

# Public workforce 2035 – futures scan

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## The problem with the future is that it keeps turning into the present

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This paper explores the likely impact of a range of factors on the New Zealand public workforce in 2035, the challenges and opportunities presented by these factors, and the implications these have for the public service today. This view was formed by scanning the literature, detailed desktop analysis and, discussions with stakeholders.

This is a strategic overview and as such is intended to generate thinking, continued enquiry and conversation with a view to better position public leaders to respond to the opportunities and challenges that the future presents. This discussion is taking place at a time as the New Zealand public service embarks on major reform to ensure it builds on the great work done previously while preparing for the changes that the future will bring.

## In a nutshell - what we found

### Continuity and change

A scan of recent international megatrends identified four clusters that will drive change: rapid technological developments, demography, environmental pressures, and shifting power. There are other more local factors unique to New Zealand that will interact with these megatrends:

- The role of Māori as parties to the Treaty of Waitangi and the Crown Māori relationship
- New Zealand's geography, including the relative physical isolation
- New Zealand's constitutional arrangements, including a single house of Parliament and the limited role of local government
- New Zealand's role in the South Pacific.

These factors have been operating for long periods of time. It is easy to over emphasise the potential for major disruptive change and ignore the extent of continuity. Everyone who will be in the workforce in 2035 is alive today

### Our highly dynamic workforce

New Zealand has a well-educated workforce and demands on the workforce are changing. New Zealand historically has had the highest OECD rate of people moving both in and out of New Zealand. Our domestic labour market is open and workers have choices about where they work. New Zealanders switch jobs at a higher rate than the OECD average. With this dynamic, and an ageing population, the public sector's

employee value proposition needs to be strong as there will be more competition for relatively fewer highly skilled workers. As stewards, the challenge is to create work environments and systems that attract, develop and retain high calibre public sector workers able to deliver for all New Zealanders.

## Demand factors

New Zealanders' expectations of how they personally interact with public services are changing. This includes the possibility of co-production and services tailored to individual needs and circumstances. Technology has made mass customisation a possibility and an expectation. This extends from involvement in policy-making through to front line service delivery. Key changes include increased demand for workers who:

- work comfortably in a bi and multi-cultural context
- have the specific capabilities required to work with agility to co-create solutions
- can support the transition to a low emissions economy.

While there will be ongoing demand for delivering services face-to-face, and increased base-load demand for public services reflecting population growth, fewer workers will be required for low to medium complexity roles as a result of automation.

## Supply factors

New Zealand's workforce population is forecast to continue to change rapidly as it ages, becomes more diverse, urbanised, has greater female representation, is more mobile and has different expectations of employers. The future of public services literature point to the need for increased public sector skills in:

- **managing relationships and connections** – using the skills and emotional intelligence to work across sectors to find solutions
- **cultural competence** – frame issues from several views of the world including Te Ao Māori
- **critical thinking** – to assess and make judgements when presented with new information
- **technology** – agility to know how and when data and technology can improve productivity, service quality and allow workers to function at the top of their capacity and capability.

## Setting the scene

### It is difficult to make predictions, especially about the future

Danish Proverb

The 21st century will be characterised by fast-paced change, growing complexity, and unpredictability. To get a sense of just how much, one only has to look back fifteen years to the start of 2005 at which point:

- Facebook had been up and running for only a year
- Google Maps had just been introduced to the market
- DVDs were one of the primary ways to watch recorded video content
- Nokia and Motorola were the two most popular mobile phone brands.

Advances in quantum-computing, gene-editing, machine-learning, blockchain, along with a raft of other changes make us wonder what the world will be like in another 15 years. Continuation of technological, demographic, geo-political and social trends, as well as changes resulting from unexpected disruptors have major implications for the workforce of the future.

The old Danish proverb highlights the difficulties of doing futures work. Predicting the future is a holy grail but scanning the futures is a worthy quest. Our journey has included three main strands:

- a literature scan focused on **International Megatrends, distinctive drivers facing civil services** as well as **New Zealand specific factors**.
- Desktop analysis focused on labour market projections and technology
- Interviews with key stakeholders.

COVID-19 is a reminder that all future work needs to factor in **wild cards** – the further out in time the less projections are reliable, and the more that exploration is required.

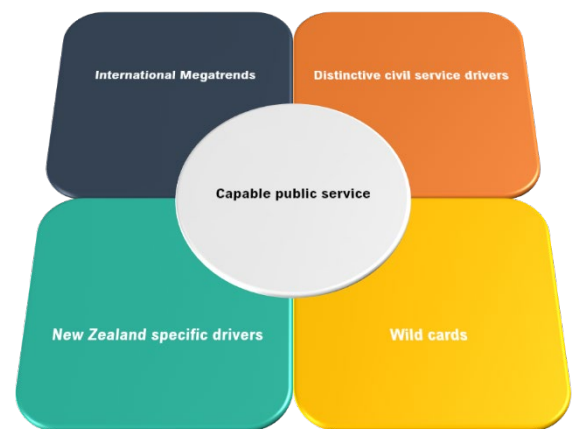


Fig. 1. Capable public service drivers

Source: NZIER

There are huge literatures on Global Futures generally, the future of work and to a lesser extent the future of public services. We have selected a handful of the most comprehensive surveys – those that had the most systematic methodology, breadth of coverage and were conducted recently.

We have used icons to help guide the reader through this paper:



*Fig. 2. Iconography for grouped references and external links*

*Source: NZIER*

## External drivers

**History is all about change and continuity, and the role of scholarship is mostly to prevent the attractions of novelty from dominating the normal predominance of continuity. The challenge, of course, is to recognise the exceptional.**

Professor Gary Hawke, Honorary Fellow, School of Government

The world is changing significantly as climate change, environmental pressures, technological, demographic and power shifts have major implications for the workforce of the future. But it is easy to over emphasise the potential for major disruptive change and ignore the extent of continuity. Recent work by the New Zealand [Productivity Commission](#) highlighted how despite the advent of the fourth industrial revolution the extent of job churn is at much lower levels than historically.

