

Five-year Blood Service Strategy



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Blood and Transplant

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Foreword

We are delighted to present this new Blood Service Strategy in the 75th anniversary year of the National Blood Service. It has been 17 years since the National Blood Service merged with UK Transplant to form NHS Blood and Transplant (NHSBT). We are proud of the strong track record that we have continued to build ever since and continue to be inspired by the amazing generosity of our donors.

This year we launched NHSBT's Strategy with the ambition to save and improve even more lives. We want to create a world in which every patient receives the donation they need. The five-year Blood Service Strategy is the first of our service strategies to be published from this, with the mission to ***ensure every patient receives the blood they need, when they need it***. The strategy also supports other existing plans such as Transfusion 2024 which outlines priorities for safe transfusion practice across the NHS. Most importantly, the Blood Service Strategy has at its heart the need to deliver an excellent service to NHS hospitals, donors and patients.

The strategy sets ambitious plans to recruit up to a million new donors and double the number of regular donors with the rarest blood types. This will help reduce health inequalities that exist today and ensure better matched blood types for patients in the future. There is a particular need for more donors of Black African and Black Caribbean ethnicity to treat people with sickle cell disease. As well as recruiting new donors, we will continue to work to deliver a great experience for our current donors who commit to returning year after year. Whether it be at the donation session or when booking their next appointment online, our donors should feel appreciated and valued on every occasion.

The pandemic has had an enormous impact on our people, donors and the patients we serve. We are very proud that, despite the challenges, NHSBT not only maintained security of supply of our critical products and services but stepped up to support the wider national response through collecting convalescent plasma for trialling new treatments for Covid patients. There is no doubt that the impact

of the pandemic will continue to be felt for some time to come, and as we look to the future, we will focus on modernising our operations. We would especially like to thank our committed and dedicated staff for their incredible work over the pandemic. They are the cornerstone of everything we do.

We will continue to use our knowledge to improve transfusion practice and to drive innovation into practice to improve patient outcomes, all underpinned by our values of caring, expert and quality. This will include developing new solutions, such as the clinical trials that are currently underway for the use of whole blood in trauma.

Foreword

In summary, we will focus on four strategic priorities to deliver our mission:

1. To use our expertise to save patient lives we will innovate and collaborate to develop and deliver a portfolio of components and services that meets the demands of our customers
2. To deliver great donor engagement and experiences, in order to grow and diversify our donor base to collect the right blood components to meet individual patient needs
3. To be the best at what we do, we will build a modern, resilient and efficient integrated supply chain to deliver the right components, on time
4. To ensure colleagues feel included and that everyone counts, we will invest in our people and culture.

To demonstrate our intention to change we have committed to a set of ambitious targets. We will track progress through management of our key performance indicators and delivery of annual business plans. Ultimately, we will know we have succeeded when every patient receives the blood they need, when they need it.



Paul O'Brien, *Director of Blood Supply*



Dr Gail Mifflin, *Chief Medical Officer and Director of Clinical Services*



David Rose, *Director of Donor Experience and Communications*

This Service Strategy will support the delivery of the wider NHSBT Strategy

As we look to the future, our ambition is to save and improve *even more* lives

To deliver this we will:



