MINISTRY OF HEALTH
MANATŪ HAUORA

National Bowel Screening Programme

2017/18 Business Case

This business case:

This business case seeks approval of the joint Ministers to utilise the $12.430 million tagged contingency for the National Bowel Screening Programme established in Budget 2017 to fund the roll out of the National Bowel Screening Programme to the Southern District Health Board and Counties Manukau District Health Board.

It provides an update on the Programme Business Case and sets out sets out the approach for the second phase of the implementation.

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1 Executive Summary

1.1 Purpose of this Business Case

This business case seeks approval of the joint Ministers to utilise the $12.430 million tagged contingency for the National Bowel Screening Programme established in Budget 2017 [CAB-17-MIN-0185.12 refers] to fund the roll out of the National Bowel Screening Programme (NBSP) to the Southern District Health Board and Counties Manukau District Health Board.

This business case does not seek funding for the national information technology solution, or for the National Cervical Screening Programme (NCSP) Human Papilloma Virus (HPV) implementation. Separate business cases will be completed for the information technology solution and for the NCSP HPV implementation in late 2017.

This business case confirms the strategic and economic cases detailed in the Programme Business Case and describes the approach to the 2017/18 implementation of the NBSP.

1.2 Updates to the Programme Business Case

The Programme design and approach to implementation remains as per the Programme Business Case, with the following amendments.

Alignment with Other Programmes

The National Screening Unit is planning to introduce Primary Human Papilloma Virus (HPV) screening into its National Cervical Screening Programme (NCSP). The existing technology solution supporting NCSP service delivery is not able to accommodate the necessary system changes for Primary HPV Screening. There is a strong correlation between the long-term technology needs of NCSP and the NBSP and therefore the preferred approach is to develop a shared technology solution that can support both screening programmes. The procurement process for the national information technology solution includes both the NBSP and NCSP-Primary HPV Screening implementation requirements.

There is also opportunity to align the service delivery models across NCSP and NBSP, which may allow the utilisation of a shared service delivery infrastructure, particularly the NCC function, across the two screening programmes.

There is a single Senior Responsible Owner (SRO) across the two initiatives. The governance for both initiatives is provided by the same members of the Executive Leadership team, to ensure consistency and alignment of the service delivery model and technology solution, as well as prioritisation of deliverables and management of potential resource and timing conflicts between the two initiatives.

Source Data for the National Information Technology Solution

The Primary Health Organisations (PHO) register and National Health Index (NHI) register have both been considered further as sources to populate the national information technology solution. The PHO register would exclude some eligible participants, especially priority populations. The National Health Index (NHI) register includes people who have moved overseas or who are not eligible for publically funded healthcare in New Zealand. After consultation, the Programme has elected to populate the national information technology solution from the NHI, for those people who have accessed health services in the last three years.

Responsibilities

Since the approval of the Programme Business Case, some changes have been agreed to the responsibilities of the NCC and the Bowel Screening Regional Centres (the Regional Centres).

- **Faecal Immunochemical Test (FIT) Laboratory Contract:** The Programme initially proposed that the contract with the FIT Laboratory would be held by the NCC. After further consideration it was concluded that the contract would be better held by the Ministry of Health, in line with other screening programmes.
- **Active Follow-Up:** Active follow-up of participants who have not returned their FIT kits has moved from the Regional Centres to the NCC; it would be less economically viable to be performed at a regional level.
- **Regional Centre Role:** The key changes to the Regional Centre responsibilities are shifting the responsibility for active follow up to the NCC (as noted above), altering the flow of funding for screening colonoscopies directly to DHBs rather than through the Regional Centres, and moving the responsibility for the education of General Practice and for promoting equitable participation to DHBs.

IT Solution

As the Programme is rolled out nationally, the pilot IT system cannot be scaled, in its current form, to meet the needs of a further 19 DHBs and the NCC safely. The IT options analysis completed in March 2017 concluded that there may be a number of IT solutions that meet the NBSP technology needs, with technology partners in the market able to offer these solutions. A procurement process is therefore underway to secure the national information technology solution and associated technology partner.

As the IT options analysis activities and resulting technology procurement process has informed the development of the national information technology solution, the Programme approach is to implement an interim IT solution followed by the national information technology solution, focused on NBSP functionality needs.

- **Enhanced Pilot:** Enhancement of the pilot IT system to accommodate the first two additional DHBs.
- **Interim IT Solution:** Critical enhancements will be made to the Enhanced Pilot System and manual processes designed, to accommodate further DHBs and the NCC. Note: the interim IT solution does not enable a nationally integrated NBSP and therefore DHBs on the interim IT solution will be migrated to the national information technology solution at the appropriate time.
- **National Information Technology Solution:** This will be determined following the procurement process. The process, options, preferred approach and costs will be described in the IT business case which is to be presented late 2017.

Programme Rollout

Whilst there has been no change to the overall duration of the Programme implementation, there has been some change in the dates for implementation within this timeline as noted in the Cabinet Update March 2017. Following the go-live of Hutt Valley and Wairarapa DHBs in July 2017, the current planning assumption is that the NCC will be operational from January 2018, and Southern DHB and Counties Manukau DHB will be live from mid-2018. Up to ten further DHBs will commence screening in the 2018/19 financial year, subject to the outcome of the RFP for the national information technology solution and its availability. All DHBs will have implemented bowel screening by the end of the 2019/20 financial year. The order and timing for DHBs remains subject to their readiness to commence bowel screening.

Programme Management and Delivery

The Programme team at the Ministry has expanded as planned to meet the increasing demands of detailed implementation planning. Programme Management and Governance arrangements are in place to ensure delivery.

- **Major Projects Monitoring:** The Corporate Centre delivery confidence assessment for the Programme has improved from Amber/Red to Amber.
- **Gateway Review:** s 9(2)(g)(i)

1.3 Funding

In August 2016, Cabinet agreed $39.3 million for the National Bowel Screening Programme (NBSP) Business Case to implement the NBSP over four financial years, including delegating the approval of future business case to the Minister of Health and the Minister of Finance (the joint Ministers) [SOC-16-MIN-0108 refers].

Budget 2017 approved $26.119 over four years, for the roll-out of the NBSP in the Hutt Valley, Wairarapa, and Waitemata district health board (DHB) regions, to establish the NBSP National Coordination Centre (NCC) and four Bowel Screening Regional Centres (regional centres), and to extend existing Quality Assurance contracts [CAB-17-MIN-0185.12 refers]. Budget 2017 also allocated $12.430 in contingency funding for the roll-out of the NBSP to Southern DHB and Counties Manukau DHB [CAB-17-MIN-0185.12 refers] pending the approval of business cases by the Minister of Finance and the Minister of Health (the joint Ministers).

Table 1 summarises the Budget 2017 bid, for $38.5 million.

The Programme remains within the agreed funding. The financial position and projection will be revisited with the business case for the national information technology solution, and for future business case for DHB implementations.

Table 1: Budget 2017

Total Waitemata, Hutt, Wairarapa. Southern & Counties Manukau	2016/17 $'M	2017/18 $'M	2018/19 $'M	2019/20 $'M	2020/21 $'M	Total 5 Years to 2020/21 $'M	2021/22 & Outyears total $'M	Total 21 years $'M
IT Capital to NDE	-	-	-	-	-			-
Depreciation & Capital Charge	-	-	-	-	-			-
National Co-ordination Centre	-	s 9(2)(ba)(i)						
National FIT Laboratory	-							
Bowel Screening Regional Centre	-							
DHBs	-							
Training, Quality & Communication	-							
Approved Costs now rephased	-							
Total Budget 17						38.549		
Total Operating Cost	s 9(2)(ba)(i)							
Total Capital Funding								
Total NBSP Cost								
DHB Funded Cost - Cancer Treatment								
Waitemata Pilot Surveillance Cost								
NBSP Funding								

1.4 National Coordination Centre

The NCC will manage participant invitation and screening, monitor and follow up on participation for the return of the FIT kit and resolve or escalate exceptions. The NCC will also support the Ministry in monitoring performance, manage the IT solution to ensure it facilitates national Programme quality, and promoting equitable participation nationally with the return of the FIT kit.

The Request for Proposals (RFP) for a National Coordination Centre ran from 1 February to 17 March 2017. Following evaluation of shortlisted responses, the recommendation was to commence negotiations with Homecare Medical Limited.

The negotiation process commenced following the approval of the evaluation panel's recommended preferred supplier for this service. The service delivery approach, implementation milestones, payment approach, risk apportionment and contract terms will be agreed through the negotiation process.

The overall contract value, as per the tender process, is within the expected budget and no change is expected to the overall Programme budget for this service. Funding arrangements and contingencies, as well as the costs across years for the implementation and subsequent operation, will be finalised in the contract negotiations, due to be completed mid-2017.

1.5 Bowel Screening Regional Centres

The Regional Centres will support the implementation and ongoing management of the NBSP in the DHBs. Each of the four Regions has selected a DHB to fulfil the role of the Regional Centre. The Regions and their preferred suppliers are:

- Northern – Waitemata DHB;
- Midland – Waikato DHB in partnership with the Midland Cancer Network, HealthShare Limited;
- Central – Hutt Valley DHB; and
- Southern – Southern DHB.

Nationally, other potential suppliers considered included Primary Health Organisations (PHOs), cancer networks, existing screening services, Māori health providers, Technical Advisory Services (TAS) or going to the market through a contestable tender process. Assessment of a lead DHB compared with potential alternative providers concluded that DHBs were best placed to undertake this role.

Each of the DHBs selected has the support of the other DHBs in their region and this has been confirmed to the Ministry NBSP team.

1.6 Quality Assurance and Improvement

The Ministry has well developed quality standards in place for the Bowel Screening Pilot. These have formed the basis for the interim quality standards which will be used as the basis of the national policy and quality standards.

The Ministry has contracts with the Northern Regional Alliance to host the Endoscopy Governance Group New Zealand (EGGNZ) and Hawkes Bay DHB to host the National Endoscopy Quality Improvement Programme (NEQIP). The Ministry is currently negotiating an extension to each of these contracts out until June 2020 with an initial focus on the DHBs rolling out NBSP in the 2017/2018 financial year.

1.7 DHB Implementations

Waitemata, Hutt Valley, and Wairarapa DHBs

Hutt Valley and Wairarapa DHBs have worked closely with the Programme team in the Ministry and the Bowel Screening Pilot team at Waitemata DHB, to ensure readiness for go-live in July 2017.

Waitemata DHB has contracted with the Ministry to extend the existing Coordination Centre services to Hutt Valley and Wairarapa DHBs, and to participate in readiness assessment at all three DHBs (including Waitemata) in preparation for go-live. This will be the Interim Coordination Centre in place until late 2017.

There are no material changes to the Programme Business Case (Part B) which sets out the local context, proposed approach, timing and costs for the Hutt Valley and Wairarapa DHBs. Key risks and issues have been monitored and managed throughout the preparatory period to minimise the risk to successful go-live.

- **Stakeholder Engagement and Communications:** There has been extensive communication and engagement with stakeholders in the preparatory period for go-live. Wairarapa DHB also sought to raise wider public awareness through the Cancer Society Relay for Life.
- **Demand Management:** The DHBs are currently meeting targets for symptomatic and surveillance colonoscopies. Hutt Valley DHB will recruit additional Senior Medical Officer (SMO) Full Time Equivalent (FTE) resources to meet the colonoscopy demand and the specific NBSP nursing activities, with a small increase in administration time to support the Programme implementation. No additional SMO time is required at Wairarapa DHB, as the demand will be met within current capacity. Additional FTE is required for nursing and administration. At Hutt Valley DHB, a procedures room within endoscopy will be made available and resourced for Bowel Screening Colonoscopies. Wairarapa DHB will include Bowel Screening Colonoscopies within current lists.
- **National and Regional Coordination:** The DHBs will utilise the Interim Coordination Centre at Waitemata DHB until the NCC is available and the DHBs transition to the new service model. The regional responsibilities are split between the Interim Coordination Centre and the Hutt and Wairarapa DHBs, until the Regional Centres are established.
- **IT Solution:** Hutt Valley and Wairarapa DHBs will go-live in July 2017 with the Enhanced Pilot IT system, and Waitemata DHB will also use the Enhanced Pilot IT system from the same time. The three DHBs will remain on this system (with potential further upgrades/enhancements) until migrated to the national information technology solution.

Southern DHB

Key elements of the planned implementation in Southern DHB are summarised below.

- **Strategic Alignment:** The NBSP is aligned with local and regional strategies and plans, including the Southern Strategic Health Plan 2015, the Southern DHB Annual Plan 2016/17, Southern DHB Māori Health Plan 2016/17 and the South Island Alliance Plan 2016/17. As Southern DHB has a high rate of bowel cancer, the population will benefit from being one of the earliest implementers. Southern DHB will also benefit from improved colonoscopy standards for symptomatic patients, enhanced reporting, and improved relationships with primary care and with Māori. The initiative will also support the ongoing development of a single service, multi-site model and teamwork across Southern DHB. However, the Programme design may not fully align with Māori needs, for example it is anticipated that distribution of FIT kits via the postal system will discourage Māori participation. There will also be increased surgical and oncology costs.

- **Key Risks, Constraints and Dependencies:** The key risks identified by the DHB at this stage are the possibility that the endoscopy suite at Dunedin hospital is not available in time, and insufficient theatre, oncology and endoscopist capacity to cope with increased demand. These risks are being addressed by seeking alternative capacity (potentially at Southland Hospital), process mapping to identify areas for streamlining, recruitment and training of endoscopists/nurse endoscopists. Significant constraints are the availability of staff, adequate funding and the availability and integration of a suitable IT solution. The implementation at Southern DHB is dependent on the IT solution, and agreements being in place with primary care and Southern Community Laboratory.
- **Stakeholder Engagement and Communication:** Key stakeholders have been identified and analysed and an indicative communications and engagement approach developed. Key stakeholders have been engaged during this initial preparatory phase through presentations, meetings, reports and updates. The DHB will continue to work collaboratively with the Regional Centre and the Ministry Programme team over the coming year, as well as with the PHOs, primary care and the laboratory as detailed planning is undertaken in preparation for go-live.
- **Demand Management:** Colonoscopy demand is modelled at between 700 and 800 NBSP colonoscopies in the first two years, reducing to between 500 and 600 per year thereafter, with a slow growth in NBSP surveillance colonoscopies. This needs to be managed alongside symptomatic demand. The preferred approach is for bowel screening and symptomatic colonoscopy, as well as the resulting additional surgical procedures, to be undertaken within the DHB. This would be facilitated by increasing theatre capacity and outsourcing other activity to allow provision for NBSP within the DHB. Additional radiology would be delivered by providing consistent access to Computed Tomography Colonography (CTC) across the District and bringing CTC in-house in Dunedin. The Oncology service will absorb the increase and additional histology volumes will be managed by a contractual arrangement with the Laboratory.

  No further investment (above that already planned and funded outside the Programme) is required for the implementation of NBSP.

  Consideration is being given to options for increasing staffing capacity, including increasing the number of gastroenterologists, increasing the number of general surgeons who undertake endoscopy, and training nurse endoscopists. These options will be worked through during detailed planning.
- **Quality and Equity:** Quality will be guided by the interim quality standards and overseen by clinical and nursing leadership within Southern DHB and the South Island Regional Centre. Māori and rural populations are identified as key target communities. It is anticipated that the Māori Health team and community leaders will play a pivotal role, alongside meetings in marae and organising huis to discuss issues. It is envisaged that a series of community meetings will take place in order to ensure rural populations are engaged and aware of the Programme. The Regional Centre will support equity within Southern DHB and ensure that consistent messages and support are provided across the South Island DHBs.
- **Management Arrangements:** The project will be governed by a Project Steering Group, which will report to the Executive Leadership Team and the Commissioners Team. The Steering Group is chaired by the General Manager, Medical Directorate as the SRO and is accountable to the Southern Chief Executive Officer via the Chief Operating Officer.

  The project will have identified resources for the duration of the project, some of which will be in place for only part of the project duration, as requirements will vary over time. Change, risk and benefits management will be undertaken to ensure smooth implementation.
- **Financial Arrangements:** The financial modelling for the DHB, for implementation and Programme out years, aligns with the scope and financials as detailed in the Programme Business Case. The indicative whole of life (21 years) capital and operating cost for the Southern DHB element of the Programme implementation is s 9(2)(ba)(i) (excluding DHB funded costs).
- **Key Milestones and Timings:** The key milestones are the completion of the implementation plan (July 2017), recruitment of staff (July 2017 to go-live), readiness review (approximately January 2018) and go-live (April 2018).

Counties Manukau DHB

Key elements of the planned implementation in Counties Manukau DHB are summarised below.

- **Strategic Alignment:** The NBSP is aligned with local and regional strategies and plans, including the Health Together Strategic Plan 2015-20, Annual Plan 2016/17, Northern Region Health Plan 2016/17 and the Northern Region Cancer Network Strategic Intent 2014/15 – 2019/20. In addition to the benefits to all New Zealanders from the Programme, Counties Manukau DHB has identified further local benefits. The service provision for colonoscopy and cancer treatment for the local population will be increased and the Programme implementation will support continued integrative models of care, with increased interaction between primary and secondary care. Local disbenefits of implementing the Programme include potential inequities between symptomatic and asymptomatic patients, the exclusion of those aged 50-60 years (given that a higher proportion of cases of bowel cancer occur in this age group for Māori and Pacific people compared with other groups), and inequitable access across the Auckland region (as the Bowel Screening Pilot had a wider age range). The DHB has emphasised the high proportion of their eligible population who are identified as the priority population (Māori, Pacific and those living in Quintile 5). This will require additional, tailored efforts across the whole screening pathway to ensure equitable access and coverage, with implications for the model of care and budget to manage this. In addition, while Asian peoples are not a priority group, the DHB has identified that additional efforts will be required to ensure their participation, recognising that a substantial proportion will not speak English.
- **Key Risks, Constraints and Dependencies:** The key risks identified at this stage are recruitment of gastroenterologists, the availability of the IT solution, inequities in participants accessing screening and the availability of funding to ensure equitable access. The risks are being addressed through early recruitment of gastroenterologists and training of nurse endoscopists, contingency planning for an interim IT solution, and investment in resource to ensure the population is knowledgeable about bowel screening and bowel cancer. The main constraints are workforce and budget and the key dependencies are IT systems interfaces, access to translated information and interpreters. Reliance on the NCC for follow-up of priority populations who do not respond to the screening invitation is considered a risk as it is expected that active follow up will be key to support equitable participation for priority groups.
- **Stakeholder Engagement and Communication**: Key stakeholders have been engaged through this early planning stage, through meetings and presentations. This has identified support for the Programme but also concerns, particularly in relation to equitable implementation, which will be worked through by the local and Ministry Programme teams during detailed planning. A detailed communications plan will be developed to support effective and timely communication. There will be close engagement with PHOs and primary care to provide education and achieve buy-in. The DHB will need to work with practices in other DHB areas, particularly in Auckland DHB. Counties Manukau DHB will engage with the National Laboratory and Ministry team to consider alternative approaches to postage for drop off, as postage may be an impediment for some priority groups.
- **Demand Management:** Colonoscopy demand is modelled at around 1,000 NBSP colonoscopies in the first two years, reducing to between 700 and 800 per year thereafter, with a slow growth in NBSP surveillance colonoscopies. In order to manage screening demand alongside symptomatic demand, the DHB intends to increase in-house capacity and capability, with outsourcing to private provider(s) as and when necessary. The DHB intends to run symptomatic and screening services separately but in parallel.

  Gastroenterology volumes will be managed by increasing capacity and outsourcing when necessary. If numbers do not warrant separate surgical lists, these will be merged with general surgery lists. Radiology will provide for standard growth and additional CTCs that come from the NBSP by increasing resources. Radiology plans for growth by utilising the same production planning tool that gastroenterology uses. Additional pathologist and technician time will be provided in-house. The increased volume of oncology treatments required for bowel cancer patients will be negotiated with Auckland DHB as per the Inter-District Flow (IDF) negotiations.

Office space will be identified within existing CMDHB facilities. Additional theatre capacity at Middlemore Hospital will be utilised to enable relocation of some services to accommodate NBSP activity. No additional funding is being sought for these facility requirements, beyond the existing capital planning process.

Additional workforce will be required, including gastroenterology, nursing, administration, project management, clinical leadership, data and quality management, community/practice team liaison and radiology and laboratory staff.

- **Quality and Equity:** The DHB will work with the Ministry team, NCC and Regional Centre on quality reporting and initiatives, to ensure that the quality of services is high and maintained. Tailored approaches will be developed to ensure equitable participation across populations. This is expected to include investment in community health providers/workers to engage with ethnic specific communities, working closely with the National Coordination Centre to ensure appropriate active follow up, media promotions and community awareness raising targeting priority populations, and assisting primary care to support these populations.
- **Management Arrangements:** The project will be governed by a Project Steering Group, which will report to the Director of Primary, Community and Integrated Care. The Steering Group is chaired by the General Manager – Emergency Department, Medicine and Integrated Care and is accountable to the Counties Manukau Director of Primary, Community and Integrated Care. It is expected that the project will have workstreams within the main project, including primary care, secondary care services, facilities/capital and IT. Change, risk and benefits management will be driven by the Programme Manager.
- **Financial Arrangements:** The financial modelling for the DHB, for implementation and Programme out-years, aligns with the scope and financials as detailed in the Programme Business Case. The indicative whole of life (21 years) capital and operating cost for the Counties Manukau DHB element of the Programme implementation is s 9(2)(ba)(i) (excluding DHB funded costs).
- **Key Milestones and Timings:** The key milestones are the completion of the implementation plan (July 2017), recruitment of staff (July 2017 to go-live), readiness review (approximately January 2018) and go-live (June 2018).

2 Purpose and Format

2.1 Purpose of this Business Case

This business case seeks approval of the joint Ministers to utilise the $12.430 million tagged contingency for the National Bowel Screening Programme established in Budget 2017 [CAB-17-MIN-0185.12 refers] to fund the roll out of the National Bowel Screening Programme (NBSP) to the Southern District Health Board and Counties Manukau District Health Board.

This business case does not seek funding for the national information technology solution, or for the National Cervical Screening Programme (NCSP) Human Papilloma Virus (HPV) implementation. Separate business cases will be completed for the national information technology solution and for the NCSP HPV implementation in late 2017.

This business case builds on the NBSP Programme Business Case and the linked Tranche 1 Business Case which was approved by Cabinet in August 2016. Figure 1 depicts the relationship between this business case (highlighted) and the other NBSP business cases, as well as the link with the National Cervical Screening Programme HPV business case.

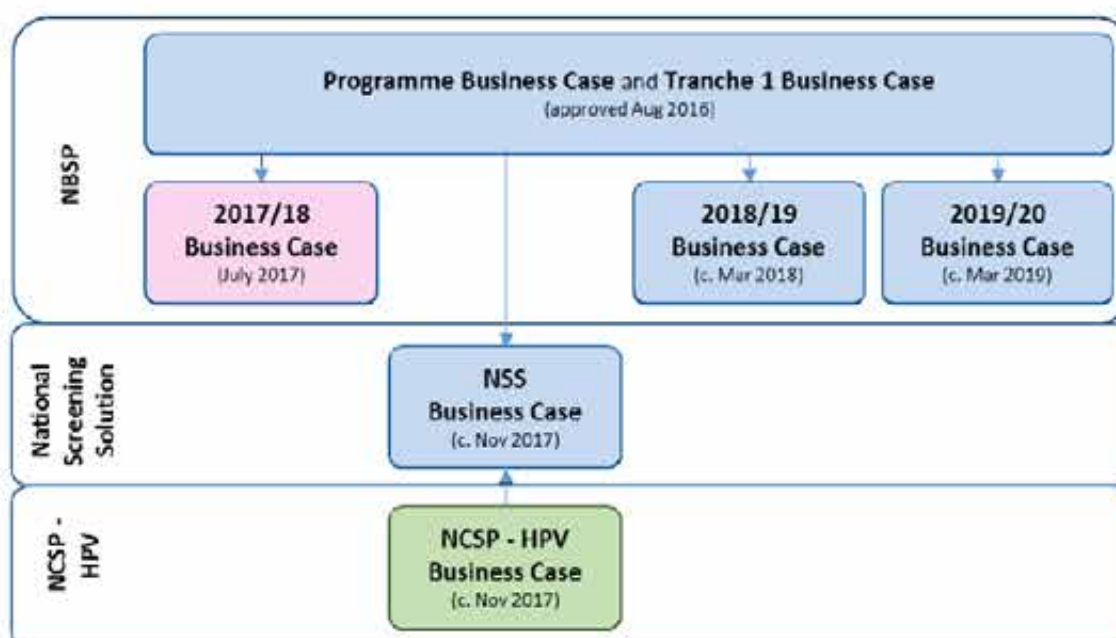

Figure 1: NBSP and NCSP/HPV Business Cases

This business case confirms the strategic and economic cases detailed in the Programme Business Case and describes the approach to the 2017/18 implementation of the NBSP. The 2017/18 implementation comprises:

- the National Coordination Centre (NCC);
- the Bowel Screening Regional Centres (the Regional Centres);
- Quality assurance and improvement contracts; and
- the first five DHBs (Waitemata, Wairarapa, Hutt Valley, Southern and Counties Manukau).

The New Zealand Treasury, Government Chief Information Officer (GCIO) and Ministry of Business, Innovation and Employment (MBIE) have been actively engaged throughout the development of this business

case. The format and approach are as agreed with Treasury and are in line with Better Business Case requirements.

2.2 Format of this Business Case

This business case comprises five elements:

- Programme update;
- National Coordination Centre;
- Bowel Screening Regional Centres;
- Quality Contracts;
- Implementation planning for DHBs 1-5.

2.3 Background to this Business Case

As part of Budget 2016, Cabinet agreed the National Bowel Screening Programme (NBSP) Business Case to implement the NBSP over four financial years [CAB-16-MIN-0189.14 refers], subject to a re-stated Programme Business Case. The Programme Business Case was approved by Cabinet in August 2016 [SOC-16-MIN-0108], including delegating the approval of future business case to the Minister of Health and the Minister of Finance (the joint Ministers).

The Programme funding is allocated through budget bids supported by the respective business cases. Budget 2016 approved $39.3 million over four years to fund the design, planning and set-up phases of the NBSP and allocated contingency capital funding of $15.969 million for IT development and infrastructure needed for a national Programme. This contingency is subject to Cabinet approval of the business case for the preferred option for the NBSP long term end-to-end national information technology solution. The contingency has been extended to 1 February 2018.

The Ministry of Health, with support from the Treasury and GCIO, committed to undertake an IT options analysis, including a market scan for the national information technology solution. The Ministry partnered with Ernst and Young to complete this analysis. The business case for the national information technology solution will be informed by the options analysis and the procurement process which is currently underway. Following discussion with Treasury and Ministers, the business case for the national information technology solution has been separated from this business case. It will be submitted for approval late in 2017, once the procurement process has been completed and the end-to-end national information technology solution approach and costs confirmed.

Budget 2017 approved $26.119 over four years, for the roll-out of the NBSP in the Hutt Valley, Wairarapa, and Waitemata district health board (DHB) regions, to establish the NBSP National Coordination Centre (NCC) and four Bowel Screening Regional Centres (regional centres), and to extend existing Quality Assurance contracts [CAB-17-MIN-0185.12 refers]. Budget 2017 also allocated $12.430 in contingency funding for the roll-out of the NBSP to Southern DHB and Counties Manukau DHB [CAB-17-MIN-0185.12 refers] pending the approval of business cases by the Minister of Finance and the Minister of Health (the joint Ministers). Table 2 summarises the Budget 2017 bid for $38.5 million.

The Programme remains within the agreed funding. The financial position and projection will be revisited with the business case for the national information technology solution, and for future business case for DHB implementations.