### International megatrends

Megatrends are global transformative changes that are expected to have far-reaching impacts on the future. A scan of recent scans of megatrends identified four clusters that will drive change: **Rapid Technological Development, Demography, Environmental Pressures, and Shifting Power.**

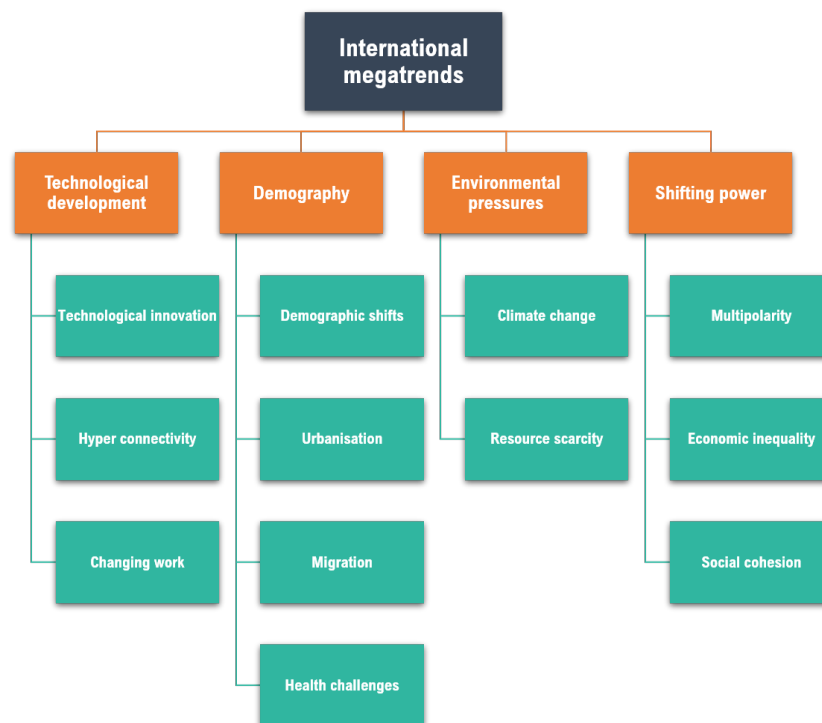


Fig. 3. International megatrends

Source: NZIER

The first cluster, **Rapid Technological Development**, encompasses three main interacting forces that will affect the very fabric of society:

1. Technological Innovation
2. Hyper connectivity, which includes the rapid increase of interconnectedness
3. Changing Work, such as the advent of the gig and shared platform economies, unemployment risk and job precarity.

The second cluster, **Demography**, includes:

1. Demographic shifts, such as an ageing global population
2. Urbanisation
3. Migration of all kinds
4. Health challenges.

The third cluster, **Environmental Pressures**, includes:

1. Climate change
2. Resource scarcity.

The fourth cluster, **Shifting Power**, encompasses socioeconomic and political trends:

1. Multipolarity, which includes the (re)emergence of global actors, and in particular the gravity of the world economy shifting due to the rapid growth of China. It also includes the tension between the forces of globalisation and the growing voices calling for localism or decentralisation.
2. Economic inequality within and between countries
3. Crumbling social cohesion, with societies more polarized and people more entrenched in their positions, increasing distrust in institutions (political and scientific).

There is a huge literature on the impact of technological change and the future of work. Some project massive disruptive change is underway. Other suggest the levels of disruption (measured by occupational churn) are currently at historic lows. The extent of forecast disruption in job losses triggered by technological change has tended to decline over time.



Meta-studies across a range of domains

[Global Megatrends: Mapping forces that affect us all](#)

[The Next Generation of Emerging Global Challenges](#)

[Global Strategic Trends: The Future Starts Today](#)

[Future Foresights: A Report for Governments to Support Future Technologies Dubai Future Academy](#)

The New Zealand Productivity Commission's recent [report](#) highlights both continuity and change.

*"It is difficult to predict exactly what technological change will mean for New Zealand and how widespread disruption will be, but impacts are being felt already in the form of changing business models and some jobs being replaced or transformed by automation."*

What this suggests for the public sector is that technological change will undoubtedly affect public services, but what service users expect, and the magnitude of the impacts and the speed will vary according to the nature of the service.

## Wild cards

COVID-19 is a reminder that all future work needs to factor in wild cards – the further out in time the less projections are reliable, and that more exploration is required.

There is a shared sense that COVID-19 is a major discontinuity spurring the adoption of new technologies and business models with a step change on activities going on-line. The unprecedented increase in public debt could moderate the funding available for ongoing public services.

What is less clear is which changes will be enduring and what long term trends and drivers will continue unaffected by COVID-19. History teaches us that those living through a major event have great difficulty assessing what the enduring impact of that event will be. The historical evidence also suggests that after previous significant events, such as pandemics, plagues and terrorist attacks, people reverted to their previous behaviours often within three to six months. The pandemic is more likely to accelerate changes that were already underway, such as online retailing, the greater use of technology and a shift towards working from home.



General survey focused on a particular sector

[Political and social trends in the future of global security. A meta-study on official perspectives in Europe and North America](#)

[Megatrends affecting science, technology and innovation](#)

[Megatrends to 2050: What better policies for better lives?](#)

[Technological change and the future of work](#)



Speculative review out to the future

[How the Economy Will Look After the Coronavirus Pandemic](#)

[NZIER – impact of Coronavirus](#)

## Distinctive public service drivers

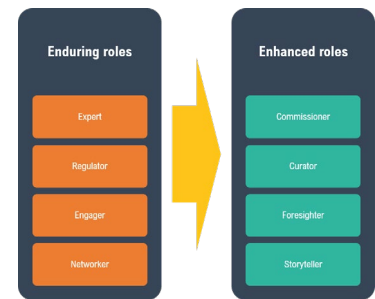
For the future public service to be fit for purpose requires both continuity and change. An [Australian study \(Dickinson & Sullivan, 2014\)](#) highlighted that current roles that will continue while new roles will need to be added.

