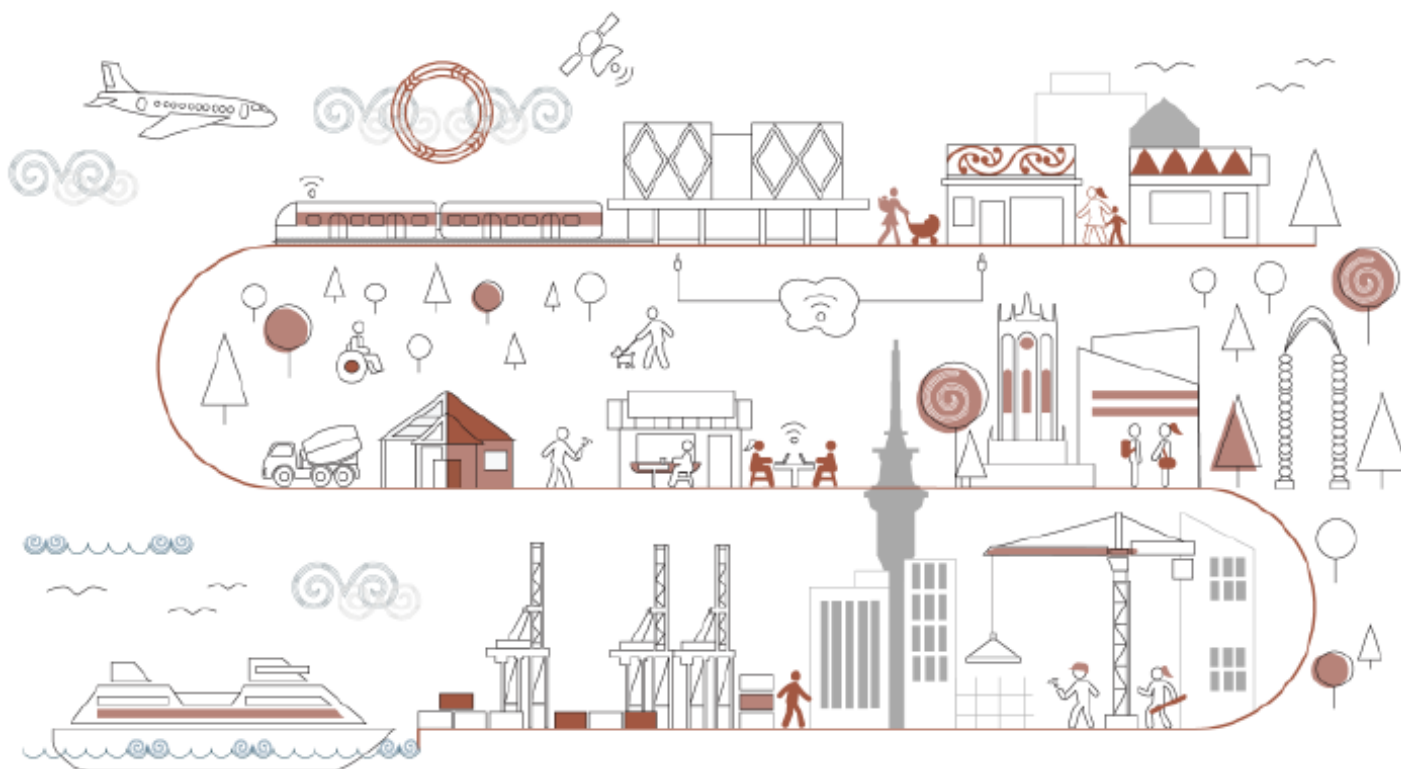


# Opportunity and Prosperity

Auckland is prosperous with many opportunities and delivers a better standard of living for everyone.

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



# Opportunity and Prosperity explained

Auckland's economy needs to be constantly agile and innovative. This is particularly important in an age of rapid technological change.

International connectivity is also critical to Auckland's economy and success. We must deliver products and services to markets across the globe in timely and sustainable ways.

In recent decades there has been an increase in Asia's prosperity. Auckland's proximity to Asia provides multiple opportunities for developing trade and economic engagement, as described on the Tripartite Economic Alliance page.

We also have immense potential in the growing numbers of young people living in Auckland who will need to play a significant role as future innovators and entrepreneurs within the economy.

## Disruption and a changing world

Technology is already disrupting business models, employment opportunities and consumer behaviour. The predicted scale of change is so great it has been described as the fourth industrial revolution.

This revolution will continue to alter both labour participation and productivity. The scale and rate of change, although difficult to quantify, will affect many industries in different ways and at different speeds.

Innovation among enterprises of all sizes can provide Auckland with the resilience to adapt in a rapidly changing world.

The potentially high-quality employment opportunities that come from innovation must however be connected across Auckland by good transport and digital networks.

Changes for individuals and organisations will be both positive and negative as new jobs are created and existing jobs disappear.

It is often predicted that automation will disproportionately affect low skilled jobs, yet recent developments in artificial intelligence indicate that jobs of all types and levels are likely to be affected.

Therefore, while some of the most vulnerable in society and those least able to adapt to change may be affected first, technological developments will affect everyone.

## Education, training and skills

To prepare Aucklanders for these shifts, we need to develop timely training and re-training opportunities. Targeted investment in education, training and skill development for all ages is vitally important.

Higher levels of literacy, numeracy, and other skills along with educational achievement allow for more people to participate in the economy, to find quality work and to raise their income levels.

Children and young people in particular need access to first-rate formal and informal education to set a solid foundation for development throughout their lives.

Having the right skills for the future requires everyone involved to work together to provide appropriate skill development in innovation areas. These include the creative and information technology sectors.

We must also fill skill gaps such as those in the construction sector and in core public services such as nursing and teaching.

Culture and practices need to change to ensure learning opportunities are available, starting in early childhood and extending throughout life, so that continuous learning becomes second nature.

This will provide people with the life skills they need to be fulfilled and to thrive in their families, communities and in their work.

## How we will measure progress

We will track progress against a set of measures.

The measures for this outcome are:

- labour productivity
- Aucklanders' average wages
- employment in advanced industries
- zoned industrial land
- level of unemployment
- use of internet in the home relative to income
- educational achievement of young people.

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

Auckland already has a strong economic sector. However, it has a strong focus on domestic consumption, and productivity levels are low.

Innovation and entrepreneurship will strengthen Auckland's economy in a globally competitive environment, enabling the economy to better meet the needs of our growing population.

Innovation is a means of lifting productivity that leads to increased wages and the creation of new jobs, even as existing ones disappear.

*See Map 6 - Jobs in advanced industries*

It is about new ideas and new ways of doing things in response to opportunities. In an economic sense, industry sectors, businesses and entrepreneurs innovate in a number of ways:

- introducing a new or improved product, service or process
- opening up a new market
- adopting a new technology
- changing the way they organise themselves.

The creative sector contributes to innovation and growth in other sectors as it generates creative capacity in business and services across Auckland as a whole.

For more on this, read the Creative Sector 2017: Industry Snapshot for Auckland<sup>226</sup>.

Innovative business practices and technological advances can create the economy of the future. Competitive entrepreneurial activity can drive economic progress, but to be truly successful Auckland needs sustainable prosperity that puts people and the environment at the centre of economic progress.

To do this we need a socially responsible and environmentally sustainable economy that enables increased profit, productivity, resilience and job growth. Such an economy reduces environmental risks, supports green technology and mitigates the potential impacts of growth and development.

The ability to innovate becomes even more important if Auckland is to compete globally. Creating the conditions for innovation, employment growth and raised productivity requires collaboration between all stakeholders, including our neighbouring regions.

A big factor in raising productivity is the sophistication of the business sector. Visit the World Economic Forum website, The Global Competitiveness Report 2016-2017.<sup>227</sup>

One of the other ways both productivity and resilience can be improved is through how we plan for business locations.

The city centre is expected to remain the primary business centre for Auckland. However, the Development Strategy's multi-nodal approach emphasises three other 'nodes' as major business assets.

These nodes will provide flexibility and choice for business across the region by providing business opportunities and business land in close proximity to deep labour pools with an interconnected transport network.