Table 2: Budget 2017 Funding

Total Waitemata, Hutt, Wairarapa. Southern & Counties Manukau	2016/17 $'M	2017/18 $'M	2018/19 $'M	2019/20 $'M	2020/21 $'M	Total 5 Years to 2020/21 $'M	2021/22 & Outyears total $'M	Total 21 years $'M
IT Capital to NDE	-	-	-	-	-			-
Depreciation & Capital Charge	-	-	-	-	-			-
National Co-ordination Centre	s 9(2)(ba)(i)							
National FIT Laboratory								
Bowel Screening Regional Centre								
DHBs								
Training, Quality & Communication								
Approved Costs now rephased								
Total Budget 17						38.549	s 9(2)	
Total Operating Cost	s 9(2)(ba)(i)							
Total Capital Funding								
Total NBSP Cost								
DHB Funded Cost - Cancer Treatment								
Waitemata Pilot Surveillance Cost								
NBSP Funding								

3 Update to Programme Business Case

3.1 Alignment with Other Programmes

Beyond the National Bowel Screening Programme implementation, the National Screening Unit (NSU) has a further business change implementation programme underway: to introduce Primary Human Papilloma Virus (HPV) screening into its National Cervical Screening Programme (NCSP). Once implemented, this clinical change will that ensure the risk of cervical changes is detected in New Zealand women as early as possible. The test will also meet the needs of both HPV-immunised and non-HPV-immunised women.

During the initial design of the Primary HPV Screening pathway and consideration of associated technology requirements, NSU identified that the existing technology solution supporting NCSP service delivery is not able to accommodate the necessary system changes for Primary HPV Screening. The NSU also noted the strong correlation between the long-term technology needs of NCSP and the NBSP. The preferred approach is to develop a shared technology solution that is able to support both screening programmes, as well as specifically to support the implementation of Primary HPV Screening for NCSP.

The opportunity to align the service delivery models across NCSP and NBSP was also identified. This may allow the NSU to utilise a shared service delivery infrastructure, particularly the NCC function, across the two screening programmes.

The proposal to implement Primary HPV Screening will be presented in a separate, dedicated business case, however the procurement process supporting the national information technology solution includes both the NBSP and Primary HPV Screening implementation requirements. The Ministry is working closely with Treasury, GCIO and MBIE to ensure the selected preferred solution and technology partner, and associated solution costs, will provide a robust long-term strategic technology support for the screening programmes delivered by NSU.

3.2 The Need for Investment

There are no significant changes to the Strategic Case for a National Bowel Screening Programme, as outlined in the 2016 Programme Business Case. The Programme scope and underlying assumptions remain unaltered.

The Programme Business Case described the need to invest in screening for bowel cancer. New Zealand has one of the highest rates of bowel cancer in the developed world. Bowel screening aims to reduce the mortality rate from bowel cancer, by diagnosing and treating bowel cancer at an early curable stage, as well as identifying and removing pre-cancerous advanced adenomas from the bowel before they become cancerous, which can, over time, lead to a reduction in bowel cancer incidence.

Bowel screening programmes are estimated to reduce mortality in the population offered screening from bowel cancer by at least 16-22 percent, and potentially up to 30 percent, after 8-10 years. A national bowel screening programme is expected to result in significant cost-savings from reduced treatment of bowel cancer, which outweigh the cost of screening. Bowel screening is an investment with health, social and economic benefits with a Programme Net Present Value (NPV) estimated at s 9(2)(ba)(i), as per the Programme Business Case financial analysis.

3.3 Programme Costs

Since the approval of the Programme Business Case in 2016, no significant changes have been identified to the Programme funding required[1]. The capital charges and depreciation impact of the national information technology solution will be identified in the business case for the national information technology solution, expected to be completed towards the end of 2017.

Within the overall Programme funding allocation, some changes are proposed between expenditure lines. These changes reflect the detailed planning which has been undertaken since the Programme was approved and better reflect the actual and anticipated Programme costs. At this stage, the Programme remains within the agreed funding. The financial position and projection will be revisited with the business case for the national information technology solution, and for future business case for DHB implementations.

3.4 Programme Benefits and Disbenefits

The benefits and disbenefits described in the Programme Business Case remain unchanged. The National Bowel Screening Programme will deliver four key benefit outcomes:

- Improved health outcomes;
- More cost-effective healthcare;
- Improved service delivery (including improved IT infrastructure supporting service delivery); and
- Better social and economic outcomes.

More detailed analysis on benefits measures has been undertaken since the completion of the Programme Business Case. Some changes have been agreed to the measures of each benefit and disbenefit, to strengthen the ability of the Programme (and external agencies) to monitor progress against realisation of the claimed benefits and the impact of disbenefits. The revised benefit and disbenefit measures are attached as Appendix 1.

3.5 Programme Delivery Approach

Service Delivery Model

There is no change to the service delivery model as described in the Programme Business Case. The Programme will use the Faecal Immunochemical Test (FIT). The age range is unchanged at 60-74, aligning with the approach used in other countries. The screening pathway is based on international best practice, and consists of seven stages (registration, invitation, screening test, positive results notification (where applicable), investigation, adverse events monitoring and treatment).

Bowel Screening Register

Since the Programme Business Case was approved, consideration was given to using the Primary Health Organisations (PHO) register to populate the national information technology solution. Further review of the population used for modelling has identified that the PHO register would exclude some eligible participants, especially priority populations. The National Health Index (NHI) register includes people who have moved overseas or who are not eligible for publically funded healthcare in New Zealand. The Programme will

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[1] Note that for each Budget bid, the Programme needs to be able to demonstrate funding required over a 20-year period. Therefore the Programme will extend by a year each time a Budget bid is submitted.

therefore populate the national information technology solution from the NHI, for those people who have accessed health services in the last three years.

Responsibilities

Since the approval of the Programme Business Case, some changes have been agreed to responsibilities for the NCC and Regional Centres.

The Programme initially proposed that the contract with the FIT Laboratory would be held by the NCC. After further consideration it was concluded that the contract would be better held by the Ministry of Health, as the NCC role is considerably different in the national roll-out compared to the Pilot. The market for laboratories is also classified as a tight oligopoly, therefore resulting in significant shrinkage of the potential market for the NCC. The Ministry also has current arrangements in place with a number of laboratories (including the current FIT Laboratory) and as such, can easily contract these services directly and ensure that there is a competitive procurement process to select the provider of the NCC.

It was decided that the role of active follow-up of participants who have not returned their FIT kits[2] would move from the Regional Centres to the NCC, as it would be less economically viable to be performed at a regional level. The NCC will have trained call centre staff able to conduct outbound calling with direct access to the national information technology solution, thereby maintaining a single point of accountability and control for contacting participants and updating the data held within the system.

The proposed role of the Regional Centres has also evolved since the approval of the Programme Business Case. The Regional Centres are responsible for activities involving a subgroup of potential or current participants. This includes encouraging participation, ensuring participants within the region who have a positive result are informed and offered investigation, monitoring timeliness of screening investigation services (including colonoscopy), and monitoring regional quality and equity. Whilst the overall purpose remains the same, some changes have been agreed as a result of further discussion with the DHBs. The key changes to the Regional Centre responsibilities are shifting the responsibility for active follow up to the NCC (as noted above), altering the flow of funding for screening colonoscopies directly to DHBs rather than through the Regional Centres, and moving the responsibility for the education of general practice (GP) and for promoting equitable participation to DHBs.

This decision to shift the role of GP education to DHBs is an acknowledgement that the existing local clinical networks are the most appropriate to utilise for educational processes. This is also supported by the alliances between DHBs and PHOs. Where possible, the Ministry is seeking to utilise existing funding flow and administrative mechanisms to minimise duplication.

3.6 Programme IT Solution

IT Solution Options

As described in the Programme Business Case, the IT system established to support the Bowel Screening Pilot was specifically developed for the pilot, within constraints of costs and timeliness and within the context of the relatively small nature of the Pilot. As the Programme is rolled out nationally, the Pilot IT system cannot be scaled, in its current form, to meet the needs of a further 19 DHBs and the NCC.

Independent quality assurance (IQA) of the IT solution options analysis undertaken for the Programme Business Case was undertaken by Caravel and Accenture New Zealand. The Ministry accepted the recommendations to investigate the wider use of the Enhanced Waitemata Pilot IT system, and committed

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[2] DHB endoscopy units will be responsible for follow up of participants who have returned their FIT kits but who Do Not Attend (DNA) their colonoscopy appointment.

to undertaking a further options analysis for the IT solution, to include a market scan [SOC-16-MIN-0108]. The Ministry partnered with Ernst and Young (EY) to complete this work.

The EY IT options analysis, including a market scan, was completed in March 2017. This concluded that there are potentially a number of different IT solutions that may meet the NBSP technology needs, with technology partners in the market able to offer these solutions. A procurement process is therefore required to secure the national information technology solution and associated technology partner. Technical work is required by the Ministry, DHBs and existing technology partners to establish interfaces to the national information technology solution for information sharing.

Based on this advice, the Ministry prepared for an open Registration of Interest (ROI) process which commenced in May 2017. The Ministry anticipates that the second stage of the procurement process will be a closed Request for Proposals (RFP) with shortlisted potential partners, to run during July and August 2017.

To minimise the impact of the national information technology solution development on the Programme, the IT implementation business case has been separated from this business case. That business case will be presented to Ministers as soon as possible after the procurement process has been completed.

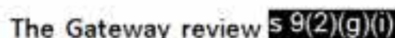
Interim IT Solution

As the IT options analysis and resulting technology procurement process has delayed the development of the national information technology solution, the Programme approach is to implement an interim IT solution followed by the national information technology solution. The interim IT solution will comprise of two phases:

- **Enhanced Pilot:** Enhancement of the pilot IT system to accommodate the first two additional DHBs (Hutt Valley and Wairarapa). The Enhanced Pilot system will be available prior to the go-live of the two new DHBs in July 2017. Where manual processes are required for Hutt Valley and Wairarapa, training and testing of these processes is part of the overall readiness assessment for go-live.
- **Interim IT Solution:** EY were engaged to review the Pilot system to identify opportunities for technical and process-related enhancements to ensure the Programme implementation can continue in a safe and robust manner. Critical enhancements will be made to the Enhanced Pilot System, and manual processes designed, to accommodate further DHBs and the NCC from early 2018, as the Programme needs to continue to progress the national roll-out safely and in a timely manner. As the addition of further DHBs will significantly increase the volume of screening participants, the IT solution must be robust and able to manage the additional volumes safely. The interim IT solution does not enable a nationally integrated NBSP. DHBs on the interim IT solution will be migrated to the national IT solution at the appropriate time. Training will be provided to Southern and Counties DHBs prior to go-live.

Interim IT Solution Assurance

Assurance on the Interim IT solution has been provided by the Gateway review (May 2017) and EY Due Diligence on the Interim IT Solution (May 2017). A number of recommendations were made, some to be addressed with immediate effect and others to be addressed in due course.


The Gateway review s 9(2)(g)(i)

Of the EY Due Diligence assessment recommendations, four were identified as 'Significant', i.e. to be addressed prior to 1 July 2017. This reflects the EY assessment that these are areas where there is serious risk, issue or weakness requiring urgent Programme Board attention and resolution.

The EY recommendations and status are summarised in Table 3.

Table 3: EY Due Diligence May 2017 - Significant Recommendations

Ref.	Recommendation	Priority	Action Plan	Status	Commentary
C2.	*Technical Suitability:*	Significant	Upgrade the Enhanced Pilot IT Solution to operate as an enterprise grade solution within the Ministry's enterprise IT estate.	T&DS Project Manager and Solution Architect investigating options/solution	Planning is underway to migrate the BSP system to NZ Cloud provider and, at the same time, upgrade versions of operating fostware. To be completed prior to the next round of DHB onboarding.
C10.	*Risk Management:* 1. Ensure that the system risk appetite and tolerance for the bowel screening service is understood, articulated and communicated 2. Implement processes and practices to identify and manage new and emerging risks. Proactively monitor existing risks.	Significant	1. Carry out review with T&DS system risks 2. Monthly risk reviews. Risk reporting to Governance Group. Review and management of DHB risk registers 3. Allocate dedicated risk responsibility/accountability roles 4. Develop integrated risk management policies/procedures 5. Identify regulatory/legal compliance policies and frameworks. Ensure they are considered as part of the risk management	Complete 6/7/16 Completed Completed Completed Completed	Risk Management Plan has been updated to reflect EY recommendations. Risk acceptance has been discussed with Southern, Counties Manukau and Wairarapa DHBs by Implementation Manager with assistance from Business Analyst Lead. Risk workshop held with these DHBs, chaired/facilitated by the Ministry Risk Advisor.
C11.	*Business Continuity:*	Significant	1. Define the business continuity policy, objectives and scope for the Enhanced Pilot IT Solution. 2. Evaluate business continuity management options and choose a cost effective and viable continuity strategy that will ensure the recovery of the bowel screening service in the event of a major disruption. 3. Develop, test and implement a BCP that reflects current service requirements. This may include: a. Business critical information (e.g. minimum required service levels) is available to the Ministry. b. Sufficient resilience for critical screening services, including a clear definition of minimum service requirements, recovery time and point objectives. c. Defined service continuity tests that verify the effectiveness of the plan, and tests are executed periodically to ensure continuity can be achieved. d. Continuity training for internal and external parties (e.g. DHBs and clinics). e. Back up and restoration policies for the screening solution are in place.	In progress In progress In progress	Business Continuity Plan being drafted by the Business Analyst team with support from T&DS. Completion due 7/7/17 for Hutt Valley and Wairarapa DHBs.
C12.	*Disaster Recovery:*	Significant	1. Ensure the Enhanced Pilot IT Solution is supported by an adequate risk management plan 2. Define actions and communications required in event of a disaster 3. Define required roles, responsibilities and skill sets to support any disaster 4. Define necessary conditions and recovery procedures 5. Test disaster recovery plan across all involved parties 6. Publish plans and supporting documentation.	Completed Completed Completed Completed Planning underway Completed	Disaster Recovery test planning is underway and will be included with the move to the NZ Cloud provider.

National Information Technology Solution

The national information technology solution will be determined following the procurement process. The process, options, preferred approach and costs will be described in the NBSP technology business case which is to be presented late 2017.

3.7 Programme Roll-out

Implementation Timeline

The Programme Business Case described the planned roll-out of the Programme across four years, commencing in 2016 and concluding in 2020 with handover to business as usual. Whilst there has been no change to the overall duration of the Programme implementation, there has been some change in the dates for implementation within this timeline. The revised timing for the Programme implementation is shown in Figure 2.

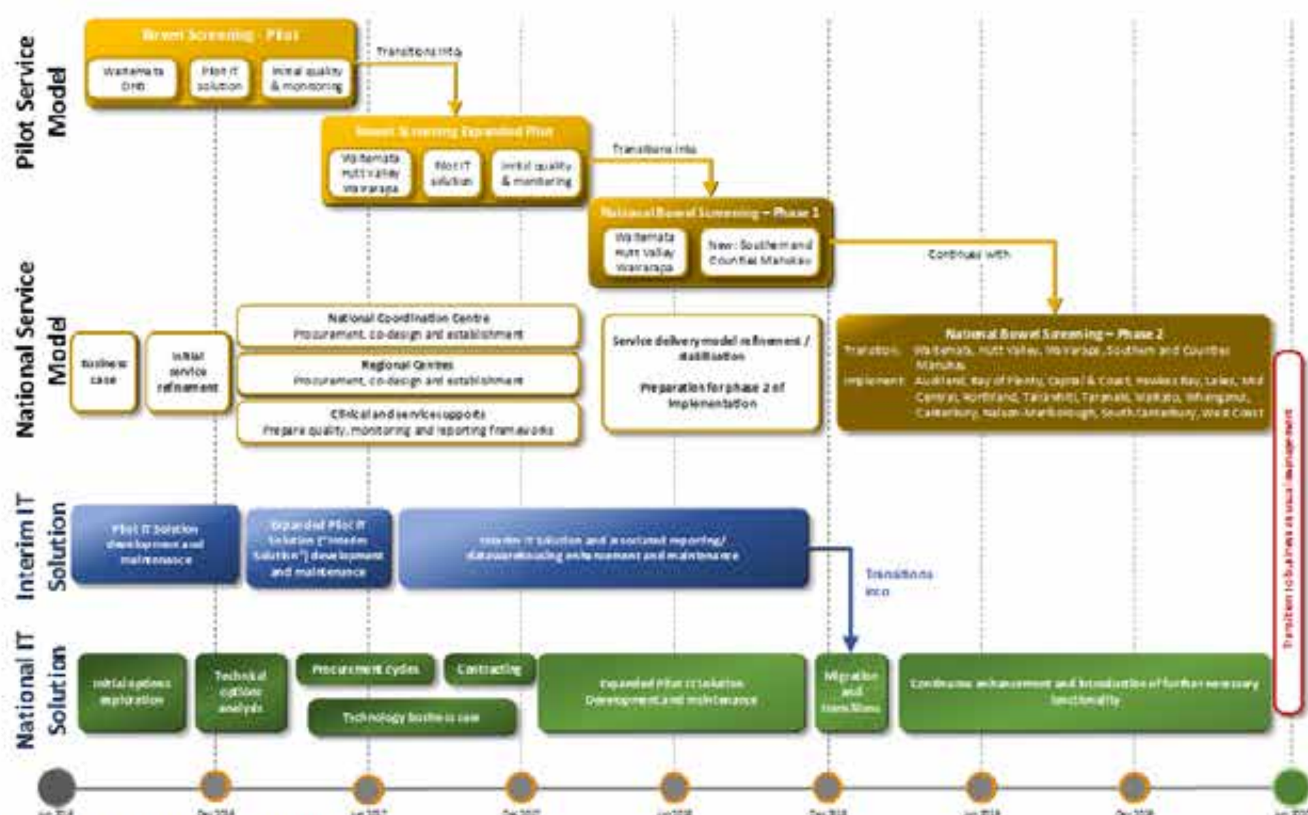


Figure 2: NBSP Implementation Timeline

DHB Order

The indicative timing and sequencing described in the Programme Business Case has been revisited and some changes to the roll-out order for the DHBs have been agreed[3].

The roll-out of the NBSP commences in 2017/18, expanding from the existing Bowel Screening Pilot at Waitemata DHB, to include Hutt Valley DHB and Wairarapa DHB from mid-2017. Further expansion of the nationwide programme will commence from mid-2018 with the addition of Southern and Counties, in April and June 2018 respectively, with service onboarding supported by the NCC.

The current planning assumptions is that up to ten further DHBs will commence screening in the 2018/19 financial year, assuming the availability of the national information technology solution, with the remainder following in the 2019/20 financial year. The order and timing for DHBs remains subject to their readiness to commence bowel screening.

DHB groupings are based on an assessment of capability and capacity. This includes achievement against Faster Cancer Treatment targets, colonoscopy waiting times and ability to treat, cancer incidence and population characteristics.

The decision on the next two DHBs (after Hutt Valley and Wairarapa) to commence screening was determined based on the weighted order (which includes cancer incidence), regional environment and implementation risk management, DHB readiness (e.g. dependency on building works being completed) and current colonoscopy indicator achievement. The current anticipated grouping of DHBs is shown in Table 4.

[3] Memo to Interim NBSP Governance Group from Deborah Woodley, Group Manager Personal Health Service Improvement, 11 November 2016.

Table 4: Phase Order for DHB Implementations[4]

Phase 1 DHBs (July 2017)	Phase 2 DHBs (Apr – Jun 2018)	Phase 3 DHBs (2018/19)	Phase 4 DHBs (2019/20)
Waitemata (Pilot already live)	Counties Manukau	Auckland	Bay of Plenty
Hutt Valley	Southern	Canterbury	Lakes
Wairarapa		Capital and Coast	Tairawhiti
		Hawke's Bay	Taranaki
		Mid Central	West Coast
		Nelson Marlborough	
		Northland	
		South Canterbury	
		Waikato	
		Whanganui	

3.8 Programme Management and Delivery

Governance

Since the approval of the Programme Business Case, changes have been made to governance arrangements to accommodate the alignment with the National Cervical Screening Programme (NCSP) Primary HPV Screening Implementation Project (as noted in Section 3.1).

There is a single Senior Responsible Owner (SRO) across the two initiatives. The governance for both initiatives is provided by the same members of the Executive Leadership team, to ensure consistency and alignment of the service delivery models and associated technology requirements, as well as prioritisation of deliverables and management of potential resource and timing conflicts between the two initiatives. This will ensure that the final service delivery model and supporting information technology is fit for purpose and provides a robust platform from which further screening programmes would be implemented.

The Governance Board and NBSP Steering Group are in place.

Programme Management

The NBSP Programme team at the Ministry has expanded as planned to meet the increasing demands of detailed implementation planning, managing the delivery of IT capability, establishing the NCC and Regional Centres, and supporting the DHBs to prepare for the roll-out of the Programme nationally.

Reporting and Assurance

The NBSP is subject to Treasury Major Projects Monitoring and Gateway reviews. This provides assurance within the Ministry, and to the Corporate Centre, on Programme progress and delivery.

- **Major Projects Monitoring**: Following the re-baselining of the NBSP, and the Cabinet support for the revised roll-out plan, the Corporate Centre delivery confidence assessment for the Programme has improved from Amber/Red to Amber. Regular reporting to the Corporate Centre is ongoing as part of Treasury Major Projects Monitoring Assurance.

[4] The DHBs are listed alphabetically by phase. This is not to be interpreted as the implementation order.

- **Gateway Review:** A Gateway review s 9(2)(g)(i)

Key Risks and Risk Management

Four key risk areas for the Programme were identified by the Gateway Review and are included in the Programme Risk Register. The current key Programme risks (including the risk areas identified by the Gateway review) and the actions being taken to address these risks are summarised in Table 5.

Table 5: Key Programme Risks and Risk Areas

Risk		Risk Management Strategy
Gateway Review identified Risk Areas	Consistent use of PRINCE2 methodology in programme/project management approach	• Assess application of PRINCE2 to NBSP Programme/Project Management. • Review product/artefact register. • Make enhancements to the management of risk (risk register etc.).
	Development of the national information technology solution	• Review the ROI responses, staffing expertise and NBSP's needs before commissioning the national information technology solution.
	Communications and relationships	• Ensure the [communications] collateral produced for the first three DHBs will be fit for the remaining DHBs as they come on board.
	Timeframe, in particular the large number of DHBs intended to go-live from January 2019	• Establish a robust Programme Schedule, including the critical path for the successful implementation of the NBSP. • Monitor and measure implementation against the NBSP Programme Schedule.
Other Key Programme Risks	If the Waitemata Data Manager (currently the first line of support for BSP) is not available there could be delays in resolving day-to-day operational issues with the system.	• Ensure there is a back-up data manager available for day to day first line support. • Include a requirement for a technical support data manager in the NCC contract.
	If the detailed cloud computing policy work currently underway results in an approach which is not aligned with the Ministry's initial preference and GCIO recommendations, this may impact the preferred national information technology solution	• Engage GCIO approved specialist consultants for development of cloud computing policy. • Ensure that any ROI/RFP responses including cloud computing components meet any Ministry of Health cloud computing policy guidelines.

Risk		Risk Management Strategy
	If the DHBs are unable to deliver timely and effective colonoscopy services due to lack of capacity required for the NBSP, then the expected benefits will not be realised by the Programme	• Provide support to DHBs to ensure smooth implementation of services. • Develop and maintain processes for support and implementation of DHBs leading up to their go-live and post-go-live support to ensure quality delivery of service and achievement of benefits.
	If the national information technology solution is delayed or has insufficient functionality, DHB roll-out may be delayed	• Programme Timeline has been re-baselined with national information technology solution now scheduled to be in place by mid-2019.

4 National Coordination Centre

4.1 Purpose

The Ministry requires a National Coordination Centre (NCC) to manage participant invitation and screening, monitor and follow up on participation and resolve or escalate exceptions. In addition, the NCC will support the Ministry in monitoring performance, ensuring national Programme quality (Quality), and promoting equitable participation nationally (Equity).

4.2 Procurement Process

Request for Proposals (RFP)

The RFP for an NCC ran from 1 February to 17 March 2017. The requirement is for an NCC which:

- Is committed to ensuring a high quality, efficient screening process with security of information, efficient processes for distribution and collection of tests and a commitment to the overall objectives of the NBSP;
- Has a strong relationship with the Ministry of Health;
- Has strong relationships with the four Regional Centres and 20 DHBs;
- Has a strong working relationship with the laboratory providing NBSP laboratory services (including processing of the FIT kits);
- Utilises and supports the national information technology solution;
- Has the potential scalability to support the wider National Screening Unit programme requirements.

Scope of Purchase

The scope of the purchase is described in Table 6.

Table 6: NCC Scope of Purchase

Scope of Purchase

Provision and management of the following core services:
a. The central database/register for the NBSP and associated IT system:
    a. data quality management; and
    b. testing and integration of the system (when required).
b. General communications to participants:
    a. communicate a negative result to a participant and their GP;
    b. communicate a positive result to a participant as a failsafe, if not contacted by GP or endoscopy clinic; and
    c. support awareness raising for all potential participants.
c. Centralised coordination of the NBSP – registration, invitation and screening of participants:
    a. ensure eligible population for screening receive an invitation to participate in the Programme;
    b. keep the database up to date;

Scope of Purchase
c. undertake tasks generated by the IT system to ensure participants complete the pathway in a timely manner; d. ensure quality of their service and contribute to its improvement; and e. support the Ministry to ensure the quality of the NBSP. d. Contact centre services: a. handling inbound queries and outbound contact to support participants. e. Mail house services for the storage and dispatch of screening kits and collateral: a. distribute screening kits to participants; b. store screening kits and collateral prior to distribution; and c. provide input into the design and creation of collateral and distribute collateral on behalf of the NBSP.

Recommendation

Two responses were shortlisted. These were assessed by individual evaluation and consensus scoring. The Evaluation Team's recommendation was that the Programme should commence negotiations with Homecare Medical Limited, for the provision of the NCC. The recommendation was formalised and approved by the Programme SRO. The preferred supplier and unsuccessful respondents were notified of the outcome.

TressCox Lawyers were engaged to provide probity advice throughout the process.

4.3 Service Delivery

Through the contract negotiation, the Programme and provider will confirm the service delivery approach. The outline intended approach, as described by the preferred provider, is summarised below.

Approach

The provider intends to model the as-is processes from the Enhanced Pilot IT System, and to then extend those to national scale through co-design of materials with target populations, stakeholders and the NBSP Programme team; evolution of the processes and communication techniques to automate and extend them; and creation of options for more immediate and low-cost interactions with Programme participants.

The provider intends to leverage the existing stakeholder management teams, digital response centre and web platform that have been developed in partnership with the Ministry to deliver the National Telehealth Service since mid-2015.

Interface and Integration

A key aim of the implementation process is to design and implement an integrated service that has no gaps between the various providers that will be part of the NBSP. This will ensure that the end-to-end service delivery, and supporting information flows, are seamless.

Integration with NBSP Partners: The majority of information sharing and monitoring will be achieved via the national information technology solution. Non-system interactions will be documented in the implementation phase to ensure that the necessary communication processes are designed and roles and responsibilities are clear. Partners will receive notifications, referrals and summaries from the national information technology solution.

Capability, Capacity and Expertise

The solution will use a combination of trained and clinical staff. The majority of administration and much of the telephone work will utilise trained non-clinical staff. These staff will have the skills necessary to answer most common questions on the pathways within the NBSP. They will be responsible for following up participants or service providers for participants who are "off pathway," will answer inbound calls from participants, and undertake any necessary outbound calling at times convenient to participants.

Where participants seek clinical information they will be transferred to nursing staff. Homecare Medical's nursing staff already provide support to participants within the Pilot, with the majority of this support being around the specific colonoscopy preparation protocols, including interactions with pre-existing conditions such as diabetes.

Where participants become anxious or distressed in relation to the Programme, access is available to qualified counsellors, registered mental health nurse staff, social workers and psychologists. If the participant interaction highlights underlying health or mental health issues, they can be directed to other services, helping them to connect with the wider health sector.

Communication

Once the Programme is in place, a regular innovation cycle can be completed reviewing Programme outcomes and analysing groups that did not participate, to plan different approaches where required. Messages and approaches can be tailored, to ensure regional and cultural appropriateness. The success of approaches will be measured and tracked over time.

In liaison with the Programme, initiatives including ongoing digital and mass market campaigns can be undertaken to retain a base-level of awareness in the general population and to create a platform for participants to engage. New channels may be added to maintain currency with the evolving media and communications market.

Implementation

The NCC implementation will be managed in five stages: initiation, solution design, development, transition and operation. The timeline for becoming operational aligns with the current Programme implementation roll-out. Any variation to the Programme timeline would be mirrored by the NCC timeline.

Data Quality and Timeliness

High quality data includes, maintaining participant contact details and tracking progression through the lifecycle. The supplier will enhance this data through richer contact details including communication channel preferences and consent for contact via those channels. This information will be loaded directly into the national information technology solution to enrich Ministry data holding. The national information technology solution will be updated in real-time for all personal contacts, and as soon as practical for bulk actions (such as physical mail, bulk email and other campaigns).