The four enduring roles included:

1. Expert – a policy expert including providing free, frank and fearless advice
2. Regulator – oversight of functions and services
3. Engager – connecting with the community to tackle difficult challenges
4. Networker – identifying new sources of expertise and bringing people together.

The four new or enhanced roles included:

1. Commissioner – an acceleration in the shift from being service deliverers to being ‘brokers and facilitators’
2. Curator – a steward who upholds the values, culture and institutional memory
3. Fore sighter – who applies vision and imagination to strategic thinking
4. Storyteller – who can envision the future of role public services but also can communicate this effectively to a broad array of audiences.



*Fig. 4. Enduring and enhanced roles in the public workforce*

*Source: NZIER*

Drawing from a review of international academic and policy literature, a meta-study identified eight key themes:

1. Future public services will require a different set of workforce roles than in the past
2. Citizens are changing too
3. Generic skills will be as important as technical skills for future public servants
4. Ethics and values are changing as the boundaries of public service shift
5. Greater traversing of boundaries and demonstrating connection will be a key element of future public services
6. Emotional intelligence (including responding to other's emotions and managing their own personal response)



7. Perma-austerity is catalysing and inhibiting change
8. Different styles of leadership - hero leaders aren't the answer.

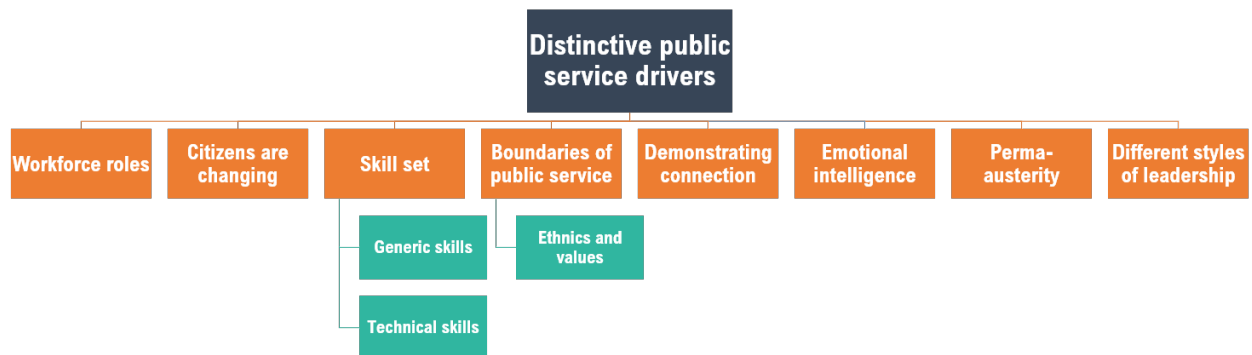


Fig. 5. Distinctive public service drivers

Source: NZIER

These international trends are highly relevant to New Zealand but how they play out domestically may differ due to unique local factors and drivers. Interviews with New Zealand practitioners focused on what success looks like in 2035 for public services:

1. Is achieving more for citizens
2. Are connected and collaborative
3. Highly professional and capable.
4. Employer of first choice.

Responding to these challenges will require a lift in the capabilities of the public work force which is discussed in the section below.



General survey focused on a particular sector

[Dickinson, H., & Sullivan, H. \(2014\). Imagining the 21st Century Public Service Workforce. Melbourne School of Government. Melbourne: The University of Melbourne.](#)

[Reimagining the Future Public Service Workforce. Helen Dickinson, Catherine Needham, Catherine Mangan, Helen Sullivan \(Eds\)](#)

[OECD Skills for a High Performing Civil Service](#)

[ANZSOG Reimagining Government](#)

## New Zealand specific factors

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### What people said:

We need to honour what made the current New Zealand – what it should have been. We need to honour that in order to go forward, otherwise we are continuing with the past where there has been a lot of grievance, a lot of disputes that are still plaguing New Zealand to this point.

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Many other local, national and regional trends interact with these megatrends. New Zealand's future will be shaped by local manifestations of globally occurring phenomena. Such forces include:

- high inward and outward **migration**, together with increasing population diversity
- the ageing population and continuing **concentration of populations in urban centres**, in particular in the Auckland region, and the coastal and peri-urban areas
- climate change
- threats to biodiversity.



General survey focused on a particular sector

[Regulatory Reform Toolkit](#)

Other influences that will contribute to New Zealand's future are unique to its heritage and geography. These influences include:

- The role of Māori as parties to the **Treaty of Waitangi** and the Crown Māori relationship post completion of the Treaty of Waitangi claims settlement process so public servants will need the relevant Te Ao Māori capabilities for the Crown to fulfil its obligations.
- New Zealand's unique geography, including the relative isolation, size, geology, the exclusive economic zone and continental shelf, so policy design and service delivery need to be tailored to local conditions.
- New Zealand's unique constitutional arrangements, including one house of Parliament, concentration of power in the central government executive which impacts on the amount of local experimentation and how learning occurs.
- New Zealand's unique role in the South Pacific with a large resident Pasifika population and Pacific people on student and work visas along with diverse Government to Government links such as Search and Rescue, Civil Aviation, internal and external security and public sector capability building.