**Grow and
diversify our
donor base**



**Modernise
our
operations**



**Drive
innovation**



**Collaborate
with
partners**

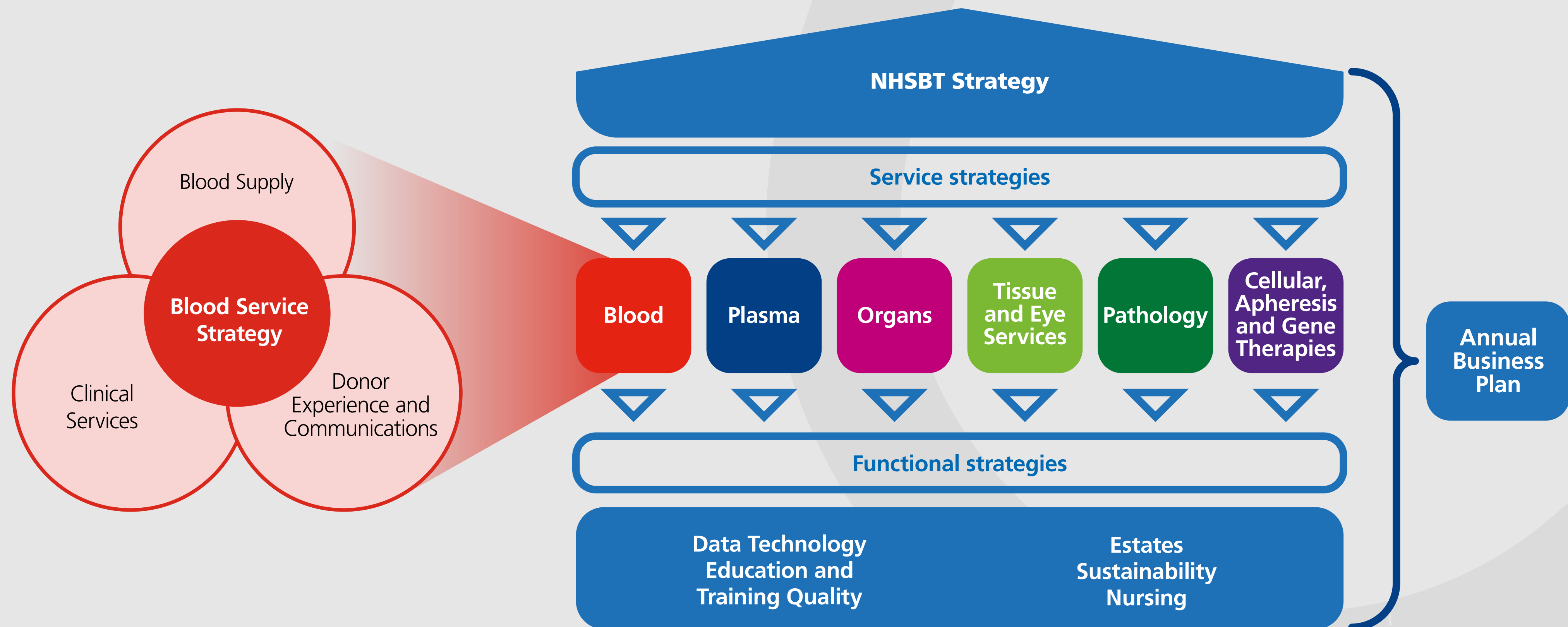


**Invest in
people and
culture**

Our vision:

A world where every patient receives the donation they need

The Blood Service Strategy defines a single vision for the Blood Service, bringing together Donor Experience, Blood Supply and Clinical Services enabled by our cross-functional directorates.



The Blood Service is a complex cycle of elements, driven by patient demand to collect the right blood and provide it to hospitals across England*

Platelets: 69% go to people with cancer, 17% helps people after surgery, 8% treat diseases, 6% helped adults and babies in intensive care

