Stats NZ
Tatauranga Aotearoa

Stats NZ's Annual Report

Pūrongo ā-tau o Tatauranga Aotearoa

Mō te mutunga o te tau i te **30 o ngā rā o Pipiri 2019**

For the year ended **30 June 2019**

New Zealand Government

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Kupu whakatataki a te Kaitatau a te Kawanatanga

Introduction from the Government Statistician

Rārangi maunga, tū te ao, tū te pō.
Rārangi tāngata, ka matemate noa.
Rāranga raraunga, ka ao ka awatea – hei oranga mo te iwi.
Tihei mauriora.

E ngā mana, e ngā reo kei tēnā marae, kei tēnā hāpori, huri noa, ko Tatauranga Aotearoa tēnei e mihi kau ana ki a koutou. Tēnā koutou, tēnā koutou, tēnā koutou katoa.

To the high authorities, all languages of every marae and community, Stats NZ greets and acknowledges you all.

Ko tēnei tā mātou pūrongo-ā-tau 2018, ā, he honore kia tuku atu ia kia kite ai koutou ngā nga hua me ngā wero o te tau 2018. He nui ngā kaupapa kua tūtuki i a Tatauranga Aotearoa, otirā i roto i ngā mahi tahi ki tāngata kē hoki.

It is an honour to present our Annual Report and share with you the achievements and challenges of 2018. It is appropriate to share all that has been achieved by Stats NZ in the past year and in collaboration with others.

Engari ka kite koutou i ngā taumahatanga o te tau hoki. Whakaaweawe ana ngā mahi o te tau i te Kautetanga 2018. Mōku ake, he mea nui kia arotakehia ā mātou mahi, kia kite ai ngā hapa ka whakatikahia, kia pai ai tā mātou rautaki whakamua. Otirā kia mārama ai i ngā huarahi me ngā tikanga hou hei hoa haere.

But, you will also see that it has been a difficult year. Census 2018 dominates much of this reflection. From my perspective, it is critical to review our work, understand our errors and use these learnings to challenge ourselves to do better.

Heoi, ahakoa ngā piki me ngā heke, me mihi tonu ki a koutou kua whakapau werawera ki te āwhina, ki te tautoko a mātou mahi mo Aotearoa – mei kore koutou, kua kore hoki ngā hua i roto i te pūrongo mo te tau ki muri nei e puta ki te ao.

However, despite the successes and challenges, I want to acknowledge all of you who have worked tirelessly to help and support the work we do for Aotearoa – if not for you all, we would not be able to report on all we have done in the last year.

He nui ngā hua ka pahawa i te hurikiko, ā, ko te mahi ngātahi ki Ngāi Māori te whainga nui mo Tatauranga Aotearoa, kia whakatinana ngā mātāpono o Te Tiriti o Waitangi.

E tika ana te kōrero, "Ehara taku toa i te toa takitahi, engāri taku toa, he toa takitini".

A lot can be achieved through determination, and working in partnership with Māori will be an ongoing focus as we seek to embrace the principles (of the Treaty).

As it is said, "My strength is not that of my effort alone, but the strength of working with others".

Ko ngā mahi tatauranga kia tika
Ko ngā raraunga kia ita
Ko ngā whakataunga kia wana!

Let the statistical processes be correct
In order for the data to be secured
And the outcomes be inspiring!

Welcome to the Stats NZ 2019 annual report.

It is with mixed feelings that I present this document for the final time.

This annual report details a challenging year for Stats NZ. This time last year, we were starting to deal with the implications of the census response rate that was lower than expected, and ultimately unacceptable. I acknowledge now, as I did then, that we did not make it easy enough for everyone to take part in the 2018 Census.

Over the year, the implications of that response rate, and the causes for it, have become clear.

While I am confident that we have been able to create a dataset that will satisfy the key uses of the census – including population count, setting electoral boundaries, and informing the district health board population-based funding model – I am disappointed that we were not able to produce some important statistics for New Zealand, including iwi affiliation data and possibly some other household data.

The *Report of the Independent Review of New Zealand's 2018 Census* showed there were failings in the way we worked, and in the way we anticipated and dealt with the challenges we faced. I accept that as Chief Executive, the failings of the organisation are my own, and I apologise again, to our customers, data users, and interested parties.

The report also noted that the programme delivered important elements, such as partnering with external vendors and the development of new systems, that can and should be used as building blocks for future censuses.

We have much to learn from the census experience and from the Independent Review. The leadership team at Stats NZ is committed to ensuring that the Stats NZ of the coming year, and the Stats NZ that will deliver the 2023 Census, has learned from what worked and what did not work. The organisation will do everything it can to provide New Zealanders with the data and statistics they need.

Already, we are learning and adapting.

Creating the key census dataset would not be possible without the efforts of many people within and outside Stats NZ. During the year, we opened ourselves up to working with people in new and different ways – we ran technical workshops with experts from the public and private sector; we sought expert input from the private sector; and we collaborated with partners and information users to identify their needs and expectations, and to ensure we focused our efforts to support them. Producing a dataset that meets, and sometimes exceeds, the key requirements of a census would not be possible without the support of our partners, such as the district health boards, the Electoral Commission, Data Iwi Leaders Group, and local and national government bodies. I take this opportunity to thank them, and the devoted Stats NZ staff who made this possible.

Creating the dataset would also not be possible without the investment in building, improving, and understanding administrative data that we undertook in recent years. The census experience showed us the value of administrative data when traditional collection methods are not possible or are unsuccessful. It also showed us where the strengths, weaknesses, and gaps in administrative data lie. It reinforced the importance of ensuring that data is collected, stored, shared, and used in a secure and effective way. Through the Data Strategy and Roadmap, and our ongoing data leadership across government, Stats NZ is supporting and driving such improvements in data governance.

Stats NZ is also leading in areas where our skills and experience can add the most value to decision-making in New Zealand and contribute to the wellbeing of its people. Following the development and introduction

of the Child Poverty Reduction Act 2018, we guided our colleagues across government on the measurement of different facets of child poverty. To support and improve this, we expanded the household economic survey (HES) from around 5,000 to 20,000 households. This year, we completed the first collection of the expanded HES, and the data it produces will help New Zealand understand and address child poverty from early 2020.

It is through our collaboration that we identified new and changing customer needs, and adapted to them. We trialled new methods for understanding the accommodation-sharing sector, we brought together trade information into an accessible dashboard, and we developed a better understanding of rental prices by working with the Ministry of Business, Innovation and Employment. We also collaborated with the public, private, academic, and NGO sectors, and the public in general, to develop Ngā Tūtohu Aotearoa – Indicators Aotearoa New Zealand. The indicators go beyond economic measures, such as gross domestic product, to include measures that New Zealanders told us matter to them. The suite of measures are now publicly available, and we are working on gathering and improving the information to fill the gaps in the data that matters most to the wellbeing of New Zealand.

Leading and collaborating is becoming the new normal for Stats NZ, and it will be key to our success in the future.

That success will also require learning everything we can from the 2018 Census experience. We are already putting into place the recommendations of the Independent Review, but there is much more to do. We are working with our customers and information users, with a particular focus on iwi/Māori data needs, but we have more to learn. We are innovating to make the best use of the resources available to us, but we need to ensure that our innovations work for all New Zealand.

We will carry these lessons and this work forward into the year ahead. I am confident in the ability of Stats NZ and its staff to learn and adapt, and the commitment and drive of the whole Stats NZ team. It is this commitment and drive that gives me belief in Stats NZ and hope for the future.

And it is with belief in Stats NZ and our people that I present this annual report for 2019.

Liz MacPherson
Government Statistician, Government Chief Data Steward, and Chief Executive

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Ko wai mātou | Who we are

Stats NZ supports the social, economic, and environmental wellbeing of New Zealand by adding value to New Zealand's most important data.

We have a long history as a reliable provider of statistics. Government agencies, businesses, iwi, and many organisations and individuals in New Zealand count on us to deliver data and statistics for critical decision-making. For us, operating with fairness, impartiality, and integrity is key to maintaining high levels of trust and participation in the New Zealand data system.

Who we want to be

Our vision is to unleash the power of data to change lives. We are striving to realise this vision by working closely with our Treaty partners and stakeholders to deliver value in the data system. Our ambition is to achieve a tenfold increase in the value of the data provided to New Zealand by 2030.

Globally, national statistics offices are at a transition point from purveyors of statistics to trusted data. We are moving from 'designed' data – surveys and censuses – to greater use of administrative, transactional, and 'organic' data. In response to the changing environment and increasing criticality and focus on data, we continue to build on our traditional role as a provider of official statistics by becoming an enabler, explorer, and steward in the wider data system. We seek to achieve this change by building an organisational culture of being both reliable and pushing boundaries. This means applying caution in maintaining high standards of delivery in our core services, while seeking radically different opportunities and solutions as new data sources and demand for different statistics and data emerge. This will allow us to unleash the value of data while maintaining confidence in our delivery of key services.

Our current strategic direction is fully articulated in our 2016–20 strategic intentions, which was presented with the 2015/16 annual report. We are developing a new strategic direction for the next five years, which will outline how we will continue to adapt in our increasingly data-driven environment.

The body of this 2018/19 annual report focuses on what we learned and achieved in the past year, and the activities that contributed to achieving our strategic goal to create a tenfold increase in the value of data provided to New Zealand by 2030.

How we're getting there

To ensure that we achieve our goals, we focused on our five strategic objectives.

1. We are the recognised leader of the New Zealand data system.
2. People trust and participate in the data system.
3. We revolutionise our data, statistics, and insights to anticipate customer needs.
4. We are reliable and push boundaries.
5. We are a sustainable and efficient organisation.

We are the recognised leader of the New Zealand data system

Providing leadership on policies and practices in the New Zealand data system, with an initial focus on the public sector, is important in the rapidly changing data environment. We are fulfilling our leadership role by establishing rules and standards to support safe and trusted use of data and by being the voice of the New Zealand data system, to whom people and organisations in the data community will turn to for guidance. Fostering this leadership role requires close engagement with stakeholders and acting transparently to set an example of best practice.

We are also responding to the increased demand for data and analytics capability across the data system and are seeking to address this in our stewardship role. Creating a tenfold increase in the value of data will require greater openness and capability across the data system, and our leadership role is expanding to meet this need.

People trust and participate in the data system

It is vital that people trust and participate in the data and statistics system. We need to build trust in our organisation and public data and statistics more broadly by delivering high-quality core products and services accurately and on time. We must build trust so that New Zealanders will readily engage with Stats NZ and use data and statistics to make informed decisions. Through our stewardship role, we have a responsibility to build trust in the data system beyond our own activities.

We revolutionise our data, statistics, and insights to anticipate customer needs

It is important that we shape and deliver our products and services to ensure they are accessible and relevant to our customers' needs. We are seeking to achieve this by collaborating with customers and partners to develop and explore available data and new sources of data.

We are reliable and push boundaries

We are developing a culture in which everyone at Stats NZ is conscious of when to apply caution and when to experiment and drive for radically different opportunities and solutions. This requires consistent high-quality delivery of our core services, which supports our ability to provide the broader, fast-paced, value-adding leadership demanded by the data ecosystem.

We are a sustainable and efficient organisation

We are becoming increasingly efficient and sustainable by transforming our business model to one that is increasingly data-driven and provides a clear understanding of where our costs and efforts lie. This requires adopting a flexible operating model in which we can easily shift our focus to meet customer needs. A cultural change is needed to develop how the organisation responds to environmental changes and Government priorities, and we are working towards aligning our internal processes to achieve this.

Supporting our people

Our people are at the core of everything we do as an organisation. As we respond to the changing demands of customers and our expanding role as a data leader, it is paramount that we maintain a healthy organisational culture.

We are committed to providing a work environment that recognises and values the different skills, abilities, experiences, and ways of thinking our people bring to work.

We embedded several foundations to support this aim and to sustain a healthy and diverse organisation where we recognise that our people have lives outside work. The ways we support our people and create a positive, inclusive, safe, flexible, and creative work environment are set out below.

Diversity and inclusion

We began work on developing methods and processes that support diversity. This includes pay equity through recruitment processes and internal promotion, as well as raising awareness of different areas of diversity.

We established a Diversity and Inclusion Working Group with representatives from across the organisation in different areas and locations. The group supported and led a number of internal diversity initiatives and networks, provided advice and support to internal stakeholders, and began developing a diversity and inclusion strategy for Stats NZ.

Members of the Diversity and Inclusion Working Group in August 2018.

Lifting cultural and language competence

Our People and Culture team have been engaging across the business to develop a suite of offerings to improve Māori cultural and language competence at Stats NZ. The aim is to equip our people to partner with Māori and iwi stakeholders in their roles.

We want to provide fun and engaging tools and experiences for our people to learn and practice their te reo Māori, as well as develop their understanding of tikanga Māori and the Treaty of Waitangi.

The first stage has been the development of a mobile app to help us feel confident in using te reo Māori and when engaging with Māori. As part of this process, our waiata group in Wellington headed to a recording studio to professionally record some of their favourite waiata, including Rārangi Maunga, Stats NZ's waiata. The waiata will feature on the app when complete.

We also have one-on-one and group te reo Māori sessions. A Māori capability community of practice has been established within Stats NZ to discuss, lead, mentor, and support ongoing development of Māori capability. Their first discussion will focus on what Stats can offer through Te Wiki o te Reo Māori.

Recruitment, selecting, and promoting STEM (science, technology, engineering, and mathematics) careers

As the public sector functional lead for both data and analytics and data stewardship, we have a strong interest in identifying and addressing barriers at all stages of the talent pipeline. This includes supporting primary school teachers to promote data and analytics careers to their students, and providing opportunities for graduates and student researchers. We also guide public sector employers on hiring and developing data and analytics professionals.

Within Stats, we intend to attract more women, Māori, and Pacific people working in STEM careers, by providing an inviting and supportive workplace. This year, we focused on educating our own people leaders about how to recruit, lead, and develop employees from diverse backgrounds, with a strong emphasis on candidate care. This includes setting up talent pools to maintain engagement with prospective employees.

Employee development and promotion

We continued to develop the concept of 'peer to peer' learning groups by setting up communities of practice representing our various areas of technical expertise and business practice. The purpose of these groups is to aid collaboration and support learning.

We coordinated a cross-agency summer internship programme for data and analytics university students. We also offered two places for each intake of the Government Chief Digital Officer ICT graduate programme.

We are focusing on continuing career development for our leaders.

Flexibility and work design

We have a diverse workforce of over 1,000 people made up of technical, corporate, and field staff. Most of them work in our offices in Wellington, Christchurch, and Auckland, while the rest are field staff who work from home. Our flexible, activity-based working environment recognises the different ways we need to and like to work.

We continued to develop our agile working style. The collaborative workspaces in our offices support work and contact across different teams, encouraging a dynamic way of working. Our technology and flexi-time policies enable our staff to achieve a positive work-life balance in a way that works for them.

We consistently hear from staff that our flexibility is one of the best things about working at Stats NZ. In 2019, we were the eighth most attractive employer in New Zealand in a survey run by Randstad, with flexibility and work-life balance the most significant factors for our employees.

Remuneration, recognition, and conditions

This year we continued to apply our remuneration practices in line with our collective employment agreement with the Public Service Association (PSA), in a way that ensures we remain competitive within the public sector market. We operated robust processes for the design and sizing of jobs, with an emphasis on a gender-neutral job design. We also have processes in place to review the sizing and remuneration of roles as they evolve, or as the market moves. Living wage has been implemented to all eligible staff, and we have a gender pay working group with representatives from the business and the PSA. Our current gender pay gap is 16.7 percent. We are working with the State Services Commission (SSC) guidelines and shall continue to do so as the SSC pay equity principles continue to be developed.

Health, safety, and wellbeing

We are committed to providing a healthy and safe working environment at all Stats NZ locations and for our people in the field. A Health, Safety, and Wellbeing Governance Group, consisting of the executive leadership team and an external member, supports us in championing the health and safety of our employees.

This year, we focused on training our managers and employees on first-aid mental health. The workshops will help them identify and respond to signs of mental health problems in the workplace.