Systems, Tools and Technology

The new NCC service delivery model would utilise the Homecare Medical virtual contact centre and associated organisational capabilities, to provide multi-channel contact and coordination with NBSP participants and stakeholders. This solution allows contact centres to operate across four locations (Wellington, Christchurch, Auckland and Dunedin). The virtual desktop is available across two data centres to provide resilience (business continuity) and is available via the internet for off-site users. Security is protected through two-factor authentication. A range of tools will be available to operate the service robustly and provide multi-channel contract options for the Ministry. The national information technology solution

provided by the Ministry would be the core Customer Relationship Management (CRM) / customer contact database for all activities and for analytics that are used for continuous improvement.

4.4 Contract Terms and Implementation Arrangements

The negotiation process commenced following the approval of the evaluation panel's recommended preferred supplier for this service.

The services to be procured are as per Table 6. The implementation milestones, payment approach, risk apportionment and contract terms will be agreed through the negotiation process.

The overall contract value, as per the tender process, is within the expected budget and no change is expected to the overall Programme budget for this service. Funding arrangements and contingencies, as well as the costs across years for the implementation and subsequent operation, will be finalised in the contract negotiations.

Review arrangements, including project evaluation and post-implementation review will be confirmed as part of finalising the contract arrangements.

5 Bowel Screening Regional Centres

5.1 Purpose

The Ministry requires Bowel Screening Regional Centres (the Regional Centres) to support the implementation and ongoing management of the NBSP in the DHBs. The Regional Centres key functions are to:

- support an equity approach to services;
- provide support to DHBs in the region in preparation for 'go-live';
- support regional production planning, adverse event and incident management;
- monitor quality along the screening pathway, adhering to national quality standards;
- provide clinical leadership for colonoscopy, laboratory, Computed Tomography Colonography (CTC), primary care and surgical services;
- develop regional plans as required; and
- work closely with providers including Endoscopy Governance Group NZ (EGGNZ), National Endoscopy Quality Improvement Programme (NEQIP) and the Ministry of Health.

5.2 Selection, Establishment and Service Delivery

This section provides a summary of the Regional Centres' selection, establishment and service delivery approach. A more detailed summary, including the evaluation of the selected providers, is attached as Appendix 2.

Procurement Process

No formal procurement process was undertaken to identify and select the Regional Centres. The Programme team approached the DHBs directly to identify the Regional Centres, as this was considered to be the best approach to achieve regional collaboration, deemed critical for the success of this function.

Criteria for Selection

The following criteria were used to select the Regional Centres:

The organisation has:

- demonstrated willingness to work collaboratively with the Ministry;
- existing strong relationships with DHBs, primary care, and social services providers;
- demonstrated understanding and experience of quality systems;
- appropriate technology and technology support capability to deliver services and share information with DHBs and the NCC;
- high quality, documented, business processes;
- high levels of cultural awareness and engagement (particularly with priority populations);
- demonstrated understanding of the regional population;
- appropriate staffing to support delivery of the required services;
- the ability to deliver services in alignment with the Operational Policy Framework; and
- an understanding of screening principles, and preferably experience in delivery of screening programmes.

The organisation has clinical staff with:

- appropriate certification to deliver Regional Centre quality services;
- a good understanding of quality standards and quality improvement processes;
- sufficient capability, cultural competency, knowledge, and experience to have the respect of peers and provide clinical leadership; and
- the ability to lead a team and support colleagues.

Selection

Each of the four Regions has selected a DHB to fulfil the role of the Regional Centre. The Regions and their preferred suppliers are:

- Northern – Waitemata DHB;
- Midland – Waikato DHB in partnership with the Midland Cancer Network, HealthShare Limited;
- Central – Hutt Valley DHB; and
- Southern – Southern DHB.

Nationally, other potential suppliers considered included Primary Health Organisations (PHOs), cancer networks, existing screening services, Māori health providers, Technical Advisory Services (TAS) or going to the market through a contestable tender process. Assessment of a lead DHB compared with potential alternative providers concluded that DHBs were best placed to undertake this role. They have existing relationships with the other DHBs in their region, have structures and governance arrangements which support this role, and for some (Waitemata and Hutt Valley) they are already delivering, or are about to deliver, bowel screening.

Each of the DHBs selected has the support of the other DHBs in their region and this has been confirmed to the Ministry Programme team.

Establishment

Strategic Alignment: Each Region has identified local strategies and plans which will be supported by the implementation of bowel screening. These include regional health and service plans, cancer strategies, DHB annual plans, Faster Cancer Treatment and Elective Health targets, colonoscopy and radiology wait time indicators, and Māori health and equity strategies.

Key Risks: There is broad consistency across the Regional Centres in the key risks that have been identified. The risks will be refined and tested further with the Ministry team as part of detailed planning, to ensure consistency (where appropriate) between the Regions in how these risks are addressed. The Programme recognises that there is likely to be some variation between Regions in how some risks are managed, due to varying local circumstances. The key risk areas identified by the Regional Centres have been summarised and consolidated in Table 7. The detail of the risks and mitigations is included in Appendix 2.

Table 7: Regional Centre Consolidated Risks

Consolidated Key Risks	Summary
Funding	• Funding available may be insufficient for the proposed Regional Centre approach. Some changes may be required, e.g. in resourcing. This will be addressed through contract negotiations between the Ministry team and Regional Centres.
NBSP implementation timing	• Uncertainty on timing is impacting stakeholder confidence and reducing the Region's ability to plan, prepare and recruit in an environment with no definitive go-live dates. • NBSP implementation delays could impact on resource requirements.

Consolidated Key Risks	Summary
IT solution	• Timing for national information technology solution yet to be confirmed. Uncertainty on how the national information technology solution will be implemented/integrate with DHB systems. Work is underway to clarify the timing and requirements.
Workforce	• Potential challenges in recruiting and retaining appropriately skilled and qualified staff due to Programme uncertainty. • Potential for competing demand for staffing across multiple health sector activities.
Equity	• Potentially insufficient emphasis on equity and participation for priority populations. • Lack of clarity on responsibility for equity at national, regional and district levels.
Clarity on service deliver model and roles and responsibilities	• Without clarity, service delivery may be based on incorrect assumptions. Clear contracts are needed to detail what is provided and by whom, between the NCC, Regional Centres and DHBs. • Lack of clarity about responsibility and accountability for relationships with primary care. • Poor stakeholder understanding of the value of the Regional Centres.
Quality	• Quality standards are not yet finalised. Potential that service delivery approach does not meet the expected standards once these are advised. • Lack of clarity about responsibilities and accountability for quality at national, regional and district levels.
Different approaches for DHBs within a Region	• Potential for disagreement between DHBs in key areas to progress the implementation of NBSP. • Support for Regional Centre is reduced at governance, clinical and/or management levels, affecting reputation and credibility.
Communication with Ministry NBSP team	• Delays in communication on NBSP approach and requirements may impact on ability/resources needed to respond within the required timeframe. • Planning is made on assumptions which may prove to be incorrect.

Constraints and Dependencies: There was a level of consistency across the Regional Centres with the main constraints (limitations imposed from the outset) and dependencies (external actions/developments outside the control of the Regional Centres, upon which success is dependent). The key constraints identified included timeframes, funding, resourcing/full time equivalent (FTE) caps, availability of information to support planning and decision making, narrowness of scope (i.e. bowel screening pathway only and not the whole colorectal pathway) and availability of a facility to locate the Regional Centre team. The key dependencies included the availability of funding, the delivery of the national information technology solution, level of regional commitment, confirmation of timing, availability of strategies (e.g. equity, health promotion and opportunistic participation), and establishment of the NCC.

Stakeholders, Communications and Engagement: Each Regional Centre has undertaken an analysis of local stakeholders, to identify those with most influence and those who will be most impacted by the establishment of the Regional Centre and implementation of NBSP. This analysis is feeding into the Communications and Engagement Plans which are being drafted, to identify mechanisms and timings for these activities. In developing their proposals, each Region has undertaken fairly wide engagement with key stakeholders, including clinical and management leads, Māori and equity partners, primary care and PHOs, and the Ministry team.

Governance: Whilst the intended governance arrangements vary slightly across the Regional Centres, each Region has identified a structure which allows reporting and accountability to the DHBs within that Region. Local DHB Steering Groups and Governance Groups have been or will be established, to formalise the role of the Regional Centre and its relationship with both the hosting DHB and with the partner DHBs. The NBSP governance structure with the Regional Centres has yet to be developed.

Project Management and Staffing: The Regional Centres have identified project management approaches which suit their local environment. PRINCE2, or a modified version thereof, is a preferred methodology for project management. Training and support on the project methodology will be provided by the Regional Centres where required. This will ensure that the implementation projects are managed in a structured way, with the development of appropriate processes and documentation to provide assurance of effective management. Staffing approaches will vary to a degree across the Regional Centres, with a combination likely of secondments, fixed term appointments and permanent appointments. In this way, risk can be managed as staffing levels can be flexed to meet the demands at that time.

Reporting: Reporting to the Ministry team will be as per the agreed contracts and will include reporting on implementation progress, quality and ongoing monitoring of performance. The Regional Centres will also provide reporting to the host DHB and other DHBs in their Region, as agreed locally. Further reporting will be made to certain groups, such as Māori leaders, clinical leads etc.

Change Management: Change management will be managed through the Regional Centres. The UK National Health Service (NHS) Change Management approach is the basis for change management for the Central and Midland Regional Centres. The Regional Centres will support local change management within the DHBs as they prepare and go-live. The change managers will also work closely with the change resource in the Ministry, which will provide guidance, support and resource as needed. The importance of effective change management is recognised by all of the Regional Centres.

Key Milestones: The Regional Centre indicative timelines with key milestones are attached as Appendix 2.

Delivery of Services

The Regions have confirmed their support for the Regional Centres, subject to agreement on the service delivery model, roles, responsibilities and funding. Each Regional Centre proposal has identified its approach to service delivery based on information and planning to date, and estimated the resources required to deliver services. The Ministry team is working with the Regional Centres to confirm the planned approach and therefore resourcing. Significant further planning is required prior to go-live, and some approaches may change as a result of contract negotiations between the Ministry team and Regional Centres, as well as subsequent detailed planning which will take place once the contracts are agreed.

Service Delivery: As the Regional Centres will have DHBs going live at different times, the timing of establishment and reaching full capacity will vary. The Waitemata, Hutt Valley and Southern Regional Centres have DHBs going live in 2017/18 and early 2018/19. Midland Regional Centre has no DHBs going live this early, but will still need to recruit and establish early enough to provide support to their first DHBs preparing for go-live. Staffing structures, as noted above, are expected to be flexible to reflect the changing demands between initial establishment, full support to DHBs implementing NBSP, and then into business as usual following the final go-live in their region. The Midland Regional Centre will work with the Midland breast and cervical screening services, as a collaborative approach will ensure appropriate learning from other screening services is applied to bowel screening.

Quality: The Regional Centres will support the DHBs to develop events and incident reporting and monitoring, as well as monitoring and reporting on trends and providing support and guidance where required if issues arise. The Regional Centres will support the Ministry team in ensuring quality standards are met. The Regional Centres will provide clinical leadership to support consistency across the regional DHBs. Support will be provided as appropriate for DHB education initiatives.

Supporting and Promoting Equity: The Regional Centres will support DHBs to promote and maximise participation for priority populations. Examples of equity activities across the Regional Centres include: Māori co-design of strategies to facilitate uptake; community health literacy and awareness; initiatives to reach immigrants, non-enrolled, vulnerable and transient populations; ensuring all DHBs have equity plans and ensuring equity awareness in Regional Centre and DHB staff and in primary care; and having equity 'champions'.

6 Quality Assurance and Improvement

6.1 Approach and Framework

Approach

The Ministry has well developed quality standards in place for the Bowel Screening Pilot. The quality standards cover the screening pathway, from screening uptake through to referral pathways for treatment. These have formed the basis for the interim quality standards which will then form the basis of the national policy and quality standards.

Quality Framework

The NBSP National Quality Framework will be integrated into the National Screening Unit Quality Framework (2015) which defines a set of key quality principles and requirements to ensure the best possible outcomes from screening programmes in New Zealand.

The Ministry has finalised Interim Quality Standards for the Waitemata, Hutt Valley and Wairarapa DHBs. Work is underway to develop the National Policy and Quality Standards and the first version is expected to be completed by September 2017. Work is also underway to document Clinical Guidelines that describe best clinical practice for the bowel screening pathway, based on the Bowel Screening Pilot.

6.2 Endoscopy Quality

Colonoscopy service provision in particular requires clear standards and close monitoring. The Ministry has contracts with the Northern Regional Alliance to host the Endoscopy Governance Group New Zealand and Hawkes Bay DHB to host the National Endoscopy Quality Improvement Programme. These contracts support colonoscopy quality by providing the ongoing governance and operational support for quality improvement in publicly funded endoscopy units using the New Zealand version of the Global Rating Scale (NZGRS[5]). The Ministry is currently negotiating an extension to each of these contracts until June 2020, with an initial focus on the DHBs rolling out NBSP in the 2017/2018 financial year.

Endoscopy Governance Group New Zealand (EGGNZ)

EGGNZ is comprised of members from all professional bodies and societies whose members are involved in delivering endoscopy in New Zealand. EGGNZ acts as the governance body providing oversight and strategic advice to the National Endoscopy Quality Improvement Programme. EGGNZ is providing a forum for gaining professional agreement on standards and will provide advice on how to provide accreditation of endoscopy services to those standards.

National Endoscopy Quality Improvement Programme (NEQIP)

NEQIP uses the NZGRS service improvement framework to facilitate coordinated quality improvement of DHB endoscopy units. NEQIP provides DHBs with support and access to resources and tools to facilitate safe, patient-focused endoscopy services that are efficient, accountable and sustainable.

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[5] The NZGRS is a web-based self-assessment quality improvement tool adapted for New Zealand. It provides a set of standards that enable endoscopy units to assess how well they provide a patient-centres service.

7 DHB Implementations: 2017/18

7.1 Hutt Valley, Wairarapa and Waitemata DHBs

Hutt Valley and Wairarapa DHBs have been working closely with the Programme team at the Ministry and the Bowel Screening Pilot team at Waitemata DHB, to ensure readiness for go-live in July 2017.

Waitemata DHB

Waitemata DHB has contracted with the Ministry to extend the existing coordination centre services to Hutt Valley and Wairarapa DHBs, and to participate in readiness assessment at all three DHBs in preparation for go-live.

The Waitemata DHB programme and clinical leads have provided coordination and support, advice and guidance to the Hutt and Wairarapa DHBs. All preparatory work was completed as planned, including the forecasting of additional screening kit components and reagents, the revision of the training manual and completion of training for system users, extension of the information line staff manual and activities to enable laboratory messaging to GPs in the Hutt Valley and Wairarapa DHBs.

Waitemata DHB has also participated in the review and development of the Interim Quality Standards to ensure they are appropriate for Hutt Valley and Wairarapa DHBs, as well as for the national context.

The IT subject matter expert at Waitemata DHB has worked closely with the Ministry's IT team, the developer of the existing Pilot IT system and the Hutt Valley and Wairarapa DHBs, to ensure the Enhanced Pilot system is able to support the extended population.

Hutt Valley DHB and Wairarapa DHB

The Programme Business Case (Part B) sets out the local context, proposed approach, timing and costs for the Hutt Valley and Wairarapa DHBs. There are no changes to the governance and project management arrangements as described in the Programme Business Case (Part B). The colonoscopy and treatment services as outlined in the Programme Business Case are unchanged and there are no changes to the benefits, constraints and dependencies previously identified. Updates to the information provided in the Programme Business Case (Part B) are summarised below.

Stakeholder Engagement and Communications: There has been extensive communication and engagement with stakeholders in the preparatory period for go-live. The DHBs are well supported by their stakeholders, with excellent participation in meetings and events. Communications and engagement has included: regular project meetings, wider stakeholder meetings, workshops on quality and equity, clinician engagement, presentations, newspaper articles and newsletters. Wairarapa DHB also sought to raise wider public awareness through the Cancer Society Relay for Life. Engagement with PHOs and GPs has occurred at a variety of meetings to discuss implementation and ongoing activities for the Programme.

Key Risks and Issues: These have been monitored and managed throughout the preparatory period to minimise the risk to successful go-live.

Demand Management: Alongside the implementation of the NBSP, the DHBs will continue to manage symptomatic demand. Both DHBs have considered resources required, including workforce, facilities and equipment as detailed below. The DHBs continue to focus on lean management for systems and processes within services and are constantly looking at ways of optimising efficiency to achieve overall service sustainability. Both DHBs are currently meeting targets for symptomatic and surveillance populations.

Workforce: At both sites, work was undertaken to identify requirements to meet additional demand. This included medical, nursing, administrative and other roles. Activity levels and the associated pressures on staffing will be monitored as the Programme rolls out, and any increase in staff requirements will be considered within wider work planning, and DHB budgeting and workforce planning/development. The current plans for workforce are:

- Hutt Valley DHB: Additional Senior Medical Officer (SMO) FTE is being recruited to meet the NBSP demand. Additional FTE is being recruited to meet colonoscopy lists and the specific NBSP nursing activities. A small increase in administration time is required to support the Programme implementation.
- Wairarapa DHB: No additional SMO time is required, as the demand will be met within current capacity. Additional FTE is required for nursing and administration.

Facilities/Capacity: At Hutt Valley DHB there is currently a procedures room within endoscopy that is underutilised. This space will be made available for Bowel Screening Colonoscopies and resourced to meet Programme needs. Wairarapa DHB will include Bowel Screening Colonoscopies within current lists, and has confirmed that there is the capacity for this.

National and Regional Coordination: The DHBs will utilise the Interim Coordination Centre at Waitemata DHB until the NCC is available and the DHBs transition to the new service model. The Ministry holds a contract with Waitemata DHB (as the Interim Coordination Centre) and holds a contract with the FIT laboratory (LabPlus). The DHBs have been working with the Bowel Screening Pilot on the provision of the Lab Doctor Dictionary, the PHO age/sex registers and on the messaging mechanisms for the results. Currently, the regional responsibilities are split between the Interim Coordination Centre and the Hutt and Wairarapa DHBs, until the Regional Centres are established.

IT Solution: The DHBs will go-live in July 2017 with the Enhanced Pilot IT system. They will remain on this system (with further upgrades/enhancements as they are rolled out) until migrated to the national information technology solution. Whilst the DHBs are using the Enhanced Pilot system, it is not anticipated that there will be any integration with the DHB endoscopy systems. Integration would be complex and would require additional funding, which would be of limited value as the DHBs will eventually transition to the national information technology solution, which will have full integration. Therefore, in the interim, data will be stored on the DHB endoscopy systems as well as manually entered onto the Enhanced Pilot system. Monitoring and reporting will be available through the Programme.

Readiness Assessment

A comprehensive readiness assessment approach was developed for Hutt Valley and Wairarapa DHBs. This readiness assessment template will be reviewed following the rollout to these DHBs, and modified as required for the later DHB rollouts.

Readiness assessment for Hutt Valley and Wairarapa DHBs was held on 14 and 15th June 2017 and for the interim Waitemata coordination centre on 26th June 2017. The go/no-go decision was made at the Governance Group meeting on 28th June 2017.

The readiness assessment evaluation areas are summarised in Table 8.

Table 8: Readiness Assessment Evaluation Areas

Criteria	Assessment Area
Governance, leadership, management	• Leadership, accountabilities, performance monitoring and management • Production plan • Staffing • Quality standards
Promotion and Equity	• Promotion and equity
Preparing Primary Care	• DHBs • PHOs • GPs
Referral and pre-assessment	• Referral and pre-assessment
Information Systems and Resources	• Information systems and resources
Colonoscopy	• Staffing, training and supervision • Management of family history • Colonoscopy • Capacity to undertake alternative investigations • Processes for Continuous Quality Improvement • Facilities • Reporting

7.2 Southern DHB

This section provides a high-level summary of the planning for implementation undertaken for Southern DHB. A more detailed summary is attached as Appendix 3. The DHB has agreed a start month of April 2018, subject to readiness. Formal commitment to implementing NBSP will be confirmed through agreement of a contract to implement, as part of detailed implementation planning.

Overview

Southern DHB combines the previous Otago and Southland DHBs and covers the largest geographic DHB area in New Zealand. Approximately 60 percent of the population live in the two cities, Dunedin and Invercargill, with the remainder of the population living in rural areas widely dispersed across the district.

The DHB has an estimated resident population of 319,200 people (as at 2016). Over the next 30 years, the Southern DHB population is projected to grow on average 0.35 percent per year. Whist the total population of the DHB is not projected to have significant growth, sub-regions are projected to have different population patterns for growth and decline, as well as population composition.

The Southern DHB population tends to be slightly older than the national average. The proportion of the population that is aged 65 or over is projected to increase in all areas within Southern DHB, and to be at higher levels than elsewhere in New Zealand. The DHB has a significantly lower proportion of Māori and Pacific people in the eligible population in comparison with the national average. The average deprivation level for the eligible population in Southern DHB is low, with only approximately 10 percent living in quintile 5 (most deprived), much less than the national average of 20 percent. In contrast, 25 percent live in quintile 1 areas (least deprived), above the national average of 20 percent.

Almost ten percent of all ethnic groups are in the most deprived quintile (deciles 9 and 10). These are considered to be priority populations for the Programme and the DHB has also identified rural populations [particularly in low decile areas], disability and mental health people as priorities. The DHB will focus on ensuring access for these populations.

Southern DHB has high colorectal cancer incidence and mortality rates compared to the rest of New Zealand.

Existing Services

Southern DHB provides comprehensive services for people with suspected and confirmed bowel cancer. These include diagnostic services, colonoscopy (including surveillance), CTC, surgical and oncology services. Multi-Disciplinary Meetings are held for lung, breast, bowel and urology.

Southern DHB is performing well on colonoscopy wait time indicators, exceeding expectations for most of the last two years. As at March 2017, 91 percent of urgent colonoscopies were performed or waiting 14 days or less (target 85 percent), 91 percent of non-urgent colonoscopies performed or waiting 42 days or less (target 70 percent) and 93 percent of surveillance colonoscopies performed in 84 days or less (target 70 percent).

Strategic Alignment

The NBSP is aligned with local and regional strategies and plans, including the Southern Strategic Health Plan 2015, the Southern DHB Annual Plan 2016/17, Southern DHB Māori Health Plan 2016/17 and the South Island Alliance Plan 2016/17.

Benefits and Disbenefits

Southern DHB has identified local benefits and disbenefits for its population (in addition to the benefits and disbenefits expected for all New Zealanders as a result of implementing the NBSP). As Southern DHB has high colorectal incidence and mortality rates compared to the rest of New Zealand, the early implementation of NBSP in this DHB will be of particular benefit. Local benefits include improved colonoscopy standards for symptomatic patients, enhancement of reporting and ability to link with the Patient Management System, and improved relationships with primary care and local Māori. It will also support the development of the Southern DHB single service multi-site working model.

The DHB recognises local disbenefits, including a lack of alignment with Māori needs and slower postal services compared to urban areas. In common with other DHBs, Southern DHB will experience impacts on surgical and oncology treatment scheduling and costs. Identification, measurement, tracking and reporting of benefits will be undertaken to ensure that the expected national outcomes are realised.

Key Risks, Constraints and Dependencies

Key Risks: Southern DHB has identified a number of risks for the implementation of NBSP. A local risk register has been developed and will be maintained and expanded as the preparations for implementation progress. The highest rated risks identified at this time are:

- **If the new endoscopy suite at Dunedin Hospital is not available on time the DHB may not have sufficient capacity to undertake NBSP colonoscopies in the public system, potentially delaying or preventing the implementation of NBSP.** The tender for the rebuild has been awarded. It is anticipated that by January 2018 there will be a clear indication as to whether the endoscopy suite will be completed by the end of May 2018 (when colonoscopy demand will begin to increase following the first kits being sent out in April 2018). If in January 2018 it is anticipated that the new endoscopy suite will be delayed further, Southern DHB has three options, which would probably be combined to provide a short-term solution:
    - provide screening colonoscopies in Dunedin out of usual hours until the unit is ready;
    - outsource either diagnostic or screening colonoscopies to the local private provider (which has indicated that they have the capacity if required);
    - provide an increased level of screening in Invercargill, where capacity will be available in the initial period of bowel screening.
- **If surgical procedures resulting from NBSP cannot be accommodated in Southern DHB theatres, activity will need to be outsourced.** This will be addressed by:
    - considering options developing a proposal to increase theatre capacity;
    - outsourcing of work to private providers.
- **Insufficient oncology capacity to cope with increased demand may result in delays in patients being treated and failure to meet FCT targets.** NBSP will result in a 'spike' of cancer patients, which will add to an already increasing waiting list. This risk will be addressed by:
    - process mapping of oncology services to identify areas for streamlining.
- **If sufficient endoscopy capacity is not available by the commencement date, this may result in delayed or poor implementation of NBSP.** This will be addressed by:
    - FTE dedicated to the Programme to mitigate conflicting clinical commitments.
    - Use of nurse endoscopists to provide primarily gastroscopies and some symptomatic colonoscopies, allowing other endoscopists to provide the NBSP services.
    - re-allocation of work, incentivising additional work (sessional lists) or outsourcing work (bringing private providers into the DHB) to free up the necessary resource will mitigate the risk.

It is acknowledged that Southern DHB has a significant agenda of work that it is undertaking at present, with the current realignment of management staff, the new hospital build, the interim works and the implementation of the NBSP. The DHB has confirmed that, with the additional resource that is anticipated for the Regional Centre, it has the necessary capacity to successfully implement both bowel screening and the Regional Centre. Programme Managers will be recruited for the NBSP in Southern DHB and also for the Regional Centre, and they will be supported by the Service Manager for gastroenterology, who has performed this role to date and is not part of the current realignment of management staff. The Programme Team at the Ministry will work closely with Southern DHB in preparing for the implementation of bowel screening, providing support as required to ensure safe go-live.

Key Constraints: The main constraints for Southern DHB are the ability to recruit sufficient appropriate staff, for processes (e.g. business case sign off) to be completed in a timely manner, adequate funding and the availability of an IT solution which is integrated into local systems. The DHB and Programme teams are working together to manage these constraints to ensure there is minimal/no impact on the Southern DHB implementation.

Key Dependencies: An adequate IT solution must be in place, and agreements must be in place with primary care and the Southern Community Laboratory. The approval of this NBSP business case is required for the roll-out.

Stakeholder Communication and Engagement

The most influential and impacted stakeholders are the NCC, South Island endoscopists, general and colorectal surgeons, and nurses. Other highly impacted stakeholders include the Southern DHB Information Systems Group, South Island DHBs, GP teams, pathology and laboratory staff and eligible participants. Other highly influential stakeholders include the Ministry NBSP team, South Island DHB hospital and general managers and Chief Medical Officers, Clinical Leads Oversight Group, Southern DHB Commissioner and Chief Executive, and the Southern Cancer Network

An indicative communication and engagement approach and plan has been developed, describing the proposed mechanisms being/to be used. Key engagement and communication activities to date include ongoing engagement between the Southern DHB and Ministry teams, presentations and reports, and engagement with key groups including clinical and management teams and Māori advisors.

Management of Projected Demand

Colonoscopy demand is modelled at between 700 and 800 NBSP colonoscopies in the first two years, reducing to between 500 and 600 per year thereafter, with a slow growth in NBSP surveillance colonoscopies. The anticipated number of bowel cancers which will be detected is approximately 60 in the first two years, and approximately 30 in subsequent years.

In planning the delivery of services, demand management (how symptomatic demand will be managed alongside screening demand), facility and workforce requirements were considered. This is to ensure that the NBSP can be implemented successfully, without a significant negative impact on existing services and symptomatic patients. The preferred approach for each service area is summarised below.

- **Colonoscopy:** Bowel screening and symptomatic endoscopy will be provided within the DHB as it is the most affordable option and the DHB has the ability to control and monitor all aspects of the service, especially in relation to quality standards for NBSP. IT integration will be needed with DHB systems only (not third-party systems). There is flexibility to engage with private providers of the service to work in the DHB if workforce issues dictate. There is a single referral pathway and processes to colonoscopy for primary care.

