New Zealand Blood Service Statement of Intent

1 July 2017 - 30 June 2021





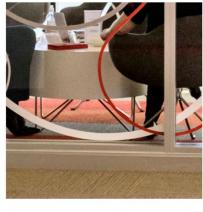




















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1 ABOUT NEW ZEALAND BLOOD SERVICE

<u>Overview</u>

New Zealand Blood Service (NZBS) is a Crown entity established under the New Zealand Public Health and Disability Act 2000. Its primary purpose and core activity is the safe, timely, high quality and efficient provision of blood and blood products and services to clinicians for the people of New Zealand. In addition to this, NZBS provides services for matching patients and donors prior to organ/tissue transplantation, tissue banking (skin and bone) and stem cell services. These activities, which are provided without charge to all people in New Zealand, contribute to achievement of the organisation's single enduring Output Class and Outcome:

Health needs of people in New Zealand are supported by the availability of safe and appropriate blood and tissue products and related services.

Blood is a special kind of medical resource. The altruistic nature and unique attributes of the "gift" of blood is unlike most other therapeutic modalities. This requires that NZBS, as a trusted partner in New Zealand's healthcare system, has in place a comprehensive donor recruitment programme and an integrated risk and safety management framework. Safety is at the heart of everything that NZBS does.

Purpose

This four year Statement of Intent (SOI) has been prepared in accordance with the Crown Entities Act 2004 and should be read in conjunction with each year's Annual Statement of Performance Expectations. It sets out the strategic direction for New Zealand Blood Service (NZBS) for four financial years through to June 2021 and outlines how NZBS will organise itself, prudently deploying resources to ensure transparency, collaboration and value for money in the support of New Zealand's healthcare sector. The SOI informs Parliament and the New Zealand public about the organisation, the strategic issues it faces and its response to those issues. Objectives and performance measures for each financial year will be updated annually in the Annual Statement of Performance Expectations, and will be reported on in the Annual Report.

Strategic Direction

The organisation's seven strategic goals describe:

- our core activity
- our quality and safety focus
- the importance of blood donors to our activities
- our important relationship with the District Health Boards (DHBs)
- our focus on our people
- the need for on-going development
- financial sustainability

These strategic goals inform this SOI and will guide NZBS over the next four years as it makes the step changes necessary to ensure the organisation is appropriately positioned to meet the on-going needs of New Zealand's health and disability sector.

Government Expectations

NZBS is a Crown agent for the purposes of the Crown Entities Act 2004 and its 2013 Amendment. Pursuant to section 7 of the Act, NZBS will give effect to Government policy when directed by the Responsible Minister, the Minister of Health. Each year the Minister provides NZBS with a Letter of Expectation, which will be reflected in the Annual Statement of Performance Expectations.

Financial and Management Constraints

NZBS receives payment for its products and services on a fee-for-service basis from the DHBs, who are its principle customers. The financial plan each year will be included in the Annual Statement of Performance Expectations and will be prepared in line with the Minister's annual Letter of Expectations, ensuring:

- Management of safety and surety of supply at all times;
- Mitigation of risks related to the biological nature of blood products and variable product demand;
- The ability to review and address key infrastructure requirements;
- Adherence to existing banking credit facility and covenant obligations; and
- Maintenance of long term financial sustainability.

Ensuring Appropriate Blood Product Utilisation

NZBS is a demand driven service. It works in partnership with prescribing clinicians in the DHBs and with Hospital Transfusion Committees to ensure clinically appropriate utilisation of blood and blood products. This is very effective, as evidenced by the ongoing reduction in demand for Red Blood Cells (RBCs) as DHBs with the support of NZBS have progressively implemented blood management programmes. This reduction in RBC prescribing, whilst good medical practice and overall reducing sector costs, does create financial challenges for NZBS with the associated loss of production volume and product issues.

Immunoglobulin product utilisation is also closely managed and monitored, as this drives plasmapheresis collection activity. Historically, the rate of growth in New Zealand has been lower than that seen in other countries. For example growth in Australia is consistently between 11-13% per annum, whereas up until 2015 NZBS growth was on average 6.5% per annum and since then it has reduced to between 0-4%.

These changes in demand are forecast to continue over the period of this SOI, therefore NZBS will flex its collection activity to align with actual demand in order to minimise expiry levels.

Collections and Facilities

Over the period of this SOI, NZBS will seek to ensure optimum efficiency of the blood collection and processing network. This will include;

- The relocation of the Dunedin collection centre in 2017 providing a modern and future protected site capable of flexing particularly plasma capacity over the long term.
- Establishment of processing of Human Progenitor Cells (HPC) at the Wellington site. This will provide support for the stem cell therapy programme in the Central region,

- The refurbishment and improvement of the main Auckland laboratory spaces. By 2020, this will provide a second processing facility (along with Christchurch) capable of servicing the blood supply for the whole of New Zealand if required,
- The Auckland site also houses the National Tissue Typing and National Reference Laboratory. Growth and new technologies in these areas requires an update in space and configuration over the next 2 -3 years.

Sector Relationships

The critical relationship for NZBS is that with the District Health Boards. Over the term of this SOI, NZBS aims to work more closely with the DHBs to collaboratively develop a strategy for blood management in New Zealand so providing a proactive response to changing demand patterns whilst ensuring prudent financial considerations. Addressing the overall cost to the sector will require NZBS to focus strongly on business improvement opportunities for cost containment, use technologies to drive efficiencies and ensure optimal skill mix models are in place in our workforce.

David Chamberlain
Chairman

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Deputy Chairperson

R Ward

Sam Cliffe
Chief Executive

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19 April 2017

2 NZBS ORGANISATIONAL STRUCTURE AND CONTEXT

2.1 New Zealand Blood Service Outcome Statement

Health needs of people in New Zealand are supported by the availability of safe and appropriate blood and tissue products and related services

2.2 NZBS in the context of the New Zealand health and disability sector

NZBS is the only provider of blood and blood products and tissue typing services in New Zealand.

A collaborative relationship with both the prescribing clinicians in the DHBs and more than 105,000 loyal donors is at the heart of the organisation's success. Strong relationships also exist with DHB management; the Ministry of Health; CSL Behring in Australia; recipient organisations (in particular Leukaemia and Blood Cancer New Zealand, Immune Deficiencies Foundation of New Zealand and the Haemophilia Foundation of New Zealand); and international partners in the blood sector. Collectively our shared aim is to ensure that New Zealand continues to enjoy a safe and secure supply of blood and blood products and related services now and into the future.

2.3 NZBS Locations

NZBS was established in 1998 to integrate the formerly fragmented hospital based blood services into a single national organisation.

Current Locations

NZBS facilities are structured in a "hub and spoke" model (see Figure 1), with four major collections and manufacturing sites in Auckland, Hamilton, Wellington and Christchurch; supported by two collection co-ordinating centres in Palmerston North and Dunedin and three regional static collection sites located in Manukau, Takapuna and Tauranga. Regular mobile collections are also made in multiple cities and towns across New Zealand.

The national Tissue Typing, Component Development and Red Cell Reference Laboratories, and the administrative National Office are located in Auckland. NZBS also runs the hospital blood banks in Auckland, Hamilton, Palmerston North, Wellington, Christchurch and Dunedin Hospitals. All other hospital blood banks are staffed and operated by local DHB staff; however NZBS maintains overall responsibility for blood banking services across the country and has an active DHB oversight programme in place to achieve this.

