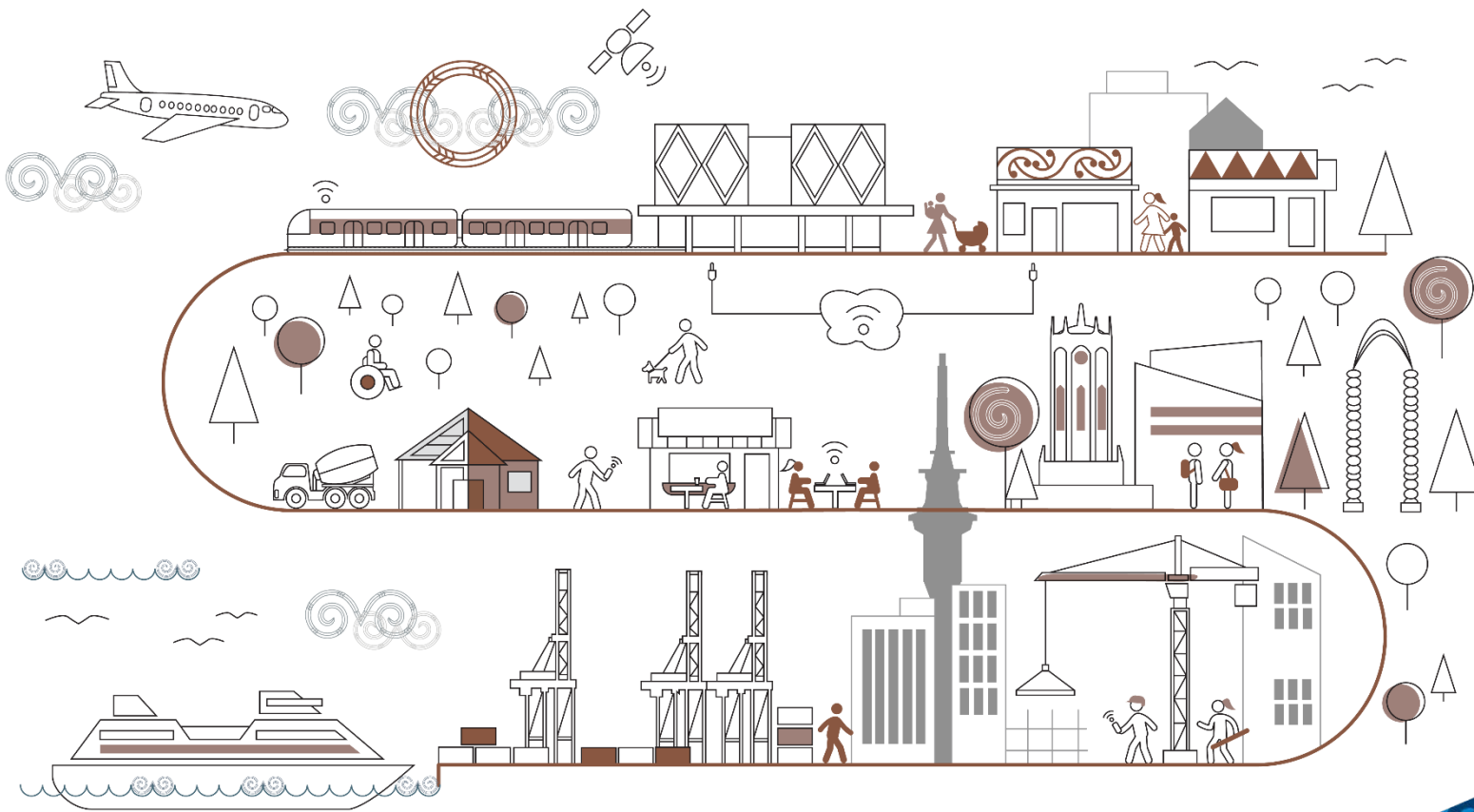


Auckland Plan 2050 Evidence Report

Opportunity and Prosperity
June 2018



© 2018 Auckland Council

June 2018

Auckland Plan, Strategy and Research Department

Auckland Council (2018). Auckland Plan 2050 Evidence Report: Opportunity and Prosperity

ISBN 978-1-98-856439-5 (PDF)

The Auckland Plan 2050 was adopted by the Auckland Council Planning Committee on 5 June 2018.

This document supports the Opportunity and Prosperity outcome in the Auckland Plan 2050 as at June 2018. Please note that the Auckland Plan 2050 is a digital plan and may be updated from time to time. Please refer to the Auckland Plan website, www.theaucklandplan.govt.nz for the most up to date version of the full plan.

This publication is provided strictly subject to Auckland Council's copyright and other intellectual property rights (if any) in the publication. Users of the publication may only access, reproduce and use the publication, in a secure digital medium or hard copy, for responsible genuine non-commercial purposes relating to personal, public service or educational purposes, provided that the publication is only ever accurately reproduced and proper attribution of its source, publication date and authorship is attached to any use or reproduction. This publication must not be used in any way for any commercial purpose without the prior written consent of Auckland Council.

Auckland Council does not give any warranty whatsoever, including without limitation, as to the availability, accuracy, completeness, currency or reliability of the information or data (including third party data) made available via the publication and expressly disclaim (to the maximum extent permitted in law) all liability for any damage or loss resulting from your use of, or reliance on the publication or the information and data provided via the publication. The publication, information, and data contained within it are provided on an "as is" basis.

Table of Contents

1	Introduction	4
2	Context.....	8
3	Evidence	19
4	Stakeholder Feedback	53
5	Conclusion	67
	References	72
	Appendix A	82

1 Introduction

1.1 Purpose

The Auckland Plan sets out a comprehensive long-term 30-year strategy for Auckland's growth and development. The purpose of this paper is to inform, support and provide background material for the Opportunity and Prosperity outcome in the Auckland Plan 2050.

This paper focuses on specialist knowledge and evidence related to the themes in the Opportunity and Prosperity outcome primarily concerning economic development and lifelong learning. The information has been drawn from a wide range of sources including feedback from consultation with Aucklanders during two rounds of engagement in 2017 and public consultation in 2018. Key partners and stakeholders who have provided feedback include central government, mana whenua, mataawaka, community and environmental organisations, the private sector, professional bodies and industry associations. The evidence in this report has been gathered since the 2012 Auckland Plan was adopted, and is current as at the date of publication of this document.

Overall, this paper provides background evidence for the strategic framework of the Opportunity and Prosperity outcome.

This report is one of a set of interrelated background papers prepared to support the Auckland Plan 2050. The Auckland Plan 2050 sets the strategic direction for Auckland and collectively these evidence reports provide the foundational background information that also may assist in the future development of policy positions.

1.2 Outcome description

Auckland needs a strong economy that delivers a better quality of life for Aucklanders. Over the last six years employment numbers and GDP in Auckland have grown steadily but productivity has not increased at the rate sought by the 2012 Auckland Plan (Infometrics, 2017). Auckland has the potential to do better. To prosper in an economic environment that will increasingly be affected by technological change, Aucklanders need to have a variety of options for engaging with education and the changing nature of work. Auckland's economy and education system needs to be further developed to enhance our capacity to innovate and export, increase our productivity and to set-up our young people for success through-out their lives.

The Opportunity and Prosperity outcome outlines the key elements that will assist to create a more robust economy, and opportunities to reduce socio-economic inequalities and lift living standards for all Aucklanders.

This outcome sets the strategic direction to:

- create the environment for a resilient economy
- attract and retain people and investment

- create lifelong opportunities for learning and skill development.

Auckland's prosperity also has the potential to grow benefits for the rest of New Zealand. To do this, Auckland needs to leverage its population growth and create good conditions for the economy to grow and Aucklanders to prosper. Aucklanders need the ability to access new opportunities in a reliable, affordable and timely manner. Therefore, it is essential for Auckland to proactively support and enable this growth.

All six outcomes are interdependent. The Opportunity and Prosperity outcome is significantly dependent on the success of the other outcomes. For example, without good access to transport options or to healthy, affordable housing or to vibrant inclusive neighbourhoods, opportunity and prosperity will be limited.

1.3 Relationship to other Auckland Plan 2050 outcomes

Table 1 Relationship to other outcomes

Outcome	Key Relationships
Belonging and Participation	<ul style="list-style-type: none"> • Ensuring all Aucklanders have access to decent employment and education opportunities reduces inequity • Positive, inclusive neighbourhoods are enhanced through personal development of social skills and life skills • Participation in informal learning (e.g. arts, cultural, sport and active recreational, adult education classes) contributes to a sense of community • Participation in the workforce contributes to a sense of self-worth and contribution to the wider community • Higher levels of education and training lead to greater civic participation and social cohesion • Opportunities for individuals and families to foster attachment to their community creates an environment that attracts and retains people

Outcome	Key Relationships
Māori Identity and Wellbeing	<ul style="list-style-type: none"> • Ensuring areas of Auckland with high Māori populations have access to a large number of economic and education opportunities is critical to improve Māori social and economic wellbeing • Thriving Māori are critical for developing the Māori business ecosystem that supports Auckland's economy • For Auckland to prosper, rangatahi need to be supported to develop their skills, knowledge and employment options • By providing high quality, culturally responsive learning opportunities, Auckland will begin to reduce the disparity in education outcomes for Māori and create more equitable life outcomes • Showcasing Auckland's unique Māori identity will build Māori businesses and Auckland's international brand • Auckland Council working in partnership with iwi can honour the principles of the Treaty of Waitangi and grow Māori economic opportunities
Homes and Places	<ul style="list-style-type: none"> • A range of housing types are needed that are accessible with secure tenure across a range of price points, in locations that support access to jobs and quality education opportunities • The substantial need for housing will be one driver of economic growth and employment • Harnessing opportunities presented by disruptive technology could help accelerate the construction of good quality dwellings • Quality public places and neighbourhoods are part of what makes Auckland attractive and retains talent in Auckland • Housing that meets minimum health standards helps keep the workforce healthy
Transport and Access	<ul style="list-style-type: none"> • The efficient movement of goods and services has significant economic benefits • Investment in all modes of transportation (especially public transport) supports Auckland's economic growth, Aucklanders' access to employment and overall prosperity • Good access to educational, cultural and recreational opportunities makes Auckland attractive and increases overall quality of life
Environment and Cultural Heritage	<ul style="list-style-type: none"> • Healthy environments contribute to a healthy workforce • Auckland's attractiveness to individuals and businesses is largely based upon its natural endowment • Businesses can create a number of adverse environmental impacts (e.g. noise, pollution, industrial waste) that actively need to be managed

Outcome	Key Relationships
Development Strategy	<ul style="list-style-type: none">• Protects current business land, industrial areas and future potential employment areas that are essential for employment• Supports a multi-nodal model within the urban footprint that will allow for intensification and redevelopment creating agglomeration benefits that increase economic productivity• Offers the capacity for new business growth in accessible locations that supports businesses and employees• Establishes areas for development and managed expansion into future urban areas that supports economic growth

2 Context

This section outlines the current Auckland context as it relates to the key aspects of the Opportunity and Prosperity outcome. It provides an overview of the policy settings at the time of amending the 2012 Auckland Plan and how they relate to Auckland Plan 2050, including Auckland's Economic Development Strategy (EDS), the 2012 Auckland Plan and other local and national policies, strategies, plans and legislative requirements. This section also reviews relevant trends, opportunities and challenges.

2.1 2012 Auckland Plan direction and creation of the Opportunity and Prosperity outcome

As part of the initial scoping for the development of the Auckland Plan 2050, subject matter experts from within Auckland Council were asked to provide advice on topics/themes that had been identified as potential gaps in the 2012 Auckland Plan.

Under economic well-being current drivers and future drivers of success were considered through the lens of chapter six of the 2012 Auckland Plan – 'Auckland's Economy' and the Auckland Economic Development Strategy.

This exercise concluded that both documents remained fundamentally sound although as a result of current drivers, priority four of the EDS and 2012 Auckland Plan 'enhance investment in people to grow skills and a local workforce' had taken on greater importance in response to the growth in numbers of young people 'Not in Education, Employment or Training' (NEETS).

Future drivers also necessitated thinking on growing skills in response to technological disruption and its impact on jobs created, lost, and the speed and scale of displacement.

Focussing on skills is considered a more pragmatic approach to dealing with the uncertainty of future jobs as skills required to service jobs are easier to predict than what the actual job may look like. This is already occurring through emphasis on Science, Technology, Engineering and Mathematics (STEM) within the formal curriculum.

The emphasis on skills also extended to pathways for life-long learning across all sectors of society for both soft and hard skills.

The causal link between skills development and economic prosperity resulted in the decision to combine these areas into the 'Opportunity and Prosperity' outcome.

2.2 Refining the Opportunity and Prosperity outcome

Content from the 2012 Auckland Plan was assessed for its continued relevance and significance in light of new information or trends that have occurred since 2012. This resulted in greater emphasis on topic areas that will be explained later in this report.

2.3 Relationship between the 2012 Auckland Plan strategic direction (chapter 6), Economic Development Strategy (EDS) and the Auckland Plan 2050

Chapter six of the 2012 Auckland Plan titled ‘Auckland’s Economy’ identifies five key priorities and seventeen supporting directives.

The five priorities are shared by the EDS which was developed at the same time as the 2012 Auckland Plan through the Chief Planning Office.

The EDS should remain a supporting document to the Auckland Plan 2050 as it provides detail and information not included in the refreshed plan but which is still relevant to Auckland’s economic prosperity. There will be some need to better align the two documents due to structural changes in the plan.

Figure 1 shows that the five priorities from the 2012 Auckland Plan/EDS are still reflected in the Opportunity and Prosperity outcome.

Figure 1 Alignment between the 2012 Auckland Plan/EDS ‘five priorities’ and the Auckland Plan 2050

Refreshed Auckland Plan	Auckland Plan 2012 and EDS 2012 - five priorities				
	Priority 1 Grow a business-friendly and well-functioning city	Priority 2 Develop an innovation hub of the Asia-Pacific rim	Priority 3 Become internationally connected and export driven	Priority 4 Enhance investment in people to grow skills and a local workforce	Priority 5 Develop a creative, vibrant international city
Direction 1 Create the conditions for a resilient economy through innovation, employment growth and raised productivity	Y	Y			
Direction 2 Attract and retain skills, talent and investment			Y		Y
Direction 3 Develop skills and talent for the changing nature of work and lifelong achievement			Y	Y	
Focus Area 1 Harness emerging technologies and ensure equitable access to high quality digital data and services		Y		Y	
Focus Area 2 Ensure regulatory planning and other mechanisms support business, innovation and productivity growth	Y				
Focus Area 3 Advance Māori employment and enable Māori business and iwi organisations to be significant drivers of Auckland’s economy				Y	
Focus Area 4 Leverage Auckland’s position to support growth in exports			Y		
Focus Area 5 Increase educational achievement, lifelong learning and training, with a focus on those most in need				Y	

2.4 Relevant policies, strategies, plans and legislation

The following section identifies the various key policies, strategies, plans and legislation that have an impact upon the outcome. That impact could be through providing supporting information or direction such as in the case of the EDS. Other non-council strategies and agencies also have significant impact on the outcome, so those areas of influence have also been identified such as the Business Growth Agenda and the education sector. The legislation identified in Table 2 sets the broad legislative parameters which the outcome operates under.

Table 2 Policies, strategies, plans and legislation

Strategy	Importance
<p>Economic Development Strategy (EDS)</p> <p>Auckland Council's Economic Development Strategy 2012-2022 (EDS) sets out the tangible steps Auckland is taking to become an internationally competitive, prosperous economy that all Aucklanders can benefit from and participate in.</p>	<p>The EDS is a key supporting document of the 2012 Auckland Plan. The EDS and the Auckland Economy chapter provided the starting point for the opportunity and prosperity outcome. The evidence base for the 2012 EDS has been incorporated where relevant into the Auckland Plan 2050.</p>
<p>Auckland Innovation Plan</p> <p>The Auckland Innovation Plan outlines the priorities and actions identified by ATEED to build a culture of innovation and entrepreneurship.</p>	<p>The Innovation Plan provides context and guidance for how Auckland might achieve greater innovation.</p>
<p>AKL 2025 Destination Auckland</p>	<p>Destination AKL 2025 presents a positive and sustainable vision for Auckland's visitor economy, providing direction and leadership for the region as the gateway to New Zealand and as a world-class destination city.</p>
<p>The Māori Plan for Tāmaki Makaurau</p> <p>A thirty-year plan that sets out Māori aspirations and actions for improving Māori wellbeing and development.</p>	<p>The Māori Plan provides valuable insight and guidance for ensuring the economic aspiration of the refreshed plan aligns with the Māori 30-year aspiration. There is also a series of shared measures for greater alignment.</p>
<p>Business Growth Agenda 2017 (BGA)</p> <p>In 2012, Central Government developed a new microeconomic reform programme through the Business Growth Agenda (BGA) to support businesses to grow and thrive in the aftermath of the Global Financial Crisis, and to build a more productive and competitive economy.</p>	<p>The BGA sets clear direction as to where central government has set its economic priorities: Building innovation, Export markets, Building infrastructure, Natural resources, Building capital markets, and Skilled and safe workplaces.</p> <p>Although the new government may re-prioritise areas of the BGA the evidence base is enduring and still remains relevant in areas such as raising productivity.</p>
<p>Unitary Plan</p> <p>The Auckland Unitary Plan is Auckland's regulatory land-use planning document and prepared under</p>	<p>The Unitary Plan provides the supporting framework for growth, determining the location</p>

Strategy	Importance
<p>the Resource Management Act 1991. It contains rules and guidance on how and where land can be developed and how resources can be used. The plan replaces the former Regional Policy Statement and the former district and regional plans.</p>	<p>and types of development including business zoning. It determines how Auckland will create a higher quality, compact city, which has economic and environmental benefits.</p>
Learning environment	
<p>Government agencies such as the Ministry of Education and the Tertiary Education Commission have a range of strategies and plans that will contribute to creating a high quality learning environment in Auckland. Some of the key strategies include:</p> <ul style="list-style-type: none"> • Ka Hikitia – Accelerating Success • Ministry of Education, Statement of Intent 2014 – 2018 • Pasifika Operational Strategy 2017–2020 • International student wellbeing strategy • Tertiary Education Strategy 2014 - 2019 	<p>Formal learning is predominantly the domain of central government and/or private providers. Understanding the aspirations and strategic direction of these organisations and the framework within which they operate is necessary to ensure that direction 3 and focus area 5 of the Opportunity and Prosperity outcome of the plan are aligned.</p>
Toi Whītiki - Arts and Culture Strategic Action Plan	
<p>The plan's overall goal is to enable arts and culture to be integrated into our everyday lives, and create a culturally rich and creative Auckland. One of its six goals is to build a flourishing creative economy. It is a ten-year plan for the region, delivered by Auckland Council in partnership with the creative sector.</p>	<p>Toi Whītiki details the importance of the creative sector in terms of its direct economic contribution and broader cultural and societal value. It has particular relevance in terms of creating the 'dynamic and cosmopolitan' centre required to attract talent referenced in direction 2 Opportunity and Prosperity outcome.</p>
I Am Auckland – the Children and Young People's Strategic Action Plan	
<p>This plan sets out the strategic direction for Auckland Council to help children and young people reach their full potential. It contains seven key strategic goals, including opportunities to access learning, development and pathways to employment.</p>	<p>The 2012 Auckland Plan placed considerable emphasis on putting children and young people first that led to the development of 'I Am Auckland'. The importance of lifting the achievement of young people is an enduring principle for the future prosperity of Auckland which is included in focus area 5 of the Opportunity and Prosperity outcome.</p>
Legislation	
<p>Legislation and the regulatory environment set the parameters for business and the economy to operate in. There are specific pieces of legislation such as the Income Tax Act 2007 that have a direct and immediate impact on the business environment. Other pieces of legislation such as the Local Government Act 2002 and Resource Management Act 1991 set a broader framework that takes into account multiple outcomes which can impact the business environment and the economy.</p>	
<p>There is a need to ensure legislation, regulatory planning and other mechanisms support business, innovation and productivity growth. Legislative examples that directly impact the economy and business environment:</p>	
<ul style="list-style-type: none"> • Companies Act 1993 • Immigration Act 1987 	

Strategy	Importance
<ul style="list-style-type: none">• <u>Employment Relations Act 2000</u>• <u>Income Tax Act 2007</u>• <u>Health and Safety at Work Act 2015</u>• <u>Contract and Commercial Law Act 2017</u>	

-

2.5 Opportunities and challenges

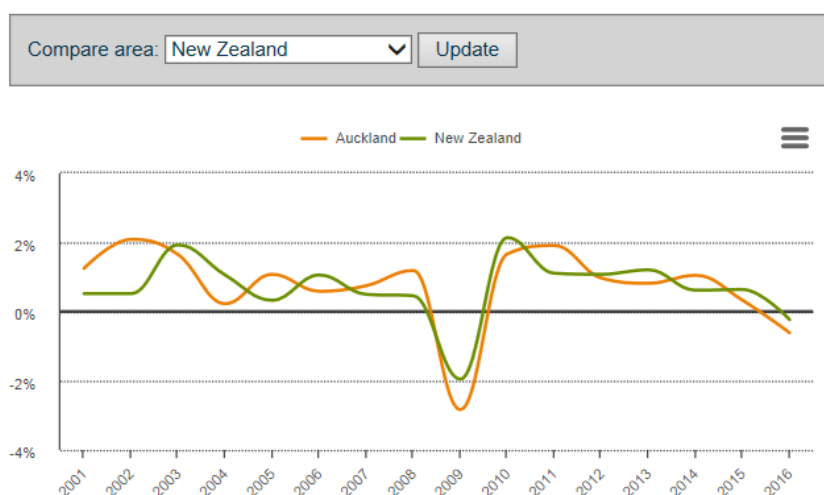
The ability to lift Auckland's productivity is fundamental to raising economic prosperity and general well-being.

Improved productivity can also have environmental benefits through achieving more with less. There are also social benefits such as more time for leisure as people may not have to work as long to achieve the same income.

The Organisation for Economic Cooperation and Development (OECD) considers that New Zealand has below average per capita gross domestic product (GDP). The OECD attributes this to low labour productivity and considers that "improving productivity growth is a major long-term challenge for improving inclusiveness and living standards" (OECD, June 2017b). As the graph below indicates Auckland's productivity follows closely the national trend.

Figure 2 Productivity growth in Auckland and New Zealand¹

Productivity growth in Auckland and New Zealand, 2000-2016



Auckland has an opportunity to improve regional productivity. Its scale and size gives it opportunities that are unique in the New Zealand context. Its large specialised and diverse labour pool, attractive lifestyle, international connectedness (port and international airport), and leading universities all provide the base components recognised as being necessary to build a globally competitive city.

Auckland's broad industry base has a number of sectors that display strong productivity attributes, for example, the advanced industries sector.

¹ Figure sourced from Infometrics: Auckland Economic Profile: Productivity Growth – 2016 -2017
<https://ecoprofile.infometrics.co.nz/Auckland/Productivity>

There is opportunity to further grow advanced industries and more productive sectors but this requires a more coordinated approach as identified through ATEED's innovation plan and other similar growth strategies and initiatives.

