

Auckland Council Research Strategy and Priority Research Areas 2013 - 2016

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Research strategy

Purpose of the strategy

The purpose of this strategy is to provide direction for Auckland Council's research activity in alignment with the council's priorities. Specifically, this strategy recognises the requirement to prioritise high-quality research to support the implementation and evaluation of the Auckland Plan.

Introduction

The Auckland Plan sets the long-term (30-year) direction for Auckland with thirteen strategic directions across social, economic, environmental and cultural domains. These strategic directions, and their associated priorities, provide the framework for this research strategy.

This strategy aims to ensure that Auckland Council's research activities contribute to the development of a sound evidence base to inform, support and evaluate the delivery of the strategic directions. The delivery of high-quality research plays an essential role in providing the evidence base for the council's activities.

Research is an organised and systematic process of discovery. It is organised because it is planned and focused, with a clearly defined scope related to the research question. It is systematic because it proceeds through a sequence of development, testing, and evaluation to ensure accurate results.

Research can involve a variety of activities and methods, from small-scale, issue-specific questions to large-scale, multi-organisation research programmes.

Ongoing data collection and monitoring is a vital component of the research effort, as it allows the council to measure progress over time against desired outcomes, and to identify future trends.

The principles and key result areas of the council's research activity are described in this strategy. Together, these seek to ensure the council's research investment:

- is of high-quality and focused on areas of strategic priority
- is able to respond to changing and emerging issues
- provides a platform for innovation, business improvement, and enhanced organisational effectiveness
- maximises strategic alliances.

Principles

Auckland Council leads a sustainable programme of high-quality research initiatives, which inform, and is informed by, its strategic direction and priorities. When research is accurately scoped and effectively delivered, it enhances the decision-making process and improves organisational effectiveness for both operational and policy development.

Effective, high-quality research needs to be:

- relevant – related to local needs and context and the council's service delivery priorities
- purposeful – undertaken in accordance with a clear brief
- systematic – robust designs, documented conclusions and peer reviews
- integrated – considers external, spatial and contextual issues (for example, wider catchment effects or social and economic drivers)
- timely – undertaken and completed when it is needed most
- rigorous – undertaken by people using appropriate skills, expertise and methods so that it is authoritative and credible
- ethical – follows a set of principles that consider the rights and interests of those involved in a research study
- reflexive – researchers recognise their world view and are willing to consider other research paradigms when appropriate
- actionable – resulting in clear recommendations or implications for policy or practice change
- adequately resourced and represents value for money
- collaborative – both across the council and with external partners to avoid wasteful duplication of effort; takes advantages of co-operative opportunities with external funding agencies and research providers
- effectively disseminated – so that those who need research findings have access to them and can understand and make use of them
- open access – data and information is accessible, open and provided in a format that promotes dissemination and discussion of research within Auckland Council and externally to central and local government, resource users, and the wider community.

Key result areas

This research strategy focuses on the five key result areas shown below:

1. Prioritise research

Well-defined research priorities provide researchers, funding agencies and decision-makers with a direction for future research investment. Research prioritisation must explicitly link to the goals, policies, and functions of Auckland Council in order to establish a future-focused research programme. This strategy recognises the thirteen strategic directions outlined in the Auckland Plan as a guiding framework for prioritisation.

2. Develop and maintain strategic alliances

Developing and maintaining good working relationships with central government organisations, tertiary education and research providers and the wider community will connect Auckland-led researchers with the latest knowledge, expertise, and techniques and provide opportunities to leverage the research activity of other organisations.

3. Develop and sustain research expertise

Auckland Council must develop and maintain a strong talent pool of researchers and technical staff in order to continue meeting the needs of end users.

These individuals need to be supported by effective training, rewarding career opportunities, up-to-date technological tools and excellent research facilities. We also need to devise and implement systems that support the recruitment of new talent from a range of academic and practical training institutions.

4. Optimise research tools and methods

Research requires innovative thought and the most appropriate tools and methods available. This means staying current with technological and international research advances.

Quality data management, analysis and information systems are a prerequisite for robust research. Improvements are needed to standardise data collection and management systems in order to lift the overall quality and accessibility of Auckland Council's datasets.