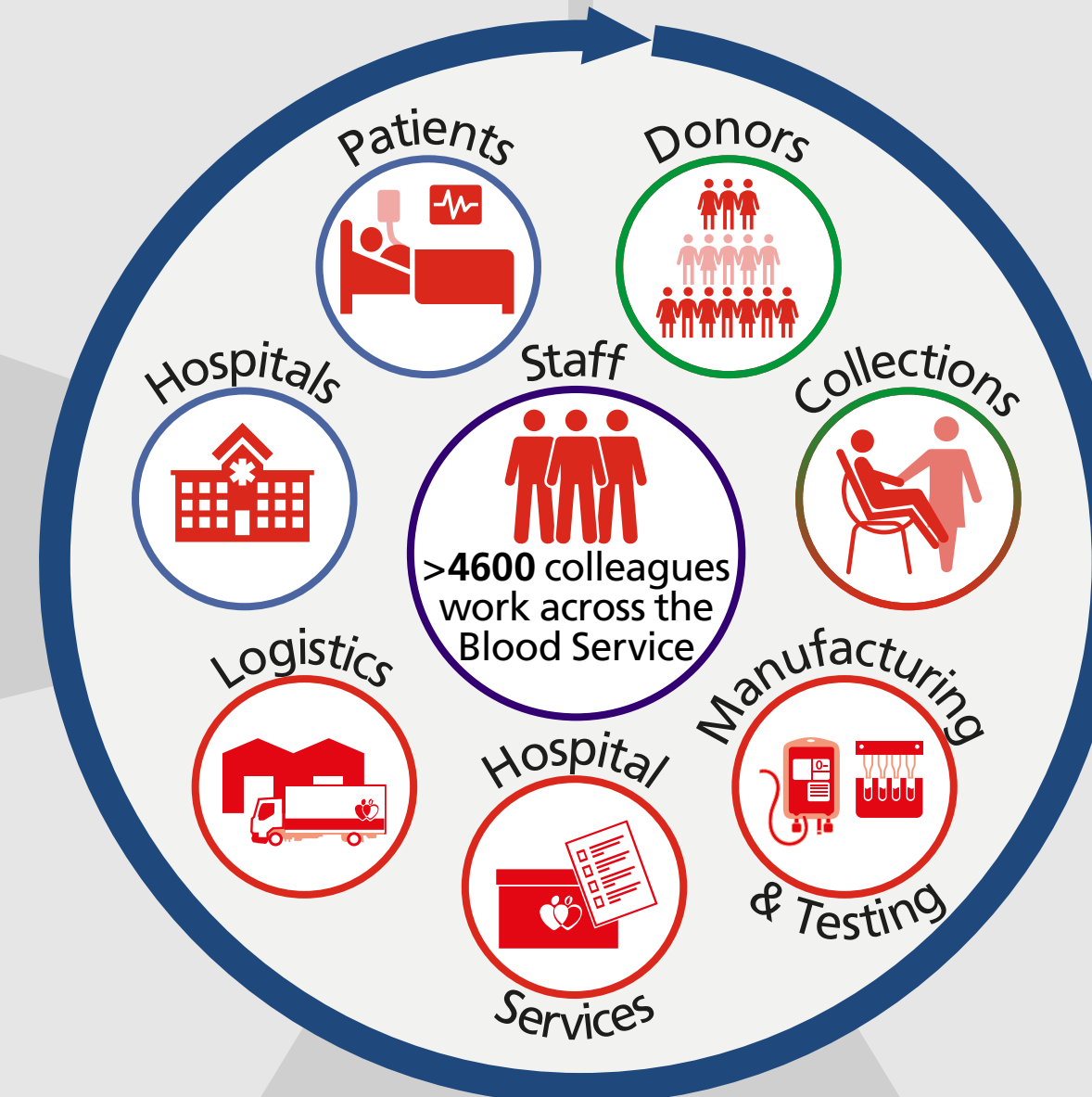
Blood: 2/3 used to treat conditions including anaemia, cancer and blood disorders. 1/3 used in surgery and emergencies including childbirth

800,000: Active donors
113,000: O negative
25,000: Ro K negative
13,500: Platelets
40%: Under 40 years old
45%: Male

270 hospitals served
8,400 invoices issued
3 transfusion research programmes in partnership with universities and Trusts
6 accredited education courses in Transfusion from certificate to masters level, for nurses, scientists and medics

4 new blood component clinical trials
325,500 Patient information leaflets issued
3,000 delegates attended PBM educational events

86,700 routine deliveries
40,700 ad-hoc deliveries
2,200 emergency deliveries
300 vehicles in fleet



1.3m units of red cells and 250,000 units of platelets issued
55% of red cell requests included specific characteristics

1,424,000 whole blood donations collected
80,300 component donations collected
26 stand alone donor centres for whole blood and component donation
50 mobile collection teams
1,280 collection team staff in mobile teams and donor centres

2 testing sites and MSL lab
3 manufacturing sites
2 million components manufactured
29 million tests completed

*stats are per year where applicable

"You will never know how much I treasure you, blood donors"

Solome Mealin is sickle cell patient who receives eight units of blood every five weeks at NHSBT's Leeds TAS unit. Solome, a mum of three, has suffered many small and large crisis episodes. Solome needed a hip replacement due to bone damage caused by sickle cell.