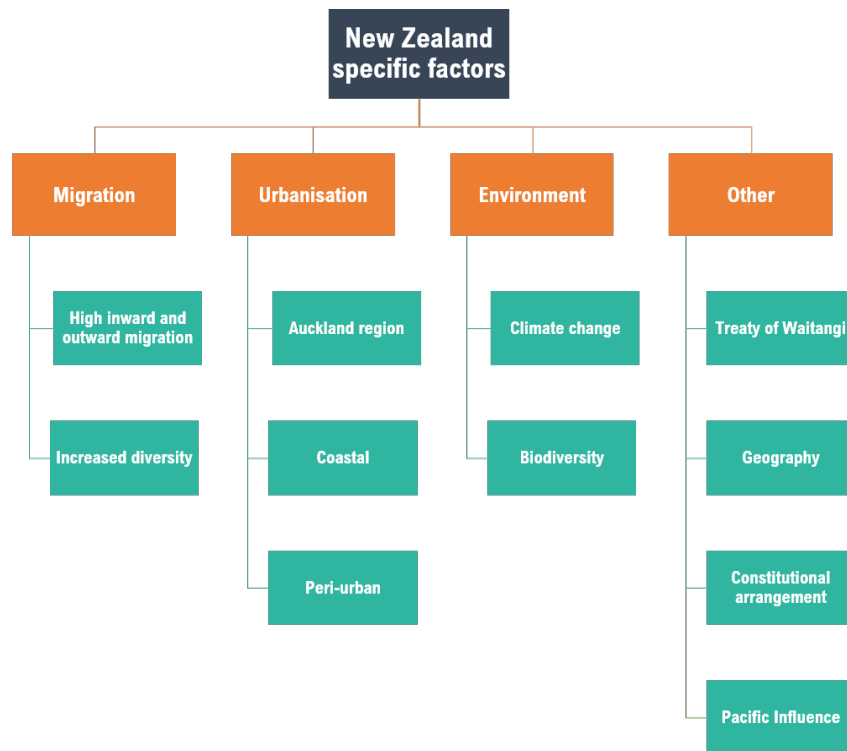


Fig. 6. New Zealand specific factors

Source: NZIER

## Demand, supply, matching, opportunities and challenges

**The world we have made, as a result of the level of thinking we have done thus far, creates problems we cannot solve at the same level of thinking at which we created them.**

Albert Einstein

When we consider the public workforce of the future there are three key considerations:

1. the workforce we require – the **demand**
2. the workforce that is available to meet that demand – the **supply**
3. the institutions to join them up – **matching**.

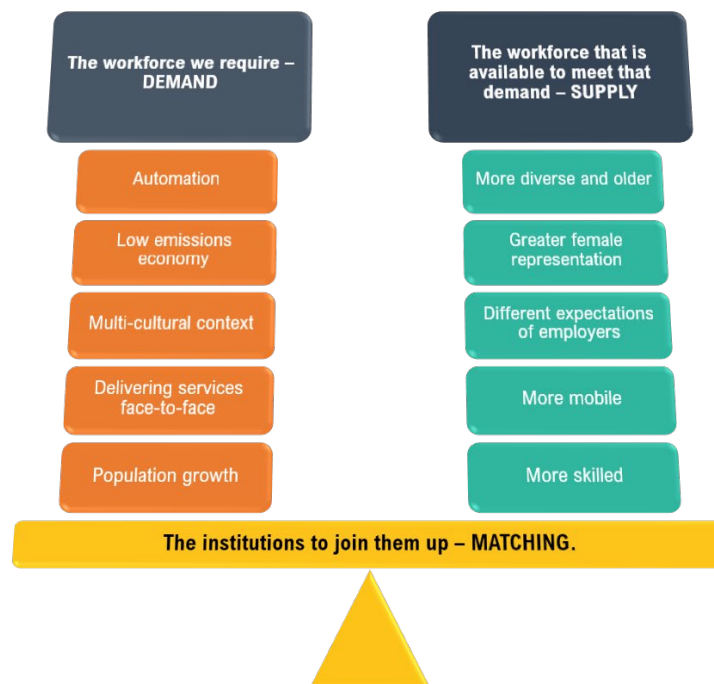


Fig. 7. Public workforce demand, supply and matching see-saw

Source: NZIER

## Workforce demand 2035

Demand for a certain type of workforce is dependent on the services the public sector provides and the choices it makes on how to provide those services. Changes in these areas are likely to see variation in the number and types of workers required by the public sector in 2035 compared to today. Given continuation of existing trends we would expect to see the following on the demand side of the workforce equation:

### **Less workers required for low-medium complexity roles as a result of automation**

*“The numbers of displaced workers are expected to increase significantly as more and more complex tasks become automatable.”* ([Future of Work Tripartite Forum Strategic Assessment: Priorities for New Zealand’s Future of Work, 2019](#))

Across the economy we are already seeing substitution of certain types of work that are easy to automate such as data collection, data processing, and doing physical work in highly structured and predictable environments. [McKinsey \(2017\)](#) estimate that about half of all the activities that people are paid to do in the world’s workforce today could potentially be automated by existing technologies. How these trends play out in the public sector are less clear as much of this work has already been outsourced. A current public example of technological substitution is the implementation of ‘Amelia,’ a conversationally intelligent cognitive agent that handles 60% of inbound calls to the Finnish tax administration, one of several examples of cognitive agents that are being deployed globally. Within New Zealand [Soul Machines](#) offers similar options. By 2035, this technology will have progressed significantly, possibly to a point where it is able to handle more cognitively complex tasks requiring what are traditionally considered to be ‘human’ capabilities.

### **Increased demand for workers to support transition to a low emissions economy**

*“The greening of our economies will create millions of jobs as we adopt sustainable practices and clean technologies, but other jobs will disappear as countries scale back their carbon- and resource-intensive industries.”* ([International Labour Organization, 2019](#))

The transition to a low emissions economy presents significant opportunity and also risk for the New Zealand economy as “a shift from the old economy to a new, low-emissions economy will be profound and widespread, transforming land use, the energy system, production methods and technology, regulatory frameworks and institutions, and business and political culture” ([Bailey and Lewis, 2018](#)).

The public sector will be a key enabler of, and contributor to, a low emissions economy. Transport energy is the one particular area where New Zealand is a poor performer. Mitigation will include increased working from home and use of E-meetings will reduce reliance on air travel. The regional footprint of agencies could change with enhanced scope for local service provision and working in hubs closer to home.