Auckland faces similar challenges to other growing global cities in terms of providing infrastructure, escalating house prices and the unaffordability this brings for those on low to median incomes. There is a need to ensure everyone has the opportunity to participate as we move towards a more productive economy.

The Auckland Plan 2050 sees lifelong learning and the ability to match future jobs with the required skills essential to providing future opportunity. This requires joined up thinking between learning institutions, businesses and government. During the stakeholder engagement to develop the Auckland Plan 2050, this need for further coordination was taken as a given by a range of stakeholders.

2.6 Trends

2.6.1 Population

Auckland is the fastest-growing region in New Zealand and is home to more than 1.66 million people. The latter is a result of a combination of natural increase and migration. Although this population size brings many opportunities for a more diverse, vibrant city with a more robust workforce, it has also created demands on infrastructure, including housing and transport related infrastructure.

Auckland's population will continue to grow considerably over the next 30 years. For Auckland to thrive, individuals and businesses will both need to benefit through an increase in GDP per capita and productivity, year on year.

Auckland's child and youth population will continue to increase

Children and young people (aged 0 to 24 years old) represent just over a third of Auckland's population (35 per cent in 2013).

Statistics New Zealand population projections (medium series) suggest that by 2038, the number of children and young people in Auckland will continue to increase, by another 11.8 per cent. However, population ageing will mean that the proportion of Aucklanders who are children and young people will decrease.

Auckland will require in some shape or form more formal and informal learning environments, as well as services and infrastructure required for children and young people. This includes:

- schools
- early childhood centres
- playgrounds and recreational opportunities
- health services.

Growing Asian population

In 1991, only 5 per cent of Auckland's residents identified with an Asian ethnicity. This proportion increased to almost a quarter (23 per cent) in 2013. In the period between 2006 and 2013, Auckland's Asian population increased by almost 73,000 people. This growth was mainly driven by a rapid increase in immigration, especially in the mid-1990s and then again since 2001. In the future Auckland's economy could benefit from this growing Asian population by enhancing its international links with Asia (Ministry of Business, Innovation and Employment, 2015b).

2.6.2 Economy

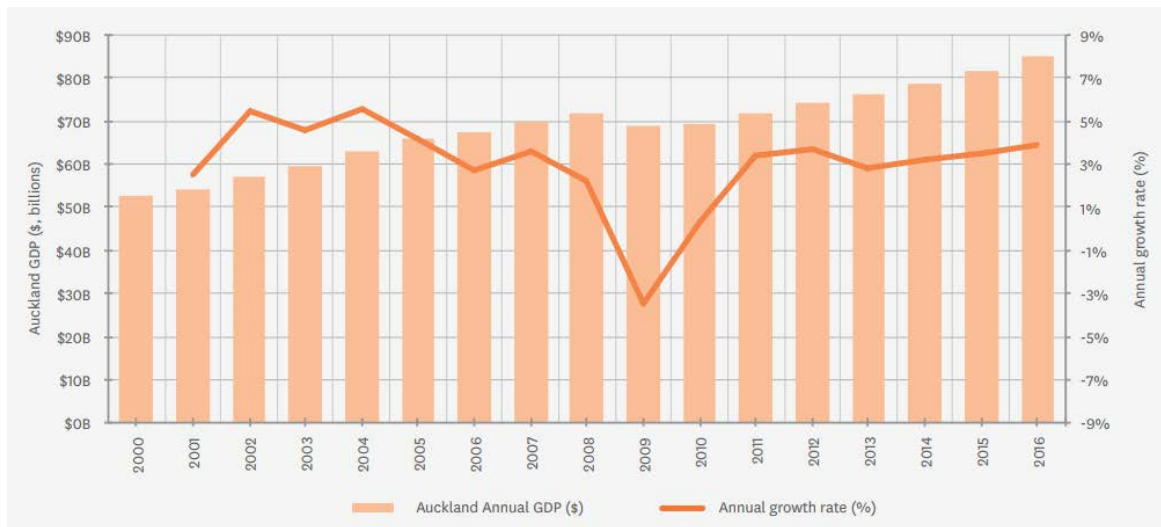
Over the last five years, in many ways New Zealand's economy has been a good news story for those engaged in it. The national economy has grown and so have wages, salaries and employment (see below). However, this prosperity has not benefited those outside the labour market as much (Salvation Army, 2017). Some indicators of this have been the increase in housing subsidies, increase in demand for food banks and persistent (though fluctuating) NEET rates.

Auckland is a significant player in the national economy and has a large, growing labour force.

In 2017, the region contributed 38.2 per cent to New Zealand's GDP. Between 2000 and 2017, New Zealand's GDP grew at an annual average rate of 2.5 per cent compared to Auckland's GDP that increased at an average annual rate of three per cent despite a period of contraction and slow growth during the 2009-2010 global financial crisis (GFC) (see Figure 3). Since the recovery from the GFC began, Auckland's GDP has been trending upwards (ATEED, 2017).

Between 2000 and 2016, Auckland's labour force increased by 292,400 or roughly 49 per cent. Labour force growth has been speeding up with 42,900 people joining the labour force in 2015 and 2016, a 4.7 per cent increase. Employment rose and unemployment rates declined to 4.7 per cent in 2016 from a high of 8.1 per cent in 2010 (ATEED, 2017).

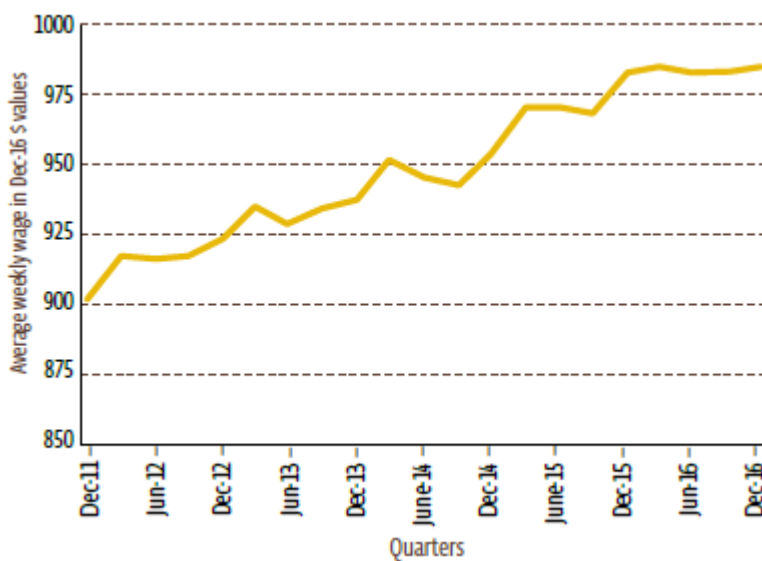
Figure 3 Auckland GDP and GDP growth, year ended June, 2000 to 2016²



Per-capita GDP stood at just over \$55,100 in the September 2016 quarter. This figure is two per cent (\$1,000) more than a year previously and 10 per cent (\$5,000) higher than five years earlier. These increases have been adjusted for inflation, so represent real increases in the size of the New Zealand economy and its potential to provide higher incomes to New Zealanders.

From 2011 to 2016 real average weekly incomes for New Zealand employees has grown (Figure 4). However, between December 2015 and December 2016 wages flattened out and when accounting for inflation, wages and salaries only increased by 1.1 per cent or by just over \$10 per week over this 12 month period (Salvation Army, 2017).

Figure 4 Real average weekly incomes for employees³



² Figure 3, sourced from ATEED. (2017). *Auckland Growth Monitor: A snapshot into Auckland’s economy and place on the world stage*. https://www.aucklandnz.com/sites/build_auckland/files/media-library/documents/AucklandGrowthMonitor.pdf

Note: This is in 2010 dollars.

³ Figure 4, sourced from Salvation Army. (2017). *Off the track: State of the nation report*.

<http://www.knowledgeauckland.org.nz/assets/publications/Off-the-track-Sal-Army-State-of-Nation-2017.pdf>

Auckland is New Zealand's main international gateway and a connector to both international and domestic markets. Auckland is the home of many industries and multinational corporations. In 2015, Auckland was the headquarters for around two-thirds of New Zealand's top 200 companies (MBIE, 2015) and in 2016, it was home to 66 per cent of New Zealand's top 200 tech firms (ATEED, 2017). Innovation sectors and more broadly other knowledge-intensive sectors providing high-value goods and services will need to continue to grow, to compete in the global market place (MBIE, 2015b).

Other sectors that contribute significantly to employment are wholesale and retail (14.8 per cent share of Auckland's total employment in September 2017) (Auckland Council, 2017a). Utilities and construction are significant sectors, in which strong growth is forecasted. Construction activities and investment in large infrastructure projects like the Wynyard Quarter regeneration, Auckland International Airport development and the City Rail Link will be key drivers of future growth. There was \$26 billion in infrastructure projects underway in 2017 and between 2016 and 2040 the city centre alone promises 88 developments including apartments, commercial office space and private developments (ATEED, 2017).

2.6.3 Educational achievement

Overall, Aucklanders are reasonably well educated. However, there are some significant disparities in educational participation and achievement, especially for Māori and Pasifika people. These poorer educational outcomes create barriers for entering and succeeding in the work force.

Auckland Council's report, *A profile of children and young people in Auckland 2016*, provides a more detailed overview of overall educational achievement.⁴

Gradual increase in levels of formal educational achievement

A formal school qualification gives young adults the basic prerequisite to go on to higher education, training and many entry-level jobs. The main qualification available to secondary school students is currently the National Certificate of Educational Achievement (NCEA), which encompasses a wide range of learning.⁵ Future educational and job prospects will be limited for those who leave school without Level 2 NCEA.⁶

In 2014, of the total young people who left school in Auckland, 81.6 per cent had achieved NCEA Level 2 (or equivalent) or above – up 2.1 per cent from the previous year. Almost half (46.2 per cent) had attained University Entrance standard.

⁴ The data and some of the wording for this section has been taken from Reid, A and Rootham, E (2016). A profile of children and young people in Auckland. Auckland Council technical report, TR2016/022

⁵ Some secondary schools in New Zealand have chosen to also offer their students the choice of Cambridge International Examinations or the International Baccalaureate alongside NCEA.

⁶ Wording taken from Ministry of Education website. <http://www.educationcounts.govt.nz/indicators/main/educationand-learning-outcomes/1781> [Accessed 31 October 2017]

There has also been a gradual increase overall in the numbers and proportion of young people leaving school in Auckland with Level 3 or higher qualifications, including University Entrance. Figure 5 shows this gradual increase of those who have acquired NCEA Level two or above broken down by ethnicity.

Figure 5 Proportion of Auckland school leavers who had gained NCEA Level 2 or above, by ethnicity (2010 to 2014)⁷

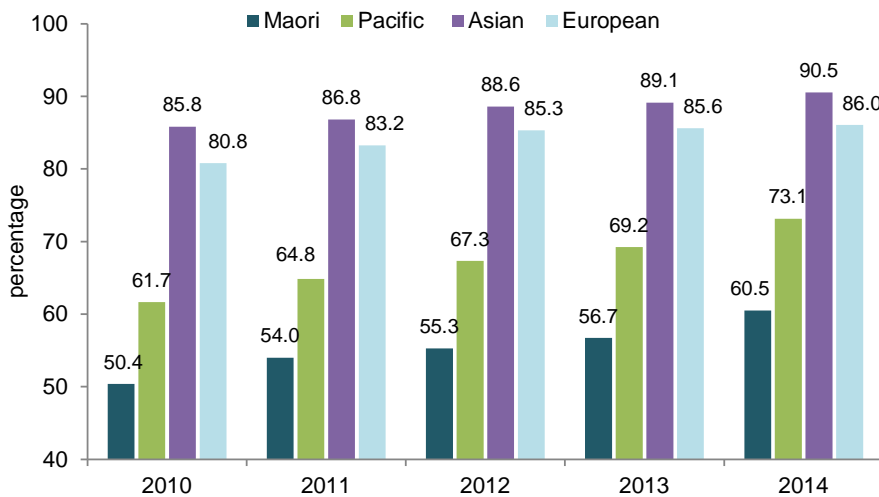
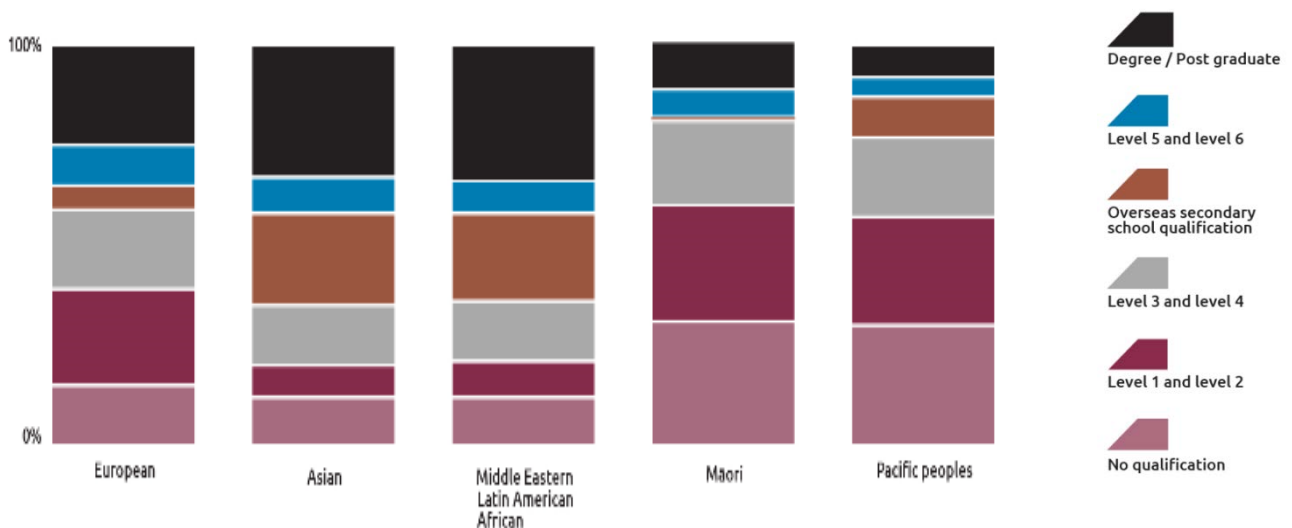


Figure 6 Proportion of Aucklanders' educational achievement ages 15 and over, by ethnicity (2013)



Adults' education levels are also growing, but follow the same pattern for some ethnicities of low participation and lower achievement. See Figure 6.

⁷ Source: Ministry of Education, School leaver data

Note: Students could belong to more than one ethnic group so percentages may total more than 100.

3 Evidence

The evidence covers the following areas:

- the importance of lifting productivity
- how innovation can contribute to lifting productivity and strengthening the economy
- advanced industries and how they contribute to a more resilient economy
- technological disruption and its potential impact on business models and the flow on effects this would have on people and future skills needs
- the importance of Auckland being globally connected
- the skills and education required to meet the challenges of the future covering:
 - soft skills
 - early years learning
 - education and training
 - lifelong learning
- the importance of the Māori economy to Auckland's prosperity.

3.1 Productivity

3.1.1 Why productivity is important

Productivity was identified as critical to economic prosperity in the 2012 Auckland Plan and the Auckland Plan 2050.

Statistics New Zealand defines productivity as:

“a measure of the degree of efficiency with which an organisation turns inputs, such as labour and capital, into outputs (e.g. consumer goods and services). Producing more goods and services with a fixed amount of inputs, producing the same quantity of goods and services with fewer inputs, or producing goods and services at a faster rate than the rate of increase in inputs, are all examples of rising productivity” (Statistics New Zealand and New Zealand Treasury, 2010:3).

The ability to produce more output from the same amount of input is an important contributing factor to long-term material standard of living.

The New Zealand Treasury advises, “Our labour productivity matters because over the long term, growth in incomes and, therefore, the goods and services that New Zealanders can consume depends on it” (New Zealand Treasury, 2014b:7).

Auckland is the largest and consistently one of the fastest growing regions in New Zealand with just under 35 percent of the country's population as at 30 June 2017 (Statistics New

Zealand, 2017). This is projected to rise to just below 40 percent of the population in 2043.

As the major contributor to the New Zealand economy, Auckland's productivity challenge is also a challenge for the rest of New Zealand.

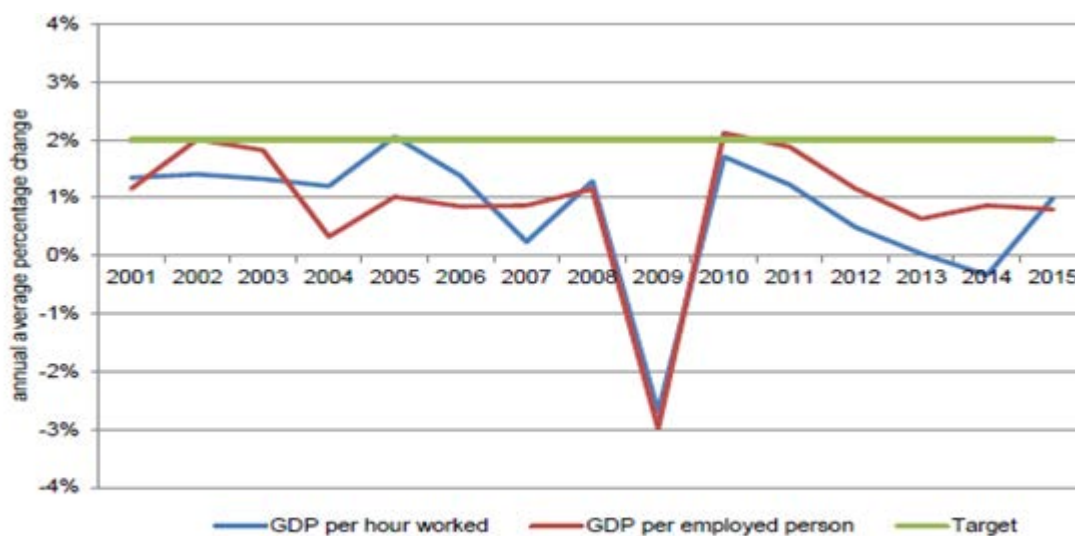
3.1.2 Auckland's productivity since 2012

Of the five targets set in the economic chapter of the 2012 Auckland Plan, two related specifically to productivity, namely:

- improve Auckland's OECD ranking of cities (GDP per capita) of 69th place in 2011 by 20 places by 2031
- increase annual productivity growth from one per cent per annum experienced in the last decade to two per cent per annum for the next 30 years.

Since the 2009 global financial crisis, Auckland's growth in GDP per capita as a measure of productivity has continued to recover although not at the rate sought by the 2012 Auckland Plan (a year on year increase of two per cent). Refer to graph below (Auckland Council, 2016).

Figure 7 Annual percentage change in productivity growth, Auckland (2001- 2015)



Source: Infometrics: Regional GDP statistics and Statistics New Zealand: Earnings and Employment Survey.

3.1.3 Why New Zealand and Auckland may not be meeting their productivity potential

The 2017 OECD Economic Survey of New Zealand report concluded in its executive summary that although New Zealand continues to enjoy a strong, broad-based economic expansion, business sector productivity remains below that of leading OECD countries such as the United States, Australia and Canada (OECD, 2017b).

This conclusion is consistent with the New Zealand Productivity Commission's November 2016 research paper titled, 'Achieving New Zealand's productivity potential'. The paper states New Zealand needs to shift from a development model based on increasing hours worked per capita to one in which productivity growth plays a more important role in driving GDP growth and incomes per capita.

The reasons for low productivity that have been identified by the OECD (OECD, 2017), the New Zealand Productivity Commission and New Zealand Treasury include the following:

- lack of international connections
- lack of agglomeration economies and scale
- weak competitive pressures
- low rates of capital investment
- low research and development activity
- high interest and exchange rates
- economic policy reform and the role of the state sector in restraining economic performance.

Addressing the above factors offers a pathway to raising productivity and has therefore been included as part of the directions and focus areas in the plan.

3.2 Innovation

3.2.1 Why innovation is important

The Opportunity and Prosperity outcome considers innovation as a means to increase productivity and build future economic resilience. The Auckland Plan 2050 does not propose innovation for innovation's sake. Innovation serves as a means of building greater resilience to disruption and change as well as creating new opportunities.

The 2012 World Economic Forum Annual Meeting described innovation as follows:

"Innovation is fundamentally about introducing new ideas and new ways of doing things, in response to new opportunities. Businesses and other organisations can innovate in a number of ways – by introducing a new improved product, service or process, opening up a new market, adopting a new technology, or changing the way businesses organise themselves. Economies which are more innovative are more productive and have higher levels of prosperity" (World Economic Forum, 2012: 34).

3.2.2 Innovation and the Auckland economy

In 2009, 46 per cent of New Zealand businesses reported innovation activity, broadly similar to other OECD countries (Statistics New Zealand, 2010). While official statistics are unavailable at a regional level for business innovation activity or patenting data, interviews with businesses on advantages that cities bring to innovation suggest that Auckland businesses undertake more innovation activity than those in other New Zealand

regions. Auckland’s size confers agglomeration benefits, and the region has considerable infrastructure to support innovation, compared with other parts of New Zealand (for example, financial institutions, universities, and industry clusters).

For Auckland to achieve its aspiration of becoming an innovation hub of the Asia-Pacific, ATEED identified the need to create a more coherent regional innovation system. The diagram below identifies some of the key organisations and components in that system.

Figure 8 Organisations in the Auckland Innovation System⁸



⁸ Figure sourced from Auckland Council. (2012b). Auckland’s Economic Development Strategy 2012-2022. Available at <http://temp.aucklandcouncil.govt.nz/EN/planspoliciesprojects/plansstrategies/theaucklandplan/economicdevelopmentstrategy/Pages/home.aspx>

In 2012, the EDS noted that Auckland had all the main components for a well-functioning system, however, the ‘ingredients’ were working in isolation of one another. The collaboration and linkages we would expect within a regional innovation system are not functioning strongly within Auckland and are likely to be constraining business innovation” (Auckland Council, 2012:99).

3.2.3 Drivers of innovation

There are a number of measures used for determining how innovative an economy is. Table 3 lists some of the factors the World Economic Global Forum, ATEED and the Productivity Commission view as drivers of innovation.

Table 3 Common factors and drivers of innovation

Organisation		
World Economic Forum (2017) – (innovation measures)	ATEED Innovation System ⁹	Productivity Commission
<ul style="list-style-type: none"> • Capacity for innovation • Quality of scientific research institutions • Company spending on R&D • University-industry collaboration in R&D • Government procurement of advanced tech. products • Availability of scientists and engineers • Patent Cooperation Treaty (PCT) patent applications/million pop 	<ul style="list-style-type: none"> • Research and Development • Collaboration • Talent & Diversity • Investment • Entrepreneurship 	<ul style="list-style-type: none"> • Investment rate and access to capital • Investment in knowledge based capital • Growing international connections to off-set small insular domestic markets

In 2017, New Zealand ranked 23rd for innovation based on the World Economic Forum measures listed above.