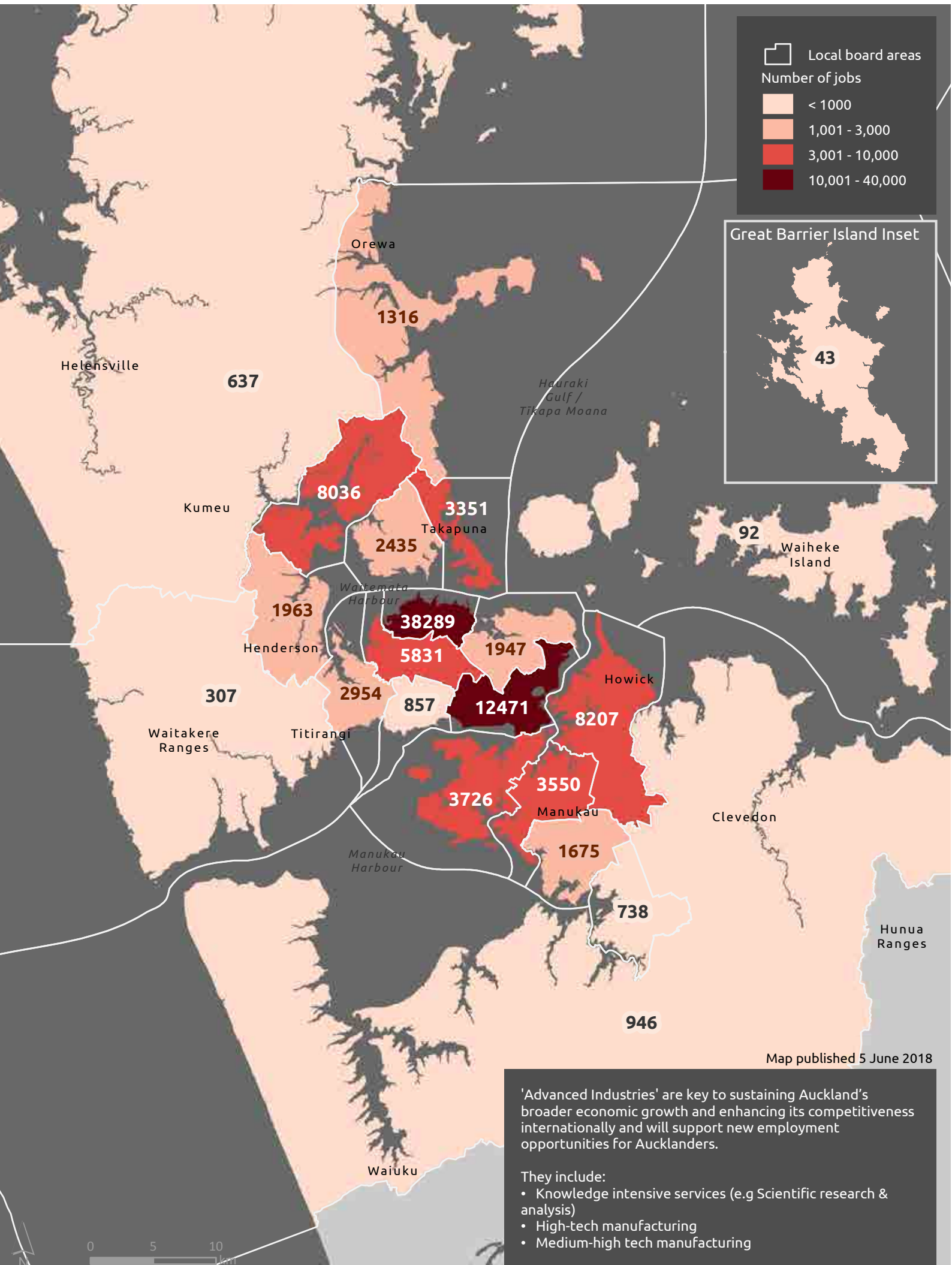
This has the potential to make more jobs and educational opportunities accessible to more people.

Though of a much smaller scale, job creation and economic performance is equally important at a local level. Initiatives to support this are often driven by local boards.

For more information read Local Board Plans<sup>228</sup>.

Businesses and entrepreneurs ultimately determine the levels of innovation. Central government, and to a lesser degree local government, need to ensure the regulatory environment is straightforward, flexible and responsive so firms can take advantage of emerging opportunities. Strategic alignment between local and central government policy is particularly important to create the conditions for enabling economic growth in Auckland.

Most importantly, Aucklanders need to be poised to take advantage of these conditions and be ready to participate in the economy as employers, as entrepreneurs, and as workers.



Map published 5 June 2018

'Advanced Industries' are key to sustaining Auckland's broader economic growth and enhancing its competitiveness internationally and will support new employment opportunities for Aucklanders.

They include:

- Knowledge intensive services (e.g Scientific research & analysis)
- High-tech manufacturing
- Medium-high tech manufacturing

# Attract and retain skills, talent, and investment

Auckland is competing globally for investment and talent. This is challenging given talented people are internationally mobile and actively sought after across the world.

The combination of our Māori identity, population diversity, Pacific connections and beautiful natural environment, creates a vibrancy and an authenticity that Aucklanders value and which attracts people from around the world.

A creative city rich in arts and culture also helps to attract people to Auckland and makes them want to stay. This results in a more vibrant city that delivers benefits which can be shared by all Aucklanders.

Read the Toi Whīteki Arts and Culture Strategic Action Plan for more information.<sup>229</sup>

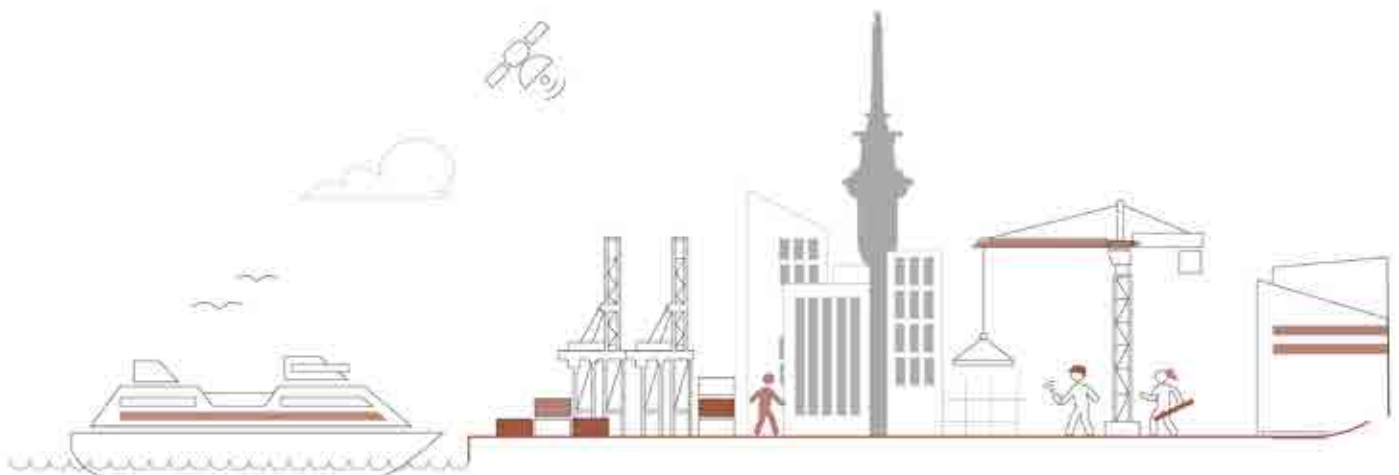
Growing awareness of Auckland's attractiveness as a dynamic cosmopolitan centre attracts talent, in particular young people with talent, to move and stay here. This will help to off-set the impacts of an ageing population and workforce.

A diverse, energetic and environmentally aware Auckland will continue to entice creative people with an entrepreneurial spirit who will lead innovation in the years to come.

As well as talent, Auckland needs to attract 'smart' capital, meaning capital that comes with associated skills, knowledge and capability. Access to smart capital helps to break down the barriers to growth that result from our size and distance from important markets.

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

However, we need to improve the cost of living, housing affordability, and infrastructure and connectivity – both physical and digital. This will create a better quality of life for existing residents and make Auckland a more internationally attractive business proposition.



Direction 3:

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

The way we work, and the skills that Auckland's economy requires, is constantly evolving. It is crucial that current and future workers have the relevant tools to succeed.

This means ensuring:

- our younger generations are equipped with the skills of the future
- our current working population is ready for change.