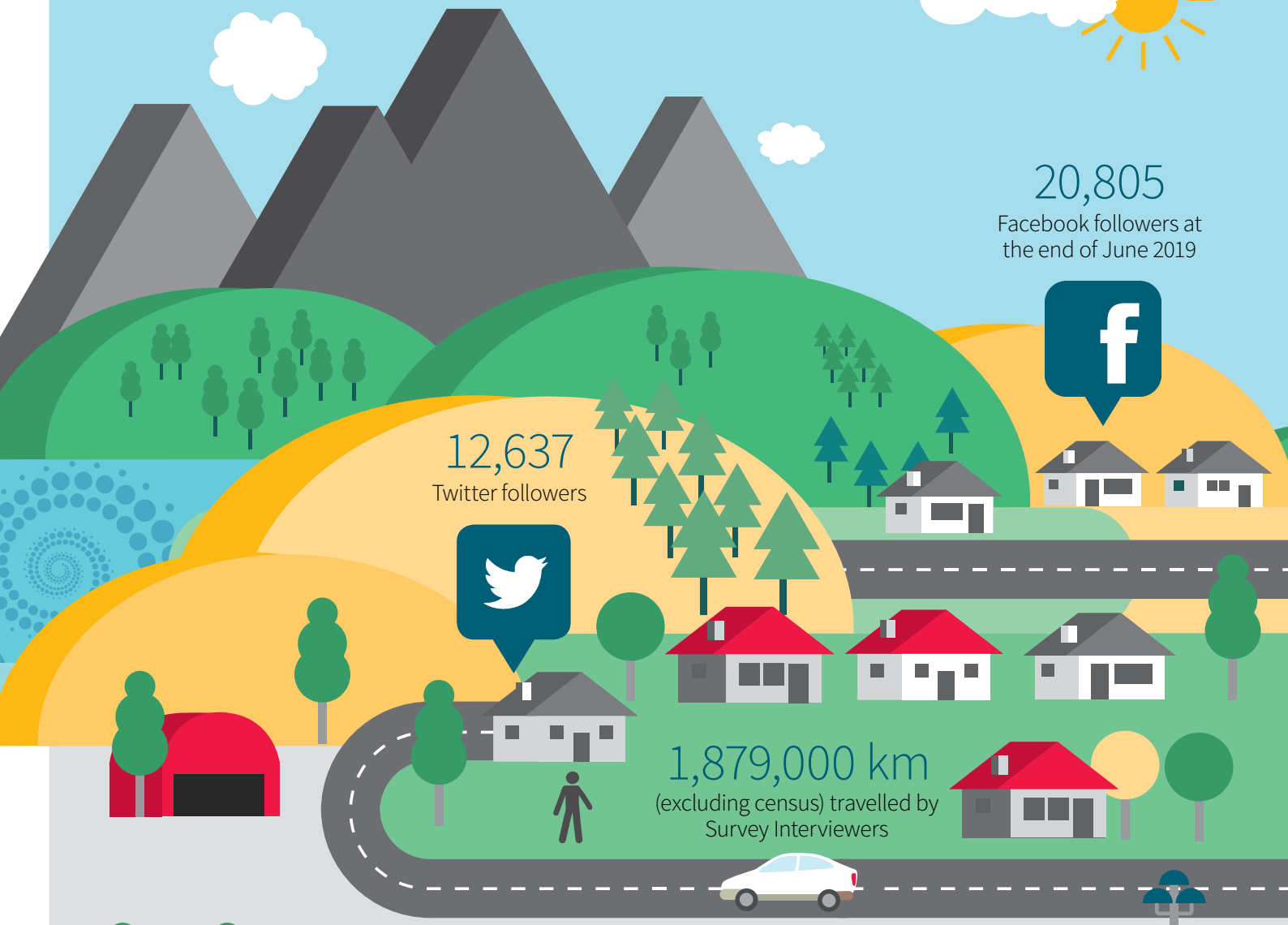
We ran health and safety in-house training workshops for employees, to provide them with the skills and knowledge to deal with work-related hazards and incidents. We also set up a reporting scheme that gives managers, who had also been trained on health and safety, the responsibility for dealing with hazards and incidents within their teams.

The safety of our field and collections staff is important to us. We continue to ensure field and collections staff are well prepared to respond to and mitigate the risks and hazards they could encounter in their work.

We completed reviewing and updating current policies and guidelines relating to the health, safety, and wellbeing of the employees we send to work overseas.

Tatauranga Aotearoa ā-tauanga Stats NZ by numbers

For the year ended 30 June 2019



20,805
Facebook followers at the end of June 2019

12,637
Twitter followers

1,879,000 km
(excluding census) travelled by Survey Interviewers

159,000
questionnaires sent, gathering approximately
132,000
responses

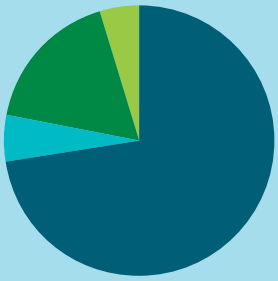
Average tenure of our staff is
8.4 years

3,379,336
visits to stats.govt.nz website

* Gender pay gap calculation differs from 2018 — now uses State Services Commission guidelines.

Stats NZ
Tatauranga Aotearoa

Ethnic mix of staff (where disclosed)

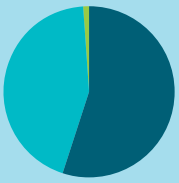


82% European
5% Māori
20% Asian
4% Pacific

1,047 staff employed across three locations

208 in Auckland
506 in Wellington
251 in Christchurch
82 other locations (field staff)

Gender breakdown



55% Female
44% Male
1% Undisclosed

Our gender pay gap* is
16.7%

41.2%
of our senior leaders are women

The 2019 Employee Experience Score as rated by staff was
67%
– up from 60% in 2018

Our staff are aged from under 20 to over 70 years

67,000
businesses and
107,000
individuals provided survey information to Stats NZ

Tatauranga 2018 | 2018 Census

Our year was dominated by the 2018 Census.

The 2018 Census saw a lower than expected level of participation, as indicated by the response rates. We spent most of 2018/19 developing methodologies for using administrative data to address gaps in census data.

In developing these methods, we used the research we began seven years ago as part of the Census Transformation programme. However, the complexity and newness of this approach has meant a significant delay for customers in accessing 2018 Census data.

The first release of 2018 Census data will be on 23 September 2019.

Using strict data safety and security protocols, we combined government administrative data with the data we collected from the census forms. Records for about 4.7 million people are now in the 2018 Census dataset, with real data about real people used to fill the gaps, after fewer people took part in the census than expected. After final data processing, the number of records is 1.4 percent (69,000) less than our best estimate of the population on 6 March 2018, census day. In 2013, the official census undercount was 2.4 percent, or 103,800 people.

The data we added to fill the gaps comes from reliable government administrative records that we hold in trust on behalf of the nation. We matched 2018 Census forms data with a file of administrative data that provided a good approximation of the New Zealand population. We also used 2013 Census data to add information about people's characteristics that are less likely to change over time.

In the final 2018 Census dataset, 89 percent of the total number of records came from 2018 Census forms and 11 percent came from other government data.

In April 2019, we confirmed the following:

- The 2018 Census dataset meets Stats NZ's quality criteria for population structure information.
- Stats NZ will use 2018 Census data to update the official population estimates and projections that many organisations use for their planning.
- The census data required for calculating the number of electorates and revising electorate boundaries are robust. Extensive testing confirmed this.
- The data needed to support the allocation of population-based funding to district health boards will be fit for this purpose.

However, we were not able to fill all the data gaps. In April 2019 we announced we would not be releasing official statistical counts of iwi, because of the level of missing iwi affiliation data, and the lack of alternative government data sources to fill the gaps. We acknowledged this was a significant loss and we are working with the Data Iwi Leaders Group, Māori interest organisations, iwi, and Māori to find real and relevant solutions.

In July 2019, we announced that the household and families data was very poor. We are currently investigating whether this data can be further improved.

During the year, the Government Statistician received advice on the 2018 Census from an independent external Data Quality Panel, comprising experts in statistical methodology design, demographic analysis, Māori and iwi data, and research using census data. The panel will publish two reports. The first will comment on overall methodology and the quality of the census data being released on 23 September. The second, which is planned for December, will focus on data quality more broadly.

The 2018 Census provided us with significant challenges and learning opportunities. The lower than expected level of participation gave us an unexpected opportunity to trial new approaches, engage more closely with our customers, stakeholders, and independent experts, and learn from the feedback we received. Our drive to recover the situation and create the best census dataset possible, has put us further along our path to modernising statistical production. We took significant steps towards building datasets using administrative data which, in future, will help reduce respondent burden and provide more integrated data. The extensive use of administrative data in the 2018 Census dataset is a significant advance for population statistics, which mirrors those we have made over the past decade in producing economic statistics.

In addition to focusing on delivering 2018 Census data, we began preparing for a 2023 Census. The design of the next census will be informed by our partnerships with Māori, our relationships with other key stakeholders and the lessons learned from internal reviews, and the findings of the *Report of the Independent Review of New Zealand's 2018 Census*[1] published in August 2019. This report found that while many aspects of the census went well, there were key components that were not successful. In particular, the reviewers concluded that weaknesses in overall governance and strategic leadership at the programme level led to a series of decisions that affected response rates. The reviewers made 16 recommendations relating to future censuses, organisational governance, programme governance and leadership, and engagement and communications. We have already made progress in implementing the report's recommendations.

2018 Census performance information

The performance measures agreed in our Estimates for 2018 Census were 'high coverage' and 'high response'. In 2016, we established specific coverage and response rate targets as part of a set of key performance indicators for the census programme. These targets, which provide a definition of 'high', were to achieve a:

- 98 percent national coverage rate
- 94 percent national response rate.

The final (or official) coverage and response rates for the 2018 Census are not yet available.

Since 1996, official census coverage and response rates have been determined using a post-enumeration survey (PES), which is run soon after census day. The 2018 PES collected data from approximately 15,000 households throughout the country. Determining the census undercount and overcount can only occur when both the final census dataset and the PES results are available for analysis. The report on the 2018 PES, which will include the official census coverage and response rates, is expected to be published in March 2020.

In the meantime, we released interim coverage rates and collection response rates. These rates are based on the best estimate of the population on census night, not the PES results.

As at 15 July 2019, the interim national coverage rate was 98.6 percent. Given this is higher than the 98 percent target, it is possible that we will achieve the performance target for national coverage.

As at 15 July 2019, the national collection response rate was either:

- 83.3 percent using the definition used in previous New Zealand censuses, based solely on the return of individual forms
- 87.5 percent using a new definition of response that aligns more closely with international practice and the data collection methodology we used in the 2018 Census. It is based on a minimum set of information from individual forms, household summary forms, and dwelling forms.

Given these interim results, it is clear that we will not achieve the performance target for national response rate.

More information about the PES, our coverage and response rates can be found on our website www.stats.govt.nz.

Our experience with the 2018 Census highlighted the need to review our performance measures for future censuses to include measures of data quality in relation to its use by customers. We will apply this learning to the measures for a 2023 Census.

1 Available from www.stats.govt.nz/reports/report-of-the-independent-review-of-new-zealands-2018-census

Table 1

2018 Census – performance information[1]

Assessment of performance by measure	2018/19	2018/19 target	2017/18	Variance to target[1]
Multi-year appropriation 2018 Census of Population and Dwellings				
National coverage rate for the 2018 Census of Population and Dwellings	Not yet available	High coverage	N/A	-
National response rate for the 2018 Census of Population and Dwellings	Not yet available	High response	N/A	-

1. These measures will be reported in the 2019/20 annual report after publication of the 2018 Census post-enumeration survey report.

Note: N/A – not applicable

Ā mātou mahi rautaki matua
Our strategic objectives

Strategic objective 1
We are the recognised leader of the New Zealand data system

Introduction

This strategic objective is about ensuring that we are best placed to guide the way for organisations working within the New Zealand data system, with a key focus on the public sector. As a leader, we must partner with others to establish system policies, practices, and standards that support the safe and trusted use of data. By being transparent in our own practices, we will demonstrate by example the value of the standards we expect from others.

When this objective is achieved, we will be the recognised organisation to turn to for advice and support on how to design data stewardship frameworks and how to support best practice. Our knowledge and understanding of emerging trends and challenges for the data ecosystem will be sector-leading and widely sought.

Government Statistician Liz MacPherson at the annual session of the United Nations Statistical Commission in New York.

Leading the data system

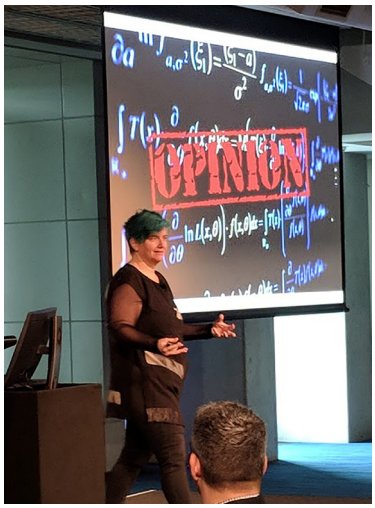
As the lead agency for New Zealand's data we provide leadership by facilitating and encouraging a collaborative approach across government – partnering with, supporting, and empowering agencies to grow their data capability and solve their data challenges. This means they can use the data they hold to inform good decision-making.

Our priority is to have good practice and capability embedded across the system while ensuring New Zealanders continue to have trust and confidence in the way their data is managed.

Launching the data strategy roadmap

At the end of 2018 we delivered a data strategy roadmap that provides focus, oversight, alignment, and a shared direction for New Zealand's data. Created through a consultation process with central and local government, business, community organisations, and non-governmental organisations (NGOs), the roadmap will initially focus on the government's role in enabling a well-functioning data system.

The roadmap will reflect ongoing work by agencies, and will be used to strengthen collaboration across four focus areas to generate maximum impact:



Cathy O'Neil, author of *Weapons of Math Destruction*, speaks at Data Summit '18.

Minister of Statistics James Shaw speaks at Data Summit '18.

- **investing** in making the right data available at the right time
- **growing** data capability and supporting good practice
- **building** partnerships within and outside government
- **implementing** open and transparent practices.

Using the roadmap will help increase visibility over what data assets are held by whom and what data we need, now and in the future, to ensure we have a clear view of data gaps and a coordinated approach on how to address them.

The strategy is supported by our Data Stewardship and Operational Data Governance frameworks, both launched this year. These strategies provide a shared direction and plan for New Zealand's data system, and a common language and understanding of data stewardship and data governance. They will help organisations and government agencies develop and embed good data practices and accountabilities.

We successfully piloted the data governance framework with Environment Canterbury, and we are exploring ways to align the framework with te ao Māori.

Hosting Data Summit '18

In September 2018 we hosted Data Summit '18, a two-day conference on informed decision-making through the ethical use of data. More than 250 data practitioners from government and the private sector discussed how to balance the tensions between data innovation and protection, to ensure New Zealanders can have trust and confidence in the way data is used. At the summit, Cathy O'Neil, author of *Weapons of math destruction: How big data increases inequality and threatens democracy*, said that algorithms are more about power than maths, and therefore when we use algorithms, we need to ask how they are going to affect people. First Nations Information Governance Centre's Jonathan Dewar discussed their perspective on data sovereignty and the challenges they face, with Professor Tahu Kukutai presenting a New Zealand view. A summary of the event is available on www.data.govt.nz.

Advising on Government data investments

In 2017 the Chief Executive of Stats NZ was designated as the Government Chief Data Steward. Ministers and government officials have sought the Chief Data Steward's view on government investment in data. We created the Data Investment Framework to guide how investment in the data system could deliver government priorities, while also building the foundations required to ensure New Zealand's data system can meet future needs. The Government Chief Data Steward is now working with both the Government Chief Digital Officer and Treasury to develop an approach for providing advice for Budget 2020.

Legislative review

A review of the Statistics Act 1975 is underway. The review aims to modernise the law governing the production of official statistics, support increased use and sharing of quality government data, and ensure the right safeguards and protections are in place (for example, to protect personal information and maintain confidentiality). Minister of Statistics Hon James Shaw launched the public consultation on the review at Data Summit '18.

More than 600 people had their say – through formal submissions and a short poll – during public consultation which closed in November 2018. Overall, the poll indicated:

- 96 percent of respondents considered it important that New Zealand have high quality official statistics that can be relied on
- 92 percent of respondents thought it important that government-held data can be safely shared and used for research and analysis to benefit New Zealanders.

Feedback will inform the development of policy that may be put into law as new data and statistics legislation. There will be further opportunity for public comment during the Select Committee process once a bill is introduced to the House.

Data ethics advisory group

A data ethics advisory group has been convened to help maximise the opportunities and benefits from new and emerging uses of data, while managing potential risk. Established in response to a recommendation in the *Algorithm assessment* report, the group will enable agencies to test ideas, policy, and proposals related to new and emerging uses of data.

Expressions of interest were sought from people with relevant expertise, who will represent one or more of the following areas:

- privacy and human rights law
- ethics
- innovative data use and data analytics
- te ao Māori
- technology
- public policy and government interests in the use of data.

We are working with the Minister of Statistics to ensure the group has the right level of visibility to provide assurance to New Zealanders that data is being used in a safe and ethical way.

The group will meet once every 6-8 weeks. The group's function and membership will be reviewed after 12 months.

Building data capability across government

Here were the most significant initiatives we worked on this year to support data capability building across government.

- **Data stocktakes** – used in several central government and local government agencies. The resulting data inventories (to be published on www.data.govt.nz) will provide transparency on the data held by agencies. The inventories will also help agencies to better manage their data assets and indicate how much more data could potentially be released as open data.
- **Data visualisation workshops** – we subsidised training sessions in Auckland, Wellington, Christchurch, and Dunedin to showcase new methods of presenting evidence for decision-making, and for telling an engaging and compelling story.

