

Northern Region Long Term Investment Plan

HIGHLIGHTS

Setting the direction for future investment that secures the best health gain for the people living in our Northern Region.



Introduction

- The Northern Region is New Zealand's largest, fastest growing and most diverse region.
- The four Northern Region DHBs (Northland DHB, Waitematā DHB, Auckland DHB and Counties Manukau Health) together receive more than a third of the nation's public healthcare funding, and use it to provide and fund regional and national services.
- We have a long history of collaboration across the Region, which has led to the development of our first joint long term investment plan for Northland and Auckland.
- The Northern Region Long Term Investment Plan (NRLTIP) provides a new perspective on the challenges and opportunities that face our region in the next two decades. It identifies potential responses to future challenges that will guide our investment path.
- The full NRLTIP is available on the Northern Regional Alliance website at www.nra.health.nz/our-services/regional-planning-and-service-delivery.

Overview

- The NRLTIP paints a picture of the substantial population growth and demographic shifts that will occur over the next two decades. It provides a regional view on how we invest in the health outcomes of our communities, and identifies priorities for additional funding.
- Health equity is an important theme of the LTIP. The Northern Region can be proud of its health system, but there are variations in life expectancy and health outcomes.
- The NRLTIP outlines our plan to work across DHB boundaries, integrating and sharing resources, assets and services to make healthcare more patient and whanau-centred and ensure every dollar is spent in a way that optimises health gain for all.
- The first phase of the LTIP is focused on the condition and capacity requirements for the Region's hospital services, the second phase has a community centred approach.

Our Region: Population

We serve 1.83 million people, 40% of the total New Zealand population.

Our population is large, diverse, growing and aging, and includes:

- A high Māori population in Northland DHB and Counties Manukau Health
- A high Pacific population in Counties Manukau Health
- A high Asian population across the Region, particularly in Auckland DHB
- A high rural population particularly in Northland
- High levels of deprivation in Counties Manukau Health and Northland DHB
- We are comparatively young but have a rapidly growing 65+ population

Over the next 20 years, approximately 57% of New Zealand's population growth will be in the Northern Region. Medium growth forecasts predict 562,000 additional people in Northland and Auckland.

Our Region: Wider Context

We are New Zealand's largest, fastest growing and most diverse region.

We are a significant regional employer and contributor to the economy.

Our DHBs, combined, employ over 26,000 people, meaning we are the largest employer in the Northern Region.

Our DHBs' annual revenue in 2016/17 totalled \$5.3billion.

	NDHB	WDHB	ADHB	CMH	Northern Region	NZ
Total population '000s 16/17	173	599	515	540	1,827	4,737
% Overseas born 2013	23%	41%	46%	43%	41%	25%
% Māori 16/17	34%	10%	8%	16%	14%	16%
% Pacific 16/17	2%	7%	10%	21%	12%	6%
% Asian 16/17	4%	22%	32%	25%	24%	14%
% Rural 2013	43%	6%	0%	7%	8%	14%
% all ages in Quintile 5 (most deprived) 2013	37%	8%	19%	36%	22%	20%
DHB Employed staff	2,741	7,091	9,433	6,763	26,028	69,620
DHB Annual Revenue (\$ millions)	604	1,636	2,074	1,577	5,256 ^{1/}	13,283

^{1/} adjusted for inter district flows within Region

Our Region: Health Outcomes

Health outcomes in our Region are generally better than the New Zealand average, but there are inequalities for some population groups and geographic areas.

- Significant inequalities and ill health are linked to ethnicity and deprivation, particularly for Māori and Pacific.
- The life expectancy gap for Māori and Pacific varies across DHBs
- On average 1,800 potentially amenable deaths occur each year in the Region.
- Rates of amenable mortality are three times higher in Māori than non-Māori non-Pacific people.
- 1 in 5 have an unmet need for primary care due to cost, transport or ability to get an appointment (20% ADHB - 27% NDHB).
- 1 in 10 did not access a GP when needed due to cost

Our Region: Health Outcomes

Health outcomes are variable across our Region.

For example, Waitematā DHB has the highest life expectancy at 84.1 years, whilst Northland DHB life expectancy is currently 79.6 years.

Variation is also seen in amenable mortality, cancer and CVD mortality, and cancer survival rates.

	NDHB	WDHB	ADHB	CMH	Northern Region	NZ
Life expectancy (2015-17)	79.6	84.1	82.9	81.3	82.5	81.7
Life expectancy Māori (2015-17)	73.0	80.9	79.5	74.8	76.0	75.6
LE Gap (yrs.) - Māori cf non-Māori, non-Pacific (2015-17)	9.1	3.8	4.6	8.8	8.0	7.2
LE Gap - Pacific cf non-Māori, non-Pacific (2015-17)	2.3	6.8	8.0	7.2	7.4	6.3
Mortality (2013-15 rate per 100,000 pop)	430.4	308.4	351.1	396.3	353.1	381.7
Amenable mortality (2013-15 rate per 100,000 pop)	115.0	66.3	76.2	103.0	84.3	92.3
Cardiovascular mortality (2013-15 rate per 100,000 pop)	125.9	84.0	102.5	118.1	103.0	112.7
Cancer mortality (2013-15 rate per 100,000 pop)	137.7	106.0	109.1	123.2	115.3	122.6
Infant mortality two year rate per 1,000 live births (2016 and 2017)	3.4	2.5	3.7	5.3	3.8	3.7
Suicide (2013-15 rate per 100,000 pop)	12.9	8.7	7.7	9.0	8.8	10.9

Key: Dark Blue = Greatest opportunity for improvement, Light Blue = Lesser opportunity for improvement

Our Region: Current Demand

In recent years demand has outstripped regional capacity in almost all settings. Our community and hospital services are at full capacity.

Over the five years to 2015/16 our population grew by 9.4% from 1.63 million to 1.78 million.