Rapid technology growth is changing the nature of work and the structure of workplaces, and the rate of this change is expected to increase.

Technological advances have created new jobs, for example, in robotics, the development of software applications, animation and fashion influencing, and have eliminated other jobs such as book keepers and machinists.

See Map 6 - Jobs in advanced industries

Technological changes generate opportunities and challenges, requiring different business models and changes for workers.

We may have more flexibility and be able to:

- work part-time
- work digitally or from home
- be self-employed or have multiple jobs.

It is important to ensure this does not occur at the expense of a decent standard of living.

To flourish in this changing economic landscape, Aucklanders will have to continuously increase their skills, retrain on the job and develop throughout their lives.

We have to strengthen systems and opportunities to enable this continuous learning. Business, industry, and unions have important roles in proactively supporting their workforce to retrain and develop.

Industry and the education sector will need to work even more closely together to be responsive to this changing environment and to create opportunities for people to develop the right skills at the right time.

All sectors have a role to play. We need to create a system-wide approach that lifts employment for all Aucklanders across the spectrum of low to high skilled roles.

Workplaces need to build more flexible cultures that attract and best utilise the talents of older workers, younger workers and everyone in between. Greater emphasis needs to be given to those who experience sustained poor employment outcomes such as disabled Aucklanders. As technology becomes faster,

Figure 31 - Jobs in the US from 1980 – 2012 requiring social skills and math skills. Data for this chart was sourced from The World Economic Forum (2016). New vision for education: fostering social and emotional learning through technology<sup>230</sup>



more affordable and accessible, it will enable more employment opportunities for people of all abilities.

Over the next 30 years, it can be assumed that many current jobs will be automated, or replaced by artificial intelligence, and there will be new jobs requiring new skills. In future, soft and creative skills are likely to become more valuable than at present.

*See Figure 31 - Jobs in the US from 1980 – 2012 requiring social skills and math skills .*

Learning and developing skills do more than improve labour market outcomes; they improve many socio-economic outcomes for individuals and families. By building soft skills and creative and technical skills, as well as general knowledge, throughout our lives, Aucklanders will develop the resilience necessary to meet this changing future.

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

The rapid rate of change and disruption that will occur in businesses means that Auckland's economy is vulnerable if it fails to adopt new technologies and innovate accordingly.

Adopting new technologies and business practices is also a way to create a much needed lift in productivity.

Auckland is well positioned to take advantage of opportunities presented through technology as it:

- has a relatively high-skilled labour market
- has strong educational institutions
- is a place that can attract talent based on its lifestyle offer.

High quality digital services are fundamental to advancing technology uptake for current and growing business and for the long term development and growth of skills required for the future.

Homes, schools and businesses need access to high speed internet to keep up with the modern economy. Meeting the challenge of providing affordable access to the internet and quality digital services to all Aucklanders means removing barriers, including:

- inadequate internet connectivity and the slow rate of expansion of high speed connectivity to rural areas
- low household incomes that make internet services and devices unaffordable

- limited digital skills
- cybersecurity threats
- lack of awareness of the opportunities and risks of digital services.

## How this can be done

The focus should be on how people and businesses get the most benefit from technological change. The fast pace of the digital revolution needs to be matched by ensuring everyone can make the most of online opportunities.

There needs to be affordable and accessible digital infrastructure and plentiful opportunities for people to continuously develop their digital literacy.

Formal education at all levels must respond to the digital new environment. This includes enhancing the entrepreneurial, science, technology, engineering and mathematics offer for all ages.





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

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

Although most innovation occurs in business, a range of other organisations have knowledge, skills, ideas and technology that can improve the chances of innovation being successful, or help a business avoid wasting resources in the process. They include:

- universities and research institutes
- innovation hubs
- government agencies
- industry associations
- financiers.

For example, a dynamic creative sector can be an incubator for future entrepreneurs and innovators. Or research and development, when coupled with the commercialisation of ideas, can significantly increase the success of an innovative product.

## How this can be done

Regulatory and policy settings need to promote innovation and help business. Regulatory processes should see rules applied consistently, without distracting innovative enterprise with unnecessary time and costs.

Laws and regulations regarding copyright, intellectual property rights, and transport regulation should all contribute to a socially responsible and innovation-friendly business environment.

The Development Strategy addresses the supply of business land and supporting infrastructure as one means of enabling innovative businesses to set up and benefit from co-location.

On the other hand, some digital industries and many start-ups can operate successfully anywhere. We must be sure that development and regulation supports both approaches.

Figure 32- Environment for business innovation, ATEED



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

A prosperous Auckland economy will include more opportunities for Māori, especially rangatahi, to gain the essential skills to increase their employment and income levels and to help drive Auckland's economic growth.

Tāmaki Makaurau presents Māori with economic opportunities across many sectors. There is potential for innovation, entrepreneurship and increasing international business opportunities.

Māori business leaders, iwi, Māori collectives, local government and others in the private sector need to work together to take up commercial and digital opportunities.

Support systems for Māori business owners need to be more accessible and well-coordinated, and enable the Māori business ecosystem to flourish.

Māori businesses have a Māori way of doing business with an emphasis on Māori values, joint ventures and enduring relationships.

They are commercially driven with well-defined long-term goals that promote a 'quadruple bottom line' and grow the Māori asset base, creating direct benefits back to iwi. This embeds a process that both empowers communities and cultivates an untapped part of the economy.

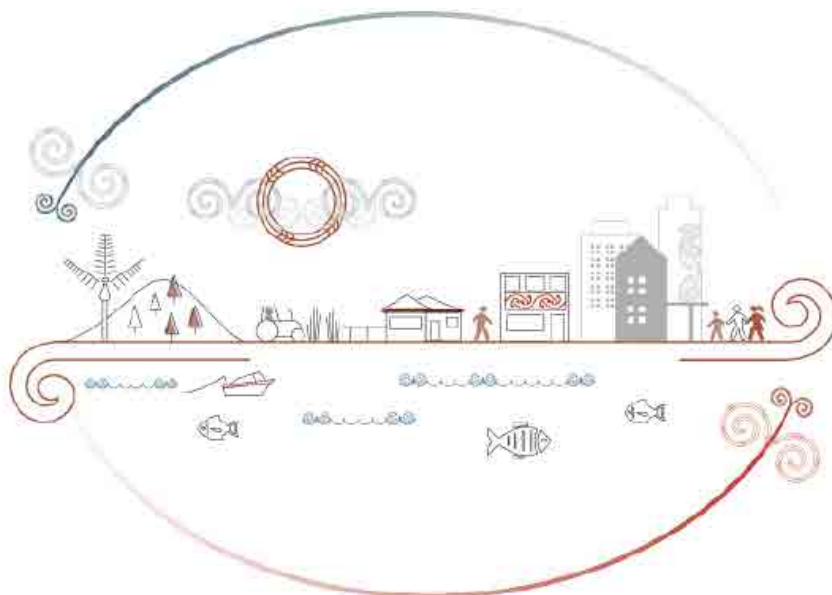
A visible thriving Māori economy creates unique opportunities for Auckland. Greater Māori economic success will have benefits for all Aucklanders and contribute to the further development of an internationally attractive Auckland economy. Globally, consumers are increasingly interested in sustainable and responsible business practices and products.

This interest aligns well with Māori values, and provides an opportunity for Māori to continue to apply a te ao Māori approach that is of growing value to the world.

## How this can be done

Areas that could be looked at include:

- supporting Māori business development
- boosting rangatahi participation in education and training
- increasing Māori employment and wages
- supporting collaboration of iwi and Māori collectives to share lessons and maximise economic value
- supporting a te ao Māori approach to Māori enterprise development
- supporting Māori entrepreneurial initiatives
- continuing partnerships between council and iwi.



# Leverage Auckland's position to support growth in exports

Auckland has an important role as New Zealand's main connection point for international and domestic markets. We need to use this role to increase exports.

Opportunities available in Auckland due to its scale, facilities and diverse population include:

- diverse and more specialised labour markets
- scope for specialised production, which increases trade between firms
- access to international markets which provides more scope for firms to benefit from scale economies
- opportunities to stimulate the development and spread of new ideas, technologies and ways of doing business
- business contacts in migrants' countries of origin
- a variety of specialised cultural and recreation opportunities.