- **Surgical Demand:** Additional surgical procedures will be provided within the DHB. An increase in theatre capacity will be required through increasing medical, nursing, and ancillary staffing FTE, and some outsourcing of some other surgical procedures to allow for provision of NBSP related surgery within the DHB.
- **Radiology:** Provision of additional radiology capacity through consistent access to CTC across the District and bringing CTC in-house in Dunedin. This is expected to meet the additional volumes required, but will require a change in service level provision in Southland. The option provides best value for money and would be significantly cheaper that outsourcing.
- **Histology:** Additional histology volumes will be managed by a contractual arrangement with Southern Community Laboratories (SCL). SCL have indicated that they have the capacity to undertake the additional volumes.
- **Facilities:** No additional capital investment is sought. Funding has been approved separately for a rebuild of the endoscopy facility at Dunedin Hospital.
- **Workforce:** Options for increasing workforce include increasing gastroenterologists, general surgeons who undertake endoscopy and training nurse endoscopists. It is not envisaged that nurse endoscopists will participate in the Programme; however, they will be able to provide the symptomatic endoscopy service, which will allow endoscopists to undertake screening colonoscopies.

Southern DHB has approached the NBSP rollout in a practical, considered way and will apply the same levels of expertise and energy with which they have successfully implemented and sustained the Colonoscopy Waiting Times Indicators over the last 2-3 years. The increase in treatments for surgery, radiotherapy and chemotherapy do present challenges as they do with other DHBs undertaking this work. Southern DHB recognises the requirement for planning to accommodate the estimated increases over the next 4 years.

Quality and Equity

Quality will be guided by the Interim Quality Standards and overseen by clinical and nursing leadership within Southern DHB and the South Island Bowel Screening Regional Centre.

The Regional Centre will support equity within Southern DHB and ensure that consistent messages and support are provided across the South Island DHBs. Early engagement has commenced with Māori leadership groups. It is anticipated that the Māori Health team and community leaders will play a pivotal part in ensuring the best possible engagement in the Programme alongside arranging meetings in marae and organising huis to discuss issues. Rural populations will also be engaged and it is envisaged that community meetings will take place in order to ensure rural populations are engaged and aware of the Programme.

Financial Arrangements

The financial modelling is over the 21 years for the implementation and Programme out-years. The financial analysis aligns with the scope and financials as detailed in the Programme Business Case. The indicative whole of life costs is s 9(2)(ba)(i). As noted in the Programme Business Case, the Programme funding does not include "brought forward" treatment costs relating to participants diagnosed with bowel cancer.

As part of the detailed analysis for the national information technology solution business case, costs to DHBs relating to the national information technology solution implementation will be identified to provide a more comprehensive view of the total cost of implementation. As the preferred approach for the national information technology solution will not be confirmed until the end of 2017, this information is not available at the current time.

Management Arrangements

The project will be governed by a Project Steering Group, reporting to the Executive Leadership Team and the Commissioners team. The Steering Group is chaired by the General Manager, Medical Directorate as the SRO and is accountable to the Southern Chief Executive Officer via the Chief Operating Officer.

The project will be implemented using the Southern DHB approved project management methodology. The project will have identified resources for the duration of the project, i.e. from initial planning to the final implementation and handover to business as usual. Some of the resources will be in place for only part of the project duration, as requirements will vary over time.

The Programme Manager will provide monthly reports to the SRO/Steering Group and to the Ministry NBSP Implementation Manager, to ensure that the DHB planning and subsequent implementation is progressing to schedule and that variations, risks and issues are proactively managed.

The key milestones and approximate timings are shown in Table 9.

Table 9: Southern DHB Key Milestones

Key Milestones	Approx. Date
Business case information developed, signed off and submitted to the Ministry	Jan - Apr 2017
Completion of implementation plan	Jul 2017
Commence recruitment of staff	Jul 2017
Readiness review	Jan 2018
Roll-out to start	Apr 2018

7.3 Counties Manukau DHB

This section provides a high-level summary of the planning for implementation undertaken for Counties Manukau DHB (CMDHB). A more detailed summary is attached as Appendix 4. The DHB has agreed a start month of June 2018, subject to readiness. Formal commitment to implementing NBSP will be confirmed through agreement of a contract to implement, as part of detailed implementation planning.

Overview

In 2015/16 Counties Manukau DHB provided health services to an estimated 528,340 people across Mangere/Ōtara, Eastern, Manukau and Franklin. The DHB has one of the fastest growing DHB populations in New Zealand with an annual projected growth rate of 1-2 percent.

Counties Manukau DHB has a population younger than the national average. The population aged 65 and over is projected to increase about 4 percent each year (compared to the average of 1-2 percent). It has a similar proportion of Māori and a significantly higher proportion of Pacific and Asian people in the eligible population, in comparison with the national average. Current projections suggest that the Asian population will grow the fastest, followed by the Pacific and Māori populations. The DHB has a much higher proportion of people in the eligible population living in quintile 5 (most deprived), at approximately 27 percent compared with the national average of 15 percent. In contrast, 24 percent live in quintile 1 areas (least deprived), above the national average of 20 percent. Māori and Pacific people are particularly impacted by socioeconomic deprivation; at the time of the 2013 Census 58 percent of Māori and 76 percent of Pacific peoples (of all ages) in Counties Manukau were living in areas classified as being the most socio-economically deprived.

For the five years 2010-2014 inclusive, on average, there were just over 220 colorectal cancer registrations each year for the DHB population. 72 percent of these occurred in those identified as NZ European/Other ethnicities. Over the same period, on average there were 90 colorectal cancer deaths each year for the population, 75 percent occurring in those identified as NZ European/Other ethnicities.

Existing Services

The DHB provides the full range of services for symptomatic patients with a high risk of, or confirmed, bowel cancer. These include diagnostic services, colonoscopy (including surveillance), CTC and surgical services. The majority of care is provided by Counties Manukau DHB, with only oncology treatments (chemotherapy and radiation therapy) provided at Auckland DHB. However, Counties Manukau DHB will be providing local delivery of a proportion of chemotherapy treatments at the Middlemore Hospital in the near future (although not for bowel cancer).

Counties Manukau DHB has exhibited a variable performance in the colonoscopy wait time indicators, particularly in non-urgent colonoscopy performance. As at March 2017, 99 percent of urgent colonoscopies were performed or waiting 14 days or less (target is 85 percent), 56 percent of non-urgent colonoscopies performed or waiting 42 days or less (target 70 percent) and 61 percent of surveillance colonoscopies performed in 84 days or less (target 70 percent).

In order to improve performance, a more robust production planning process was implemented in 2015, systems and processes have been streamlined, and additional staff employed. Some activity has been outsourced and ad hoc additional endoscopy lists and out of hours/weekend lists have been run to increase capacity. There are plans for further gastroenterologists and support staff to be recruited and increased procedure rooms to be made available to meet demand.

Strategic Alignment

The NBSP is aligned with local and regional strategies and plans, including Health Together Strategic Plan 2015-20, Annual Plan 2016/17, Northern Region Health Plan 2016/17 and the Northern Region Cancer Network Strategic Intent 2014/15 – 2019/20.

Benefits and Disbenefits

Counties Manukau DHB has identified two local benefits in addition to the benefits to all New Zealanders: NBSP will support continued integrative models of care (increasing interaction between primary and secondary care) and there will be increased service provision for colonoscopy and cancer treatment for DHB's population.

Local disbenefits include potential inequities between symptomatic and asymptomatic patients, the exclusion of patients in the 50-60 year age range (given that a higher proportion of cases of bowel cancer occur in this age group for Māori and Pacific peoples compared with other groups), and inequalities of access across the Auckland metro region due to the access for patients currently participating in the Bowel Screening Pilot. The DHB has emphasised the high proportion of their eligible population who are identified as the priority population (Māori, Pacific and those living in Quintile 5). This will require additional, tailored efforts across the whole screening pathway to ensure equitable access and coverage, with potential implications for the model of care and budget to manage this. In addition, while Asian peoples are not a priority group, the DHB has identified that additional efforts will be required to ensure their participation, recognising that a substantial proportion will not speak English.

As detailed in the Programme Business Case, the age range was selected following careful consideration of international findings, results of available cost-effectiveness analyses, the age-profile of colorectal cancer incidence and the colonoscopy resources available to the country. It aligns with the approach used in other OECD countries, as the age range of 60-74 targets those with high bowel cancer incidence and balances this against the number of quality life years that could be saved, with the colonoscopy resources currently available. As additional data becomes available once the NBSP is fully implemented, further evidence-based consideration can be given to the age range. If and when national colonoscopy capacity increases, subject to appropriate evidence, it may be possible to widen the eligible age range and screen a larger proportion of the population.

Benefits tracking will be undertaken by the CMDHB team in support of the national monitoring of benefits realisation. The DHB SRO has overall responsibility for the realisation of benefits within that DHB, and for ensuring regular reporting to the Programme.

Key Risks, Constraints and Dependencies

Key Risks: A local risk register has been developed and will be maintained and expanded as the preparations for implementation progress. The highest rated risks identified at this time for CMDHB are:

- **If sufficient endoscopy resource is not available, this may impact on the ability to implement NBSP.** There is a limited pool of gastroenterologists and there will be competing demands on this pool from throughout the country. This will be addressed by:
  - commencing recruitment as soon as the business case is approved;
  - training a nurse endoscopist (NE) who will be ready to perform endoscopy independently in 2018. Another NE will commence training at this point.
- **If the national information technology solution is not available when the DHB goes live, an alternative IT solution will be required.** This will be addressed by:
  - undertaking contingency planning (already underway) to use the enhanced Pilot IT system in the interim.
- **If not adequately addressed, the population profile may result inequalities in Programme access.** The generally poor health of the population means that the mortality age is lower than the target population for the NBSP, i.e. a relatively high proportion of people die before 60. There may be issues with the programme not reaching the eligible population due to demographics (the high numbers of Māori, Pacific and Asian people), high levels of socio-economic deprivation and poor health literacy. This will be addressed by:
  - putting significant effort into ensuring that the population is educated and knowledgeable about bowel screening and bowel cancer.
- **If insufficient funding is available the DHB may not be able to ensure equitable access and adequate uptake of NBSP.** This will be addressed by :
  - putting significant resource into ensuring that the population is educated and knowledgeable about bowel screening and bowel cancer, and that the screening pathway supports their participation.
- **If a positive screening result is obtained for an ineligible participant, this will create ethical challenges for the DHB.** There is a potential that ineligible people may be invited for screening. If this occurs and a positive result is obtained, the DHB will consider the ethical responsibility to the individual. This will be addressed by:
  - using the NHI to as the data source for invitations, only identifying people who have accessed health services in the last three years.

Key Constraints: The two main constraints for the CMDHB implementation are workforce and facility capacity, and the budget available relative to the model of care that is appropriate for the DHB population. Additional staff will be required to support the NBSP, and increased facility capacity will be needed to accommodate the growth in activity. The funding available is limited and may present constraints in local implementation.

Key Dependencies: The main dependencies identified at this stage are the availability of an appropriate IT solution, access to translated information/interpreters, and the management of active follow up in the priority population which will be led by the NCC.

Stakeholder Communication and Engagement

The most influential and impacted stakeholders identified by CMDHB are the NCC, endoscopists, general and colorectal surgeons, pre-assessment and endoscopy nurses, the Bowel Screening Regional Centre, GPs, practice nurses and administrative staff, and IT services. Highly influential stakeholders include the DHB Board and executive team, the Ministry Programme team, Māori and Public Health Units and the Alliance Leadership Team, whilst the most impacted stakeholders are the population and community of CMDHB.

Key engagement activities to date include presentations to primary and community groups, engagement with PHO and DHB leaders and the Consumer Council, and meetings with internal and external groups (including clinical and management groups, GP Liaison, Māori and Pacific and Asian health services).

A Communication Plan will be developed, with direct communication with the Regional Centre and NCC for any integrated communications. Engagement of key stakeholders will be an on-going process throughout the CMDHB NBSP set-up and when it goes live. The Project/Programme Manager and the Clinical Director will be responsible for communication. It is envisaged that there will be a joint communication plan for media activities across the Northern Region.

Engagement with primary care is expected to continue through the Alliance Leadership Stakeholders (PHO and DHB leadership) and DHB Primary Care Liaison staff. The DHB will need to work with practices in other DHB areas, particularly in Auckland DHB as approximately 14 percent of the eligible population is registered with GPs outside the CMDHB district.

Management of Projected Demand

Colonoscopy demand is modelled at around 1,000 NBSP colonoscopies in the first two years, reducing to between 700 and 800 per year thereafter, with a slow growth in NBSP surveillance colonoscopies. The anticipated number of bowel cancers which will be detected is approximately 80 in the first two years, and approximately 40-50 in subsequent years.

Demand management options were evaluated against clinical criteria, non-clinical success factors and alignment with the Seven Executable Strategies. This determined that the preferred option was to increase in-house capacity and capability, and outsource to private provider/s as and when necessary. This option was considered to be most likely to deliver the required services, achieve better patient outcomes and provide space and time to grow symptomatic and more complex gastroenterology procedures.

- **Colonoscopy**: Symptomatic referrals will be managed as business as usual, and referrals identified as NBSP will be separated and sent to the NBSP Nurse Coordinator to assess for suitability for a procedure. The NBSP patients will then be put on the waiting lists and the colonoscopy performed on separate NBSP procedure lists at a CMDHB facility. Gastroenterology volumes will be managed in-house by increasing capacity and outsourcing to private providers as and when necessary.

- **Surgery:** Referrals from gastroenterology will be received by the general surgeons and the NBSP Cancer Nurse Coordinator. If active treatment is decided, the patient will be discussed at the Multi-Disciplinary Meeting (MDM) and referrals made for oncology as appropriate. The patient will have their surgical and/or oncology treatment as appropriate. The NBSP treatment pathway will run parallel to the standard bowel cancer treatment system, but will be clearly identified as NBSP for ease of identifying the volume of patients who are being treated as a result of the Programme. If NBSP patient volumes do not warrant a specific general surgical list, lists will be absorbed into normal list schedules.
- **Oncology**: For oncology treatments, including radiology and chemotherapy, bowel cancer patients are treated at Auckland DHB at this time. Radiology will provide for standard growth and additional CTCs that come from the NBSP by increasing their resources in staffing, as CTCs are all planned to be done in-house at this time. Radiology plans for growth by utilising the same production planning tool that gastroenterology uses.
- **Pathology:** Additional pathologist and technician time to manage demand will be required. It is proposed that this work is done in-house at CMDHB as a more cost effective option.
- **Facilities:** Office space will be identified within existing CMDHB facilities. The current plan for gastroenterology is to build capacity within Middlemore Hospital in the vacant Galbraith Theatre rooms, to allow relocation of some service to enable the NBSP activity to be accommodated. No additional funding is being sought for these facility requirements, beyond the existing capital planning process.
- **Workforce:** The implementation of NBSP will require additional workforce, including gastroenterology, nursing, administration, project management, clinical leadership, data and quality management, and community/practice team liaison. An increase would also be needed in radiology and laboratory staff.

Quality and Equity

Counties Manukau DHB will work with the Ministry team, NCC and Regional Centre on quality reporting and initiatives, to ensure that the quality of services is high and maintained. Tailored approaches will be developed to ensure participation across populations. Additional services will be required to ensure equitable access to the Programme for the population of Counties Manukau, such as community health providers/workers to engage with ethnic specific communities. This may include community awareness raising, media promotions, practice liaison and community health worker to actively follow up priority populations, and provision of training and support to GPs. Some of these elements are specific to the model of care proposed by CMDHB to ensure equitable implementation for its population; other elements are part of the national model but may require a higher level of investment locally to achieve the same level of access for their population.

Financial Arrangements

The financial modelling is over the 21 years for the implementation and Programme out-years. The financial analysis aligns with the scope and financials as detailed in the Programme Business Case. The indicative whole of life costs is s 9(2)(ba)(i). As noted in the Programme Business Case, the Programme funding does not include "brought forward" treatment costs relating to participants diagnosed with bowel cancer. As part of the detailed analysis for the national information technology solution business case, costs to DHBs relating to the national information technology solution implementation will be identified to provide a more comprehensive view of the total cost of implementation. As the preferred approach for the national information technology solution will not be confirmed until the end of 2017, this information is not available at the current time.

Management Arrangements

The project will be governed by a Project Steering Group chaired by the General Manager – Emergency Department, Medicine and Integrated Care. The Steering Group is accountable to the Director of Primary, Community and Integrated Care.

The project will be implemented using the Counties Manukau DHB approved project management methodology. The Manukau Method standard change management process and documentation will be used.

The Project Manager will provide monthly reports to the SRO/Steering Group and to the Ministry NBSP Implementation Manager, to ensure that the DHB planning and subsequent implementation is progressing to schedule and that variations, risks and issues are proactively managed.

The key milestones and approximate timings are shown in Table 10.

Table 10: Counties Manukau DHB Key Milestones

Key Milestones	Approx. Date
Business case information developed, signed off and submitted to the Ministry	Jan - Apr 2017
Completion of implementation plan	Jul 2017
Commence recruitment of staff	Jul 2017
Readiness review	c. Jan 2018
Roll-out to start	Jun 2018

Appendix 1: Revised Programme Benefits and Disbenefits

The Programme benefits and disbenefits fall into three overall categories: those which can and will be measured (screened and total population); those which may be subject to future evaluation but which will not be routinely monitored; and unquantified benefits which, whilst important will be neither monitored nor evaluated.

The benefit and disbenefit measures are classified as either being measurable for the screened population or for the total population. The classification is summarised in Table 11.

Table 11: Benefits Classification

Classification	Description	Frequency of monitoring/ responsibility	Frequency of monitoring/ responsibility
Screened Population	Measures will be applied to the screening population only. Benefits realisation/dis-benefit mitigation can begin as soon as the Programme is introduced into the first DHB. The screened population benefits will provide early indicators of the Programme's success.	Monthly by the NSU Information, Quality and Equity Team.	Every four months by the NBSP Programme Director and Clinical Director, to coincide with the reporting for Treasury.
Total Population	Measures will be applied to the whole population of New Zealand. Measuring to assess the benefits realisation/ dis-benefit mitigation will begin as soon as the first DHB goes live, in order to assess whether the trends demonstrated are in line with expectations. Over time, a national picture will be produced. The population per DHB results will provide early indicators of the effectiveness of the Programme and an initial proxy as to what the national level may look like.	Annually or according to current practices, by the NSU Information, Quality and Equity Team until handover to business as usual operations.	Annually by the NBSP Programme Director and Clinical Director until handover to business as usual operations.
Future Evaluation	Benefits realisation results for the screened population and total population provide early indicators of the Programme's success. A full evaluation may be carried out by a third party on the benefits in this classification.	A minimum of 10 years post the roll-out to each DHB.	One off, post monitoring.

The benefits and disbenefits for the NBSP were outlined in the Programme Business Case. As a result of further investigation into data availability, some revisions have been made to the benefits and measures identified. The updated benefits and measures are summarised below. The NBSP Benefits Realisation Plan is available from the Ministry NBSP Programme team.

Programme Benefits and Disbenefits – Measured/Future Evaluation

The measures and areas of potential future evaluation for the NBSP benefits are summarised in Table 12.

Table 12: NBSP Benefits

Benefit Outcome	Screened Population	Total Population	Future Evaluation
Improved health outcomes Cost effective healthcare	• Appropriate rate of detected cancers. • Increase in the proportion of screening-detected bowel cancers detected at TNM Stage I. • Appropriate rate of screening-detected advanced adenomas.	• Reduction in bowel cancer mortality. • Reduction in bowel cancer incidence. • Increase in 5-year relative survival rate for bowel cancer. • Benchmarking improvement with international comparisons (smaller variance from OECD average).	• Quality of Life Years (QALYs) saved (estimated at s 9(2)(ba)(i) nationally over the 20-year modelled period). • Contribution to society (estimated at s [redacted] nationally over the 20-year modelled period). • Decrease in total bowel cancer treatment costs.
Improved service delivery			• Quality improvement to DHB endoscopy unit services.
Disbenefit	**Screened Population**	**Total Population**	**Future Evaluation**
Health outcomes	• Psychological harm arising from participation in the Programme.	• Widening of equity gap for mortality and survival rates.	
	• Adverse physical health outcomes from the screening process e.g. bleeding or tearing of the bowel or complications from sedation.		

Programme Benefits and Disbenefits – Not Measured

Other benefits arising from the NBSP have been identified which cannot easily be quantified but which nevertheless support the case for investment.

- **Improved relationship/engagement with primary care:** Having primary care as an active partner in the Programme facilitates improved integration and relationships across the health system, which has the potential to have flow on effects for other health issues. It would support the maintenance of a person's main health relationship with primary care, given the broad knowledge and information primary care has about their enrolled population.
- **Raised awareness of bowel cancer:** Results from the Waitemata DHB to date indicate that over the initial two years of the Pilot, bowel screening raised awareness of the symptoms of bowel cancer, resulting in an approximately 20 percent increase in referrals for diagnostic colonoscopy, i.e. for investigation of bowel symptoms. The 'bystander effect' of raising population awareness of bowel cancer and symptoms, and disease prevention, is a significant benefit. 'Health literacy' may be improved as people understand more about their health needs and options.

- **Increased identification of individuals and families with genetic bowel cancer syndromes:** Highlighting and assessing the significance of family history of bowel cancer as part of the bowel screening pathway has the potential to identify families with a genetic predisposition to developing bowel cancer. In the Netherlands, approximately 16 percent of participants presenting for colonoscopy as part of the Programme had a family history of bowel cancer and approximately 6 percent were referred for genetic assessment. Offering these families regular colonoscopy has the potential to substantially further increase the bowel cancer incidence and mortality benefit from bowel screening. The current Familial Gastrointestinal Service has provided an estimated cost benefit of $11 million annually in saved hospital costs.
- **Wider health benefit:** In addition to the direct health benefit to the individual, there is a wider health benefit to the system and other cancer patients as a result of detecting and treating earlier stage bowel cancers. Where no further surgery, chemotherapy or radiotherapy is required post colonoscopy, this frees up constrained resources for other cancer patients and assists the achievement of the Faster Cancer Treatment times for all patients. Earlier diagnosis and reduced mortality would also reduce pressure on hospice and palliative care services.
- **Utilisation of high quality data:** Through the introduction of a bespoke information solution the Programme will collect relevant, high quality data that does not currently exist. This data will be made accessible through a variety of mechanisms to a wide group of stakeholders including the wider health sector. This will ensure the Programme can:
  - provide high quality clinical information relevant to the cancer pathway;
  - provide high quality service delivery information relevant to the cancer pathway;
  - provide high quality information to cancer patients; and
  - provide data which can be used for evaluation, monitoring, and research purposes.

  The provision of complete and accurate data is a requirement of the national information technology solution[6] and is therefore not measured separately. Whilst the value of the data generated could potentially be assessed by measuring the relevance of the data to service delivery, clinicians, patients, and DHBs, it is not considered practical to do so.
- **Reduction of bowel cancers identified through Emergency Department (ED) admissions:** The NBSP should decrease the proportion of colorectal cancers that are first diagnosed following presentation at ED, which will reduce pressure on EDs and reduce diagnostic and treatment costs. The 2008/2009 PIPER study was able to identify that 34 percent of colon cancers and 14 percent of rectal cancers were first identified following presentation at ED. There are no plans to repeat a similar PIPER study, therefore these values cannot be used as a baseline. It is expected that at a point 10 years following the commencement of NBSP, the proportion of all bowel cancers first diagnosed following presentation at ED will be lower than the 2008/2009 rates, for the total population and for Māori.

The disbenefits arising from NBSP which cannot easily be quantified are also taken into consideration as part of assessing the overall value of the investment.

- **Delays in diagnosing bowel cancer for some populations:** The proposed phased roll-out of the Programme would result in people in some areas being offered screening later that those in other areas. Some cancers will have diagnosis delayed as a result of the roll-out approach.

[6] PIPER: Presentations, Investigations, Pathways, Evaluation, Rx (treatment)

- **Programme parameters will result in some cancers not being identified:** The constrained age-range for the Programme will result in people outside this range not being screened, and therefore in this population cancers not being identified via screening. The threshold for positivity on the FIT test will result in some cancers not being identified, which would have been detected with a lower threshold for positivity.
- **Opportunity cost:** The cost of implementing the Programme would preclude investment in other priority areas. This would be at both national and local level, as DHBs may need to prioritise funding to implement the Programme in their area.
- **Increased pressures on resources:** Endoscopy and histology capacity is constrained. As the roll-out progresses, the pressure on staff in these areas would increase until increased investment can improve workforce capacity.

Appendix 2: Bowel Screening Regional Centres

Four Regional Centres have been selected to support the roll-out of the Programme.

The selection process and intended implementation approach for each of the Regional Centres is summarised below, based on planning undertaken to date. There are some variations in the Regional Centre responses, reflecting the local planning and anticipated approach. It is recognised that significant further planning is required prior to go-live and that some approaches may change as a result of the more detailed planning and ongoing discussions between the Regional Centres and the Ministry NBSP team.

Financial Arrangements: The financial arrangements for each Regional Centre will be managed within the agreed Programme funding. The financial modelling for the Regional aligns with the scope and financials as detailed in the Programme Business Case. The indicative whole of life (21 years) capital and operating costs for the Regional Centres is s 9(2)(ba) .

IT Solution: The national information technology solution will enable automated information sharing across the NCC, the Laboratory Services Provider and the DHBs to ensure end-to-end support for the NBSP. The Regional Centres will not have specific interface requirements to the national information technology solution, but will need to have the ability to access information and appropriate reports held on the national information technology solution. In support of this, there will be a requirement for key staff to undergo training on the national information technology solution. The Ministry Programme team will liaise with the four Regions to ensure the national information technology solution is able to support the work of the Regional Centres and is fit for purpose.

Northern Region

Supplier Selection

Extensive discussion and consideration regarding the establishment of the Regional Centre has included senior management and clinical leaders from Northern Regional Alliance, Northern Regional Cancer Network and Auckland, Waitemata, Counties Manukau and Northland DHBs. In recommending Waitemata DHB to host the Regional Centre, other DHBs recognised the existing expertise in Waitemata DHB, and recommended that the effort and time required to establish new infrastructures, develop the required knowledge and expertise would be better spent developing local high-quality bowel screening services. Therefore, Waitemata DHB were asked to establish the Regional Centre to which they agreed. No other organisation was formally assessed against the criteria. The analysis concluded that all the required criteria were met.

Waitemata DHB has a good understanding of quality systems. Key quality indicators in the bowel screening pilot have been met continually. Waitemata DHB has shown a good understanding of the quality requirements of a national screening programme. They were involved in the development and review of the NBSP Interim Quality standards.

The DHB has demonstrated a good understanding of IT connectivity and screening systems. Staff have always received adequate training on systems. Waitemata DHB has detailed documentation to ensure good business processes and procedures. They developed the current bowel screening pilot IT system manual, active follow up protocols and tools to support primary care activities e.g., Dr Info and patient dashboard. They also developed the endoscopy manual currently published on the Ministry's website.

Waitemata DHB has shown a focus on improving participation for under-screened populations. The DHB undertakes regular consultation with Māori and Pacific providers and conducts regular patient satisfaction surveys. Waitemata DHB worked towards continuous improvement as the pilot progressed. All staff in the current Pilot have attended cultural competency training. There is a commitment from all Northern DHBs to ensure the Regional Centre has appropriate access and support for regional activities. The Regional Centre will be well placed to develop a good understanding of the regional population.

Staff have the required qualifications, skills and training to undertake their roles. This covers all staff including nursing, administration, management and medical. Waitemata DHB has the contract for BreastScreen Waitemata Northland, an abdominal aortic aneurism screening programme across Auckland DHB and Waitemata DHB and is also involved in trials on how HPV self-sampling may work for priority populations in New Zealand.

Waitemata DHB has continually demonstrated a strong working relationship with the Ministry of Health, DHBs and primary care. There is support across the region from DHB management and clinical staff for Waitemata DHB to undertake the regional leadership.

Establishment of Regional Centre

- **Strategic Alignment:** The Programme supports and aligns with regional strategies, many of which are laid out in the Northern Region Health Plan 2016/17. This includes a focus on making significant progress against the National Colonoscopy indicators for Urgent, Non-Urgent & Surveillance procedures and working regionally through the Regional Tumour Stream to identify and implement improvements in colonoscopy services. Workforce initiatives include supporting a training and credentialing programme for registered nurses to expand their scope of practice i.e. undertake colonoscopy procedures. This will support increased colonoscopy provision in the region. The Chairman of the three Auckland DHB Boards is also clear that the three metro-Auckland DHBs will be working more closely as part of an integrated system. This offers opportunity for all as the Auckland region faces the challenges of a growing population and changes in the way healthcare is being delivered.
- **Key Risks, Constraints and Dependencies:** The key risks, constraints and dependencies identified to date are summarised in Table 13.