5. Mobilise knowledge

It is essential to communicate the research findings in a way that is easily understood by decision-makers, policy staff, resource users, and the wider community and is therefore useful to everyone.

Priority research areas

Introduction

The first action of this strategy is to identify priority research areas for the period between 2013 and 2016. Well-defined organisational research priorities not only provide a means to coordinate internal research effort, but also guide external researchers, their organisations and funding agencies in decisions about future research investment.

This document aims to set out those priorities.

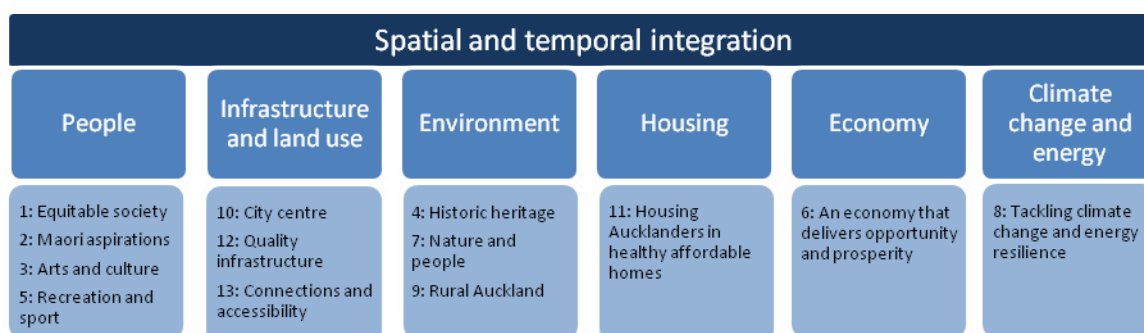
The development of these priorities has been guided by the Auckland Plan, which represents a paradigm shift in spatial planning for Auckland. Successful spatial planning is underpinned by a credible evidence base, including social, cultural, economic and environmental information. To support the implementation of the Auckland Plan and this shift to spatial planning, research will be required across a range of subject areas to integrate effects and drivers on a spatial and temporal basis. This integration enables research to provide a robust evidence base for the Auckland Plan, through an understanding of the full range of drivers, effects and interactions of pursuing the plan's vision.

Auckland Council has developed a Māori Responsiveness Framework as part of its

commitment and legal obligations in relation to Te Tiriti o Waitangi/the Treaty of Waitangi. This framework focuses on enhancing and guiding the Auckland Council Group's commitment to Māori, including the key goals of effective Māori participation in democracy and developing strong Māori communities. This research strategy is underpinned by a broad consensus that it is important to acknowledge and incorporate the goals of the framework, together with a strong commitment to do so.

The priority areas have been identified to meet the research needs and support the implementation of the Auckland Plan's thirteen strategic directions. Given the widely-shared vision of the Auckland Plan, there is some alignment and commonalities amongst these strategic directions. In order to provide coherent guidance for research activities, the directions have been distilled into six research themes to ensure integration and reduce duplication. Some of the strategic directions or research areas could align with multiple research themes, so they should not be considered as unconnected areas of interest. In fact, integrated cross-theme research is likely to provide the most challenging, interesting and valuable research outputs.

The six research themes and associated strategic directions (numbered as they appear in the Auckland Plan)



People are central to the Auckland Plan and represent the focus of the positive outcomes it is seeking. Infrastructure and land use is core council business and crucial to enabling and delivering the aspirations of the Auckland Plan, whilst the plan acknowledges that people and the environment are inseparable. Housing, climate change and economy are intertwined with people, environment and infrastructure, but each have substantial research requirements that warrant stand-alone research themes.

The priority research areas are based on the information needs of the Auckland Plan and the range of strategies that have been developed to support the plan's implementation. These areas will provide the information required to support the council's planning and operational functions and are framed around three high-level research approaches:

- system dynamics
 - how things work, how we measure things and how they interact
- values and trade-offs
 - how different values are quantified and evaluated in making decisions
- policy effectiveness
 - how we use information and tools to assess the effectiveness of decisions.