Auckland however still has a primarily inwardly-focused economy driven by consumption, real estate, and domestically-focused services.

## How this can be done

We need to move into creating and exporting a wide range of sustainably developed products, and more knowledge-intensive goods and services based on innovation and productivity growth.

Focusing on a broader mix of exports will mean a wider spread of innovation opportunities, and will require a wider range of skills.

There are a number of emerging and evolving economic sectors including:

- tourism, for more information read Destination AKL2025<sup>231</sup>
- food and beverage
- high technology
- marine
- screen and creative industries
- finance
- tertiary education and training.

Encouraging these export-linked new sectors will increase the resilience of Auckland's economy and also make New Zealand less vulnerable to fluctuations in commodity prices.

We also need to ensure the ongoing sustainable growth of sectors that are already internationally competitive, as described in The Tripartite Economic Alliance later in this section.

Figure 33 - The image below shows the top five New Zealand export markets in 2017.



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

Learning begins in the home. A solid foundation of early childhood learning and development that builds linguistic, social, emotional and physical skills is a prerequisite for success.

When followed by quality formal education and plentiful informal learning opportunities, this benefits people throughout their lives.

See Figure 34 - Highest qualifications for the 15 year and over usually resident population.

All our young people need the fundamental skills and creative thinking capabilities to develop the adaptability and resilience they will need in the future.

The Southern Initiative<sup>232</sup> is an example of a place-based initiative that aims to set children up for life with the best start and a pathway for further education and training.

For Auckland to succeed, attention needs to be focused not only on creating excellent learning opportunities for all our children and young people, but also on preparing everyone for a changing economic environment that will require continuous upskilling.

Whether in school, in the home, at work or within the community, it will be even more important to acquire knowledge, master methods of learning and build social skills.

These skills assist individuals to gain and keep good employment, to be personally fulfilled and to participate fully in the wider society.

Some Aucklanders are thriving but others are not - read Educational achievement of Auckland's children and young people for more information later in this section.

Particular focus is required to lift educational achievement and skill development of those most in need, which includes groups who consistently experience poorer education and employment outcomes.

Trades training, apprenticeships and retraining options will continue to play an essential role in people getting the right skills to succeed. There needs to be a variety of development opportunities, that will reduce barriers to achieving meaningful employment and high wage jobs, at every stage of life.

All Aucklanders deserve the chance to achieve great things.

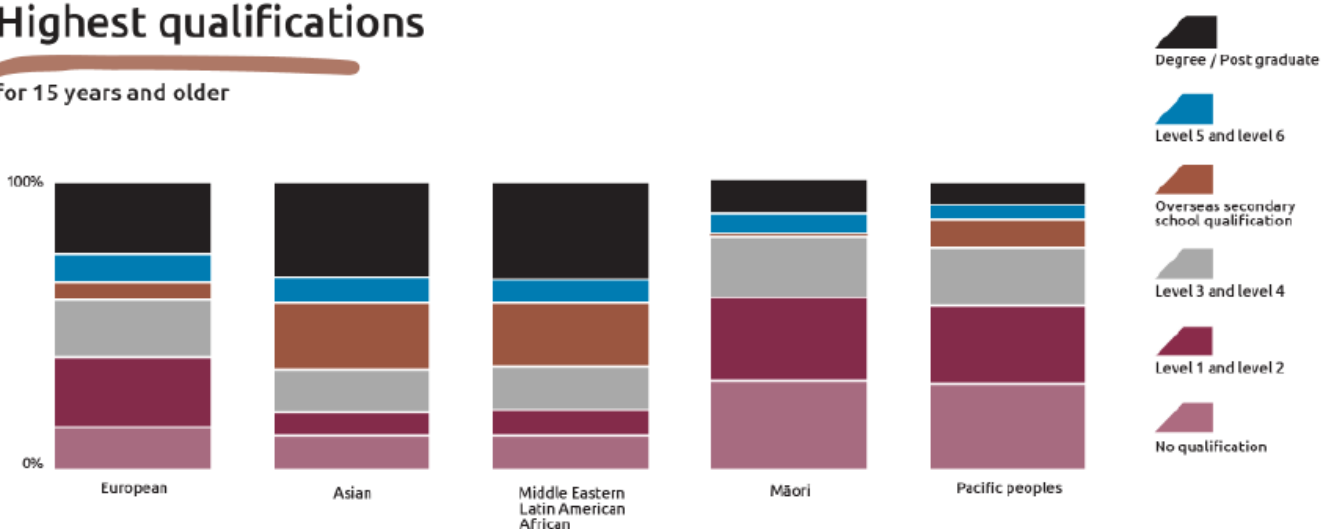
We must ensure that all of our people have the tools they need to build a bright future, through a mix of informal learning options, paired with quality formal education and general personal development.




See Map 7 - Proximity to Education

Figure 34 - Highest qualifications for the 15 year and over usually resident population. Source: Census 2013.


## Highest qualifications

For 15 years and older

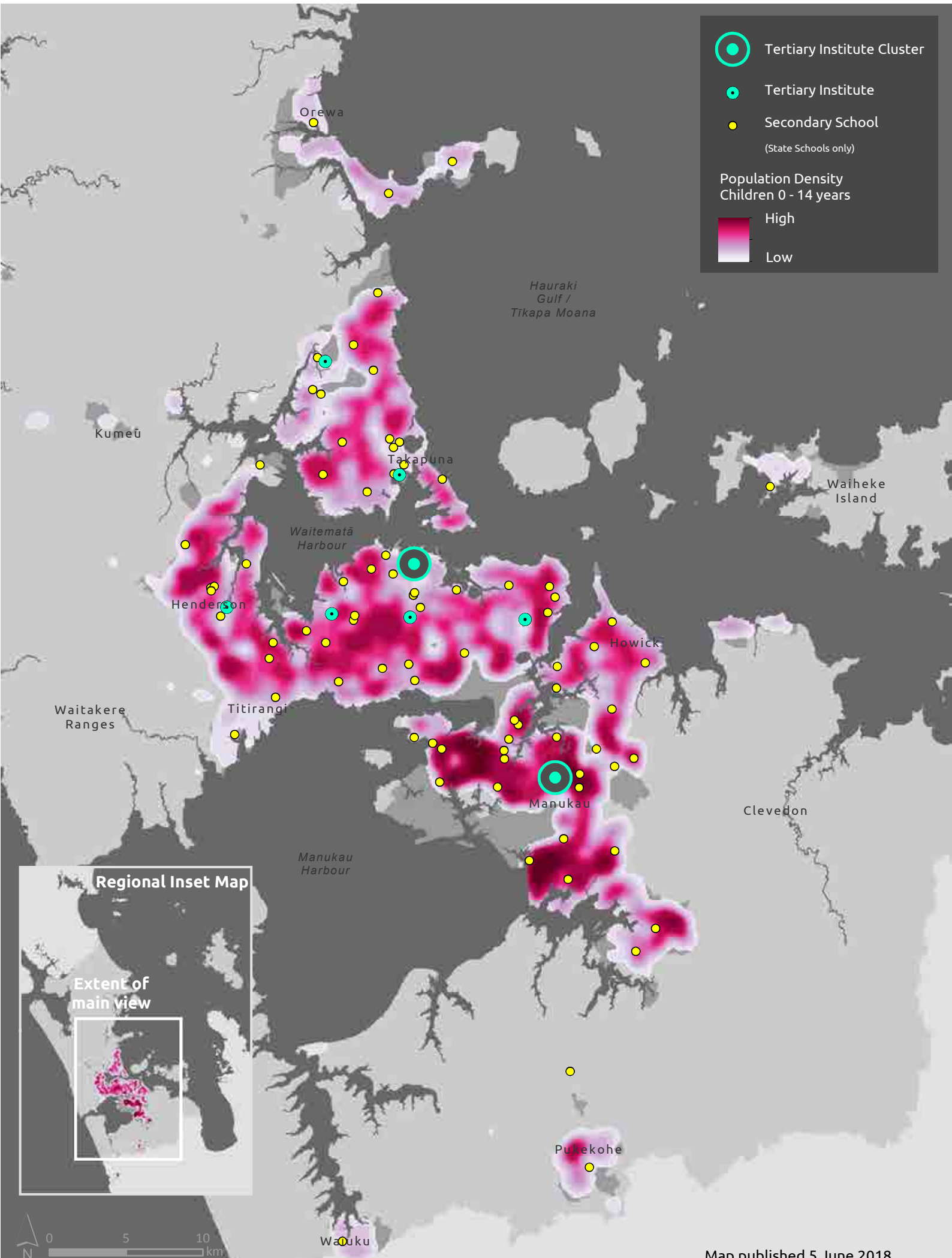


-  Tertiary Institute Cluster
-  Tertiary Institute
-  Secondary School  
(State Schools only)

Population Density  
Children 0 - 14 years



- High
- Low



## How this can be done

We can do this through:

- training and education initiatives focused on those most in need
- encouraging a culture and practice of lifelong learning and skill development
- supporting early childhood learning
- enabling opportunities to build soft skills
- supporting education-to-work pathways, apprenticeship and internship programmes
- providing appropriate education infrastructure
- retraining opportunities and digital literacy programmes.