Pacific Programme team.

- **Data and Statistical Capability Framework** – we trialled a new cognitive tool with some agencies to ensure a common language is used to describe people, data, and analytic capability in relation to job roles. The framework was rolled out at Stats NZ, with discussions for implementation underway with central and local government.
- **Cultural reach indicators** – we partnered with the Ministry for Culture and Heritage to support the delivery of a framework and set of indicators to measure how New Zealanders access and participate in the government-funded cultural sector. The indicators will help the ministry gain a greater understanding of who is accessing government-funded cultural activities, and who is missing out. The indicators will also be used for reporting on cultural access and participation.
- **Data champions** – we held two half-day strategic workshops for the data champions network (senior managers from each public sector and local government agency). In the first workshop, Environment Canterbury talked about their experiences in developing a data governance approach, and how they were able to tell an easy-to-understand rates story through data visualisation, narrative, and the power of geography. In the second workshop, the Ministry of Education shared insights from a data stocktake, while we provided an overview of the draft data stewardship framework for feedback.
- **'R' code e-learning modules** – we developed several e-learning modules to support improved 'R' coding capability, a programming language used for statistical computing. The modules are used by Customs, NZ Defence Force, and the Ministry of Business, Innovation and Employment, who are progressively rolling the modules out on their website.

Pacific Programme

Stats NZ has a long-standing commitment to assist Pacific nations develop their statistical capability. We have delivered a range of products and services over the last decade to help increase sustainability through the government's Pacific Development Programme, which is funded by the Ministry of Foreign Affairs and Trade.

The Pacific Statistics Methods Board held its biannual meeting at Stats NZ's Auckland office in May 2019. The meeting focused on results from the Marshall Islands' household income and expenditure survey test, which looked at using recall (versus diary) as a future method for collecting data. If approved, the exercise will provide Pacific member countries with a modern approach for running the survey.

We hosted three Pacific Island statisticians – from Fiji, Samoa, and Tonga – for five weeks in March 2019 as part of our Pacific Annual Attachment Programme. Participants tapped into our insights and expertise to expand their knowledge on projects for their national statistics offices. The representative from Fiji Bureau of Statistics, for example, developed a GIS mapping tool, which was reviewed by Stats NZ's GIS mapping team.

We funded a workshop in New Caledonia for 18 statisticians from eight Pacific nations to help expand their survey sampling design knowledge. Sampling identifies which people (the sample) to collect survey data from.

We visited Tuvalu – our first visit in more than a decade – to provide analytical support to their statistics and customs offices to help them enhance their trade data.

New guidelines for reporting on gender pay gaps

In November 2018, Stats NZ, the State Services Commission and the Ministry for Women issued new guidelines for reporting on gender pay gaps (GPGs).

GPGs are differences in pay for groups of women and men, usually based on the median or mean pay that men and women receive. We provide an annual gender pay gap figure that allows us to see gender wage differences at the national level.

In June 2019, we reported on our GPG using the new guidelines.

The key difference from last year's methodology was the inclusion of casuals, which significantly increased the staff count in the lower pay band. We undertook this change to meet the recommendation to include casuals, where there may be a higher proportion of women.

The median GPG at Stats NZ for 2019 was 15.7 percent. This median would be 14.5 percent if it was recalculated with the previous methodology.

Much of the gap came from a higher proportion of females on lower pay bands and a higher proportion of males in senior leadership roles.

The report will inform our GPG Action Plan to address GPGs within Stats NZ, and our People and Culture team will work to develop better data capturing tools for GPG analysis.

Strategic objective 2
People trust and participate in the data system

Introduction

This strategic objective is about fostering trust and participation in the New Zealand data system, both within New Zealand and internationally. We will provide assurance that we respect people's privacy and manage their data securely so that they will readily provide information to Stats NZ and use available data to make informed decisions.

When this objective is achieved, more people and organisations in New Zealand will actively participate in our surveys and use our data to inform decisions. The Stats NZ brand will be recognised as trustworthy, open, and collaborative.

Engaging with Māori

We are committed to working with iwi and Māori to enable greater access to data and support better data outcomes.

Over the last year we continued working with the Data Iwi Leaders Group (DILG). Te Ara Takatū – the free iwi data trial established through an agreement with DILG – continued with 61 requests for customised datasets received from iwi and iwi-related groups. The trial was successful and has been extended. We also worked closely with DILG on progressing Māori data governance approaches and to understand the impact of gaps in iwi affiliation data in the 2018 Census. More formal partnership arrangements are now being established for working on future solutions.

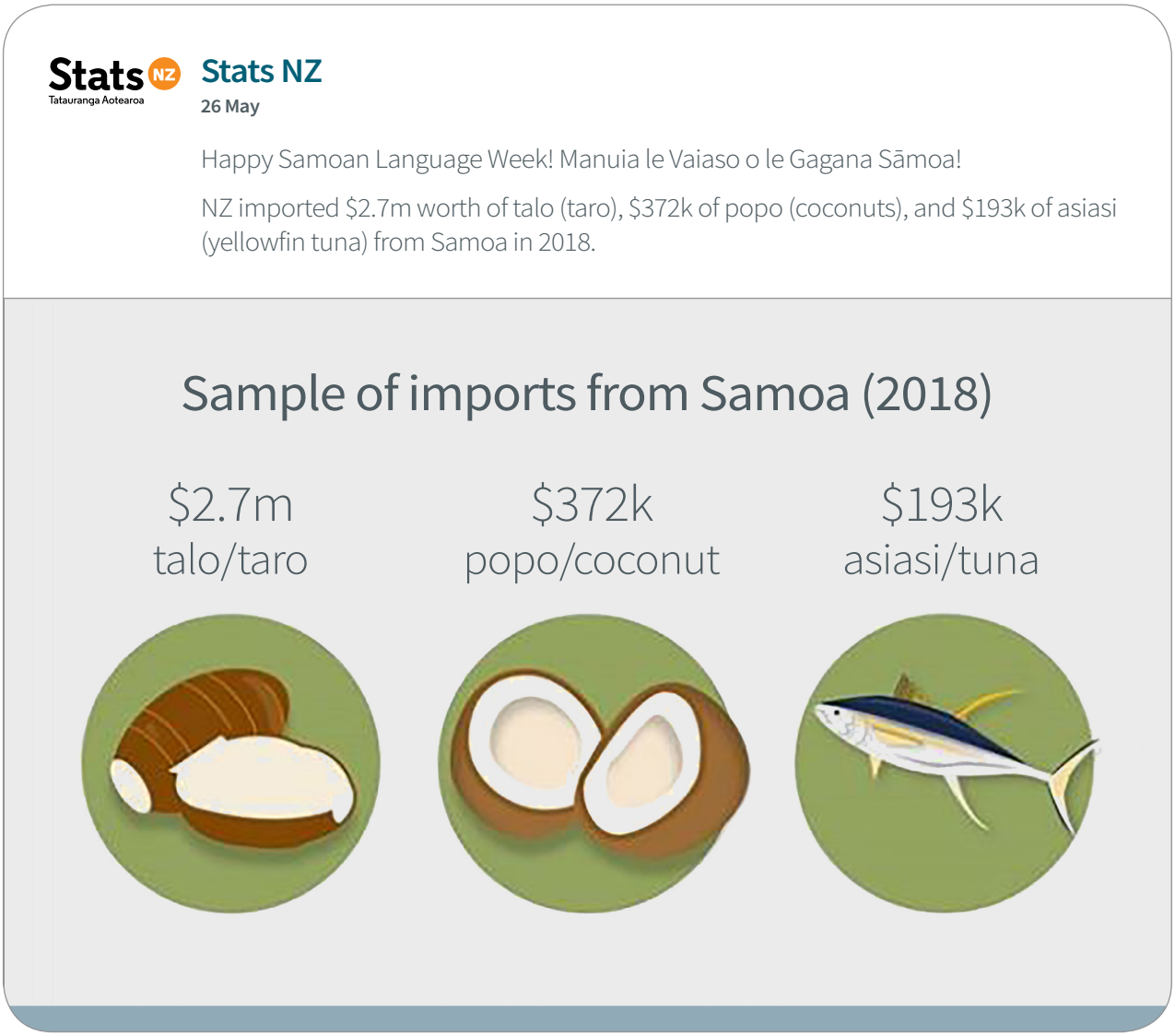
We also established a partnership with the Tūhono Trust to provide a te ao Māori lens to our wellbeing indicators work (Ngā Tūtohu Aotearoa – Indicators Aotearoa New Zealand). Tūhono is a charitable trust that offers Māori affiliation, and research and development services to over 161 authorised user organisations (iwi organisations).

We continue to work closely with iwi and Māori organisations to explore data governance frameworks, wellbeing reporting, how 2018 Census data can be used, and the design of the 2023 Census.

Tikanga framework for reviewing projects

We introduced a tikanga-based assessment framework and applied this to the integrated data review process for new projects in the Integrated Data Infrastructure (IDI) and Longitudinal Business Database (LBD). The framework ensures data will be used in an appropriate and collaborative way and that research does not disadvantage any specific population, such as Māori, Pacific people, and other ethnic groups, people with disabilities, and the homeless. For research relating specifically to Māori, we ask researchers to demonstrate what value their work will bring to iwi and Māori communities and how they work collaboratively on projects.

The project application process was the first formal application of the tikanga framework. Researchers met the requirements, answered questions, and understood why we moved to this model. This is a very positive step towards showing that the data we keep will be used in a safe and respectful way and will be from a unique Māori perspective. We want to expand the use of the tikanga framework and apply it to all minority and identifiable populations within the IDI.



Making data meaningful

Connecting with everyday New Zealanders continues to be a key objective for us. We remain focused on ensuring our content is current, relevant, and understandable to a general audience.

We continued to deliver engaging content on our Facebook page, with our followers growing to over 20,000 during 2018/19. Some of our most popular posts included comparisons of the prices of milk and cigarettes over time.

Our overseas trade data is one of the most popular sources for our Facebook posts. Trade-based posts often have large engagements (reactions, comments, and shares).

We will continue exploring different ways of engaging with the public. Next year we will focus on presenting data by city and by region and communicate specific topics to niche audiences.

Videos help demystify data work

We produced a series of short, easy-to-watch videos to explain the role of data and raise awareness of the different activities we are working on. The people leading the work talk about what they are doing, and who they are partnering with. The videos are available on www.data.govt.nz.

Paul Clarke, Senior Advisor – Te Tohu Rautaki – Angitu Māori, features in a video about partnering with Māori.

Open data

A total of 7,216 open datasets are now available on www.data.govt.nz, an increase of 1,387 in the last 12 months. More than 55 percent of these datasets come from central government, while a further 32 percent from local government. The remainder come from district health boards and Crown research institutes.

Government use of algorithms

We continued to work with the Government Chief Digital Officer in leading a cross-government programme to increase the transparency and accountability of how government uses algorithms. Algorithms are the automated decision-making processes used by computer programs to identify patterns in data.

This builds on our work with the Privacy Commissioner to develop principles that support the safe and effective use of data and analytics.

The *Algorithm assessment report*, published in October 2018 on www.data.govt.nz, reviewed existing algorithms and their uses across government. The report found that the development of algorithms by participating government agencies is well-aligned to the delivery of clear public benefit in a range of circumstances. It said that it will continue to be important to preserve human oversight and ensure the views of key stakeholders are given consideration.

The report's key recommendations included:

- publishing information to explain how algorithms inform decisions affecting people
- embedding a te ao Māori perspective into the development and use of algorithms
- establishing a group of independent experts to advise and guide agencies.

We are working on a formal Government response to the report's recommendations and are engaging across government about the next steps.

Statistical standard for sexual identity and a framework for sexual orientation

In February 2019, we introduced a statistical standard for sexual identity and a statistical framework for sexual orientation. We worked hard to meet what we know is a strong demand to record and present data on sexual identity. The introduction of the standard and the framework is an important step to ensuring all New Zealanders are represented in official statistics.

The new standard provides guidelines and classification criteria for collecting and reporting information on sexual identity. The statistical framework for sexual orientation represents an agreed way of thinking about the topic of sexual orientation. It describes the scope and components of sexual orientation and provides definitions for aspects related to the topic.

In April 2018, we ran a public consultation on the proposed standard and framework. The consultation attracted over 900 submissions, underlining the importance of this work.

The aim of this work is to make future collections more consistent and comparable. This will lead to practical benefits. For example, we know that young people belonging to sexual minorities are more likely to experience bullying and to have limited access to mental health care. To address these issues, policymakers need access to high-quality, timely, and accurate data.

Stats NZ's waiata group performs at the website launch for Ngā Tūtohu Aotearoa – Indicators Aotearoa New Zealand.

In June 2019, for the first time, we released information on the wellbeing of people of different sexual identities as part of *Wellbeing statistics 2018* – another important step towards better reflecting New Zealand's diversity in our data.

The 2019 household economic survey included a question on sexual identity, which was developed together with the statistical standard for sexual identity. The standard will be implemented across all future household surveys, including the 2020 general social survey.

Ngā Tūtohu Aotearoa – Indicators Aotearoa New Zealand

In June 2019, we released Ngā Tūtohu Aotearoa – Indicators Aotearoa New Zealand.

Ngā Tūtohu Aotearoa is a suite of social, environmental, and economic indicators showing how well we are doing as a country. They will help provide an independent and transparent picture of wellbeing and sustainable development in New Zealand

To select the indicators, it was important to have New Zealanders participate and not be driven by the availability of data. Instead, we took a wider approach in looking at what matters most to New Zealanders. We heard and considered a range of perspectives through our consultation and peer review processes, and worked with community groups, independent experts, international peers, and the government sector.

The first set of indicators includes gaps in data, and limitations in the ability to break it down to levels meaningful to different communities. However, knowing where the data gaps are helped us understand where we need to focus our efforts.

Ngā Tūtohu Aotearoa will be the data source that underpins government frameworks, such as Treasury's Living Standards Framework and Dashboard. It will support cross-government initiatives and New Zealand's international reporting requirements, such as the United Nations Sustainable Development Goals.

This is the first step on a journey. Our ongoing development of the indicators includes partnering with Māori to introduce te ao Māori perspectives. We want the indicators to be inclusive across diverse perspectives, and throughout the next year we will work with stakeholders to understand the data gaps and how they can be addressed.

Strategic objective 3

We revolutionise our data, statistics, and insights to anticipate customer needs

Introduction

This strategic objective is about achieving a radical difference in how we shape and deliver our services and products. This requires us to work on expanding the range of data sources we use, mainly by developing new digital channels. We must also focus on the accessibility and relevance of the products we deliver in order to remain relevant to our customers' evolving needs.

When we realise this objective, we will be at the forefront of change in delivering products that meet the data needs of people and organisations in New Zealand. This will be achieved by developing our knowledge and understanding of emerging trends and challenges for our customers. The products we deliver will be easily accessed, understood, and used by our customers.

Integrated data in action

The Integrated Data Infrastructure (IDI) is a large database containing de-identified information about people and households. IDI helps researchers gain evidence-informed insights, measure the effectiveness of government initiatives and services, and answer important questions about New Zealanders' lives. Our privacy, confidentiality, and security requirements balance the benefits these insights can bring while keeping data safe and protecting privacy.

The insights below, among others, generated public interest in 2018/19. They are from research using our integrated data.

Equity index

The Ministry of Education (MoE) is using data from the IDI to develop an equity index. The index will use a large selection of socio-economic factors to look at the full combination of a child's circumstances. This allows the index to provide more refined information about the distribution of socio-economic disadvantage across the New Zealand schooling system and how it affects students, schools, and communities. The index will help us understand how the system is working for children from low socio-economic backgrounds. MoE is still developing the index and assessing its potential uses for the future.

Childhood obesity

Using data from the IDI, a study showed childhood obesity rates have declined in most of New Zealand, but have remained high in some regions. Obesity rates vary between regions, with about half the differences due to the socio-economic, rural, and ethnic composition of a region. The study, part of A Better Start – National Science Challenge, found that the community in which a child lives is a strong predictor of their obesity risk.

Researchers were able to link child obesity information from the Ministry of Health's B4 School Check with other government data to obtain information about community, deprivation, and ethnicity. IDI data makes it possible to monitor trends in obesity over time in New Zealand, and highlight regions that might benefit from interventions to reduce obesity.

Pacific migrant settlement experience

Motu researchers used the longitudinal immigration survey and the IDI to examine the settlement experience of Pacific migrants. They found that Pacific migrants, although having a similar likelihood of being employed compared with non-Pacific migrants of the same sex, earned considerably lower wages. Their research showed that a limited proficiency in English and low education levels seem to trap Pacific migrants in a cycle of low-paid work.

Multi-use vaccines

This retrospective study by the University of Auckland aimed to estimate the effectiveness of the New Zealand meningococcal B vaccine, MeNZB, against gonorrhoea-associated hospitalisation. The data suggests vaccination with MeNZB significantly reduced the rate of hospitalisation from gonorrhoea, which supports previous research. Administrative datasets of demographics, customs, hospitalisation, education, income tax, and immunisation were linked using the IDI.