These are priority research areas for Auckland Council and are implicitly intended to be used within the Auckland context at a range of

scales, from regional to local board. However, several of the research areas have a national or international relevance. Hence, delivering the research needed to satisfy Auckland's requirements will involve a flexible role for Auckland Council; at times the council may operate as a lead research organisation, at other times as a research partner or, if the relevant research has been done elsewhere, as an informed end-user.

This document identifies the high-level research priorities for Auckland Council and should be used as a framework for the council's research activities. Furthermore, it may be used by external research providers and funding organisations to maximise alignment and synergistic outcomes by gaining an understanding of what Auckland Council, as an important research stakeholder, considers are major research issues.

The strategy will be implemented by developing a detailed research plan for each of the six themes. The plans will expand on the priority research areas identified in this document, to provide the link between the research strategy and research projects. The research plans, taking into account the existing knowledge base, will provide the specific direction and questions for research projects and will be developed in partnership with research stakeholders throughout Auckland Council.

Research theme 1:

People

> Ngā iwi o Tāmaki Makarau

People are at the heart of the Auckland Plan and the well-being of Aucklanders is fundamental to achieve the plan's vision of creating the world's most liveable city.

This theme focuses on the research needs of four strategic directions identified in the Auckland Plan, which are:

- create a strong, inclusive and equitable society that ensures opportunity for all Aucklanders
- enable Māori aspirations through recognition of te Tiriti O Waitangi / the Treaty of Waitangi and customary rights
- integrate arts and culture into our everyday lives
- promote individual and community well being through participation and excellence in recreation and sport.

The most important aspect of this theme is increasing our understanding of how to put children and young people first, lift Māori well being, value our cultural diversity and provide recreational and sporting opportunities.

Research areas

Demography

- investigate the effects on society of actual and projected demographic trends, including population growth and ageing, and changing ethnic diversity.

Education

- investigate ways the early childhood education sector can meet the needs of our changing society
- understand the levels and drivers of literacy and numeracy in the adult population.

Arts and culture

- explore the role of the arts sector in Auckland's social, cultural and economic futures
- assess the values of arts and culture and identify opportunities for, barriers to, and levels of participation in these areas.

Social cohesion and diversity

- understand the drivers of social and community cohesion and their role in creating the world's most liveable city
- investigate the effects of age and ethnic sub-cultures on social cohesion
- identify the implications of a digital divide across the population.

Recreation and sport

- assess the values of active recreation and sport and identify opportunities for, barriers to, and levels of participation in these activities.

Changing society

- understand the processes leading to, and impacts of, social inequalities
- understand the impact of changing social support mechanisms on the well-being of Auckland's diverse groups: children and young people; the elderly; migrants and refugees; Māori; Pacific peoples; the homeless; and the disabled
- assess the impact of changing social support mechanisms on community development.

Health and well-being

- understand the connection between the environment and human health and well-being
- assess the barriers and opportunities to optimal health and well-being of Auckland's diverse groups: children and young people; the elderly; migrants and refugees; Māori; Pacific peoples; the homeless; and the disabled.

Research theme 2:

Infrastructure and land use

> Ngā pou whakahaere o Tāmaki Makaurau

Infrastructure and land use are critical to the well-being of Aucklanders. The role of infrastructure and transport as an enabler and connector is essential to realise the vision of Auckland as the world's most liveable city.

This theme focuses on the research needs of three strategic directions identified in the Auckland Plan, which are:

- plan, deliver and maintain quality infrastructure to make Auckland liveable and resilient
- create better connections and accessibility within Auckland, across New Zealand, and to the world
- create a stunning city centre, with well-connected quality towns, villages and neighbourhoods.

The most important aspect of this theme is increasing our understanding of how to optimise our infrastructure to meet current and future needs. The focus is on how network utilities, such as transport, water, energy and communications, and social infrastructure, such as schools, hospitals and community facilities interact with land use and quality of life in different geographical settings.

Research areas

Transport

- evaluate what drives the demand for different transport modes and their effects on people, the economy and the environment
- investigate the effects of different configurations of freight infrastructure
- investigate the relative effectiveness of different travel demand management schemes.