Outpatient contacts

grew by 12.1%
to 2.0 million p.a.



GP consultations

grew by 10.5%
to 5.1 million p.a.



ED attendances

grew by 18.8%
to 381,000 p.a.



Inpatient Discharges

grew by 15.5%
to 374,000 p.a.



Aged care spending

grew by 14.4%
to \$388 million

Our Region: Facilities Infrastructure

Our facilities are aging, with 18.5% defined as being in 'poor' or 'very poor' condition and 20% do not support current models of care.

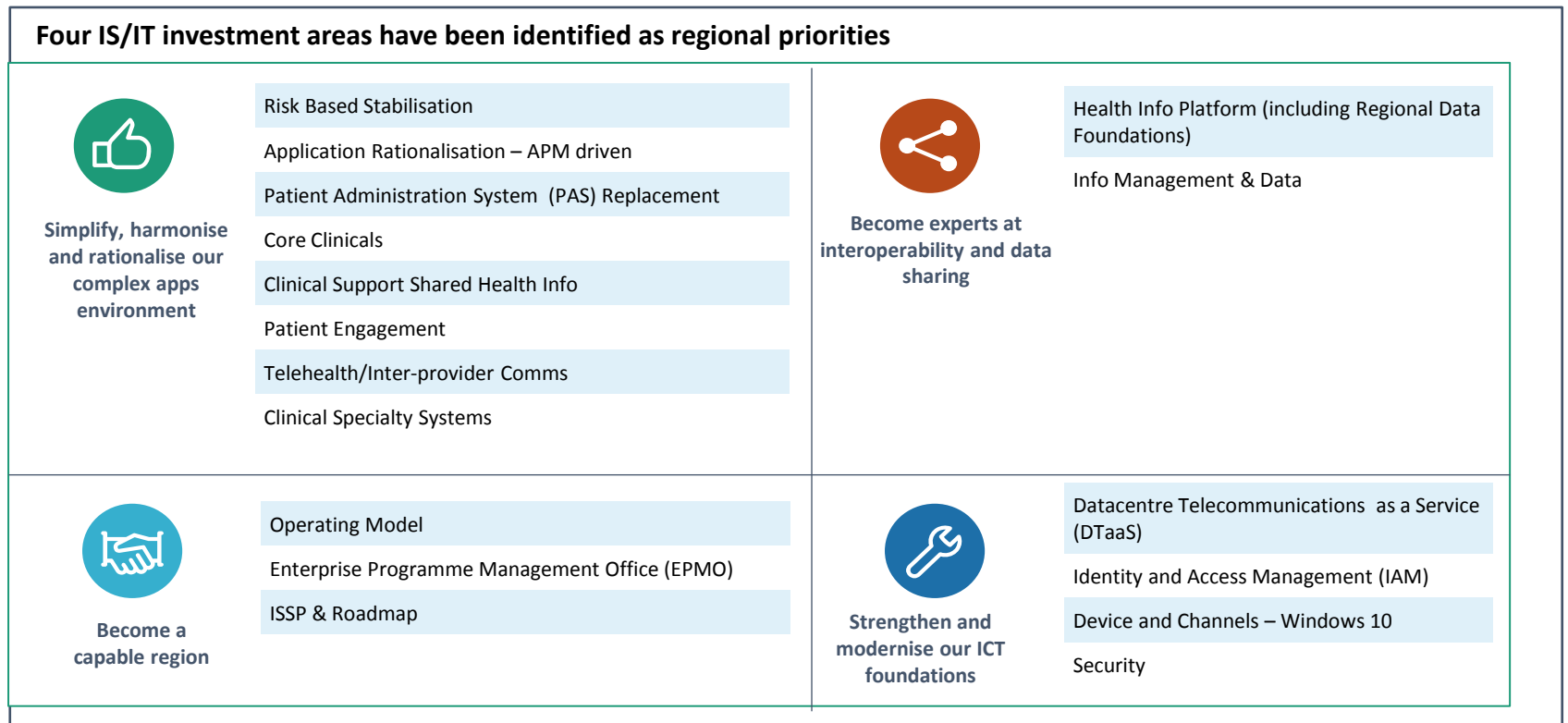
- We have \$3.8bn (reinstatement value¹) of building facilities and physical infrastructure
- In recent years, our DHBs have prioritised the investment of available funding into service delivery, delaying maintenance and upgrades
- Issues with critical infrastructure (water supply, power), asbestos, seismic compliance and building water tightness exist across all our sites
- Patient safety is protected through active maintenance programmes, but significant remediation works are needed in the coming years
- DHBs in the Northern Region recently received capital funding aligned to the NRLTIP. Other regional business cases are at different stages in the capital investment process

Our Region: Information Technology

- Our information systems (IS) include infrastructure, and clinical and business applications, and are critical to the delivery of safe, high quality health services.
- The majority of our IS are complex, ageing and not aligned to future models of care.
- Our current application landscape includes more than 2,000 individual applications, and is only partially connected which presents challenges in passing data between our systems.
- Significant investment is needed across the Region to bring our IS up to current versions, increase capability, and reduce the risk of failure.
- We need to lift our future investment with an initial focus on building sound foundations.
- Further investment in IS is essential to deliver the required changes in our models of care.

Our Region: Information Technology

Our IS/IT systems need to be able to deliver the future models of care signalled in the NRLTIP.