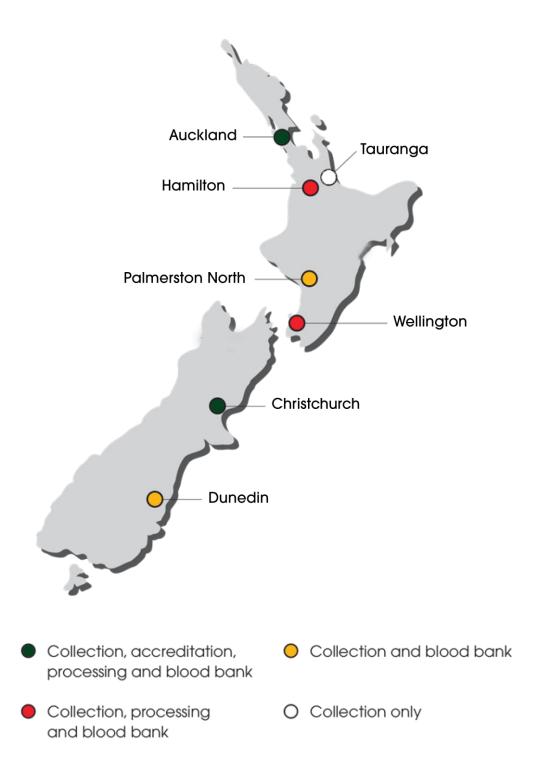


Figure 1: Distribution of NZBS activities across New Zealand

2.4 Process of providing blood products

Operationally, blood is collected either as whole blood (which is then separated into its component parts) or as individual components (plasma or platelets) via a process called apheresis. Figure 2 outlines the process for providing fresh and fractionated blood products to the DHBs.

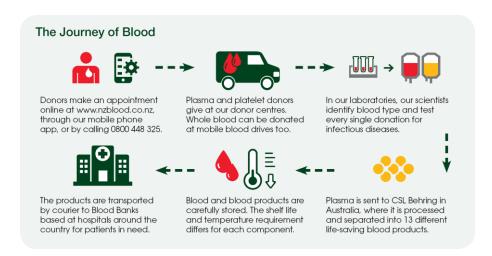


Figure 2: Flow of blood products to DHBs

2.5 NZBS Organisational Structure

NZBS is organised and supported by a structure as outlined below.

Governance

NZBS is governed by a board appointed by and responsible to the Minister of Health. Current Board members have a range of appropriate and complementary skills and experience to govern what is a very complex technical manufacturing entity. It forecasts and reports on performance to the Minister through the Ministry of Health.

The NZBS Board performs the roles and responsibilities of a Crown Entity board as defined in the Crown Entities Act 2004.

Management

From 2017, NZBS will be establishing a new Executive management structure. This is acknowledging the highly specialist nature of the business and the need to future proof key senior capability. The structure of the Executive is at Figure 3 below.

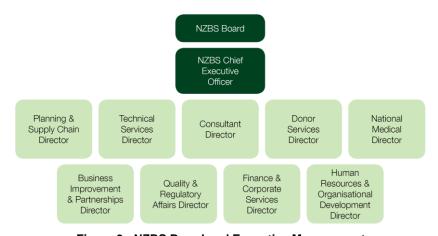


Figure 3: NZBS Board and Executive Management
Details about incumbents can be found on: www.nzblood.co.nz

The Executive is supported by a number of key clinical and non-clinical roles including logistics, information services, health and safety, regional area management, transfusion medicine specialists and nurses.

NZBS Staff

Teamwork is fundamental to the success of NZBS. 87% of NZBS staff are classified as "front-line" (i.e staff whose role is directly related to the provision of blood and products within our regulatory and Good Manufacturing Practice compliant environment).

Staff by Operational Area

Figure 4 provides an overview of NZBS staff groupings by operational area. "National" refers to the following national roles:

- National Management
- Finance and Procurement
- Information Services
- Marketing and Communications
- Human Resources and Payroll
- Operational Support Officers
- Training and Development Co-ordinators

This centralised national structure is an efficient management model and facilitates effective control and co-ordination of the national blood service.

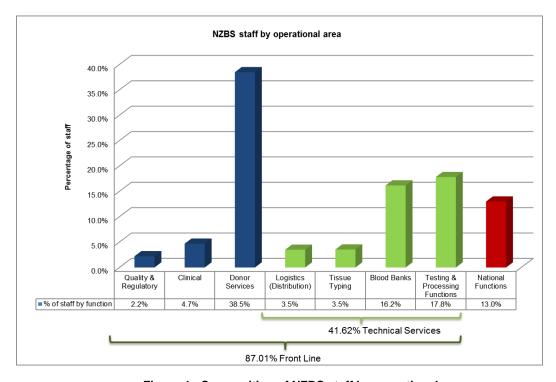


Figure 4: Composition of NZBS staff by operational area

Note:

Staff in Donor Services are predominantly Nurses, but also include Enrolled Nurses, Donor Technicians, Donor and Apheresis Recruiters, Drivers, Reception and Front-line Administration staff.

Staff in Technical Services are predominantly Medical Laboratory Scientists, but also include Medical Laboratory Technicians and Assistants and Clinical Scientists.

Over the period of this Statement of Intent NZBS will be progressively changing the skill mix of its staff through attrition to levels more consistent with international blood services. That will see:

- Donor Services moving to 60% Registered Nurses and 40% Enrolled Nurses and Donor Technicians; and
- Technical Service ratios will vary for the different laboratories, with a move to more Medical Laboratory Technicians and Assistants. Non-scientific tasks will progressively move to logistics support.

Principle front-line activities can be described as being either clinical, donor or technically related, as outlined in Figure 5.

	Key Activities	Responsible for	Location
es	Donor Recruitment	Maintaining a sustainable donor population; recruiting new donors and retaining existing donors through relationship development and scheuling appointmnts to achieve collection targets.	All NZBS sites
ervic(Collections	Collecting whole blood whilst ensuring maintenance of good donor health	All NZBS sites
Donor Services		Collecting apheresis plasma and platelets whilst ensuring maintenance of good donor health	Auckland, Hamilton, Tauranga (plasma only), Palmerston North (plasma only), Wellington, Christchurch, Dunedin
	Donation Accreditation Testing	Blood grouping and screening every blood donation for: HIV, HCV, HBV, syphilis, with selective testing for some donors	Auckland, Christchurch
	NZBS Processing	Separating whole blood into red cells, plasma and platelets, through a range of manufacturing processes.	Auckland, Hamilton Wellington, Christchurch
	CSL Processing (Fractionation)	Frozen New Zealand plasma is sent to CSL Behring Australia, fractionated and returned to NZBS for distribution	CSL Behring, Australia
ces	Tissue Bank	The national skin bank in Auckland and bone banks at each of the processing sites and in the blood banks in Palmerston North and Dunedin.	Auckland, Hamilton, Palmerston North, Wellington, Christchurch, Dunedin
Technical Services	Distribution	The logistics function in the four hub sites distributes products to each of the DHB hospital blood banks and oversees inventory management, minimising expiry and ensuring that products are always available to meet demand. (Note: the DHB blood banks supply all private hospitals.)	Auckland, Hamilton, Wellington, Christchurch
Te	Blood Bank	Cross-matching and antibody screening to ensure compatibility between the donated blood and the patient (recipient) before it is dispatched to the appropriate hospital staff for transfusion	At the following hospitals: Auckland, Hamilton, Palmerston North, Wellington, Christchurch, Dunedin
	National Red Cell Reference Laboratory	Undertakes complex pre-transfusion testing and antibody identification. Runs a national quality assurance programme and in-house reagent manufacturing	Auckland
	National Tissue Typing Laboratory	Key testing and assessment services to DHBs undertaking organ and haemopoetic stem cell transplantation	Auckland
rvices	Clinical Support	Medical and transfusion nursing support to both DHB and NZBS staff on all transfusion medicine related issues.	Auckland, Hamilton, Palmerston North, Wellington, Christchurch, Dunedin
Clinical Services	Clinical Services	Provision of therapeutic services, such as plasma exchanges, stem cell harvests and therapeutic venesections	
		National Office functions of: Clinical, Quality & Regulatory Marketing, Information Services, Finance and Human Resou	