Internal migration flows

This project is part of the Capturing the Diversity Dividend of Aotearoa/New Zealand research programme funded by the Ministry of Business, Innovation and Employment. The project uses data from the IDI to research New Zealand's age- and ethnicity-specific internal migration patterns, and how these patterns can be used to project future trends.

Innovation in statistical products

Throughout the year we made significant innovations and improvements to ensure our statistical products continue to meet customer needs. The following examples highlight how we are adding to our core statistics or how we are changing the approaches for compiling and producing relevant statistics.

Measuring child poverty

The Child Poverty Reduction Act 2018 aims for a significant and sustained reduction in child poverty in New Zealand. The Act requires government to set 3- and 10-year targets on four primary measures, and the Government Statistician to report annually on 10 measures of child poverty.

Statistics on the economic wellbeing of New Zealanders, including children, are produced from household economic survey (HES) data. Before 2018/19, HES surveyed a random sample of between 3,000 and 5,500 households, one-third of them with dependent children. The survey provided valuable information such as overall distribution of household income and material wellbeing, and comparisons between groups. However, because of its small sample size, HES did not provide robust results on short-term changes, especially for year-on-year comparisons where more precision was required.

In 2018/19 we improved the data source for measuring child poverty. The improvements included increasing the sample size to 20,000 households, better targeting of low-income and high-deprivation households, and using income data from administration sources. The first child poverty results using these improvements will be available in early 2020.

In April 2019, we released child poverty statistics based on HES 2017/18. We partly addressed the limitations in the survey by using different data sources and methodologies. By using the IDI, we were able to increase the effective sample size by combining income data from administrative sources with data from HES and the household labour force survey. This ensured the child poverty estimates released for 2017/18 are

robust enough to use as baselines for setting 3- and 10-year targets.

It was not possible to provide further breakdowns for the estimates published in that release. We plan to publish estimates by region and ethnicity in early 2020 based on results from the larger sample of 20,000 households.

New Zealand trade dashboard

We introduced the New Zealand trade dashboard, an online tool that makes it easier to see what New Zealand buys and sells internationally. It shows export and import data for goods and services by country and commodity type, and brings this information together from various Stats NZ sources. Through the tool users can see and compare:

- key trade data by country, country group, or customised country groups
- key trade data about goods and services by product type
- two-way trade by country.

The dashboard includes an interactive map of the world – just click on any country from Afghanistan to Zimbabwe to see how much New Zealand trades with that country. The dashboard allows users to explore our trade data in new ways and make the most of this rich source of information about the economy. We worked with the Ministry of Foreign Affairs and Trade on replacing an obsolete product – Global New Zealand – with the dashboard. As a result, we are making more information available, in a more accessible format, to a wider range of users.

Accommodation and the sharing economy in New Zealand

In June 2019 we released a research paper providing an experimental view of the accommodation-sharing sector and its contribution to the economy. This is the first time this has been done in New Zealand. The paper was part of our contribution to international statistical discussions on measuring the 'digital economy'.

Digitisation has affected both New Zealand's accommodation sector and what is known as the 'sharing' economy. 'Sharing' economy, also known as platform-enabled ecommerce, is the exchange of goods and services between consumers through a digital application.

The research was as much about testing how such an estimate could be developed as it was about quantifying the size of the accommodation sharing sector. As the work involved assumptions and models, and because results had a large estimated range of between $400 million–$700 million for the year ended March 2018, the nature of this work is experimental. However, it was valuable sharing this research with customers to provide further insight into this part of the economy.

Measuring the distribution of household income and outlays

The household sector accounts provide information on annual household incomes, outlays (expenditure), and savings. However, they give combined measures only, and depict conditions for an 'average' household. Useful as they are, these statistics show a limited story about living standards. They say little about the differences between households or how available resources are distributed. This information is often critical for designing economic and social policies.

Stats NZ has been part of an international effort to develop a new range of household distributional statistics consistent with national accounts concepts and totals using existing microdata sources.

In August 2018, we released experimental data on household incomes, outlays and savings, grouping households by income, main source of income, and household-type for the March years 2007, 2010, 2013, and 2016.

The data showed:

- disposable income of households in the highest income group was about six times that of households in the lowest group
- households in the top three income groups had been dissaving throughout 2007–16, with almost all savings attributable to households belonging to the top income group.

We will continue to work on updating the series and refining the methods, with the intention of releasing the series as official statistics.

Ending statistical reliance on passenger departure cards

We worked with the Ministry of Business, Innovation and Employment and NZ Customs to remove airport departure cards by removing the statistical reliance on them.

From November 2018, people leaving New Zealand no longer needed to complete departure cards, saving 7 million travellers a combined 100,000 hours every year.

We are now using a new way of measuring migration called the outcome-based approach which is based on actual movements of travellers rather than stated intentions. This gives a more robust and accurate measure of migrant flows in and out of New Zealand. It links all arrivals and departures using passport data to create travel histories for passengers, which in turn are used to classify movements as short-term or long-term.

The Australian Bureau of Statistics adopted the outcome-based approach several years ago, and we looked to move in the same direction. The outcomes measure has flow-on benefits to population estimates and their uses, especially where accurate estimates of migration by age group or by subnational area are important.

The new measure has a lag of 17 months to generate final migration estimates. This is because the underlying '12/16-month rule' classifies travellers according to whether they spend 12 months (or more) of the following 16 months in New Zealand or overseas. We recognised that such a delay would be unacceptable to many customers, so through 2018 we developed a cutting-edge machine-learning statistical model, which provides a provisional estimate of migration.

Provisional estimates of migration become more certain over time, because with each additional month of data the model has more information about the border crossings it is trying to classify. Within five to six months of the reference period, the model can classify over 95 percent of the 14 million annual border crossings as either short-term or long-term. The model will evolve over time, with some refinements and as it learns more from the data.

Improved approach to measuring rents

We collaborated with the Ministry of Business, Innovation and Employment (MBIE) to look for a better way of measuring the change in rental prices. We now measure residential rents using rental bond data. This has two benefits: it reuses administrative data which has already been collected, and it lets us create a more accurate measure of rent in overall inflation.

Until March 2019, we measured rent prices by sending postal surveys to a sample of landlords. This was the best method available then, but now it is possible to use more complete data. Since MBIE manage the bonds held for rental properties, they can measure regional average prices based on every tenancy, not just a sample of them.

To make use of MBIE's data we needed to modernise our approach. Using the latest research on inflation measurement, we developed a new method to track rent price inflation using the administrative bond database. This means we no longer needed to run our own survey of landlords. The approach is not only more efficient but also creates a bigger dataset.

The new measure is so easy to create that we can produce it every month, not every quarter like we used to with the postal survey. The new rental price indexes will give decision-makers in government and business a more up-to-date picture of how inflation is tracking.

Housing quality framework

The Housing Quality Conceptual Framework, which we released in June 2019, gives a broad understanding of what is meant by 'housing quality'. It will be useful across the New Zealand data system and for the Ministry of Housing and Urban Development when they develop improved housing-quality statistics.

The framework defines housing quality as the degree to which housing provides a healthy, safe, secure, sustainable, and resilient environment for individuals, families, and whānau to live in and to participate within their kāinga, natural environment, and communities. It brings together and defines four interrelated elements of housing quality:

- housing habitability
- housing functionality
- environmental sustainability
- social and cultural sustainability.

Incorporating cultural values and community connections alongside physical considerations like design and construction, the framework is more people-centred, creating a more complete picture of what 'housing quality' really means to New Zealanders.

Digital Nation Domain Plan

In collaboration with MBIE, we produced the *Digital Nation Domain Plan* to help us understand and respond to the impacts of digital transformation. The plan, released in May 2018, outlines the what, when, and how of measuring digital development.

The domain plan looks at how we can improve the way information on our digital industries is collected and coordinated across the data system. This will help us build a better understanding of the way digital technologies are affecting New Zealanders. The plan sets some strategic priorities for data relating to the digital domain, and highlights four key areas for action:

- digital inclusion
- defining and valuing the digital sector
- digital security
- digital technologies and their impact.

We are now looking for new ways to partner with others and explore alternative data sources to identify how key data needs can be met.

Strategic objective 4
We are reliable and push boundaries

Introduction

This strategic objective is about developing a culture where everyone at Stats NZ is conscious of where to apply caution and when to experiment and drive for radically different opportunities and solutions. This requires our leaders to empower and coach our people to make the most of their skills and experiences.

When this objective is achieved, our core service delivery will be high quality, timely, and accurate. We will focus on maintaining this reliability as we search for opportunities to improve and expand our services, to provide greater value to our customers.

Our focus on developing a flexible work place where all our people with their diverse and varied characteristics, skills and experiences can flourish and contribute positively to our organisation is described in Supporting our People section (pp 12-13). In addition to these activities we also placed emphasis in 2018/19 on developing our culture, leadership and accountability and on establishing a future-focused Statistical Job Family.

Culture, leadership, and accountability

Investment in the capability of our people leaders continues to be a priority. We worked to further embed our adopted Coaching for Performance model that replaced our more traditional performance management process. This model contributes to creating a positive, deliberate change in our people's working lives. It is about managers helping people to unleash their own impact at work.

Statistical, Data, and Analytics job family

Our Statistical Job Family was no longer fit for purpose and did not allow us to respond to increasingly complex customer demands in our expanding role as leader of the government data system.

The review of the job family began in 2016, culminating in the development of a new Statistical, Data, and Analytics (SDA) job family, which would prepare us for the future while reflecting changes in our work as we modernise our systems and processes. Our new position descriptions better reflect the skills and capabilities we need. Alongside regular workforce planning, the new job family will enable our leaders to foster existing talent, provide clear career pathways for our people, and enable us to recruit more strategically for the skillsets we need now and in the future.

In mid-2018 we implemented the new SDA job family, which was a significant change (it affected about one-third of the organisation). Throughout the implementation process, our senior leaders consulted with the Public Service Association and ensured the implementation minimised disruption, was people-centred and fair, and maximised opportunities for staff. We will continue to embed the SDA, including skills and capability development, through 2019/20.

The role out of 'r' code e-learning modules for our statistical teams, as described on page 19, is a further example of our continued focus on empowering our technical experts.

Impacts of climate change

Relatively small changes in our climate can have big effects on our ecosystems.

CHANGES ARE ALREADY AFFECTING NEW ZEALAND

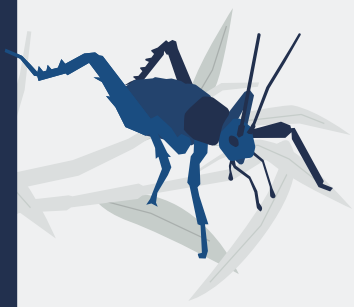
Warming land
+ 1°C
Average temperature increase, 1909–2016

Warming sea
+ 0.7°C
Average sea-surface temperature increase around New Zealand, 1909–2009

Rising sea levels
+ 14–22 cm
Varying sea-level rise around New Zealand, 1916–2016

Increasing ocean acidity
+ 7%
Increase in acidity off Otago coast, 1998–2016

Climate change affects our environment directly and intensifies the effects of other pressures.



Changing distribution
Warmer temperatures played a role in shifting the range of two wētā species in Taranaki.

Drought
The 2012–13 drought was one of the most extreme in recent history and affected the entire North Island and the west coast of the South Island. Climate change made it more likely to happen.

Shifting seasons
Hapū and whānau-based fishers observe changes in the seasons, which affect harvest times.

Flood
Sea-level rise caused more flooding during storm, 2011.

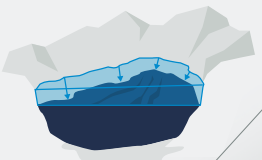
Northland

Auckland

Flood
Flooding from the highest high tide, 2016.

Taranaki

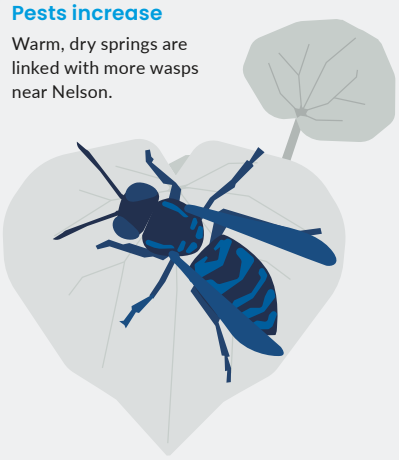
Melting glaciers
Glaciers in Southern Alps decreased 25% in ice volume, 1977–2016.



Nelson

Nelson Lakes to Pelorus Bridge

Pests increase
Warm, dry springs are linked with more wasps near Nelson.



Otago Peninsula

Warming seas
Increasing sea-surface temperatures were a factor in the reduced survival of yellow-eyed penguin.

Note: Data for this illustration is from Mattern et al (2017) and this report.

Urban pollution

Urban areas are sources of pollutants that affect ecosystems and our health. The type and amount can vary from place to place and over time.

SOURCES OF URBAN POLLUTION

Home heating

Burning wood and coal for home heating during cooler months is the main source of particulate matter in the air in our cities and towns. Burning treated timber is the primary source of arsenic in urban air.

Air particulate matter

Transport

Vehicle emissions contribute to poor air quality. Abrasion of road surfaces, tyres, and brake pads release small particles, including heavy metals into the environment. Petroleum spills and leaks contaminate land, soil, and water.

Air particulate matter
Gaseous pollutants
Heavy metals

Industry and manufacturing

Pollutants from industry vary depending on the type of industry. Burning fuels for processes or electricity pollutes the air while storage or disposal of waste can contaminate soil and waterways.

Air particulate matter
Gaseous pollutants
Heavy metals

Wastewater and stormwater

Wastewater and stormwater enter urban streams through leaky pipes, illegal connections, and consented overflows during storms. Rainwater carries pollutants through the stormwater system into the waterways.

Nutrients
Pathogens
Sediment
Heavy metals

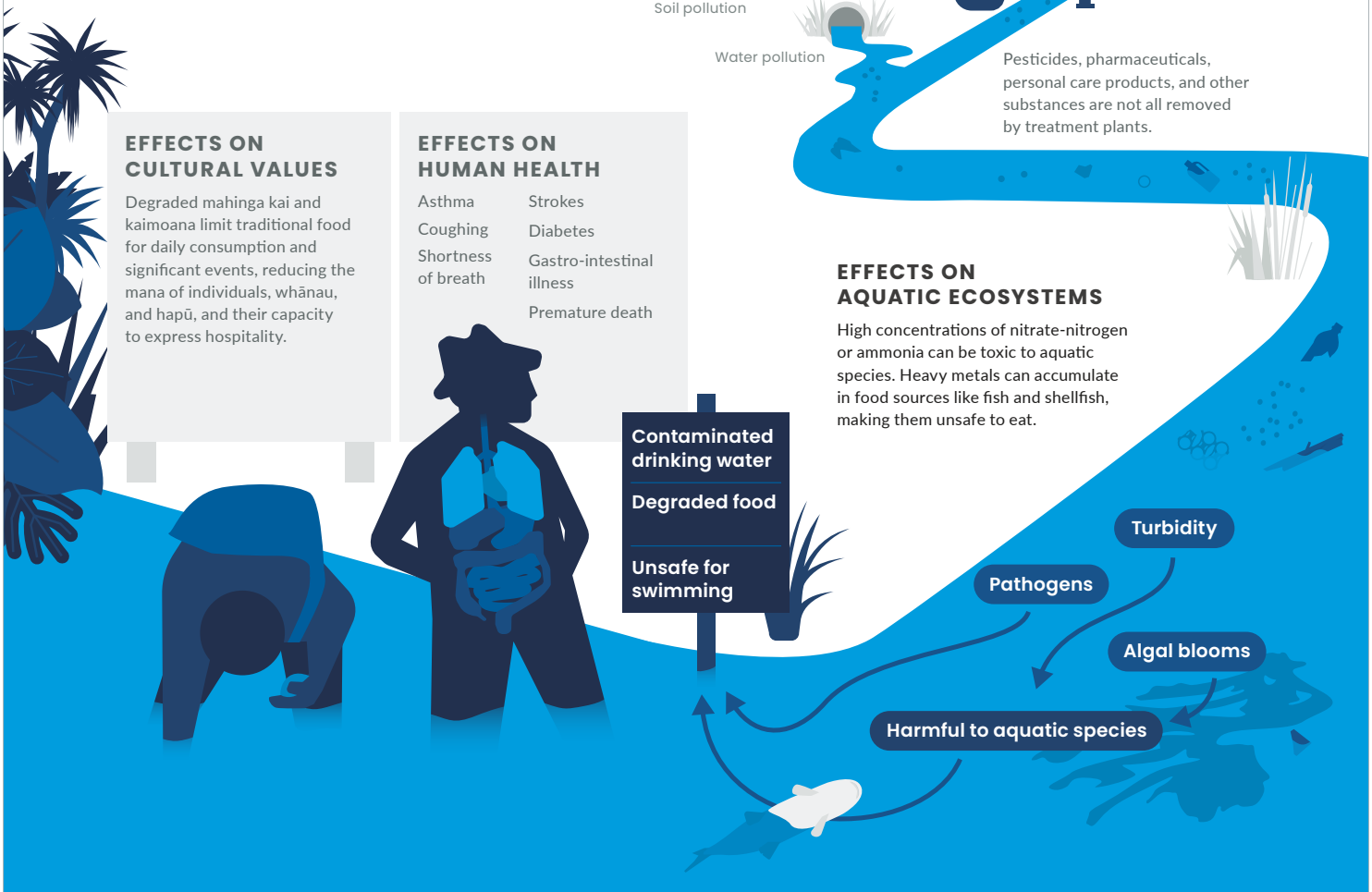
Pesticides, pharmaceuticals, personal care products, and other substances are not all removed by treatment plants.