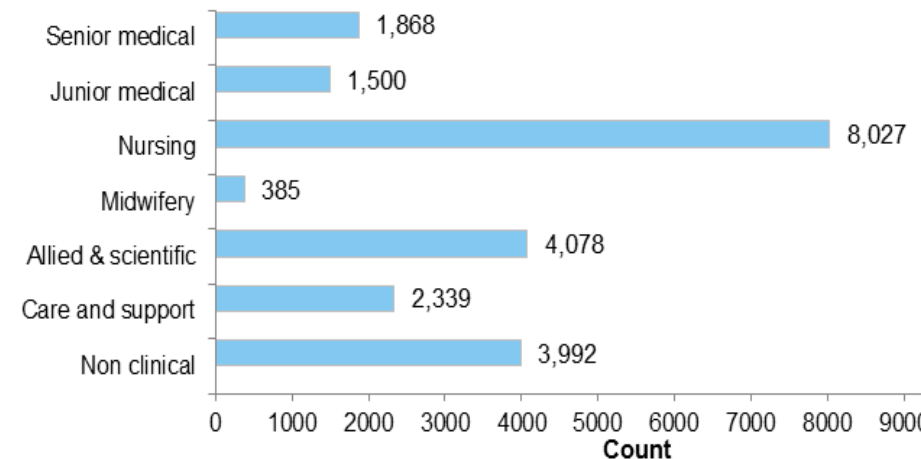


Our Region: Workforce

The people who deliver and support the delivery of care are one of the most important parts of our regional healthcare system.

- We have approximately 84,000 people working across a broad definition of healthcare services in the Northern Region.
- Collectively, our four DHBs are the Region's largest employer with over 26,000 workers in 223 different roles, and we are important training and research organisations

Northern Region FTE by occupation group (June 2017)



Our Region: Workforce

- We contract services from many external providers spending \$1.6 billion on their services. This includes:
 - 380 general practices providing 5.1 million consultations
 - 423 community pharmacies dispensing 24 million prescriptions
 - 77 mental health NGOs providing 572,000 contacts and 462 mental health beds
 - 198 aged care residential facilities providing 9,765 beds

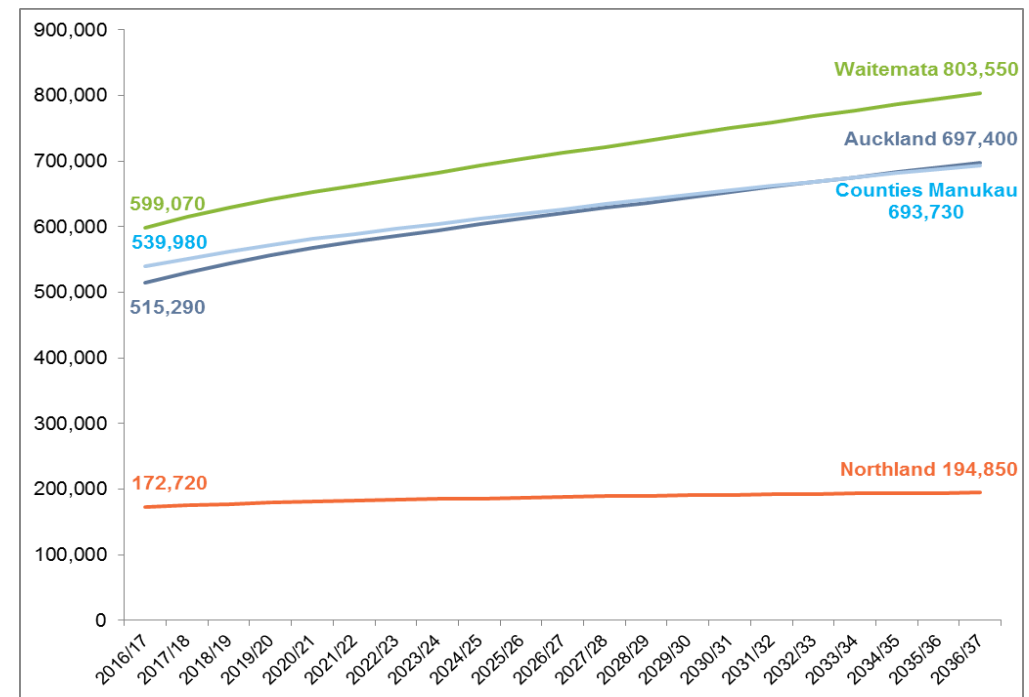
Future Challenges and Opportunities

- The Northern Region healthcare system faces a fast changing environment due to a rapidly growing and aging population and the impact of 'game changing' and expensive technological advances.
- We have the opportunity to work together as a region to shape the future of healthcare delivery in order to manage future demand, address inequities, and secure the best health gain for the people living in our Region.
- The NRLTIP outlines options for balancing and sequencing investment in several key areas. Our priorities over the next 20 years include: improving health equity; increasing our prevention and early intervention work; taking a more patient and whānau centric approach to services; fixing and upgrading critical infrastructure; and addressing future hospital capacity.

Future Challenges: Population Growth

We expect significant growth and change in the population we need to serve over the next 20 years.

- In the next 20 years, 57% of New Zealand's growth will be in the Northern Region.
- 562,000 additional people in the next 20 years using medium growth forecasts.
- 781,000 additional people in the region the next 20 years using high growth forecasts.
- We have an aging population; the number of people aged over 75 years is anticipated to more than double during this time.



Medium growth forecasts

Future Challenges: Demand

The demand for healthcare associated with our growing, ageing and changing population will require significant investment.

