	80%	95%	100%		
Design and build	5%	3.5%	25%	21%	21%	21%	25%	25%	25%	30%	34%	34%	38%	50%	75%	100%		
Test	0%	0%	20%	9%	9%	9%	9%	9%	9%	17%	17%	25%	30%	45%	70%	100%		
Accept and Deploy	0%	0%	15%	9%	9%	9%	9%	9%	9%	17%	17%	25%	30%	40%	65%	100%		
Decommission	5%	0%	10%	0%	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	15%	tbc	tbc	tbc	tbc	tbc	75%	100%			
Database Modernisation	0%	0%	0%	1%	1%	1%	1%	1%	1%	2%	3%	4%	5%	5%	25%	50%	100%	
Integration Modernisation	0%	0%	5%	4%	4%	4%	4%	4%	4%	7%	7%	10%	10%	10%	25%	75%	100%	
Budget % (excl. Cont.)	n/a	12%	33%	32%	32%	33%	35%	tbc	38%	41%	44%	47%	51%	49%	67%	83%	100%	
Budget % (incl. Cont.)	n/a	9%	27%	24%	24%	24%	27%	tbc	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. Progress %ages to be confirmed once the Strategic Partner is onboard.
- Budget** – Jun '22 actuals not available at time of reporting

# 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 Q2 22/23			
R31	Full Blood Count Review, Lab Donor & Referral Management	1080	Complete	Complete	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	Complete	In-Progress	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	In-Progress	Scheduled Q3 22/23	Scheduled Q1 23/24	Scheduled Q1 23/24	Q1 FY23/24	
R34	Product Batching & Sorting	540	In-Progress	Scheduled Q4 22/23	Scheduled Q2 23/24	Scheduled Q2 23/24	Q2 FY23/24	

**Key insights**

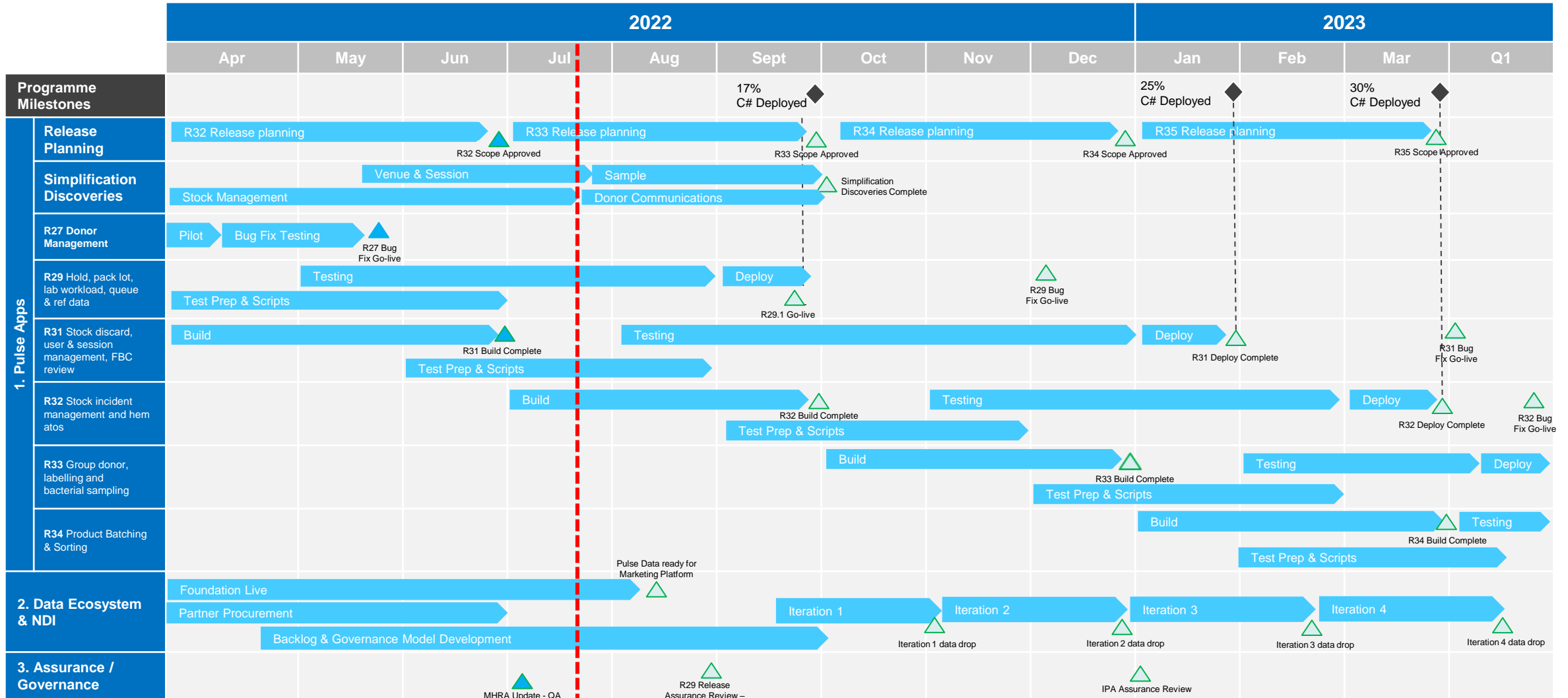
Our plans are showing that we are recovering programme timelines through the Continual Improvement activities in progress across the programme.