3.2.4 System-wide innovation for a more sustainable economy

Since the Industrial Revolution (from around 1760 to 1840), linear, one-way production models have dominated global manufacturing. This has resulted in more developed economies mostly taking an approach where raw materials and energy are extracted, produced into products or commodities and then used and discarded. As Auckland’s population grows, this approach which is based on consuming finite resources, increasing volumes of waste and contributing to environmental degradation is not sustainable. To transform the traditional economy, there needs to be system-wide innovation that is geared towards greater sustainability.

⁹ ATEED. (2016). *Auckland's Innovation Economy* http://innovation.aucklandnz.com/#research_development

There are a number of initiatives, system models and movements proposing new ways of working across the world. Three such, large-scale innovative concepts are:

- the circular economy (Ellen MacArthur Foundation, 2018)
- the low carbon economy¹⁰
- the United Nations Environment's Green Economy Initiative (UN Environment, 2018).

What these three concepts have in common is the intention to move away from a disposable economy towards one that reduces environmental risks, while improving economic and social outcomes.

There are short-term challenges associated with an economic model shift, but there is the potential to deliver long-term, resilient economic growth and increased productivity (McKinsey Center for Business and Environment, 2016). Some sectors may experience job losses and affected workers may need to re-train and acquire new skills. However, other sectors will adapt and thrive. New products, services and whole industries will be created. Early innovators and adopters could realise additional benefits by becoming exporters of circular economy expertise and technology (ATEED, 2018b).

Some examples of innovative actions that will complement system-wide innovation are the implementation and use of:

- green technologies or 'green' goods (e.g. thin film solar panels, green concrete and electric vehicles)
- efficient, clean production techniques (e.g. use of non-toxic inputs, use of cleaner, low emissions techniques, substitute secondary material [that is, recycled materials])
- eco-friendly business and everyday practices (e.g. knowing the supply chain, energy efficient transport, less/re-useable packaging)
- targeted and appropriate fiscal protection policies (e.g. innovative green procurement policies, tax relief).

3.2.5 Provision of business land

The Auckland Plan 2050 through its Development Strategy creates a multi-nodal approach in relation to the supply of business land.

The term node generally refers to a 'core' or junction of activity. For the Development Strategy a node refers specifically to a sub-regional area with a large metropolitan centre at its core, encompassing a mix of activities such as shopping, offices, living, education, health, social and entertainment along with public spaces and public transport, supported by large business areas.

A key benefit of the multi-nodal approach is the likelihood of greater productivity and employment growth, created through agglomeration when businesses workers and consumers physically locate close to one another (ATEED & NZIER, 2017).

¹⁰ For more on Auckland Council's low carbon strategy see: Low Carbon Auckland: Auckland's Energy Resilience and Low Carbon Action Plan, Toitū te whenua, toitū te tangata <https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-by-laws/our-plans-strategies/topic-based-plans-strategies/environmental-plans-strategies/docs/low-carbon-copy/low-carbon-strategic-action-plan-full.pdf>

Refer to the Auckland Plan 2050 and Auckland Plan 2050 Development Strategy evidence report for a further breakdown of the multi-nodal approach:

<https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/auckland-plan/about-the-auckland-plan/Evidence%20reports%20documents/evidence-report-development-strategy.pdf>

A range of different business uses are needed to support the functioning of the nodes. As such, the nodes will influence how much business/commercial land is made available by the Auckland Unitary Plan.

3.3 Advanced industries

3.3.1 Why advanced industries are important

The 2012 Auckland Plan and EDS placed particular emphasis on shifting the Auckland economy away from GDP growth based on domestic consumption to a more resilient, productive and export driven economy. (Auckland Council, 2012a:34).

The EDS analysed Auckland's mix of industries and clusters of advantage and concluded:

“Auckland’s mix of specialised and supporting industries is also a potential source of economic advantage. Auckland’s economic performance depends on combining a diversified industrial base (to protect against economic shocks) and critical mass in a smaller number of sectors in which Auckland has established strengths. These sectors have the potential to achieve high rates of productivity and export growth. Clusters and concentrations of industries help attract skills and investment, and encourage the growth of specialised supporting services” (Auckland Council, 2012b:15).

Auckland's advanced industries¹¹ are a small but fast growing sector of the Auckland economy that possess the attributes needed to lift productivity and create a more diverse industrial base.

They can be aggregated into five general categories (NZIER, 2016:4):

- knowledge intensive services (e.g. internet publishing, scientific research services, and engineering design)
- information and communications technology (e.g. computer manufacturing, software publishing, and data processing)
- hi-tech manufacturing (e.g. human and veterinary pharmaceuticals, photographic, optical and surgical equipment, and manufacturing)
- medium-tech manufacturing (e.g. chemical and pesticides manufacturing)
- other manufacturing and wholesaling (e.g. petrol refining and wholesaling, metal manufacturing, and computer wholesaling).

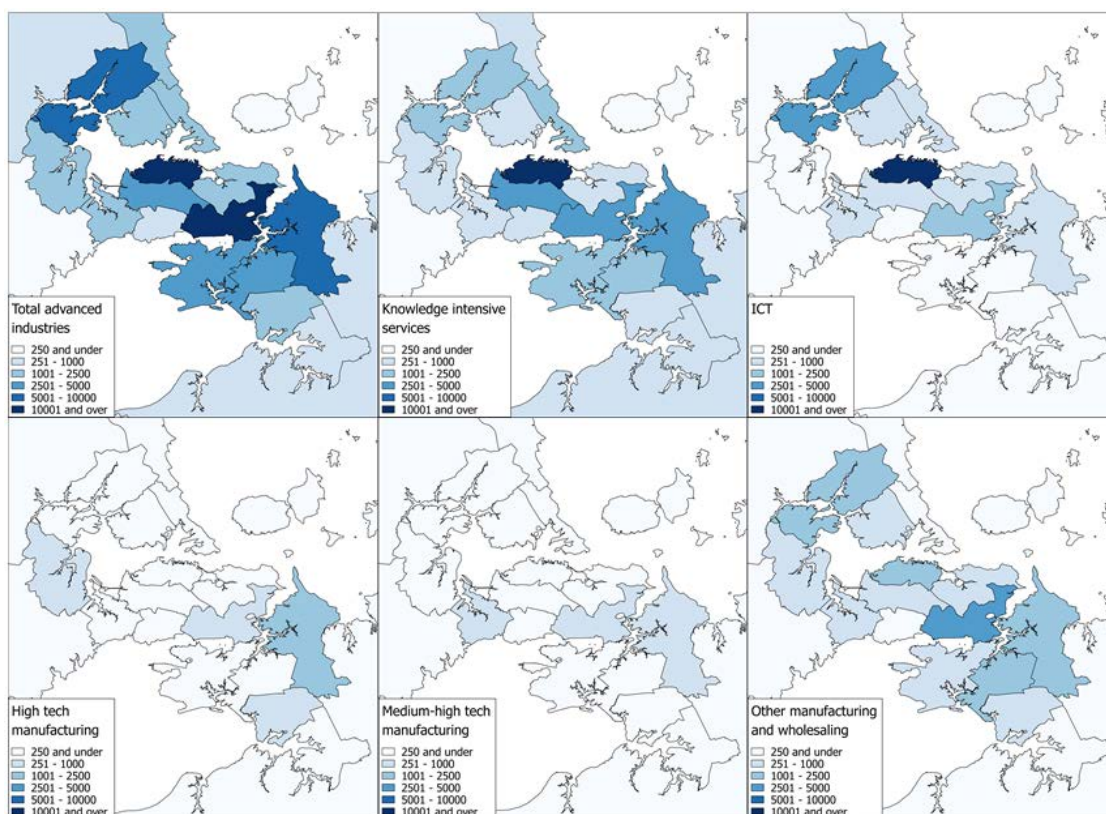
Auckland's advanced industries tend to export largely to high-income and developed markets compared to more traditional agricultural commodity export markets (where

¹¹ Advanced Industries are made up predominantly of: Computer system design and related services, Management and related consulting services, Architectural, engineering and technical services, Scientific research services but also includes other categories.

developing countries such as China are more prominent). This diversity adds to the resilience of the Auckland economy.

Most of Auckland's advanced industries are clustered within two kilometres of the city centre (see Figure 9).

Figure 9 Maps: Location of Auckland's advanced industries' jobs by sector¹²



3.3.2 Growth and contribution of advanced industries to Auckland since 2012

ATEED's Auckland Economic Insights Series on Advanced Industries February 2017 compared the growth of advanced industries since 2000 against non-advanced industries.

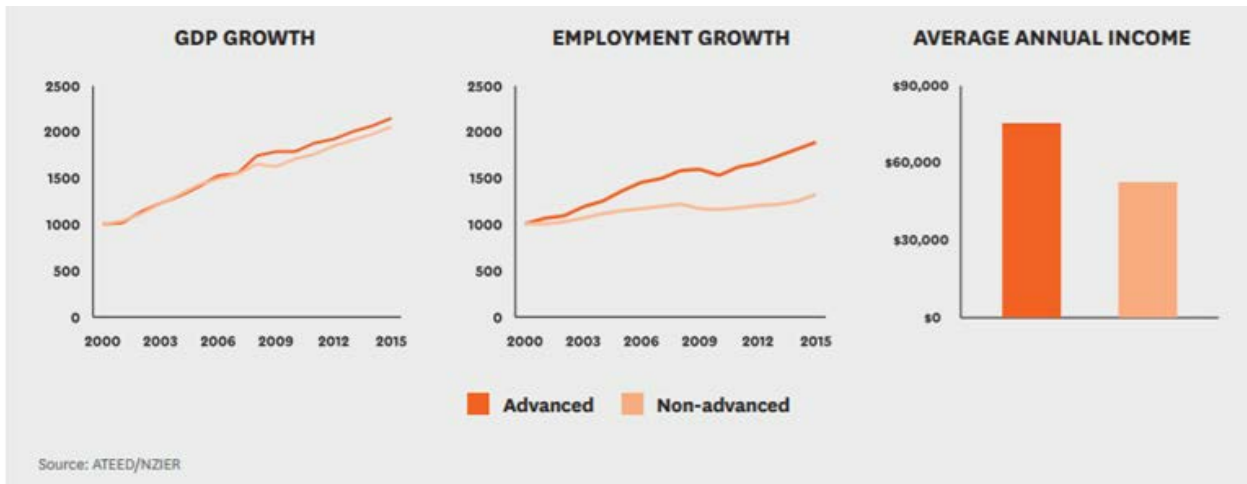
That comparison as illustrated in the graphs below taken from that report concluded:

- *Auckland's advanced industries have grown by 5.2 percent per annum since 2000, compared to 4.9 percent for non-advanced industries*
- *their share of total Auckland jobs has risen from 8 per cent to 11 per cent,*
- *37,000 new jobs have been created within the advanced industries*
- *those employed in advanced industries earn on average \$27,000 per annum more than those in non-advanced*

¹² Figure sourced from NZIER (2016). *Auckland's advanced industries – Contribution to the Auckland Economy*, NZIER report to ATEED July 2016, Available upon request from Auckland Tourism, Events & Economic Development

- *Advanced industries export growth has marginally outperformed non-advanced industries since 2009 adding diversity to a commodity dominated export portfolio*

Figure 10 Advanced Industries – Growing faster and learning more



3.4 Technological disruption

Technological disruption is not a new a phenomenon. Throughout history inventions such as the steam engine have revolutionised business and industry resulting in significant change to the status quo.

The impacts of technological disruption in the past although profound took decades or centuries to be realised enabling business and society to respond in a more considered way.

The speed and scale of technological disruption will challenge businesses to adapt and change or miss new opportunities or at worst become obsolete. For example improvements in artificial intelligence (AI) have enabled computers to routinely take on complex problem solving challenges more quickly and cheaply than human intelligence.

3.4.1 The impacts of technological disruption

Technological disruption and the anticipated rate and scale of their impacts have grown in significance since the 2012 Auckland Plan.

In 2012, technology was viewed by many as a relatively benign means of lifting productivity. Since then the rapid increase and application of automation technology has raised concerns as to the scale and impact of technological disruption and, in particular, the impact on labour markets.

The World Economic Forum in its 2016 study on the future of jobs made the following comment:

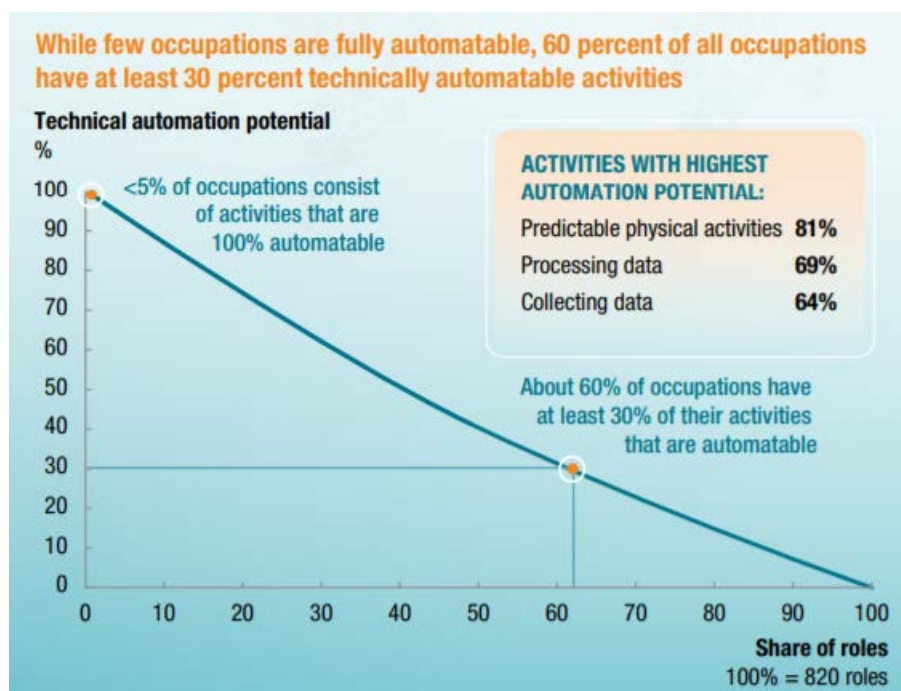
“Disruptive changes to business models will have a profound impact on the employment landscape over the coming years. Many of the major drivers of transformation currently affecting global industries are expected to have a significant impact on jobs, ranging from significant job creation to job displacement, and from heightened labour productivity to widening skills gaps. In many industries and countries, the most in-demand occupations or specialties did not exist 10 or even five years ago, and the pace of change is set to accelerate” (The World Economic Forum, 2016b:3).

There are multiple sources describing which industries and business sectors are most likely to be affected. Consistent across most studies is that low skilled, low paid workers will experience greater impacts of disruptive technology through automation; however, the growth of artificial intelligence will also impact sectors previously considered more immune to disruption.

It has been estimated that 65 per cent of children entering primary school in 2017 will ultimately end up working in completely new job types that do not yet exist (The World Economic Forum, 2016b). There are new occupations in fields that relatively recently could have been mistaken for science fiction, for example:

- cybersecurity
- cloud technologies
- robotics
- ‘app’ development
- social media management
- meta-data mining.

The McKinsey Global Institute estimate that 60 per cent of all occupations have at least 30 per cent technically automatable activities (see Figure 11).

Figure 11 Automation potential of different occupations¹³

Assistive technology can reduce the barriers to employment and will help create new job opportunities for those with disabilities. It is unlikely however that this increased access to a broader range of jobs will offset the number of low skilled jobs expected to be lost through technological disruption where people with disabilities are most represented (Wolbring, 2016).

3.4.2 Timing of disruption

The timing of technological disruption is difficult to predict as it varies across industries, countries and regions.

Historically, some New Zealand businesses were able to remain relatively competitive even if they chose not to innovate. This has been identified as one of the reasons for some New Zealand businesses' low productivity levels (Conway, 2016).

Increased globalisation has meant there is greater pressure on businesses to be able to innovate in order to compete internationally.

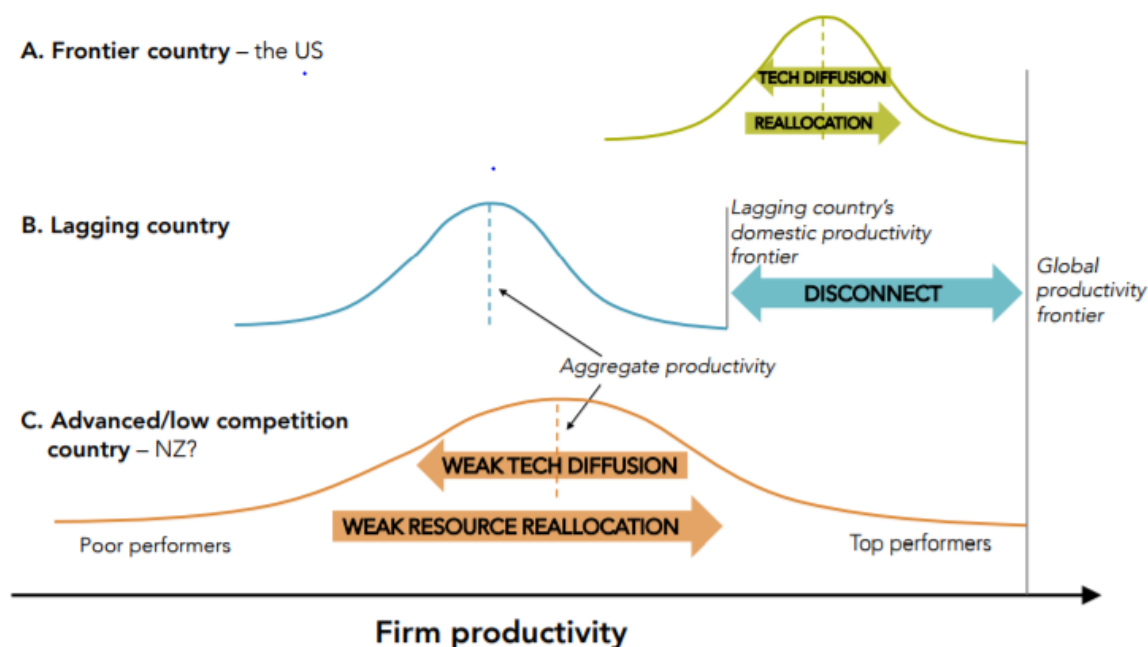
The diffusion of technology and business practices from leading companies (frontier companies) through to late adopters used to occur at a relatively slow rate. With the scale and speed of change, by the time slow adopters of technologies change their business model the changes they have made may already be redundant putting that business into a continued cycle of following lead firms. Worse still some industries may become

¹³ Figure sourced from McKinsey Global Institute. (2017). *A future that works: automation, employment and productivity, executive summary*.

<https://www.mckinsey.com/~media/McKinsey/Global%20Themes/Digital%20Disruption/Harnessing%20automation%20of%20a%20future%20that%20works/MGI-A-future-that-works-Executive-summary.ashx>

completely obsolete as new technologies take over. The following November 2016 graph from the Productivity Commission explains this concept in terms of the impact of failure to respond to new technology on productivity.

Figure 12 Stylised reasons for low aggregate productivity¹⁴



3.5 Harnessing emerging internet technologies

Improved broadband services increase the capacity for innovation and productivity. They open the door for a more globally connected city which has wide ranging economic, social and cultural benefits. Since the 2012 Auckland Plan, access to high quality digital data and services has become fundamental to business success and learning. In order to meet the needs of our current and future residents and attract new businesses that will grow the economy over the next 30 years, we have to continue building the core infrastructure required to enable high speed internet connections.

One example of the growth in the information technology sector since 2012 is the 'internet of things' (IoT). IoT consists of a range of physical devices, vehicles, home appliances, and fitness trackers that are embedded with electronics, software, and sensors that operate through existing internet infrastructure. The IoT is expected to reach 30 billion objects by 2020 (Norgrove & Scott, 2017). The McKinsey Global Institute through analysing how the IoT could be applied to physical settings and across industries estimate a potential economic impact of as much as \$11.1 trillion per year in 2025.

High speed internet is one of the key technological advances that will continue to be required in future. The availability of high-speed internet continues to grow. In 2012, Auckland and Wellington were the regions with the highest proportions of households with some form of internet connection in New Zealand (Statistics New Zealand, 2012).

¹⁴ Figure sourced from Conway, P. (2016). *Achieving New Zealand's productivity potential*. <https://www.productivity.govt.nz/research-paper/achieving-new-zealands-productivity-potential>

However, there is still a minority who do not have good access, or the necessary disposable income to stay connected to the internet. This minority is digitally disadvantaged and as the world advances into a highly digital future, they will fall further behind.

In 2015, World Internet Project New Zealand (WIPNZ) surveyed 1377 New Zealanders to investigate their internet usage. The WIPNZ survey begins with asking respondents (at the age of 16 or above) whether they are currently using the internet or have used the internet in the last three months. Based on answers to a series of questions in regards to internet usage (e.g. frequency of using different devices, type of internet connection at home, abilities in using the internet and frequencies of engaging in a range of online activities), respondents have been grouped into five sub-groups of internet user status:

- never-users (those who have never used the internet)
- ex-users (those who have used the internet in the past but are not current users)
- low-level users (those who use the internet but at a relatively low level)
- first generation users (internet users who tend to connect through traditional devices)
- next generation users (internet users who are highly connected, using multiple, and more mobile devices to go online).

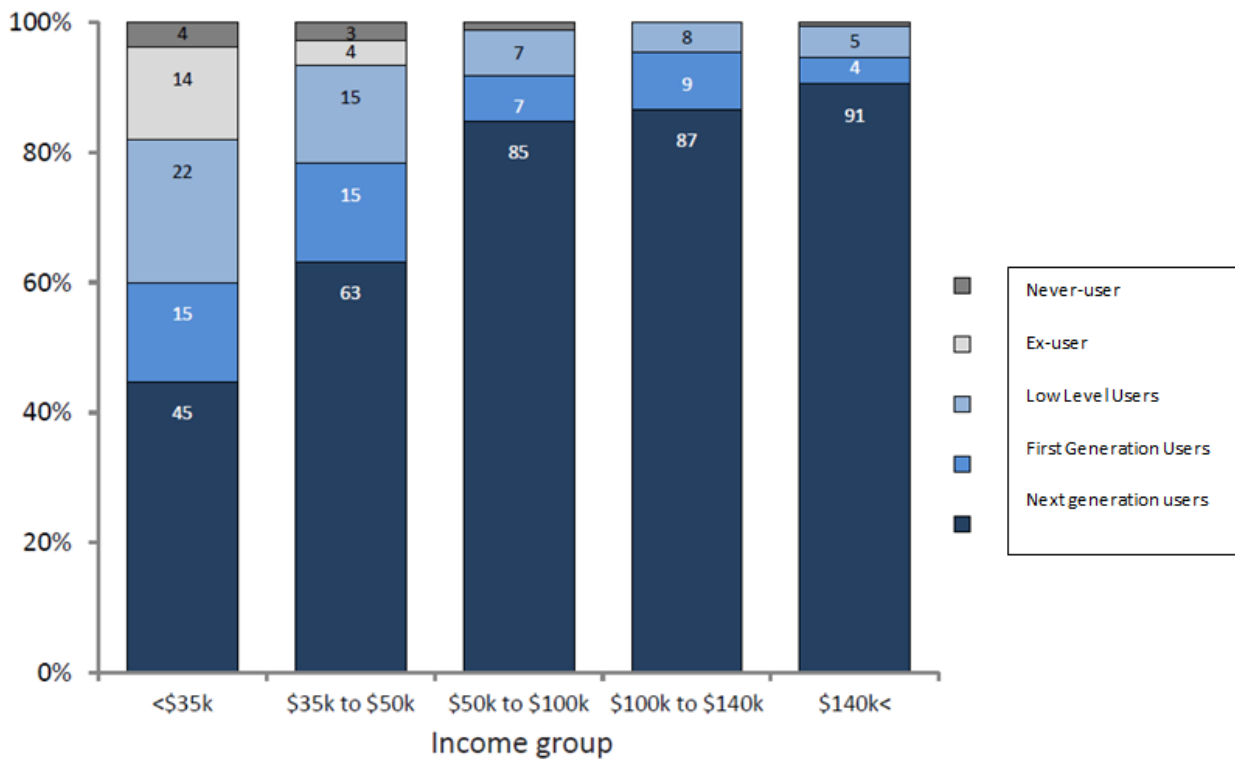
In this survey, age and household income, followed by ethnicity and urban/rural location, were the most significant factors stratifying internet usage in New Zealand. For example, for anyone under 65 years of age¹⁵:

- 14 per cent of those in the under-\$35,000 household income bracket were ex-users
- four per cent of the \$35-50,000 bracket were ex-users
- and in households with incomes over \$140,000, there were no ex-users at all (Crothers et al., 2016). See Figure 13.