Figure 5: Key front-line NZBS activities

KEY ORGANISATIONAL FEATURES

Clinical Services

The NZBS Clinical Team plays a key role in maintaining clinical quality - ensuring that the right product is provided to the right patient at the right time. The clinical role within NZBS impacts on all areas in the "vein to vein" blood service from selection of donors to provision of advice and support for the management of patients with complex clinical problems requiring transfusion and analysis of any reported adverse transfusion events.

A multidisciplinary Clinical Advisory Group, chaired by the National Medical Director, oversees NZBS clinical activity; providing advice to the Chief Executive on clinical issues and taking a proactive role in setting clinical policy, standards and encouraging transfusion medicine best practice.

The clinical team work closely with DHB clinicians and hospital transfusion committees to support the development and introduction of new policies and procedures aimed at improving transfusion outcomes for patients. Initiatives include a multi-site clinical audit programme and support for clinical transfusion research studies.

A clinical oversight programme enables NZBS to discharge its statutory responsibility for maintenance of effective blood banking and cross-matching systems in the DHB Blood Banks not operated by NZBS. The programme has been endorsed by International Accreditation New Zealand (IANZ). Active participation in the NZBS Clinical Oversight Programme is a key component to the DHB managed Blood Banks maintaining IANZ Accreditation.

A comprehensive twenty four hour national clinical advisory service is available to all hospital clinicians.

A national haemovigilance programme examines and reports annually on the frequency and causes of adverse transfusion related events, to help health professionals understand the risks associated with blood transfusion and assist development of improved systems for the safe delivery of blood products to patients.

Quality, Safety and Compliance

The NZBS Quality and Regulatory Affairs team has a broad scope which includes ensuring organisational compliance with Good Manufacturing Practice (GMP) and maintenance of all required licences and accreditation through the development of robust quality systems. It maintains systems for document and records management, customer complaints, corrective action management, equipment management, validation management and conducting internal and external audits. The team works very closely with operational teams to ensure regulatory requirements are met.

The key external parties with whom the Quality and Regulatory Systems function interacts are:

- Medsafe,
- International Accreditation New Zealand (IANZ)
- The American Society for Histocompatibility and Immunogenetics (ASHI)
- The Australian Therapeutic Goods Administration (TGA)
- CSL Behring
- Archives NZ
- DHB Blood Banks

Risk Management

NZBS is a highly regulated and quality conscious organisation. Within this highly prescribed environment, risk management is a crucial feature of ensuring both the safety of the blood supply and NZBS's ability to deliver that supply.

NZBS employs a risk management framework that ensures all significant risks are effectively identified, assessed, managed, mitigated, monitored and reported. Risk management is an inherent part of corporate governance and it is the responsibility of the NZBS Board to ensure that an appropriate risk management framework, which ensures risks are identified and appropriately managed, is in place.

The NZBS Board reviews the Organisational Risk Register at least quarterly and annually reviews the NZBS Risk Management Policy. The Board also sets the level of risk it is prepared to accept in order to achieve NZBS's purpose and objectives. The current level of risk tolerance is LOW.

The NZBS Board and Executive review the top ten risks (including all high and very high risks and all governance risks) as identified on the NZBS Risk Matrix, along with the NZBS Risk Profile Matrix on a quarterly basis.

The NZBS Board and Management have a high focus on cyber and data security monitoring organisational standards against industry best practice.

NZBS Values

Safety is our Cornerstone (Ko te haumaru tā mātau mātapono taketake). Everything that we do contributes to the safety of our donors, products and the recipients of the services that we provide to New Zealanders. In doing this we commit to these values.

- Striving for Excellence (Kia tau kite Tihi)
 - Maximising the resources NZBS has to draw on, we strive for excellence in everything we do;
- Teamwork (Te Mahi Ngātahi)

We value working towards and supporting each other to meet our common goal;

- Integrity and Respect (Te Pono me Te Tika)
 - We value an environment where there is mutual trust and respect; and
- Open Communication (Te Whakawhitiwhiti Whakaaro i runga i te Māharahara)

We value an environment where there is transparency and openness in communication; and

• Safety for All (Te haumaru hoki te katoa)

We value creating a culture that is safe and promotes wellbeing for colleagues, donors and patients.

2.6 Key External Relationships

NZBS has relationships with a number of different stakeholder groups (other than the Minister of Health). Key relationships exist between NZBS and:

- Donors
- DHBs and their patients
- Private hospitals
- Other users of blood products and services
- Ministry of Health

- Dilworth Trust Board (landlord for Auckland hub-site)
- Ngāi Tahu Property (landlord for Christchurch hub-site)
- CSL Behring Australia (plasma fractionator) based in Melbourne, Australia
- MAK-System (blood management software provider) based in Paris, France
- Patient advocate groups (e.g. Leukaemia and Blood Cancer NZ; Haemophilia Foundation of NZ and Immunodeficiency Foundation of NZ)
- National Haemophilia Management Group (NHMG)

The expectations of these stakeholders are assessed by a variety of means including regular contact (through routine service delivery and associated activities), focus group meetings, surveys and documented requests and requirements.

NZBS can be considered the custodian of the "gift of life" donated by more than 105,000 voluntary New Zealand blood and apheresis donors. In achieving its organisational goals and objectives, NZBS is mindful of its responsibility to these donors and the requirement to protect their taonga/gift through internal activities and by providing support to the prescribers of blood and blood products to ensure appropriate and cost-effective utilisation.

2.7 <u>Statutory Obligations and Minister of Health's Expectations</u>

The core functions of NZBS are specified in section 55 of the New Zealand Public Health and Disability Act 2000 (NZPHD Act) and subsequent Gazette Notices to that legislation.

The key function of NZBS identified in the NZPHD Act is:

To manage the donation, collection, processing, and supply of blood, controlled human substances, and related or incidental matters, in accordance with its statement of intent (including the statement of forecast service performance) and (subject to section 65 of the NZPHD Act) any [Ministerial] directions given under the Crown Entities Act 2004.

NZBS will contribute to delivery on the fundamental principles and five themes contained in the New Zealand Health Strategy: Future Direction 2016.



Figure 6: Five strategic themes of the New Zealand Health Strategy 2016

Theme 1. People – powered

Our donors and patients are at the forefront of everything that we do. NZBS strives to ensure information about both the donation process and our therapeutic services is accessible and well understood. The recent introduction of our mobile donor app allows donors to interact with NZBS in a highly effective way and remain connected to the process of donation with ease.