- Sickle cell is a disorder predominantly found amongst Black heritage patients and requires regular transfusions, most often with the specific rare blood subtype Ro. Most patients are children, and **demand for Ro blood is projected to double** from 2016/17 – 2025/26.
- **Only 52% of hospital Ro demand can be fulfilled from our existing donor base**, meaning sickle cell patients often receive less well-matched blood which, while clinically suitable, can have longer term health consequences, including alloimmunisation. Patients that have formed antibodies against donor red cells are at greater risk of transfusion reactions and delays in blood provision, and in extreme cases, can become un-transfusable.
- **Closer genotype matching of multi-transfused patients could improve their outcomes if we are able to expand our donor base to meet the ethnic makeup of patients.**



Life-enhancing gene therapies are not widely accessible to treat sickle cell, meaning regular blood transfusion remains a front line therapy

The Blood Service must respond to 8 major challenges over the next 5 years

- Patient **health inequalities** due to **sub-optimal blood matches** for frequently transfused patient.
- Changing **donor expectations** and a need for **increased diversity** will drive our service model.
- **Unpredictability in collection** following the pandemic, alongside global supply chain disruption.
- **Stretched colleagues** due to the pandemic and challenges with equity, development and retention.
- **Declining productivity** and **increasing costs** are unsustainable in a challenging economic climate.
- **Unconnected data** and **legacy technology** constrain our ability to adapt in a rapidly changing world.
- **Variable transfusion practice** in hospitals in a landscape of inconsistent education.
- Growing clinical requests for both **universal, and highly-specific, components**.



Biomedical developments over the next 15 years have the potential to transform our service and patient outcomes

15+
years

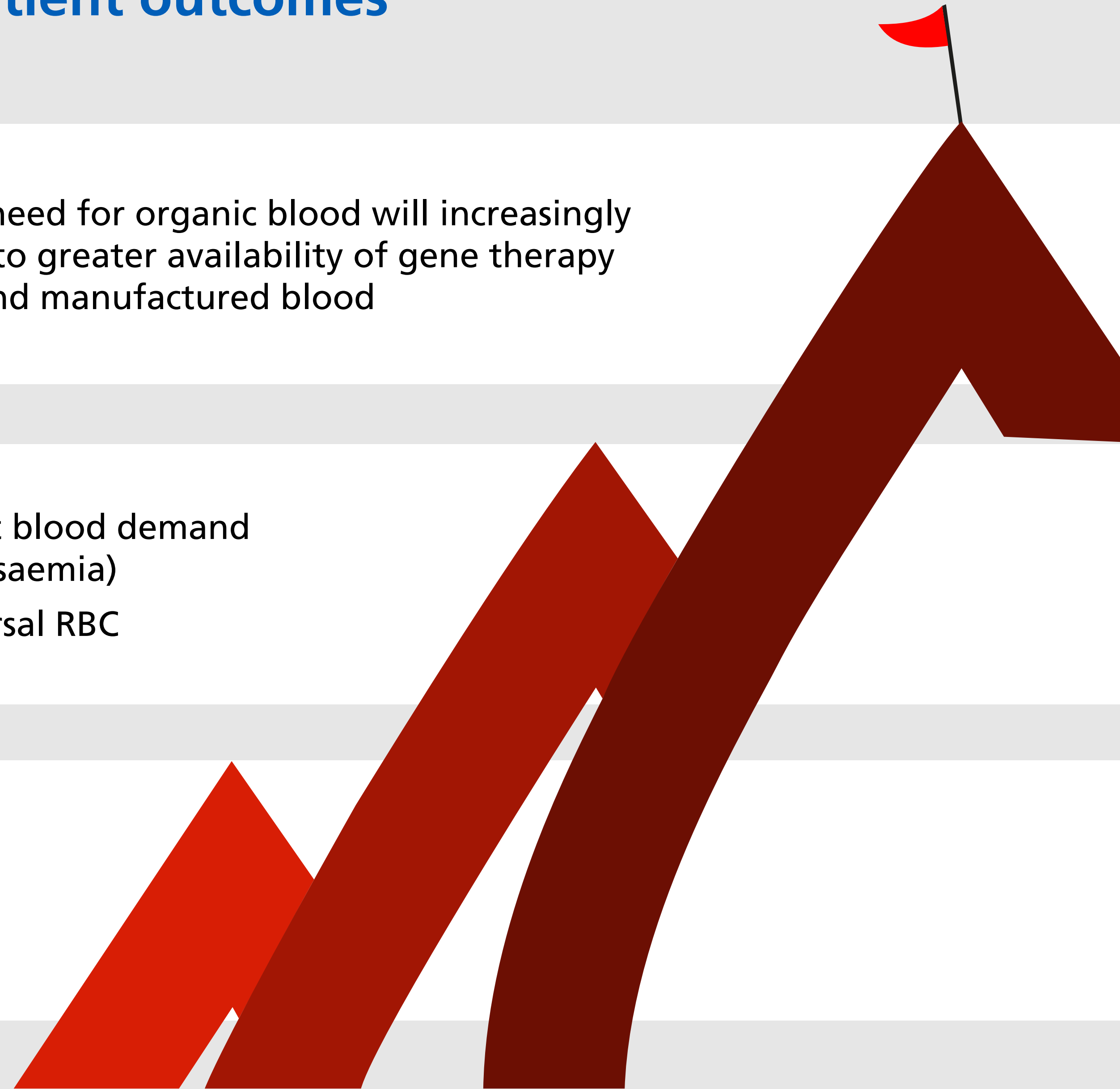
Peak vision: The need for organic blood will increasingly be reduced due to greater availability of gene therapy and manufactured blood