Fundamentally, this shows that those who are socio-economically disadvantaged are also digitally disadvantaged and their access to information, education and employment opportunities on-line is constrained.

¹⁵ This data is not intended to imply that those over 65 years old do not need access to the internet. Data on those aged 65 or above have been excluded as 65 is the retirement age, so the incomes of people in this age group tend to be significantly below those who are under 65.

Figure 13 New Zealand internet user status by household income: under 65s, in 2015¹⁶



Once people access the internet, they need to be able to take full advantage of its value and be comfortable using the internet and associated technologies. This requires digital literacy. This is the ability to confidently find, evaluate, use and create digital content in meaningful ways to participate in educational, cultural, social and economic activities (National Library, 2017). Building an understanding of the strategies for finding high quality digital content, reducing internet risks (e.g. identity theft, cyberbullying, computer viruses) and navigating services (e.g. online banking, education) is essential for keeping up in an increasingly digital world.

As cyber-attacks and cybercrime proliferate across the world, there needs to be a better understanding of threats and trends, so vulnerabilities can be assessed, and steps taken towards mitigation of risks and the creation of more resilient systems. Cybercrime can include damage and destruction of data, stolen money, lost productivity, theft of intellectual property, theft of personal and financial data, fraud, post-attack disruption to the normal course of business, and reputational harm (Morgan, 2017). This is an issue for governments, businesses and individuals. New Zealand's Cyber Security Strategy is being refreshed in 2018 to analyse gaps and opportunities to improve New Zealand's cybersecurity (National Cyber Policy Office, 2018). Cybersecurity is essential for people to have the privacy and safety required to use the internet as part of their daily lives and in their businesses.

¹⁶ Figure from Crothers et al. (2016). *The internet in New Zealand 2015*. https://workresearch.aut.ac.nz/data/assets/pdf_file/0003/71328/WIPNZ-Report-060515.pdf

3.6 Export growth and interconnectedness

3.6.1 The importance of international connectedness, growing exports and attracting investment and skills

Economic openness and access to international markets and investment opportunities is essential for small countries. International expansion provides opportunities:

- for scale and capital investment
- for a wider revenue base
- to increase the knowledge base
- for more productive firms to grow more quickly and become more competitive
- and incentives to innovate.

In its June 2017 economic survey of New Zealand, the OECD identified lack of international connection and scale, weak competitive pressures, low rates of capital investment and low research and development activity as key factors that contribute to New Zealand's poor productivity performance.

The report indicated that reducing barriers to foreign direct investment (FDI) increases international connections and for small economies like New Zealand provides the additional benefits:

- boosting the recipient countries' productivity by providing capital to fund capital formation
- opening up access to global supply chains and markets
- promoting local competition.

Compared to portfolio investment where investors bring only their capital for the purpose of maximising dividends, direct investment can create a lasting relationship that can lead to technological, skills and managerial quality transfers as the investor has an active role to play in and stronger stake in the success of the business. This can reduce the likelihood of financial crises because the investor is more committed to long-term gains and prepared to ride out temporary downturns.

Auckland's attractiveness as a place for foreign investors to invest is dependent upon a number of factors. New Zealand's reputation as free from corruption, Auckland's number one ranking for doing business as ranked by the World Bank's 2017 Doing Business Report contributes to Auckland's desirability and attractiveness for FDI.

Such rankings, however, should not be taken for granted or as an indication that further improvements are not necessary. For example, New Zealand's relatively higher corporate tax rate is viewed by the OECD as a potential impediment to attracting FDI. Examples such as this highlight the challenge government and policy makers have in balancing regulatory settings for the both the international, national and regional context in order to create further opportunities and enhance prosperity.

3.6.2 Attracting talent

For Auckland to thrive, it needs to attract highly skilled migrants while retaining Aucklanders who can contribute to a range of roles in society and in the labour market. The ability to attract the talent Auckland needs is reliant in the first instance on creating a place where talented people want to live. A vibrant and diverse city can attract people from across the world. The energy and character of a city with a thriving arts and cultural sector tends to attract creative skilled people who seek a vibrant urban experience, with festivals, clubs, art galleries, interesting food and people (BOP Consulting, 2015). Moreover, these people tend to generate more creative capacity in a city.

To attract the great variety of low to high skilled labour required in Auckland, there needs to be a focus on all the aspects of a city that create a high quality of life (e.g. good transport, plentiful employment options, safe and clean city). Successful cities are ones that cultivate and sustain the creative capacity of all their people at every skill level (Coletta, 2008). Over the past two decades the influence of creative artists to major cities has been identified as contributing a source of revitalisation but also of gentrification and displacement of lower-income residents (Grodach et al., 2014) (Florida, 2018).

MBIE's 2008, longitudinal immigration survey titled 'New Faces, New Futures' identified the following three most common reasons migrants chose New Zealand :

- the relaxed pace of life or lifestyle (44 percent)
- the climate or clean, green environment (40 percent)
- providing a better future for their children (39 percent).

3.7 The right skills at the right time

Technological advances and increased globalisation are leading to significant changes regarding when and how work is done. Technological innovations offer new and flexible opportunities which benefit some, creating more flexible non-traditional work conditions (i.e. working from home, part-time, or from the other side of the world) and others are marginalised as roles become more insecure and short-term. Additionally, we have an ageing population in Auckland that has begun to work longer and most likely will continue to work longer in the future (Reid, 2017). Despite this, the sheer number of people participating in the labour force will diminish considerably over the next 30 years (Statistics New Zealand, 2015). This diminishing labour force and disruption to traditional business models is an issue most OECD countries will have to grapple with in the years to come. This is a particularly acute issue in New Zealand where productivity growth has been low.

Productivity can be improved through a number of mechanisms and one of the key mechanisms is to improve the skills and education of the labour force (Paterson, Brown & Davies, 2010). Skills enhance the labour force contribution to economic growth and improve the ability to innovate and adopt new ideas (New Zealand Treasury, 2008). Investing in our people is essential for Auckland to be able to compete globally and for individuals to reap the benefits a strong economy can deliver.

To succeed as a city, all Aucklanders need to have access to good education and training, so they can cultivate the right skills to contribute to and benefit from economic growth. It is critical that Auckland's workforce is well matched to the skills need of its labour market. Around the world in developed nations, despite high unemployment rates, there has been a persistent skills mismatch (The Economist Intelligence Unit, 2014b). Like many places around the world, Auckland has begun to experience this. Since 2009, Auckland businesses have reported difficulty finding appropriately skilled workers (Allpress, 2013). Skills imbalances, such as surpluses, shortages and mismatches lead to poor labour market outcomes (OECD, 2017a).

In Auckland, employment is shifting towards a higher skills base. In between 2000 and 2016, the population that identified as low skilled reduced by seven percentage points from 44 to 37 per cent, whereas those identified as high skilled increased by eight percentage points from 28 to 36 per cent (see Figure 14) (ATEED, 2017).

Figure 14 Auckland workforce by broad skill level¹⁷



Auckland's workforce must acquire necessary skills for high-skilled industries (e.g. technologically advanced industries and complex business services) to be able to lead innovation, increase productivity and create more jobs (OECD, 2017c). In highly-skilled industries it takes time for potential employees to undertake the required training. Therefore, short of bringing in talent from outside of Auckland, these industries are vulnerable to skill deficits as it is difficult to quickly grow the number of qualified local people.

¹⁷ Figure sourced from ATEED. (2018). *Skills and Talent: Auckland's workforce broken down by broad skill level (%) per annum from 2000-2016*. <https://www.aucklandnz.com/auckland-index/people>

The Hays Global Skills Index provides an analysis of the global labour market and the supply and demand for skilled labour (Hays, 2017). They found that in 2017, there was high demand for skilled talent in New Zealand, particularly in high-skill industries requiring roles like:

- structural, civil and building services design engineers
- professional practice auditors
- quantity surveyors
- software and digital technology specialists
- project managers (construction and infrastructure).

The OECD's 2016 economic survey of New Zealand showed that there were national skills shortages in a range of skill areas (see Figure 15).

Figure 15 Top ten hardest skills to find in New Zealand¹⁸

Jobs ranked in decreasing order of difficulties to find, 2016¹⁹



Note: Health Professionals = Doctors and other non-nursing

Although highly-skilled industries are important for prosperity, Auckland also needs a mix of skill levels to match the range of different jobs that will also be required (e.g. construction sector, health care services). There are skills deficits in a variety of core services such as nurses, doctors, teachers, firefighters and police.

Evidence shows that there has been growth in occupations that require high levels of both cognitive skills and soft skills (OECD, 2017a). Soft skills are becoming increasingly important as automation takes over portions of roles that are routine, repetitive and do not

¹⁸ Figure sourced from OECD. (2017). OECD Economic Surveys: New Zealand 2017. http://www.keepeek.com/Digital-Asset-Management/oecd/economics/oecd-economic-surveys-new-zealand-2017_eco_surveys-nzl-2017-en#

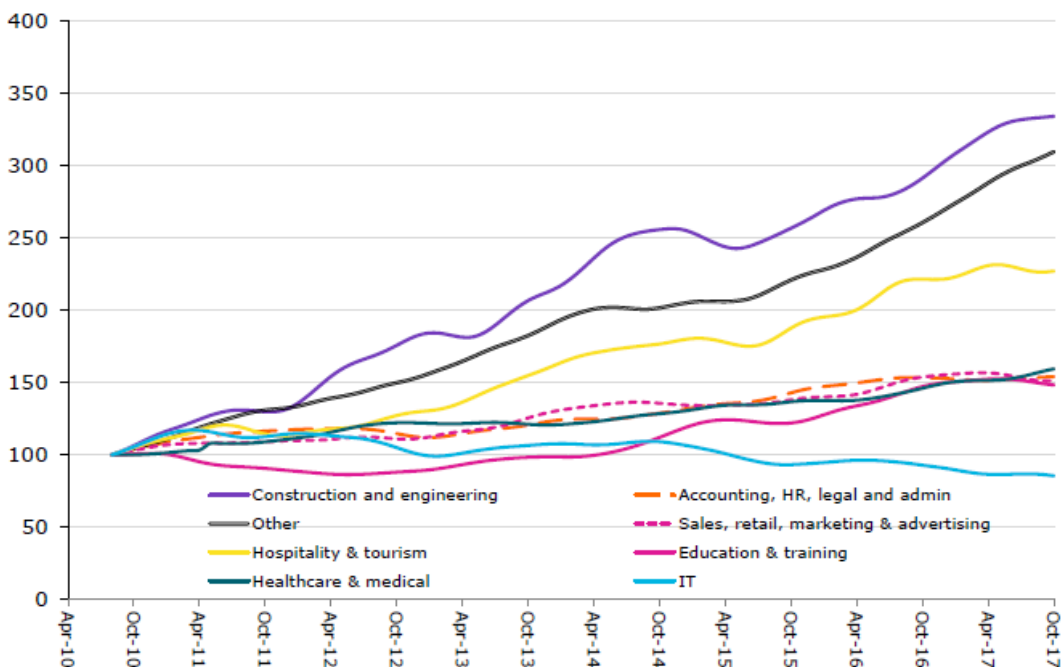
¹⁹ This data is survey based. Firms are classified as facing a skills shortage if they report having difficulties filling jobs.

require complex interactions or abstract tasks (The Economist Intelligence Unit, 2014b). For further discussion on this, please see the Soft skills section.

MBIE's Jobs Online monthly report for October 2017 showed that nationally there has been a steady increase in job vacancies in both low skilled to high skilled industries, with the exception of information technology (IT)²⁰ (Figure 16). Although Auckland's job vacancies are not as large as some other areas of the country, this provides an insight to understand the speed and scale of the skills shortage.

Figure 16 All vacancies index by industry²¹

[Trend series (Aug10=100)]



In Auckland the skills gap has been growing and will continue to grow if the city continues to become more unaffordable for basic living costs (e.g. accommodation and transport), and more Aucklanders migrate elsewhere. This skills gap is one of the reasons it is so important that Auckland is able to attract and retain talented people.

To create a more robust skill-base in the workforce in the short-term, there needs to be regular assessment of skills available and the skills needed in the labour market, so educational institutions, training providers, businesses and government have good

²⁰ It is useful to note, that even though IT vacancies have not been steadily increasing since 2010 like the other industries represented, they are still a large number of vacancies.

²¹ Figure from Ministry of Business, Innovation and Employment (MBIE). (2017). Jobs Online Monthly Report – October 2017. <http://www.mbie.govt.nz/info-services/employment-skills/labour-market-reports/jobs-online/document-image-library/jobs-online-oct-2017/jobs-online-oct-17.pdf>

information about skill needs and can plan accordingly. For example, there needs to be analysis of the skills requirements needed to meet future sector needs, including an analysis of the available skills and demands from Auckland's key sectors, and analysis of what jobs international migrants and ex-'export education' students are filling.

There are a number of ways to approach creating the right skills for the city at the right time. Some of these include early interventions in the education system, vocational up-skilling for the low and middle-skilled, continuous on-the job training and better schemes to match people with good quality employment.²² No matter what the overall approach, re-training through-out life is going to be an essential part of skill development for the workforce of the future. In the future, workers are going to have to become more self-reliant in developing the skills they will need over the course of their life to adapt and remain relevant in the workforce (The European Political Strategy Centre, 2016). Businesses, tertiary and vocational institutions, government and local government need to work together to build on current skill development initiatives and contribute to achieving our skills goals. There needs to be a system-wide approach to increasing a range of skills to assist lifting employment outcomes for all Aucklanders.

As covered in this report's Context section, although education participation and achievement has been increasing overall, there are still many Aucklanders who are not achieving good employment outcomes. For example the number of Māori in skilled occupations decreased by 6 per cent from 2014 to 2015. This was a result of the overall decline in Māori employment in the region. There were also proportionately more Māori working in goods-producing industries and fewer in the service industries, in comparison to other ethnic groups (MBIE, 2015).

People need opportunities to develop the relevant skills, including technical and vocational skills, for decent jobs, whether as employees, employers or entrepreneurs.

Skill development starts earlier than when people are preparing to enter the workforce. From early childhood through-out adulthood, people need the high quality learning opportunities that equip them with a strong mix of skills for life.

3.8 Soft skills

The term soft skills describes a range of personality traits, non-cognitive skills and abilities, character traits and socio-emotional skills (European Political Strategy Centre, 2016). While some of these terms imply permanence, people are not born with a fixed set of abilities (OECD, 2015) and can develop these skills over their lifetimes.

Soft skills include²³:

²² For an example of a skills matching initiative for young people in Auckland, see Youth Connections: <https://www.aucklandcouncil.govt.nz/grants-community-support-housing/Pages/youth-connections.aspx>

²³ There is a range of information on the kinds of soft skills that are most valuable in the future. Three useful discussions are: 1 - World Economic Forum. (2015). *New Vision for Education: Unlocking the Potential of Technology*. Prepared in collaboration with The Boston Consulting Group. Geneva: World Economic Forum.; 2 - The Economist Intelligence Unit.

- critical thinking and problem solving
- creativity and curiosity
- communication and collaboration
- agreeableness
- conscientiousness
- persistence and self-motivation
- adaptability
- leadership
- social and cultural awareness
- enthusiasm.

These skills are important for individual development, academic performance and participation in society. They are also highly valued in the workplace.

A recent longitudinal study in nine countries conducted by the Organisation for Economic Cooperation and Development (OECD) has shown a balanced set of cognitive, social and emotional skills play a crucial role in improving children's economic and social outcomes later in life (OECD, 2015). The OECD study found that, in New Zealand, the impact of raising the social and emotional skills of an eight year old reduces self-reported behaviour problems (e.g. drinking, smoking, violence, fights) at 16 years old by 15 percentage points, while the impact of raising cognitive skills is statistically insignificant (OECD, 2015).

3.8.1 Soft skills for work

As the work environment evolves, soft skills are becoming increasingly important in a variety of workplaces. With shifts in the work environment such as the increase of offshoring and the automation of repetitive simple tasks, in developed countries there has been a 'hollowing out of the middle', with middle-skilled workers forced to take low skilled jobs that are non-routine (Canon & Marifian, 2013). This growing automation and globalisation of markets has seen:

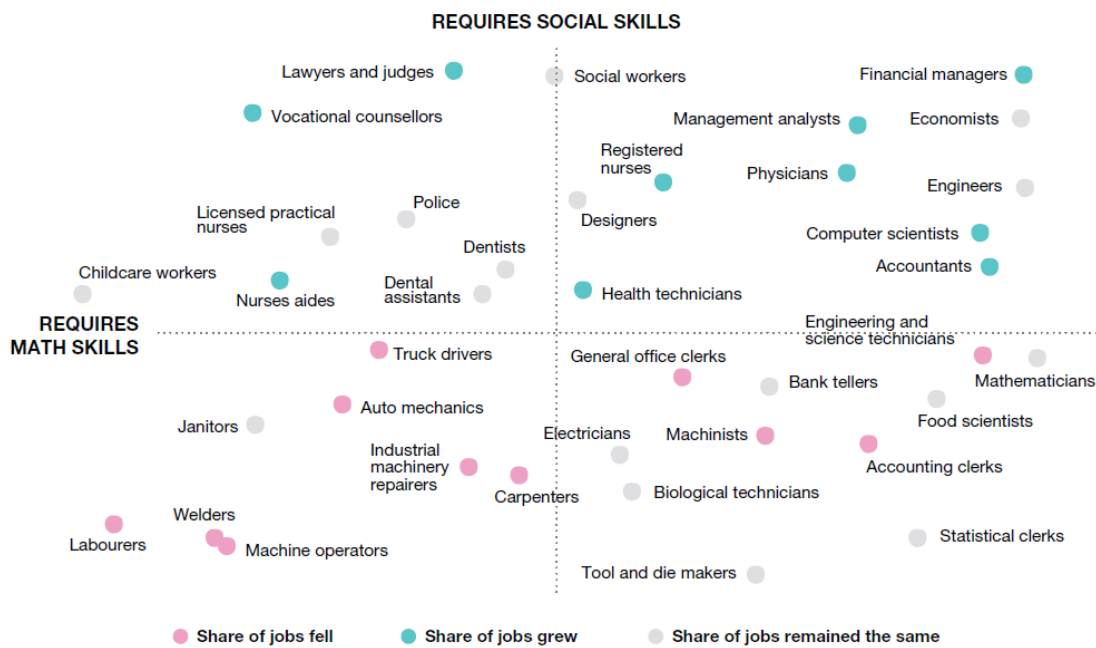
- a decrease in the proportion of middle-skilled jobs
- an increase in the proportion of low-skilled jobs
- more demand for highly-skilled workers (The Economist Intelligence Unit, 2014b).

Employers are seeking people with a range of soft skills in both high and low skilled roles.

A significant piece of research in the United States has shown that the bulk of job growth from 1980 to 2012 has been in occupations that require high social skills such as managers, teachers, nurses and therapists, physicians and lawyers (see Figure 17). This research also found that high-paying jobs increasingly require social skills (Deming, 2017). These trends are very similar all over the developed world.

Further to this, in 2016 the US Bureau of Labor Statistics projected employment to grow fastest in occupations that are difficult to automate, specifically within healthcare, construction, and Science, Technology, Engineering and Mathematics (STEM) occupations (Allpress, 2013).

Figure 17 Jobs in the US from 1980 – 2012 requiring social skills and math skills²⁴



Note: The position of an occupation on the x and y axes reflects the intensity of math and social skills required, based on calculations by David Deming, using data from the Occupational Information Network (O*NET), a survey administered by the US Department of Labor. The bubble color reflects changes in the share of jobs from 1980 to 2012. Jobs with shares that changed in a range from -24 to 24 percentage points are grouped under "Share of jobs remained the same", jobs with shares that changed by more than 24 percentage points are grouped under "Share of jobs grew" and jobs with shares that changed by less than -24 percentage points are grouped under "Share of jobs fell".

Adapted from Miller, Claire Cain, "Why What You Learned in Preschool Is Crucial at Work", *The New York Times*, October 16, 2015, <http://www.nytimes.com/2015/10/18/upshot/how-the-modern-workplace-has-become-more-like-preschool.html>, based on data from Deming, David J., *The Growing Importance of Social Skills in the Labor Market*, Harvard University and NBER, August 2015, http://scholar.harvard.edu/files/ddeming/files/deming_socialskills_august2015.pdf.

There will be increasing demand for workers who have a comparative skills advantage. Even in highly technical roles a strong set of soft skills will provide that advantage. There are skills gaps in many OECD countries that include technology and basic literacy skills. There is also a significant lack of soft skills.

Auckland employers surveyed in 2012 stated that soft skills (or non-cognitive skills) are becoming increasingly important when hiring (Allpress, 2013) and expressed difficulties finding employees with adequate soft skills. In this survey, some infrastructure firms reported “that they could increase revenues and improve productivity more through enhanced non-cognitive skills amongst their engineers than through advances in technical skills.” (Boven, Carter & Smutz, 2012:18).

In 2017 a number of Auckland organisations, including Xero, ASB, Noel Leeming, Vector and Sky City, published an open letter stating their intent to hire people without tertiary qualifications. Their hiring process would instead focus on assessment of the necessary

²⁴ Figure sourced from World Economic Forum. (2016). *New Vision for Education: Fostering Social and Emotional Learning through Technology*. http://www3.weforum.org/docs/WEF_New_Vision_for_Education.pdf

skills, attitudes, motivation and adaptability to join their organisations, in conjunction with previous experiences in and out of the workforce (NZ Talent, 2017).