Land use

- understand the effects of strategies, policies and standards on shaping infrastructure and land use
- understand the relationship between land use and economic growth, including the effects of major infrastructure
- investigate interactions between land use and infrastructure in planning for development
- investigate how polycentric urban form contributes to well-being, economic change and associated agglomeration effects
- assess the dynamics and implications of change in rural Auckland.

Physical infrastructure

- investigate how the sustainability and resilience of infrastructure can be measured, assessed and improved
- understand the role and flow-on effects of digital infrastructure on people, the economy and the environment

Social infrastructure

- examine spatial and socio-economic disparities in access to physical, natural and social infrastructure
- explore how infrastructure can enhance social and community cohesion
- evaluate mechanisms for the delivery of social infrastructure to improve social outcomes.

Funding infrastructure

- evaluate different models for funding infrastructure.

Research theme 3:

Environment

> Te Taiao o Tāmaki Makaurau

The complex relationships between the natural and built environment and our well-being are recognised by two of the Auckland Plan's six transformational shifts. A strong commitment to environmental action and green growth and improved quality of urban living will provide the base to achieve Auckland's vision.

This theme focuses on the research needs of three strategic directions identified in the Auckland Plan, which are:

- protect and conserve Auckland's historic heritage for the benefit and enjoyment of present and future generations
- acknowledge that nature and people are inseparable
- keep rural Auckland productive, protected and environmentally sound.

The most important aspect of this theme is increasing our understanding of how to value and manage our historic and natural heritage, maintain a sustainable rural environment and realise a quality compact urban environment.

Research areas

Built environment

- assess the effects and drivers of different built environment structures and forms across a range of spatial scales
- assess the constraints to meet the vision of being the world's most liveable city
- investigate the most efficient distribution of land use activity across different urban centres
- examine how to value and conserve historic and treasured places, spaces and landscapes
- investigate the opportunities and barriers associated with developing a sustainable Auckland.

- investigate tools and methods to identify, avoid and manage biosecurity threats to Auckland
- evaluate the effects and risks of natural hazards to facilitate effective responses and build community and environmental resilience
- increase our knowledge of how climate change will affect natural ecosystems to inform appropriate responses
- assess the mauri of Auckland's natural, historic and current heritage
- evaluate best practice methods and tools to achieve positive heritage and biodiversity outcomes.

Natural environment

- identify innovative solutions to confront environmental degradation and improve the delivery of ecosystem services to ensure a liveable city
- develop frameworks for valuing natural resources and simplifying complex systems to assist management decisions
- support environmental management by increasing and applying our knowledge of the dynamic natural environment

Interactions

- understand rural ecosystems to keep rural Auckland productive, protected, and environmentally sound
- evaluate the connections between people, heritage, the environment and quality of life and assess methods for achieving positive outcome.

Research theme 4:

Housing

> Ngā whare o Tāmaki Makaurau

The availability of secure, healthy and affordable housing is fundamental to the well-being of Aucklanders.

This theme focuses on the research needs of strategic direction eleven in the Auckland Plan, which is to:

- house all Aucklanders in secure, healthy homes they can afford.

The most important aspect of this theme is increasing our understanding of ways to meet the four priorities identified in strategic direction eleven, which are:

- increase housing supply to meet demand
- increase housing choice to meet diverse preferences and needs
- improve the quality of existing and new housing
- improve housing affordability and the supply of affordable housing.

Research areas

Supply and demand

- identify the structure, drivers and operation of the property development sector and its effects on housing supply and demand
- investigate the likely effects of actual and projected demographic trends, including population growth and ageing, and changing ethnic diversity on the demand for housing
- investigate the opportunities and barriers associated with different housing initiatives and funding models.

Housing preferences

- explore housing preferences, choices and trade-offs across the population
- understand the spatial dynamics of Auckland's housing market
- explore the likely social, environmental and economic impacts of alternative models of housing tenure, with particular focus on the rental market.

Housing quality

- understand the quality of housing and the driving forces that determine quality.

Housing affordability

- investigate the full costs of construction and the effects of this on housing affordability
- identify the drivers and effects, including the social implications, of unaffordable housing.