## Increased demand for workers with specific capabilities who can work in different ways

The [Institute of Public Administration New Zealand \(2018\)](#) outlined the skills and attributes they believed a public servant would need to adapt to the changes of the 21st century. Included amongst these were:

- Agility: working across the public service as increasing numbers of initiatives are delivered across the Service or by teams drawn from agencies but working independently of these agencies. Also includes constantly developing new capabilities to enable movement between roles.
- Citizen centric design: the capability to co-create solutions with stakeholders, similar to that displayed by the employees of Buurtzorg, a home care provider in the Netherlands that has significantly transformed this industry in Europe through its focus on citizen centric service provision since its inception in 2006 ([Ćirković, 2018](#)).
- Critical thinking skills that allow new situations to be evaluated quickly and effectively.
- Resilience.
- Data-savviness.
- Expertise in managing complex, multi-year, multiparty contracts

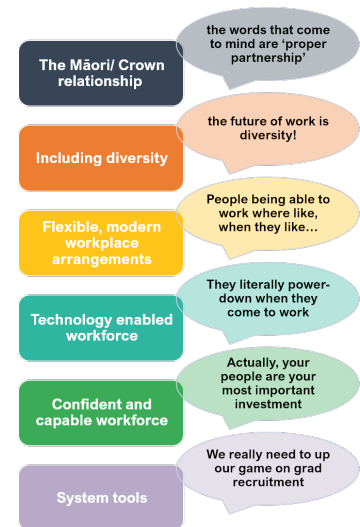


Fig. 8. Stakeholder interviews identified six change themes

Source: SSC; NZIER

Stakeholder discussion highlighted the different kinds of partnerships that would be critical for the future including the Crown Māori Relationship and more commercial partnership arrangements which will require a combination of soft skills (such as emotional intelligence) and harder technical skills (such as a sophisticated understanding of commissioning).

## Increased demand for workers to work in bi- and multi-cultural contexts

*"Public servants must have the strategic and operating skills to understand the nuance of developing effective relationships with Māori organisations, whānau, hapū and iwi. This means public servants must be competent to engage with the Māori world and demonstrate leadership practices that give effect to the Crown and Māori working in partnership together."* ([IPANZ, 2018](#))

With an increasingly diverse population and workforce, the ability to work effectively with many cultures will be important for future public servants.

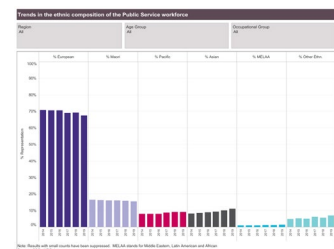


Fig. 9. Ethnic composition of New Zealand public workforce

### **Continued demand for workers delivering services face-to-face**

While more and more services become automated and delivered through digital channels and by digital agents, there will continue to be a demand for face-to-face services. With the ability to self-service transactional enquiries on-line and the introduction of cognitive agents to handle low to mid-level complexity queries, face-to-face services are likely to be related to either complex family/individual issues or queries, be in response to a choice by citizens to engage in this way, or be one method by which citizens are involved in the design and delivery of services.

### **Increased baseload demand for public services reflecting population growth**

Government's use a range of policy levers including delivering goods and services such as health and education, making transfer payments and collecting taxes, administering regulations and investing in capital equipment. Historical experience suggests that the demand for government supplied goods and services grows over time with incomes and population and this baseload demand growth is expected to continue. However, with the growth in public debt – initially following the Christchurch Earthquake sequence and then with the response to COVID-19, this growth will be constrained by competing fiscal priorities. Technology provides the opportunity for routine task to be automated allowing staff to improve how services are delivered to the public.

## Workforce supply 2035

Looking to 2035 on the supply side of the equation, there are three key considerations:

1. Will there be enough people to meet the demand?
2. Where will we get them from?
3. How do we attract and retain them?

A look at current trends impacting on workforce supply informs a response to these questions. These trends could indicate a public workforce in 2035 that:

### Is more diverse

*“New Zealand’s foreign-born population as a proportion of total population is one of the largest in the OECD, increasing from 17 percent to 28 percent from 2000 to 2014..., and contributes just over 27 percent of the current working-age population.” (Treasury, 2016)*

The last decade has seen record net migration inflows with the equivalent of the combined populations of Wellington and Lower Hutt cities migrating to New Zealand in the last 5 years alone (see Fig. 10). Historically, the bulk of migrants to New Zealand have come from Australia and Europe, but this mix is changing. In the September 2019 year, after returning New Zealand citizens, the largest number of migrants came from China, India, South Africa, Australia and the Philippines (Statistics NZ 2019). Over the next few years COVID-19 will change the immigration mix again with increasing migration from New Zealand diaspora living overseas and constraints on migration from those with work visas. At the same time the New Zealand born workforce will grow increasingly diverse as the share of Māori and Pasifika will increase.

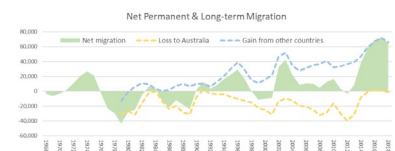


Fig. 10. Net Migration to New Zealand

Source: Stats NZ Permanent & Long-term Migration

By 2035, as the impacts of climate change are felt more deeply globally, New Zealand is likely to see increased numbers of people seeking to emigrate to New Zealand from a range of other countries. Immigration is unlikely to be a panacea, however, because of the limits of what the infrastructure and social cohesion will sustain.



## Is older

Over the last three decades there has been a change in the age structure with a steady increase in the median age of the labour force (see Fig 2 - [ILO Regional Office for Asia and the Pacific, 2019](#)). This median is expected to continue to increase as average life spans rise to the point that the majority of the population are living to at least 100 and fertility rates decline.

The increasing representation of older workers in the workforce is also driven in part by financial necessity as continued employment is required to fund longer lives. More workers will continue to participate in the labour force beyond 65, not only through choice but also as the result of financial necessity. 1 in 3 of those who reach 65 in New Zealand are still carrying financial debt. Retaining older worker in the workforce is both an opportunity but also presents the challenge of managing a multigenerational workforce.

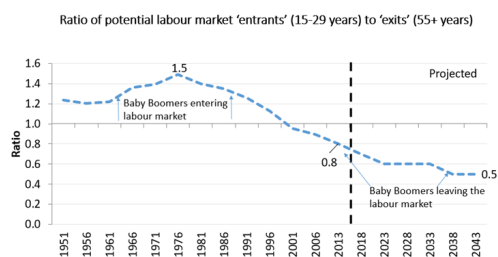


Fig. 11. Ratio workforce entrants and exits

Source: Stats NZ various years; Population projections, 2013 (base); Natalie Jackson Demographics Ltd.