Theme 2. Closer to home

NZBS operates from 8 fixed sites but also travels to over 300 unique locations around the country allowing a wide range of eligible New Zealanders to donate conveniently. NZBS also actively supports all 35 blood banks nationally providing a true "vein to vein" service for all patients regardless of location.

Theme 3. Value and high performance

Our enduring focus on quality and business process improvements contributes to the system level theme of Value and High Performance. NZBS is actively building a culture that allows teams and individuals to use data to measure and drive performance whilst striving for continuous quality improvement.

Theme 4. One team

NZBS is an active partner both clinically and non-clinically with the DHBs and other stakeholders. We are actively working towards a more collaborative approach to planning for demand changes and supporting the DHBs with blood management programmes.

We operate the blood management information systems used by all the DHBs and constantly seek new ways to support the wider health sector with improved technologies and enhanced clinical products.

Theme 5. Smart system

The clinical team work closely with DHB clinicians and hospital transfusion committees to support the development and introduction of new policies and procedures aimed at improving transfusion outcomes for patients. Initiatives include a multi-site clinical audit programme and support for clinical transfusion research studies.

This SOI reflects the expectations of NZBS's owner, the Crown, as documented in the July 2012 Enduring Letter of Expectations from the Ministers of Health and State Services and the Minister of Health's annual Letter of Expectations. NZBS will work with the Ministry of Health as the Minister's agent to ensure that each expectation is appropriately progressed.

3 HOW NZBS CONTRIBUTES

NZBS activities contribute to achievement of the government's and health and disability system's goals as detailed below.

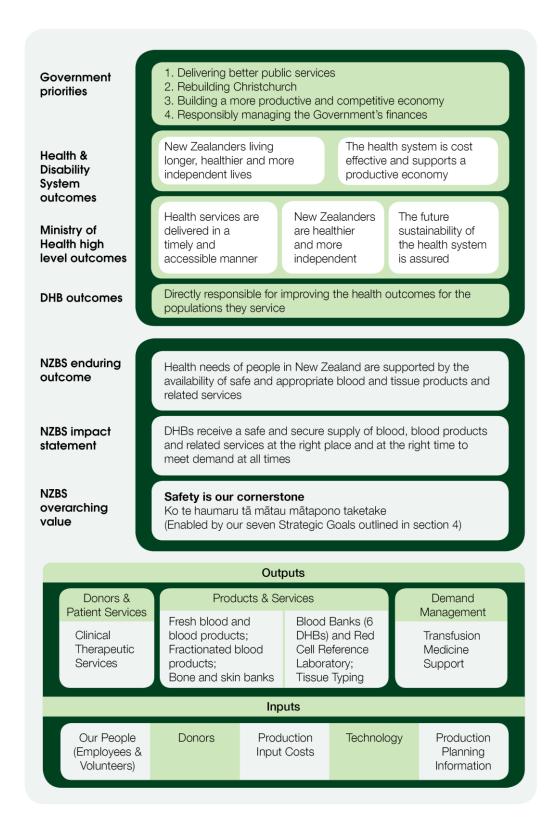


Figure 7: How NZBS contributes

4 NZBS STRATEGIC GOALS AND HOW THEY WILL BE IMPLEMENTED

The following section presents how NZBS intends to perform its functions and conduct its operations over the period of this SOI in order to achieve its strategic goals.

4.1 NZBS Strategic Goals

The NZBS Board and Executive have refreshed the organisation's strategic direction looking forward to 2021. The following seven strategic goals set the direction for NZBS's core activity, quality and safety focus, recruitment and retention of blood donors, its critical relationship with the DHBs, focus on NZBS staff and the need for on-going development and financial sustainability.

	Strategic Goal	Focus
1.	NZBS builds on core capabilities to provide a range of products and services which are appropriate to New Zealand health needs and priorities.	External
2.	NZBS achieves the highest possible Safety and Quality standards in all that it does.	Internal
3.	NZBS manages a sustainable donor population capable of supporting on-going product demand in New Zealand.	Internal
4.	NZBS relationships with other health sector entities are mutually supportive and productive.	External
5.	NZBS has a sustainable, competent and engaged workforce.	Internal
6.	NZBS uses international best practices and internal Research & Development capabilities to improve and develop products and services for the New Zealand health and disability sector.	Internal
7.	NZBS is a financially sustainable organisation operating effectively and efficiently.	Internal

The seven NZBS strategic goals collectively relate to three key areas of NZBS activity:

1. **Donors and Patient Services**

Collecting blood from donors, ensuring maintenance of their good health and that there are sufficient donors to support product demand, plus a small range of clinical therapeutic services.

2. Products and Services

Testing/manufacturing and supplying blood and tissue products together with related services.

3. <u>Demand Management</u>

Maintaining an excellent relationship with the DHBs as the primary NZBS customers; providing information to assist their management of product demand and informing NZBS production schedules to ensure 100% product availability at all times.

4.2 How performance against strategic goals will be measured

The following section describes the activities related to each of the seven strategic goals and describes the key measures which will be reported in the Annual Report each year to demonstrate progressive achievement of the goals.

Strategic Goal 1

NZBS builds on core capabilities to provide a range of products and services which are appropriate to New Zealand health needs and priorities.

This strategic goal outlines NZBS's core activity as the only provider of blood and blood products and related services to the New Zealand health and disability sector. NZBS will utilise its core capabilities of specialist transfusion medicine knowledge and expertise to support the sector with a safe and appropriate range of products and services to meet New Zealand's changing health needs and priorities.

Leveraging off our unique competencies and capabilities, NZBS has a focus on:

- Ensuring the safety of the nation's blood supply;
- Respecting the gift status of every voluntary donation through minimising product expiry and maximising efficient utilisation;
- Ensuring certainty of supply of blood and tissue products and services to the healthcare community; and
- Meeting 100% of demand, 24 hours per day, 7 days per week, every year.

Measures and targets for achievement of Strategic Goal 1 are recorded in the Annual Statement of Performance Expectations and will be reported against in the Annual Report by:

Achievement of the NZBS Impact Statement – ensuring that DHBs receive a safe and secure supply of the right blood, blood products and related services at the right place at the right time to meet demand at all times.

Strategic Goal 2

NZBS achieves the highest possible Safety and Quality standards in all that it does.

Safety and quality are the over-riding principles of highly regulated blood services across the globe. To assure public confidence in the safety of New Zealand's blood supply, NZBS will ensure that regulatory accreditation and compliance requirements are maintained at all times in each of the four years of this SOI and beyond.

In the NZBS setting, in addition to standard public sector legislative requirements, the following regulatory compliance is required:

- Annual Manufacturing Licences in the 6 NZBS collection and manufacturing sites audited by Medsafe against the Code of Good Manufacturing Practice (GMP);
- IANZ accreditation to International Standard ISO 15189 "Medical Laboratories – requirements for quality and competence" in all NZBS diagnostic laboratories, including the six hospital Blood Banks run by NZBS.
- ASHI (American Society for Histocompatibility and Immunogenetics); and accreditation in the national Tissue Typing laboratory which requires annual monitored self-assessment and a formal inspection and external audit every two years.