EFFECTS ON CULTURAL VALUES

Degraded mahinga kai and kaimoana limit traditional food for daily consumption and significant events, reducing the mana of individuals, whānau, and hapū, and their capacity to express hospitality.

EFFECTS ON HUMAN HEALTH

- Asthma
- Coughing
- Shortness of breath
- Strokes
- Diabetes
- Gastro-intestinal illness
- Premature death



EFFECTS ON AQUATIC ECOSYSTEMS

High concentrations of nitrate-nitrogen or ammonia can be toxic to aquatic species. Heavy metals can accumulate in food sources like fish and shellfish, making them unsafe to eat.

Environmental reporting

In April 2019, Stats NZ and the Ministry for the Environment released *Environment Aotearoa 2019* – the first 'synthesis' report produced under the Environmental Reporting Act 2015. This collaborative report is an example of how we are shifting the way we report on different topics to reflect complexity and a system-wide perspective. The report used nine issues to tell an interconnected story about our environment. This thematic, system-level approach resulted in a true synthesis report and a platform for honest conversations and informed decisions about the future of our environment.

The report drew on 60 environmental indicators, many of which had proven to be reliable measures in previous domain reports. We revised or updated 17 indicators and one of them – nitrogen and phosphorus in fertilisers – appeared for the first time. The data and the indicators that sit behind the report provide a crucial measure of accuracy and credibility.

The strength of our environmental reporting system is putting robust, independent, rigorously checked information about the environment into the hands of decision-makers – so they can concentrate on what they need to do about it.

The report also acknowledged the need to build and expand our knowledge of the environment. We have considerable knowledge in some areas but understanding our environment as a whole – as a system – is a much bigger challenge. By continuing to improve environmental reporting, we will become better equipped to understand the effects of our actions on the environment.

Environment Aotearoa 2019 is the latest in the environment reporting series that covers the environmental domains of air, climate and atmosphere, fresh water, land, and marine. The previous report, Our air 2018, was released in October 2018 and showed that air quality in New Zealand is generally good.

Changes to the general social survey

Every two years, the general social survey (GSS) takes a snapshot of social wellbeing in New Zealand. It provides information on how New Zealanders are faring across multiple aspects, such as life satisfaction, health, social connectedness, culture and identity, and overall subjective wellbeing.

To reflect shifting needs of customers and the issues which New Zealanders are interested in better understanding, we collaborated with different organisations to extend the topics covered in the 2018 GSS. The result of this was the breadth and variety of stories and products produced.

The 2018 GSS incorporated a supplement on housing and physical environment. This included housing affordability, living behaviours, housing quality and suitability, access to key public facilities, and New Zealanders' perceptions of their natural environment.

We partnered with MBIE and BRANZ to carry out physical inspections of over 800 homes taken from the GSS sample and provide objective measures of the condition of housing in New Zealand. Combined with GSS data, this will increase our understanding of the country's housing quality and the impact this has on wellbeing.

A highlight of the 2018 GSS was the breadth and variety of stories and products produced. For the first time, the survey also included a question on sexual identity, which is an important step towards better reflecting the diversity of New Zealanders. Collecting this information allowed us to understand the different wellbeing outcomes of people with different sexual identities.

We have been thinking of ways to do things differently, and we combined data from the 2018 GSS and the survey of working life to look into the link between job satisfaction and wellbeing. We also used GSS data to measure the increase in the use of reusable shopping bags, following the Government's announcement of a plastic bag ban.

Renting vs owning in NZ

Around 1 in 3 Kiwi households rent

Dwelling suitability

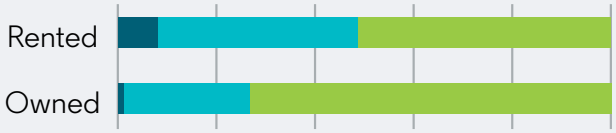
	Rented	Owned
Very suitable	31.8	50.9
Suitable	50.9	41.8
Neither suitable or unsuitable	10.2	4.6
Unsuitable /very unsuitable	7.1	2.7

Renters rate their dwelling suitability lower

Feeling the chill

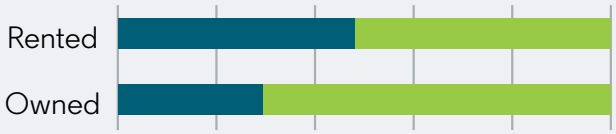
Damp:

always / sometimes / not damp



Mould:

has mould / doesn't have mould



Households in rented accommodation are more likely to live with damp, cold and mould than those living in their own home.

Can you see your breath inside?

32% of renters and

13% of owners can

We will continue to analyse GSS data and partner and collaborate with other organisations to produce further insights. In 2020 we will extend survey content to further standardise the data we collect.

A new look at population

The work of Data Ventures is one of the many ways Stats NZ is thinking differently to unlock the potential of New Zealand's data.

The Data Ventures team worked on a unique way to identify the population density of New Zealand while maintaining the privacy of the population.

Data Ventures is a data trust, which means it sits in the middle of the data chain. Data Ventures gets datasets from other organisations, turns those datasets into useful products, and sells those products – mainly to government. This led to Data Ventures' first product, Population Density, an online tool that captures the number of people who work, live, and play in a given area at a given time.

In a world first, Data Ventures worked with different mobile phone providers and pulled together their anonymised aggregated datasets. The providers gave Data Ventures access to the total number of mobile devices by suburb in New Zealand, across different time periods. Population Density can model the number of people in an area for emergency planning, identify the effects visiting populations have on an area, plan how roads, sewerage pipes, or even bus routes can be used, and see how population counts change over a season, month, or year.

Environmental-economic accounts 2019

Our *Environmental-economic accounts 2019* report was released in June. The 2019 report focused on climate change and the transition to a low-emissions economy: the pressures of emissions on the atmosphere, the likely impacts of climate change on natural resources, and the extent of economic responses to reduce emissions. This thematic approach illustrates how environmental-economic accounts can be integrated and used to inform a particular issue.

The System of Environmental-Economic Accounting, on which the accounts are based, is an internationally accepted statistical standard that specifies how environmental and economic information can be integrated coherently to form a more complete picture of New Zealand's performance in each area.

Bringing together environmental, economic, and social data creates powerful insights, which in this case enriches our understanding of New Zealand's emissions problem. Among the key findings of the 2019 report is that total emissions decreased just 0.9 percent over the 2007–17 period. Household emissions of greenhouse gases increased 19.3 percent, while industry emissions decreased 2.9 percent.

The report takes an in-depth look at how different industries are performing, contrasting their contribution to gross domestic product with their contribution to greenhouse gas emissions. This concept was visualised in an accompanying infographic [see page 36].

Emissions and the economy

Greenhouse gases emissions are a pressure on the state of the atmosphere, affecting New Zealand's climate, economy, and society. Emissions are produced by all industries in the economy, through economic activity, and by households, through transportation and other activities. The System of Environmental-Economic Accounting links environmental, economic, and social data, to give a more complete picture of New Zealand's economic and environmental performance. This infographic shows how emissions produced by industries across the economy relate to the economic activity undertaken by those same industries (as measured by GDP).
Also shown is the emissions produced by New Zealand households and visitors in relation to overall numbers.

For more information see the full report at **stats.govt.nz/information-releases/environmental-economic-accounts-2019-data-to-2017**

About the data

Industry and household emissions are based on the production of direct and gross emissions produced by an industry or household. Data are compiled according to the System of Environmental-Economic Accounting framework. Emissions are measured as kilotonnes(kt) of carbon dioxide equivalents which are the emissions of greenhouse gases weighted by their 100-year global warming potential. Other gases include nitrous oxide and fluorinated gases. Emissions data are to the year December 2017. Industries are defined by the Australia and New Zealand Standard Industrial Classification 2006 (ANZSIC06), and households on an economic residence basis. Gross domestic product is in current prices and to the year March 2017. Other manufacturing includes: Textile, leather, clothing, and footwear manufacturing; Wood and paper products manufacturing and printing; Non-metallic mineral product manufacturing; Transport equipment, machinery and equipment manufacturing; Furniture and other manufacturing.
See Environmental-economic accounts: 2019 for more detail.

Strategic objective 5
We are a sustainable and efficient organisation

Introduction

This strategic objective is about transforming our business model to one that is data-driven and that provides a transparent understanding of where our costs and efforts lie. This will require adopting a flexible operating model where we can easily shift our focus to meet customer needs.

When this objective is achieved, our processes will be optimised to make the most efficient use of technology and free up our people to add value and innovate. Our people will have the flexibility and support to focus on adding value.

Capability bid

For some time, we have faced significant rising rental and technology costs, cumulative cost pressures, and increased demand on the organisation reflecting the scarcity of data and analytics capability and capacity. Up until 2019, we continued to use unsustainable funding from fiscally neutral sources (insurance proceeds and capex / opex swaps) to fund our current work programme and meet the needs of our customers.

Without additional funding we would have needed to significantly reduce products and services, including stopping major products, reducing stewardship activities, and reducing staffing by up to 20 percent. As part of Budget 2019, we submitted a capability bid seeking to put us in a sustainable position to produce key statistics and undertake our data leadership role. Budget 2019 appropriated further multi-year funding for the Official Statistics Multi-Category Appropriation. This included an increase to baseline funding equal to $136.5 million over four years to meet cost pressures.

The Budget 2019 funding has ensured that we can continue to provide data and statistical information services. This includes maintaining the production of official statistics to deliver on priority needs, including the expanded household economic survey programme for measuring child poverty, and the stewardship of government data and statistical activities to fulfil Stats NZ's data stewardship role.

Quality of government data

Data content standards establish consistent ways for describing and recording data. This consistency is vital to ensuring data is easy to collect, share, integrate, manage, analyse, and reuse. A group comprising standards development experts from across government gave feedback on three data content standards, which are now in the approval process. We want to ensure the quality of government data continuously improves so it becomes a valuable enduring resource for New Zealand.

Achieving this will drive consistency of practice across the organisation, provide clarity for our people and give additional confidence to our customers.

Accommodation changes

Over the past year we have made progress on ensuring we have the right environment to support our work practices and culture.

Our vision of a flexible and agile workforce will be supported by a physical environment that facilitates collaboration, flexibility and transparency.

With support from the Government Property Group (GPG), we went to the property market to find a new home for our Wellington staff from April 2021. The procurement process

led us to select 8 Willis Street as our preferred site. We worked with GPG to identify agencies potentially interested in co-locating, with the idea appealing to the Ministry for the Environment (MfE). This resulted in Stats NZ and MfE negotiating a lease on the entire building. Our negotiations were supported by independent legal, structural, engineering, architectural, and property valuation experts.

In April 2019 our Auckland operations relocated a few hundred metres up the road from 48 to 80 Greys Avenue. The new building provides a fit-for-purpose working environment for our Auckland teams.

Our Christchurch teams continue to enjoy sharing with seven other government agencies in our Christchurch premises.

Flexibility and resiliency through technology

This year we completed the Information Technology as a Service (ITaaS) programme. Moving to a modern delivery model allows for greater transparency, mobility, and flexibility for our people and supports our business continuity and resiliency.

Data centres and infrastructure

All IT services are now operating out of cloud environments, with two onshore data centres and one in Sydney. Given the volatile nature of New Zealand's physical environment, this is essential for resilience.

To ensure these centres are always available and are resilient, we have production and disaster recovery servers operating out of geographically separated Infrastructure as a Service (IaaS) data centres:

- production servers will operate out of an Auckland-based centre
- disaster recovery servers will operate out of a Wellington-based centre.

We also located production services in a separate physical location from ICT staff. This eliminates the risks associated when staff and the systems they manage are in the same location, significantly reducing our risk in case of disaster.

Network and telecommunications

We migrated all network and telecommunication services to Telecommunications as a Service (TaaS). Our people now have unified communications, with email, messaging, and voice capabilities available across mobile and desktop platforms. This means staff can do many of their work activities while at home or on the move.

All Stats NZ buildings now operate a wireless-as-a-primary-network capability, enabling mobility for staff and shared occupancy support. Employees now have more choice about where and how they do their work, with improved network connectivity when travelling within and outside our buildings.

Desktop and collaboration

We migrated all desktop services to Desktop as a Service, and staff can work either via a mobile device or a virtual desktop from any device, in any location.

Several collaboration tools are also available for staff, providing ways for our people to work together from different locations, reducing the need for co-location and travel.

IT service management

We updated internal and vendor management capabilities, processes, and practices to ensure we gain the full value of ITaaS. This includes managing costs well, ensuring alignment to business outcomes, and allowing a culture of continuous improvement.

Independent security oversight

The use of all-of-government common capabilities has enabled us to leverage the increased independent security oversight provided by the Government Chief Digital Officer, through their certification programme. This provides additional assurance that the necessary security controls are in place to protect data. By applying these assurance activities for the all-of-government collective good, we gain insights into our security that would be financially unsustainable if we were to deliver it alone.

Ngā inenga whakatutukinga ki ngā rironga pūtea
Appropriation performance measures

This section reports on the appropriation performance measures of Stats NZ for the year ended 30 June 2019[1].

Data Futures Partnership performance measure

Appropriation

This appropriation is limited to enabling the activities of the Data Futures Partnership. It is intended to achieve the continued support of the independent, cross-sector Data Futures Partnership to ensure New Zealand's data is used effectively to create social and economic value for all New Zealanders. In 2017, Ministers decided that the initiative should be discontinued. The partnership ended in 2018/19.

How we measure our success

The Data Futures Partnership finalised their *Guidelines for data governance* and *Trusted Data Use Guidelines*, which have been delivered to the satisfaction of responsible Ministers.

Table 2

Data Futures Partnership – performance information

Assessment of performance by measure	2018/19 result	2018/19 target	2017/18 result	Variance to target
Appropriation enabling the activities of the Data Futures Partnership				
The work plan of the Data Futures Partnership is delivered to the satisfaction of responsible Ministers	Achieved	Achieved	Not measured 2017/18	No variance

1. 2018 Census of population and dwellings multi-year appropriation measures are included in the 2018 Census section on pages 15–16.

Official statistics multi-category appropriation performance measures

The overarching purpose of this appropriation is to ensure the availability, and promote the use of, the highest priority data and official statistical information to add value to decision-making.

This appropriation is broken down into three categories:

Official statistics

This category is intended to achieve the outcome of empowering decision-makers by adding value to New Zealand's most important data.

Data and statistical information services which includes two aspects:

- Economic and business data and statistical information services
  This category is limited to the delivery of data and statistical information services relating to business and the economy.
- Population, social, and labour market data and statistical information services
  This category is limited to delivery of data and statistical information services relating to the population, environment, household economics, social conditions, and the labour market.

Stewardship of government data and statistical activities

This category is limited to the coordination of statistical and data services for government through leadership of the Official Statistics System, oversight of the IDI, liaison with partners and customers, provision of ministerial services, statistical and data management advice, and the operation of access channels.

Official statistics category

These performance measures are intended to achieve the outcome of empowering decision-makers by adding value to New Zealand's most important data.

How we measure our success

At the end of June 2019, the percentage of positive responses by customers who were asked if they could find what they were looking for on our website was 40 percent. This represents a 6 percent increase compared with last year, but remains below our target. This measure of the ease of navigating our website, as well as the measure of customers' awareness of the available data (which was 11 percent lower than our target of 668,000), were affected by the process of rolling out our new website and a transition period which required customers to navigate our new and archived websites. We identified two areas to make significant progress: information architecture and data tools. We are in the early stages of defining a roadmap to give customers a better journey to finding the information they are looking for.

Stats NZ uses a qualitative survey to understand customers' use of data to inform two of the measures below. This year we interviewed nine organisations, all of which reported that they use Stats NZ data to make informed decisions. Five of these organisations also reported their use of Stats NZ data to make evidence-based decisions had increased compare with the previous year. These positive results indicate the continued value customers place on the data we provide.