10
years

Gene therapy starts to impact blood demand (sickle cell and thalassaemia)
New Products: Universal RBC

5
years

Genomics-led blood matching requires a genotyped donor base
New Products: Whole blood for trauma, universal platelets and plasma components



Our Blood Service Strategy
will prepare us for the
future while meeting the
challenges of today

Five-year Blood Service Strategy

Our focus is to ensure our donor profile and component collection are representative of the changing patient demand and that we collect and issue blood via an efficient, resilient and safe supply chain while innovating for the future.



Our service mission is “to ensure every patient receives the blood they need, when they need it.”

We will deliver this mission through four strategic priorities over the next five years:



Invest in people and culture so that all colleagues are developed and included and deliver safe and effective services to donors and hospitals

“Everyone Counts”

Build a modern, safe, resilient and efficient integrated supply chain to deliver the right components, on time

“We are the best at what we do”

Grow and diversify our donor base to collect the right blood components to meet individual patient needs

“We deliver great donor engagement and experiences”

Innovate and collaborate to develop and deliver a safe portfolio of products and services that better meets the needs of our customers

“Our expertise saves patients’ lives”

Our priorities will ensure we achieve our challenging ambitions by 2027

"Everyone Counts"

20% increase in colleague engagement scores*

10pp increase in colleague diversity at Band 8a+*

"We are the best at what we do"

£30m saved to invest in improving patient health*

80% of key international benchmarking metrics in the top quartile*

"We deliver great donor engagement and experiences"

20% increase donor base and donor retention*

13pp increase in BME new donors donating*

5 point increase to Donor Satisfaction*

17% increase in RhD neg donors in the donor base

"Our expertise saves patients' lives"

2pp increase in service (OTIF), including Ro demand*

20% increase in adherence to NICE Transfusion Quality Standards

2 new/enhanced products or services to the market p.a.*

20% increase in education to promote safe and appropriate use

What will be different for colleagues?



From disparate engagement to a highly motivated, inclusive workforce

- A highly engaged and diverse workforce who feel valued, safe and energised in the role they play for patients and donors.
- Enhanced local autonomy with a focus on operational excellence to ensure services to donors and patients meet the highest standard of care.
- A *just culture* with open and considered communications and where incidents and issues are 'dealt with appropriately' with agreed resolution.
- Proactive collaborative working with Trade Union colleagues to make blood a great place to work and to deliver our Five-year ambitions.

From stretched colleagues to capabilities and capacities that deliver Blood's strategic ambitions

- Colleagues are developed for the roles needed by NHSBT/NHS today and in the future (including data analytics, customer service and genomics testing).
- Strong talent management for proactive succession management for key managers and subject matter experts.
- NHSBT is able to capitalise on opportunities within the environment and has the right teams to deliver those desires.
- A workforce which is supported through flexible working to give an improved work-life balance.

What will be different across the vein-to-vein supply chain?



From excellent productivity in testing to a highly productive, cost efficient, safer and more resilient total supply chain

- Demand forecasts based on patient usage, supported by active hospital data.
- Fully supported core blood system that unlocks our data, enables improved system-wide integration and supports rapid development.
- Stock maintained consistently at target levels by blood group.
- Key Blood Service Metrics are within EBA/ABO top quartiles and an innovation pipeline has clear funding.
- Implemented targeted automation to remove manual processes and errors in high throughput areas and review and implement technologies to further improve the safety of our components.
- Maintained zero major non-compliances and removed overdue management of quality incidences.
- A synergistic supply chain which meets the needs of donor-to-patient VSM activity.