NZBS also complies with the requirements of:

- FACT (Foundation for the Accreditation of Cellular Therapy) for processing of haemopoietic progenitor cells in order to support the FACT accreditation held by the Auckland City Hospital, Starship Stem Cell Transplant Programme and Christchurch Hospital. Because NZBS does not hold the accreditation, this is not listed as a measure below; and
- The Human Tissue Act 2008, as NZBS is the predominant supplier of human bone and sole supplier of human skin to DHBs and private healthcare providers. NOTE: as New Zealand is not self-sufficient in the supply of cadaver skin, NZBS co-ordinates importation of skin as required, supplementing domestic collection in order to meet demand. Due to global shortages, this does mean that NZBS does not have the same surety of supply that it has for blood and blood products.

The Government has commenced a review of the Medicines Act with a view to establishing a regulatory framework for tissues and cellular therapies. An initial consultation with interested parties occurred in early 2016 and NZBS expects to be involved in further consultations as the framework is developed.

Achievement of Strategic Goal 2 is closely linked to Strategic Goal 1 and assures public confidence. It is in alignment with Ministry of Health's outcomes and is a fundamental requirement for any blood service; therefore, although an internal strategic goal, maintenance of the following safety and quality requirements will be measured and reported in the Annual Statement of Performance Expectations and Annual Report as achievement of:

- 1. Medsafe licences.
- 2. IANZ accreditation.
- 3. ASHI accreditation next biennial audit in 2018.
- 4. Testing of every donation prior to use.
- 5. Reporting of transfusion related adverse events as part of the NZBS National Haemovigilance Programme

Strategic Goal 3

NZBS manages a sustainable donor population capable of supporting on-going product demand in New Zealand.

New Zealand is primarily self-sufficient for blood and blood products; however, this does not preclude the procurement of imported product if clinically necessary and/or in exceptional circumstances. The active donor population is the source of the raw product that NZBS requires to manufacture its range of blood and blood products for transfusion; therefore, maintenance of good donor health is an essential requirement. To achieve this strategic goal NZBS will:

- Maintain a sustainable number of active donors (people who have donated whole blood and/or apheresis plasma/platelets at least once in the last 24 months) at the level of at least 105,000 donors (95,000 whole blood donors and 10,000 apheresis donors) over the four years of this SOI in order to meet demand. NOTE: this number is regularly reviewed and will be adjusted in-order to meet the changing demand for products. The annual target will be updated each year in the Annual Statement of Performance Expectations.
- Continue to develop donor recruitment and retention strategies to maintain sufficient voluntary donors to replace retiring or deferred donors including:

- Maximising use of the Donor Relationship Management system and other electronic means for communicating with donors as we implement more blood-group specific strategies to better match collection with demand;
- Monitoring and implementing strategies to maintain good donor health;
- Targeting initiatives contained in the NZBS Māori Responsiveness Strategy (MRS) to improve engagement with Māori with the aim of increasing the number of Māori who donate blood; and
- Targeting initiatives to recruit and retain youth donors (in particular between the ages of 19-25 years) to ensure a sustainable donor population into the future.

Figure 8 shows the current age profile of active donors (i.e. donors who have donated at least once in the last 24 months). Note:

- The decline in donors less than 20 years old is the result of a deliberate strategy to reduce school based collections to only one annual visit per school;
- The increase in donors aged 20 29 is in response to targeted marketing to New Zealand youth; and
- The general decline in the other age brackets is as a result of NZBS matching its new donor recruitment activities down in response to the declining demand for RBCs.

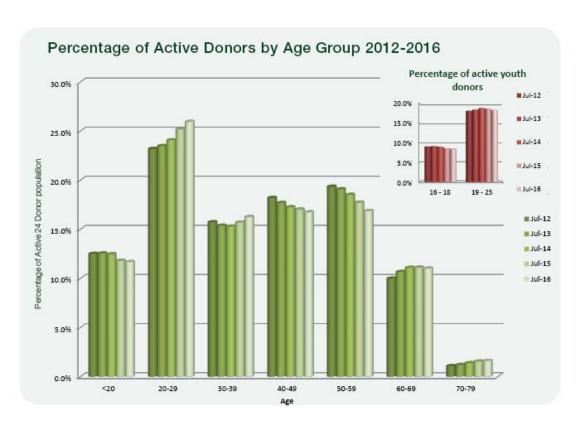


Figure 8: Active donors by year and age group for 2012- 2016

Measures and targets for achievement of Strategic Goal 3 are recorded in the Annual Statement of Performance Expectations and will be reported against in the Annual Report by:

- 1. Achieving annual donor population target numbers
- 2. Meeting youth and Māori donor growth targets
- 3. Meeting donor satisfaction targets

Strategic Goal 4

NZBS relationships with other health sector entities are mutually supportive and productive

Blood and blood products are provided free-of-charge to patients in New Zealand. NZBS is funded on a fee-for-service basis by its customers, primarily the DHBs. (Note the provision of blood and blood products to private hospitals and other users is coordinated by NZBS and paid for by the DHBs).

As the only supplier of blood and blood products to the New Zealand health and disability sector, the fiscal and operating environments within the DHBs have a direct impact on NZBS. To successfully support the sector NZBS needs to work in partnership with the DHBs and ensure on-going efficient and effective management of its internal operations.

NZBS Support to DHBs

NZBS supports the DHBs, who are the prescribers and purchasers of blood and tissue products and services (i.e. the DHBs determine demand). This support includes:

1. Provision of reports and analysis

- Monthly clinical product utilisation data assists DHB clinicians and management to maximise product utilisation, minimise expiry and cost;
- Ensuring appropriate blood product stock levels (and hence DHB expenditure) to most efficiently support anticipated clinical demand;
- Two to three clinical audit reports each year, based on work carried out by the NZBS clinical team (Transfusion Medical and Nurse Specialists) working in partnership with DHB clinical staff to assess targeted specific product utilisation;
- Monitoring with the aim of minimising adverse reactions in donors and in recipients (as identified by DHBs). This is achieved by analysis and publication of an annual Haemovigilance Report (a key tool used internationally by blood services) to help prescribers, treating clinicians and the blood service track trend changes and together ensure appropriate, clinically safe and efficacious product utilisation;¹ and
- Representation and reporting to the National Haemophilia Management Group (NHMG).

Clinical Oversight of DHB Blood Banks

 NZBS Transfusion Medicine Specialists visit all DHB Blood Banks not directly managed by NZBS to provide guidance and clinical oversight; ensuring that nationally consistent quality systems and processes are used in the provision of blood components and products to patients;

¹ More information about the Haemovigilance Report can be found on the NZBS website at: http://www.nzblood.co.nz/Clinical-information/Haemovigilance-programme

- DHB blood bank responsiveness to NZBS clinical oversight visit recommendations enables them to meet the requirements for International Accreditation New Zealand (IANZ) accreditation; and
- NZBS participation in the local DHB Hospital Transfusion Committees.

3. Planning and Communication

- The lead DHB CEO continues to be the key sector contact for NZBS to:
 - Agree the annual price engagement process in time for DHBs to budget for price and volume changes in their Annual Plans;
 - Identify and implement reporting change requirements, particularly to facilitate improved product utilisation; and
 - Identify business improvement opportunities, efficiencies and areas where working together can deliver savings to both DHBs and NZBS and any other mutually beneficial activities/projects.