Table 13: Northern Regional Centre Key Risks, Constraints and Dependencies

Key Risks	Risk Management Strategies
Uncertainty on roll-out timeframes may compromise the ability to recruit trained staff with the required skills to undertake regional clinical and quality leadership roles to the required level	• Ongoing liaison with Ministry team to confirm timelines.
Lack of clear definition of roles and responsibilities of the NCC, Regional Centres and DHBs is impacting ability to plan implementation	• Clear contracts with the Ministry, and memoranda of understanding with DHB and other service providers. • All providers will need to ensure there are clear service specifications in any agreement or memorandum of understanding.
Lack of clear design/ planning expectations from the Ministry is impacting ability to plan implementation	• Clear direction from the Ministry to ensure service delivery planning is based on correct assumptions.

Constraints	Summary
FTE cap on DHBs	• Current DHB FTE caps may not allow for the required flexibility to recruit new, appropriately qualified staff.
Availability of facility/ location to ensure a cohesive team is established	• Neutrality must be assured, including location of the Regional Centre.
Dependencies	**Summary**
IT system	• An IT system is required that supports the reporting requirements for monitoring functions required of the Regional Centres, as these will be reliant on the NCC and DHBs providing the required monitoring data.
Quality reporting from NCC and DHBs	• Both the NCC and DHBs must provide quality reports in a timely manner. The NCC and DHBs will require access to the IT system with the necessary operating, monitoring and reporting capability.
Adequate funding.	• Staff remuneration needs to be commensurate with experience, previous training and necessary skills.
Regional commitment	• There must continue to be regional 'buy in' from the Northern DHBs. Strong governance and effective communication will be required.
Reporting / data	• As the key function of the Regional Centre is to monitor quality across the region, the key dependency will be its reliance on receiving adequate reporting to do so. They will rely on both the NCC and the DHBs to furnish them with accurate and timely reports.

- **Key Stakeholders:** The key stakeholders for the Northern Region have been identified and analysed for impact and influence. The Chief Executives have confirmed their support for the implementation of the NBSP and to Waitemata DHB acting as the Northern Bowel Screening Regional Centre (subject to agreement on funding availability and finalisation of the specifications for the Regional Centres).
- **Communications and Engagement:** The approach will build on the activities already undertaken in the region during the Bowel Screening Pilot. Much of the activity will be lead locally, with regional support. The Regional Centre will take a regional approach to media campaigns and ensuring consistency of messages. DHBs are best placed to liaise and communicate with GPs. There is a very active Regional Bowel Cancer Tumour Stream Group led out of the Regional Cancer Network, with ongoing communication about the NBSP and planned roll-out. The Cancer Network Manager will ensure relevant communications/updates are provided as needed to the Regional Bowel Cancer Tumour Stream and the regional Colonoscopy Steering Group. Advisory groups will be established and facilitated workshops will be held as needed (e.g. to improve participation in under-screened groups). An initial Communications and Engagement Plan has been developed, identifying all Northern Region stakeholders and outlining communication activities to be undertaken through planning, implementation and into business as usual. Communication and engagement activities to date include:
    - Implementation planning meetings with DHBs and engagement with the Ministry's NBSP team.
    - Engagement with DHB Chief Executives, Clinical Directors and General Managers.
- **Governance:** This will be provided by the Northern Regional Cancer Board (NRCB), which is accountable to the four regional DHBs. The Regional Centre will sit within the framework of the Northern Region Governance for the cancer programme. The collaboration structures and linkages are shown below. Clinical leadership will be provided by direct linkages between the Regional Centre Clinical Director and the DHB bowel screening clinical leads. Advisory groups will be established, including a quality group, an endoscopy leaders group and an equity advisory group. The governance context is shown in Figure 3.

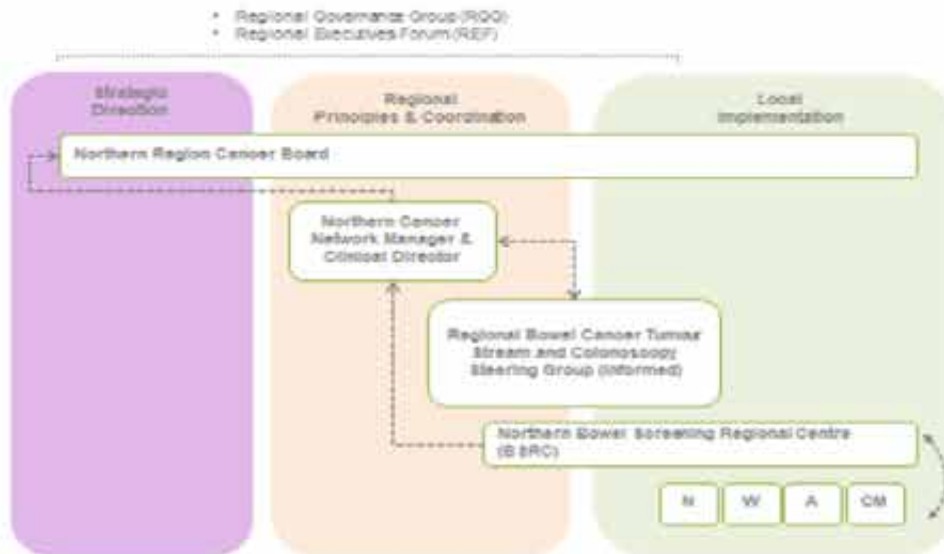


Figure 3: Northern Regional Centre Governance Context

- **Project Management:** A formal project management approach will be taken and is expected to remain in place until approximately 6 months after the last Northern Region DHB goes live. An Implementation Steering Group will be established to ensure the operational requirements of the Programme are met. The project team will be co-lead by a dedicated full time Regional Centre Programme Manager and a Clinical Director. The Regional Centre will support DHBs in developing their implementation plans to ensure regional consistency. Some roles will be permanent and some may be fixed term, to accommodate changes as the service develops.
- **Reporting:** Reporting on implementation planning and ongoing operation will be provided (initially monthly) to the Steering Group, and as required to the NBSP team, the NRCB, Northern Region Executives Forum, Regional Bowel Screening Steering Group and Tumour Stream, DHBs, PHOs/GPs and Māori/Pacific equity advisors.
- **Change Management:** The Programme Manager will be responsible for coordinating change management activities. It is expected that requirements will be greater in DHBs where there will be requirements for IT system connectivity and process and system change to meet the quality standards. The Regional Centre will provide support to DHBs as they prepare for go-live, and ensure learning from other go-lives is transferred.
- **Key Milestones:** The service is expected to commence in early 2018, in preparation for Counties Manukau to commence bowel screening in mid-2018. A Memorandum of Understanding with the NCC is expected to be in place 3 months prior to go-live at Counties Manukau DHB and 5 months prior to go-live at the other DHBs. The key milestones are summarised in Table 14.

Table 14: Northern Regional Centre Key Milestones

Key Milestones	Approx. Date
Appointment of Programme Manager and Clinical Director	Sep 2017
Confirmation of location	Oct 2017
Appointment of other Regional Centre key staff	Nov 2017 – Feb 2018
Establish operational steering group	Feb 2018
Supporting CMDHB preparation and readiness assessment	Jan- May 2018
Supporting CMDHB go-live	Jun 2018

- **Conflict of Interest:** Strong governance and leadership will be key in managing any conflicts of interest, either real or perceived. Both the NRCB and the Regional Centre implementation steering groups will have wide representation from all DHBs and other screening service providers. Regular reporting at a national and regional level will be open and transparent. Although reporting will be by DHB, individual data will be anonymised. Both the quality and equity plans will be approved by the Regional Centre steering group. The Waitemata DHB policy on managing conflicts of interest will be followed.

Delivery of Services

- **Service Delivery:** The requirements to develop systems and processes will be highest in the early stages of the roll-out. Although volumes will be smaller and the number of DHBs (hence relationships) will be fewer, the operational 'load' on the Regional Centre will be high. The load will lessen over time, but with each additional DHB coming 'on line' there will be new challenges and pressures, which will cancel out any reduction in operational load. With the staffing structure kept lean and flexible, the Regional Centre will have the ability to support new DHBs as they come on-line with the lessons gained in previous go-lives. No significant variation in work requirements is anticipated in the interim stage. The Regional Centre will support DHBs to undertake production planning (including opportunities for shared regional capacity planning).
- **Quality:** The Regional Centre will support DHBs to develop strong adverse events and incident reporting and undertake monthly monitoring. Regional monitoring of events, incidents and trends will enable the Regional Centre to inform providers within the region (and to the national Programme as required) of issues and trends. The Regional Centre will ensure DHBs have failsafe mechanisms for patients referred to colonoscopy, and will support the development of strong relationships with colonoscopy, laboratory, surgical and primary care providers. The Centre will work with the Ministry team to ensure quality standards are adhered to, and will undertake quality workshops as needs are identified.
- **Supporting and Promoting Equity:** The Regional Centre will support the DHBs to develop regional consistency and transfer learning across the region. This includes ensuring activities are undertaken to promote and maximise Māori, Pasifica and Asian participation. The Regional Centre will build on the work of the Bowel Screening Pilot and will follow recommendations made in the independent evaluation of the pilot by Litmus Research Group. Actions to ensure equitable participation in bowel screening will include:
  - Ensuring all DHBs have an equity plan, to implement locally appropriate actions to increase equity.
  - Ensuring these plans feed into a regional equity plan, which will be developed in collaboration and consultation with the communities and DHBs.
  - Reporting by ethnicity, deprivation, gender, and any other demographics to determine the need for targeted actions for particular populations.
  - Supporting DHBs to ensure primary care involvement has an equity awareness.
  - Ensuring local and regional governance and steering groups have representation to ensure there is membership to 'champion' equity.
  - Ensuring all staff are culturally competent and receive appropriate training.
  - Holding an equity workshop to ensure the region is responsive to the needs. The needs will be determined by good data and examples of previously successful initiatives.

Midland Region

Supplier Selection

The following options for the lead organisation were considered:

- Lead DHB from with the Midland Region;
- RFP/tender contestable process;
- Midland Cancer Network (MCN) – regional services business arm of MCN;
- Align with breast and/or cervical screening services within Midland; and
- Lead Primary Health Organisation (PHO).

The analysis of potential providers showed that a lead DHB approach has high alignment with the selection criteria. This would allow a quick and timely regional decision by eliminating the need to go to the market. Whilst an RFP/contestable process would be open and transparent, this would be too slow for the NBSP timeline. There was moderate alignment with the MCN, as the Network's competencies align with functions of the Regional Centres, the MCN has knowledge of the service and sector, and the Programme is aligned with endoscopy/colorectal regional pathway work. Whilst there was perceived to be moderate to high alignment with breast/cervical screening, these are managed by two different providers. A lead PHO approach would enable strengthened links with primary care. Initial interest expressed by a PHO was withdrawn following clarification on criteria/requirements.

Only Waikato DHB expressed interest in delivering the Regional Centre function. Evaluation against the criteria concluded that Waikato DHB meets the selection criteria, has experience in delivering regional screening programmes and is expected to be the first of the Midland DHBs to roll-out the Programme. Support for Waikato DHB was received from the other Midland Region DHBs.

The lead organisation was therefore agreed as Waikato DHB, to provide executive and clinical leadership and infrastructure support. There will be a partnership approach between Waikato DHB and the MCN, HealthShare Limited. The MCN will provide regional programme and project management support, and will facilitate the planning, implementation and evaluation required.

This approach was agreed in principle at the Midland Chief Executives' meeting in September 2016.

Establishment of Regional Centre

- **Strategic alignment:** The NBSP aligns with the Midland Cancer Strategy Plan 2015-2020, the Equity of Health Care for Māori: A framework (2014), the Midland Regional Services Plan 2016-2019, Midland DHB annual plans and Faster Cancer Treatment and Electives Health targets, colonoscopy and radiology wait time indicators.
- **Key Risks, Constraints and Dependencies:** The key risks, constraints and dependencies identified to date are summarised in Table 15.

Table 15: Midland Regional Centre Key Risks, Constraints and Dependencies

Key Risks	Risk Management Strategies
If there continues to be limited information on NBSP service model, roll-out and timelines this may impact stakeholder confidence and ability to plan and prepare for go-live	• Ongoing discussion between the Regional leads and the NBSP team (a single NBSP point of contact to be in place) to develop the Programme. • Regional project team to work regionally to keep DHBs informed and support preparedness for go-live.

Key Risks	Risk Management Strategies
If there is a delay in DHB roll-out timeframes this could impact on the Regional Centre project management resource requirements.	• Timeline to be confirmed as soon as possible.
If there is no definitive go-live timeframe and Programme has high level of uncertainty this may impact recruitment with a potential loss of candidates	• Adequate lead-in time confirmed for recruitment, with timely appointment of Regional Centre Manager to support DHB go-lives.
Uncertainty of funding available for Regional Centres and DHBs may impact on delays in implementing contracts	• Further clarification of funding needed with NBSP team, to include equity and primary care funding needs.
Uncertainty on timeframe and requirements of NBSP IT solution is impacting ability of Regional Centre/DHBs to plan implementation	• Resource planning needed. • Ongoing dialogue with NBSP team to determine timeline and IT requirements.
Insufficient emphasis on equity / health promotion and community engagement may result in inequalities	• Liaison with NBSP team to identify strategies to address challenges. Continued discussion on funding requirements and service delivery model. • Ongoing work with NBSP team on addressing community engagement challenges.
Lack of final quality standards is creating uncertainty on what the final standards may require	• Ongoing discussion with NBSP team.
Constraints	**Summary**
Implementation of Ministry Contract Agreement	• Contract Agreement needs to be in place to allow timely planning.
Timelines	• Contract timelines for deliverables are short, due to the regional sign off process required.
Focus on bowel screening pathway only	• Colorectal cancer pathway is out of scope.
Uncertainty on timeframes	• Certainty is required to allow planning and preparation.
Dependencies	**Summary**
NBSP strategies on equity, health promotion, community engagement, health literacy	• NBSP Advisory Group to confirm.
NBSP funding, IT solution, timelines, evaluation process	• Ministry NBSP team led.
National Endoscopy Programme - GRS	• Ministry led.

- **Key Stakeholders:** The key stakeholders for the Midland Region, and their level of influence and impact have been identified. Support for the NBSP and approach has been confirmed by these stakeholders.

- **Communications and Engagement:** A Communications Plan has been developed. Key communication and engagement activities to date include:
    - Information overview to DHB Board members.
    - Project updates to Midland DHB Chief Executives, Governance Group, Midland DHB Executive Groups, MCN Executive Group, Midland United Regional Integration Alliance Leadership team (MURIAL), Hei pa Harakeke (MCN Māori leaders group).
    - Engagement with MURIAL to ensure early engagement and governance, and to determine how to work in partnership with Midland iwi and communities to co-design ways to reduce risk of disparities.
    - Engagement with Midland GM Māori Group and Midland Regional Iwi Relationship Board to ensure early engagement, governance and co-design of pathway to reduce disparities.
    - Ongoing communication with Ministry NBSP team.
- **Governance:** A Midland Regional Centre Governance Group has been established. It has a direct reporting line to the Midland DHB Sponsor (Chief Executive, Waikato DHB) and is accountable to the Midland DHB Chief Executives Group via the Executive Sponsor. The Governance Group works in partnership with numerous Midland Regional Executive groups. Local DHB bowel screening Governance Groups will participate in the Midland Regional Centre Governance Group. Midland DHBs have bowel screening clinical and service management leads. Membership will be reviewed annually and/or as required when Midland DHBs begin to go-live. The governance arrangements are shown in Figure 4.

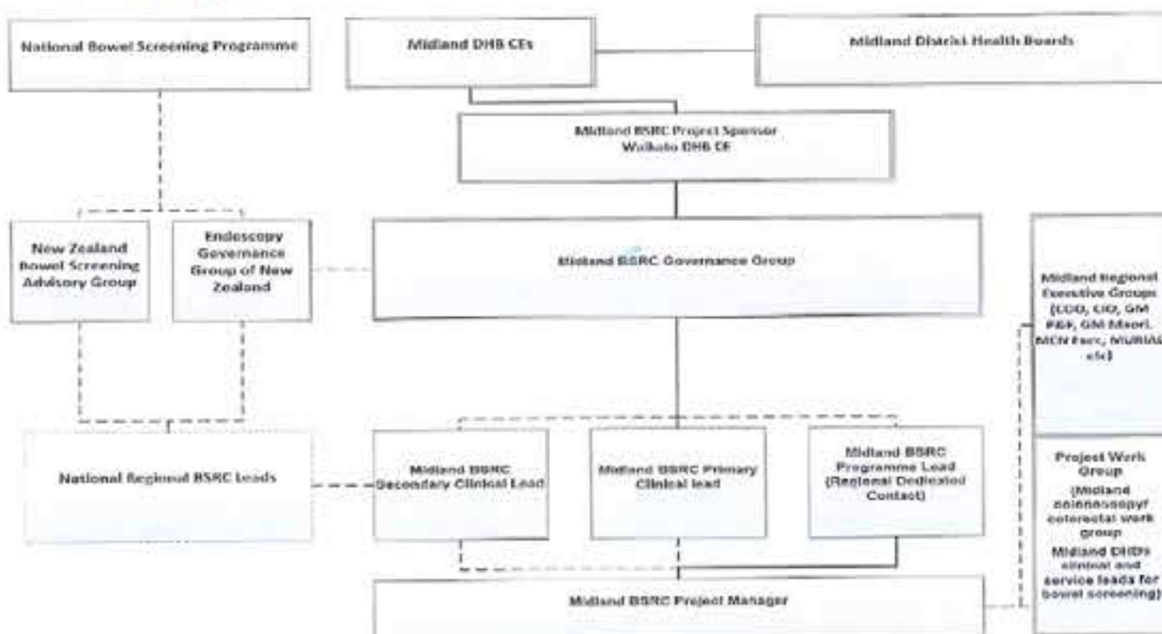


Figure 4: Midland Regional Centre Governance Arrangements

- **Project Management:** The Regional Centre will utilise a programme management and modified PRINCE2 project management methodology and approach. The national Equity of Health Care for Māori: A Framework, and He Pikinga Waiora Implementation Framework will be applied. A co-design approach and continuous quality improvement will be used. The Waikato DHB will be the lead organisation, in partnership with the MCN, HealthShare Limited. Midland Regional Centre project staffing is required until all Midland DHBs and Midland Regional Centre have gone live.
- **Reporting:** The Regional Centre project will report monthly to the Midland Regional Centre Governance Group, and quarterly to the Midland DHB Chief Executive and executive groups. Reporting to the Ministry NBSP team will be as per the agreed contract and may include attendance at national meetings and written reporting.

- **Change Management:** The NHS Change Model will be utilised to support change management. The Regional Centre regional lead, clinical leads and project managers will assist each DHB local project manager with planning and preparing for go-live and will bring forward experiences and lessons learned from the Midland Regional Centre, Waikato DHB and the other regional implementations to the later Midland DHB go-lives. Primary and secondary clinical leads, the equity manager and the quality manager will work with and support DHBs colleagues before, during and after implementation.
- **Key Milestones:** As the Midland Regional Centre will be the last with a DHB go-live, the start date is to be confirmed. This will be finalised as part of detailed contract negotiations between the Ministry NBSP team and the Regional Centre. The key planned milestone dates are summarised in Table 16.

Table 16: Midland Regional Centre Key Milestones

Key Milestones	Approx. timing
Provide Ministry in principle the region's agreed lead organisation for Midland Regional Centre – complete	30/9/2016
Establish Midland Regional Centre Governance Group, project & communications plan – complete	15/12/2016
Appoint Primary and Secondary Clinical Leads for business case development – complete	10/2/2017
Midland DHB CEs endorsement and sign off of Midland Regional Centre information required for this Business Case - complete	7/4/2017
Provide the Ministry with Midland Regional Centre information required for this Business Case - complete	28/4/2017
Develop a Midland Regional Centre Implementation Business Case	1/2/2017 – 19/5/2017
Midland DHB CEs endorsement and sign off Midland Regional Centre detailed implementation plan and provide to the Ministry - complete	5/5/2017 19/5/2017
Provide to the Ministry a Midland Regional Centre final report	30/5/2017
Work with the Ministry to develop the next phase Midland Regional Centre Ministry Contract Agreement and Service Specification in place for the region	19/5 – 30/6/2017
Support Waikato DHB business case development and go-live	2017-2018/19
Recruit Midland Regional Centre staff, set up facility and systems and processes	2017-2018/19
Midland Regional Centre go-live	2018/19
Support other Midland DHBs with business case development and go-live	2019/20 onwards
Support Midland Regional Centre evaluation one year post last Midland DHB go-live	2020/21

- **Conflict of Interest:** Conflict of interest will be managed through the Waikato DHB Conflict of Interest Policy.

Delivery of Services

- **Service delivery:** The Midland Regional Centre is working in partnership with the Midland breast and cervical screening services during the service delivery design and planning phase. While the screening models are different, a collaborative approach ensures recommendations and lessons learned from the other screening services are applied to the bowel screening implementation. The Regional Centre will deliver an overarching regional monitoring, reporting and support service.
- **Quality:** The Regional Centre will implement routine audit to ensure quality is maintained throughout the invitation, testing and referral processes, as well as active follow up for priority populations. The Regional Centre will monitor, manage and report on regional quality, plan and deliver quality improvement initiatives, provide clinical leadership at a regional level to ensure consistency in DHBs, ensure service provision adheres to national standards, support DHBs to implement primary care education and work across the region to share knowledge and develop capability.
- **Supporting and Promoting Equity:** This is a key area for Midland Region, which has a much higher Māori population (26.5 percent compared with 15.6 percent nationally), a high proportion of the population with high socio-economic deprivation and large rural/remote populations. It will be the responsibility of all staff across the Programme to promote participation, particularly with priority populations. Activities will be undertaken to promote Māori and Pacific participation, recognising the scale of these populations in the Midland Region compared with the national average. The Midland Region will focus on:
    - Māori participation in co-design of the service and strategies to facilitate the uptake of screening;
    - Other hard to reach vulnerable populations (e.g. immigrant populations);
    - Non-enrolled GP populations and opportunistic initiatives;
    - Managing inter district flow of people and transient populations; and
    - Health promotion plan including community health literacy and awareness.

Central Region

Supplier Selection

DHBs, PHOs, Māori Health Providers, Central Region Technical Advisory Service (TAS) and the Central Cancer Network were considered as potential suppliers. Following discussions with these organisations, there was no interest from PHOs, Central Region TAS or the Central Cancer Network. The preferred approach was determined to be a DHB.

The Central Region DHBs were evaluated against the selection criteria, taking into consideration the benefits of the host organisation having already implemented the screening pathway.

The evaluation concluded that Hutt Valley DHB was most aligned with the requirements. The DHB currently hosts screening services including breast and cervical, and can leverage off existing experience and functions already in place for these other programmes. Although Hutt Valley DHB has been identified as the host organisation for the Central Regional Centre, it was also agreed that Mid Central DHB will provide additional support, leveraging knowledge and experience from existing regional screening programmes.

Hutt Valley DHB will have implemented the Programme prior to (or at the point of) the establishment of the Central Regional Centre, and can leverage off this experience. This was considered to be a significant benefit as there will be a greater degree of understanding of the Programme, and the needs of the DHBs when preparing for and going live with bowel screening.

The Central Region DHB Chief Executives endorsed the selection of Hutt Valley DHB.

Establishment of Regional Centre

- **Strategic Alignment:** The establishment of the Regional Centre aligns with three regional themes:
    - **Consolidation** (*continued focus on key, longer-term priorities while addressing emerging priorities):* Cancer control is a long term priority for the Central Region and within this, implementing the NBSP is a key regional focus for the next few years until the Programme is in place across all DHBs in the region.
    - ***Commitment*** *(regional priorities will take precedence over sub-regional/local priorities):* The Regional Centre is supported by all DHBs and participating in the functions of the Centre is identified in their 2017/18 annual plans, as this will be a new requirement.
    - ***Collaboration*** *(regional solutions to derive greatest benefit and financial effect):* The Regional Centre's core functions are to coordinate a regional approach to service planning and quality monitoring.
- **Key Risks, Constraints and Dependencies:** Are summarised in Table 17.

Table 17: Central Regional Centre Key Risks, Constraints and Dependencies

Key Risks	Risk Management Strategies
If there is disagreement between 6 DHBs on key decisions to progress Regional Centre this may impact implementation/ ongoing collaboration	• Key Terms of Reference for Steering Group and comprehensive leadership to ensure full exposure to issues and discussions to mitigate divergent thinking. • Project team mandated to provide local engagement, including roadshows and meetings with local stakeholders.
If there is delay in Ministry development activities this could delay DHB roll-out and the function of the Regional Centre	• Resources required to support the national roll-out of NBSP including the information technology, contracts, etc. • Regional leads continue to work with the Ministry team to support the development of the Programme.
Limited knowledge about the NBSP roll-out in general may result in poor stakeholder understanding of the value of the Regional Centre	• Ministry team to provide a point person for DHB queries re NBSP. • Regional roadshows to cover wider NBSP implementation information as well as specific discussion related to the Regional Centre. • Hutt Valley/Wairarapa DHB roll-out Programme Manager engaged with Regional Centre project to help inform linkages.
Inability to recruit to the required roles in the Regional Centre could result in delayed or poorer implementation	• Ensure business case identifies fully absorbed costs to reduce any concerns from DHBs releasing staff for the clinical leadership roles. • Central Cancer Network to provide interim project management support until appropriate personnel recruited.
Delays in DHB roll-out timeframes could impact on the timing of the project manager resource requirements in the Regional Centre	• Ministry to confirm DHB implementation timing so that resource can be implemented appropriately.

Constraints	Summary
Deliverable Timelines	• Contract timelines for the deliverables are very short due to the regional sign-off process which is also required.
FTE cap	• Hutt Valley DHB will need to identify how the non-clinical roles can be managed within the administration FTE cap (Ministry advised of constraint).
Limited Ministry information for the Regional Centre design and planning phase	• The planning for the Regional Centres is undertaken in an environment which is developing and therefore the Regional Centres may need to adjust their functions as the Programme develops.
Consistent operating model for all Regional Centres	• The four regions need to collaborate with the Ministry and each other to ensure the Regional Centres have a consistent core operating model aligned with core functions.
Dependencies	**Summary**
National Information Technology Solution	• For the Regional Centres to undertake its monitoring function the new IT solution must be in place.
National Coordination Centre (NCC)	• Regional Centre functions are dependent on the NCC being in place.
DHB roll-out	• For the Regional Centre to effectively support DHBs to roll-out bowel screening, the timing of the roll-outs for Central DHBs needs to be staggered.
Funding available to commence Regional Centre establishment from July 2017	• The Regional Centre must be in place to support DHB implementation, recognising that there is a 12-18 month planning process required.

- **Key Stakeholders:** Key stakeholder analysis was undertaken and will be repeated during the planning phase to ensure all stakeholders are captured and their level of influence and impact kept current. The Central Region DHBs have confirmed their support for the establishment of the Regional Centre.
- **Communications and Engagement:** A Communication Plan has been developed and extensive communication and engagement has been undertaken to ensure a high level of understanding of and commitment to the Programme. Communication and engagement activities to date include:
  - Engagement with DHB Executive Groups on proposed functions, options, process and timeframes, with regular progress updates;
  - Establishment of a Project Steering Group comprising key local stakeholders;
  - Planning of a Regional Screening Forum and DHB roadshows with wider stakeholders; and
  - Regular engagement with and updates to the Ministry Programme team.
- **Governance:** A time limited Regional Centre Project Steering Group has been established to drive the project between now and when the Regional Centre ongoing governance structure is implemented (timing for this will be determined during the implementation planning process but at the latest will be Jan 2018). The Steering Group includes DHB leads, Primary Care, Māori Health, advisors from the other regional cancer screening services, consumer representatives and the Regional NBSP Coordinator. The Steering Group is accountable to the Regional Chief Executives Group. The relationships are shown in Figure 5.