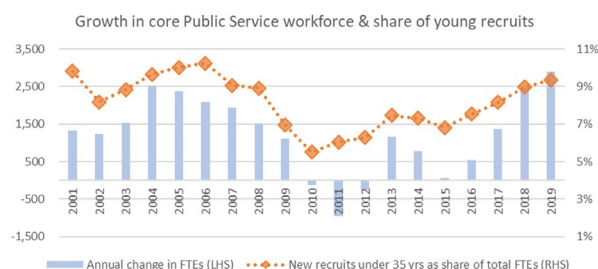


Fig. 12. Core public service workforce young recruit FTEs

Source: SSC Workforce Data

## Has greater female representation

More females are participating in the labour force at all ages, with marked increases early in careers and later in careers (see Fig 13. below). This reflects changing societal norms as organisations implement policies designed to encourage greater representation of women. Overall, the proportion of women participating in the labour force increased from 55% to 66% between 1987 and 2019 with a large increase in the proportion of women aged 25–34 over this period. The public sector already is a major employer of women.

Looking ahead there will be increasing demand for flexible work practices. These are an attractor for working parents seeking to balance the demands of working parents with family commitments, for older workers and millennials, as well as for people with cultural and other interests to meet.

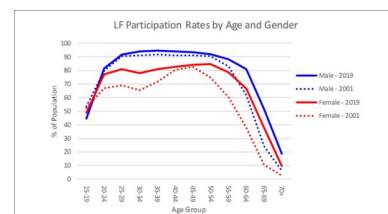


Fig. 13. Labour Force participation rates - comparison between 2001 and 2019

Source: SSC Workforce Data

## Has different expectations of employers

Those entering in the workplace will have different expectations about what should be available. These expectations include the ability to be connected with others 24/7, to access and manipulate information from any location, and to use technology seamlessly as a tool in achieving objectives.

A 2019 survey of over 4,000 respondents conducted by [Randstad](#) in New Zealand found that the top five things that employees were looking for from an employer were: 1. Salary and benefits, 2. Work/life balance, 3. Job Security, 4. Good work environment, and 5. Good training. Besides salary and benefits, the two areas that offered the greatest opportunity in creating an attractive employer brand were in enabling work/life balance and a positive work environment.



*Fig. 14. Top five survey responses for what employees were looking for from an employer - Randstad 2019*

*Source: Randstad*

In addition, the spirit of service to the public is a positive attractor for especially young people as they are highly motivated to add public value.

The public service ethos captures the intrinsic motivation to serve the public rather than the extrinsic motivation such as rewards or fear of sanctions. The challenge for the public sector is how to channel this spirit of service as there are other opportunities for young people to make a difference outside of government.

There is a lot of hype about generational differences between Boomers, Gen X, Y (also known as Millennials), Z, and Gen Alpha. While, on average, there are some generational differences such as the spirit of service, there is greater variation within a generation and significant similarity between generations. For example Jennifer Deal '[Retiring the Generation Gap](#)' (2006) found:

- Values are similar across generations, e.g. family tops the list for all generations
- All generations are uncomfortable with change, with resistance to change being a product of how much you have to gain or lose from the change.

Nevertheless, expectations around flexibility provided by employers are also shifting with increasing numbers of employees expecting the flexibility to complete their work in a way that suits them, whether this is starting and finishing at times that work for them, configuring their working hours across the working week to suit, working reduced or part-time hours, working from different locations, or looking at different ways to configure their role such as job sharing.

## Is more mobile

Loyalty to a single employer based on 'a job for life' is no longer a relevant concept. Years of significant change and restructurings at an increasing level of frequency have changed the psychological contract between employees and employers. Income security as a result of having a range of transferable and ever evolving capabilities will be a key consideration compared to an expectation that someone will have one job over a career with a single employer. Increased mobility is also reflected in the range of choices workers are exercising regarding the nature of their employment relationship with their employer. Gig workers and contractors are examples of types of employment relationships that are becoming more prevalent in some sectors as opposed to the traditional permanent employee model.

## Is more skilled

Technological change is expected to increase the demand for high skills. The moderate growth in the number of young New Zealanders can be seen in the slow growth in the number of domestic graduates. This means growth in the university pipeline will not be strong enough to meet increasing demand from public sector, unless increasing use is made of international students ([McKinsey, 2017](#)).

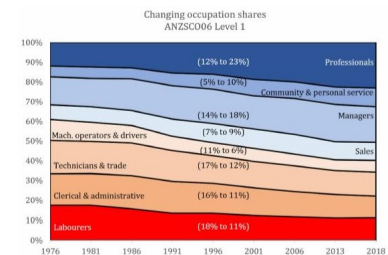


Fig. 15. Changing occupation shares, ANZSCO06 Level 1

Source: Maré D C (2019). Occupational drift in New Zealand: 1976-2018. Motu Working Paper 19-22.

## Matching supply and demand

Considering the above workforce trends, a response to the workforce supply questions posed earlier would be:

### Will there be enough people to meet the demand?

It is unlikely that there will be enough workers with the capabilities required to meet workforce demand by 2035. Prior to COVID-19, we were already experiencing shortages in a range of occupations and industries. Dropping fertility rates, and an ageing population will put pressure on our ability to have sufficient local workforce numbers to meet demand. Migration inflow can mitigate this to an extent. The adoption of technology will influence the size and nature of the gap between workforce supply and demand however by 2035 uptake is not anticipated to be enough to address worker shortage. As noted by [McKinsey \(2017\)](#), globally “...the world’s economy will actually need every erg of human labor working, in addition to the robots, to overcome demographic aging trends in both developed and developing economies...a surplus of human labor is much less likely to occur than a deficit of human labor, unless automation is deployed widely”. ([McKinsey, 2017](#))

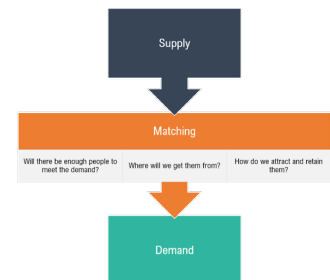


Fig 16. Matching supply and demand for the future workforce

Source: NZIER

### Where will we get them from?

Current trends would suggest a much more diverse workforce in the future. Diverse in terms of age, ethnicity, gender and generation but also generally across the labour market in terms of the nature of the employment relationships. In addition to this, the workforce will increasingly be augmented by technology. A much more agile existing workforce will also enable the ability to move people to those areas of greatest demand which in turn will lead to greater income security. If looking outside the existing workforce to meet demand, increasingly 'non-traditional' candidate pools such as migrants, gig workers, and technology vendors may need to be tapped into. Māori and Pasifika youth and disabled people are sectors of our labour force that are currently underutilised and as such are also a source of future workforce for the public sector.