Table 3

Official statistics – performance information

Assessment of performance by measure	2018/19	2018/19 target	2017/18	Variance to target result
The percentage of Stats NZ's published data available at a 5-star open data standard	96%	96%	96%	No variance
The percentage of customers that perceive statistics help them make informed decisions	100%	85%[1]	83%	15%
The percentage of Stats NZ's key customers that report increasing use of data from Stats NZ to make evidence-based decisions	56%	20%[1]	33%	36%
The number of customers who are aware of available data	594,321	668,000[2]	159,025[3]	-73,679 (-11%)
The percentage of positive responses to the pop-up question on Stats NZ's website 'did you find what you were looking for?'	40%	80%	34%	-40%

1. The baseline was used internally as the measure was still being tested when the 2018/19 performance measures were confirmed.
2. This result is the number of direct website sessions measured using Google Analytics.
3. This result covers direct website sessions between April and June 2018 only.

Economic and business data and statistical information services; and population, social, and labour market data, and statistical information services category

These performance measures are intended to achieve statistical releases that are free of significant errors, meet response and release dates, excluding census.

How we measure our success

The achievements below reflect our focus on ensuring Tier 1 and other key statistics are produced and released reliably. The achievement of these performance measures reflects our commitment to ensuring that customers can rely on the quality of our statistics and know that they will be delivered consistently when expected.

We successfully put eight business surveys online, four more than anticipated. Businesses liked the online mode and chose it where it was offered. This is reflected by the increase in the number businesses choosing to provide data digitally, which grew from 25.6 percent in 2017/18 to 34 percent, exceeding our target of 25 percent. Online surveys reduce collection costs for respondents and Stats NZ and enable our teams to start working with the data much earlier.

In contrast, no progress was made to shift our population-based surveys online. We reprioritised our activities to meet government priorities and 2018 Census requirements, resulting in this area of work being postponed for the future.

Table 4

Data and statistical information services – performance information

Assessment of performance by measure	2018/19	2018/19 target	2017/18	Variance to target result
Ensure the right statistical information is produced by the Official Statistics System to better support decision-making and understanding	Achieved	Maintain the number of Tier 1 stats	Achieved	No variance
Multi-category appropriation – Economic and business data and statistical information services				
Number of statistical releases: economic and business data and statistical information services	140	136	133	4 (3%)[1]
Percentage of statistical releases that are free from significant errors	100%	99%	100%	1%
Percentage of statistical releases published on the advertised date as agreed with the Minister of Statistics in Output Plan	100%	100%	100%	No variance
Number of and percentage of Stats NZ-run surveys that are completed online – economic and business data	8 (23%)	4 (11%)	4 (11%)	4 (100%)[1]
Number of and percentage of businesses that chose to provide Stats NZ data in digital format – economic and business data	55,714 (34%)	45,234 (25%)	44,156 (25.6%)	10,480 (23%)[1]
Multi-category appropriation – Population, social, labour market data, and statistical information services				
Number of statistical releases: population, social, labour market data, and statistical information services	69	70	71	-1 (-1.4%)[1]
Percentage of statistical releases that are free from significant errors	100%	99%	100%	1%
Percentage of statistical releases published on the advertised date as agreed with the Minister of Statistics in Output Plan	100%	100%	100%	No variance
Number of and percentage of households and individuals that chose to provide Stats NZ data in digital format – population, social, and labour market data	0%	0%	0%	No variance
Number of and percentage of Stats NZ surveys that are completed online – population, social, and labour market data	0%	0%	0%	No variance

1. The result percentages were calculated using the result numbers.

Stewardship of government data and statistical activities category

These performance measures are intended to achieve leadership of the New Zealand data ecosystem and facilitate awareness and use of statistical information.

How we measure our success

There were 90 submissions to the Minister, including briefings, aide memoires, and memorandums. Of these, 89 were within the agreed timeframes, a 9 percent increase compared with 2017/18.

Social licence means that to manage the public's data, they need to have trust in, and an understanding of, what we do. The results suggest New Zealanders still have a good level of trust in Stats NZ. The proportion of people who had a high level of trust in Stats NZ fell 6.6 percent compared with 2017/18, while the proportion of those who had no trust in Stats NZ fell 0.9 percent compared with 2017/18. Only 1 in 4 said they know what we do.

A focus area for the year was ensuring the technical infrastructure of the IDI is adequate. This will support growth in the use of the IDI and enable us to provide more data to customers, faster – in line with our strategy for the future for the IDI. This focus is reflected by our performance on the two measures which relate to the IDI. At the end of June 2019, the number of customers accessing microdata was 745, which reflects stabilised growth and an increase in customers' ability to self-service. This increased use of IDI self-service led in part to the reduced number of requests for customised data in 2018/19 – 60 percent less than anticipated. A second factor which has influenced this measure has been the delay in the release of 2018 Census and delay in the higher number of requests that would have followed.

Table 5

Stewardship of government data and statistical activities – performance information

Assessment of performance by measure	2018/19	2018/19 target	2017/18	Variance to target result
Multi-category appropriation – Stewardship of government data and statistical activities This category is intended to achieve leadership of the New Zealand data ecosystem and to facilitate awareness and use of statistical information.				
Percentage of briefings submitted to the Minister within agreed timeframes	99%	90%	90%	9%
Percentage of responses to parliamentary questions submitted to the Minister within required timeframes	100%	100%	100%	No variance
Percentage of responses to departmental Official Information Act requests sent within statutory timeframes	100%	100%	100%	No variance
Social licence: Stats NZ maintains the support of its stakeholders as a trusted steward of the New Zealand's data and information	85%	85%[1]	85%	No variance
Requests for customised data	476	800–900	735	-374[2] (-44%)
Number of users accessing microdata	745	600	737	145 (24%)

1. The baseline was used internally as the measure was still being tested when the 2018/19 performance measures were confirmed.
2. Variance calculated using target of 850 requests.

Services to other agencies and capital expenditure measures

Appropriation

The services to other agencies appropriation is intended to achieve the provision of shared services with other government agencies for the efficient and effective management of the Crown estate, such as the provision of shared accommodation in Christchurch and Wellington.

The capital expenditure appropriation is intended to invest in the renewal, upgrade, and redesign of assets that support the delivery of Stats NZ's services, including delivery of the 2018 Census.

How we measure our success

The non-financial performance measures reported in table 6 relate to the services to other agencies revenue dependent appropriation, and the capital expenditure appropriation.

Table 6

Services to other agencies and capital expenditure – performance information

Appropriation / Assessment of performance by measure	2018/19 result	2018/19 target	2017/18	Variance to target
Appropriation – services to other agencies revenue dependent appreciation (RDA) (M67) This appropriation is limited to the provision of services by Stats NZ to other agencies, where those services are not within the scope of another departmental output expense appropriation in Vote Statistics.				
Support the provision of shared services with other government agencies	Achieved	Achieved	Achieved	No variance
Appropriation – capital expenditure permanent legislative authority (PLA) (M67) This appropriation is limited the purchase or development of assets by, and for the use of, Stats NZ, as authorised by section 24(1) of the Public Finance Act 1989.				
Deliver infrastructure that supports our strategic vision and business	Achieved	Achieved	Achieved	No variance

Tauākī takohanga
Statement of responsibility

For the year ended 30 June 2019

I am responsible, as Chief Executive of Stats NZ, for:

- the preparation of Stats NZ's financial statements, and statements of expenses and capital expenditure, and for the judgements expressed in them
- having in place a system of internal control designed to provide reasonable assurance as to the integrity and reliability of financial reporting
- ensuring that end-of-year performance information on each appropriation administered by Stats NZ is provided in accordance with sections 19A to 19C of the Public Finance Act 1989, whether or not that information is included in this annual report; and
- the accuracy of any end-of-year performance information prepared by Stats NZ, whether or not that information is included in the annual report.

In my opinion:

- the financial statements fairly reflect the financial position of Stats NZ as at 30 June 2019 and its operation for the year ended on that date; and
- the forecast financial statements fairly reflect the forecast financial position of Stats NZ as at 30 June 2020 and its operations for the year ending on that date.

Liz MacPherson

Government Statistician and Chief Executive
30 September 2019

AUDIT NEW ZEALAND
Mana Arotake Aotearoa

Te Pūrongo a te Kaiarotake Tū Motuhake
Independent auditor's report

To the readers of Statistics New Zealand's annual report for the year ended 30 June 2019

The Auditor-General is the auditor of Statistics New Zealand (the Department). The Auditor-General has appointed me, Jacques Coetzee, using the staff and resources of Audit New Zealand, to carry out, on his behalf, the audit of:

- the financial statements of the Department on pages 54 to 85, that comprise the statement of financial position, statement of commitments, statement of contingent liabilities and contingent assets as at 30 June 2019, the statement of comprehensive revenue and expense, statement of changes in equity, and statement of cash flows for the year ended on that date and the notes to the financial statements that include accounting policies and other explanatory information;
- the performance information prepared by the Department for the year ended 30 June 2019 on pages 14 to 47 and 89 to 93; and
- the statements of expenses and capital expenditure of the Department for the year ended 30 June 2019 on pages 86 to 88.

Opinion

In our opinion:

- the financial statements of the Department on pages 54 to 85:
  - » present fairly, in all material respects:
    - its financial position as at 30 June 2019; and
    - its financial performance and cash flows for the year ended on that date; and
  - » comply with generally accepted accounting practice in New Zealand in accordance with Public Benefit Entity Reporting Standards.
- the performance information of the Department on pages 14 to 47 and 89 to 93:
  - » presents fairly, in all material respects, for the year ended 30 June 2019:
    - what has been achieved with the appropriation; and
    - the actual expenses or capital expenditure incurred compared with the appropriated or forecast expenses or capital expenditure; and
  - » complies with generally accepted accounting practice in New Zealand.
- The statements of expenses and capital expenditure of the Department on pages 86 to 88 are presented fairly, in all material respects, in accordance with the requirements of section 45A of the Public Finance Act 1989.

Our audit was completed on 30 September 2019. This is the date at which our opinion is expressed.

The basis for our opinion is explained below. In addition, we outline the responsibilities of the Government Statistician and our responsibilities relating to the information to be audited, we comment on other information, and we explain our independence.

Basis for our opinion

We carried out our audit in accordance with the Auditor-General's Auditing Standards, which incorporate the Professional and Ethical Standards and the International Standards on Auditing (New Zealand) issued by the New Zealand Auditing and Assurance Standards Board. Our responsibilities under those standards are further described in the Responsibilities of the auditor section of our report.

We have fulfilled our responsibilities in accordance with the Auditor-General's Auditing Standards.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of the Government Statistician for the information to be audited

The Government Statistician is responsible on behalf of the Department for preparing:

- Financial statements that present fairly the Department's financial position, financial performance, and its cash flows, and that comply with generally accepted accounting practice in New Zealand.
- Performance information that presents fairly what has been achieved with each appropriation, the expenditure incurred as compared with expenditure expected to be incurred, and that complies with generally accepted accounting practice in New Zealand.
- Statements of expenses and capital expenditure of the Department that are presented fairly, in accordance with the requirements of the Public Finance Act 1989.

The Government Statistician is responsible for such internal control as is determined is necessary to enable the preparation of the information to be audited that is free from material misstatement, whether due to fraud or error.

In preparing the information to be audited, the Government Statistician is responsible on behalf of the Department for assessing the Department's ability to continue as a going concern. The Government Statistician is also responsible for disclosing, as applicable, matters related to going concern and using the going concern basis of accounting, unless there is an intention to merge or to terminate the activities of the Department, or there is no realistic alternative but to do so.

The Government Statistician's responsibilities arise from the Public Finance Act 1989.

Responsibilities of the auditor for the information to be audited

Our objectives are to obtain reasonable assurance about whether the information we audited, as a whole, is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit carried out in accordance with the Auditor-General's Auditing Standards will always detect a material misstatement when it exists. Misstatements are differences or omissions of amounts or disclosures, and can arise from fraud or error. Misstatements are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of readers, taken on the basis of the information we audited.

For the budget information reported in the information we audited, our procedures were limited to checking that the information agreed to the Department's information on strategic intentions.

We did not evaluate the security and controls over the electronic publication of the information we audited.

As part of an audit in accordance with the Auditor-General's Auditing Standards, we exercise professional judgement and maintain professional scepticism throughout the audit. Also:

- We identify and assess the risks of material misstatement of the information we audited, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- We obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Department's internal control.
- We evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Government Statistician.
- We evaluate the appropriateness of the reported performance information within the Department's framework for reporting its performance.
- We conclude on the appropriateness of the use of the going concern basis of accounting by the Government Statistician and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Department's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the information we audited or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Department to cease to continue as a going concern.
- We evaluate the overall presentation, structure and content of the information we audited, including the disclosures, and whether the information we audited represents the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the Government Statistician regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Our responsibilities arise from the Public Audit Act 2001.

Other information

The Government Statistician is responsible for the other information. The other information comprises the information included on pages 3 to 93, but does not include the information we audited, and our auditor's report thereon.

Our opinion on the information we audited does not cover the other information and we do not express any form of audit opinion or assurance conclusion thereon.

Our responsibility is to read the other information. In doing so, we consider whether the other information is materially inconsistent with the information we audited or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on our work, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Independence

We are independent of the Department in accordance with the independence requirements of the Auditor-General's Auditing Standards, which incorporate the independence requirements of Professional and Ethical Standard 1 (Revised): Code of Ethics for Assurance Practitioners issued by the New Zealand Auditing and Assurance Standards Board.

Other than in our capacity as auditor, we have no relationship with, or interests, in the Department.

Jacques Coetzee

Audit New Zealand
On behalf of the Auditor-General
Wellington, New Zealand

Ngā tauākī pūtea
Financial statements

Ngā tauākī pūtea
Financial statements

This section reports on the financial performance of Stats NZ for the year ended 30 June 2019.

- Statement of comprehensive revenue and expense
- Statement of financial position
- Statement of changes in equity
- Statement of cash flows
- Statement of commitments
- Statement of contingent liabilities and contingent assets
- Notes to the financial statements
- Appropriation statements.

Statement of comprehensive revenue and expense

For the year ended 30 June 2019

2018 Actual $000		Note	2019 Actual $000	2019 Unaudited budget $000	2020 Unaudited forecast $000
	Revenue				
183,539	Revenue Crown	[2]	139,060	126,948	146,721
14,638	Other revenue	[2]	38,423	38,653	11,664
198,177	***Total revenue***		**177,483**	**165,601**	**158,385**
	Expenses				
114,739	Personnel	[3]	94,359	88,617	96,485
65,681	Operating	[4]	43,087	38,319	46,617
13,623	Depreciation and amortisation	[12-13]	13,284	13,004	10,772
3,041	Capital charge	[5]	3,077	3,161	4,511
(108)	Loss on disposal of non-current assets	[14]	962	-	-
196,976	***Total expenses***		**154,769**	**143,101**	**158,385**
1,201	**Net surplus/(deficit) and total comprehensive revenue and expense**		**22,714**	**22,500**	**-**

Explanation of significant variances against the original budget 2018/19 are detailed in Note 19. The accompanying accounting policies and notes form part of these financial statements.

Statement of financial position

As at 30 June 2019

2018 Actual $000		Note	2019 Actual $000	2019 Unaudited budget $000	2020 Unaudited forecast $000
	Assets				
	Current assets				
11,814	Cash and cash equivalents		31,510	14,219	39,691
32,628	Debtor Crown		46,047	60,243	32,628
1,140	Debtors and other receivables	[6]	753	521	999
2,414	Advances and prepayments		2,650	2,877	2,814
47,996	***Total current assets***		**80,960**	**77,860**	**76,132**
	Non-current assets				
11,751	Property, plant, and equipment	[12]	8,084	17,275	13,621
15,600	Intangible assets	[13]	10,275	13,045	9,271
27,351	***Total non-current assets***		**18,359**	**30,320**	**22,892**
75,347	**Total assets**		**99,319**	**108,180**	**99,024**
	Liabilities				
	Current liabilities				
9,012	Creditors and other payables	[7]	7,141	7,473	7,349
1,201	Repayment of surplus to the Crown	[8]	181	-	-
-	Provisions	[9]	571	-	-
7,594	Employee entitlements	[10]	7,927	4,550	6,388
720	Goods and services tax payable		768	1,034	893
-	Deferred revenue	[11]	1,083	-	-
18,527	***Total current liabilities***		**17,671**	**13,057**	**14,630**
	Non-current liabilities				
6,136	Employee entitlements	[10]	7,230	4,312	5,162
6,136	***Total non-current liabilities***		**7,230**	**4,312**	**5,162**
24,663	**Total liabilities**		**24,901**	**17,369**	**19,792**
50,684	**Net assets**		**74,418**	**90,811**	**79,232**
	Equity				
50,684	Taxpayers' funds		74,418	90,811	79,232
50,684	**Total equity**	[15]	**74,418**	**90,811**	**79,232**

Explanation of significant variances against the original budget 2018/19 are detailed in Note 19. The accompanying accounting policies and notes form part of these financial statements.