From high levels of substitutions and future sufficiency concerns to removing patient health inequalities by delivering total on time in full

- Track and pull donor-patient geno/pheno-type matched component meeting demand without substitutions, relieving the pressure on O neg issues.
- Ensure rare and hard-to-source components reach the patients who need them most, minimising wastage and improving efficiency.
- A component portfolio to meet hospital universal component demand with new products and a refined service offering.
- Hospital orders delivered to agreed service agreements, on time and through planned delivery routes.

What will be different for donors and collections?



We will ask less of our donors and give them an improved, consistent and joined up experience

- A donor base that accurately reflects the ethnic diversity of the population and which addresses clinical demand.
- A larger, more resilient donor base meaning donors donate less frequently and we can call on them when we really need them.
- A joined-up donation experience across all services, making it easier for donors to donate different and multiple components.
- A more engaging pre-donation experience that ensures more donors are ready to donate with health screening and insights that maximise donations on sessions.
- A quicker donation experience delivered by great teams in a refreshed environment which makes donors come back again and again.
- Improved digital communications to meet donor expectations.

From rigid staff deployment to a flexible approach supporting an amazing on-session experience

- Donation venues located and designed to meet donor and staff expectations, based on data-rich insights.
- Deploying collection capacity when and where it is needed to meet clinical demand.
- Streamline on session activity, and collect blood using modern equipment and processes.
- Post-donation testing of red cell donors which personalises their donation intervals and maintains donor health.

What will be different for hospitals and patients?



From poorly connected to an integrated system enabling enhanced connectivity and interoperability

- Automated hospital IT systems to reduce manual input, enable easy retrieval of NHSBT results/sharing of outcome information*, improve safety and to enhance the customer experience.
- A funded model for integrated stock management that provides information on hospital inventory, enabling efficiencies across the system.

From a partially connected landscape of research and development to innovative, evidence-based practice that directly links to improving outcomes

- An innovation pipeline delivering the new and improved services and components needed to meet best practice guidelines and changing patient needs (e.g. whole blood in trauma, platelets in PAS, universal plasma/platelets and freeze dried plasma).
- The Data Driven Transfusion Blood and Transplant Research Units (BTRU) will inform transfusion management, supporting the integration of system-wide datasets to develop insight, track impact of interventions, and better understand outcomes
- Improved health outcomes for multi-transfused patients by matching blood genotypes.*
- Collaborate with commercial gene therapy companies to accelerate sickle cell treatment.**

From challenges in laboratory practice to a scientific development framework with the capacity and capability to provide safe care for patients

- A scientific and technical training and education programme which will strengthen laboratory and clinical best practice.***
- Defined standards for laboratory transfusion practice developed through collaboration with regional transfusion networks.
- A career framework for scientists supporting professional development and an established NHSBT Chief Scientific Officer.***

From strong collaboration to excellence in Patient Blood Management

- A strengthened resource to support clinical transfusion practice in hospitals.
- Improved hospital practice delivered through National Blood Transfusion Committee (NBTC) collaboration and benchmarked national quality improvement systems such as NICE and the Model Hospital.

*Linked to development of Pathology Strategy **Linked to Cell, Apheresis and Gene Therapies (CAGT) Strategy ***Linked to development of NHSBT Education Strategy