Homelessness

- understand the drivers and impacts of homelessness
- explore appropriate solutions to homelessness in Auckland.

Research theme 5:

Economy

> Ngā ritenga ohaoha o Tāmaki Makarau

This theme seeks to understand the drivers and nature of Auckland's economy to underpin the region's transformation and improve its prosperity. To achieve the Auckland Plan's vision, the economy must be inclusive and equitable so that all Aucklanders can enjoy its benefits.

This theme focuses on the research needs of strategic direction six in the Auckland Plan, which is:

- Develop an economy that delivers opportunity and prosperity for all Aucklanders and New Zealand.

The most important aspect of this theme is increasing our understanding of ways to meet the five priorities identified in strategic direction six:

- grow a business-friendly and well-functioning city
- develop an innovation hub of the Asia Pacific rim
- become internationally connected and export driven
- enhance investment in people to grow skills and local workforce
- develop a creative, vibrant international city.

Research areas

Growing prosperity

- investigate different ways to deliver economic development and their effects on people, the economy and the environment
- assess the impact of Auckland's urban structure on the economy, businesses, communities and households
- measure the interactions between the economy and large scale infrastructure, including in the evaluation of major projects
- understand the roles and functions of Auckland's economic sectors
- investigate economic growth opportunities for Māori.

Economic connectivity

- assess Auckland's connectivity to enhance its competitiveness, international engagement and exports
- investigate barriers and opportunities for Auckland to become a Pacific Rim hub.

Economic interactions

- identify opportunities for and evaluate the effects of greening the Auckland economy
- assess the effects of urban expansion on rural economies and infrastructure
- assess the relationships between the economy and the environment, such as climate change, natural hazards and heritage value
- determine the drivers and effects of socio-economic inequity in economic status and growth
- identify the effects of an ethnically diverse economic base, including the labour force, business ownership and consumer demand
- assess the effects of Auckland's household sector on urban function and form.

Labour market

- investigate the patterns and drivers of employment rates and understand the skill profile changes and demand in Auckland
- identify opportunities and barriers to the participation of diverse groups including Māori, Pacific, new migrants, refugees, young people, women, and the disabled in the labour market
- assess the effects of selective labour market interventions on employment outcomes
- identify how to attract, retain and develop the necessary skills to meet industry needs.

Research theme 6

Climate change and energy

> Whararereketanga o ngo Āhuarangi

Climate change and energy are invariably linked with electricity and transport as these are major emitters of greenhouse gasses. Identifying and preparing for the risks of climate change is an important issue for all Aucklanders. An efficient, secure, resilient and affordable energy supply is critical to Auckland's liveability and economic future.

This theme focuses on the research needs of strategic direction eight in the Auckland Plan, which is:

- Contribute to tackling climate change and increasing energy resilience.

The most important aspect of this theme is increasing our understanding of how to deliver the three priorities identified in strategic direction eight:

- mitigate climate change
- improve energy efficiency, security and resilience
- adapt to a changing climate.

Research areas

Mitigate climate change

- understand Auckland's current and future emission profile
- investigate and evaluate new and innovative approaches, including transport initiatives to achieve local and international greenhouse gas and energy targets
- develop methodologies for monitoring the effectiveness of regional climate change mitigation, and translating national predictions to regional level effects
- improve our capability to develop greenhouse gas inventories to track progress against regional and international targets
- explore Aucklanders' values in relation to possible trade-off decisions required for climate change mitigation
- evaluate the wider benefits and opportunities of a low carbon economy and subsequent reductions in greenhouse gas emissions and energy use
- determine the role of Auckland's natural environment in mitigating the effects of climate change, including the carbon sink capacity.

Energy efficiency, resilience and security

- evaluate innovative methods to improve energy efficiency, security and resilience
- investigate methods to effect behavioural change and influence choices in energy use
- investigate means of reducing reliance on fossil fuels.

Climate change adaption

- understand the implications of Auckland's geography for climate change adaptation and mitigation planning
- understand the adaptive capacity of people, communities, natural systems and historic heritage to the potential effects of climate change
- evaluate climate change understanding, awareness and preparedness and ways to improve this.