Statement of changes in equity

For the year ended 30 June 2019

2018 Actual $000		Note	2019 Actual $000	2019 Unaudited budget $000	2020 Unaudited forecast $000
50,684	Equity as at 1 July		50,684	52,684	75,185
1,201	Total comprehensive revenue and expense		22,714	22,500	-
	Owner transactions:				
-	Retention of surplus 2017/18		1,201	-	-
-	Capital injections		11,580	15,627	4,047
-	Capital withdrawals		(11,580)	-	-
(1,201)	Return of operating surplus to the Crown		(181)	-	-
50,684	**Equity as at 30 June**	[15]	**74,418**	**90,811**	**79,232**

Explanation of significant variances against the original budget 2018/19 are detailed in Note 19. The accompanying accounting policies and notes form part of these financial statements.

Statement of cash flows

For the year ended 30 June 2019

2018 Actual $000		Note	2019 Actual $000	2019 Unaudited budget $000	2020 Unaudited forecast $000
	Cash flows from operating activities				
176,154	Receipts from Revenue Crown		127,391	91,948	146,721
13,661	Receipts from other revenue		39,893	38,653	11,664
(178,054)	Payments to suppliers and employees		(137,547)	(132,241)	(144,204)
436	Goods and services tax (net)		(1,702)	(250)	100
(3,041)	Payments for capital charge		(3,077)	(3,161)	(4,511)
9,156	***Net cash flow from operating activities***		**24,958**	**(5,051)**	**9,770**
	Cash flows from investing activities				
333	Receipts from sale of property, plant, and equipment		7	-	-
(2,047)	Purchase of property, plant, and equipment		(1,158)	(6,000)	(5,000)
(3,282)	Purchase of intangible assets		(4,111)	(3,000)	(3,000)
(4,996)	***Net cash flow from investing activities***		**(5,262)**	**(9,000)**	**(8,000)**
	Cash flows from financing activities				
-	Capital contribution		-	15,627	4,047
-	***Net cash flow from financing activities***		**-**	**15,627**	**4,047**
4,160	**Net increase/(decrease) in cash and cash equivalents**		**19,696**	**1,576**	**5,817**
7,654	**Cash and cash equivalents as at 1 July**		**11,814**	**12,643**	**33,874**
11,814	**Cash and cash equivalents as at 30 June**		**31,510**	**14,219**	**39,691**

Explanation of significant variances against the original budget 2018/19 are detailed in Note 19. The accompanying accounting policies and notes form part of these financial statements.

Statement of cash flows

For the year ended 30 June 2019

Reconciliation of net surplus/(deficit) to net cash from operating activities

2018 Actual $000		2019 Actual $000
1,201	**Net surplus / (deficit)**	**22,714**
	Non-cash items	
13,623	Depreciation and amortisation	13,284
207	Movements in non-current employee entitlements	1,094
13,830	***Total non-cash items***	**14,378**
	Items classified as investing or financing activities	
708	(Gain)/loss on derecognition of work in progress	6
(108)	(Gain)/loss on disposal of non-financial assets	962
600	***Total items classified as investing or financing activities***	**968**
	Working capital movements	
(7,385)	(Increase)/decrease in debtor Crown	(13,419)
(615)	(Increase)/decrease in debtors and other receivables	387
(537)	(Increase)/decrease in advances and prepayments	(236)
1,219	Increase/(decrease) in creditors and other payables	(1,869)
436	Increase/(decrease) in goods and services tax payable	48
-	Increase/(decrease) in current provisions	571
769	Increase/(decrease) in employee entitlements	333
21	Increase/(decrease) in realised derivative financial instruments	-
(383)	Increase/(decrease) in deferred revenue	1,083
(6,475)	***Net working capital movements***	**(13,102)**
9,156	**Net cash flows from operating activities**	**24,958**

The accompanying accounting policies and notes form part of these financial statements.

Statement of commitments

As at 30 June 2019

Capital commitments

Capital commitments are the aggregate amount of capital expenditure contracted for the acquisition of property, plant, and equipment and intangible assets that have not been paid for or not recognised as a liability at balance date.

There are no capital commitments at 30 June 2019 (2018: Nil).

Non-cancellable operating lease commitments

Stats NZ leases property, plant, and equipment in the normal course of its business. The majority of these leases are for premises which have a non-cancellable leasing period ranging from three to 15 years.

Stats NZ's non-cancellable operating leases have varying terms, escalation clauses, and renewal rights. No restrictions are placed on Stats NZ by any of its leasing arrangements.

2018 Actual $000		2019 Actual $000
	Non-cancellable operating lease commitments	
6,831	Not later than one year	5,832
19,922	Later than one year and not later than five years	36,226
13,025	Later than five years	106,689
39,778	**Total non-cancellable operating lease commitments**	**148,747**

The increase in operating lease commitments is due to a new lease signed for office accommodation in Wellington. The target lease commencement date is 1 April 2021 with an interim term of 15 years.

The accompanying accounting policies and notes form part of these financial statements.

Statement of contingent liabilities and contingent assets

As at 30 June 2019

Contingent liabilities

2018 Actual $000		2019 Actual $000
	Contingent liabilities	
50	Employment-related matters	54
50	**Total contingent liabilities**	**54**

Contingent assets

Stats NZ has a contract works insurance claim in progress resulting from the 2016 Kaikōura earthquake. It is estimated that the final settlement will be $1.5 million (2018: Nil).

In the 2018 Annual Report Stats NZ reported a contingent asset for material damages and business continuity insurance resulting from the 2016 earthquake. The claim was not quantifiable at that stage and Stats NZ subsequently received a final insurance payment of $29.3 million in 2018/19.

The accompanying accounting policies and notes form part of these financial statements.

Ngā tuhipoka mō ngā tauākī pūtea
Notes to the financial statements

1. Statement of accounting policies for the year ended 30 June 2019

Reporting entity

Statistics New Zealand (abbreviated to Stats NZ) is a government department as defined by section 2 of the Public Finance Act 1989 (PFA) and is domiciled and operates in New Zealand. The relevant legislation governing Stats NZ's operations include the PFA and the Statistics Act 1975. It is a wholly-owned entity of the Crown whose primary objective is to provide services to the public rather than to make a financial return. Accordingly, Stats NZ has designated itself as a public benefit entity (PBE) for financial reporting purposes.

The financial statements of Stats NZ are for the year ended 30 June 2019, and were approved for issue by the Government Statistician on 30 September 2019.

Basis of preparation

The financial statements have been prepared on a going concern basis, and the accounting policies have been applied consistently throughout the year.

Statement of compliance

These financial statements have been prepared in accordance with the requirements of the Public Finance Act, which include the requirement to comply with New Zealand Generally Accepted Accounting Practice (NZ GAAP) and Treasury Instructions.

These financial statements have been prepared in accordance with and comply with Public Sector PBE Accounting Standards.

Presentation currency and rounding

The financial statements are presented in New Zealand dollars and all values are rounded to the nearest thousand dollars ($000) unless otherwise stated.

Standard early adopted

In line with the Financial Statements of the Government, Stats NZ has elected to early adopt PBE IFRS 9 *Financial Instruments*. PBE IFRS 9 replaces PBE IPSAS 29 *Financial Instruments: Recognition and Measurement.* The main change for Stats NZ is an update to Note 6 Debtors and other receivables with the policy updated to reflect that the impairment of short-term receivables is now determined by applying an expected credit loss model. Refer to Note 20 for further information on the implications of the adoption of PBE IFRS 9.

Standards issued and not yet effective and not early adopted

Standards and amendments, issued but not yet effective that have not been early adopted, and which are relevant to Stats NZ are:

Amendment to PBE IPSAS 2 Statement of Cash Flows

An amendment to PBE IPSAS 2 Statement of Cash Flows requires entities to provide disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes. This amendment is effective for annual periods beginning on or after 1 January 2021, with early application permitted. Stats NZ does not intend to early adopt the amendment.

PBE IPSAS 41 Financial Instruments

The XRB issued PBE IPSAS 41 Financial Instruments in March 2019. This standard supersedes PBE IFRS 9 Financial Instruments, which was issued as an interim standard. It is effective for reporting periods beginning on or after 1 January 2022. Although Stats NZ has not assessed the effect of the new standard, it does not expect any significant changes, as the requirements are similar to PBE IFRS 9.

PBE FRS 48 Service Performance Reporting

PBE FRS 48 replaces the service performance reporting requirements of PBE IPSAS 1 and is effective for reporting periods beginning on or after 1 January 2021. Stats NZ has not yet determined how application of PBE FRS 48 will affect its statement of performance.

Summary of significant accounting policies

Significant accounting policies are included in the notes to which they relate. Significant accounting policies that do not relate to a specific note are outlined below.

Foreign currency translation

Foreign currency transactions (including those for which forward foreign-exchange contracts are held) are translated into NZ$ (the functional currency) using the spot exchange rates at the dates of the transactions.

Foreign exchange gains and losses resulting from the settlement of such transactions, and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies, are recognised in the surplus or deficit.

Cash and cash equivalents

Cash and cash equivalents include cash on hand, and funds on deposit with banks with a maturity period of 90 days or less and are measured at carrying value.

Stats NZ is only permitted to expend its cash and cash equivalents within the scope and limits of its appropriations.

Goods and services tax (GST)

All items in the financial statements, including appropriation statements, are stated exclusive of GST except for receivables and payables, which are stated on a GST-inclusive basis. Where GST is not recoverable as input tax, then it is recognised as part of the related asset or expense. The net amount of GST recoverable from, or payable to, Inland Revenue is included as part of receivables or payables in the statement of financial position.

The net GST paid to, or received from Inland Revenue, including the GST relating to investing and financing activities, is classified as an operating cash flow in the statement of cash flows.

Income tax

Stats NZ is a government department and consequently is exempt from income tax. Accordingly, no provision has been made for income tax.

Statement of cost accounting policies

Stats NZ has determined the cost of outputs by using the cost allocation system outlined below.

Direct costs are those costs directly attributed to an output. Indirect costs are those costs that cannot be identified with a specific output in an economically feasible manner.

Direct costs are charged directly to outputs. Indirect costs are charged to outputs based on cost drivers and related activity. Personnel costs are either charged on the basis of actual time incurred using a time recording system, or assigned with other indirect costs to outputs based on the proportion of direct expenditure.

There have been no material changes to the costs allocation methodology since the date of the last audited financial statements.

Critical accounting estimates and assumptions

In preparing these financial statements Stats NZ has made estimates and assumptions concerning the future. These estimates and assumptions may differ from the subsequent actual results. Estimates and judgements are continually evaluated. They are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are disclosed in Note 13 (assessing the useful lives of software) and Note 10 (measuring long service and retirement leave).

Budget and forecast figures

Basis of the budget and forecast figures

The 2019 budget figures are for the year ended 30 June 2019 and were published in the 2017/18 annual report. They are consistent with Stats NZ's best estimate financial forecast information submitted to Treasury for the Budget Economic and Fiscal Update (BEFU) for the year ending 2018/19.

The 2020 forecast figures are for the year ended 30 June 2020, which are consistent with the best estimate financial forecast information submitted to Treasury for the BEFU for the year ending 2019/20.

The forecast financial statements were prepared as required by the Public Finance Act to communicate forecast financial information for accountability purposes. The forecast financial statements may not be appropriate for other purposes.

The budget and forecast figures are unaudited and were prepared using the accounting policies adopted in preparing these financial statements.

The 30 June 2020 forecast figures were prepared in accordance with PBE FRS 42 Prospective Financial Statements. The forecast financial statements were approved for issue by the Government Statistician on 4 April 2019.

The Government Statistician is responsible for the forecast financial statements, including the appropriateness of the assumptions underlying them and all other required disclosures. While Stats NZ regularly updates its forecasts, updated forecast financial statements for the year ended 30 June 2020 will not be published.

Significant assumptions used in preparing the forecast financials

In preparing the forecast figures, estimates and assumptions were made about the future – based on the best information available to Stats NZ. These estimates and assumptions may differ from the subsequent actual results. The main assumptions are as follows.

- The forecasts were compiled on the basis of existing government policies and Ministerial expectations. The 2019/20 actual financial statements may include changes to the baseline budget through new initiatives or technical adjustments. Any such changes will affect Revenue from the Crown and Output Expenditure.
- Forecast sales to customers ('Other revenue' in the Statement of comprehensive revenue and expense) is based on the best available estimates but the actual financial result for 2019/20 is subject to demand fluctuations.
- The forecast personnel assumptions are based on the current salary costs, adjusted for any anticipated remuneration increases for the forecast year.
- Forecast expenditure is based on the assumption that Stats NZ will continue to realise efficiency and effectiveness savings in 2019/20. Stats NZ is focused on improved oversight of expenditure through enhanced planning, budgeting, and prioritisation processes.

2. Revenue

Revenue is measured at the fair value of the consideration received, or receivable, as follows.

Revenue Crown

The fair value of revenue from the Crown is measured based on Stats NZ's funding entitlement for the accounting period. The funding entitlement is established by Parliament when it passes the Appropriation Acts for the financial year. The amount of revenue recognised takes into account any amendments to appropriations approved in the Appropriation (Supplementary Estimates) Act for the year, and certain other unconditional funding adjustments formally approved before the balance date.

There are no conditions attached to the funding from the Crown. However, Stats NZ can incur expenses only within the scope and limits of its appropriations. The fair value of Revenue Crown has been determined to be equivalent to the funding entitlement.

Other revenue

The sale of customised data/subscriptions is recognised when the product is sold to the customer. The recorded revenue is the gross amount of the sale. Revenue from contract surveys is recognised to the extent that the service has been completed by Stats NZ. Office rental revenue under an operating sub-lease is recognised on a straight-line basis over the lease term. Other sources of income are recognised when earned and are reported in the financial periods to which they relate.

The breakdown of other revenue is:

2018 Actual $000		2019 Actual $000
5,000	Insurance revenue[1]	29,299
4,861	Contract surveys[2]	4,540
1,861	Office rental income	1,626
1,307	Recoveries revenue	1,174
1,070	Customised data/subscriptions[2]	996
539	Other	788
14,638	**Total other revenue**	**38,423**

1. The insurance revenue of $29.3 million (2018: $5 million) relates to a final insurance settlement under a material insurance and business continuity claim arising from the 2016 earthquake.

2. Revenue from contract surveys of $2.615m was inadvertently reported as part of revenue from customised data/subscriptions in 2017/18. The 2018 comparatives have been restated for this error.

3. Personnel

Salaries and wages

Salaries and wages are recognised as an expense as employees provide services.

Superannuation schemes

Obligations for contributions to the State Sector Retirement Savings Scheme, KiwiSaver, and the Government Superannuation Fund are accounted for as defined contribution schemes and are expensed in the surplus or deficit as incurred.

2018 Actual $000		2019 Actual $000
108,671	Salaries and wages	86,683
2,588	Employer contributions to defined contribution plans	2,603
976	Increase/(decrease) in employee entitlements	1,569
2,504	Other	3,504
114,739	**Total personnel**	**94,359**

The reduction in total personnel costs between 2018 and 2019 relates to the increased 2018 costs for the last Census.

4. Operating

Operating expenses

Operating expenses are recognised in the period to which they relate.

Operating leases

An operating lease is a lease that does not transfer substantially all the risks and rewards incidental to ownership of an asset. Lease payments under an operating lease are recognised as an expense on a straight-line basis over the lease term.

2018 Actual $000		2019 Actual $000
13,116	IT outsourced services	11,174
8,296	Operating lease and other rentals	6,908
7,919	Software licences and maintenance	6,284
4,279	Consultancy	3,516
4,197	Telecommunications	3,073
4,964	Contracted and professional services	2,487
3,466	Domestic and Australia travel	1,909
580	Interviewer travel	1,399
1,640	Building services	986
4,731	Printing and photocopying	758
2,455	Postage, courier, and freight	640
552	Corporate training[1]	595
260	Facilities – repairs and maintenance[2]	550
4,066	Publicity and advertising	277
144	IT hardware – repairs and maintenance	106
1,598	Minor IT purchases	102
98	Fees to Audit NZ for audit of the financial statements	101
3,320	Other operating expenses	2,222
65,681	**Total operating**	**43,087**

The reduction in total operating costs between 2018 and 2019 relates to the increased 2018 costs for the last Census.

1. Corporate training was reported as part of Other operating expenses in 2017/18.

2. Facilities – repairs and maintenance was reported as part of Building services in 2017/18

5. Capital charge

The capital charge is recognised as an expense in the financial year to which the charge relates. Capital charge for 2018/19 was $3,077,070 (2018: $3,041,040).

Stats NZ pays a capital charge to the Crown based on equity at 30 June and 31 December each year. The capital charge rate for the year ended 30 June 2019 was 6 percent (2018: 6 percent).

6. Debtors and other receivables

Short-term receivables are recorded at the amount due, less an allowance for credit losses. Stats NZ applies the simplified expected credit loss model of recognising lifetime expected credit losses for receivables.

In measuring expected credit losses, short-term receivables have been assessed on a collective basis as they possess shared credit risk characteristics. They have been grouped based on the days past due.

Short-term receivables are written off when there is no reasonable expectation of recovery. Indicators that there is no reasonable expectation of recovery include the debtor being in liquidation.