Measures and targets for achievement of Strategic Goal 4 will be recorded in the Annual Statement of Performance Expectations and reported against in the Annual Report by the following key areas of interaction between the DHBs and NZBS:

- 1. Monthly distribution of the key product utilisation monitoring reports
- 2. Production and circulation of an annual Haemovigilance Report
- A minimum of one clinical oversight visit to each DHB each year, including timely production of a report outlining any corrective actions and/or recommendations for improvement
 - Note: implementation of recommendations is the responsibility of the DHBs.
- 4. Feedback on the NZBS : DHB relationship from the Lead DHB CEO.

Strategic Goal 5

NZBS has a sustainable, competent and engaged workforce.

Our talented diverse workforce of dedicated employees, volunteers and outsourced call centre staff are central to ensuring we continue to achieve our core purpose and strategic goals.

NZBS has a programme of activities building on prior initiatives to ensure we maintain and grow a sustainable, competent and engaged workforce. These are focused on Culture & Leadership, Capability, Customer Service & Engagement, and Continuous Business Improvement. Within these elements the following seven good employer principles are encompassed:

- 1. Leadership, accountability and culture
- 2. Recruitment, selection and induction
- 3. Employee development and promotion
- 4. Flexibility and work design
- 5. Remuneration, recognition and conditions
- 6. Harassment and bullying prevention
- 7. Safe and healthy environment

Culture & Leadership

Recognising the proven linkages between culture, leadership and engaged staff and safety and quality business outcomes, NZBS has recently undertaken a process to refresh our values and co-design shared behaviours of importance that link to our purpose, our service and the needs of our patients, donors and health sector stakeholders.

Safety is cornerstone to everything we do at NZBS. The NZBS Board and senior management support the continued development of a positive workplace culture in which health and safety is part of everyday business. NZBS continues a focus on a range of initiatives to support the safety and health of our employees and meeting obligations to our donors, contractors and all who visit and interact with our organisation in any capacity. The NZBS Health & Safety System was fully reviewed and updated in preparation for the promulgation of the Health & Safety at Work Act (HSAW) on 4 May 2016.

Capability

Ensuring we have the right skills, at the right time, with our workforce displaying the right attitudes and behaviours aligned to our values is recognised as key to NZBS being a successful sustainable service provider.

Learning and Development initiatives and attention to succession planning also mitigate the risks inherent in loss of key personnel and ensure best utilisation of financial resources in respect of labour costs. NZBS has an integrated Learning and Development framework which supports appropriate development of the skills and talent necessary to maximise employee potential.

NZBS works collaboratively with the key training agencies (especially in the area of laboratory scientist training) to ensure that under-graduate teaching is aligned with the future industry requirements. NZBS provides BMLSc students with clinical experience opportunities as part of their degree training and employs graduates where suitable vacancies exist.

Employee turnover in recent years has been low. NZBS regularly reviews its recruitment policies to ensure they meet best practice and are non-discriminatory. Training is provided to relevant staff on recruitment practices to ensure that the organisation's obligations as an equal opportunity employer are met. The NZBS Recruitment strategy streamlines recruitment processes, helping to attract and retain key talent. This will continue to be monitored and developed over the period of this SOI.

Continuous Business Improvement

Over the last 12 months NZBS has incrementally rolled out a Continuous Business Improvement programme investing in three interrelated areas: staff engagement and empowerment, sustainable improvements though sound LEAN methodologies and design and thirdly, inclusive leadership. Frontline staff are being empowered with practical skills to identify, analyse and implement quality improvement breakthroughs, generate efficiencies and enhance working environments and experiences.



Performance and KPI metrics are key elements of the business improvement programme, providing visible, meaningful informatics to support business management.

Measures and targets for achievement of Strategic Goal 5 will be recorded in the Annual Statement of Performance Expectations and will be reported against in the Annual Report by:

- 1. A further improvement in the Employee Engagement Index in FY18 and FY20.
- 2. Annual Employee turn-over of 12% or less.

Strategic Goal 6

NZBS uses international "best practices" and internal Research and Development capabilities to improve and develop products and services for the New Zealand health and disability sector.

NZBS activities related to the achievement of this goal include:

- Monitoring and, where appropriate, prioritising internal activities/projects to keep abreast of international developments in transfusion medicine practise and deliver business improvements. For example:
 - Extension of the shelf life of platelet components from 5 to 7 days in conjunction with the introduction of mandatory bacterial screening. This improves availability, reduces expiry whilst ensuring component safety
 - Extension of the shelf-life of thawed fresh frozen plasma from 24 hours to 5 days. This will reduce expiry of the thawed component and also potentially improve timeliness of availability of the component for acute trauma cases; and
 - Development of an electronic immunoglobulin approval tool to improve confidence that the product is being used in accordance with international guidelines and enabling timely reporting to District Health Boards.
- Adherence to the Council of Europe Guide to the preparation, use and quality assurance of blood components ("The Guide") as NZBS's external reference standard. The Guide is reviewed biennially by an expert internationally constituted committee. By undertaking its own regular review of this internationally recognised Guide, NZBS will assure relevance and appropriate alignment of New Zealand blood safety standards with standards applied in European countries and Australia.
- Benchmarking with international blood services. NZBS is a member of the Asia Pacific Blood Network (APBN) and participates in an annual Comparison of Practice benchmarking analysis looking at metrics such as:
 - Issues of components per 1,000 population;
 - Overall population participation rate in blood donation, including analysis in specific age bands;

- Donor deferral rates, with more analysis being conducted about reasons for deferral:
- Donor and recipient adverse events; and
- o FTE / specific outputs.
- Upgrading facilities to ensure a sustainable infrastructure to meet forecast demand and enable adoption of new technologies, systems and processes. Ensuring upto-date versions of key software packages and maximising functionality. For example, the planned introduction of a new Blood Banking system (eTraceline) during 2017 and evaluation of the implementation of an electronic donor health questionnaire. These initiatives will facilitate improvements in safety and efficiency and enhance customer service to both donors and DHBs.

Strategic Goal 7

NZBS is a financially sustainable organisation operating effectively and efficiently.

This strategic goal is in accordance with the Minister's expectation that financial sustainability is a critical part of all crown entities strategy. NZBS's "vein-to-vein" business model is the envy of many blood services around the world. In particular the close relationship this model promotes between the DHBs and NZBS, which ensures a good alignment of priorities and on-going focus on cost control. The underlying principles of the business model will continue to be reviewed over the four years of this SOI to ensure that NZBS continues to meet the nation's requirement for a high quality, safe, cost effective and financially sustainable demand driven support service to the New Zealand health and disability sector.

Key approaches within the current model include:

- Self Sufficiency where clinically appropriate (to ensure surety of supply) whereby NZBS collects sufficient blood to meet all of New Zealand's requirements for blood and blood products. This self-sufficiency principle will continue to be reviewed over the period of this SOI to ensure that it remains an appropriate strategy for New Zealand; and
- Plasma fractionation contractual arrangements with CSL Behring which will be renegotiated in 2017 and extends to at least June 2020.

NZBS acknowledges the financial pressures on the country and the health and disability sector in particular and will:

- Ensure prudent financial management, operating in a financially responsible manner and keeping expenditure under review to ensure provision of value for money;
- Maintain financial sustainability in response to any change in product mix and volumes, limiting any price increases to DHBs through a strong focus on cost containment and internal business improvement activities; and
- Provide to the DHBs, by way of rebate, the portion of any unbudgeted annual surplus delivered which is not required by NZBS in discharging its own financial obligations and responsibilities, in accordance with the NZBS Financial Guidelines Policy introduced in 2009.