There is no certainty about the skills that will be required in this rapidly changing environment. However, soft skills, particularly adaptability, creativity and critical thinking will be more advantageous as the nature of work evolves.

3.9 Early years learning

The human brain develops more rapidly between birth and five years of age than in any other point in life (Wisconsin Council on Children and Families, 2007) and learning done in these first five years builds the brain architecture for lifelong development (Centre for the Developing Child, 2007). Therefore, a nurturing home environment that provides rich language exposure, positive social interactions and early literacy experiences will begin to build the skills required for success in school and later in the workplace and the community. This helps to create a foundation of emotional well-being, social competence and cognitive abilities that serves a person through-out life (Centre for the Developing Child, 2007).

Beyond the first days of learning in the home, there is consistent evidence in New Zealand and internationally that early childhood education (ECE) participation is positively associated with gains in school readiness, school achievement and reduced special education placement (Mitchell, Wylie & Carr, 2008). Early childhood learning is so important for health, employment and social outcomes, that UNESCO has made access to quality, early childhood development, care and pre-primary education a Sustainable Development target (UNESCO, 2017) and in 2012 the New Zealand government set a goal to increase the number of children participating in ECE to 98 per cent (Ministry of Education, 2016). To assist in meeting this goal, the government set up an ECE participation programme nationwide in 2010. It is made up of various initiatives that aim to support Māori, Pasifika, and low-income families to enrol their children in ECE.²⁵

The Ministry of Education reports that there have been steady rises in ECE participation rates in Auckland and across New Zealand since 2000. In addition, the time that children spend in ECE per week has been increasing (Reid & Rootham, 2016). In 2015, the Ministry of Education reported that 95.2 per cent of children in Auckland took part in ECE.

Although the rates for Pasifika (89.5 per cent) and Māori (91.9 per cent) children are still lower than for other groups, this is a significant improvement from 2012 participation rates. In part, this may reflect the impact of programmes introduced to target specific local areas where ECE participation is low (Reid & Rootham, 2016).

Interventions in the early years are more effective than later in life (Heckman, 2008), so quality learning must begin here. While all small children have a level of vulnerability,

²⁵ To find out more about this programme, refer to <https://www.educationcounts.govt.nz/publications/ECE/ece-participation-programme-evaluation>

children from families with complex needs are particularly vulnerable.²⁶ The highest social return on investment is achieved through early support of these children (Centre for Social Impact, 2015). There is significant positive impact of early and continuous investment in building social and emotional skills, particularly for children from lower socio-economic backgrounds (OECD, 2015). This not only increases the likelihood of individual achievement in life but also benefits society as these people become better employees or employers and solid citizens in the community.

For all our children to have a good start in life, they need supportive early learning environments. In these spaces highly skilled staff and parents can build positive relationships with young children to develop their social and emotional skills alongside their literacy and cognitive skills. Investing in the early years of a child's life makes a significant positive impact on their long-term outcomes.

3.10 Education and training

Although the early years are critical in laying the foundations for learning, what teachers and parents do, the learning environments they offer, and the habits they support in children and young people after the age of five still matters (Wylie & Hipkins, 2006).

Equitable access to a high-quality education system is essential for the development of all young people. High quality education assists children to create the balanced set of cognitive, social and emotional skills that they need to achieve positive life outcomes (OECD, 2015). Quality learning environments have highly skilled teachers, adequate resources, and they provide culturally responsive learning opportunities and a learning pedagogy that keeps pace with the changing world (e.g. providing collaborative, interdisciplinary learning opportunities, abundant digital literacy and a focus on science, technology, engineering and mathematics).

Today our young people are growing up in a world with unprecedented digital connection and technological innovation. If they are prepared with the right skills and knowledge they will have the tools to excel in an exciting new future, but if they are underprepared they will be vulnerable in the job market and may have difficulty ever catching up.

Having culturally responsive learning opportunities is especially important in Auckland. In 2013 over a third of our young people (aged 0-24 years) were Māori or Pasifika (Reid & Rootham, 2016), and they persistently experienced disproportionate negative outcomes (UN Convention on the Rights of the Child Monitoring Group, 2017). The OECD's 2013 economic survey of New Zealand reports,

“Among the population lacking school qualifications, Māori have nearly double the incidence of people lacking school qualifications as Pakeha/Europeans and

²⁶ The Ministry of Social Development defines children and young people as vulnerable when their basic safety, emotional, physical, social, cultural or developmental needs are not met at home or in the wider community.

quadruple those of Asians, and conversely Māori show much lower rates of tertiary attainment” (New Zealand Treasury, 2013a:1).

Although trends are improving across the city, there are significant educational disparities for Māori and Pasifika children and young people in Auckland. Māori and Pasifika young people’s tertiary attainment rates, NCEA attainment and early childhood education participation rates have been rising, but they are not catching up to those of other ethnicities.

There needs to be increased focus in these areas on creating positive outcomes for Māori and Pasifika young people. Teaching and learning needs to happen in ways that support students to engage, values their identity, language and culture and helps them to achieve success.²⁷

Every child needs supportive learning environments to grow and thrive, whether they are sixth generation New Zealanders, recent migrants or disabled students. However, for students from lower socio-economic backgrounds good education is essential. The link between a parent’s socioeconomic status and a child’s educational outcome is very high in New Zealand when compared internationally (New Zealand Treasury, 2013b). Therefore, children whose parents lack educational qualifications and live in a socio-economically deprived area have a higher probability of poor educational outcomes.

Auckland has a disproportionate number of low decile schools.²⁸ Thirty-two per cent of all decile 1 schools in New Zealand are found in Auckland, while only 21.5 per cent of New Zealand’s schools are in Auckland. Māori and Pasifika children are more likely than others to attend low-decile schools. As of 1 July 2015, approximately 71 per cent of Auckland’s Pasifika students and 50 per cent of Māori students attended decile 1, 2 or 3 primary and secondary schools, compared to only six per cent of European/Pākehā students (Auckland Council. (2017b).

In New Zealand, inequality in education outcomes is significant intergenerationally. Educational achievement persists between generations. For example, highly educated parents are more likely to have children participate in tertiary education than in any other OECD country (OECD, 2013a). Those lacking in educational qualifications are unlikely to have children with better qualifications. Evidence shows strong links between participation in education and positive life outcomes in areas of employment, income and social status (Economic and Social Research Council, 2014). For children in New Zealand, education

²⁷ For more on how to achieve this, see the Ministry of Education’s Māori or Pacific strategies: Ka Hikitia – Accelerating Success: The Māori Education Strategy 2013-2017, and the Pasifika Education Plan 2013-2017.

²⁸ A school’s decile rating is a measure of the socio-economic position of the school’s student community relative to other schools throughout the country. The Ministry of Education targets funding to state and state integrated schools through the decile rating system. School decile ratings provide some insight into the socio-economic area of the school as ratings reflect the income level of parents of the school, not the quality of the school. Decile 1 schools are the 10 per cent of schools nationally with the highest proportion of students from low socio-economic communities, and decile 10 schools are the 10 per cent of schools that have students from the highest socio-economic communities nationally. Explanation from: Reid, A. and Rootham, E. (2016). *A profile of children and young people in Auckland*. Auckland Council technical report, TR2016/022.

remains the main way to break the transmission of low incomes across generations (New Zealand Treasury, 2013b).

Broadly both formal and informal education builds literacy, numeracy and a suite of other skills. Informal education opportunities offer different kinds of learning. Participation in arts, culture and in sport and recreation are also immensely valuable to help children build the range of cognitive and soft skills they need for life. Learning through arts and culture, children develop their creativity and imagination, but also improve attainment in other subjects (e.g. mathematics and reading) (Cultural Learning Alliance, 2011). While participation in competitive sport and active recreation builds motor skills and social skills, (Holt et al., 2009) they also have physical and psychological benefits and can contribute to raising academic achievement (Kolt et al., 2006).

3.10.1 Benefits of education and lifelong learning

The benefits of education and training cannot be underestimated. On a range of metrics people fare better in life the more education they have. Fundamentally, people with more education tend to live longer. In 2013 the OECD stated that,

“On average across 15 OECD countries, a 30-year-old male tertiary graduate can expect to live another 51 years, while a 30-year-old man who has not completed upper secondary education can expect to live an additional 43 years. A similar comparison between women in the two educational groups reveals less of a difference than that among men” (OECD, 2013b:1).

Individuals with higher literacy, numeracy and tertiary education self-reported better health and higher life satisfaction (OECD, 2016a). For example, in Auckland the 2016 New Zealand General Social Survey showed that 88 per cent of people with educational attainment at a bachelor’s degree level or above rated their overall life satisfaction at 7 out of 10 or more, compared with 77 per cent of people with no qualifications (Norgrove & Scott, 2017). The prevalence of depression reduces with higher levels of educational attainment (Norgrove & Scott, 2017). From an economic stand point, individual income is generally higher for those with higher qualifications, as they have access to greater employment opportunities, more employment mobility due to their social status and access to networks. In New Zealand, in 2015, the median hourly earnings of a person with a bachelor’s degree or higher qualification was 65 per cent higher than for a person without a qualification (Ministry of Education, 2017).

Education and training builds the competence and character which makes people successful and resilient in their professional and personal lives (OECD, 2016a). Quality education in the beginning of life lays the foundation for continuous learning throughout life (UNESCO, 2012). Learning and skill development brings significant benefits to society more widely.

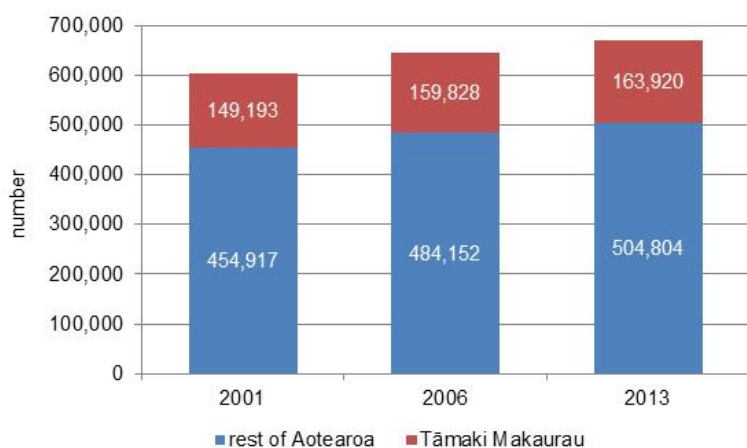
In 2016, the OECD reported that in New Zealand, adults who have higher literacy levels are around three times more likely to trust others compared to adults with low literacy levels (OECD, 2016b). New Zealanders who score at the highest levels in literacy are around twice as likely as those who score at or below Level 1 literacy to believe they can have an impact on the political process (59 per cent compared to 29 per cent), which is similar to the OECD average. New Zealanders with higher skills proficiency are also much more likely to participate in volunteer activities. Adults with higher levels of education also have stronger civic engagement, volunteering and interpersonal trust (OECD, 2013b).

In short, individuals who have more skills are more positively involved in their communities. Informal learning assists people to build skills from language skills to cultural norms to technical expertise that are needed in the workplace, civil society and are an important part of a fulfilling life (National Research Council, 2012). These are the building blocks for a prosperous society.

3.11 Māori economic development

Māori are a critical part of the prosperity landscape in Auckland. The Māori population is young and growing, which provides a huge opportunity for Māori to play an increasing role in Auckland's economic success. In 2013, over half of the Māori descent population in Auckland (51.5 per cent) was younger than 25, and a third (32.8 per cent) were children under 15 years of age. Between 2001 and 2006 the number of people of Māori descent living in Auckland increased by seven per cent and in between 2006 and 2013, the population grew again by nearly three per cent to a total of 163,920 people of Māori descent living in Auckland (see Figure 18).²⁹

Figure 18 Number of people of Māori descent, Tāmaki Makaurau and rest of Aotearoa, 2001, 2006, 2013³⁰

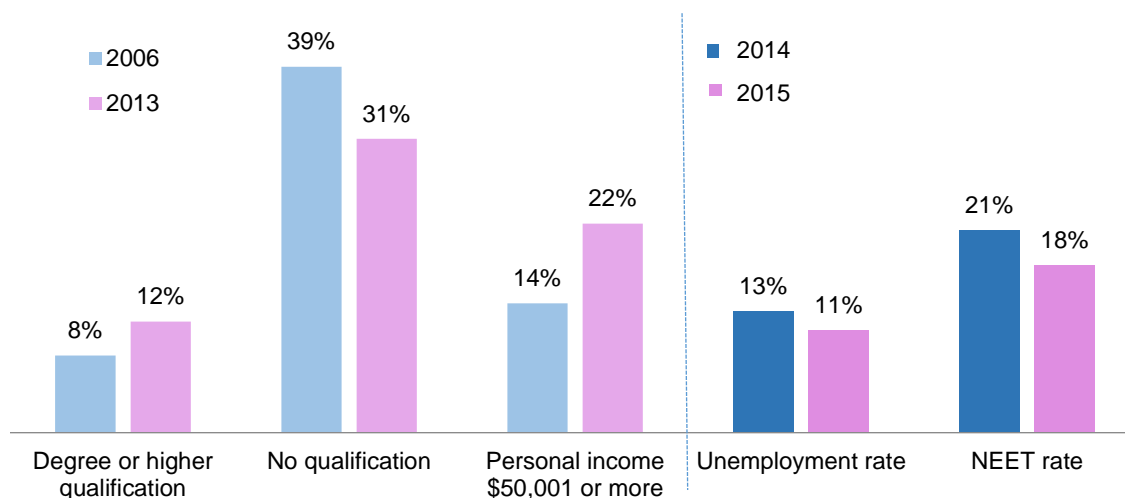


The opportunity of this young and growing population is countered by a longstanding trend of Māori experiencing lower socio-economic outcomes. Māori live in all parts of Auckland, but there are larger proportions of the Māori population in the west and south of the region where socio-economic deprivation is higher than other areas. The people living in these areas experience multiple disadvantages. For example, in 2013, generally geographic areas with a large Māori population were also areas where Māori incomes were low, and throughout Auckland, Māori incomes were around 20 per cent lower than the Auckland average (NZIER, 2017).

However, socio-economic indicators reveal that there have been some improvements for Māori (Figure 19).

²⁹ Māori are counted in two ways in the New Zealand Census of Population and Dwellings: through ethnicity (cultural affiliation) and through Māori descent (ancestry). These population numbers refer to people of Māori descent. Unless otherwise specified all data is from Statistics NZ, Census of Population and Dwellings 2013 by descent.

³⁰ Data source: Statistics NZ, Census of Population and Dwellings

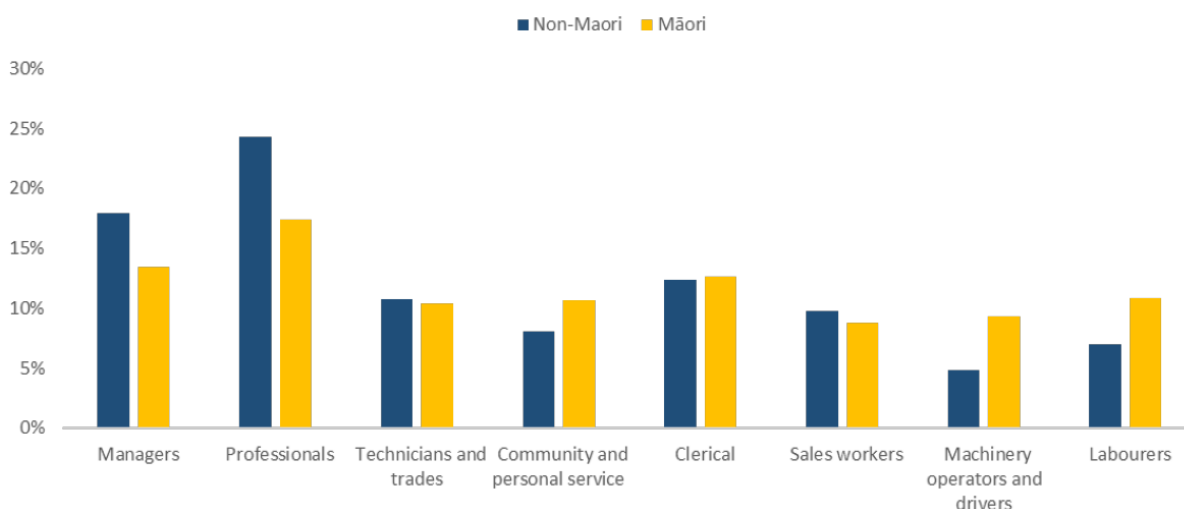
Figure 19 Socio-economic indicators for Māori (by ethnicity) aged 15 years and over in Tāmaki Makaurau³¹

Compared to other Aucklanders overall, Māori still have:

- fewer qualifications
- more likelihood of having no qualifications (in 2013, 31 per cent compared to 17 per cent for all Aucklanders) (NZIER, 2015)
- higher unemployment rates (in 2014, 13 per cent of the labour force compared to 7 per cent of all Aucklanders) (NZIER, 2015)
- lower incomes (in 2013, 20 per cent lower than the Auckland average) (NZIER, 2017)
- low relative median income (in 2013 Māori (\$24,500) was lower than the median income for Aucklanders as a whole (\$29,600), and \$12,000 less than the median income among the European ethnic group) (Census 2013)
- under-representation in high income occupations (See Figure 20)
- higher numbers of 15 to 24 years old not in education, employment or training (NEET) than the Auckland population overall (particularly high disparity for Māori youth aged 20 to 24 years where 26.5 per cent were NEET compared to 13.4 per cent overall in 2015) (Auckland Council, 2017b).

³¹ Data source: Statistics NZ, Census of Population and Dwellings (2006 and 2013) by ethnicity and Household Labour Force Survey (December 2014 and December 2015)

Note: Data on qualifications and personal income is taken from the 2006 and 2013 Census results. Data on unemployment and NEET rate is from the HLFS for year ending December 2014 and December 2015.

Figure 20 Māori are under-represented in high income occupations, 2013 Census³²

Note: These eight broad occupational categories are established by Statistics NZ and data is taken from 2013 Census results.

Māori are a vital part of Auckland's economy and any approach to lifting Auckland's prosperity will include a productive and dynamic contribution from Māori. This will require a significant improvement across a number of their socio-economic indicators. This can be done in a number of ways, but two essential methods to respond to these demographic trends are:

- continued focus on social and economic development in geographic areas with large concentrations of Māori
- significant investment in rangatahi education, career pathway planning and training (including vocational training, apprenticeships, graduate programmes and internships).

3.11.1 The Māori Economy

'The Māori economy' is referenced widely but defined slightly differently each time. Broadly, most agree that Māori economic interests are multi-dimensional, include many sectors and that Māori and iwi play an increasingly key role in New Zealand's and Auckland's economies (New Zealand Treasury, 2014a).

The New Zealand Institute of Economic Research (NZIER) defines the Māori economy in Auckland as an aggregation of three distinct aspects (NZIER, 2017):

- businesses that are owned and operated by Māori that supply identifiably Māori goods and services – tourism and entertainment are examples
- businesses that are owned and operated by Māori that supply other goods and services³³

³² Figure sourced from NZIER. (2017). *The Māori Economy of Tāmaki Makaurau*.

- Māori people working for any employer.

This provides a useful distinction between these separate elements. Irrespective of the precise parameters of the Māori economy, supporting all three of these elements is critical for further Māori economic development.

Both nationally and in Auckland the Māori economy is significant (Nana, Khan & Schulz, 2015). Auckland is a major player with 27 per cent of the Māori economy operating in Auckland and 55 per cent of the national Māori asset base in Auckland (NZIER, 2015). From 2013 to 2015 the Auckland Māori economy as defined by NZIER has also grown year on year. Figure 21 summarises this growth.

Figure 21 Summary of Auckland Māori economy growth³⁴

Measure	Measure	2013	2014	2015	2013-15 Growth
Production	GDP (\$m)	3,682	3,891	4,202	14%
	% annual growth		6%	8%	
	GDP/capita	21,683	22,917	24,744	14%
	% annual growth		6%	8%	
Expenditure	GDP (\$m)	3,971	4,152	4,267	7%
	% annual growth		5%	3%	
	GDP/capita	23,387	24,455	25,132	7%
	% annual growth		5%	3%	

There is an opportunity for Māori and Auckland to leverage off this growth to develop a more productive economic sector and better outcomes for Māori. One way to build on this growth is through the Treaty of Waitangi settlements.

The Crown is the primary Treaty of Waitangi partner responsible for the Treaty relationship, but councils also have statutory responsibilities to engage with Māori and to recognise the Treaty. Apart from Auckland Council's statutory responsibilities, there is an increasing understanding that meaningful engagement and partnership between the council and iwi can result in more informed decision-making, more streamlined processes, and better quality outcomes (Local Government New Zealand, 2007).

³³ As stated by the NZIER, based on the classification system Statistics New Zealand uses, Māori businesses can be divided into two types: Māori authorities and other Māori-owned businesses. NZIER states, "Māori authorities are entities, and their subsidiaries, that receive, manage or administer assets held in common ownership by Māori. Other Māori business are businesses that their owner identifies as a Māori business, are not a Māori authority and are not owned by another enterprise. Either of these types of business can use Māori cultural capital."

³⁴ Figure sourced from NZIER. (2017). *The Māori Economy of Tāmaki Makaurau*.

Treaty of Waitangi settlements, return of land, and having the first right to purchase Crown properties the Crown might wish to dispose of at a further date can benefit Māori broadly and play a significant part in advancing the Auckland Māori economy.

Treaty settlements provide specific cultural redress to iwi to enhance their kaitiaki responsibilities. They establish the return of physical access to their heritage such as maunga, harbours and other Crown properties. There is statutory protection for areas of particular significance to iwi as well as action to correct and rename areas to accurately reflect that tribal heritage. All of these further enable iwi and hapu identity to grow for generations to come while re-building a robust asset base.

3.11.2 Māori business

There is not a singular model for all Māori businesses, but they do have a number of similarities. Māori businesses' vision and values are strong drivers of the business (Te Puni Kōkiri, 2006). Māori organisations have an interest in commercial and cultural success. Economic success is only one aspect of a larger agenda that pursues a quadruple bottom line of cultural, social and environmental objectives for the individual and the collective (Westpac, 2016). They also tend to take a long-term view of business and are prepared to forego short-term gains to provide security for future generations (NZIER, 2017).

Taking an intergenerational view may constrain the use of assets. In strict economic terms, an asset's value can only be realised if the business is able to leverage additional funds (which is sometimes slow and difficult in a collective with multiple owners) or if the asset is sold. For Māori the value of an asset is not strictly financial. Instead the value of an asset is inherent or is in its ability to generate higher incomes, more jobs and improved wellbeing for iwi, hapu and whānau (Te Puni Kōkiri, 2013). This whānau-centric approach, which may be restrictive in one way, is also one of the factors contributing to Māori business' success.