Our strategic roadmap identifies the core deliverables across each priority

		2022–23	2023–24	2024–25	2025–26	
“Everyone counts”	Engagement and Motivation	Culture of Operational Excellence – Run to Target		External public body benchmark report		
		Just culture				
		Revamped recruitment and reward processes		Fast track leadership scheme		
	Capability and Capacity	5-10 yr strategic workforce plan		Implement strategic workforce plan (Talent mapping etc)		
		Succession plans for all leaders and SMEs		Rotational development scheme		
“We are the best at what we do”	Efficient Supply Chain	Major programmes: Blood Tech Modernisation and Testing Development				
		Strategic Procurement: Long Term Procurement Strategy (blood products and services), New Blood Packs, Courier Contract, Gamma Irradiation Replacement Programme				
		Champions league performance scorecards	Cross-directorate active performance data reporting	Resilient and flexible business continuity plan		
				Optimised Aph collections		
			Full Face blood labelling			
			Donor-to-patient Value Stream Map		Automate areas of high throughput	
	Total OTIF	Distribution strategy		Optimised Hospital Services functions		
		Transport Management System				
“We deliver great donor engagement and experiences”	Donor Base	Marketing automation				
		1st NHS data partnership	Full NHS data partnership			
		Home ABO testing	Integrate PFM and CD in PIT BAU			
		Single registration process				
		OFH Donor recruitment				
		New London DC and wider Collection Footprint Strategy implementation				
	On Session	Review post pandemic operations	New Donor Pathway			
		New extended London mobile programme		Off Session Hb Testing, eDSC and Off-Session Screening		
		Dynamic collection staffing model			eDonor check in	
		Service training and DC refresh				
“Our expertise saves patients’ lives”	New Components and Services	Occult hep B screening	Platelets in PAS		Operationalise universal product lines depending on clinical trial outcomes	
		New blood component Clinical Trials: Whole Blood use in Trauma; Freeze dried plasma; Universal plasma; Universal platelets				
		Review wider hospital service proposition alongside innovation pipeline				
		Programme/ SOC approval	Integrated stock management approach discovery phase		Implement agreed way forward on integrated stock management approach	
	Transfusion 2024	Transfusion clinical trials network options appraisal		NCA, education and training investment		Align future plans to Data Driven Transfusion BTRU outcomes
		NICE OS continuous audit tool made available		National competency framework in place		

Key year one activities for priorities 1 and 2*

<i>"Everyone Counts"</i>	Develop and implement action plans, following Your Voice survey	EDI Training delivered to 50% BS colleagues	Implement monthly 1:1s for all senior managers (band 8a+)	Complete a strategic workforce plan to ensure we have the right capability and capacity to deliver vision
	Introduce colleague-led recognition/suggestion scheme	Engage with Trade Union colleagues to better enable the delivery of our 5 year ambition and vision	Create a culture of operational excellence – Implement Run to Target methodologies across key processes	Develop career and succession plans for all leaders and SMEs

<i>"We are the best at what we do"</i>	Complete a donor-to-patient Value Stream Map (VSM) to identify areas of waste	Pilot and provide recommendations for automated consumable ordering for frontline teams	Create and implement a resilient and flexible business continuity plan for the blood supply chain	Deliver testing development programme	Review, audit and implement actions from high value red cell unit CI event
	Complete an appraisal of opportunities for automation (including results transfer)	Collection Footprint Y1: Reverse pandemic associated excess capacity and costs	Develop procurement strategy for all current BS products and services over the next 5-10 years	Develop multi-year cost improvement plan	Revising operating division scorecards to align with SMT strategic priorities
			Develop Distribution Strategy to efficiently meet hospital requirements. Implement Y1 quick wins	Continued delivery of Blood Tech modernisation	Roll out champions league scorecard for all operational teams

*This slide maps to the NHSBT 2022/23 business plan, a small number of additions are present

Key year one activities for priorities 3 and 4*

<i>“We deliver great donor engagement and experiences”</i>	Finalise total Collection Footprint implementation plan to collect to demand	Define model collection process and implementation plan. Implement Y1 quick wins	Type registered enrolees off session ahead of donation	Refresh post-covid donor sentiment/behaviour insight	Build recruitment and data partnerships with organisations with known-typed datasets/who type-test e.g. MoD and the NHS
	Collection Footprint Y1: Establish new London DC and extended London mobile programme with Ro focus	Define the model collection workforce to support colleague and donor satisfaction	Rebranded donation environment in new centres	New marketing technology: more efficient donor engagement	Integrate registration and management for transfusion in to Web and App

<i>“Everyone Counts”</i>	Transfusion 2024: set-up programme/SOC/stock management discovery/options appraisal transfusion clinical trials network	Launch Data Driven Transfusion BTRU	Support plasma collection via Recovered Plasma	Deliver testing development programme
	Make available the NICE QS continuous audit tool	Implement Occult Hep B Screening	Support delivery of recruitment to OFH as part of the NHSBT genomics programme requirements	Prepare to deliver IBI recommendations
	Whole Blood use on Trauma Clinical Trial commences	Universal Plasma/ Universal Platelets feasibility and cost/benefit; start Freeze dried plasma project with MOD	Upgrade hospital order management process to safely deal with special requirements and substitutions	Establish innovation pipeline aligned to Blood Service Strategy

*This slide maps to the NHSBT 2022/23 business plan, a small number of additions are present