If we simply multiply current activity by expected population growth **in 20 years the Region will need:**



1.1 million

Additional
Outpatient
Attendances



2.2 million

Additional
GP Consults



2,055

Additional
Beds



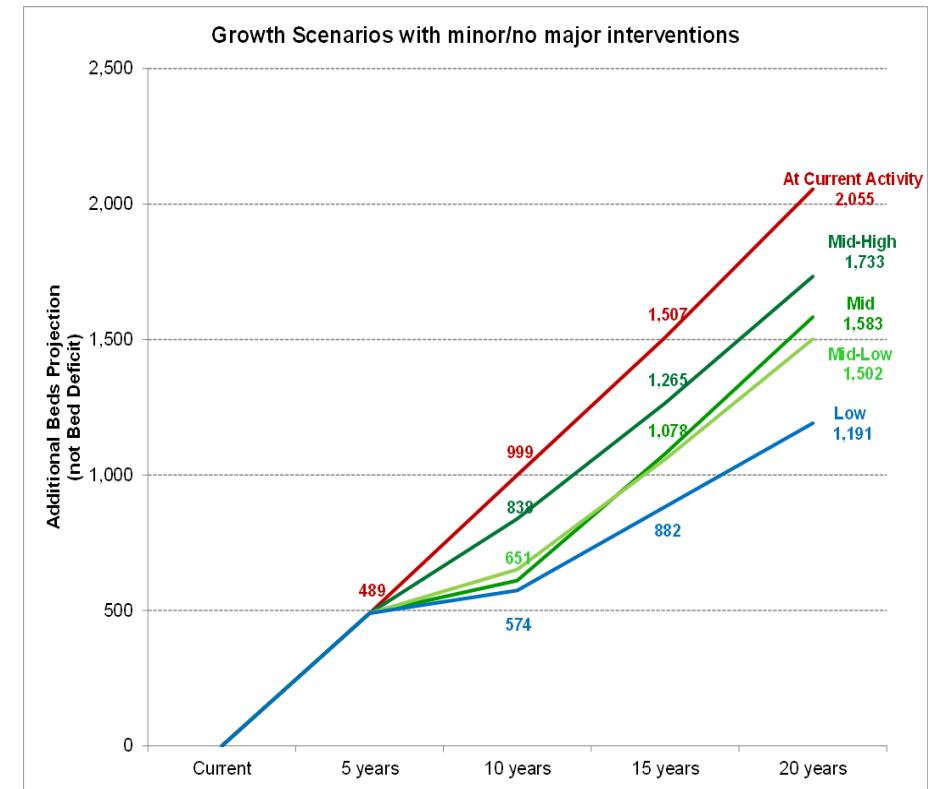
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Additional
Theatres

Future Challenges: Model of Care impact on Hospital Capacity

Investing in changes to our models of care can bend the demand curve for hospital services.

- The bed projection of 2,055 beds reflects the number of beds we would need by 2037 we simply multiply current activity by population growth.
- If we accelerate model of care changes we can expect to reduce the demand on hospital beds demand to around 1,600 additional beds as patients have improved health and/or are supported outside of hospital settings.
- A more dramatic model of care change programme would be required to reduce the additional bed requirement to around 1,200 beds.



Future Challenges: Our investment approach

The NRLTIP outlines three investment themes, Fix, Future proof, and Accelerate, which will enable us to improve health outcomes while ensuring we can meet our future capacity requirements

We need to prioritise our investments within each of these themes, as well as balancing our future investment path across these themes to ensure the sustainable delivery of optimal health outcomes for the Region.

We will **Accelerate** model of care changes in:

- Population health and prevention
- Primary and community care
- Information Systems /Information Technology
- Workforce
- Configuration of hospital based services

Future Challenges: Our investment approach

In the short term we will:

- **Fix** investments in facilities and assets which are critical to on-going service delivery
- Start immediate **Future proof** work
- Use our remaining funding to begin **Accelerate** and longer term **Future proof** initiatives

In the medium and long term we will:

- Invest proportionately more in **Future-proofing** our capacity and **Accelerating** model of care changes

Future Opportunities: Doing Things Differently and Working Together

By accelerating model of care changes and working together we will improve patient health outcomes, patient engagement and health sector collaboration.

- As a Region we will work to deliver the right care in the right place at the right time
- We will invest in short and long term increases in hospital capacity
- Our community and primary care settings will be developed and supported to provide a wider range of services appropriate to the needs of their local patient cohorts
- We will increase our IS/IT capabilities to enable telehealth to be provided for our remote populations who otherwise may not access certain services
- We will invest in aged care services to provide a broad spectrum of home based health and support services and alternative living environments for older people

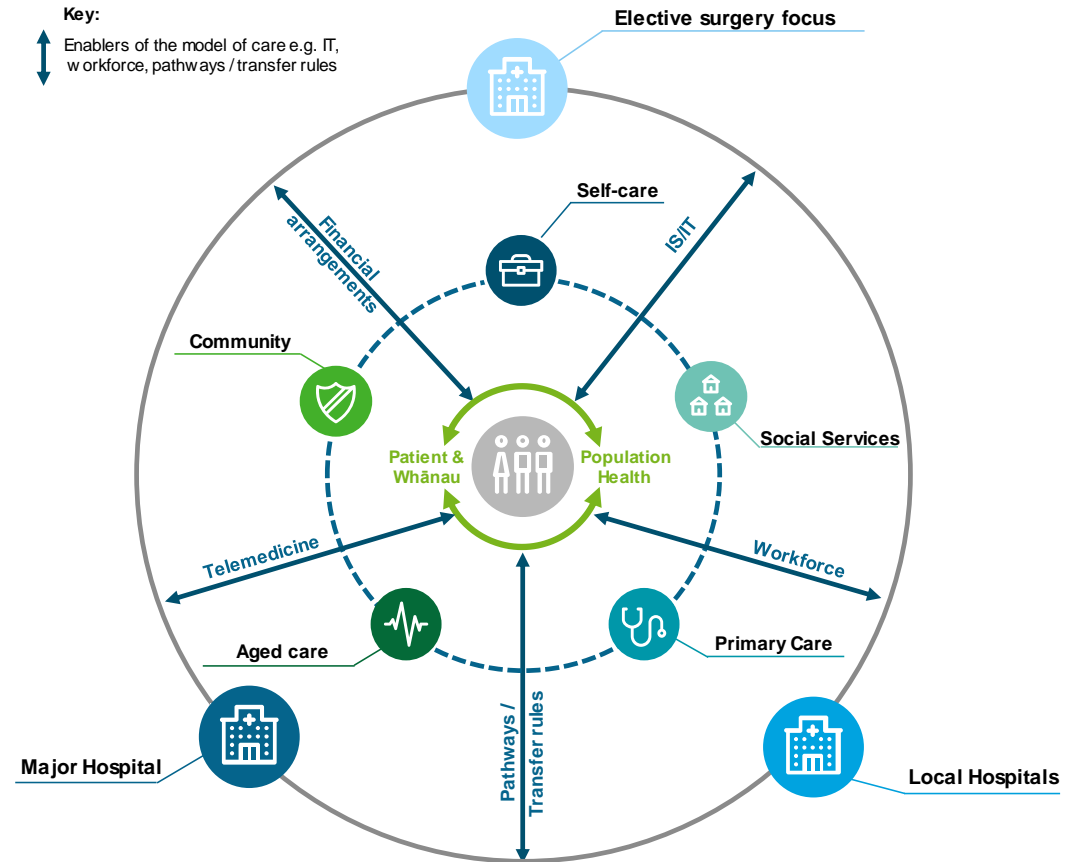
Future Opportunities: Doing Things Differently and Working Together