### How do we attract and retain them?

Flexibility to accommodate individual circumstances through the creation of an inclusive environment and ways of working, work that is meaningful, and the income security that comes from continuous development and employment opportunities across the wider public sector will be key attractors for future workers. This will require attention along the pipeline starting with provision of early-in-careers programmes. The ability to build careers across the service will help to retain capable workers as will the opportunity to contribute to a valued purpose.



Fig 17. Workforce retention factors for future workers

Source: NZIER

# Future workforce: opportunities and challenges

Yet remarkable opportunities also summon us. Advances in technology are not only expanding choices about where and when to work, but are also creating new and better jobs. Lowering our carbon footprint offers tremendous opportunities to meet growth, development and employment needs and improve rural livelihoods .... Empowering young people to reach their full potential and access emerging opportunities will make them tomorrow’s agents of change.

International Labour Organization, 2019

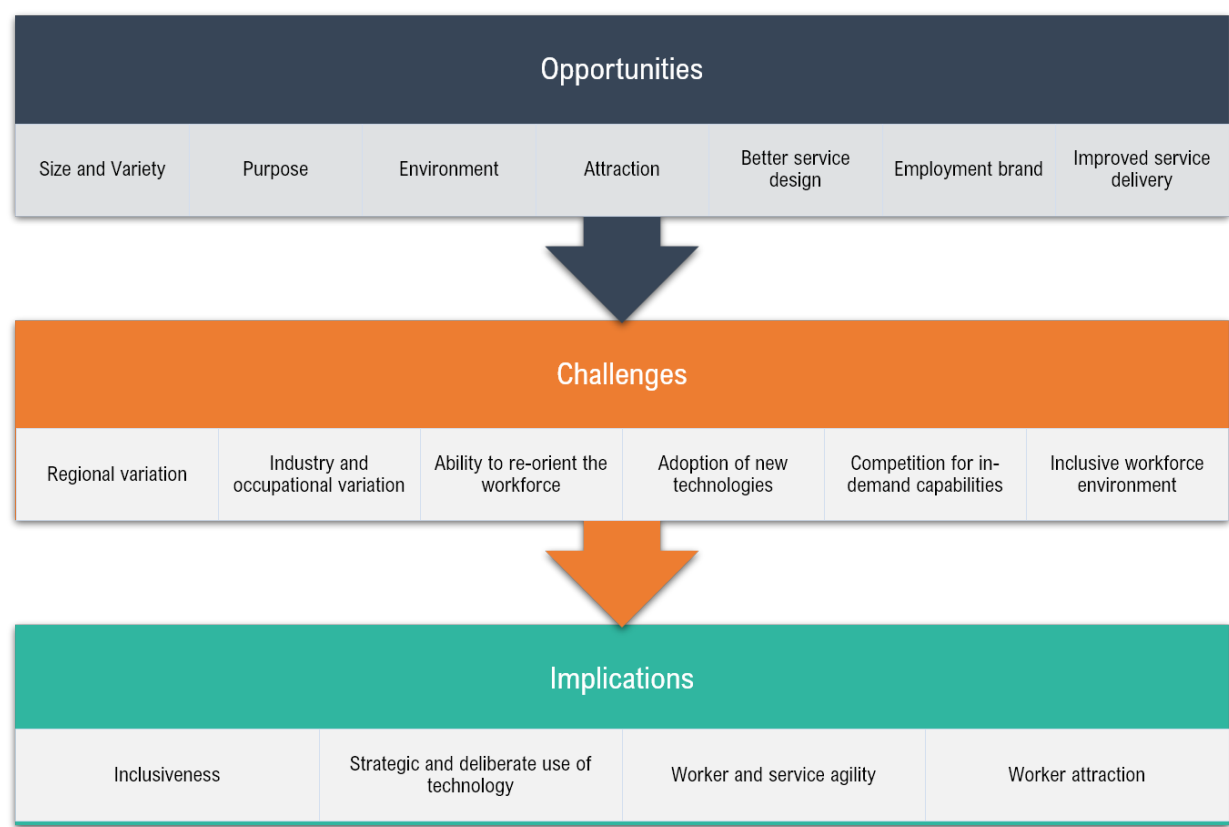


Fig. 18. Future workforce opportunities, challenges and implications

Source: NZIER

## Opportunities

The New Zealand Public Service has several advantages over other employers when competing in the workforce market.

- **Size and variety:** Its size and the variety of organisations within the public sector creates the opportunity for workers to hold multiple roles within the service during the time they participate in the labour force resulting in greater income security. Workers are also able to continuously develop through a variety of work, while greater invest in the capability of current workforce will promote a more mobile workforce and flexible career path.
- **Purpose:** As noted in the Public Service Legislation Bill, the “fundamental characteristic of the public service is acting with a spirit of service to the community.” The desire to serve and contribute to positive outcomes for the citizens of New Zealand attracts people to work for the public service.
- **Environment:** The New Zealand public sector is well regarded internationally. It is currently implementing a range of initiatives to create an inclusive environment which in turn will enhance its attractiveness as a possible employer.