Māori businesses with a te ao Māori approach are focussed on building long-term commercial relationships where there is an emphasis on mutual benefits into the future (NZIER, 2017). This approach aligns well with the growing international desire for authentic products and services (Llopis, 2014). Additionally, a te ao Māori business approach often includes environmentally sustainable and responsible business practice (Spiller et al., 2011) that resonates with global audiences who are increasingly interested in sustainable economic development. This provides an opportunity for Māori to lead their own economic development and use their unique identity, business approach and values to create strong global relationships and increase social, economic and cultural outcomes for whānau. One potent example of Māori organisations maximising their unique cultural identity is in the biggest export sector in New Zealand, the international tourism sector (NZIER, 2017).

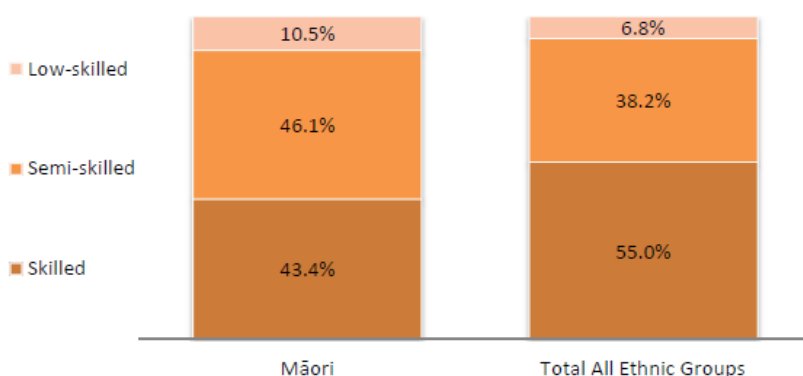
However, Māori are engaged across a mix of industries and have traditionally had disproportionately higher engagement in primary sectors (e.g. agriculture, mining,

constructions, transport and warehousing) (NZIER, 2015). More collaboration between Māori businesses and collectives for joint outcomes could create opportunities to scale up and capture more of the supply chain. For example, those involved in farming could get involved in marketing and distribution at the higher end of the value chain, creating greater benefits in incomes and financial returns (Westpac, 2016). Greater intentional collaboration can also create opportunities for collectives to network, share ideas and further develop management and governance capability (Te Puni Kōkiri, 2006).

In addition to Māori working together, further support of partnership approaches between iwi, government, local government, the public and the private sector will help boost economic returns for all players. Building partnerships with Māori to enable mutual financial goals to be met is valuable, but also building partnerships for co-management and co-governance of natural resources can develop wider outcomes that contribute to Māori economic aspirations. Mana whenua participation in co-management and co-governance of natural resources creates more effective resource management and honours the council's Treaty responsibilities.

This collective organising needs to go hand in hand with increasing education attainment for individuals. As stated above Māori tend to have lower level qualifications and are more likely to have no qualifications. Māori are also still more often in semi-skilled and low-skilled occupations (see Figure 22). In September 2015, the biggest employers of Māori in Auckland were the construction (7,700 workers), manufacturing (6,800 workers) and health care and social assistance (6,500 workers) industries (MBIE, 2015a).

Figure 22 Employment by skill level in Auckland in September 2015³⁵



Māori are also less likely to be business owners (whether a sole trader or a larger business) compared to the rest of the Auckland population. In 2015, Māori made up approximately 10 per cent of Aucklanders, but only accounted for four per cent and five per cent of employers and sole-traders respectively (NZIER, 2015).

³⁵ Figure sourced from Ministry of Business, Innovation and Employment (MBIE). (2015). *Māori in the labour market*. <http://www.mbie.govt.nz/info-services/employment-skills/labour-market-reports/maori-labour-market/maori-in-the-labour-market-report/maori-in-the-labour-market-2010-2015>

Low education and skill levels make finding work difficult and make Māori particularly vulnerable to changes in the economic environment (e.g. the global financial crisis) or disruption to industries (e.g. increased automation affecting low skilled roles). Educational institutions and businesses need to work together to provide more opportunities for students to gain real world experience through-out their education (Westpac, 2016). Additionally, among a range of empowering education options, rangatahi need more opportunities to participate in STEM programmes to prepare them for the more digitally-focussed economy of the future. Good, culturally responsive formal education (Ministry of Education, 2018) coupled with lifelong learning and training opportunities are essential for Māori to accelerate success and lead their own economic development.

4 Stakeholder feedback

An essential part of developing the Auckland Plan was engagement with key partners, stakeholders and the communities of Auckland. The purpose of early engagement in rounds 1 and 2 was to provide opportunities for early input into the direction of the plan before formal consultation in phase 3. The summary of feedback presented below relates to the three phases of engagement that informed development of the Auckland Plan 2050.

4.1 Round one: Early engagement

The first round of engagement took place between May and June 2017. This engagement sought feedback on the proposed working model for the Auckland Plan 2050. This helped test whether the identified challenges and proposed direction of the plan were valid and whether the refresh was focusing in the right areas. There were several strategic themes containing three to five areas of focus with key potential priorities. Three key questions were asked:

- are we focussing on the right things to be successful?
- do the areas of focus within the themes provide the right direction?
- are the themes a good way to respond to the challenges and opportunities Auckland faces?

Within the proposed working model the issues that were eventually drawn into the Opportunity and Prosperity outcome centred on the themes of education, skill development, the economy and employment. The feedback received on the 'Skills and Jobs' theme, as the Opportunity and Prosperity outcome was then known, is outlined below.

Table 4 Early Engagement: Skills and Jobs Feedback themes and key points

Building a resilient economy and workforce

- Auckland needs to attract and retain talent
- Need adaptable skills to meet the changing economy and type of jobs in the future
- Should bring the world to Auckland through tourism and investments
- Auckland needs a diversified economy with a strong focus on innovation
- Auckland needs to strengthen connections within New Zealand and to the world
- Need to raise productivity despite the majority of the workforce being employed by SMEs

Increasing participation in workforce

- Need clear pathways for education/training for employment
- Need to reduce the number of those Not in Education, Employment or Training (NEET)
- Need affordable housing and transport options for people to get to their jobs

Access to local jobs

- Need to provide local jobs for local people
-

Increasing participation and achievement in education and opportunities for lifelong learning

- Life-long learning is more than just academic knowledge but includes life skills that are needed for employment and long-term wellbeing
- Need to address barriers to higher achievement and increasing disparities across Auckland

Influences that are affecting education and employment outcomes

- Need to address rising household costs. High housing costs mean people need to move around for schools and jobs and that reduces achievements
- Need to address the mismatch between current skill sets and changing jobs
- Need to manage the displacement of jobs caused through technological change

Services supporting education and employment

- Need to be partnerships and alignment of approach between key stakeholders (i.e. Central government, private sector, education institutions, etc.)
- Need to provide better support for disadvantaged groups

Example of how feedback informed content of the high level strategic framework:

Feedback: The impact of technology on the future of skills and jobs will impact parts of business sectors and society differently. Those better skilled to adapt to change will have advantages over less technically literate people which could lead to growing inequality.

Action: This feedback led to the development of the focus area that centred on harnessing emerging technologies and ensuring equitable access to high quality digital services. This was moved from the 'access and connectivity' outcome to 'Opportunity and Prosperity' to emphasise its importance in this area.

4.2 Round two: Targeted engagement

The second round of engagement took place between July and October 2017. This phase sought feedback at a more technical, detailed level on the proposed strategic framework and high-level areas of the Development Strategy. Engagement material included summary information on each outcome area, and a proposed set of strategic directions and focus areas for each of the six outcome areas together with summary information. This included a bullet pointed summary of key potential content and possible measures. The feedback received is outlined in

Table 5 below.

Over both rounds of engagement there were over 300 discrete items of feedback received about the Opportunity and Prosperity theme from engagement with 105 stakeholders and partners. Appendix A has a list of stakeholders and partners engaged.

Table 5 Targeted Engagement: Opportunity and Prosperity feedback and responses

Summary of feedback by theme	Summary of response to feedback
Economic/business environment, social enterprise and entrepreneurs	
<ul style="list-style-type: none"> Discussion regarding New Zealand's lack of business sophistication, poor innovation and technological readiness. 	<ul style="list-style-type: none"> Accepted in part – sophistication of the business sector in specific reference to the World Economic Forum Competitiveness Report has been included under Direction 1.
<ul style="list-style-type: none"> Greater emphasis needed on fostering research and development for innovation and supporting entrepreneurs. 	<ul style="list-style-type: none"> Accepted in part - referenced in the focus area narrative.
<ul style="list-style-type: none"> Discussion on the need to further support entrepreneurs, social enterprises and local business. In particular, the government and council could use their size and scale to drive this change (e.g. through their own procurement practice). Auckland Council has to walk the talk in terms of how we maximise our development and investment to support the economy. 	<ul style="list-style-type: none"> Accepted in part - Entrepreneurs and social enterprise have been included in the narrative of Direction 1 and focus area 2. Entrepreneurship is further identified as a focus of The Southern Initiative. It emphasises grass roots entrepreneurship.
Local jobs for local people	
<ul style="list-style-type: none"> Positive support for multiple centres that will enable agglomeration in the city centre and employment in business centres that will allow for local jobs for local people. 	<ul style="list-style-type: none"> No further action required - This concept is already included in the narrative. Discussion of the circular economy under the Environment and Cultural Heritage outcome picks up the concept of enduring benefits derived from local start ups.
<ul style="list-style-type: none"> There should be an emphasis on Manukau and other centres as they grow and define themselves as areas of excellence – for example, education hub, airport, and food technology. 	<ul style="list-style-type: none"> No further action required - The Development Strategy's multi-nodal approach identifies the role and importance of Manukau.
Internet access and digital literacy	
<ul style="list-style-type: none"> Internet access and digital literacy is critical for business, education and personal development, and it has to be accessible across Auckland. 	<ul style="list-style-type: none"> Accepted - Concept included in the introductory narrative, Directions 2 and 3, and focus areas 1, 3 and 5 as well as supporting information.
Arts and culture and creative sector	
<ul style="list-style-type: none"> The vibrancy of the city is what attracts and retains people. Discussion on the need to enhance the cultural opportunities and grow arts and culture opportunities in the city. Note there are good metrics in Richard Florida's work on this issue. 	<ul style="list-style-type: none"> Accepted - Included in the narrative. Mirrored by several other pieces of feedback. Has been referenced in a direction under this outcome.

Summary of feedback by theme	Summary of response to feedback
<ul style="list-style-type: none"> • “The Arts” are part of the city’s “outreach economy”, and understood as an output component or export commodity of the city supporting and helping to project Auckland’s internationally competitive reputation. • The large economic impact of the creative sector and of arts and culture is not mentioned. This is a driver of GDP growth and a huge contributor to the tourism sector. 	<ul style="list-style-type: none"> • Accepted – A hyperlink to Toi Whītiki Arts and Culture Strategic Action Plan has been included in the Opportunity and Prosperity outcome to support this detailed understanding of the arts benefits to the economy. • Accepted in part – the creative sector has been referenced as an important industry in focus area 4. The level of the sector’s impact has not been referenced.
Increase productivity and raise wages	
<ul style="list-style-type: none"> • Need to increase productivity and raise wages simultaneously, while growing local talent developing skills in world class education institutions. 	<ul style="list-style-type: none"> • No further action needed – the societal impacts of education are already included throughout the outcome and particularly in focus area 5.
Lifelong learning	
<ul style="list-style-type: none"> • Education is not only about economic imperatives. It creates cultural capital such as tolerance and social cohesion. There is a place for knowledge for knowledge’s sake 	<ul style="list-style-type: none"> • No further action needed – already included in the outcome.
<ul style="list-style-type: none"> • Support the focus area relating to lifelong learning and training but concerned about the implied restriction to only supporting training in “new and emerging areas”. 	<ul style="list-style-type: none"> • Accepted - removed “new and emerging areas” in the title of the focus area
<ul style="list-style-type: none"> • There should be separate, distinct emphasis in the narrative on ‘supporting the acquisitions of soft/life skills’ and ‘opportunities for informal learning’. 	<ul style="list-style-type: none"> • Accepted in part - “Informal learning opportunities” has been added to the narrative in addition to building soft skills.
<ul style="list-style-type: none"> • Soft skills have never been more important, such as emotional intelligence, the ability to work in teams, and think critically. 	<ul style="list-style-type: none"> • Accepted - Included in the narrative. Also more detailed supporting information on ‘soft skills’ has been added.
<ul style="list-style-type: none"> • There needs to be more explicit emphasis on retraining throughout life and developing adaptability skills, especially for those aged 50+ years. This needs to be about lifelong employability, the needs of which may change at different phases of life. 	<ul style="list-style-type: none"> • Accepted in part - Life-long learning and skill development and re-training is already included in the narrative.
<ul style="list-style-type: none"> • Skills and jobs – support for the focus on providing meaningful jobs to rangatahi; “Don’t give us zero hour contracts and jobs at McDonalds”. 	<ul style="list-style-type: none"> • Accepted in part - Added the concept of “meaningful opportunities” for employment in focus area 5.
<ul style="list-style-type: none"> • Lifelong learning happens in major facilities (stadium, galleries, museums) and small community facilities. These facilities need to be supported. 	<ul style="list-style-type: none"> • Accepted in part – This level of detail regarding the important role of major facilities in providing a space for a range of activities, including learning has been covered in the Belonging and Participation outcome, focus area 2. Support for these facilities has been covered in the Development Strategy.

Summary of feedback by theme	Summary of response to feedback
<ul style="list-style-type: none"> In addition to giving priority to future proofing youth education and training to align with a digital future, recognise the need for youth training that addresses current housing development needs and future proof our workforce for further housing development demands over the next 30 years. <hr/> <ul style="list-style-type: none"> Support equitable access as the first action under the Focus Area “harness emerging technologies and ensure equitable access to high quality digital data”. Strongly support the actions under the focus area for advancing opportunities for Māori, particularly rangatahi, to gain necessary skills, education and training. Support preparing the future workforce for the job displacement that will come about due to digital/virtual technology. Endorse lifelong learning focus particularly and the overall emphasis of education both formal and non-formal in the jobs and skills work stream. 	<ul style="list-style-type: none"> Accepted in part - The narrative in the outcome reflects the variety of skills required in the future (including a reference to construction sector skills). The skills required will change over time. <hr/> <ul style="list-style-type: none"> No further action needed - these four points are covered in the general narrative, or the relevant focus area or direction.
Tertiary institution placement	
<ul style="list-style-type: none"> The physical strategic placement of tertiary institutions is critical for the future and to ensure that hubs around Auckland can be accessed easily. There needs to be recognition that Manukau is fast becoming a prominent education destination. 	<ul style="list-style-type: none"> Accepted in part - Existing tertiary institutions are included in the Development Strategy maps. Locations for future placement are not included. Accepted in part - Covered through the multi-nodal development approach. The Development Strategy’s multi-nodal approach identifies the role and importance of Manukau, including its education role.
Business and employment growth	
<ul style="list-style-type: none"> Suggested amendment to this strategic direction: Create the conditions for <u>business and employment growth</u>, innovation, raised productivity and a resilient economy. This amendment ensures the strategic direction encompasses the critical issues of business and employment growth. The strategic directions otherwise emphasise the individual rather than business and businesses. This amendment also strengthens the link to business land. 	<ul style="list-style-type: none"> Accepted - “<u>employment growth</u>” added to the direction.

Summary of feedback by theme	Summary of response to feedback
Regulatory and other mechanisms	
<ul style="list-style-type: none"> Changing nature of jobs. 	<ul style="list-style-type: none"> Accepted - This is reinforced by the direction and focus area on life-long learning.
<ul style="list-style-type: none"> Developing local skills. 	<ul style="list-style-type: none"> Accepted - We will develop local skills and attract skills from abroad.
<ul style="list-style-type: none"> General comment: lack of reference to Pasifika. 	<ul style="list-style-type: none"> Accepted - Strengthened in the context sections of the plan with more detailed supporting information included.
<ul style="list-style-type: none"> Lifting productivity – macro policies required 	<ul style="list-style-type: none"> Accepted - No change required – reference has been made in the narrative.
<ul style="list-style-type: none"> Legislative changes – Areas that require central government interventions such as, apprenticeships, and free drivers licences. 	<ul style="list-style-type: none"> Accepted in part - Noted – this forms part of the implementation of the plan.
<ul style="list-style-type: none"> Flexible work/school hours – some staggering of start times to jobs and schools would smooth travel and infrastructure issues. 	<ul style="list-style-type: none"> Out of scope of the Auckland Plan - however this is not at a level of Auckland Plan direction.
<ul style="list-style-type: none"> Foreign fee paying students as a means of generating revenue and cultural exchange. 	<ul style="list-style-type: none"> Out of scope of the Auckland Plan.
Leverage Auckland’s position to support growth in exports for an internationally competitive New Zealand economy	
<ul style="list-style-type: none"> Upgrading basic infrastructure such as walkways and cycle ways, roads and access to ports and airports will support freight movement, export growth and tourism activity in rural areas. 	<ul style="list-style-type: none"> Accepted in part - Infrastructure provision is covered through the Access and Connectivity outcome. Addressed through the Development Strategy.
<ul style="list-style-type: none"> Installing innovative technology such as high-speed internet access, cell phone and wifi services and encouraging local services will enable rural communities and businesses to participate fully in the New Zealand economy. 	<ul style="list-style-type: none"> Accepted in part - Specific reference to the need for expansion of high speed connectivity to rural areas has been made in focus area narrative.
<ul style="list-style-type: none"> Include reference to the rural economy and the role of rural settlements within the region. 	<ul style="list-style-type: none"> No change required - The rural sector is considered part of the broader economy. Also addressed specifically in the Development Strategy. Also covered in the outcome context section.
Māori economic development	
<ul style="list-style-type: none"> Digital sector employment, social labs/hubs within marae, digital marae and digital pa to be included. 	<ul style="list-style-type: none"> Accepted in part - this detailed feedback is more operational in nature. However, the overall concept of digital sector employment and supporting the uptake of digital opportunities has been added to the narrative.

Summary of feedback by theme	Summary of response to feedback
<ul style="list-style-type: none"> The education system is failing current Māori and will continue to worsen unless things change. Note the importance of developing rangatahi skills as they have lower qualifications and employment levels and are a large, growing proportion of young people in Auckland. 	<ul style="list-style-type: none"> Accepted - The plan recognises the need for change and focus on rangatahi. Mentioned in focus area 4 and in supporting information on educational achievement.
<ul style="list-style-type: none"> There is still strong construction growth predicted for the short to medium term that provides an opportunity for Māori to develop industry related skills. 	<ul style="list-style-type: none"> Accepted in part - Narrative does not present an either-or scenario. The narrative in the outcome reflects the variety of skills required in the future (including a reference to construction sector skills).
<ul style="list-style-type: none"> Specific Māori employment strategies raising employment figures and work readiness. Notes the importance of the Māori economy and developing a culture of partnership and shared effort: what opportunities to share resource for shared outcomes? Reciprocal relationship between the environment and Māori. There are a number of factors that limit opportunity for Māori economic advancement such as housing, access to educational opportunities and poverty that need to be addressed for Māori to succeed. 	<ul style="list-style-type: none"> Accept in part – No specific strategies have been identified as this is more of an operational matter. However, raising Māori employment and essential skills has been referenced in focus area 4. No further action needed - these three points are covered in the outcome narrative and focus area 4. Points also covered in Homes and Places and Māori Identity and Wellbeing outcomes.
Affordability	
<ul style="list-style-type: none"> Unaffordability of Auckland is impacting on attracting and retaining talent. 	<ul style="list-style-type: none"> Accepted – issues identified in the plan. Increasing cost of living and housing specifically referenced as an impediment to attracting talent Homes and Places provides comment on the loss of core workers such as teachers as part of direction 3.
Inter-regional and international connections	
<ul style="list-style-type: none"> Cross boundary & inter-regional connections – inter-relationships with neighbouring regions, implications for win-wins, deeper labour pools. 	<ul style="list-style-type: none"> Accepted - This is covered in the context section of the plan and through a minor addition to the Opportunity and Prosperity direction narrative. It is also addressed in Transport and Access which includes a focus on targeted new transport investment to the most significant challenges including improving Auckland's inter-regional connections.

Summary of feedback by theme	Summary of response to feedback
<ul style="list-style-type: none"> Disruption – impact on jobs on changing technology, emphasis on flexibility. 	<ul style="list-style-type: none"> Accepted - This is addressed in the context of the outcome.
<ul style="list-style-type: none"> Growth of exports in particular location to growing Asian markets. 	<ul style="list-style-type: none"> Accepted - Reference to the tripartite agreement between Auckland, Los Angeles and Guangzhou; and increased sales of protein to Asia. Specific reference in introductory paragraph to growing Asian economy.
Rural	
<ul style="list-style-type: none"> Enhance the ability of rural production areas to increase production, employment and exports while sustaining their natural environment. Enhance the ability for rural areas to benefit from tourism, heritage and outdoor recreation opportunities. 	<ul style="list-style-type: none"> Accepted in part - Addressed through the Development Strategy. Rural production and the rural economy are addressed specifically.
Measures specific to the Opportunity and Prosperity outcome	
<ul style="list-style-type: none"> The measure "median wage of Māori and the Auckland median wage" may need some clarification. 	<ul style="list-style-type: none"> Accepted - A measure of the Auckland median wage that will be broken down by ethnicity.
<ul style="list-style-type: none"> More beneficial to measure internet usage instead of internet access. Suggested ultra-fast broadband access, rather than internet access. 	<ul style="list-style-type: none"> Accepted - Will investigate if data collection can be commissioned.
<ul style="list-style-type: none"> Possible measures for consideration: Percentage of people aged 15-24 years who are not in employment. Rural production – exports, and businesses. Tourism in rural and heritage areas. Elite and prime soils in production. Pay equality. 	<ul style="list-style-type: none"> Accepted in part - There are challenges around measurability of suggested measures. Suggestions will be considered for inclusion in set of secondary measures as part of the broader measurement framework. Accepted in part - Retention of elite soils to be considered through environmental monitoring. Accepted in part - Data gathered through median wage will enable analysis of pay equality to be undertaken.
<ul style="list-style-type: none"> Unclear where there is any benefit to measure NZQF level 4 or if NCEA level 3 is just as useful. 	<ul style="list-style-type: none"> Accepted in part - Further research to be undertaken on measure. Note correction: <u>NCEA</u> level 4 should read <u>NZQF</u> level 4.

4.3 Summary on feedback – rounds one and two

The overarching principle of creating a more resilient economy through innovation and raising productivity was supported by all stakeholders. Directions 2 and 3, which support that principle through attracting and retaining the necessary skills and investment alongside developing local skills and talent, were also supported.

Feedback received focussed primarily on adding content or detail across the outcome. Due to the plan being more streamlined and focussed this was not possible as some

suggestions were not at the appropriate level or were out of scope. Where appropriate the addition of a word or sentence was added to convey the necessary principle or concept.