- We will increasingly take a population health approach that will support and engage our patients in their healthcare journey.
- This will be supported by investments balanced across public health, primary and community care, and hospital based services, with a focus on:
 - Cost-effective public health interventions
 - Community based alternatives to admission
 - Different types of hospital based services
 - Increased productivity across the whole system

Future Opportunities: Our Vision

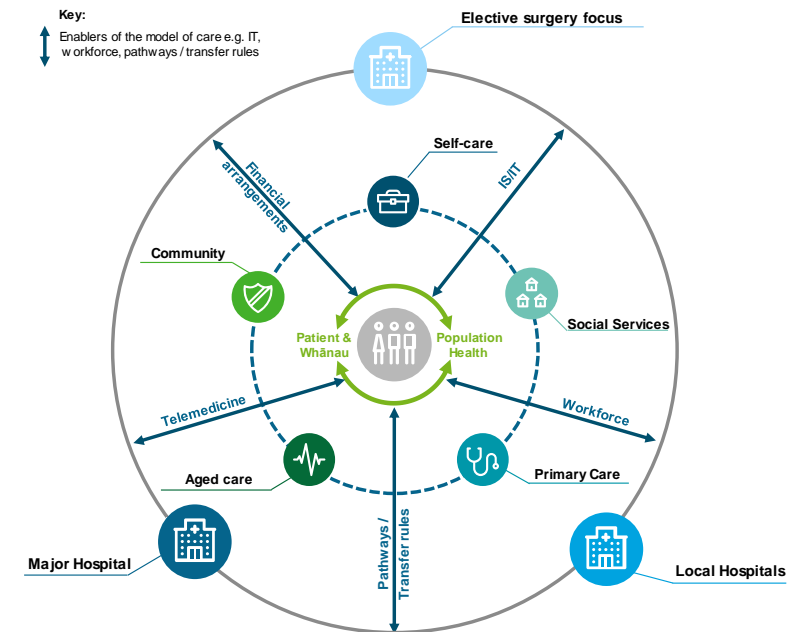
We will deliver care through an integrated, collaborative, patient centred web of primary, community and hospital based healthcare settings.

- In the future we will adopt a new model of care where all service providers, DHB owned or otherwise, are 'nodes' within a more integrated Regional health system.
- These nodes include all components of the health delivery system such as patient self-care, primary and community care, private and NGO services and DHB hospital, public health and community services.



Future Opportunities: Our Vision

- Boundaries between care settings will become increasingly blurred with the focus being on providing care in the most appropriate setting.
- Increasing collaboration with other care providers, will improve the overall health of our population, increase access to care and reduce inequities.
- We will identify what services should be centralised and what services can be localised to improve quality, safety and outcomes of care.
- Our delivery mechanisms will still be sensitive to the requirements of our populations and local needs.



Future opportunities: Model of Care Changes

The NRLTIP outlines how accelerating investment in population health and prevention efforts will support our patients and their whānau and improve health outcomes over time.

- Our future network of care will be centred around the patient and their whānau enabling our population to stay well and be treated effectively if they are injured or fall ill.
- Our population health and prevention efforts will incrementally improve the health outcomes of our whole population but will be particularly focused on reducing inequities by targeting our populations who typically have worse health outcomes due to deprivation, access to care and ethnicity.
- Over time model of care changes will help mitigate demand for hospital services, through improving health outcomes in our Region's population.