The technological, demographic and social shifts taking place now offer a number of opportunities when we consider the public workforce in the future. These include:

- **Attraction:** Building attractive, inclusive and supportive workplaces will enable the public sector to tap into the increasingly diverse population. A competitive advantage as a ‘country of choice’ when it comes to sourcing skilled migrants could also assist in the attraction of future public servants.
- **Better service design:** The increasing diversity of our workforce brings with it a range of perspectives and experiences, better enabling the public sector to connect with, and design and deliver services for our citizens.
- **Employment brand:** The New Zealand Public Service is well placed to offer workplace opportunities and an environment that will develop the skills and capabilities of the current workforce and meet the expectations of future workforce participants. By its very nature, the public sector serves the community and as such appeals to an increasing number of people for whom social good is a desirable attribute in a prospective employer.
- **Improved service delivery:** Technology enables greater flexibility in delivering services to citizens including the ability to work closer to citizens through remote working technology.

## Challenges

Equally the technological, demographic and social shifts taking place now offer a number of challenges when we consider the public workforce in the future. These include:

- **Regional variation:** Demographic changes will be much more pronounced in some regions versus others which would have implications for the local public workforce, although technology provides the opportunity to moderate some of these impacts by allowing a more mobile and distributed future workforce.
- **Industry and occupational variation:** Not all public services and occupations will be impacted equally by future workforce changes. While all jobs will be impacted by technology by 2035, the extent of impact will be determined by a range of factors including the range of tasks that combine to create a role, with some roles comprised of a higher number of automatable tasks compared to others. This highlights the value of having a planned approach to understand and manage the impacts of changes.
- **Ability to re-orient** the workforce quickly to meet demand: Workforce demand will continue to change in the future. With an increasing pace of change it is likely that this demand will shift quickly. Identifying those likely changes early and enabling those in the workforce to prepare for alternative roles before exiting existing ones will contribute to full labour force participation.
- Adoption of **new technologies:** As noted previously, adoption of new technology will be dependent on a range of factors such as extensive capital investment. If the public sector is to realise the productivity gains associated with the introduction of new technology these factors will need to be managed.
- Competition for **in-demand capabilities:** The public sector is not unique when it looks to the workforce and associated capabilities it requires in the future. The government will be in a market of employers, all of whom are competing for workers with the same in-demand capabilities.
- Creating an **inclusive workforce environment:** To attract and retain capable individuals from all demographic groups, the public sector will need to create an inclusive environment in which individuals can realise their potential.

## Implications

A review of the material relating to future technological, demographic and social changes point to the following as key considerations in relation to the public workforce needed in 2035:

### Inclusiveness

The workforce is becoming increasingly diverse in terms of demographic characteristics and employment relationships. Creating a workplace environment in which someone can bring their whole self to work and be treated equitably regardless of their individual characteristics will be important to attract, retain, and get the most out of future workers. This will be especially important to the public service's ability to engage with, and

deliver outcomes that work for, diverse New Zealand communities. Having an inclusive environment is also fundamental to being able to tap into diverse candidate pools.

### **Strategic and deliberate use of technology**

Technology has the potential to address worker shortfall, create productivity gains, and create more enriching roles. It also has the potential to create disruption to the workforce. There are a number of global examples of the public services using technology to better deliver services with the likes of the Estonian e-Estonia initiative being one of the more comprehensive of these. It is important to note that to realise the benefit of the technology investment, significant investment will need to be made to upskilling and reskilling the workforce to ensure they have the capability to fully utilise new technologies and to manage job transitions.

### **Worker and service agility**

The investment in capability building, ability of individuals and the public sector to be more mobile and adapt quickly to future changes will contribute to better workforce outcomes. At an individual level, it is about continuously learning in the understanding that demand will constantly shift and that a higher level of income security will result from continuing to develop beyond the scope of a current role.

### **Securing Supply**

At a whole of public service level, securing supply will require a more deliberate approach to workforce strategy to respond to the increasingly competitive labour market environment. This will require more consistent investment in graduates and new entrants as well as different sourcing and recruitment approaches.

Understanding where the workforce of the future will come from, creating an attractive employer brand, and working with other organisations to influence career choices will be important enablers of the public sector having the workforce it requires in the future.



General survey focused on a particular sector

[Institute of Public Administration New Zealand \(2018\). The Future Public Servant in New Zealand – a discussion paper. IPANZ.](#)



Meta-studies across a range of domains

[Reflection on the Future of Work and Society International Labor Organization](#)  
[McKinsey & Company \(2019, February\). Future of work tripartite forum: evidence base on the future of work.](#)

[Future of Work Tripartite Forum Strategic Assessment \(2019\). Priorities for New Zealand's Future of Work.](#)



Speculative review out to the future

[2050: The Future of Work. Findings of an International Delphi-Study of The Millennium Project.](#)



## Future directions/conclusions – Themes questions for reflection

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**The expectations of our future workforce of us as employers and us as leaders is vastly different to how it was when we were entering the workforce.**

Anonymous interviewee

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### Which trends matter for you?

The [CIPHER](#) framework allows you to ask questions about which trends matter most to you.

**Contradictions** – Are previously correlated and associated trends now diverging?

**Inflections** – Has there been an acceleration in a trend due to a major event?

**Practices** – Are technologies changing use patterns?

**Hacks** – Are new uses being created from current technologies and are there new ways of doing things?

**Extremes** – Is there promising, far reaching exploration at a frontier?

**Rarities** – Are there outliers that could become the norm in time?

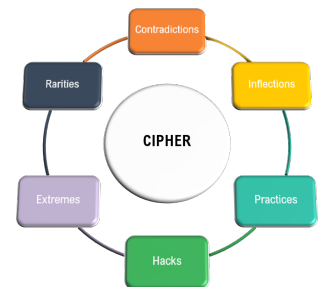


Fig. 19. CIPHER framework

Source: Future Today Institute

### The [Harvard Business Review](#) reminds us:

- Don't rely on projections but consider a range of scenarios.
- Plan for the best and prepare for the worst trajectories.
- Look past the immediate crisis. What opportunities or challenges will arise?
- Focus on consumer signals & leverage your data to calibrate insights.



Speculative review out to the future

[What Coronavirus Could Mean for the Global Economy](#)

[NZIER – impact of Coronavirus](#)