4.4 Public consultation

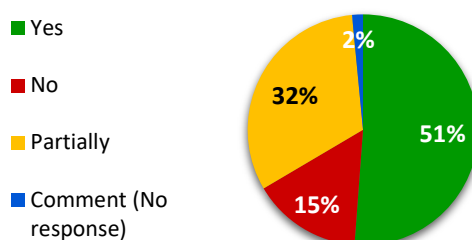
Auckland Council's Planning Committee approved the draft Auckland Plan 2050 for consultation on 28 November 2017. Formal consultation on the draft plan took place from 28 February to 28 March 2018, alongside the council's draft 10-year Budget. The material to support consultation was available online and in libraries, service centres and local board offices. It included a combined Auckland Plan 2050 and 10-year Budget consultation document, the draft Auckland Plan website (the digital plan), an overview document with translations, and full print versions of the whole draft plan. Feedback was provided in writing (including via an online feedback form), in person (over 50 Have Your Say events) and via social media.

The consultation document contained the following statement and question on the Opportunity and Prosperity outcome:

Rapid technology advances will create challenges, opportunities and change across many industries and jobs. The Auckland Plan proposes Aucklanders will need to adapt to the coming changes by investing in education, training and skills development for all.

Do you think the five focus areas identified in Opportunity and Prosperity will achieve this?

There were 14,279 written submissions on the Opportunity and Prosperity outcome. Of these, 49 per cent agreed with the focus areas, 33 per cent partially agreed, 16 per cent did not agree, and 2 per cent provided commentary but did not tick one of the yes/no/partial boxes.



In addition to the written submissions, there were 885 feedback points from 'Have Your Say' events:

Yes	16%
No	5%
Partial	7%
Provided comment but did not indicate yes, no or partial	72%

Below are the key feedback themes and our response:

Skills and training	<p>Feedback</p> <ul style="list-style-type: none"> • Supports need for ongoing skills and training. • Large number of comments about value of apprenticeships and training in core services and trades. <p><i>Response</i></p> <ul style="list-style-type: none"> • Add text to emphasise importance of education-to-work pathways: trades training, apprenticeships and retraining options.
Education	<p>Feedback</p> <ul style="list-style-type: none"> • Support for focus on good quality educational infrastructure where it is needed as the city develops. • Support for better collaboration between business and education providers so learners of all levels have appropriate and relevant skills for work. <p><i>Response</i></p> <ul style="list-style-type: none"> • Add text to support provision of appropriate education infrastructure. • No other change – feedback is consistent with the text.
Employment	<p>Feedback</p> <ul style="list-style-type: none"> • Large number of comments on the need to raise employment levels for all Aucklanders, both low and high skilled workers. • Some feedback on the need to support better employment outcomes for those who struggle to find good quality employment. <p><i>Response</i></p> <ul style="list-style-type: none"> • Add text about the role all sectors have to play in creating a system-wide approach to lifting employment for all Aucklanders.
Creative sector	<p>Feedback</p> <ul style="list-style-type: none"> • Large number of comments seeking more prominence of the creative sector and emphasis on its contribution in terms of economic benefit, the nurturing of future innovation and entrepreneurship, and attracting, retaining and developing talent. <p><i>Response</i></p> <ul style="list-style-type: none"> • Add text to emphasise value of arts and culture as an attractor, and its contribution to innovation and growth of the creative sector, and its capacity to create a vibrant city.

<p>Local jobs for local people</p>	<p>Feedback</p> <ul style="list-style-type: none"> • Large number of submitters wanted to see more local jobs in their local areas. Feedback included that spreading job growth more evenly across Auckland would help raise opportunities in areas of low employment, take pressure off parts of transport and broader infrastructure networks, and reduce housing costs. <p><i>Response</i></p> <ul style="list-style-type: none"> • Further reference to how the multi-nodal approach of the Development Strategy will enable better access to jobs. Text added linking local board initiatives to local economic development.
<p>Focus on Māori</p>	<p>Feedback</p> <ul style="list-style-type: none"> • Large number of comments that preferential treatment was being shown to Māori. • Some considered it excluded others who are experiencing poor social and economic outcomes and in need of employment support. • Questions on how Māori economic success benefits all of Auckland and the broader economy. • Other comments recognised international value Māori culture brings as a unique point of difference. • Reference to ‘investment’ was perceived as council directly funding Māori employment, wages and business. <p><i>Response</i></p> <ul style="list-style-type: none"> • Further emphasise focus on raising employment levels for all Aucklanders. • Add text to create a direct reference to maintaining a partnership approach between council and iwi. • Add text on how Māori culture creates a unique economic advantage in Auckland that benefits all Aucklanders. • Remove the word “investment” as it may imply a commitment of council funds.
<p>Cybersecurity</p>	<p>Feedback</p> <ul style="list-style-type: none"> • Comments on cyber-risk and privacy associated with moving towards a more digitised economy. <p><i>Response</i></p> <ul style="list-style-type: none"> • Make specific reference to importance of cybersecurity.
<p>Green economy</p>	<p>Feedback</p> <ul style="list-style-type: none"> • Large number of comments on need for economy that reduces environmental risk, acknowledges finite nature of resources and sustainable development. <p><i>Response</i></p> <ul style="list-style-type: none"> • Text added to explain benefits of green economy. Link to supporting information under Environment and Cultural Heritage outcome.

<p>Growth through immigration</p>	<p>Feedback</p> <ul style="list-style-type: none"> • Large number of submitters considered negative impacts of growth from immigration outweighed benefits. • Suggested immigration be slowed until Auckland overcame some of the issues such as housing shortages, traffic congestion and high unemployment amongst certain demographics. <p><i>Response</i></p> <ul style="list-style-type: none"> • No change. The need to maintain quality of life for all Aucklanders while attracting the necessary talent is already considered in the plan.
--	---

4.5 Discussion of all feedback

There was a strong push for greater emphasis on creating local jobs for local people. The Development Strategy provides business the flexibility to locate in areas across the region through its multi-nodal approach which is supported by improved access and connectivity. The Opportunity and Prosperity outcome supports that approach. The city-centre will remain the economic heart of Auckland but Albany, Manukau, and Westgate are all identified as areas to be serviced and able to grow as business determines.

The need for supporting infrastructure and business land required for business is addressed primarily through the Development Strategy. Internet access and digital services was separated out into focus area one because it was identified as valuable to business, to the digital economy of the future and for education and skills development.

Feedback in the two rounds of engagement included the need to highlight local employment opportunities. Content was therefore added to emphasise the importance of small scale local economic development in addition to the overall approach. Local boards' contribution to local economic development through their local board plans was also acknowledged.

Specific sectors of the economy such as 'rural' and the 'arts' sought greater emphasis in the plan. The challenge for the Opportunity and Prosperity outcome was that the broader non-economic benefits of these sectors were out of scope. That said, further content was added with a link to the Toi Whītiki Arts and Culture Strategic Action Plan highlighting the importance of the arts in creating an attractive and vibrant city which will foster and draw in talent. Furthermore, content was added to stress the contribution the creative sector makes to growing innovation in other sectors and the creative capacity of Aucklanders.

Emphasis on the rural sector economy was addressed through the Development Strategy.

The increased uncertainty across society in general due to the unknown scale and rate of change has created a growing awareness of the need for personal resilience and adaptability.

This has extended beyond the domain of the workplace and transcends all parts of society including those most vulnerable such as the disabled community. In response to feedback there has been further clarification of the groups who regularly and disproportionately experience poor employment outcomes and further emphasis on supporting our most vulnerable to achieve positive employment outcomes.

As stated previously in this evidence report life-long learning, re-training, trades training and soft skill development was identified as necessary for responding to future technological disruption and has become a new and prominent theme since the 2012 Auckland Plan. There was feedback in the public consultation that education and training is the primary vehicle for lifting employment opportunities but needs to be understood within a systems-wide approach to lifting employment outcomes where private, public and non-profit sectors all play a role.

In both engagement rounds, feedback on focus area 3, “Advance Māori employment and support Māori business and iwi organisations to be significant drivers in Auckland’s economy” raised a number of relevant issues covered outside of this outcome. In particular issues such as poor housing and poor health act as a significant barrier to economic success. Underachieving in formal education and the impact of this as a barrier to achieving future prosperity was already recognised in the outcome. However, to respond to this feedback, greater emphasis has been placed on rangatahi achieving positive educational outcomes in focus areas 3 and 5.

In the public consultation, the focus on advancing Māori employment and business as a means of driving Auckland's economy received the most feedback and was perceived by submitters as favouring Māori over other Aucklanders. Fundamentally, there was a lack of understanding of the council’s statutory responsibilities towards Māori and the benefits for all Aucklanders in supporting Māori economic development. To mitigate this, there was the addition of some text to make these benefits clearer and the addition of references through-out to make explicit the focus on increasing employment outcomes for all Aucklanders.

There were a few minor themes that also were addressed through the addition of some text, including concerns about cybersecurity, supporting the green economy and the provision of education infrastructure.

5 Conclusion

5.1 How the strategic framework responds to the evidence and feedback

This section explains how the evidence and feedback provided earlier in this report have shaped the Opportunity and Prosperity section of the plan's Strategic Framework. The framework comprises directions that identify how the Auckland Plan 2050 will achieve the Opportunity and Prosperity outcome and focus areas that identify how this will be done.

Table 6 Opportunity and Prosperity Strategic Framework (December 2017)

Opportunity and Prosperity Strategic Framework	
Direction	Focus Area
Direction 1 Create the conditions for a resilient economy through innovation, employment growth and raised productivity	Focus Area 1 Harness emerging technologies and ensure equitable access to high quality digital data and services
Direction 2 Attract and retain skills, talent and investment	Focus Area 2 Ensure regulatory planning and other mechanisms support business, innovation and productivity growth
Direction 3 Develop skills and talent for the changing nature of work and lifelong achievement	Focus Area 3 Advance Māori employment and enable Māori business and iwi organisations to be significant drivers of Auckland's economy
	Focus Area 4 Leverage Auckland's position to support growth in exports
	Focus Area 5 Increase educational achievement, lifelong learning and training, with a focus on those most in need

Direction 1

Create the conditions for a resilient economy through innovation, employment growth and raised productivity

Productivity is fundamental to lifting living standards and creating a more resilient economy. The pursuit of increased productivity through innovation is likely to have both positive and negative impacts on existing labour markets.

The predicted job losses across various industries, professions and groups in society through automation and artificial intelligence may or may not be off-set by job growth brought about through innovation and new business models. How Auckland grows and connects its population both physically and digitally can help offset in part the negative impacts of change as access to opportunity is less constrained by immediate spatial proximity.

The flexible supply of business land supported by effective infrastructure (digital, transport, port/airport, etc.) and access to talented labour pools will help to set the foundation for a more resilient economy.

Direction 1 acknowledges the uncertainty and risk of not striving for a more resilient economy that can be internationally competitive, and able to anticipate and capitalise on future opportunities that will arise out of technological disruption.

Lifting productivity, promoting innovation and raising employment will help to ensure all Aucklanders can benefit from Auckland's increased prosperity.

Direction 2

Attract and retain skills, talent and investment

Auckland is relatively small when compared to other global cities and therefore in order to compete the city has to widen its talent and skills pool and have access to sufficient investment capital.

Because Auckland shares a number of common attributes with other global cities its attractiveness as a destination of choice cannot be based on any single point of difference. Auckland's unique offer is based on the sum of its parts such as Māori identity, population diversity, Pacific connections and a beautiful, natural environment, plus a thriving arts and cultural scene.

New Zealand's regulatory settings, international reputation as relatively free from corruption and a good place to do business makes it a good place for foreign investment.

Direction 2 acknowledges the potential gaps and obstacles Auckland needs to overcome to compete globally and also considers areas of comparative advantage that should be protected and/or enhanced.

Direction 3

Develop skills and talent for the changing nature of work and lifelong achievement

Technological disruption will generate opportunities and challenges in the future workplace, requiring different business models and changes for the workforce. As Auckland's population continues to grow, this larger population base can drive the future economy if they are supported well. To keep pace with the changing world, Aucklanders

need equitable access to a high-quality education system including early childhood education, formal education, tertiary education, training, re-training, informal and lifelong learning opportunities.

Direction 3 is a key pillar of the Opportunity and Prosperity outcome. It recognises that any positive employment journey begins with quality education inspiring an appetite to continue learning throughout life. This direction acknowledges the lifelong nature of learning, particularly the increasing requirement for a range of re-training and up-skilling options delivered on-the job and by tertiary and vocational institutions. This will provide opportunities for Aucklanders to develop the right skills at the right time. This direction seeks to deliver an Auckland that has skilled people ready to contend with a rapidly changing world and that steadily improves socio-economic outcomes for everyone.

Focus Area 1

Harness emerging technologies and ensure equitable access to high quality digital data and services

In this fast-changing world of technological advances, Auckland's economy needs to take advantage of new technology to ensure it is not left behind on the global stage. Adopting new technologies, new business practices and increasing research and development, will assist Auckland in keeping pace and potentially lifting overall productivity.

Since the 2012 Auckland Plan, access to high quality digital data and broadband services has become fundamental to both the individual and to businesses, enabling business success and better participation in the learning environment. Although Auckland is one of the regions with a high proportion of households connected to the internet, there is still a minority who do not have good access or the necessary disposable income to stay connected. In a highly digital future, this will need to be addressed to provide equitable opportunities for everyone.

Focus area 1 recognises the need to further develop high quality digital infrastructure across the region, support business to innovate and adopt new technologies as appropriate, and support individuals to achieve both equitable access to the internet and a good level of digital literacy to make the best use of the emerging technology. To support this over the long term, there is also an emphasis on skill development to prepare people to embrace technological change (e.g. more STEM skill development), and the development of safe, secure and resilient digital systems.

Focus Area 2

Ensure regulatory planning and other mechanisms support business, innovation and productivity growth

Economic growth in general is dependent upon multiple factors and forces beyond the control of councils and the government. Understanding the drivers of innovation and increased productivity enables regulators and planners to remove unnecessary barriers and impediments to doing business.

Innovation needs a business-friendly, supportive environment. It requires strong connections between individuals and organisations in developing new and improved products, services, processes and markets.

Focus Area 2 identifies that tangible mechanisms such as the supply of core-infrastructure, business land, access to universities and research institutes all contribute to creating a supportive business environment. Less immediately tangible mechanisms that foster and promote avenues for business growth such as the arts, that add value to the complex economic mix and help generate creativity and innovation, are also explored in the focus area.

It is important that the regulatory environment functions in the interests of doing business as well as for the broader outcomes of Auckland Plan 2050.

Focus Area 3

Advance Māori employment and enable Māori business and iwi organisations to be significant drivers of Auckland's economy

Any prosperity for Auckland will include robust prosperity for Māori Aucklanders. The growing young Māori population will have an increasingly important role in the labour force and in developing opportunities for Māori economic growth. To harness the great potential of this youthful population, disparities in education and employment outcomes that Māori experience must be eliminated. Only in an inclusive and equitable society that honours Auckland's foundational commitment to the Treaty of Waitangi will all Aucklanders thrive.

Focus area 3 is dedicated to increasing employment and positive economic outcomes for Māori. This includes supporting a Māori way of doing business with a focus on commercial success that meets a quadruple bottom line, aligns with Māori values and supports the wider Māori business ecosystem. This focus area also takes into account the current outcome disparities and the young growing Māori population by articulating the need to boost rangatahi participation and achievement in education and training.

Focus Area 4

Leverage Auckland's position to support growth in exports

To compete on the global stage Auckland must have a global offer. Larger markets can increase the viability of products that are otherwise not sustainable at a local level as the scope and opportunity for specialised production and economies of scale increases as well as serving as a catalyst for innovation.

Focus area 4 explores the changing global economic landscape and how this can impact and present opportunities for Auckland.

The growth of e-commerce has meant that physical distance to markets is no longer as significant a barrier to business growth and increases localised opportunities for some of Auckland's highly skilled-worked force.

Auckland's physical proximity to growing markets around the Pacific provides new consumers for Auckland's growing sectors in tourism, food and beverage, marine, screen and creative industries and other productive industries. Growth in these industries coupled with Auckland's port and international airport makes Auckland the key gateway city of New Zealand.

Focus Area 5

Increase educational achievement, lifelong learning and training, with a focus on those most in need

Focus area 5 recognises the need for good education, training and lifelong learning. In this section, there is acknowledgement that positive learning in the first five years of life is critical for success. Formal and informal education and training is essential for economic success throughout life. The need to develop skills, whether they are digital skills, literacy, numeracy, entrepreneurial skills or the creativity to innovate, is explicitly outlined in this focus areas and woven through-out focus areas 1, 2 and 3.

There is a high value in people building a balanced set of cognitive, social and emotional skills. This is not only beneficial in the workplace, but also creates healthy, self-fulfilled individuals who can participate fully in society and thrive in their communities. This focus area seeks to create an environment where quality education, training and learning is the standard and leads to positive outcomes for everyone, while focusing on significantly lifting outcomes for those most in need (i.e. those who continuously experience poor education and employment outcomes such as Māori and Pasifika people).

References

- Allpress, J. A. (2013). *The labour market and skills in Auckland*. Auckland Council technical report, TR2013/005. Auckland: Auckland Council. Available at [http://www.knowledgeauckland.org.nz/assets/publications/Labour market and skills in Auckland.pdf](http://www.knowledgeauckland.org.nz/assets/publications/Labour%20market%20and%20skills%20in%20Auckland.pdf)
- ATEED. (2016). *Auckland's innovation economy* http://innovation.aucklandnz.com/#research_development [Accessed 14 February 2018]
- ATEED. (2017). *Auckland growth monitor: A snapshot into Auckland's economy and place on the world stage*. Auckland: Auckland Tourism, Events and Economic Development. Available at https://www.aucklandnz.com/sites/build_auckland/files/media-library/documents/AucklandGrowthMonitor.pdf
- ATEED. (2018a). Skills and Talent: Auckland's workforce broken down by broad skill level (%) per annum from 2000-2016. <https://www.aucklandnz.com/auckland-index/people> [Accessed 8 February 2017]
- ATEED. (2018b). *Circular economy: A new dynamic for Auckland businesses*. Auckland: Auckland Tourism, Events and Economic Development. Available at https://www.aucklandnz.com/sites/build_auckland/files/media-library/documents/ATEED-economic-insight-paper-Circular-economy-final.pdf
- Auckland Council. (2012a). *The Auckland Plan*. Auckland: Auckland Council. Available at <https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/Pages/auckland-plan.aspx>
- Auckland Council. (2012b). *Auckland's Economic Development Strategy 2012-2022*. Auckland: Auckland Council. Available at <http://temp.aucklandcouncil.govt.nz/EN/planspoliciesprojects/plansstrategies/theaucklandplan/economicdevelopmentstrategy/Pages/home.aspx>
- Auckland Council. (2013). *The Southern Initiative area profile - Initial results from the 2013 Census*. Auckland: Auckland Council. Available at <http://temp.aucklandcouncil.govt.nz/EN/planspoliciesprojects/reports/Documents/southerninitiativeaareaprofile2013census.pdf>
- Auckland Council. (2016). *Auckland Plan Targets: Monitoring Report 2016, November*, Technical Report 2016/042. Available at <http://temp.aucklandcouncil.govt.nz/SiteCollectionDocuments/aboutcouncil/planspoliciespublications/technicalpublications/tr2016042aucklandplantargetsmonitoringreport2016.pdf>

Auckland Council. (2017a). *Auckland regional household labour force survey: Quarterly overview – September 2017*. Auckland: Auckland Council. Available at <http://knowledgeauckland.org.nz/assets/publications/Auckland-HLFS-09September-2017.pdf>

Auckland Council. (2017b). *I Am Auckland Status Report 2017*. Auckland: Auckland Council. Available at <http://temp.aucklandcouncil.govt.nz/EN/planspoliciesprojects/plansstrategies/Councilstrategies/Documents/iamaucklandstatusreport.pdf>

BOP Consulting. (2015). *World Cities Culture Report 2015*. BOP Consulting has prepared this report for World Cities Culture Forum. Available at http://www.worldcitiescultureforum.com/assets/others/WCCF_Report_D2.pdf

Boven, D., Carter, N. and Smutz, M. (2012). *Fuelling our economy, proposed skills agenda, Auckland workforce skills from the employers' perspective*. Auckland: Committee for Auckland. Available at <http://stakeholderstrategies.co.nz/wp-content/uploads/fuelling-our-economy.pdf>

Canon, M. and Marifian, E. (2013). *Job polarization leaves middle-skilled workers out in the cold*. St. Louis: The Regional Economist. Available at https://www.stlouisfed.org/~media/Files/PDFs/publications/pub_assets/pdf/re/2013/a/employment.pdf

Coletta, C. (2008). *Fostering the creative city*. Report written for The Wallace Foundation. New York City: The Wallace Foundation. Available at <http://www.forwardcities.org/wp-content/uploads/2018/04/Fostering-the-Creative-City-.pdf>

Centre for Social Impact. (2015). *A Strategic review of early years investment*. Auckland: NEXT Foundation & Foundation North. Available at <https://d2lpg680qjnw8a.cloudfront.net/1002/2015-07-31-strategic-review-of-early-years-investment-2306151.pdf>

Centre for the Developing Child. (2007). *The science of early childhood development: Closing the gap between what we know and what we do*. Cambridge: National Scientific Council on the Developing Child. Available at http://46y5eh11fhgw3ve3ytpwxt9r.wpengine.netdna-cdn.com/wp-content/uploads/2015/05/Science_Early_Childhood_Development.pdf

Conway, P. (2016). *Achieving New Zealand's productivity potential: Research paper 2016/1*. New Zealand Productivity Commission. Wellington: New Zealand Productivity Commission. Available at <https://www.productivity.govt.nz/research-paper/achieving-new-zealands-productivity-potential>

Crothers, C., Smith, P., Urale, P. and Bell, A. (2016). *The internet in New Zealand 2015*. Auckland: Auckland University of Technology. Available at

https://workresearch.aut.ac.nz/_data/assets/pdf_file/0003/71328/WIPNZ-Report-060515.pdf

Cultural Learning Alliance. (2011). *Key research findings: The case for cultural learning*. London: Cultural Learning Alliance. Available at

http://www.creativenz.govt.nz/assets/ckeditor/attachments/1315/the_case_for_cultural_learning_key_research_findings_2011.pdf

Deming, D. J. (2017). *The growing importance of social skills in the labor market*. Cambridge: Harvard University. Available at

https://scholar.harvard.edu/files/ddeming/files/deming_socialskills_aug16.pdf

Economic and Social Research Council. (2014). *The wellbeing effect of education*. Swindon: Economic and Social Research Council. Available at

<http://www.esrc.ac.uk/files/news-events-and-publications/evidence-briefings/the-wellbeing-effect-of-education/>

Ellen MacArthur Foundation. (2018). *What is a circular economy?*

<https://www.ellenmacarthurfoundation.org/circular-economy> [Accessed: 14/06/2018]

European Political Strategy Centre. (2016). *The future of work: Skills and resilience for a world of change*. European Political Strategy Centre. Available at

http://ec.europa.eu/epsc/sites/epsc/files/strategic_note_issue_13.pdf

Florida, R. (2018). *How Culture Shapes Economic Development*.