Measures and targets for achievement of Strategic Goal 7 will be recorded in the Annual Statement of Performance Expectations and will be reported against in the Annual Report by:

• Meeting budget each year whilst continuing to implement internal initiatives to ensure on-going safety and surety of supply.

5 ORGANISATIONAL CAPABILITY – STRATEGIC ISSUES AND HOW THEY WILL BE MANAGED

To achieve the outputs and strategic goals outlined in this document NZBS must maintain and continue to enhance its organisational capability by operating effective systems to help in the early identification and management of any issues that may arise as external or internal business needs/conditions alter. Organisational capability in 2017/18 and the key strategic issues identified are discussed in the table below, along with management activities planned over the period of this SOI in order to manage them.

Strategic Issue Status in 2017/18 and management activities to address issues Cost and supply Like blood services all over the world, NZBS is vulnerable to unexpected difficulties due to or unmanaged changes in the mix or volume of products utilised by its unexpected customers. Even small changes in mix, volume or fractionation yield changes in demand have the potential to affect both supply and revenue and can result in significant over or under recovery of operating costs. Working in partnership with DHB clinicians, NZBS plays an active role in product management activities to ensure appropriate utilisation of blood and blood products (i.e. demand management). Red Blood Cells (RBCs) Each year since 2010 has seen a reduction in demand for RBCs as DHBs working in partnership with NZBS implement improved blood management systems. Demand for RBCs is forecast to continue to decline and not plateau until the outer years of this SOI. In response to this decline, Whole Blood (WB) collection levels have been progressively reduced whilst increasing the conversion of WB donors to Plasmapheresis. Immunoglobulin products Consistent with blood services around the world, immunoglobulin continues to be the primary product driver for plasma collection in New Zealand. NZBS works closely with DHBs to manage use of intravenous immunoglobulin (IVIg) and regular clinical audits indicate that the prescribing of IVIg in New Zealand is largely consistent with published international guidelines. Historically the rate of growth of immunoglobulin prescribing has been lower than that seen in other countries. For example, growth in Australia continues to increase between 11-13% per annum, whereas in New Zealand we have historically seen average annual growth rates of approx. 6.5%. During 2014/15 we saw a large demand growth increase to 12% which was unprecedented. Growth has however fallen substantially since then and is currently forecast to be 1-2 %. The volatility of demand patterns requires both a close working relationship with DHB prescribers and an NZBS infrastructure capable of flexibility and responsive change. During 2015, NZBS began to import a commercial immunoglobulin product (Privigen) in response to that unprecedented demand growth. At the same time NZBS worked to restore the buffer in plasma stocks which was lost as a result of a product recall in 2013. The buffer will be reinstated during 2017 and collection capacity is now well placed to be responsive to changing demand patterns. Plasmapheresis collections will be adjusted up or down if there is a sustained change in demand. However, it is important to understand that there is a lead time from any change in donor collection activity (which cannot be easily "turned on and off") to the provision of finished

product.

NZBS will continue to review its strategy of self-sufficiency for immunoglobulin products during the term of this SOI, to ensure that it is still appropriate and cost effective in meeting sector requirements. If demand growth remains "soft", then self-sufficiency is achievable and financially desirable.

Monofix (a Factor IX product)

Virtually all demand for a Factor IX product has switched to recombinants. We will work closely with the National Haemophilia Management Group (NHMG) to review the future feasibility of manufacturing this product.

Biostate (a Factor VIII product)

Volumes are determined and agreed with the NHMG. We continue to jointly monitor those patients who receive this plasma derived product and manage any switches to recombinants in a co-ordinated manner.

DHB Relationship and price increase expectations

Recovering its costs on a fee-for-service basis from its customers, NZBS acknowledges the sector expectation to ensure any price increase is kept to the absolute minimum required to fund business as usual and NZBS controlled activities. NZBS works hard to meet this sector expectation without compromising NZBS financial viability (Crown expectation).

The relationship that exists between NZBS and the nominated "Lead DHB CEO" is well maintained and provides an effective channel for communication, on-going planning and issue resolution for both NZBS and the DHBs. Through this communication channel NZBS will continue to provide early indications to the DHBs about annual price movements to inform their annual budget planning process.

This SOI will see a greater focus on proactive collaboration with the DHBs to manage areas of mutual interest and ensure optimal blood management efficiencies for NZBS and the sector.

The annual NZBS budget incorporates its financial policy settings, internal efficiencies and anticipated volume growth / decline for specific products and services. It also ensures all specific funding requirements under Ministerial directive are complied with, together with the requirement to meet all capital expenditure requirements out of operating cash flows.

A mechanism exists to share with the DHBs the portion of any unbudgeted annual surplus that NZBS may achieve due to changed product mix demand, improved fractionation yields and cost efficiencies; and which is not required by NZBS in discharging its own financial obligations and responsibilities.

Ensuring sufficient blood donors to meet ongoing changes in demand

A total donor panel of at least 107,300 active donors will be sufficient to meet projected requirements for 2017/21.

To ensure a secure buffer supply and meet the demand for plasma products, we aim to increase the plasma donor panel by 3000 from 2015/16 levels to 10,400 over the period of this SOI.

Donor recruitment and retention will be a focus for NZBS over the period of this SOI. There are a number of new and ongoing initiatives to support optimal utilisation of the donor panel. In particular, the focus on bloodgroup specific donor appointments to better match collections with demand and youth recruitment to address the generally aging demographic of New Zealand blood donors.

NZBS committed to a defined Māori Responsiveness Strategy in 2010 to improve its engagement with Māori. This strategy will be reviewed over the period of this SOI to ensure that it remains current and continues to complement targeted initiatives to encourage Māori support for the New Zealand Bone Marrow Donor Registry (NZBMDR) for which NZBS (working in partnership with Leukaemia and Blood

Cancer New Zealand) carries out both recruitment and tissue typing services for potential donors.

Regular use of computer surveys and targeted focus groups will enable NZBS to ensure donor satisfaction and to assess donor views on selected issues, facilitating service improvement.

A Facebook site launched in mid-2009 to communicate with youth donors has more than 72,180 fans and is proving to be an effective means of retaining engagement with this demographic. We began promoting and using our Twitter account in August 2016. We have a small, but steadily growing, group of 340 followers. Our Instagram account, launched in January 2016, is used to share donors' own content and has 1,068 followers. We are close to meeting our ongoing target for 18.8% of donors to be in the 19-25 age bracket (18.1% as at February 2017).

In June 2016 we launched the new NZ Blood Donor App, which motivates and encourages people to keep donating blood by strengthening our relationships with donors. Since introducing the new app self-scheduled appointments have increased seven-fold and account for around 16% of all appointments booked.

In response to donor requests and to reduce postal costs, NZBS has increased the use of app notifications, text and email to contact donors. Electronic communication will continue to be promoted as the preferred contact method during the period of this SOI.

Fractionated product supply

NZBS contracts with a third party fractionator CSL Behring (Australia) Pty Ltd to manufacture fractionated products of required specifications, prepared from New Zealand plasma.

NZBS and its predecessors have had a long standing relationship with CSL Behring and they are responsive to the changing needs of NZBS. Key staff at NZBS and CSL Behring work together to manage production of fractionated products by altering the amount or timing of plasma fractionation pools to most effectively meet New Zealand's product requirements at all times.