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

# 2022-23 Programme Plan

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

△	Milestones
▶	Activity
▶	Critical Path
→	Issues
→	Key Dependencies



# Key performance indicators explained

KPI	Measure	Green	Green/Amber	Amber	Amber/Red	Red
<b>Progress against plan</b>	Milestone progress against plan	No significant issues or delays with delivery and acceptance of milestones/deliverables. Confidence of milestones/deliverables delivery and acceptance on time >90%.	Minor delays, some issues require short term attention, milestone/deliverables may miss target. Confidence of milestones/deliverables delivery and acceptance on time 80-90%	Minor delays, significant issues require short term attention, milestones/deliverables may miss target. Confidence of milestones/deliverables delivery and acceptance on time 60-80%.	Major issues / delays, require immediate attention, unlikely to meet target for milestones/deliverables. Confidence of milestones/deliverables delivery and acceptance on time <60-50%.	Major issues / delays, require immediate attention, will not meet target for milestones/deliverables. Confidence of milestones/deliverables delivery and acceptance on time <50%.
<b>Budget/spend</b>	Budget remaining vs. forecast to end of FY	Finances are under control and within tolerances set. <b>Under-spend:</b> If no tolerances set, then any favourable variance is within 95% of Budget.	<b>Over-spend (forecast or actual):</b> Minor attention to finances required with a potential to exceed tolerances set. There are minor issues but these can be resolved with short term action. Formal application for draw-down of any contingency fund may be required. <b>Under-spend:</b> If no tolerances set, then any favourable variance forecast is between 90-95% of Budget.	<b>Over-spend (forecast or actual):</b> 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. <b>Under-spend:</b> If no tolerances set, then any favourable variance forecast is between 85%-90% of Budget.	<b>Over-spend (forecast or actual):</b> Financial viability of the programme is under question and requires significant attention. Forecast likely to exceed contingency fund identified in the Business Case. If forecast spend is in excess of 10-15% of budget, then the business case may need to be revisited: additional funding may be required subject to relevant approval. <b>Under-spend:</b> If no tolerances set, then any favourable variance forecast is below 80-85% of Budget.	<b>Over-spend (forecast or actual):</b> Financial viability of the programme is under question and requires immediate attention. Forecast to exceed contingency fund identified in the Business Case. If forecast spend is in excess of 15% of budget, then the business case must be revisited: additional funding is required subject to relevant approval. <b>Under-spend:</b> If no tolerances set, then any favourable variance forecast is below 80% of Budget.
<b>Scope</b>	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.	Scope is under control with some changes to deliverables that may have minimal impact on 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 are likely to impact time and cost or delivery of other deliverables. These may cause significant impact to time and cost and other indicators beyond agreed tolerances.	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.
<b>Quality</b>	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	Majority of Customer Quality requirements are clear, any quality issues can be rectified without impacting overall programme delivery.	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.	There is a potential for serious regulatory / quality issues requiring immediate attention which may 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 potentially severely impact the overall programme delivery and customer acceptance.	Significant 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.
<b>Benefits</b>	Benefits progress against plan	No significant issues or delays in realising benefits - will hit or exceed the target.	Minor issues / delays in realising benefits with scope to recover to meet defined targets.	Minor delays or minor reduction is expected against the benefits defined in the business case.	Significant delays or reduction is expected against benefits defined.	Viability of the programme is under question from a benefits delivery perspective. Major delays in delivery or significant reduction in expected benefit.
<b>Leadership continuity</b>	% change in leadership in last quarter – includes SRO and product centre LT	No or minor leadership changes	Some changes in leadership which can be mitigated by handovers. New leaders continue programme delivery as per Business Case and plans.	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.	Several leadership changes over short period of time, which cannot all be mitigated through thorough handovers. New leaders may slightly alter 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.
<b>Vendor relationship</b>	Vendor relationship as scored by SRO and AD	No concerns or minor concerns.	Emerging diversion of opinions and/or slightly strained communications but with no impact to overall programme delivery.	Diversion of opinion on some topics and/or strained communications, which may impact overall programme delivery.	Stronger diversion of opinion and strained communications, which are starting to impact the overall programme delivery.	Significant diversion of opinion and strained communications, which will severely impact the overall programme delivery.
<b>Engagement scores</b>	Monthly programme engagement score metrics on knowledge and engagement	Good engagement scores (4.5 to 6 out of 6).	Moderately good engagement scores (4 to 4.5 out of 6) or emerging drop in scores	Mediocre engagement scores (3 to 4 out of 6) or sudden drop in scores.	Disappointing engagement scores (2 to 3 out of 6) or sudden large drop in scores.	Poor engagement scores (0 to 2 out of 6) or sudden large drop in scores.