Future opportunities: Model of Care Changes

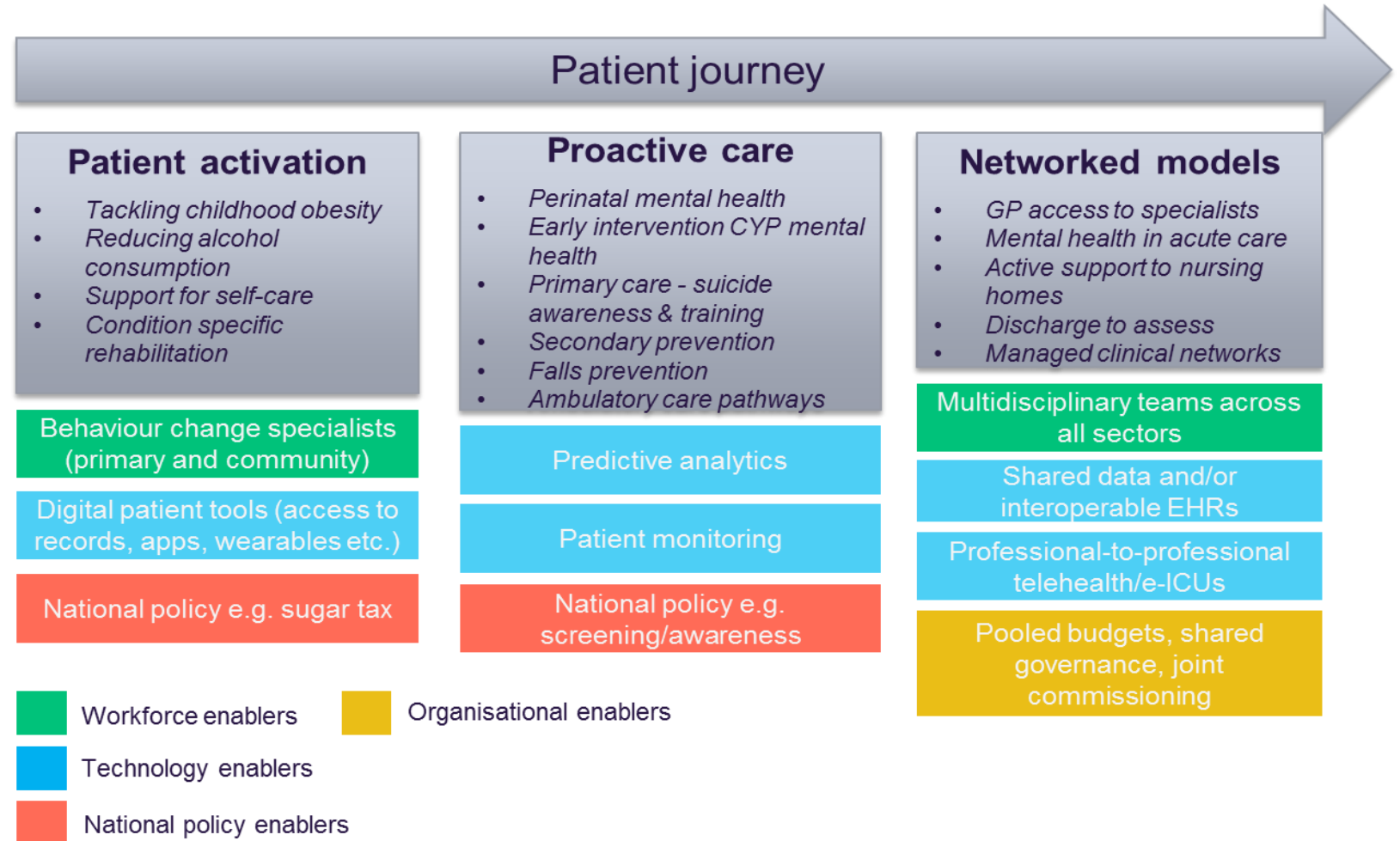
- The NRLTIP outlines the role of investment in population health and prevention efforts to improve health outcomes across our Region, and to reduce the demand for hospital services.
- Examples of focus areas are improving health literacy, empowering patients to lead healthier lifestyles, and increasing the uptake of screening programmes so we can help people before they become sick.

Area of Focus	Description
Healthy Lifestyles	Provide services which support Māori, Pacific and vulnerable populations to be smoke free, physically active and consume nutritious diets
Screening	Increase the uptake of bowel, breast, and cervical screening programmes and implement abdominal aortic aneurysm (AAA) screening
Chronic Disease Management	Implement systems to support early identification and planned proactive management of CVD, diabetes and respiratory disease for Māori, Pacific and other vulnerable populations with a focus on equitable outcomes
Cross sector collaboration	Building relationships and referral pathways with non-health services to support improved health outcomes for Māori, Pacific and other vulnerable populations
Advocate, where appropriate, on key upstream drivers of inequity	Advocate to central and local government for effective measures that address drivers of inequity both within and outside the health sector

Future Opportunities: Model of Care Changes

The NRLTIP identifies interventions which have the greatest impact on Hospital use.

Key interventions where evidence demonstrates change has been effective at keeping people healthier, and reducing their need for hospital services.



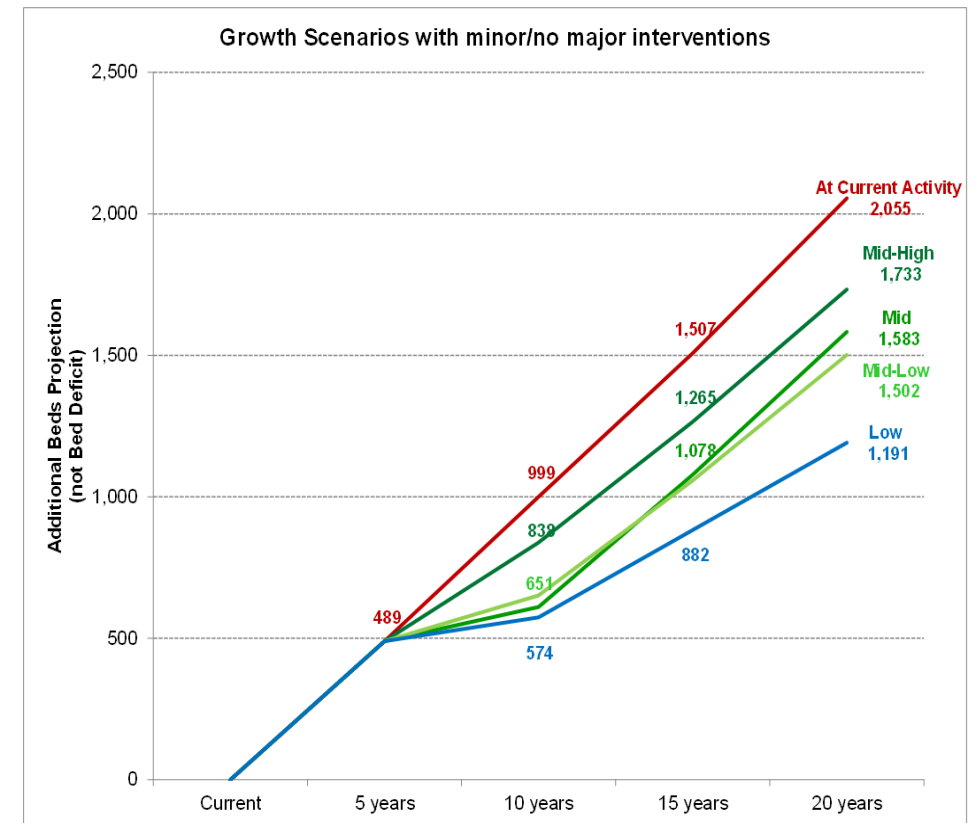
Future Opportunities: Hospital Capacity

The NRLTIP predicts we will need to invest in between 1,200-2,055 extra hospital beds by 2037 to meet regional demand.