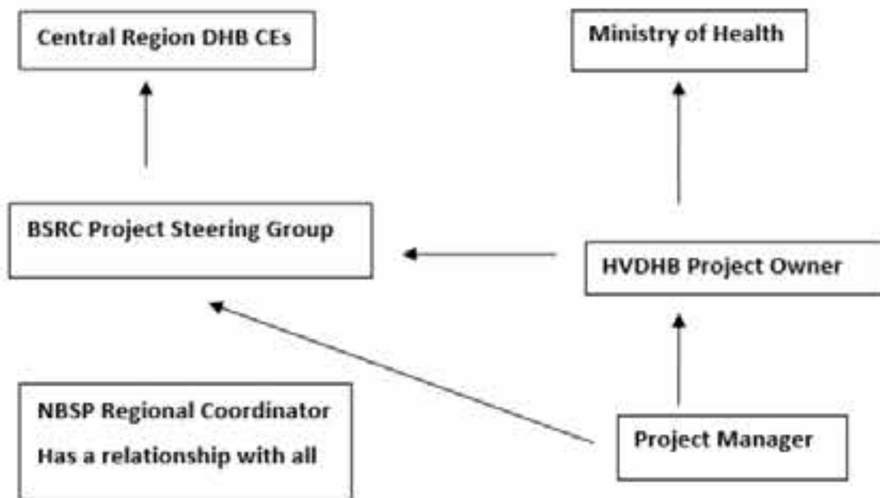


Figure 5: Central Regional Centre Governance Relationships

- **Project Management:** The project will be managed using PRINCE2, the Health Equity Assessment Tool and a co-design approach. Recruitment will follow usual processes. Secondments (e.g. for some clinical leadership roles), fixed term and permanent roles will be considered. Staff from other DHBs (including Mid Central DHB) may be appointed to roles within the Central Regional Centre team, where appropriate. There is no pre-requisite for all staff being physically located at Hutt Valley DHB. Project management to support DHB implementations will cease once all DHBs are live. It is likely that some of the other roles could also be scaled back after the initial implementation period.
- **Reporting:** Hutt Valley DHB will provide progress reports to the Ministry as required within the contract. Monthly project progress reports will be provided to the sponsors (Regional CEs), project steering group and other key stakeholders including regional General Managers/Chief Operating Officers.
- **Key Milestones:** The Regional Centre is expected to be implemented from July 2017, with an initial focus on supporting Hutt Valley and Wairarapa DHBs in their early 'go-live' space. The Regional Centre will also support the remaining Central Region DHBs to plan for implementation from July 2018. Should the establishment of the Regional Centre be delayed, the Central Cancer Network will work with the Hutt Valley/Wairarapa DHBs bowel screening implementation team to apply lessons learnt and share development resources across the region as appropriate until the Regional Centre is functional. The quality monitoring functions of the Regional Centre will develop over time, as the quality and governance functions for the national Programme are confirmed. The key milestone dates are summarised in Table 18.

Table 18: Central Regional Centre Key Milestones

Key Milestones	Approx. timing
Appoint a dedicated regional contact by 30/9/16 – complete	30/9/16
Provide Ministry in principle the region's agreed lead organisation for Central Regional Centre – complete	12/12/16
Complete contracting arrangements between Lead DHB (Hutt Valley DHB) and the Ministry to undertake planning work for the Central Regional Centre – complete	Feb 2017
Establish Regional Centre Project Steering Group – complete	Mar 2017
Treasury Implementation Business Case developed and endorsed by steering group, Hutt Valley DHB Board/Finance, Risk and Audit Committee (FRAC) and Regional Chief Executives	Mar/Apr 2017

Key Milestones	Approx. timing
Undertake DHB roadshows to update on the NBSP in general and to discuss requirements of the Regional Centre to inform implementation planning (delayed until implementation toolkit and confirmed DHB go-live dates received from the Ministry)	Aug/Sep 2017
Central Regional Centre Business case sent to the Ministry – complete	28/4/17
Detailed implementation plan developed and endorsed by steering group, Hutt Valley DHB Board/FRAC and Regional Chief Executives – complete	Apr/May 2017
Detailed implementation plan sent to the Ministry – complete	19/5/17
Complete contracting arrangements between Lead DHB (Hutt Valley DHB) and the Ministry to implement the Central Regional Centre	Jun 2017
Implement the Central Regional Centre	From Jul 2017

- **Conflict of Interest:** There is a low level of risk for conflicts of interest to arise as part of the Regional Centre project. Should conflicts arise, they will be managed through DHB Conflicts of Interest Policy.

Delivery of Services

- **Service Delivery:** The Regional Centre will monitor achievement of quality standards. Clinical leads will work with primary care and endoscopy services at each DHB to identify initiatives to support or improve referral processes. Timeliness of patient journey and management of adverse events will be monitored, and initiatives for improvement developed where necessary. The Regional Centre will work with the DHBs to ensure appropriate plans are in place for sufficient capacity to manage the projected additional workload.
- **Quality:** The Regional Clinical Leads and the Quality Lead will proactively work with primary care, DHB NBSP implementation teams and the DHB clinical teams (endoscopy, surgery, pathology, radiology and oncology) to promote high quality, consistent service delivery, in line with the NBSP Quality Standards. Emphasis will be placed on sharing initiatives and innovations that improve service delivery. Regular feedback will be provided to DHBs and primary care (PHOs) on areas of potential improvement. The team will proactively plan, facilitate and/or coordinate quality improvement initiatives in conjunction with relevant sector groups. Appropriate resources and education will be available to support local DHB education initiatives. The Regional Centre team will monitor data quality and ensure reporting meets requirements.
- **Supporting and Promoting Equity:** The Regional Centre will use available data to monitor completion of active follow up for priority patients, review trends and identify areas where Quality Standards have not been met, or where potential disparities in equity can be addressed. The Regional Centre will have a full time Equity Lead who will sit at Governance Group level. Any issues will be addressed at the Regional Centre Governance Group and with individual DHBs (including DHB outreach teams). The team will develop an Equity Plan for the Region, ensuring input and buy-in from priority population groups, and all individual DHBs. The Regional Centre will monitor participation for all population groups within the region, and support DHBs to improve engagement and communication processes for their priority populations, using lessons learnt at local, regional and national levels. The Equity Lead will work closely with the NBSP Equity Manager, Equity Leads at the other Regional Centres and the NCC to promote equitable participation through innovation and quality improvement initiatives.

Southern Region

Supplier Selection

The South Island Alliance Leadership Team, comprising the five South Island (SI) DHB CEOs, decided that the SI Regional Centre should be led by a DHB. Of the five South Island DHBs, only Southern DHB expressed an interest in providing the Regional Centre function. Analysis concluded that all of the required criteria were met.

The DHB has positive relationships with the Ministry and the other South Island DHBs, WellSouth PHO and other providers. It has demonstrable understanding and experience of quality systems and has the technology support capability required to deliver services and share information.

The Gastroenterology Department has strong internal business processes, and has been well engaged in significant internal planning in order to prepare department for the NBSP roll-out and management of symptomatic and other services. Oncology services have been engaged in process mapping services, to understand current patient journey and improve responsiveness and improve performance against Faster Cancer Treatment targets.

The DHB has high levels of cultural awareness, as evidenced by the implementation of the Southern DHB Māori Health Plan. The General Manager Māori, Iwi Governance and PHO provide impetus for recognition of Māori as a priority. Southern DHB has been actively involved in SI Clinical Leads group since its inception in 2014, which supports understanding of regional issues.

The DHB has strong clinical and management understanding of screening principles. It has current involvement with screening programmes including HPV, Newborn Hearing, Breast and Cervical and previous involvement with direct provision of screening programmes.

The majority of current colonoscopy providers are accredited. Southland and Dunedin hospitals are certified. Southern DHB has robust quality processes and established, dedicated teams. It is leading the South Island in terms of consistent delivery of colonoscopy and has assisted other SI DHBs to attain colonoscopy waiting time targets.

The SI Clinical Leads Group, which includes gastroenterologists, general surgeons and management representatives (Planning & Funding and Hospital) from the five SI DHBs, endorsed the nomination from Southern DHB. This was based on Southern DHB's interest, their support by their SI colleagues at clinical, management and executive levels, and their ability and willingness to undertake this important role. GMs Planning & Funding, Hospital General Managers, and Chief Medical Officers endorsed the nomination. The SI Alliance Leadership Team endorsed the nomination in principle on 12 December 2016, and the Ministry was formally advised of the nomination on 23 December 2016.

Establishment of Regional Centre

- **Strategic Alignment:** The key regional strategies that the Programme aligns with are the South Island Health Services Plan 2016/17 and 2017/18 (Draft). It supports Colonoscopy Waiting Times, the Southern Cancer Network, the SI Information Systems Service Level Agreement (ISSLA) Plans, and the SI Workforce Development Hub.

- **Key Risks, Constraints and Dependencies:** Are summarised in Table 19.

Table 19: Southern Regional Centre Key Risks, Constraints and Dependencies

Key Risks	Risk Management Strategies
If there is a change to Ministry timeframes this will require a change in planning approach to accommodate the change	• Changes to timeframes may impact go-live dates. • Flexible approach to implementation.
If there is insufficient funding, the Southern Regional Centre may not be able to run as proposed	• Finalisation of contract with Ministry. • Staffing and management arrangements for the Regional Centre will be reconfigured.
If the Regional Centre is unable to recruit roles including clinical staff, it may operate initially below the required staffing level	• Early recruitment once contract is signed with Ministry. • Flexible role coverage may be required.
If SI DHBs support for Regional Centre falls away at governance, clinical and management levels, this will affect the Regional Centre's reputation and credibility.	• Work with South Island clinical leads groups, General Managers, Planning and Funding/Hospital General Managers/Chief Medical Officers and Alliance Leadership Team to ensure expectations are fulfilled. • Inclusive discussions with clinicians and operational management across the South Island and at Southern DHB.
If there is a lack of clarity about responsibility for equity at national, regional, district levels this will result in confusion between the parties about who is undertaking which body of work.	• Regional Centres and Ministry Programme Team agree service specification and scope of job description for equity lead role. • Ongoing collaboration between Regional Centres, Ministry, DHBs and local/regional Māori stakeholders. • Equity workshops across South Island and collaboration between Regional Centres.
If clarity is lacking about responsibility and accountability for quality, this may impact ability to promote and ensure national quality standards.	• Draft standards finalised, released and implemented in DHBs to enable Southern Regional Centre learning. • Regional Centre engagement with • DHBs, South Island Clinical Leaders Operational Group (SI CLOG), Ministry, other Regional Centres to develop regional role in oversight of performance against quality standards.
If the relationship with Primary Care is jeopardised the effectiveness of NBSP may be compromised	• Assumption that each DHB will lead relationship with primary care. • Primary care involvement in the SI CLOG. • Support to DHBs as they go-live, to assist engagement with primary care.
If the full IT solution is not available at go-live this may impact ability to track patients and undertake necessary quality reporting	• Ministry to advise process for Southern Regional Centre and SDHB to engage with BSP+, and SI to engage with Southern DHB and SI ISSLA re interface • Ministry team to engage with Southern Regional Centre and Southern DHB and SI ISSLA in development of new solution.

Constraints	Summary
Roles and responsibilities	• Lack of clarity about roles and responsibilities inhibits SI DHB commitment and Regional Centre recruitment and ability to proceed down formal sign off route.
Signoff	• Sign off process requires substantive information about roles, responsibilities and funding, in order to proceed to agreement negotiation phase.
Agreement negotiation	• Timeliness of negotiation and responsiveness of contracting parties inhibit negotiation, signoff and then establishment.
Workforce	• Regional Centre lifetime must be clearly established in order to recruit and retain staff during life of Regional Centre.
Information system interface with Southern DHB and SI systems	• Ministry IT requirements need to be known, and planned into Southern DHB and SI ISSLA work plans, with clear agreement about respective funding commitments.
Dependencies	**Summary**
Agreement negotiation timeline, business case sign-off, funding, evaluation process and timeframe, life of Regional Centre, DHB roll-out timeframe	• Ministry-led.
Information system availability	• Ministry-led, Information Services Service Level Alliance (ISSLA) – SI Plan, Southern DHB: inclusion in DHB plan.

- **Key Stakeholders:** Support has been confirmed from key stakeholders including the SI Clinical Leads Group, the Southern DHB Deputy CEO, GM Medical, SO General Managers Planning and Funding and Hospital GMs, and the SI Alliance Leadership Team.
- **Communications and Engagement:** Responsibility for communications and engagement with key stakeholders during the implementation project has been considered from the perspectives of the SI Regional Centre, and expected integration with the communication processes of the NBSP, the Ministry, the NCC and DHBs as they roll-out the Programme, to the degree that these processes are known now. Communication and engagement activities to date include:
    - Meetings with NBSP, NSU and wider Ministry representatives;
    - Progress reporting to SI Alliance Leadership Team, SI Clinical Leads Oversight Group, Southern DHB Provider Arm Leadership Team (PALT), Southern DHB Commissioner and CEO, Southern DHB IS Group, Southern Cancer Network, SI DHBs;
    - Support to DHBs on consistent messaging to PHOs and GPs; and
    - Meetings with/communications to: endoscopists, general and colorectal surgeons (public and private), general managers, nursing leads, quality leads, laboratory and pathology leads and administration.
- **Governance:** The project to establish the Regional Centre will be overseen by the SI Clinical Leads Oversight Group [SI CLOG], which will evolve from the current SI Clinical Leads Group. Their Terms of Reference will be amended to cover the Group providing oversight and direction to the SI Regional Centre and ensuring that the service delivery model is aligned with the NBSP expectations, and that the member DHBs are supportive of the design, establishment and implementation processes. When the SI Regional Centre Clinical Lead is appointed, they will assume the role of SI CLOG Chair.

  The SI CLOG will be accountable to SI Alliance Leadership Team, via SI GMs Planning & Funding, Hospital General Managers and Chief Medical Officers, and the CEO Sponsor (Southern DHB CEO). The SI CLOG has an operational relationship to the Southern DHB through the Regional Centre team and the Southern DHB Senior Responsible Owner. The Regional Centre Programme Manager will report operationally to the GM Medical Services Southern DHB, as Senior Responsible Owner, and report to the SI CLOG. The Governance relationships are shown in Figure 6.

Figure 6: Southern Regional Centre Governance Arrangements

- **Project Management:** The project arrangements are in three phases: development of the service model and delivery plan, establishment of the Regional Centre and implementation. The SI Regional Centre Senior Responsible Officer (SRO) will be Dr Janine Cochrane GM Medical Services, Southern DHB. The SRO is responsible operationally to the Southern DHB CEO, via the reporting line to the Chief Operating Officer, for ensuring that the plan deliverables are achieved. The SI Regional Centre project team members can be based entirely in Southern DHB, or operate virtually from other SI bases. Recruitment has not yet commenced but is expected to follow usual processes. Secondments, fixed term and permanent roles will be considered, with an emphasis on minimising staff turnover to ensure retention of knowledge.
- **Reporting:** The project will report to the Ministry NBSP Programme team as required, quarterly to the SI Alliance Leadership Team, GMs Funding and Planning/Chief Medical Officers and Southern DHB Commissioners. Reporting will be monthly to the SRO and bi-monthly to the SI Clinical Oversight Group, Southern DHB Chief Operating Officer, PALT and Chief Executive.
- **Change Management:** The Programme's Clinical Director and Programme Manager, with their team, will be responsible for change management. The local resource will link with the Programme team and Ministry relationship managers via the agreed regular meeting schedule. The Regional Centre has a critical role in supporting SI DHBs as they transition on to the national Programme. It will act as a resource centre, provide clinical leadership and general collegial support; monitor DHB performance through collegial relationships, expertise, staff availability, information sharing, regular meetings with the Oversight Group, regional and national peers and promotion of guidelines, quality standards.
- **IT Links and Information Flows:** From a SI perspective, the Programme Manager will be linked into Southern DHB and SI Information Services Service Level Alliance staff and their respective planning processes, as well as with the NBSP Team and IS Team.
- **Conflict of Interest:** A Conflict of Interest Register will be maintained. Where conflicts may be perceived, management strategies will be implemented, including open recruitment, reporting and oversight and managed access to appropriate data.

- **Key Milestones:** The SI Regional Centre will be ready to commence on 1 April 2018, at the same time, or ahead of, the first SI DHB to roll-out, Southern DHB, who are scheduled to enter the Programme on 1 April 2018. The key milestones are summarised in Table 20.

Table 20: Southern Regional Centre Key Milestones

Key Milestones	Approx. Date
Clarification of Regional Centre staff roles, resourcing required	March 2017
Clinical Leads Oversight Group revised Terms of Reference confirmed	March 2017
Governance and management signoff of approach, plan	February – June 2017
Business Case information – draft submission to the Ministry	28 April 2017
Business Case information – Ministry feedback	tbc
Agreement in place: 1 July – ? 30 June 2021 [4.5 years, including evaluation at 1 year post roll-out of all SI NBSP]	1 July 2017
Development of recruitment process	April – May 2017
Recruitment of Programme Manager, Clinical Director, Equity Manager	July-September 2017
Recruitment of Quality Manager, Administrator	January 2018
Go-live	April 2018

Delivery of Services

- **Service Delivery:** The Regional Centre will monitor achievement of quality standards for contacting and referring patients, progress along the screening pathway and management of adverse incidents. Initiatives to improve DHB performance will be identified where required.
- **Quality:** The Clinical Lead will work with SI CLOG, the roll-out planning team and clinical teams, and primary care to promote high quality, consistent service delivery. DHBs and primary care will receive feedback on areas where improvement is desired. The project team will plan quality improvements proactively, in conjunction with relevant sector groups. Although the primary responsibility for clinician-clinician bowel screening education will rest with each DHB, the Clinical Director, Quality Manager and Equity Manager will support local DHB education initiatives where required. The project team will ensure data and reporting meet required standards.
- **Supporting and Promoting Equity:** The Regional Centre will monitor completion of active follow up for priority patients, review trends and identify areas where quality standards have not been met. An Equity Plan will be developed in conjunction with priority population groups and DHBs. The Regional Centre will assist with reviewing evidence of effective engagement and communication processes for priority populations, using national and if necessary regionally and locally created resources to engage with the SI and local populations. The Regional Centre will work with DHBs to review the effectiveness of the SI and DHB equity response and support them to develop and introduce successful quality improvement initiatives.

Appendix 3: Southern DHB

Organisation Overview

Southern DHB combines the previous Otago and Southland DHBs and covers the largest geographic DHB area in New Zealand. Approximately 60 percent of the population live in the two cities, Dunedin and Invercargill, with the remainder of the population living in rural areas widely dispersed across the district.

The DHB has an estimated resident population of 319,200 people (as at 2016). Over the next 30 years, the Southern DHB population is projected to grow on average 0.35 percent per year. Whist the total population of the DHB is not projected to have significant population growth, sub-regions are projected to have different population patterns in for growth and decline, as well as population composition.

The Southern DHB population tends to be slightly older than the national average. The proportion of the population that is aged 65 or over is projected to increase in all areas within Southern DHB, and to be at higher levels than elsewhere in New Zealand.

The DHB has a significantly lower proportion of Māori and Pacific people in the eligible population in comparison with the national average. There is projected to be an increase in the Māori, Pacific and Asian populations.

The average deprivation level for the eligible population in Southern DHB is low, with only approximately 10 percent living in quintile 5 (most deprived), much less than the national average of 20 percent. In contrast, 25 percent live in quintile 1 areas (least deprived), above the national average of 20 percent.

Bowel Cancer in Southern DHB

Cancer Rates

For the 60-74 year age group, Southern DHB has the highest colorectal cancer incidence rate in New Zealand and the second highest mortality rate.

Eligible Population

The population eligible for the National Bowel Screening Programme would be approximately 51,650[7] in the 2018 financial year.

Almost five percent of the eligible population is Māori, less than one percent is Pacific Island and almost ten percent of all ethnic groups are in the most deprived quintile (deciles 9 and 10). These are considered to be priority populations for the Programme and the DHB has also identified rural populations [particularly in low decile areas] and disability and mental health people as priorities. The DHB will focus on ensuring access for these populations.

Southern DHB has a very large geographical area covering 62,356 square kilometres and so has significant pockets of population located away from the major centres of Invercargill and Dunedin. Close liaison with healthcare providers in these areas will be necessary to promote the Programme.

[7] Source: Statistics NZ population projections – census 2013.

This will be primarily through the rural trust hospitals (Clutha, Gore, Dunstan, Ranfurly and Oamaru), Lakes District Hospital, general practitioners and rural nurse specialists supported by Southland and Dunedin hospitals.

In addition there is a small population based upon Stewart Island (381) for which access to healthcare services is timely but costly due to the travel required. Southern DHB has rural nurse specialists who run a 24 hour service on the Island, backed up by Southland Hospital and general practitioners based in Invercargill. Support for the Programme on Stewart Island will be led by the rural nurse specialists whose work is based in the centre of the community.

Southern DHB has two prisons, located in Milton and Invercargill. Close liaison with the Corrections Facility medical staff will occur in order to ensure that this patient group has access to the service. As at January 2017 there were 16 inmates within the eligible age range for bowel screening.

Existing Colonoscopy and Treatment Services

Southern DHB provides a comprehensive suite of services for its population with suspected and confirmed bowel cancer.

Diagnostic Services: for symptomatic patients are provided on referral. Colonoscopy provision is based on the national direct access prioritisation guidelines. For all patients who do not meet criteria, the referrer receives a letter either requesting further information, suggesting alternative management or an alternative diagnostic test is arranged.

Colonoscopy: is provided primarily by the gastroenterology team with support from the general surgical teams in Dunedin and Southland Hospitals. Colonoscopy is also provided on a monthly basis at Dunstan Hospital and by the mobile surgical bus at rural sites when it is available. None of the colonoscopy workload is currently outsourced. There are no GP trained endoscopists and no trained nurse endoscopists. There is one nurse endoscopist in her second year of training.

Surveillance Colonoscopy: provision is guided by the 2012 NZ Guidelines Group document and recommendations from the New Zealand Familial Gastro Intestinal Cancer Service.

CT Colonography (CTC): is provided in the public facilities in Invercargill, Oamaru and Dunstan in Central Otago. In Dunedin the test is provided by Pacific Radiology. The National Access Guidelines are utilised in Dunedin and Dunstan and are due to be implemented in Invercargill. The rural trust hospital in Oamaru has a pre-existing contract with Pacific Radiology and there is no defined criteria for acceptance or prioritisation.

Surgical Services: for bowel cancer are provided at Southland and Dunedin Hospitals. Occasionally, when there are issues with theatre capacity, surgery may be undertaken at either Southern Cross Hospital in Invercargill or Mercy Hospital in Dunedin.

Oncology Services: are primarily based in Dunedin Hospital with an oncology satellite unit based at Southland Hospital and a chemotherapy delivery clinic based in Dunstan Hospital. Outpatient appointments occur in both Dunedin and Southland via local and travelling medical staff. Chemotherapy administration is delivered in Dunedin, Southland, Dunstan, Oamaru, Lakes District and Balclutha Hospitals primarily supported by a specialist nursing team.

Multi-Disciplinary Meetings (MDMs): occur across the District in the areas of lung, breast, bowel and urology. Bowel MDMs occur on a weekly basis and involve staff from both Invercargill and Dunedin Hospitals connected via a video link.

Waiting Times: Southern DHB has exceeded the colonoscopy wait time indicator expectations for most of the last two years. As at March 2017, 91 percent of urgent colonoscopies were performed or waiting 14 days or less (target is 85 percent), 91 percent of non-urgent colonoscopies performed or waiting 42 days or less (target 70 percent) and 93 percent of surveillance colonoscopies performed in 84 days or less (target 70 percent).

Investment Alignment with Local and Regional Strategies

The NBSP is aligned with local and regional strategies and plans, including the Southern Strategic Health Plan 2015, the Southern DHB Annual Plan 2016/17, Southern DHB Māori Health Plan 2016/17 and the South Island Alliance Plan 2016/17.

Southern DHB Benefits and Disbenefits

In addition to contributing to the Programme-wide benefits, Southern DHB has identified specific further local benefits and disbenefits, as summarised in Table 21.

Table 21: Benefits and Disbenefits of Implementing NBSP for Southern DHB

Benefit	Summary
Improved colonoscopy standards for symptomatic patients	• Introduction and implementation of quality standards for bowel screening will have a flow on effect to symptomatic colonoscopy. • Potentially provide standards for symptomatic endoscopy where they do not currently exist. • Define and standardise colonoscopy standard of care for symptomatic patients.
IT systems	• Enhancement of the reporting ability of the ProVation endoscopy reporting system will enhance quality for all patients undergoing colonoscopy. • NBSP will take advantage of planned IS improvements for Southern DHB and the South Island, which will (eventually) include one patient management system (PMS) across the district.
Improved relationship with primary care	• Will act to reduce any barriers that may exist at the primary/secondary interface by improving relationships across the sector and will benefit the whole community across all services. • People not registered with a primary care practice (particularly Māori and other priority populations) who opt into the NBSP will be encouraged to register, improving their access to health care.
Improved relationship with Māori in Southern DHB	• Engagement with Māori in Southern DHB to make bowel screening a success will improve relationships and ties with Māori. • Māori who opt into the NBSP will be encouraged to register, which will improve their access to health care.
Meeting demand for NBSP early given Southern DHB rates of bowel cancer are highest	• People in Southern DHB experience the highest rates of bowel cancer in New Zealand, and the second highest mortality rates. Early adoption of bowel screening will provide significant benefit for this community.
Supporting the ongoing development of single service, multi-site model and teamwork across Southern DHB	• Implementation of Programme will support this aim.

Disbenefit	Summary
FIT kit distribution process and Māori participation	• Distribution of FIT kits using the postal system will discourage some Māori participation in the Programme. • Postal delivery is slower in many rural areas, compared to urban areas.
Lack of alignment with Māori needs	• Disengagement and increased inequity.
Surgical on-flow treatment scheduling and cost	• Additional theatre capacity and FTE will be required. • Additional surgical procedures will need to be accommodated and funded from within existing budget. • Tension between colorectal surgical capacity to provide colonoscopies and deliver other surgical services that meet DHB compliance targets, especially Faster Cancer Treatment (FCT) and Elective Services Patient Flow Indicators (ESPI) compliance.
Oncology on-flow treatment scheduling and cost	• Oncology service currently dealing with treatment spike associated with PHARMAC decisions regarding the funding of new cancer treatments. • NBSP will provide an additional treatment spike of patients which will need to be accommodated into the service.

Key Risks

The key risks identified during initial planning and the development of this business case are recorded in the Southern DHB NBSP Project Risk Register. Significant risks from Southern DHB implementation that may impact on the Programme implementation or success have been incorporated in the Programme Risk Register. The risks assessed as being the highest probability and highest impact, (i.e. red on the RAG status) post mitigation, for Southern DHB are summarised in Table 22.

Table 22: Southern DHB Key Risks

Key Risks	Summary and Risk Management Strategies
If endoscopy suite at Dunedin Hospital is not available on time the DHB may not have capacity to undertake NBSP colonoscopies in the public system, potentially delaying or preventing implementation of NBSP	The current facility at Dunedin Hospital is not fit for purpose for bowel screening and a replacement facility is required. Progress on the new build is behind schedule and may be delayed beyond the anticipated start date for bowel screening. Risk Management Strategy • provide screening colonoscopies in Dunedin out of usual hours until the unit is ready; and/or • outsource either diagnostic or screening colonoscopies to the local private provider (which has indicated that they have the capacity if required); and/or • provide an increased level of screening in Invercargill, where capacity will be available in the initial period of bowel screening.
If surgical procedures resulting from NBSP cannot be accommodated in SDHB theatres, activity will need to be outsourced	Theatre capacity is limited within SDHB and the introduction of bowel screening will place further pressure on theatre capacity and production. Risk Management Strategy • Options for increasing capacity being considered, with a proposal for change to increase theatre capacity developed. • Outsourcing of theatre work to private providers may be required (noting that this would result in increased costs).
Insufficient oncology capacity to cope with increased demand may result in delays in patients being treated and failure to meet FCT targets	Early cancer detection of patients will create a spike in patient numbers for the oncology services as well as ongoing increase in patients related to these decisions. The current waiting list is increasing and additional demand arising from NBSP will increase this problem. Risk Management Strategy • Process mapping of oncology service to identify areas for streamlining.