# Implementing the Opportunity and Prosperity outcome

## Implementation partners

Auckland's businesses are the backbone of Auckland's economic future.

Central government sets the legislative framework for businesses to operate in and provides leadership through its different policy settings.

Auckland Council has set a strategic vision for Auckland's economy through Auckland's Economic Development Strategy. Auckland Tourism, Events and Economic Development (ATEED), a council-controlled organisation, works with partners to deliver multiple objectives, from growing Auckland's innovation culture and key economic sectors to attracting foreign direct investment, international events and visitors from around the world.

Through the supply of adequate infrastructure, central and local government help create the physical environment within which enterprise can thrive.

Several partners collaborate to create the learning environment of the future, including education and training agencies and organisations, research institutes, and COMET Auckland (a community education charitable trust).

Auckland Council will develop an implementation approach for this outcome working alongside our key partners and stakeholders. This will be built on existing programmes and ensure all new elements introduced in the Auckland Plan 2050 are planned for.

## Mechanisms used to work together

Auckland businesses are represented by a range of national and regional advocacy groups and professional bodies, each with specific priorities and work programmes.

Businesses engage with central government through these groups, and with each other through a range of networks.

Business and the education sector will need to work collaboratively for their mutual benefit, to create opportunities for individuals to develop the right skills and potentially to deliver innovative commercial products.

There is an ongoing need for stakeholders involved in the creation of positive learning environments in schools, tertiary institutes, and in the workplace to work together in order to deliver coherent actions on the ground. This may involve Auckland-wide strategic approaches that align planning and monitoring and define collaborative action.

Advanced industries are critical to the future of Auckland's economy as they rely on innovation and add high value through bringing capital and jobs into New Zealand.

Auckland has a multi-agency approach to grow advanced industries that involves: attracting investment, research and development activities, providing supporting infrastructure, addressing skills shortages to secure a talent pipeline, and supporting the growth of international trading relationships to increase export revenues.

## Supporting strategies and plans

### Auckland's Economic Development Strategy

The strategic vision for Auckland's economy that sets out the tangible steps to make Auckland an internationally competitive, prosperous economy where all Aucklanders can benefit.

Learn more about Auckland Economic Development Strategy.<sup>233</sup>

### Learning environment

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:

- Ka Hikitia – Accelerating Success<sup>234</sup>
- Pasifika Operational Strategy 2017–2020<sup>235</sup>
- International student wellbeing strategy<sup>236</sup>
- Tertiary Education Strategy 2014–2019<sup>237</sup>
- Auckland Innovation Plan<sup>238</sup> - The Auckland Innovation Plan outlines the priorities and actions identified by ATEED to build a culture of innovation and entrepreneurship in Auckland

- Toi Whītiki - Arts and Culture Strategic Action Plan<sup>239</sup>- 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, delivered by Auckland Council in partnership with the creative sector.
- I Am Auckland - the Children and Young People's Strategic Action Plan<sup>240</sup> - 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.

Auckland Council's strategies, policies and plans have acted as an important input in the development of Auckland Plan 2050. With the adoption of the plan, the council will assess these documents to ensure they remain fit for purpose.

## How to get involved

- Information about Auckland's Jobs and Skills Hubs –
  - City centre,<sup>241</sup>
  - Tāmaki<sup>242</sup> and
  - Ara<sup>243</sup> at the airport.
- ATEED has more information about building young talent on the ATEED website.<sup>244</sup>
- Find out about activities as champions and connectors within the Auckland education and skills system on COMET Auckland's website.<sup>245</sup>
- Information about grants and help for new businesses is available on the business.govt.nz<sup>246</sup> website.

## Supporting information

Information about the initiatives that ATEED delivers across business growth and innovation, business attraction and investment, tourism, international education, film and major events can be found on the ATEED website.



# Supporting Information

The Fourth Industrial Revolution

Impact of new technology

The Tripartite Economic Alliance

The importance of soft skills

Educational achievement of Auckland's children and young people

Why lifting productivity is important

Groups that experience poor education and employment outcomes

Māori and Pasifika Trades Training programme

# The Fourth Industrial Revolution

Technology disruption is predicted to be of a scale so great that it is described as the fourth industrial revolution.

The following is taken from World Economic Forum, The Global Competitiveness Report, 2016-2017, Geneva, 2016.<sup>247</sup> It was adapted from Klaus Schwab's 2016 book titled The Fourth Industrial Revolution. Find out more on the World Economic Forum website.<sup>248</sup>

"We are at the beginning of a global transformation that is characterized by the convergence of digital, physical, and biological technologies in ways that are changing both the world around us and our very idea of what it means to be human. The changes are historic in terms of their size, speed, and scope.

This transformation – the Fourth Industrial Revolution – is not defined by any particular set of emerging technologies themselves, but rather by the transition to new systems that are built on the infrastructure of the digital revolution. As these individual technologies become ubiquitous, they will fundamentally alter the way we produce, consume, communicate, move, generate energy, and interact with one another.

And given the new powers in genetic engineering and neurotechnologies, they may directly impact who we are and how we think and behave. The fundamental and global nature of the revolution also poses new threats related to the disruptions it may cause – affecting labour markets and geopolitical security as well as social value systems and ethical frameworks."

# Impact of new technology

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.<sup>249</sup>

We are on the cusp of a new 'automation age'. In a study of the scale of change that could be expected from recent developments in robotics, artificial intelligence, and machine learning, the McKinsey Global Institute developed a template for estimating the automation potential across 2000 work activities and more than 800 occupations within the United States.

Results are shown below. This summarises the potential impact of automation across the global economy.

Information for the chart below was sourced from McKinsey Global Institute (January 2017) A future that works: Automation, Employment, and Productivity – Executive Summary.

The X axis (horizontal) represents 820 (100 per cent) occupations, expressed as an overall percentage.

Those occupations have been broken down into a number of distinct activities based on a list of 2000 activities.

An occupation can share a number of common activities.

For example, data analysis is an activity undertaken by an economist, or a market researcher or a scientist, among others.

The Y axis (vertical) represents the proportion of each occupation that could be automated, based on the activities that make up that role. In other words, its technical automation potential.