<https://www.citylab.com/life/2018/06/how-culture-shapes-economic-development/562328/> [Accessed: 14/06/2018]

Grodach, C., Foster, N. & Murdoch III, J. (2014). Gentrification and the Artistic Dividend: The Role of the Arts in Neighborhood Change. *Journal of the American Planning Association*. 80 (1), pages 21-35, Available at

<https://www.tandfonline.com/doi/full/10.1080/01944363.2014.928584?src=recsys>

Hays. (2017). *Hays Global Skills Index 2017: New Zealand*. Available at <http://www.hays-index.com/wp-content/uploads/2017/09/Hays-GSI-2017-New-Zealand.pdf>

Heckman, J. and Kautz, T. (2012). Hard evidence on soft skills. *Labour Economics*. 19(4), 451–464. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3612993/>

Heckman, J. (2008) Schools, Skills and Synapses. *Economic Inquiry*. Vol. 46(3), pages 289-324. Available at <http://www.nber.org/papers/w14064>

Holt, N., Tamminen, K., Tink, L., & Black, D. (2009). An interpretive analysis of life skills associated with sport participation. *Journal Qualitative Research in Sport and Exercise*. Vol 1, 160-175. Available at

<http://www.tandfonline.com/doi/abs/10.1080/19398440902909017>

IEEE Spectrum / Nordrum, A. (18 August 2016) *Popular internet of things forecast of 50 billion devices by 2020 Is outdated*. Available at

<https://spectrum.ieee.org/tech-talk/telecom/internet/popular-internet-of-things-forecast-of-50-billion-devices-by-2020-is-outdated> [Accessed 15 November 2017]

Infometrics. (2017). *Productivity in Auckland*.

Available at <https://ecoprofile.infometrics.co.nz/Auckland/Productivity>

Kolt, G., Schofield, G., Schofield, L., McLachlan, C., Svendsen, C., Mackay, L. (2006). *Best Practice Review of Sport and Physical Activity Interventions for Young People Aged 13-18 Years – Report to Sport and Recreation New Zealand (Vol. 1 & 2)*. Auckland, New Zealand: Auckland University of Technology.

Local Government New Zealand. (2007). Frequently Asked Questions on Council- Māori engagement: A resource to support councils. Available at

<http://www.lgnz.co.nz/assets/Uploads/Our-work/CME-FAQs-Maori.pdf>

Llopis, G. (2014). *Consumers Are No Longer Brand Loyal*. 10 December 2014.

<https://www.forbes.com/sites/glennllopis/2014/12/10/consumers-are-no-longer-brand-loyal/#28459ae72ae0> [Accessed 4 December 2017]

Lysnar, P., Tuatagaloa, P. and Joynt, J. L. R. (2016). Māori and housing in Tāmaki Makaurau: a stocktake of issues, experiences and initiatives. Auckland Council technical report, TR2016/026. Available at

<http://knowledgeauckland.org.nz/assets/publications/TR2016-026-Maori-and-housing-in-Tamaki-Makaurau.pdf>

McKinsey Center for Business and Environment. (2016). The circular economy: Moving from theory to practice. McKinsey & Company. Available at <https://www.mckinsey.com/~media/McKinsey/Business%20Functions/Sustainability%20and%20Resource%20Productivity/Our%20Insights/The%20circular%20economy%20Moving%20from%20theory%20to%20practice/The%20circular%20economy%20Moving%20from%20theory%20to%20practice.ashx>

McKinsey Global Institute. (2015). *The internet of things: mapping the value beyond the hype*. Available at

<https://www.mckinsey.com/~media/McKinsey/Business%20Functions/McKinsey%20Digital/Our%20Insights/The%20Internet%20of%20Things%20The%20value%20of%20digitizing%20the%20physical%20world/The-Internet-of-things-Mapping-the-value-beyond-the-hype.ashx>

McKinsey Global Institute. (2017). *A future that works: automation, employment and productivity, executive summary*. Available at

<https://www.mckinsey.com/~media/McKinsey/Global%20Themes/Digital%20Disruption/Harnessing%20automation%20for%20a%20future%20that%20works/MGI-A-future-that-works-Executive-summary.ashx>

Ministry of Business, Innovation and Employment (MBIE). (2015a). *Māori in the labour market*. Wellington: MBIE. Available at <http://www.mbie.govt.nz/info-services/employment-skills/labour-market-reports/maori-labour-market/maori-in-the-labour-market-report/maori-in-the-labour-market-2010-2015>

Ministry of Business, Innovation and Employment (MBIE). (2008). *New Faces, New Futures*. Wellington: MBIE. Available at <http://www.mbie.govt.nz/publications-research/research/migrants---settlement/Chapter1IntroductiontotheLongitudinalImmigrationSurveyNewZealand.pdf>

Ministry of Business, Innovation and Employment (MBIE). (2015b). *Regional Economic Activity Report*. Wellington: MBIE. Available at <http://www.mbie.govt.nz/info-services/business/business-growth-agenda/regions/documents-image-library/rear-2015/min-a003-rear-report-lr-optimised.pdf>

Ministry of Business, Innovation and Employment (MBIE). (2017). *Jobs Online Monthly Report – October 2017*. Wellington: MBIE. Available at <http://www.mbie.govt.nz/info-services/employment-skills/labour-market-reports/jobs-online/document-image-library/jobs-online-oct-2017/jobs-online-oct-17.pdf>

Ministry of Education. (2016). *More children in early childhood education*. <http://www.education.govt.nz/ministry-of-education/government-education-initiatives/better-public-services/more-children-in-early-childhood-education/> [Accessed 26 January 2018]

Ministry of Education. (2017). *Profile & Trends 2015: Tertiary Education Outcomes and Qualification Completions*. Wellington: Ministry of Education. Available at http://www.educationcounts.govt.nz/_data/assets/pdf_file/0011/174467/2015-pt-outcomes-completions-final.pdf

Ministry of Education. (2018). *Maori*. <https://www.education.govt.nz/quick-links/maori/> [Accessed 4 December 2017]

Mitchell, L.; Wylie, C.; & Carr, M. (2008). *Outcomes of early childhood education: Literature Review*. Report prepared for the Ministry of Education. Wellington: Ministry of Education. Available at http://www.nzcer.org.nz/system/files/885_Outcomes.pdf

Morgan, S. (2017). *2017 Cybercrime Report: Cybercrime damages will cost the world \$6 trillion annually by 2021*. Report from Cybersecurity Ventures sponsored by Herjavec Group. Available at <https://cybersecurityventures.com/2015-wp/wp-content/uploads/2017/10/2017-Cybercrime-Report.pdf>

Nana, G., Khan, M. and Schulze, H. (2015). *Te Ohanga Māori 2013; Māori economy report 2013*. BERL has prepared this report for Te Puni Kōkiri. Wellington: Te Puni Kōkiri. Available at <https://www.tpk.govt.nz/en/a-matou-mohiotanga/business-and-economics/Māori-economy-report-2013>

National Cyber Policy Office. (2018). *Refresh of New Zealand's Cyber Security Strategy and Action Plan (to Cabinet External Relations and Security Committee)*. A document released by the Department of the Prime Minister and Cabinet relating to the refresh of New Zealand's Cyber Security Strategy and Action Plan. Available at <https://www.dpmc.govt.nz/our-business-units/security-and-intelligence-group/national-cyber-policy-office>

National Library. (2017). *Why digital literacy matters*. <https://natlib.govt.nz/schools/digital-literacy/understanding-digital-literacy/why-digital-literacy-matters> [Accessed: 19 January 2018]

National Research Council. (2012). *Key National Education Indicators: Workshop Summary*. A workshop hosted by the Steering Committee on Key National Education Indicators, A. Beatty and J.A. Koenig, Rapporteurs. Washington, DC: The National Academies Press. Available at <https://www.nap.edu/read/13453/chapter/1>

New Zealand Treasury. (2008). *Putting Productivity First*. Available at <http://www.treasury.govt.nz/publications/research-policy/tprp/08-01/tprp08-01.pdf> [accessed: 16/11/2017]

New Zealand Treasury. (2013a). *Education Key to Economic Growth and Equity*. <http://www.treasury.govt.nz/economy/education> [Accessed 26 January 2018]

New Zealand Treasury. (2013b). *Living Standards Background Note: 'Increasing Equity'*. Wellington: New Zealand Treasury. Available at <https://treasury.govt.nz/sites/default/files/2017-12/hls-bq-equity-dec15.pdf>

New Zealand Treasury. (2014a). *The Māori Economy*. <http://www.treasury.govt.nz/economy/maorieconomy> [Accessed: 13 February 2018]

New Zealand Treasury. (2014b) *Holding on and letting go – Opportunities and challenges for New Zealand's economic performance, A perspective from the Treasury*. Available at <http://www.treasury.govt.nz/publications/briefings/holding-on-letting-go>

Norgrove, A. and Scott, D. (2017). *How does New Zealand's education system compare? OECD's Education at a Glance 2017*. Wellington: Ministry of Education. Available at http://www.educationcounts.govt.nz/_data/assets/pdf_file/0006/182535/Education-at-a-Glance-2017-New-Zealand-Summary-Report.pdf

NZ Talent. (2017). *NZ Talent, Educate for the future – an open letter from New Zealand businesses*. <https://nztalent.org/> [Accessed 31 October 2017]

NZIER. (2015). *The Auckland Māori Economy: Size, issues and opportunities*. Wellington: Independent Māori Statutory Authority.

NZIER. (2016). *Auckland's advanced industries – Contribution to the Auckland Economy*, NZIER report to ATEED July 2016, Available upon request from Auckland Tourism, Events & Economic Development

NZIER. (2017). *The Māori Economy of Tāmaki Makaurau*. Wellington: Independent Māori Statutory Authority.

OECD. (2013a). *OECD Economic Surveys: New Zealand*. Paris: OECD Publishing. Available at http://dx.doi.org/10.1787/eco_surveys-nzl-2013-en

OECD. (2013b). *What are the social benefits of education?, Education indicators in focus*, No. 10, Paris: OECD Publishing. Available at <http://dx.doi.org/10.1787/5k4ddxn139vk-en>

OECD. (2015). *Skills for Social Progress: The Power of Social and Emotional Skills*. Paris: OECD Publishing. Available at <http://www.oecd.org/edu/skills-for-social-progress-9789264226159-en.htm>

OECD. (2016a). *Education at a glance 2016: OECD indicators*. Paris: OECD Publishing. Available at http://www.oecd-ilibrary.org/education/education-at-a-glance-2016_eag-2016-en

OECD. (2016b). *New Zealand – Country note – Skills matter: Further results from the survey of adult skills*. Paris: OECD Publishing. Available at <http://www.knowledgeauckland.org.nz/assets/publications/Skills-matter-NZ-OECD-June-2016.pdf>

OECD. (2017a). *Getting Skills Right: Skills for Jobs Indicators*. Paris: OECD Publishing. Available at <http://dx.doi.org/10.1787/9789264277878-en>

OECD. (2017b). *OECD Economic Surveys: New Zealand 2017*. Paris: OECD Publishing. Available at http://www.keepeek.com/Digital-Asset-Management/oecd/economics/oecd-economic-surveys-new-zealand-2017_eco_surveys-nzl-2017-en#

OECD. (2017c). *OECD Skills Outlook 2017: Skills and Global Value Chains*. Paris: OECD Publishing. Available at <http://dx.doi.org/10.1787/9789264273351-en>

Paterson, D., Brown, S. and Davies, D. (2010). *Labour force participation in New Zealand: Recent trends, future scenarios and the impact on economic growth*. Department of Labour. Available at <https://ojs.victoria.ac.nz/LEW/article/download/1719/1562>

Reid, A. (2017). *Older Aucklanders: A quality of life status report*. Auckland Council technical report, TR2017/014. Available at <http://www.knowledgeauckland.org.nz/assets/publications/TR2017-014-Older-Aucklanders-quality-of-life-status-report.pdf>

Reid, A. and Rootham, E. (2016). *A profile of children and young people in Auckland*. Auckland Council technical report, TR2016/022. Available at <http://temp.aucklandcouncil.govt.nz/SiteCollectionDocuments/aboutcouncil/planspoliciespublications/technicalpublications/tr2016022profilechildrenyoungpeopleauckland.pdf>

RIMU. (2014). *The Southern Initiative: A Snapshot*. Auckland Council report prepared for the Chief Executive's Office. <http://knowledgeauckland.org.nz/assets/publications/TSI-the-southern-initiative-a-snapshot.pdf>

Salvation Army. (2017). *Off the track: State of the nation report*. Auckland: The Salvation Army Social Policy and Parliamentary Unit. Available at <http://www.knowledgeauckland.org.nz/assets/publications/Off-the-track-Sal-Army-State-of-Nation-2017.pdf>

Wolbring, G. 2016. Employment, disabled people and robots: What is the narrative in the academic literature and Canadian newspapers? *Societies*, 6, 15. Available at <http://www.mdpi.com/2075-4698/6/2/15>

Spiller, C., Pio, E., Erakovic, L. and Henare, M. (2011). *Wise Up: Creating Organizational Wisdom Through an Ethic of Kaitiakitanga*. *Journal of Business Ethics*, vol. 104, issue 2, 104: 223. Available at <https://doi.org/10.1007/s10551-011-0905-y>

Statistics New Zealand. (2012). *Household Use of Information and Communication Technology: 2012*
http://archive.stats.govt.nz/browse_for_stats/industry_sectors/information_technology_and_communications/HouseholdUseofICT_HOTP2012/Commentary.aspx [Accessed: 16 November 2017]

Statistics New Zealand. (2015). *National Labour Force Projections: 2015(base)–2068*.
http://m.stats.govt.nz/browse_for_stats/population/estimates_and_projections/NationalLabourForceProjections_HOTP15-68.aspx [Accessed: 16 November 2017]

Statistics New Zealand. (2017). *Subnational Population Projections: 2013(base)–2043 update*. Available at
http://archive.stats.govt.nz/browse_for_stats/population/estimates_and_projections/subnational-population-projections-info-releases.aspx

Statistics New Zealand and New Zealand Treasury (2010). *Taking on the West Island: How does New Zealand's labour productivity stack up?* Wellington: Statistics New Zealand and New Zealand Treasury. Available at <http://www.treasury.govt.nz/publications/research-policy/tprp/10-01/tprp10-01.pdf>

Te Puni Kōkiri. (2006). *Hei Whakamārama i ngā Āhuetanga o te Tūrua Pō - Investigating Key Māori Business Characteristics for Future Measures: Thinking Paper* FOMANA CAPITAL has prepared this report for Te Puni Kōkiri. Available at <https://www.tpk.govt.nz/en/a-matou-mohiotanga/business-and-economics/investigating-key-Māori-business-characteristics>

Te Puni Kōkiri. (2010). *The Māori Economy*. Wellington: Te Puni Kōkiri. Available at <http://www.tpk.govt.nz/en/a-matou-mohiotanga/business-and-economics/the-Māori-economy>

The Committee for Auckland. (2012) *Fuelling our economy: Auckland workforce skills from the Employers' perspective*. Available at http://knowledgeauckland.org.nz/assets/publications/Fuelling_our_economy_Auckland_workforce_skills_from_the_employers_perspective.pdf

The Economist Intelligence Unit. (2014a). *The learning curve: Education for skills and life*. Pearson. Available at <http://thelearningcurve.pearson.com/reports/the-learning-curve-report-2014>,

The Economist Intelligence Unit. (2014b). *What's Next: Future Global Trends Affecting Your Organization: Evolution of Work and the Worker*. SHRM Foundation. Available at <https://www.shrm.org/foundation/ourwork/initiatives/preparing-for-future-hr-trends/PublishingImages/Pages/Evolution-of-Work/2-14%20Theme%201%20Paper-FINAL%20for%20Web.pdf>

The European Political Strategy Centre. (2016). *Strategic note 13: The Future of Work Skills and Resilience for a World of Change*. Available at http://ec.europa.eu/epsc/sites/epsc/files/strategic_note_issue_13.pdf

UN Convention on the Rights of the Child Monitoring Group. (2017). *Getting it right: The children's convention in Aotearoa*. Office of the Children's Commissioner. Available at <http://www.occ.org.nz/publications/reports/getting-it-right-nov-2017/>

UNESCO. (2012). *Rationale: General education quality analysis / diagnosis framework*. <http://www.ibe.unesco.org/en/geqaf/introduction/background/rationale> [Accessed: 20/11/2017]

UNESCO. (2017). *Sustainable Development Goal 4 and its targets*. <https://en.unesco.org/node/265600> [Accessed: 20/11/2017]

UN Environment. (2018). *What is an "Inclusive Green Economy"?* <https://www.unenvironment.org/explore-topics/green-economy/why-does-green-economy-matter/what-inclusive-green-economy> [Accessed: 14/06/2018]

U.S. Bureau of Labor Statistics. (2016). *Employment Projections: 2016–26 Summary*. Washington, D.C.: U.S. Department of Labour. Available at <https://www.bls.gov/news.release/pdf/ecopro.pdf>

Westpac. (2016). *Industry Insights: Māori in the NZ Economy*. <https://www.westpac.co.nz/assets/Business/Economic-Updates/2016/Bulletins-2016/Industry-Insights-Maori-in-the-NZ-Economy-September-2016.pdf> [Accessed: 4 December 2017]

Wilson, R., Reid, A. and Bishop, C. (2016). *Auckland Plan targets: monitoring report 2015 with data for the Southern Initiative area*. Auckland Council technical report, TR2016/007. Auckland: Auckland Council. Available at <http://temp.aucklandcouncil.govt.nz/SiteCollectionDocuments/aboutcouncil/planspoliciespublications/technicalpublications/tr2016007aucklandplantargetsmonitoringrpt2015.pdf>

Wisconsin Council on Children and Families. (2007). *Brain Development: The Early Years*. Madison: Kids Forward. Available at <http://files.eric.ed.gov/fulltext/ED526797.pdf>

World Economic Forum. (2015). *New Vision for Education: Unlocking the Potential of Technology*. Prepared in collaboration with The Boston Consulting Group. Geneva: World Economic Forum. Available at http://www3.weforum.org/docs/WEFUSA_NewVisionforEducation_Report2015.pdf

World Economic Forum. (2016). *New Vision for Education: Fostering Social and Emotional Learning through Technology*. Prepared in collaboration with The Boston Consulting Group. Geneva: World Economic Forum. Available at

http://www3.weforum.org/docs/WEF_New_Vision_for_Education.pdf

World Economic Forum. (2016b) *The Future of Jobs, Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*. Available at

http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf

World Economic Forum. (2012), *The Global Competitiveness Report 2011-12*. Available at

http://www3.weforum.org/docs/WEF_GCR_Report_2011-12.pdf

World Economic Forum. (2017) *The Global Competitiveness Report, 2016 – 2017*.

Available at <http://www3.weforum.org/docs/GCR2016->

[2017/05FullReport/TheGlobalCompetitivenessReport2016-2017_FINAL.pdf](http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017_FINAL.pdf)

Wylie, C. and Hipkins, R. (2006). *Growing independence: Competent students at 14*. Wellington: Ministry of Education. Available at

<http://www.nzcer.org.nz/system/files/14601.pdf>

Appendix A

List of partners and stakeholders engaged between July and October 2017

Partner/Stakeholder Group	Partner/Stakeholder engaged
Central Government	
Independent Māori Statutory Board	
Council Controlled Organisations	Auckland Transport
	Auckland Tourism, Events and Economic Development
	COMET Auckland
	Regional Facilities Auckland
	Panuku Development Auckland
	Watercare
Mana Whenua	Ngāti Paoa Iwi Trust
	Ngāi Tai ki Tāmaki Tribal Trust
	Ngāti Tamaoho Trust
	Ngāti Tamaterā Treaty Settlement Trust
	Ngātiwai Trust
	Ngāti Whanaunga Incorporated
	Ngāti Whātua o Kaipara – Ngā Maunga Whakahii o Kaipara Development Trust
	Ngāti Whātua Ōrākei Whai Maia
	Te Ākitai Waiohū
	Te Ahiwaru – Makaurau Marae Trustees
	Te Ara Rangatū o Te Iwi o Ngāti Te Ata Waiohū Incorporated
	Te Kawerau a Maki – Te Kawerau Iwi Tribal Authority
	Te Patukirikiri
	Te Rūnanga o Ngāti Whātua
	Te Uri o Hau - Environs Holdings Limited
Mataawaka Organisations	Hāpai Te Hauora (The Salvation Army, Plunket, Toi Tangata, Auckland Regional Public Health Services, Te Whānau o Waipareira, The Cancer Society, and Problem Gambling Society)
	Te Ohu Mana Rangatahi
	Manukau Urban Māori Authority
	Te Ora o Manukau (Manurewa Marae, Papakura Marae, Te Roopu Waiora, Te Kaha O Te Rangatahi, Tāmaki Makaurau Māori Womens Welfare League, Raukura Hauora and Te Wananga O Awanuiarangi)
Advisory Panels	Demographic
	Disability Advisory Panel
	Ethnic Advisory Panel
	Pacific Peoples Advisory Panel
	Rainbow Communities Advisory Panel
	Seniors Advisory Panel
	Youth Advisory Panel
	Sector
	City Centre Advisory Board
	Heritage Advisory Panel
	Rural Advisory Panel
Infrastructure Sector	2 Degrees Mobile
	Auckland International Airport Limited
	Auckland Utilities Operations Group

Partner/Stakeholder Group	Partner/Stakeholder engaged
	Automobile Association Bike Auckland Chorus New Zealand Limited Counties Power Manukau First Gas Generation Zero Greater Auckland Living Streets Aotearoa Kiwi Rail Holdings National Road Carriers New Zealand Transport Agency Ports of Auckland Refining New Zealand Public Transport Users Association Road Transport Forum Spark Telecommunications Forum The Campaign for Better Transport Transpower Walk Auckland Wiri Oil Services Limited Vector Limited Vodafone
Private Sector	Chamber of Commerce Committee for Auckland Employers and Manufacturers Association Homes, Land and Community (HLC) formerly Hobsonville Land Company Infrastructure New Zealand Property Council New Zealand Retirement Villages Association Urban Design Forum
Non-profit sector	Community Housing Aotearoa New Zealand Housing Foundation Salvation Army Te Matapihi – He Tiro mō Te Iwi Trust
Professional member organisations and advocacy group	New Zealand Institute of Architects - Auckland Branch New Zealand Institute of Architects-Urban Issues Group New Zealand Planning Institute – Auckland Branch
Sector Groups	Advisory Panel for Art in Public Places Auckland City Centre Residents Group Auckland District Health Board Auckland Intersectorial Health Group Auckland Museum Environment Defence Society Forest and Bird Society Friends of Oakley Creek Friends of Regional Parks Geoscience Society of NZ Generation Zero

Partner/Stakeholder Group	Partner/Stakeholder engaged
	Gulf Islands Trust Group
	Heritage New Zealand
	Manukau Harbour Restoration Society
	OneVoice
	Sports NZ & Aktive Auckland
	St Lukes Environmental Protection Society
	Stop Auckland Sewage Overflows Coalition
	The Sustainability Society (IPENZ)
	Toi Whitiki Leadership group (Arts & Culture sector)
	UNITEC
	Western Rural Community
Neighbouring Councils	Upper North Island Strategic Alliance (technical officers and chief executives forum)
	Waikato District Council
	Waikato Regional Council