Option 1: Maintain our **current pace of change** and meet the current activity growth forecast (2,055 beds)

Option 2: **Moderately increase pace of change** to meet a medium moderated growth forecast (1,600 beds)

Option 3: **Dramatic change programme** to deliver the lowest bed capacity growth forecast (1,200 beds)



Future Opportunities: Hospital Capacity

Option 1: Maintain our **current pace of change** and meet the current activity growth forecast (2,055 beds)

- Investment in years 1- 5 is predominantly in current sites
- An additional acute site south of Metro Auckland would be commissioned and fully operational by year 10. Initially 350-400 beds will be commissioned, but the site will accommodate up to 600 beds
- A second additional acute site North of Metro Auckland would be commissioned with 350-400 beds fully operational by year 20

Option 2: Moderately increase **pace of change** to meet a medium moderated growth forecast (1,600 beds)

- Investment in years 1-5 is predominantly in current sites
- Waitakere Hospital would become a full acute site
- An additional acute site south of Metro Auckland would be fully operational by year 20
- Land bank north of Metro Auckland in anticipation of 20 to 50 year demand

Option 3: Dramatic change **programme** to deliver the lowest bed capacity growth forecast (1,200 beds)

- Additional capacity is met on current DHB sites
- No additional acute hospital locations proposed within the next 20 years
- Additional capacity requirements managed through competitive commercial outsourcing arrangements
- Land bank north or south of Metro Auckland in anticipation of 20 to 50 year demand

Future Opportunities: Short Term Capacity

Short term capacity pressures are unlikely to be addressed by model of care changes; alongside long term planning we must rapidly expand our current sites to meet demand.

- In the immediate future we will invest in quick, tangible decongestion efforts within our current facilities, particularly in metro Auckland.
- The development of additional capacity will have a lag time that requires the Region to explore alternative solutions to relieve pressures on current sites.
- Metro Auckland is also considering other short term measures, including: extending working hours of theatres and outpatient clinics; resourcing all physical beds; continuing current outsourcing arrangements and exploring other options for strategic outsourcing; investigating temporary facilities; and investing in community based services e.g. extending primary and home based care hours, acute care teams.

Future Opportunities: Our Investment Path

Our preferred investment path concurrently remediates current infrastructure; future proofs our medium growth scenario (existing and new sites), and invests to support model of care change.

Developing hospital capacity

- The preferred path will ensure the resilience of our current facilities and develop new acute capacity while also allowing investment in our necessary population health initiatives, community and primary care, workforce sustainability and IS/IT.
- We will remediate, reconfigure and expand our current sites to meet anticipated demand.
- We will rapidly grow Waitakere Hospital to meet the needs of West Auckland and decongest both North Shore and Auckland City Hospitals.
- We will build a new 350-400 bed acute site south of Metro Auckland within the next 20 years.
- We will land bank north of Metro Auckland to ensure the sustainable delivery of healthcare in the Region beyond the duration of the LTIP.

Future Opportunities: Our Investment Path

Accelerating model of care changes

- By only investing in our current sites and one additional new acute site we will be able invest remaining capital in accelerating model of care changes to improve regional population health.
- ‘Accelerating-change’ related investments will include:
 - Public health interventions, patient activation and proactive care
 - Developing our primary and community care settings and hubs to enable patients to be supported outside of hospital settings
 - Strengthening of our workforce, ensuring they have the capacity and capability required to deliver on our population health strategy
 - Modernising our IS/IT systems to enable interoperability and communication across all sectors of the health system

Future Opportunities: Capital Investment

Immediate capital investment priorities include:

- Metro Auckland immediate capacity projects
- Replacement of the Tanekaha Unit at the Mason Clinic
- North Shore Hospital sustainable inpatient services
- Repurposing of selected facilities to create much needed inpatient capacity, especially at Auckland Hospital, Greenlane, Middlemore and Manukau
- New elective capacity and inpatients beds at North Shore Hospital (currently being considered by the Ministry of Health's Capital Investment Committee).
- Remediation of facilities and infrastructure, especially at Auckland and Counties Manukau DHBs
- Redevelopment of Whangarei Hospital, primarily for remediation and fitness for purpose

Medium-term priorities include:

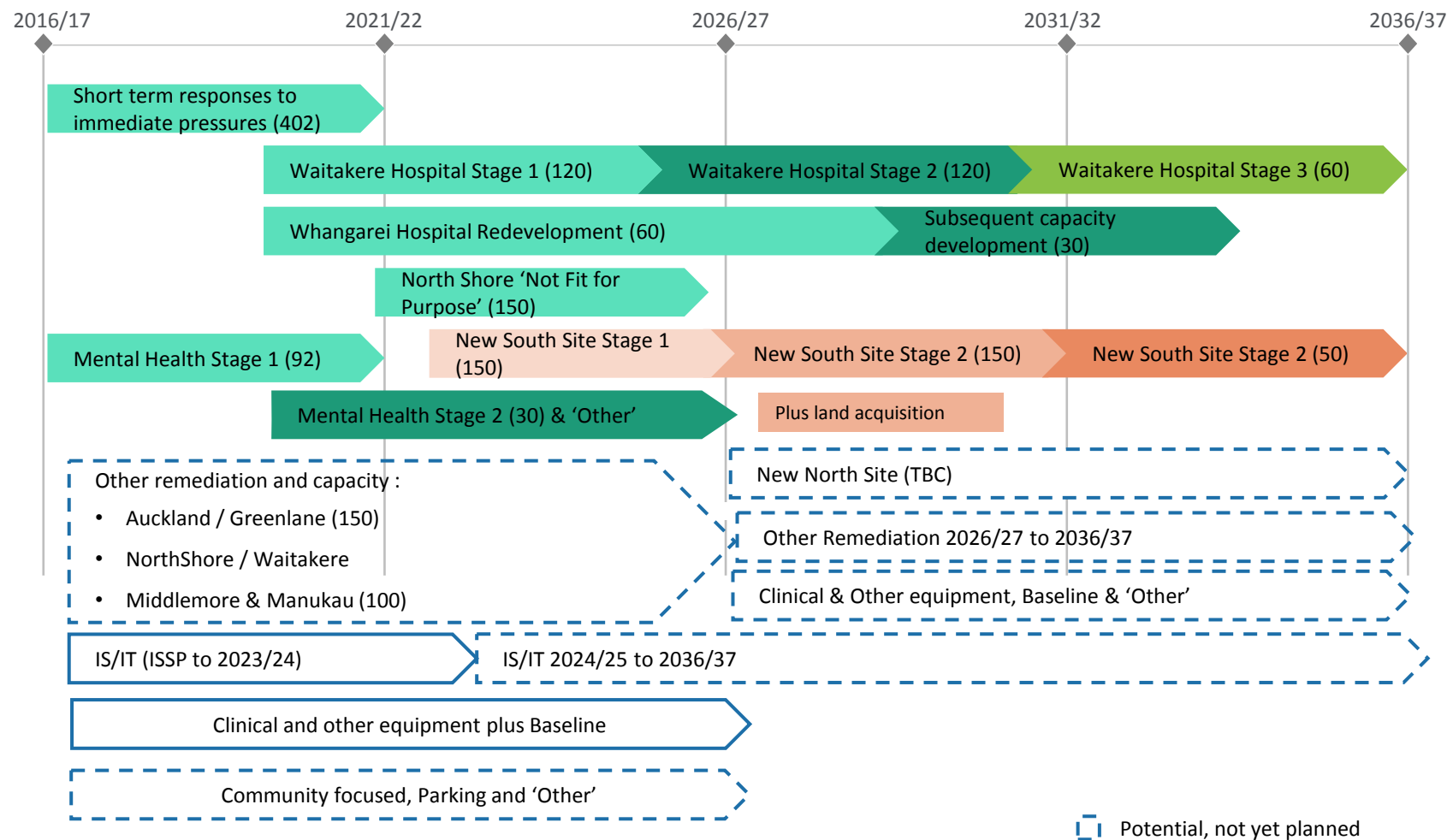
- Greenfield development
 - (including land acquisition; South and North)
- Expansion of Waitakere capacity
- Investment in clinical equipment
- New mental health facilities
- Community investments

In addition to investment in capacity, infrastructure and equipment, we also need to invest in:

- The resilience and ability of our information systems to support and enable new models of care.
- The capacity and capability of our workforce
- Baseline funding as an ongoing requirement; to ensure appropriate levels of asset maintenance and replacement

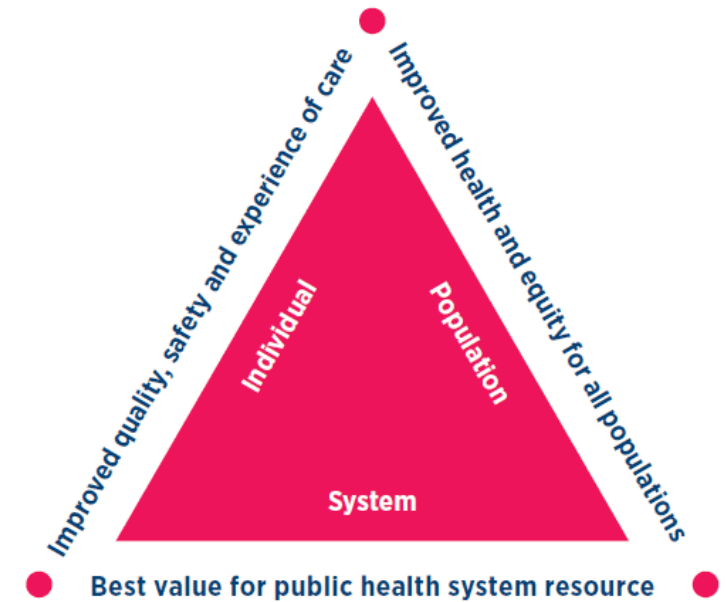
Future Opportunities: Potential Phasing

The 'grouped project' view shows potential phasing suggestions for our overall investment schedule from 2017/8 to 2036/7. Note that this view conceals some annual phasing impacts.



Next Steps: The NRLTIP is a Living Document

- The capital funding we recently received has enabled us to start investing in some of the areas identified in the Phase One NRLTIP.
- Phase Two NRLTIP work, currently underway, increases the focus on investment planning with regard to community, population health and mental health services.
- Our current work is also further detailing plans completed in our Phase One deep dive areas, which looked at model of care changes in Cancer, Frail Elderly and Electives.
- Investments required in workforce and information systems to support and enable the desired changes are an ongoing focus.
- The Northern Region DHBs are working together to continuously refine and improve our sequencing to ensure we best meet the changing health needs of our region.



The Triple Aim Framework
underpins our strategy