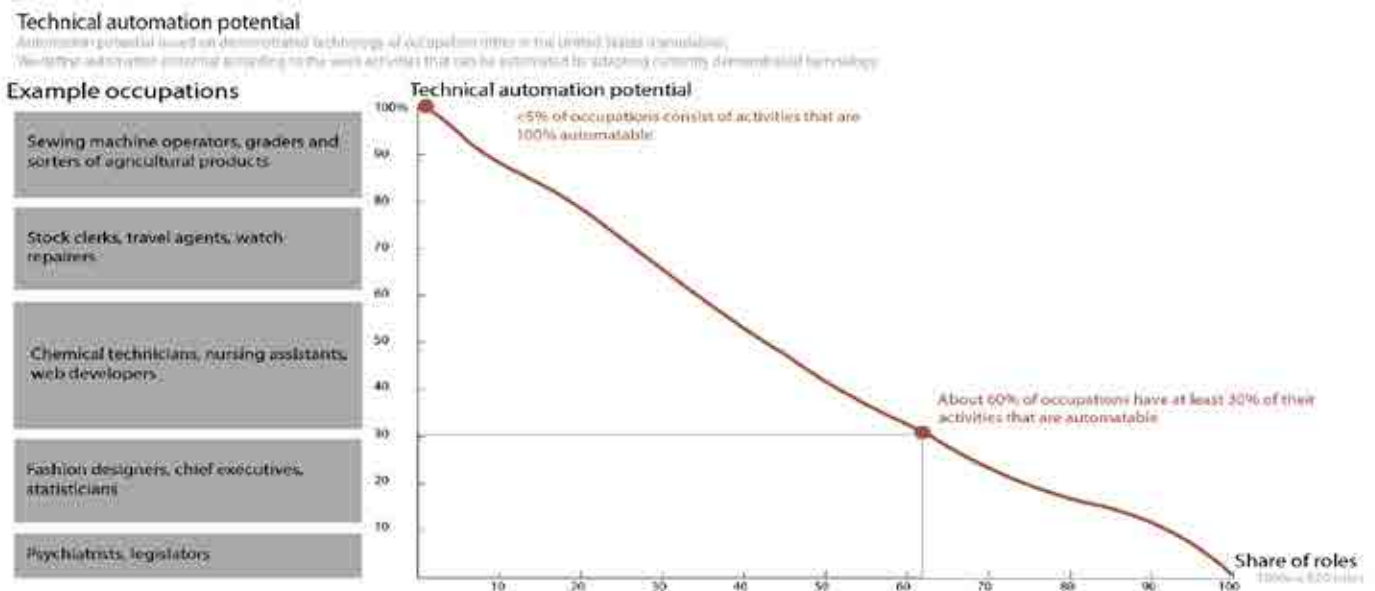
As the chart shows, the McKinsey Global Institute study found that while less than five per cent of occupations are fully automatable, 60 per cent of all occupations have at least 30 per cent technically automatable activities.<sup>250</sup>


The study also looked at possible technology adoption scenarios. The modelling produced significantly different results.

In the earliest scenario, automation could account for more than 50 per cent of working hours in two-thirds of countries within just 20 years. In the latest scenario, more than half of all countries will have 50 per cent automation or more within 50 years.

These findings reflect uncertainty about the speed of take up of automation technologies across activities and sectors.

Regardless of the speed of adoption, the study concluded that the greatest impact will be experienced in a few advanced economies, especially Germany, Japan, and the United States. These countries have both high wages and industries with high potential for activities to be automated.





In all economies, including New Zealand, the decision when to automate will depend on the costs of integrating technology in the workplace relative to wages.

Other factors which will determine the speed of take up are the impact on production and service quality, and customer acceptance.

# The Tripartite Economic Alliance

In 2014, the Tripartite Economic Alliance between Auckland, Guangzhou (GZ, China) and Los Angeles (LA, U.S.A.) was signed for a three year period.

The alliance is based on strong previous sister-city relationships. It focuses on increasing trade and investment between the three cities and their surrounding areas, and deepening political and civic engagement.

This is the first trilateral economic international agreement between cities, and sets a new benchmark for city engagement and collaboration. Under the alliance, there have been annual Tripartite Economic Summits. The intention is to implement specific tri-party initiatives and a work programme to meet the shared objective of increasing trade and economic engagement.

The Tripartite Economic Alliance creates a 'platform' and opens doors to meaningful and substantive economic, trade and investment opportunities for Auckland-based businesses, entrepreneurs, and investors. It also allows the parties to get increased benefits from existing people and cultural- focused relationships.

## Progress since signing of the tripartite agreement

The tripartite has been a successful collaboration to date, deepening Auckland's connections and visibility with two important international partners and gaining national and international recognition.

Auckland Tourism Events and Economic Development (ATEED), a council-controlled organisation, estimates that opportunities from the Auckland summit have generated a number of potential deals for local companies. Given the time required for business deals to conclude, the

commercial results from the LA and Auckland summits will continue to be tracked.

Other initiatives facilitated under the Tripartite Economic Alliance include substantive memoranda of understanding and strategic alliances between business and research institutions that cover ports, design and innovation.

Auckland, LA and Guangzhou have experienced significant interest in the model from cities around the world. It is therefore serving as a potential model for other international city relationships.

Collaboration between Auckland Council organisations and central government has also strengthened under this alliance. This collaboration was formalised through the signing of a memorandum of understanding to future-proof Auckland's working relationship with central government on global engagement.

The Tripartite Economic Alliance was extended by a further three years in November 2017 at the summit held in Guangzhou.



# The importance of soft skills

The term 'soft skills' describes a range of personality traits, non-cognitive skills and abilities, character traits and socio-emotional skills.<sup>251</sup> People are not born with a fixed set of abilities and many of these skills are developed over their lifetime.

Soft skills include:

- 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.

## Investment in children's soft skills

Early investment in developing children's social and emotional skills helps to:

- establish healthy brain architecture as the brain forms
- create a strong foundation on which higher-level skills can be built
- provide ongoing benefits throughout life<sup>252</sup>

Building these skills early can have a positive impact on all children, especially those in disadvantaged groups.

A recent longitudinal study in nine countries conducted by the Organisation for Economic Cooperation and Development 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.<sup>253</sup>

The 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.

## Soft skills for work

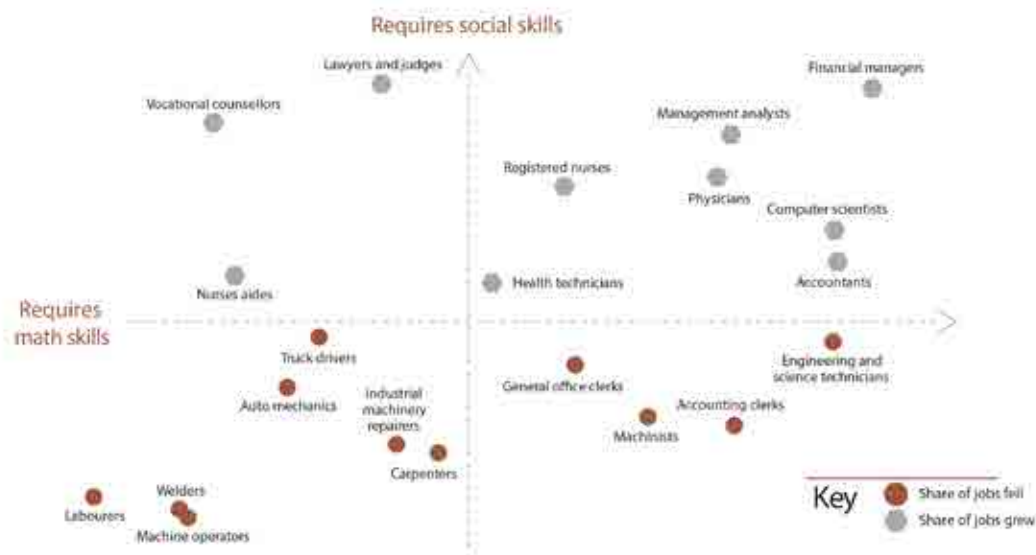
As our work environments evolve, soft skills are becoming increasingly important in a variety of workplaces.

The 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<sup>254</sup>

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

Figure 35 - Jobs in the US from 1980 – 2012 requiring social skills and math skills. Data for this chart was sourced from *The World Economic Forum (2016). New vision for education: fostering social and emotional learning through technology*<sup>255</sup>



Research has shown that the bulk of job growth in the United States from 1980 to 2012 was in occupations that require high social skills such as managers, teachers, nurses, therapists, physicians and lawyers.

It has also been found that higher-paying jobs increasingly require social skills.<sup>256</sup>

Further to this, the United States Bureau of Labour 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.<sup>257</sup>

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<sup>258</sup> and expressed difficulties finding employees with adequate soft skills.

That study also found that 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.<sup>259</sup>

In 2017 a large number of business organisations, including Xero, ASB, Noel Leeming, Vector and Sky City, published an open letter<sup>260</sup> stating their intent to hire people without tertiary qualifications.

Their hiring process would instead focus on assessment of the necessary skills, attitudes, motivation and adaptability to join their organisations, in conjunction with previous experiences in and out of the workforce.

The possibilities that technology brings are being pushed further and further every day.

There are new occupations in fields that only recently would have been taken for science fiction, for example:

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

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

#### For further information:

The World Economic Forum report on the new vision for education<sup>261</sup>

The Economist Intelligence Unit report on the learning curve<sup>262</sup>

The European Political Strategy Centre report on the future of work skills and resilience for a world of change<sup>263</sup>

# Educational achievement of Auckland's children and young people

## Auckland's child and youth population will continue to increase

Children and young people (aged 0 to 24 years old) represent over a third of Auckland's population (36 per cent in 2013).