Unlike a standard manufacturing environment, the protein composition of raw plasma entering each fractionation batch is determined by the individual donors contributing to it. This introduces an unknown biological variable into the production model which adds complexity and risk to forecasting exact yield and hence the amount of manufactured product ultimately derived from each pool of plasma fractionated. Variations in product yield can have significant impacts upon per unit costs of production and production volumes. Additionally there is a risk that a fractionation pool of plasma may be "contaminated" and need to be withdrawn. NZBS mitigates this risk by having a three month supply of fractionated products in New Zealand and a "buffer" stock of frozen NZ plasma at CSL Behring, which would enable an urgent fractionation pool to be commenced in the event that this situation occurred.

NZBS expects to maintain its strategic relationship with CSL Behring during the period of this SOI.

Facilities

NZBS is not financially resourced to own any property and is consequently in a tenant/landlord relationship for all of its facilities. All leased premises² are fitted-out to meet NZBS specialist requirements for the collection, processing and distribution of blood and blood products, noting blood is classified as a medicine in New Zealand and regulated accordingly.

Regular internal and external audit of how facilities meet GMP requirements and organisational needs is undertaken.

² Details about the location of NZBS facilities can be found on page 7.

Following a comprehensive Collections & Facilities Review undertaken in 2015, NZBS is now planning the refurbishment of the major hub site in Auckland. This will provide by 2020 a laboratory site capable of processing the entire country's blood supply if required. The refurbishment will take into consideration GMP and other regulatory compliance requirements, technology changes and forecast collection and manufacturing activity.

During 2018, NZBS National Office will relocate back to the Epsom site having moved to provide needed operational space.

The blood banks in Auckland and Christchurch hospitals are too small to meet the volume of activity. An extension to the Auckland Blood Bank has now been agreed with Auckland DHB and planning is well underway for completion mid-2018. NZBS will continue to work with Canterbury DHB to ensure that adequate blood bank space is planned for in the new Christchurch hospital build.

Planned changes to facilities all add cost which will be off-set by a range of on-going efficiencies and other money-saving initiatives within NZBS.

Labour cost escalations

Labour is the largest single cost in running the blood service.

Staffing numbers are flexed depending on forecast product demand whilst being cognisant of the need for a high quality infrastructure in place to ensure the ability to fully supply. NZBS will review the collection capacity within the network and make recommendations for future site configurations as demand indicates.

Operating in the same labour market, NZBS employment terms and conditions are consistent with health and disability sector collectives that have been negotiated by the DHBs. For some employee groups NZBS is directly linked as part of sector wide Multi Employer Collective Agreements.

NZBS is required under the NZPHD Act to consult with the Director-General of Health on its bargaining strategy prior to commencing any Collective Agreement negotiations and settlement with staff on Individual Employment Agreements. This bargaining strategy also needs to be consistent with the Government's regularly published expectations for pay and employment conditions in the State Sector.

Recognising the significant impact that DHB employment relations practices and collective agreement negotiations have on the organisation, NZBS actively participates in sector forums whenever possible and seeks to keep abreast of employment relations matters in the wider DHB health and disability sector.

With changing product demand, both staffing levels and skill-mix will continue to be regularly reviewed over the period of this SOI.

Retention of specialist trained staff (Being a "Good Employer")

It is critical that NZBS can attract and retain skilled, committed employees to ensure that the on-going viability and safety of the blood supply are not compromised. Therefore, consistent with government expectations and to achieve its Strategic Goal 5, NZBS Human Resource policies, practices and programmes ensure legislative requirements are met and that there is alignment with the seven key elements of being a "Good Employer".

Building on findings of our biannual workplace culture and engagement survey conducted in November 2016, our refreshed values and behavioural framework are now being introduced to our workforce with a range of ongoing activities planned over the coming 24 months to embed our refreshed values throughout the organisation and to build on our good employer processes.

A key focus of our culture programme is a values based leadership programme which will be expanded over the coming 18 months, building on previous leadership investment, focusing on all levels of management including emerging talent.

An employee appreciation programme 'Vital' designed in collaboration with our staff and launched in 2016 encompasses an extensive range of elements to enhance engagement, support resiliency, health and wellbeing, and promote an appreciative positive culture. Features will continue to be developed and expanded over future years.

NZBS has recently completed a review of the executive structure to support succession planning for the future and to aid a refocus on critical areas of strategy, operations and business improvement. The new structure will be progressively implemented from early 2017.

Workforce planning to grow, sustain and optimise our workforce will be a key element of our workplan over the coming 4 years. Recruitment and induction processes are in the process of further development as we align to our refreshed values.

NZBS has implemented a Children's Protection Policy and safety worker checks in line with the requirements of the Vulnerable Children's Act 2014.

NZBS continues to invest in training and development of frontline and support staff to ensure a safe, sustainable, high quality service. Staff are provided with on the job training supported by frontline workforce trainers, eLearning, journals, education sessions, workshops and conferences. We also support a number of staff with external tertiary education and development and staff scholarships are judged and awarded annually, with recipients utilising the awards to visit and study in international blood services and laboratories and to attend conferences.

Staff consultation and involvement has been factored into planning for all facility upgrades.

Ability to deal with "the unexpected"

Biennial Staff Engagement Surveys will be conducted in 2018 and 2020. A comprehensive organisational risk management framework ensures that all significant NZBS risks are effectively identified, assessed, managed and monitored.

NZBS also has a robust emergency management plan which continues to be well tested in response to the earthquakes in late 2016.

Risk identification and escalated incident management are agenda items at each Executive Team meeting. The NZBS Board receives regular reports on any major incidents, reviews the Risk Register and Organisational Health and Safety metrics on a quarterly basis and the Risk Management Policy annually.

Cyber risk has become more acute in recent times and NZBS has a range of measures in place to protect key systems from attack. The Board now receive quarterly updates on the status and effectiveness of these measures and NZBS works closely with the GCIO team to ensure we are operating at the most effective level.

Retention of regulatory compliance

All NZBS manufacturing sites are GMP compliant and hold licences to manufacture blood components. NZBS diagnostic laboratories, including the 6 hospital Blood Banks, are IANZ accredited. The National Tissue Typing laboratory is also accredited by ASHI.

NZBS works closely and successfully with regulators/auditors to ensure that all manufacturing centres retain required licences to manufacture blood components, and all diagnostic laboratories hold appropriate accreditation at all times. Maintaining accreditation and appropriate licences is part of "business as usual" with continuous quality improvement fundamental to the organisation at all levels.

Affordability of required capital investment

Blood Service activities are capital intensive (for context, the 2016/17 book value is forecast at \$23.59m) with capital expenditure requirements met from operating cash-flows. GMP requirements ensure that all equipment is well maintained and replaced as required.

All NZBS properties are leased; the property capital component comprising fit-out and specialist equipment is met from operating cash flows or funded on "pay-as-you-go" third party finance leasing arrangements.

Over the term of this SOI the key capital investments will include:

- Blood Management System enhancements \$1.5m.
- Key Specialist Equipment Replacements \$2.2m.
- General Equipment Replacements \$2.1m.
- Auckland Facilities Upgrades \$7.3m.
- IT Infrastructure Investment \$1.35m.
- Business Improvement Initiatives \$0.6m.