Key Risks	Summary and Risk Management Strategies
If sufficient endoscopy capacity is not available by the commencement date, this may result in delayed or poor implementation of NBSP	Time required to recruit may mean that additional personnel will not be available at the commencement date. Involvement of colorectal surgeons in the NBSP will need to be appropriately scheduled to meet the needs of the Programme, allow continuance of other surgical activities and current endoscopy commitments. Risk Management Strategy • FTE dedicated to the Programme will mitigate conflicting clinical commitments. • Nurse endoscopists will provide primarily gastroscopies and some symptomatic colonoscopies allowing other endoscopists to provide the NBSP services. • Re-allocation of work, incentivising additional work (sessional lists) or outsourcing work (bringing private providers into the DHB) to free up the necessary resource will mitigate the risk.

Key Constraints and Dependencies

Specific constraints and dependencies have been identified for Southern DHB, in addition to those previously identified for the Programme. The key constraints and dependencies for Southern DHB are summarised in Table 23.

Table 23: Southern DHB Key Constraints and Dependencies

Constraints	Notes
Staff	• Appropriate staff must be recruited to deal with the increased volume of work that the Programme will generate. Will include endoscopist, nursing and administration staff.
Business case signoff	• Inability to get the necessary business case signoff will lead to delays in the timeline.
Funding	• If identified costs exceed identified funding then bowel screening may be delayed whilst the issue is resolved. Appropriate funding must be made available both for implementation and for ongoing costs associated with the Programme.
IT	• Inability to integrate the national information technology solution into DHB systems will create a delay in commencement.
Dependencies	**Notes**
IT Solution	• IT Solution must be in operation and integrated with Southern DHB systems by go-live.
Primary Care	• Primary care agreements must be in place with Ministry for bowel screening to commence.
Southern Community Laboratory	• Agreement for provision of additional histology must be in place for bowel screening to commence both in terms of cost and capacity.
Treasury business case	• Treasury business case must be approved for NBSP roll-out to continue.

Stakeholder Identification, Engagement and Communication

The most influential and impacted stakeholders are the NCC, South Island endoscopists, general and colorectal surgeons, and nurses. Other highly impacted stakeholders include the Southern DHB IS Group, South Island DHBs, GP teams, pathology and laboratory staff and eligible participants. Other highly influential stakeholders include the Ministry NBSP team, South Island DHB hospital and general managers and Chief Medical Officers, Clinical Leads Oversight Group, Southern DHB Commissioner and Chief Executive, and the Southern Cancer Network.

An indicative communication and engagement approach and plan has been developed, describing the proposed mechanisms being/to be used. Key engagement and communication activities to date include:

- Ongoing engagement between the clinical, project, IT and financial leads and the Ministry team;
- Presentations and reporting to Southern DHB Executive Leadership Team and Chief Medical Officer;
- Engagement with Māori advisors/leaders, radiation oncology, surgical team, oncology management, Gastroenterology administration, radiology, Surgical Southland Management (surgical directorate and surgical endoscopists in Southland), Planning and Funding, Communications, Finance, business analysts, and Provider Arm Leadership Team (PALT);
- Provision of updates to South Island Clinical Leaders Group; and
- Engagement with PHO, Southern Community Laboratories (SCL), and Southern Cancer Network.

The Southern DHB communications team will be responsible for communications. The project manager will be responsible for engagement with key stakeholders, including communications team. The project manager will ensure the integration with the Programme communications from the Regional Centre and NCC.

The DHB will work collaboratively with the Southern Regional Centre, which will be managed by Southern DHB. Conflict of interest will be managed by a clear separation of reporting lines between staff working in the Regional Centre and the delivery of the NBSP. Despite the Regional Centre being located within Southern DHB, there is no necessity for all staff to be located within the same geographical space.

There will be close engagement with the PHOs and primary care in the planning and implementation of the Programme. Operational engagement with laboratory services will occur between the Programme Manager and the laboratory and contractual arrangements will be dealt with between Southern DHB Planning and Funding and SCL.

The key internal and external stakeholders have indicated their support for the implementation of the NBSP locally.

Management of Projected Demand

Colonoscopy demand is modelled at between 700 and 800 NBSP colonoscopies in the first two years, reducing to between 500 and 600 per year thereafter, with a slow growth in NBSP surveillance colonoscopies. The anticipated number of bowel cancers which will be detected is approximately 60 in the first two years, and approximately 30 in subsequent years.

In planning the delivery of services, demand management (how symptomatic demand will be managed alongside screening demand), facility and workforce requirements were considered.

Options were assessed against five criteria:

- **Strategic fit and business needs:** How well the option meets the NBSP objectives, related business needs and service requirements, and integrates with other strategies, programmes and projects.
- **Potential value for money:** How well the option optimises value for money (i.e. to deliver the optimal mix of potential benefits, costs and risks).
- **Supplier capacity and capability within timeframe:** How well the option matches the ability of potential suppliers to deliver the required services, and likelihood of a sustainable arrangement that optimises value for money.
- **Potential affordability:** Likelihood that the option can be afforded within likely available funding, taking into account other funding constraints.
- **Potential achievability:** Likelihood that the option would be successfully delivered, given the organisation's ability to respond to the changes required, and the level of available skills required for successful delivery.

Demand management was further split into colonoscopy, surgery, radiology, oncology and histology.

Colonoscopy: four options were considered:

- Bowel Screening provided from within the DHB alongside symptomatic endoscopy;
- Mixed model of provision of bowel screening between DHB and private provider;
- Full outsourcing of bowel screening to private provider;
- Outsourcing of symptomatic patients to private provider.

Analysis of the options against the criteria determined that the preferred option was for bowel screening and symptomatic endoscopy to be provided within the DHB. It is the most affordable option and is good value for money as facilities can accommodate the workload and costs are limited to the additional staff required. The DHB has the ability to control and monitor all aspects of the endoscopy service, especially in relation to quality standards for the Programme. Integration with systems, strategies and programmes is assured. Information technology integration only needs to occur with the DHB systems and no third party systems. There is flexibility to engage with private providers of the service to work in the DHB if workforce issues dictate. There is a single referral pathway and processes to colonoscopy for primary care.

Surgical Demand: four options were considered:

- Provision of these surgical procedures within the DHB whilst maintaining current service volumes;
- Provision of resource for these surgical procedures within the DHB by reducing surgical activity in other areas;
- Increase theatre capacity for the district; and
- Outsourcing of surgical procedures.

Evaluation against the criteria indicated that the preferred option was the provision of the additional surgical procedures within the DHB (both sites) while maintaining current service volumes and incorporating expected annual increase mandated by the Ministry. This option provides the ability to continue to meet patient expectations and accommodate additional volumes within the expected annual increase of surgical caseweights. Theatres are nearing capacity and discussions are underway to increase capacity at both sites. An increase in theatre capacity will be required through increasing medical, nursing, and ancillary staffing FTE, and some outsourcing of some other surgical procedures to allow for provision NBSP-related surgery within the DHB.

Radiology: three options were considered:

- Absorb volumes into current service;
- Provide consistent access to CTC across the District and bring CTC in-house in Dunedin; and
- Provide consistent access to CTC across the District and bring some CTC in house in Dunedin.

Evaluation against the criteria determined that the preferred option was the provision of additional radiology by providing consistent access to CTC across the District and bringing CTC in-house in Dunedin. This also means that patients would proceed directly to CTC after a failed colonoscopy within the same building rather than transferring to another provider facility. The option would provide the additional volumes required but would require a change in service level provision in Southland. The option provides best value for money and would be significantly cheaper that outsourcing.

Oncology: The oncology service is already under pressure following changes to PHARMAC funding arrangements for new drug therapies and the introduction of new techniques in radiation therapy. This has created an increase in treatments which is expected to grow as these treatments expand into general oncology practice. The treatment spike (potentially 31 additional patients) caused by the Programme will be additional to this increased demand and place considerable pressure on the service. Additional resource may be required in the short to medium term in order to enable the spike to be absorbed and maintain FCT waiting times. No options were identified for increase provision of radiation and medical oncology.

Histology: Additional histology volumes will be managed by a contractual arrangement with Southern Community Laboratories. Southern Community Laboratories have indicated that, subject to suitable contractual arrangements, they have the capacity to undertake the additional volumes estimated to be an additional 3,156 histological samples as a direct result of bowel screening.

Facility requirements

To successfully implement the NBSP, there is no need for additional capital investment. There is currently approved funding for a rebuild of the endoscopy facility at Dunedin Hospital, however this work has been unexpectedly delayed. Completion of this work is essential for bowel screening to commence at Southern DHB. The endoscopy room at Southland Hospital is under pressure to be utilised as theatre space and will be further pressured by the additional theatre volumes generated in the Programme. There is however no need for additional capital investment whilst this space is retained for endoscopy.

Workforce Requirements

Options considered include:

- Increasing the number of gastroenterologists;
- Increasing the number of general surgeons who undertake endoscopy; and
- Training nurse endoscopists.

It is not envisaged that nurse endoscopists will be involved in the NBSP and so will not directly participate in the Programme. However it is anticipated that nurse endoscopists will be able to provide symptomatic endoscopy services, which will allow other endoscopists to undertake screening colonoscopy.

Pathology is provided by SCL at Southern DHB. SCL have the capacity to flex their nationwide workforce to cope with the anticipated demand created by NBSP.

Quality and Equity

Quality will be guided by the Interim Quality Standards and overseen by clinical and nursing leadership within Southern DHB and the South Island Regional Centre. The Regional Centre will receive some clinical oversight from the South Island Alliance Colonoscopy Clinical Leaders group and hence the quality standards that are reported by the Regional Centre will be open to scrutiny by this group.

Māori and rural populations for Southern DHB have been identified as key target communities in order to ensure equity in uptake and outcomes for the NBSP. Early engagement with Māori has already begun with Māori leadership groups, to develop the appropriate community networks and awareness of the Programme and to listen to the barriers that are identified. It is anticipated that the Māori Health team and community leaders will play a pivotal part in ensuring the best possible engagement in the Programme alongside arranging meetings in marae and organising huis to discuss the issues. Rural populations must be engaged and it is envisaged that a series of community meetings will take place in order to ensure rural populations are engaged and aware of the Programme.

The Regional Centre will support equity within Southern DHB and ensure that consistent messages and support are provided across the South Island DHBs.

Commercial Arrangements

Contracts will be established between the Programme and Southern DHB to allow the services to be established and delivered.

Financial Arrangements

The financial modelling for the DHB is over 21 years for the implementation and Programme outyears. The financial analysis aligns with the scope and financials as detailed in the Programme Business Case, and assumes:

- go-live in Southern DHB in April 2018;
- expected volumes of participants at each stage of the pathway as modelled on findings from the Bowel Screening Pilot, revised for the Programme age-range and FOBT threshold.

The following items have been excluded from the scope and therefore financial analysis:

- clinical hardware and associated applications required to establish or augment the DHBs' clinical capability;
- changes to the DHBs' internal administrative systems to support new staff or other capabilities;
- wider impacts on other Ministry or sector systems.

The indicative whole of life (21 years) capital and operating financial profile for Southern DHB is set out in Table 24. A more detailed analysis is attached as Appendix 5.

Table 24: Southern DHB Indicative Whole of Life Costs

Southern DHB	2016/17 $M	2017/18 $M	2018/19 $M	2019/20 $M	2020/21 $M	Total 5 Years to 2020/21 $M	2021/22 & Outyears total $M	Total 21 years $M
Total Ministry DE						-		
Information System Costs DE						-		
National Co-ordination Centre						-		
National FIT Laboratory						-		
Bowel Screening Regional Centre						-		
DHBs						-		
Training, Quality & Communication						-		
Waitemata 50-60 transition cost						-		
Approved Costs now rephased						-		
Total Budget 16	-	-	-	-	-	-	-	-
IT Capital to NDE	-			-	-			
Depreciation & Capital Charge								
National Co-ordination Centre		s 9(2)(ba)(i)						
National FIT Laboratory	-							
Bowel Screening Regional Centre	-							
DHBs	-							
Training, Quality & Communication	-							
Approved Costs now rephased								
Total Budget 17	-							
Total Operating Cost	-							
Total Capital Funding								
Total NBSP Cost	-							
DHB Funded Cost - Cancer Treatmen	-							
Waitemata Pilot Surveillance Cost								
NBSP Funding	-							

Southern DHB is committed to meeting the Minister of Health's expectation of financial performance, as set out in the Annual Plans.

The proposed funding arrangements for Southern DHB is:

- **Ministry of Health (using programme funding of s 9(2)(ba)(i)):** funds the screening pathway including screening, training, colonoscopy service provision and ongoing surveillance colonoscopies as a result of screening. Screening services and surveillance colonoscopies are funded at a rate set by the Ministry which include depreciation, interest and capital charge.
- **DHB:** funds treatment costs within their annual funding arrangements. Those participants with cancer would be treated at their DHBs under usual care. The majority of people diagnosed with bowel cancer through the screening programme would have been diagnosed and treated by their DHB at some stage in the future. The screening programme identifies them earlier (and likely at a more treatable stage), hence these costs are brought forward.

Management Arrangements

Governance: The DHB Board is ultimately responsible for the governance of the project, as part of its overall organisational governance responsibilities. The project will be governed by a Project Steering Group, which will report on an exception basis to the Executive Leadership Team and the Commissioners Team. The Southern Bowel Screening Steering Group has responsibility for advising and supporting the project team to deliver the project implementation on time and to budget. The Steering Group is chaired by the General Manager, Medical Directorate as the SRO and is accountable to the Southern Chief Executive Officer via the Chief Operating Officer. The project lead reports to the Bowel Screening Steering Group.

Project Management: The project will be implemented using the Southern DHB approved project management methodology for the delivery of this project. The project will have identified resources for the duration of the project, i.e. from initial planning to the final implementation and handover to business as usual. Some of the resource will be in place for only part of the project duration, as requirements will vary over time. The staffing structure is shown in Figure 7.

Figure 7: Project Structure for Southern DHB NBSP Implementation Project

Project Monitoring and Reporting: The Programme Manager will provide monthly reports to the SRO/Steering Group and to the Ministry NBSP Implementation Manager, to ensure that the DHB planning and subsequent implementation is progressing to schedule and that variations, risks and issues are proactively managed.

Key Milestones: The key milestones and approximate timings are shown in Table 25.

Table 25: Southern DHB Key Milestones

Key Milestones	Approx. Date
Business case information developed, signed off and submitted to the Ministry	Jan - Apr 2017
Completion of implementation plan	Jul 2017
Commence recruitment of staff	Jul 2017
Readiness review	Jan 2018
Roll-out to start	Apr 2018

Change, Benefits and Risk Management: The Programme change management resources will liaise with the DHB implementation project team to provide support as required. The project manager will be responsible for change management for Southern DHB, with the Bowel Screening Steering Group providing support and oversight. The project manager will ensure regular contact with the Programme team and Ministry relationship managers.

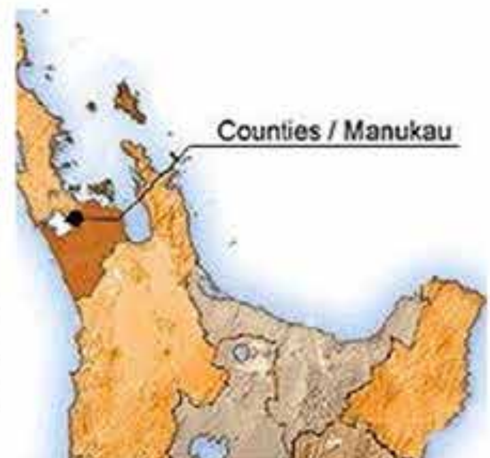
Identification, measurement and tracking of benefits will be undertaken to ensure that the expected outcomes are realised. The DHB Senior Responsible Owner will have overall responsibility for the realisation of benefits within that DHB, and for ensuring regular reporting to the Programme.

A Risks and Issues Register has been developed for Southern DHB. If any risks or issues are deemed significant enough to impact on the implementation of the overall Programme, these will be captured in the Programme Risk Register and monitored accordingly.

Monitoring and Evaluation: The planning and roll-out of the Southern DHB implementation will be supported and monitored by the Ministry team. The project will be subject to Treasury Major Projects Monitoring and Gateway review as part of the overall Programme monitoring and assurance. A Readiness for Service Review will be scheduled prior to go-live, to assess the preparations for go-live and to ensure that the DHB is well placed for a successful implementation. Post Go-Live evaluation will also be undertaken, to review the implementation process and identify any learning points which could be incorporated into planning for subsequent DHB implementations.

Appendix 4: Counties Manukau DHB

Organisation Overview



In 2015/16 Counties Manukau DHB (CMDHB) provided health services to an estimated 528,340 people across Mangere/Ōtara, Eastern, Manukau and Franklin. Counties Manukau has one of the fastest growing DHB populations in New Zealand with an annual projected growth rate of 1-2 percent.

Counties Manukau DHB has a population younger than the national average. The population aged 65 and over is projected to increase about 4 percent each year (compared to the average of 1-2 percent).

The DHB has a similar proportion of Māori and a significantly higher proportion of Pacific and Asian people in the eligible population, in comparison with the national average. Current projections suggest that the Asian population will grow the fastest, followed by the Pacific and Māori populations.

Counties Manukau DHB has a much higher proportion of people in the eligible population living in quintile 5 (most deprived), at approximately 27 percent compared with the national average of 15 percent. In contrast, 24 percent live in quintile 1 areas (least deprived), above the national average of 20 percent. Māori and Pacific people are particularly impacted by socioeconomic deprivation; at the time of the 2013 Census 58 percent of Māori and 76 percent of Pacific peoples (of all ages) in Counties Manukau were living in areas classified as being the most socio-economically deprived.

Bowel Cancer in Counties Manukau DHB

Cancer Rates

Cancer registration and mortality data has been examined for the five years 2010-2014 inclusive, the most recent data available with cause of death. On average, there were just over 220 colorectal cancer registrations each year for the CMDHB population, 72 percent occurring in those identified as NZ European/Other ethnicities. There is no obvious sustained trend pattern over that period.

The distribution across age groups of those registered with bowel cancer is quite different by ethnicity. Forty to fifty percent of cases occurred in those aged under 60 years for Māori and Pacific people compared with 18 percent for NZ European/Other groups, while over 40 percent of cases occurred in those aged 75 years and over for NZ European/Other groups. Asian peoples were intermediate with 36 percent under 60 years and 24 percent 75 years and over. All ethnicities combined 25 percent of registrations for the CMDHB population were for people under 60 years of age; this compares with 19 percent for the total NZ population. Approximately 40 percent of CMDHB registrations were people in the target age group for the Programme, 60-74 years; this is similar to the total NZ population.

On average, there were 90 colorectal cancer deaths each year 2010-2014 for the CMDHB population, 75 percent occurring in those identified as NZ European/Other ethnicities. The numbers are small for other ethnic groups: an average of 7 per year for Māori, 10 for Pacific, 5 for those of Asian ethnicities and 67 for those of NZ European/Other ethnicities. Again, the distribution across age groups varies by ethnicity, with 26-44 percent aged under 60 years for Māori, Pacific and Asian peoples (although small numbers) compared with 11 percent for those of NZ European/Other groups.

Eligible Population

The CMDHB population is the most ethnically diverse in the country. Nine percent of the eligible population are identified as Māori, 13 percent as Pacific and 22 percent as Asian ethnicities. Approximately 27 percent (of people of all ethnicities) in the target age group in CMDHB live in the most socioeconomically deprived quintile (deciles 9 and 10). This compares with 15 percent nationally and 6 percent in the pilot site of Waitemata DHB. Māori, Pacific and people living in Quintile 5 are considered to be priority populations for the Programme.

A significant factor in implementation for CMDHB is the proportion of the eligible population who do not speak English. At the time of the 2013 Census 31 percent of the total Pacific population and 51 percent of the total Asian population aged 65 years and over did not have conversational English. Even for those aged 45-64 years, 13 percent of the Pacific population and 24 percent of the Asian population living in Counties Manukau did not have conversational English. It is also important to note that the Asian population in CMDHB differs from that in Waitemata DHB, with a higher proportion of Indian (46 percent) than Chinese (34 percent) population. It is noted that there are currently no translated resources available in Indian languages.

There are also two prisons in the CMDHB area, the South Auckland Corrections facility, a new high security men's prison, and Auckland Regional Women's Correction facility. CMDHB provides hospital and outpatient medical services to these facilities and has an excellent relationship with the Women's facility who enrols women into the BSA programme. Further clarification is required on how the NCC will identify and invite eligible people in these facilities.

Current Service Delivery

Counties Manukau DHB currently provides services for symptomatic patients with a high risk of, or confirmed, bowel cancer. The majority of care is provided by CMDHB services with only oncology treatments (chemotherapy and radiation therapy) provided at Auckland DHB. However, CMDHB will be providing local delivery of a proportion of chemotherapy treatments at the Middlemore Hospital in the near future.

Referral Pathway: Referrals received in the specialist services are triaged as a high suspicion of cancer. Patients are put on the Faster Cancer Treatment Pathway and receive their diagnostic procedure within 14 days of assessment. Patients who have familial bowel cancer are referred to the New Zealand Familial Gastrointestinal Cancer Service based at Auckland DHB by secondary care specialists, GPs and private specialists. The service provided includes assessment of bowel cancer risk, facilitation of diagnosis, coordination of surveillance for high risk patients, management advice and family counselling.

Colonoscopy: This is undertaken and either Middlemore Hospital (MMH) or the Manukau Surgery Centre (MSC). CTC is performed at MMH only at this time. The majority of colonoscopies are done by gastroenterologists and trainees. Approximately one list per week is done by general surgeons. There is one trainee nurse endoscopist who is performing endoscopy on a Senior Medical Officer (SMO) procedure list, the SMO provides the supervision for these 2 procedure lists per week.

When a diagnosis of cancer is confirmed, referrals are sent to the appropriate services as well as to the Cancer Nurse Coordinator, who provides coordination of services, liaison and patient contact for the rest of the patient journey. CT and/or MRI (both of which are provided at CMDHB) results are discussed at the Multi-Disciplinary Meeting involving all services concerned with the patient's treatment.

Surgery: Surgery will be done at either MMH or MSC depending on list and colorectal surgeon availability.

Pathology: Specimens are analysed by the Laboratory Services which has the main laboratory at MMH and a smaller laboratory at MSC. Most work is performed by histopathologists, with technicians performing the preparation of the specimens for examination and reporting.

Oncology: Services are primarily provided by Auckland DHB at their facilities, either Auckland City Hospital or Greenlane Clinical Centre. In 2015, Auckland DHB provided chemotherapy for 204 new bowel cancer patients and 234 in 2016. It is intended that by mid-2017 a proportion of these patients will start to be treated at the new Infusion Centre at MMH. The implementation is to be phased over 2-3 years and at end state is anticipated that 80 to 90 percent of CMDHB patients will have their chemotherapy delivered locally.

Waiting Times: Counties Manukau DHB has exhibited a variable performance in the colonoscopy wait time indicators, particularly in non-urgent colonoscopy performance. As at March 2017, 99 percent of urgent colonoscopies were performed or waiting 14 days or less (target is 85 percent), 56 percent of non-urgent colonoscopies performed or waiting 42 days or less (target 70 percent) and 61 percent of surveillance colonoscopies performed in 84 days or less (target 70 percent).

In order to improve performance, a whole-service review has been undertaken and improvement plans developed. A more robust Production Planning process was implemented in 2015, systems and processes have been streamlined, and additional staff have been employed including three additional gastroenterologists, nurses, and technical and clerical staff. Some activity has been outsourced and ad hoc additional endoscopy lists and out of hours/weekend lists have been run to increase capacity. Additional procedure lists were added in 2016. There are plans for further gastroenterologists and support staff to be recruited, and increased procedure rooms to be made available to meet demand.

Investment Alignment with Local and Regional Strategies

The NBSP is aligned with local and regional strategies and plans, including Health Together Strategic Plan 2015-20, Annual Plan 2016/17, Northern Region Health Plan 2016/17 and the Northern Region Cancer Network Strategic Intent 2014/15 – 2019/20.

Counties Manukau DHB Benefits and Disbenefits

In addition to contributing to the Programme-wide benefits, CMDHB has identified specific further local benefits and disbenefits, as summarised in Table 26.

Table 26: Benefits and Disbenefits of Implementing NBSP for Counties Manukau DHB

Benefit	Summary
Support continued integrative models of care	• Increased interaction between primary and secondary care and increased awareness of gastroenterology services. • This could be measured by: ○ Increased appropriate referrals for both symptomatic and asymptomatic patients in the Gastroenterology Department over and above the standard demographic growth percentage ○ Increased collaborative/shared care initiatives for gastroenterology patients ○ Feedback and experience surveys on service provision from PHOs/GPs and secondary services
Increased service provision for colonoscopy and cancer treatment for CMDHB population	• Provision of additional diagnostic colonoscopy/CTC and cancer treatment – surgery and/or oncology. • This could be measured by reports as per the following: ○ Volume reports for colonoscopy/CTC via ProVation and CMDHB data warehouse ○ Surgical volumes for bowel cancer are collected via a surgical database ○ Auckland DHB collates data on oncology treatments

Disbenefit	Summary
Inequities between symptomatic and asymptomatic patients	• Targets such as timelines will negatively impact symptomatic patients/ patients requiring other procedures. To be measured and monitored by: ○ waiting list reports detailing number of patients on the NBSP waitlist and the symptomatic waitlist and the length of time to procedure for each waitlist.
Exclusion of 50-60 age range misses the age of presentation for some population groups within CMDHB[8]	• Incidence of bowel cancer in Māori and Pacific is at a younger age than European/ other groups. To be measured by: ○ population health statistics and databases with regular reports for monitoring and review.
High proportion of eligible population which are priority populations will impact on access and achievable coverage	• Socioeconomic status, poor health literacy, health status and the diversity of languages spoken will impact on Programme success. Access to the Programme is also impacted by a highly mobile population, issues with transport and access and use of communication technology. • To be measured, monitored and reported by the NCC and reports should be provided to the Regional Centres and the DHBs concerned.
Inequalities of access in the Auckland Region	• Inequities in the ages for eligibility between Waitemata DHB and CMDHB populations (until Bowel Screening Pilot participants come in line with the National Programme) will cause confusion and inequities in service access particularly as patients do not all enrol with GPs in their resident DHB area. ○ Evaluation would be by the Programme, potential use of complaints could as a proxy.

Key Risks

The key risks identified during initial planning and the development of this business case are recorded in the Counties Manukau DHB NBSP Project Risk Register. Significant risks from CMDHB implementation that may impact on the Programme implementation or success have been incorporated in the Programme Risk Register. The risks assessed as being the highest probability and highest impact (i.e. red on the RAG status), post mitigation, for Counties Manukau DHB are summarised in Table 27.

Table 27: Counties Manukau DHB Key Risks

Key Risks	Summary and Risk Management Strategies
If sufficient endoscopy resource is not available, this may impact on the ability to implement NBSP	Limited pool of gastroenterologists, both nationally and internationally. There will be competing demands on this limited pool from throughout the country. Risk Management Strategy • Recruitment to commence as soon as the business case is approved. • Training a nurse endoscopist (NE) who will be ready to perform endoscopy independently in 2018. Another NE will commence training at this point.

[8] As detailed in the Programme Business Case, the age range was selected following careful consideration of international findings, results of available cost-effectiveness analyses, the age-profile of colorectal cancer incidence and the colonoscopy resources available to the country. It aligns with the approach used in other OECD countries, as the age range of 60-74 targets those with high bowel cancer incidence and balances this against the number of quality life years that could be saved, with the colonoscopy resources currently available. As additional data becomes available once the NBSP is fully implemented, further evidence-based consideration can be given to the age range. If and when national colonoscopy capacity increases, subject to appropriate evidence, it may be possible to widen the eligible age range and screen a larger proportion of the population.

Key Risks	Summary and Risk Management Strategies
If the national information technology solution is not available at commencement, an alternative IT solution will be required	The national information technology solution may not be ready for the go-live date for CMDHB. Risk Management Strategy • Contingency planning is underway to use the enhanced Pilot IT system in the interim. This will incur additional costs which need to be factored in.
If not adequately addressed, the population profile may result in inequalities in Programme access	There may be issues with the population of CMDHB not accessing the Programme due to demographics, high levels of socio-economic deprivation and poor health literacy and language barriers. The population has generally poor health, meaning that the mortality age is lower than the target population for the NBSP, i.e. high proportion of people die before 60. Risk Management Strategy • Significant effort will be put into ensuring that the population is educated and knowledgeable about bowel screening and bowel cancer.
If insufficient funding is available the DHB may not be able to ensure equitable access and adequate uptake of NBSP	Ensuring access and equitable uptake will require additional resources. Risk Management Strategy • Significant resource will be put into ensuring that the population is educated and knowledgeable about bowel screening and bowel cancer.
If a positive screening result is obtained for an ineligible participant, this will create ethical challenges	There is a potential that ineligible people may be invited for screening. If this occurs and a positive result is obtained, the DHB will consider the ethical responsibility to the individual. Risk Management Strategy • Eligibility for health services will be managed by the NBSP using the NHI, for people who have accessed health services in the last three years.