Statistics New Zealand population projections (medium series) suggest that over the next 20 years, the number of children and young people in Auckland will continue to increase, possibly by another 26 per cent.

Population ageing will mean however that the proportion of Aucklanders who are children and young people will decrease.

Auckland will require 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.

## Relatively high rates of participation in early childhood education

There is consistent evidence linking good quality education, especially early childhood education (ECE), with improved skills development and employment prospects.<sup>264</sup>

Participation in high quality ECE builds the foundation for children's lifelong learning.

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.<sup>265</sup>

In 2015, 95 per cent of children in Auckland took part in ECE. Although the rates for Pacific (90 per cent) and Māori (92 per cent) children are 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.<sup>266</sup>

The national ECE Participation Programme<sup>267</sup> was set up 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.

## 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 the National Certificate of Educational Achievement (NCEA), which encompasses a wide range of learning. Future educational and job prospects will be limited for those who leave school without Level 2 NCEA.

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.

There has also been a gradual increase overall in the numbers and proportions of young people leaving school in Auckland with Level 3 or higher qualifications, including University Entrance.

## Education has an intergenerational impact

In New Zealand, educational achievement persists between generations.

In 2012, the OECD noted that the chance that a young person whose parents have not attained an upper secondary education will attend higher education is limited, and they reported that tertiary students in New Zealand were more likely to have highly educated parents than in any other OECD country.<sup>268</sup>

Evidence shows very strong links between education and the transfer of income and other inequality across generations. For children in New Zealand, education is the main way to break the transmission of low incomes across generations.<sup>269</sup>



## Socio-economic deprivation has a negative effect on educational achievement

Educational achievement is associated with socio-economic background.

The link between a parent’s socio-economic status and a child’s educational outcome is very high in New Zealand when compared internationally.<sup>270</sup>

Children whose parents do not have school qualifications and who live in a socio-economically deprived area have a higher probability of poor educational outcomes than other children in Auckland.

Auckland has a larger number of low decile schools.

Auckland has a disproportionate number of low decile schools, for example those rated 1, 2 or 3.

A third (32 per cent) of all decile 1 schools in New Zealand are found in Auckland, while only 21 per cent of New Zealand’s schools are in Auckland.

The southern part of Auckland has a substantial concentration of decile 1, 2 or 3 secondary schools.

Māori and Pacific children are more likely than others to attend low-decile schools. As at 1 July 2015, approximately 71 per cent of Auckland’s Pacific 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.<sup>271</sup>

Read more about school deciles on the EDUCATION.govt.nz website.<sup>272</sup>

## Some improvement in educational outcomes in The Southern Initiative area

Significant proportions of Auckland’s Māori and Pacific school leavers are from schools in The Southern Initiative.

In 2014, over a third (38 per cent) of all Māori school leavers and almost half (47 per cent) of all Pacific school leavers (overall, 21 per cent of school leavers) were from schools in this area.

Relatively large proportions of Māori and Pacific young people in the Southern Initiative area are leaving school with low, or no, qualifications, when compared with other ethnic groups, and compared to school leavers from other areas. For example, in 2014, a third (33 per cent) of Māori school leavers left school without NCEA Level 1, as did 19 per cent of Pacific students.

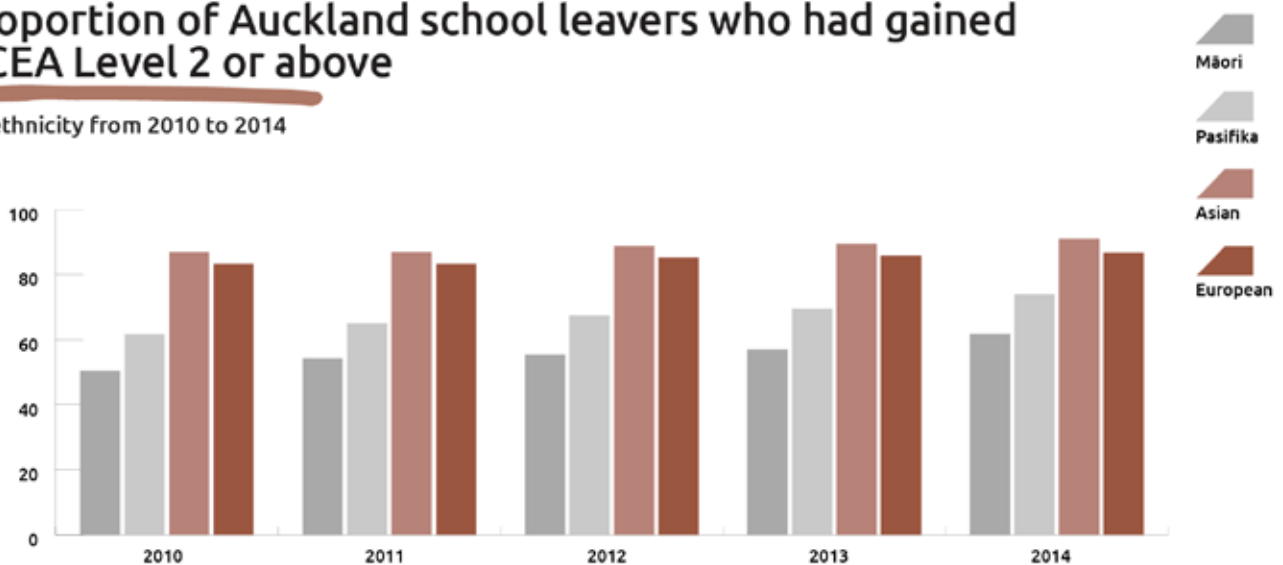
These figures are however an improvement on previous years, particularly among Māori school leavers.

Figure 36 - Proportion of Auckland school leavers who had gained NCEA Level 2 or above, by ethnicity (2010 to 2014)  
Source: Ministry of Education, School leaver data

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

### Proportion of Auckland school leavers who had gained NCEA Level 2 or above

by ethnicity from 2010 to 2014



## School leaver attainment among school leavers from schools in the Southern Initiative area, by ethnicity (2014)

	Below NCEA Level 1 (%)	Level 1 and working towards Level 2 (%)	NCEA Level 2 or above (%)
Māori	33	17	50
Pacific	19	12	69
Other ethnicities	11	10	79
Total	19	12	69

## School leaver attainment among school leavers from schools in the rest of Auckland, by ethnicity (2014)

	Below NCEA Level 1 (%)	Level 1 and working towards Level 2 (%)	NCEA Level 2 or above (%)
Māori	20	13	67
Pacific	13	9	77
Other ethnicities	6	6	88
Total	8	7	85

Source: Wilson, Reid & Bishop (2016) using Ministry of Education data.<sup>273</sup>

Note: Students could belong to more than one ethnic group.

## Māori and Pacific young people have poorer educational outcomes

Māori and Pacific young people make up more than a third of Auckland's young people and continue to experience higher levels of disparity in education outcomes than others.

The 2013 OECD economic survey of New Zealand reports that:

"Among the population lacking school qualifications, Māori have nearly double the incidence of people lacking school qualifications as Pakeha/Europeans and quadruple those of Asians, and conversely Māori show much lower rates of tertiary attainment."<sup>274</sup>

Although trends are improving across Auckland, there are significant educational disparities for Māori and Pacific children and young people.

Māori and Pacific 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.<sup>275</sup>

There needs to be increased focus in these areas on creating positive outcomes for Māori and Pacific young people.

## Focusing on equitable education outcomes

Auckland can create equitable outcomes for all its children and young people. To bring all Auckland's children and young people along on the journey of educational achievement, these indicators of inequitable education outcomes need to improve swiftly.

There needs to be focus in geographic areas with low levels of educational achievement, lower socio-economic areas and higher levels of Māori and Pacific young people.

A strong education system that focuses on creating positive outcomes for all, not just some of its learners, will benefit everyone.

# Why lifting productivity is important

There are three main ways to achieve higher incomes:

- increase the number of people working
- increase the number of hours worked
- increase productivity.

New Zealand has traditionally relied on the first and second methods to boost national income, which has resulted in more people working longer hours and low real wage growth.

The Organisation for Economic Co-operation and Development (OECD) has highlighted that productivity in New Zealand remains well below that of leading OECD countries.<sup>276</sup>

Productivity is calculated as the ratio of the volume of outputs to the volume of inputs.

High productivity means that a large amount of output is produced with little input. Find out more about productivity on the Stats NZ website.<sup>277</sup>

Lifting productivity is an important goal as it has the greatest potential to improve quality of life and create broader more sustainable benefits. These include a more highly skilled workforce, higher wages, more efficient use of resources, and innovative and more resilient businesses.

Since 2000, the knowledge intensive service sector in Auckland has grown at an average annual rate of 3.9 per cent.<sup>278</sup>

This sector:

- covers firms providing finance, professional, scientific and technical services
- is supported by a highly skilled and knowledge-enabled labour force and is highly productive.

While Auckland seeks growth in those sectors that are highly productive it is also important to improve productivity across all businesses.

Innovation through new technologies and automation can drive the change required to lift productivity within firms and reshape existing business models.

Firms can lift productivity by:

- increasing research and development
- encouraging collaboration between industry and research institutions
- attracting skilled migrants
- improving infrastructure and land use settings that enable mass benefits.

# Groups that experience poor education and employment outcomes

## Over-representation in some groups

In Auckland some groups are over-represented among those with poor education and employment outcomes, including:

- young people (aged 15-24)
- Māori
- Pacific people
- disabled people
- women<sup>279</sup>
- long-term unemployed
- underemployed<sup>280</sup>
- those with low formal educational attainment.

## Groups with lowest levels of participation in employment in New Zealand in 2015<sup>281</sup>

Group	Employment participation
Women	Higher rates of unemployment and underemployment Lower rates of labour force participation than men
Young Māori women aged 15 to 24	Unemployment rate of 24 per cent
Young Pacific women aged 15 to 24	Unemployment rate of 31 per cent
Māori	High unemployment rate at 13 per cent (compared to 6 per cent of all people) Lower rates of labour force participation at 66 per cent (compared to 68 per cent of all people)
Pacific people	High unemployment rate at 13 per cent Lowest labour force participation rate of all ethnicities at 61 per cent
Disabled women	46 per cent participation in the labour force (compared with 54 per cent of disabled men)

## Youth unemployment

The unemployment rate of young people in Auckland has been higher than that of other age groups for some time.

In 2015, the employment situation for youth was beginning to improve from the peak of unemployment rates after the Global Financial Crisis, but these rates have not yet recovered as much as for other age groups.

## Auckland youth with the highest unemployment rates in 2013

Group	Unemployment status <sup>282</sup>
Māori youth aged 20 to 24	23 per cent (compared with 15.2 per cent unemployment rate overall)
Pacific youth aged 20 to 24	25 per cent (compared with 15.2 per cent unemployment rate overall)

*Note: Data on youth unemployment and NEET taken from a report into children and young people prepared by Auckland Council on the Knowledge Auckland website.<sup>283</sup>*

## Auckland youth who are not in education, employment or training (NEET)

For young people, unemployment is only a part of their story. Young people aged 15 to 19 tend to be completing secondary school qualifications and beginning tertiary study or training. Those who are seeking work at this age are unlikely to have qualifications, skills or much work experience, contributing to these relatively high unemployment levels and low labour force participation rates.<sup>284</sup>

Therefore, to better understand young people's employment outcomes, data is collected on young people who are not in education, employment or training (NEET).

The NEET rate is designed to capture a wider understanding of the proportion of young people who are excluded and/or disengaged from both work and education, than standard measures for adults such as unemployment. Young people aged 15-24 who are NEET tend to take a longer time to find employment and have difficulty maintaining employment.

### Auckland youth with the highest not in education, employment or training (NEET) rates in 2015

Group	NEET status
Māori youth aged 20 to 24	26 per cent (compared to 13.4 per cent overall)
Pacific youth aged 20 to 24	27 per cent (compared to 13.4 per cent overall)

Data source: Stats NZ, Household Labour Force Survey.

Note: These figures need to be read with caution as there is a relatively high sampling error associated with estimating NEET rates by ethnicity and age, due to small sample sizes.

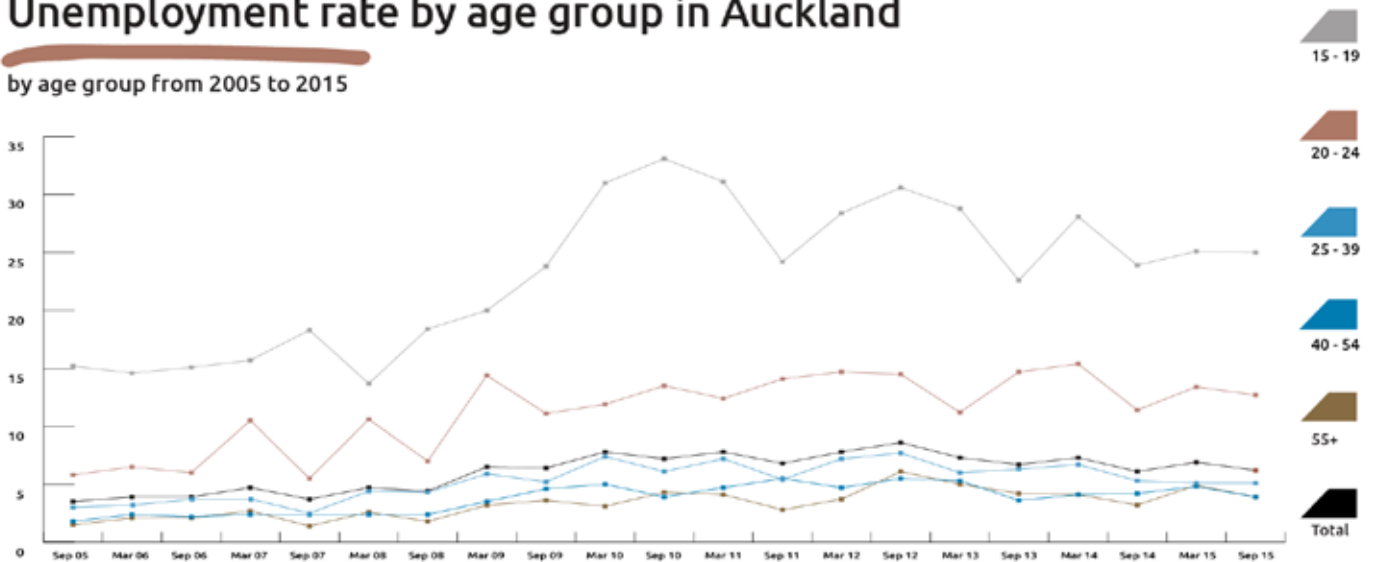
### Further reading

A report on young people not in education, employment or training on the Scottish Government website.<sup>285</sup>

Figure 37 - Unemployment rate by age group in Auckland (September 2005 to 2015). Source: Stats NZ, Household Labour Force Survey

## Unemployment rate by age group in Auckland

by age group from 2005 to 2015



# Māori and Pasifika Trades Training programme

Auckland is currently experiencing a demand for skilled tradespeople and that demand is expected to grow.

The Southern Initiative identified young Māori and Pasifika training and employment as a critical priority. To address this, it delivers the Māori and Pasifika Trades Training programme.

The programme is a central government initiative to assist Māori and Pasifika, aged 16 to 40, to:

- gain qualifications through training and apprenticeships
- secure sustainable employment with opportunities for progression.

The programme is based on close collaboration with an employer consortium and training providers to ensure trainees meet the needs and requirements of the industry.

The Southern Initiative coordinates training providers to deliver courses and recruit Māori and Pasifika people to take up trade training.

There is a focus on recruiting vulnerable young people not in education, training or employment, who are often challenging to reach.

Participants are recruited through Work and Income, community organisations, iwi and prisons.

Young people, who often have limited exposure to work, benefit particularly from the soft skills training that the programme provides. Moreover, young people enter into the programme with confidence that a clear path to sustainable employment is part of the programme.

Following the training participants receive assistance to find a job. They and their employer receive post-employment support to ensure that any challenges are managed.

In 2015, a majority of participants were offered full-time employment or apprenticeships following their training.

Employers are positive about the programme and value the contribution of the participants to their businesses.

Māori and Pasifika Trades Training is an example of organisations working together to empower young people and improve outcomes for some of Auckland's most vulnerable people.