Key Constraints and Dependencies

Specific constraints and dependencies have been identified for Counties Manukau DHB, in addition to those previously identified for the Programme. The key constraints and dependencies for CMDHB are summarised in Table 28.

Table 28: Counties Manukau DHB Key Constraints and Dependencies

Constraints	Notes
Workforce and facility capacity	• Access to colonoscopists, pathologists and endoscopy as all gastroenterology services throughout the country are trying to access staff from the same pool nationally and internationally. • Facility capacity will need to increase over the next 5 years in order to be able to provide services for the standard growth and additional volumes from the NBSP as well as symptomatic patients.
Budget	• Budget may not be adequate to ensure equity of access for our population who require additional resources to ensure engagement. • Implementation of IT system/s may incur costs for which CMDHB does not have a budget.
Dependencies	**Notes**
ICT systems and local interface	• IT solution must be in place prior to go-live to enable the DHB to commence the Programme safely.
Active follow up to address inequalities in the priority population	• Active follow up of priority population non-responders is an NCC role and CMDHB has no control over this aspect of the Programme. • Further active follow up by primary care relies on the availability of timely electronic data to practices around patients who have not responded to invitation.
Access to translated	• Current national resources/invitations are in English. Provision of

information and interpreters	information in other languages is the responsibility of the NCC.

Stakeholder Identification, Engagement and Communication

The most influential and impacted stakeholders identified by CMDHB are the NCC, endoscopists, general and colorectal surgeons, pre-assessment and endoscopy nurses, the Regional Centre, GPs, practice nurses and admin staff, and IT services. Highly influential stakeholders include the DHB Board and executive team, the Ministry Programme team, Māori and Public Health Units and the Alliance Leadership Team.

Key engagement and communication activities to date include:

- Steering Group meetings;
- Presentations at Primary and Community Leadership meetings;
- Engagement with the Alliance Leadership stakeholders (PHO and DHB leaders) and CMDHB Consumer Council; and
- Stakeholder meetings with internal and external groups including GP Liaison, Māori and Pacific and Asian health services, Finance, IT, Surgical Services, Laboratory Services, Radiology Services and Oncology/Palliative Care.

Engagement with these stakeholders has identified support for the Programme but has also identified some concerns. These have been raised with the Ministry team.

A Communication Plan will be developed by the Project/Programme Manager of the CMDHB NBSP in collaboration with the CMDHB Communications Department. It is proposed that the CMDHB Communications Department and the CMDHB NBSP Centre will communicate directly with the Regional Centre and NCC for any integrated communications. Engagement of key stakeholders will be an on-going process throughout the CMDHB NBSP set-up and when it goes live.

The Project/Programme Manager and the Clinical Director will be responsible for communication and reporting with the NCC. This would include reporting and bi-annual meetings (although in the initial stage meetings may need to be held more frequently), and other communications as required (email and/or teleconference) to address emerging issues or risks. Formal and informal communication with the Regional Centre via the Programme Manager and Clinical Director will occur as required/as per contract. It is envisaged that there will be a joint communication plan for media activities across the Northern Region.

Engagement with primary care is expected to continue through the Alliance Leadership Stakeholders (PHO and DHB leadership) and DHB Primary Care Liaison staff. Communication directly with GPs and primary care staff will be through the dissemination of information to GPs by communication with PHOs, utilisation of GP CME evening and cell groups to educate GPs about the Programme and seek buy-in, utilisation of DHB electronic GP newsletters to provide updates, and provision of information via the DHB website. The DHB will need to work with practices in other DHB areas, particularly in Auckland DHB as approximately 14 percent of the eligible population is registered with GPs outside the CMDHB district. Concerns identified by primary care are being, and will be raised with the Ministry Programme team.

CMDHB will engage with the National Laboratory and Ministry team to consider alternative approaches to postage for drop off, as postage may be an impediment for some priority groups. On an on-going basis, it is understood that it is the NCC role to communicate and liaise with the National Laboratory.

Management of Projected Demand

Colonoscopy demand is modelled at around 1,000 NBSP colonoscopies in the first two years, reducing to between 700 and 800 per year thereafter, with a slow growth in NBSP surveillance colonoscopies. The anticipated number of bowel cancers which will be detected is approximately 80 in the first two years, and approximately 40-50 in subsequent years.

In planning the delivery of services, demand management (how symptomatic demand will be managed alongside screening demand), facility and workforce requirements were considered. Options were evaluated against clinical criteria, non-clinical success factors and alignment with the Seven Executable Strategies.

In order to manage symptomatic demand alongside screening demand, three options were considered:

- Option 1: Increasing in-house capacity and capability to manage all standard growth in endoscopy and the bowel screening programme;
- Option 2: Outsource the bowel screening colonoscopy to private provider/s and continue to manage standard growth as business as usual in-house;
- Option 3: Increase in-house capacity and capability and outsource to private provider/s as and when necessary.

Evaluation against the criteria determined that the preferred option was Option 3. This option was considered to be most likely to deliver the required services, achieve better patient outcomes and provide space and time to grow symptomatic and more complex gastroenterology procedures.

Counties Manukau DHB will manage the competing demands from screening and symptomatic services by running each part as parallel, but separate, clearly identifiable systems.

Primary Care: The planned approach is for the GP to be notified by the NCC of participants who fail to respond. GPs will follow with non-responders. GPs will be informed of positive and negative results, and will notify the participant by phone or consultation. With 105 GP practices currently, there would be approximately 10 positive screens/patients per practice per annum in the first couple of years, reducing to 7-8 per year, plus demographic growth. It is not foreseen that this will impact significantly on GP practices.

Diagnostic Care: Symptomatic referrals will be managed as business as usual, and referrals identified as NBSP will be separated and sent to the NBSP Nurse Coordinator to assess for suitability for a procedure. The NBSP patients will then be put on the waiting lists as per the guidelines and where appropriate, an appointment will be made. The colonoscopy will be performed on separate NBSP procedure lists at a CMDHB facility. Potentially there may be specific gastroenterologists and nurse endoscopists who perform the NBSP procedures, based on being credentialed for this work. A positive result will trigger a referral for further treatment either surgical and/or oncology treatment. In both gastroenterology and radiology for CTC, there will continue to be a separate NBSP group running in parallel with the symptomatic patient group. The NBSP Cancer Nurse Coordinator will also be notified of the positive result for patients and track them through the system. Patients who require referral to the Familial Bowel Cancer Service at Auckland DHB will be referred by a gastroenterologist at this time.

Secondary Care: Referrals from gastroenterology will be received by the general surgeons and the NBSP Cancer Nurse Coordinator. Additional tests will be requested as appropriate. Treatment options will be discussed with the surgeon. If active treatment is decided, the patient will be discussed at the Multi-Disciplinary Meeting (MDM) and referrals made for oncology as appropriate. The patient will have their surgical and/or oncology treatment as appropriate. The NBSP treatment pathway will run parallel to the standard bowel cancer treatment system, but will be clearly identified as a NBSP patient

for ease of identifying the volume of patients who are being treated as a result of the NBSP. It may not be feasible to assign a specific general surgical list to NBSP if the volume of patients does not warrant this. This would be monitored, but potentially lists will be absorbed into normal list schedules. For oncology treatments, including radiology and chemotherapy, bowel cancer patients are treated at Auckland District Health Board (Auckland DHB) at this time.

Assuming Option 3 (increase in in-house capacity and capability, with outsourcing when necessary):

- Gastroenterology volumes will be managed in-house by increasing capacity and outsourcing to private providers as and when necessary. Radiology will provide for standard growth and additional CTCs that come from the NBSP by increasing their resources, as CTCs are all planned to be done in-house at this time. Radiology plans for growth by utilising the same production planning tool that gastroenterology uses.
- Additional pathologist and technician time to manage demand will be required. It is proposed that this work is done in-house at CMDHB as a more cost-effective option.
- The increased volume of oncology treatments required for bowel cancer patients will be negotiated with Auckland DHB as per the Inter-District Flow (IDF) negotiations. These negotiations allow for standard growth year on year and the NBSP volumes will be additional to this.

Facility Requirements

Options for office space for the NBSP will be identified within existing CMDHB facilities. The current plan for gastroenterology is to build capacity within Middlemore Hospital in the vacant Galbraith Theatre rooms to allow relocation of some service to enable the NBSP activity to be accommodated. No additional funding is being sought for these facility requirements, beyond the existing capital planning process.

Workforce Requirements

The implementation of NBSP will require additional workforce, including gastroenterology, nursing, administration, project management, clinical leadership, data and quality management, and community/practice team liaison. An increase would also be needed in radiology and laboratory staff. The final staffing model will be determined during contract discussions and detailed planning in preparation for go-live.

Quality and Equity

Counties Manukau DHB will work with the Ministry team, NCC and Regional Centre on quality reporting and initiatives, to ensure that the quality of services is high and maintained.

The make-up of the CMDHB population will pose significant issues in terms of ensuring equitable access to the Programme. Tailored approaches, both through the operation of the NCC and at a DHB level, will need to be developed to ensure participation across populations. Additional services will be required to ensure equitable access to the Programme for the population of Counties Manukau, such as community health providers/workers to engage with ethnic specific communities. Counties Manukau DHB therefore propose to develop services for the Programme including:

- Community Awareness sessions with target populations including Māori (through marae, Whare Oranga and groups with high proportions of eligible Māori) Pacific (through churches, Pacific health providers etc.) and Asian populations to increase awareness and understanding about bowel cancer and bowel screening.
- Media promotions, both ethnic specific and in local newspapers.

- Provision of practice liaison and community health workers to provide active follow up of non-responders to support activities of the national co-ordination centre and primary care. It is noted that the evaluation report advises that the NCC does not have access to phone numbers for all participants. Working with primary care and DHB Patient Information Systems will help locate some non-responders.
- Assisting GPs as required with follow up and cultural support for patients with a positive result who need to see their GP.
- Following up and supporting people with positive results to encourage attendance at colonoscopy, treatment and other appointments as required.
- Provision of electronic systems and training to support GPs to identify patients who have not returned the screening test and provide support for mail outs and phone calls and other initiatives to increase participation.

Commercial Arrangements

Contracts will be established between the Programme and Counties Manukau DHB to allow the services to be established and delivered.

Financial Arrangements

The financial modelling for the DHB is over 21 years for the implementation and Programme outyears. The financial analysis aligns with the scope and financials as detailed in the Programme Business Case, and assumes:

- go-live in Counties Manukau DHB in June 2018;
- expected volumes of participants at each stage of the pathway as modelled on findings from the Bowel Screening Pilot, revised for the Programme age-range and FOBT threshold.

The following items have been excluded from the scope and therefore financial analysis:

- clinical hardware and associated applications required to establish or augment the DHBs' clinical capability;
- changes to the DHBs' internal administrative systems to support new staff or other capabilities;
- wider impacts on other Ministry or sector systems.

The indicative whole of life (21 years) capital and operating financial profile for Southern DHB is set out in Table 29. A more detailed analysis is attached as Appendix 5.

Table 29: Counties Manukau DHB Indicative Whole of Life Costs

Counties Manukau DHB	2016/17 $M	2017/18 $M	2018/19 $M	2019/20 $M	2020/21 $M	Total 5 Years to 2020/21 $M	2021/22 & Outyears total $M	Total 21 years $M
Total Ministry DE						-		
Information System Costs DE						-		
National Co-ordination Centre						-		
National FIT Laboratory						-		
Bowel Screening Regional Centre						-		
DHBs						-		
Training, Quality & Communication						-		
Waitemata 50-60 transition cost						-		
Approved Costs now rephased						-		
Total Budget 16	-	-	-	-	-	-	-	-
IT Capital to NDE	-			-	-			
Depreciation & Capital Charge								
National Co-ordination Centre		s 9(2)(ba)(i)						
National FIT Laboratory								
Bowel Screening Regional Centre								
DHBs								
Training, Quality & Communication								
Approved Costs now rephased								
Total Budget 17	-							
Total Operating Cost	-							
Total Capital Funding								
Total NBSP Cost	-							
DHB Funded Cost - Cancer Treatmen	-							
Waitemata Pilot Surveillance Cost								
NBSP Funding	-							

Counties Manukau DHB is committed to meeting the Minister of Health's expectation of financial performance, as set out in the Annual Plans.

The proposed funding arrangements for Counties Manukau DHB is:

- **Ministry of Health (using programme funding of** s 9(2)(ba)(i) **):** funds the screening pathway including screening, training, colonoscopy service provision and ongoing surveillance colonoscopies as a result of screening. Screening services and surveillance colonoscopies are funded at a rate set by the Ministry which include depreciation, interest and capital charge.
- **DHB:** funds treatment costs within their annual funding arrangements. Those participants with cancer would be treated at their DHBs under usual care. The majority of people diagnosed with bowel cancer through the screening programme would have been diagnosed and treated by their DHB at some stage in the future. The screening programme identifies them earlier (and likely at a more treatable stage), hence these costs are brought forward.

Management Arrangements

Governance: The project will be governed by a Project Steering Group, which will report on an exception basis to the Director of Primary, Community and Integrated Care. The Steering Group is chaired by the General Manager – Emergency Department, Medicine, and Integrated Care and is accountable to the Counties Manukau Director of Primary, Community and Integrated Care. The project manager reports to the Steering Group.

Project Monitoring and Reporting: The Counties Manukau DHB Programme Manager will provide monthly reports to the SRO/Steering Group and to the Ministry NBSP Implementation Manager, to ensure that the DHB planning and subsequent implementation is progressing to schedule and that variations, risks and issues are proactively managed.

Key Milestones: The key milestones and approximate timings are shown in Table 30.

Table 30: Counties Manukau DHB Key Milestones

Key Milestones	Approx. Date
Business case information developed, signed off and submitted to the Ministry	Jan - Apr 2017
Completion of implementation plan	Jul 2017
Commence recruitment of staff	Jul 2017
Readiness review	c. Jan 2018
Roll-out to start	Jun 2018

Change, Benefits and Risk Management: The Counties Manukau DHB Programme Manager will be responsible for change management throughout the implementation project. There is a standard change management process and documentation in the Manukau Method which includes identifying the need to change as early as possible, completing the change documentation and developing a contingency plan. This is then escalated to the Steering Group for approval of the change and plan. If necessary and appropriate, the change will be escalated to the Ministry Programme team and relationship managers.

Benefits tracking will be undertaken by the CMDHB team in support of the national monitoring of benefits realisation. The DHB SRO has overall responsibility for the realisation of benefits within that DHB, and for ensuring regular reporting to the Programme.

A Risks and Issues Register has been developed for Counties Manukau DHB. Where these risks or issues are deemed significant enough to impact on the overall Programme, these are also captured in the Programme Risk Register and monitored accordingly.

Monitoring and Evaluation: The planning and roll-out of the CMDHB implementation will be supported and monitored by the Ministry team. The project will be subject to Treasury Major Projects Monitoring and Gateway review as part of the overall Programme monitoring and assurance. A Readiness for Service Review will be scheduled prior to go-live, to assess the preparations for go-live and to ensure that the DHB is well placed for a successful implementation. Post Go-Live evaluation will also be undertaken, to review the implementation process and identify any learning points which could be incorporated into planning for subsequent DHB implementations.

Project Management: The overarching project will be implemented using the Counties Manukau DHB approved project management methodology. There will be projects or workstreams within the main project, with primary care one work stream, secondary care services another and facilities/capital the other. When the project is set up by the Project Manager, yet to be employed, there may be changes to the structure as the implementation plan is finalised. The staffing structure is shown in Figure 8.

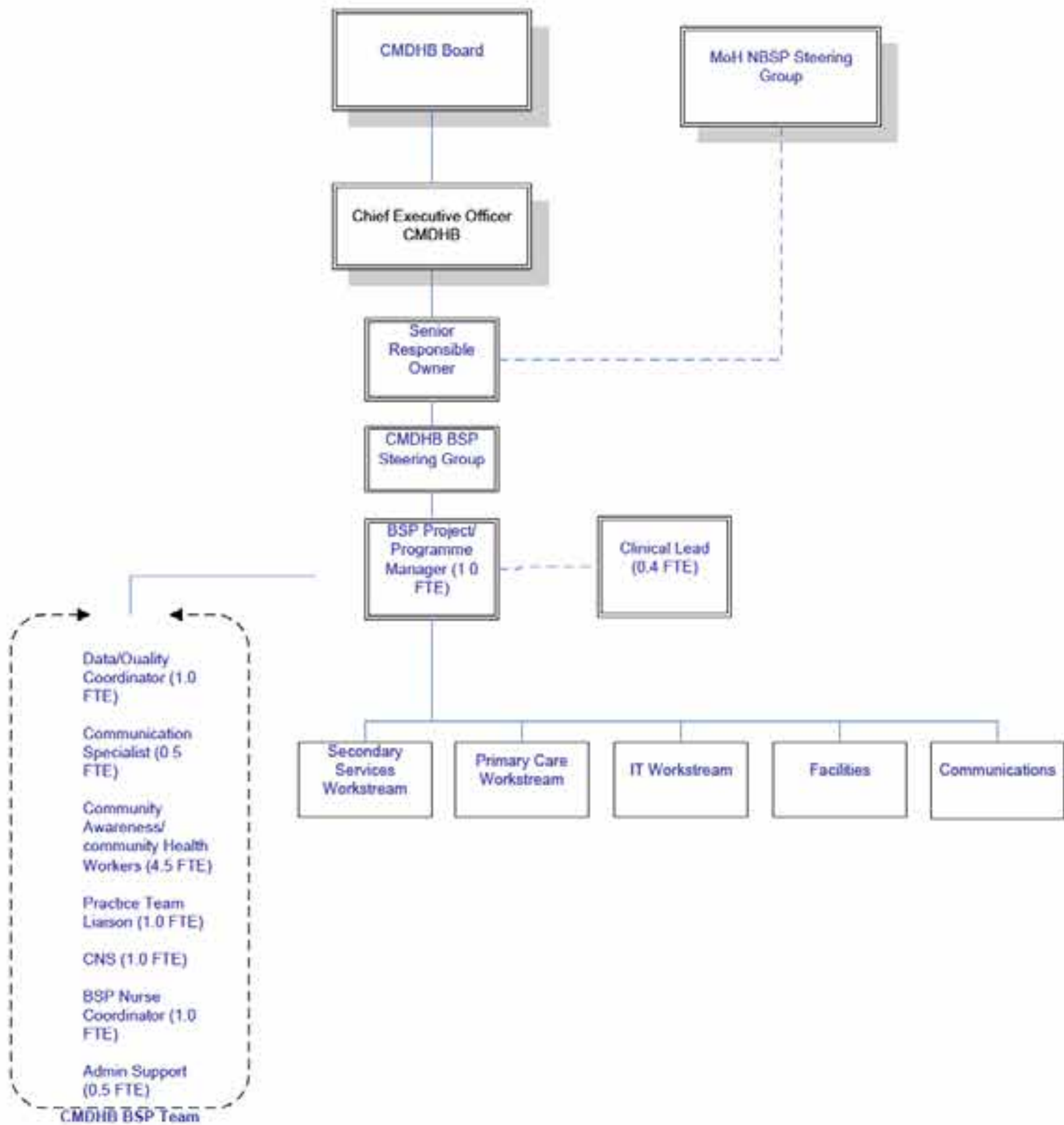


Figure 8: Proposed Structure for the Counties Manukau DHB NBSP Implementation Project

Appendix 5: Financial Case

Budget 2017 Funding

NBSP Total

DHB Bowel Screening Programme Related Costs	16/17	17/18	18/19	19/20	20/21	2021/22 & Outyears	Total
National Co-ordination Centre	s 9(2)(ba)(i)						
NCC one off set up costs							
Postage of kits per year							
Postage for resending kits to people who spoilt their previous one							
Postage for faecal occult blood test kits returned per year							
Development and printing of local promotional resources, running of website etc							
Staffing costs and overheads							
Active follow up calls for priority population groups who have not returned kits							
0800 Number Phone system							
Sub-total NCC							
National FIT Laboratory							
One off set up costs							
Overheads for FIT blood test analysers							
Staffing costs (Spec reception, FIT analysis)							
Faecal occult blood test kits							
Sub-total National FIT Lab							
Bowel Screening Regional Centre							
BSRC one off set up costs							
Regional delivery of services (communications, staffing, DHB support, travel)							
Sub-total BSRC							
DHBs							
DHB one off set up costs							
DHB IT integration one off							
Supporting local colonoscopy service provision, including clinical leadership, training GPs and project management							
Colonoscopy service provision							
Histology of polyps and adenomas found during colonoscopy excl surveillance							
CTC following positive faecal occult blood test result excl surveillance							
Payment of GPs for positive result management							
Funding to PHOs: Primary care liason role, PHO support for GPs, passive followup of priority populations that do not return kits (after NCC attempts)							
Community incentives programme (participant recruitment & health promotion)							
Advertising							
Interest, Depreciation and Capital Charge							
Sub-total DHB							
Other							
GRS/accreditation/qlty improvement							
Social media							
Ongoing training requirements - nurse endoscopists							
NBSP sector training (IT, clinical, process)							
Sub-total Other							
Total DHB Bowel Screening Costs							
Funding from Ministry (Ministry NDE)							
Brought Forward DHB Treatment Cost							
Cancer							
Historical Cancer Costs							
Additional Symptomatic Cols							
Electives Funding							
Net Brought Forward DHB Treatment Cost							
Total NDE & DHB Funded Cost							
Capital							
Capital DHBs							
Capital IT							
Total							
Total Cost (Including Capital but excluding Waitemata Transition)							
Waitemata Transition to national							
- postage of kits per year							
- postage for resending kits to people who spoilt their previous one							
- postage for faecal occult blood test kits returned per year							
- GP							
- Kits							
- Cols Transition to National							
- Cols Pilot B/F							
Total Waitemata Transition to National							
Net Cost/(Surplus)							
Total Appropriation (excl DHB Funding)							

Southern DHB

DHB Bowel Screening Programme Related Costs	16/17	17/18	18/19	19/20	20/21	2021/22 & Outyears	Total
National Co-ordination Centre	s 9(2)(ba)(i)						
NCC one off set up costs							
Postage of kits per year							
Postage for resending kits to people who spoilt their previous one							
Postage for faecal occult blood test kits returned per year							
Development and printing of local promotional resources, running of website etc							
Staffing costs and overheads							
Active follow up calls for priority population groups who have not returned kits							
0800 Number Phone system							
Sub-total NCC							
National FIT Laboratory							
One off set up costs							
Overheads for FIT blood test analysers							
Staffing costs (Spec reception, FIT analysis)							
Faecal occult blood test kits							
Sub-total National FIT Lab							
Bowel Screening Regional Centre							
BSRC one off set up costs							
Regional delivery of services (communications, staffing, DHB support, travel)							
Sub-total BSRC							
DHBs							
DHB one off set up costs							
DHB IT integration one off							
Supporting local colonoscopy service provision, including clinical leadership, training GPs and project management							
Colonoscopy service provision							
Histology of polyps and adenomas found during colonoscopy excl surveillance							
CTC following positive faecal occult blood test result excl surveillance							
Payment of GPs for positive result management							
Funding to PHOs: Primary care liason role, PHO support for GPs, passive followup of priority populations that do not return kits (after NCC attempts)							
Community incentives programme (participant recruitment & health promotion)							
Advertising							
Interest, Depreciation and Capital Charge							
Sub-total DHB							
Other							
QRS/accreditation/qlty improvement							
Social media							
Ongoing training requirements - nurse endoscopists							
NBSP sector training (IT, clinical, process)							
Sub-total Other							
Total DHB Bowel Screening Costs							
Funding from Ministry (Ministry NDE)							
Brought Forward DHB Treatment Cost							
Cancer							
Historical Cancer Costs							
Additional Symptomatic Cols							
Electives Funding							
Net Brought Forward DHB Treatment Cost							
Total NDE & DHB Funded Cost							
Capital							
Capital DHBs							
Capital IT							
Total							
Total Cost (including Capital but excluding Waitemata Transition)							
Waitamata Transition to national							
- postage of kits per year							
- postage for resending kits to people who spoilt their previous one							
- postage for faecal occult blood test kits returned per year							
- GP							
- Kits							
- Cols Transition to National							
- Cols Pilot B/F							
Total Waitemata Transition to National							
Net Cost/(Surplus)							
Total Appropriation (excl DHB Funding)							

Counties Manukau DHB

DHB Bowel Screening Programme Related Costs	16/17	17/18	18/19	19/20	20/21	2021/22 & Outyears	Total
National Co-ordination Centre Costs							
NCC one off set up costs	s 9(2)(ba)(i)						
Postage of kits per year							
Postage for resending kits to people who spoilt their previous one							
Postage for faecal occult blood test kits returned per year							
Development and printing of local promotional resources, running of website etc							
Staffing costs and overheads							
Active follow up calls for priority population groups who have not returned kits							
0800 Number Phone system							
Sub-total NCC							
National FIT Laboratory							
One off set up costs							
Overheads for FIT blood test analysers							
Staffing costs (Spec reception, FIT analysis)							
Faecal occult blood test kits							
Sub-total National FIT Lab							
Bowel Screening Regional Centre costs							
BSRC one off set up costs							
Regional delivery of services (communications, staffing, DHB support, travel)							
Sub-total BSRC							
DHBs local services							
DHB one off set up costs							
DHB IT integration one off							
Supporting local colonoscopy service provision, including clinical leadership, training GPs and project management							
Colonoscopy service provision							
Histology of polyps and adenomas found during colonoscopy excl surveillance							
CTC following positive faecal occult blood test result excl surveillance							
Payment of GPs for positive result management							
Funding to PHOs: Primary care liason role, PHO support for GPs, passive followup of priority populations that do not return kits (after NCC attempts)							
Community incentives programme (participant recruitment & health promotion)							
Advertising							
Interest, Depreciation and Capital Charge							
Sub-total DHB							
Other							
GRS/accreditation/qlty improvement							
Social media							
Ongoing training requirements - nurse endoscopists							
NBSP sector training (IT, clinical, process)							
Sub-total Other							
Total DHB Bowel Screening Costs							
Funding from Ministry (Ministry NDE)							
Brought Forward DHB Treatment Cost							
Cancer							
Historical Cancer Costs							
Additional Symptomatic Cols							
Electives Funding							
Net Brought Forward DHB Treatment Cost							
Total NDE & DHB Funded Cost							
Capital							
Capital DHBs							
Capital IT							
Total							
Total Cost (including Capital but excluding Waitemata Transition)							
Waitemata Transition to national							
- postage of kits per year							
- postage for resending kits to people who spoilt their previous one							
- postage for faecal occult blood test kits returned per year							
- GP							
- Kits							
- Cols Transition to National							
- Cols Pilot B/F							
Total Waitemata Transition to National							
Net Cost/(Surplus)							
Total Appropriation (excl DHB Funding)							

Appendix 6: Glossary

Acronym	Description
BSP	Bowel Screening Pilot
CTC	Computed Tomography Colonography
DHB	District Health Board
ESPI	Elective Services Patient Flow Indicators
FCT	Faster Cancer Treatment
FIT	Faecal Immunochemical Test
GCIO	Government Chief Information Officer
GDP	Gross Domestic Product
ISSLA	Information Systems Service Level Agreement
MBIE	Ministry of Business, Innovation and Employment
MDM	Multi-Disciplinary Meeting
NCC	National Coordination Centre
NHI	National Health Index
NHS	National Health Service (UK)
NRCB	Northern Region Cancer Board
NSU	National Screening Unit
NZGRS	New Zealand Global Rating Scale
OECD	Organisation for Economic Co-Operation and Development
PALT	Provider Arm Leadership Team
PHO	Primary Health Organisations
QALY	Quality Adjusted Life Year
RFP	Request For Proposal
RSC	Regional Screening Centres
SCI	Sector Capability and Implementation
SI CLOG	South Island Clinical Leads Oversight Group
SRO	Senior Responsible Owner
TAS	Technical Advisory Service