Previous accounting policy for impairment of receivables

In the previous year, the allowance for credit losses was based on the incurred credit loss model. An allowance for credit losses was recognised only when there was objective evidence that the amount due would not be fully collected.

2018 Actual $000		2019 Actual $000
1,145	Debtors and other receivables (gross)	758
(5)	Less: Allowance for credit losses	(5)
1,140	**Debtors and other receivables (net)**	**753**
	Debtors and other receivables comprise:	
1,140	**Debtors and other receivables (exchange transactions)**	**753**

The expected credit loss rates for receivables at 30 June 2019 and 1 July 2018 are based on the payment profile of revenue on credit over the prior two years at the measurement date and the corresponding historical credit losses experienced for that period. The historical loss rates are adjusted for current and forward-looking macroeconomic factors that might affect the recoverability of receivables. Given the short period of credit risk exposure, the impact of macroeconomic factors is not considered significant.

There have been no changes during the reporting in the estimation techniques or significant assumptions used in measuring the loss allowance.

The allowance for credit losses at 30 June 2019 and 1 July 2018 was determined as follows:

30 June 2019	Receivables days past due				
	Current	More than 30 days	More than 60 days	More than 90 days	Total
Expected credit loss rate	0.6%	60.0%	0.3%	0.0%	
Gross carrying amount ($000)	465	2	292	-	758
Lifetime expected credit loss ($000)	3	1	1	-	5

01 July 2018	Receivables days past due				
	Current	More than 30 days	More than 60 days	More than 90 days	Total
Expected credit loss rate	0.1%	2.0%	0.0%	100.0%	
Gross carrying amount ($000)	992	152	-	1	1,145
Lifetime expected credit loss ($000)	1	3	-	1	5

The movement in the allowance for credit losses is as follows:

2018 Actual $000		2019 Actual $000
5	Allowance for credit losses as at 1 July calculated under PBE IPSAS 29	5
-	PBE IFRS 9 expected credit loss adjustment – through opening accumulated surplus/deficit	-
5	Opening allowance for credit losses as at 1 July	5
-	Increase in loss allowance made during the year	-
5	**Balance at 30 June**	**5**

7. Creditors and other payables

Short-term creditors and other payables are recorded at the amount payable.

2018 Actual $000		2019 Actual $000
3,540	Creditors (exchange transactions)	1,641
5,472	Accrued expenses and other payables (exchange transactions)	5,500
9,012	**Total creditors and other payables**	**7,141**

Creditors and other payables are normally settled on 30-day terms so the carrying value of creditors and other payables approximates their fair value.

8. Return of operating surplus to the Crown

The return of any operating surplus to the Crown is required to be paid by 31 October each year.

Of the $22.714 million 2019 surplus, $22.533 million has been retained to rebuild cash reserves following the use of cash to recover from the demolition of Statistics House following the 2016 earthquake. There is a provision for the balance of $0.181 million to be returned to the Crown (2018: $1.201 million although approval was later obtained to retain the $1.201 million surplus).

2018 Actual $000		2019 Actual $000
1,201	Net surplus/(deficit)	22,714
-	Retention of surplus	(22,533)
1,201	Net repayment of surplus to the Crown	181

9. Provisions

Stats NZ recognises a provision for future expenditure of uncertain amount or timing when (a) there is a present obligation (either legal or constructive) as a result of a past event and (b) it is probable that expenditure will be required to settle the obligation and (c) a reliable estimate can be made of the amount of the obligation. Provisions are not recognised for future operating losses.

Provisions are recorded at the best estimate of the expenditures expected to be required to settle the obligation, using a discount rate based on market yields on government bonds at balance date with terms to maturity that match, as closely as possible, the estimated timing of the future cash outflows. The increase in the provision due to the passage of time is recognised as a finance cost.

	Restructuring $000
2018	
Opening balance at 1 July 2017	-
Additional provisions recognised	-
Amounts used	-
Unused amounts reversed	-
Closing balance at 30 June 2018	-
Analysed as:	
Current	-
Non-current	-

2019	
Opening balance at 1 July 2018	-
Additional provisions recognised	571
Amounts used	-
Unused amounts reversed	-
Closing balance at 30 June 2019	**571**
Analysed as:	
Current	571
Non-current	-

Restructuring provision

The restructuring provision was due to organisational changes in the Statistical, Data, and Analytics group.

10. Employee entitlements

Short-term employee entitlements

Employee entitlements that Stats NZ expects to be settled within 12 months of balance date are measured at nominal values, based on accrued entitlements at current rates of pay. These include salaries and wages accrued up to balance date, annual leave earned but not yet taken at balance date, retiring and long-service leave entitlements expected to be settled within 12 months, and sick leave.

Stats NZ recognises a liability for sick leave to the extent that absences in the coming year are expected to be greater than the sick leave entitlements earned in the coming year. The amount is calculated based on the unused sick leave entitlement that can be carried forward at balance date, to the extent that Stats NZ anticipates it will be used by staff to cover those future absences.

Stats NZ recognises a liability and an expense for bonuses where it is contractually obliged to pay them, or where there is a past practice that has created a constructive obligation.

Long-term employee entitlements

Employee entitlements that are due to be settled beyond 12 months, such as long-service leave and retiring leave, have been calculated on an actuarial basis. The calculations are based on:

- likely future entitlements based on years of service, years to entitlement, the likelihood that staff will reach the point of entitlement, and contractual entitlements information; and
- the present value of the estimated future cash flows using the three risk-free discount rates and a salary inflation factor.

2018 Actual $000		2019 Actual $000
	Current employee entitlements	
5,003	Annual leave	5,286
579	Sick leave	565
2,012	Retirement and long-service leave	2,076
7,594	**Total current portion**	**7,927**
	Non-current employee entitlements	
6,136	Retirement and long-service leave	7,230
6,136	**Total non-current portion**	**7,230**
13,730	**Total employee entitlements**	**15,157**

The present value of the retirement and long-service leave obligations depends on several factors that are determined on an actuarial basis using a number of assumptions. Two key assumptions used in calculating this liability include the risk-free discount rates and the salary inflation factor. Any changes in these assumptions will impact on the carrying amount of the liability.

Stats NZ has used the actuarial models provided by the Treasury, including the applicable risk-free discount rates and salary inflation factor. Risk-free discount rates of 1.23 percent in year 1 (2018: 1.78 percent), 1.03 percent in year 2 (2018: 1.90 percent), and 2.23 percent in year 3 onwards (2018: 3.55 percent), and a salary inflation factor of 2.92 percent (2018: 3.10 percent) were used.

The risk-free discount rate used for year 3 onwards is based on the average of 20 forward rates (from year 3 to 22 inclusive) taken from the published table of discount rates as at 30 June 2019. The salary inflation factor is based on using a 1.72 percent medium-term inflation assumption plus 1.2 percent for long-term labour-productivity growth for the public sector. On average, over the longer term it is expected that nominal wages and salaries would grow approximately in line with inflation and the rate of labour-productivity growth.

If the risk-free discount rates were to differ by 1 percent from Stats NZ's estimates, with all other factors held constant, the carrying amount of the liability would be an estimated $608,692 lower (1 percent increase) or $708,463 higher (1 percent decrease).

If the salary inflation factor was to differ by 1 percent from Stats NZ's estimates, with all other factors held constant, the carrying amount of the liability would be an estimated $701,301 higher (1 percent increase) or $614,900 lower (1 percent decrease).

11. Deferred revenue

Deferred revenue under exchange transactions of $1.083 million (2018: Nil) is income in advance that relates to a subsequent financial year. It is recognised as income when the services are provided or performed.

12. Property, plant, and equipment

Property, plant, and equipment consists of computer equipment, leasehold improvements, furniture and fixtures, and office equipment.

Additions

The cost of an item of property, plant, and equipment is recognised as an asset only when it is probable that future economic benefits or service potential associated with the item will flow to Stats NZ and the cost of the item can be measured reliably. Work in progress is recognised at cost less impairment and is not depreciated.

Individual assets, or group of assets, are capitalised if their cost is greater than $1,500. The value of an individual asset that is less than $1,500 and is part of a group of similar assets is capitalised.

Subsequent costs

Costs incurred subsequent to initial acquisition are capitalised only when it is probable that future economic benefits or service potential associated with the item, will flow to Stats NZ and the cost of the item can be measured reliably.

The costs of day-to-day servicing of property, plant, and equipment are recognised in the surplus or deficit as they are incurred.

Depreciation

Depreciation is provided on a straight-line basis on all property, plant, and equipment, at rates that will write off the cost of the assets to their estimated residual values over their useful lives. In determining an asset's useful life, consideration is given to its expected usage, its expected wear and tear, technical obsolescence, and legal or similar limits on its use.

The useful lives and associated depreciation rates of major classes of assets were estimated as follows:

Furniture and office equipment	5 to 7 years
Computer equipment	3 to 5 years
Leasehold improvements	remaining term of the lease or the estimated remaining useful lives of the improvements, but not to exceed 12 years – whichever is the shorter.

The residual value and useful life of an asset is reviewed, and adjusted if applicable, at each financial year end.

Disposals

Gains and losses are determined by comparing the carrying amount of the asset with the disposal proceeds received (if any). Realised gains and losses are recognised in the surplus or deficit.

Impairment

Stats NZ does not hold any cash-generating assets. Assets are considered cash generating where their primary objective is to generate a commercial return.

Property, plant, and equipment is tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable service amount. The recoverable service amount is the higher of an asset's fair value less costs to sell and value in use.

Value in use is the present value of the asset's remaining service potential. Value in use is determined as being the depreciated replacement cost or the restoration cost, depending on the nature of the impairment and the availability of information.

If an asset's carrying amount exceeds its recoverable service amount, the asset is impaired and the carrying amount is written down to the recoverable service amount. The impairment loss is recognised in the surplus or deficit. The reversal of an impairment loss is also recognised in the surplus or deficit.

	Furniture and fixtures $000	Leasehold improve-ments $000	Office equipment $000	Computer hardware $000	Total $000
2018					
Cost					
Balance at 1 July 2017	3,752	9,136	267	8,406	**21,561**
Additions	377	211	-	1,594	**2,182**
Disposals	(435)	(193)	(15)	(181)	**(824)**
Work in progress movement	(134)	-	-	(3)	**(137)**
Balance at 30 June 2018	**3,560**	**9,154**	**252**	**9,816**	**22,782**
Accumulated depreciation and impairment losses					
Balance at 1 July 2017	710	1,168	186	5,396	**7,460**
Depreciation expense	834	1,627	32	1,679	**4,172**
Eliminate on disposal	(216)	(193)	(16)	(176)	**(601)**
Balance at 30 June 2018	**1,328**	**2,602**	**202**	**6,899**	**11,031**
Carrying amount as at 30 June 2018	**2,232**	**6,552**	**50**	**2,917**	**11,751**
2019					
Cost					
Balance at 1 July 2018	3,560	9,154	252	9,816	**22,782**
Additions	458	-	-	206	**664**
Disposals	(61)	(1,564)	(80)	(3,136)	**(4,841)**
Work in progress movement	2	468	-	23	**493**
Balance at 30 June 2019	**3,959**	**8,058**	**172**	**6,909**	**19,098**
Accumulated depreciation and impairment losses					
Balance at 1 July 2018	1,328	2,602	202	6,899	**11,031**
Depreciation expense	798	1,327	26	1,924	**4,075**
Eliminate on disposal	(61)	(852)	(79)	(3,100)	**(4,092)**
Balance at 30 June 2019	**2,065**	**3,077**	**149**	**5,723**	**11,014**
Carrying amount as at 30 June 2019	**1,894**	**4,981**	**23**	**1,186**	**8,084**

Carrying amounts at year-end are stated at cost less accumulated depreciation and include work in progress relating to leasehold improvements of $468,000 (2018: Nil), furniture and fixtures of $2,000 (2018: Nil), and computer hardware of $23,000 (2018: Nil).

There are no restrictions over the title of Stats NZ's property, plant, and equipment. No items of property, plant, and equipment are pledged as security for liabilities.

13. Intangible assets

Stats NZ has intangible assets in the form of software and internally generated assets.

Software acquisition and development

Acquired computer software licences are capitalised on the basis of the costs incurred to acquire and bring to use the specific software. Costs that are directly associated with the development of software for internal use by Stats NZ, are recognised as an intangible asset. Costs that are directly associated include software development, labour, and directly applicable operating costs. Costs associated with maintaining computer software are recognised as an expense when incurred.

Amortisation

The carrying value of an intangible asset with a finite life is amortised on a straight-line basis over its useful life.

Amortisation begins when the asset is available for use and ceases at the date that the asset is derecognised. The amortisation charge for each period is recognised in the surplus or deficit. The useful lives and associated amortisation rates of major classes of intangible assets have been estimated as follows:

Software – acquired and developed	3 to 8 years

Critical accounting estimates and assumptions

The useful lives of intangible assets are based on management's view of the expected period over which Stats NZ will receive benefits, historical experience with similar systems, and anticipation of future events which may affect useful lives, such as changes in technology.

Impairment

Intangible assets that have a finite useful life are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Intangible assets are also reviewed annually for indicators of impairment at each balance date. Assets under construction are tested for impairment at each balance date. For further details refer to the policy for impairment of property, plant, and equipment in Note 12. The same approach applies to the impairment of intangible assets.

	Software	Internally generated software	Total
	$000	$000	$000
2018			
Cost			
Balance at 1 July 2017	5,797	65,270	**71,067**
Additions	279	4,240	**4,519**
Disposals	(84)	-	**(84)**
Work in progress movement	-	(1,946)	**(1,946)**
Balance at 30 June 2018	**5,992**	**67,564**	**73,556**
Accumulated amortisation and impairment losses			
Balance at 1 July 2017	4,474	44,116	**48,590**
Depreciation expense	294	9,157	**9,451**
Eliminate on disposal	(84)	(1)	**(85)**
Balance at 30 June 2018	4,684	53,272	**57,956**
Carrying amount as at 30 June 2018	**1,308**	**14,292**	**15,600**
2019			
Cost			
Balance at 1 July 2018	5,992	67,564	**73,556**
Additions	-	3,342	**3,342**
Disposals	(2,606)	(5,789)	**(8,395)**
Work in progress movement	-	762	**762**
Balance at 30 June 2019	**3,386**	**65,879**	**69,265**
Accumulated amortisation and impairment losses			
Balance at 1 July 2018	4,684	53,272	**57,956**
Depreciation expense	279	8,930	**9,209**
Eliminate on disposal	(2,394)	(5,781)	**(8,175)**
Balance at 30 June 2019	**2,569**	**56,421**	**58,990**
Carrying amount as at 30 June 2019	**817**	**9,458**	**10,275**

Carrying amounts at year-end are stated at cost less accumulated amortisation and include work in progress relating to internally generated assets of $2,222,000 (2018: $1,460,000).

There are no restrictions over the title of Stats NZ's intangible assets. No intangible assets are pledged as security for liabilities.

14. Loss/(gain) on disposal of non-current assets

During the period there was a loss on the sale and disposal of property, plant, and equipment, and intangible assets of $962,000 (2018: gain of $108,000).

15. Equity

Equity is the Crown's investment in Stats NZ and is measured as the difference between total assets and total liabilities.

Of the $22.714 million 2019 surplus, $22.533 million has been retained to rebuild cash reserves following the use of cash to recover from the demolition of Statistics House following the 2016 earthquake. There is a provision for the balance of $0.181 million to be repaid to the Crown (2018: $1.201 million although approval was later obtained to retain the $1.201 million surplus).

Capital management

Stats NZ capital is its equity. Stats NZ manages its revenues, expenses, assets, liabilities, and general financial dealings prudently. Stats NZ's equity is largely managed as a by-product of managing income, expenses, assets, liabilities, and compliance with the Government budget processes, Treasury instructions, and the Public Finance Act.

The objective of managing Stats NZ's equity is to ensure that Stats NZ effectively achieves its strategic direction, while remaining a going concern.

16. Related-party transactions and key management personnel

Related-party transactions

Stats NZ is a wholly-owned entity of the Crown.

Related-party disclosures have not been made for transactions with related parties that are within a normal supplier, or client/recipient, relationship on terms and conditions no more or less favourable than those that it is reasonable to expect Stats NZ would have adopted in dealing with the party at arm's length in the same circumstances. Further, transactions with other government departments and Crown entities are not disclosed as related-party transactions when they are consistent with the normal operating arrangements between government agencies, and undertaken on the normal terms and conditions for such transactions.

There were no related-party transactions that were not within a normal arm's length supplier or client/recipient relationship.

Key management personnel compensation

2018 Actual		2019 Actual
	Executive Leadership Team[1]	
1,682	Remuneration ($000)	2,003
5.5	Full-time equivalent members	6.5

1. Executive Leadership Team includes the Government Statistician.

There were no termination benefits and post-employment benefits paid to key management personnel for financial year ended 30 June 2019 (2018: Nil). The remuneration of any staff member permanently in a role or acting in a vacant role within that team has been included for the period they were a member.

The above key management personnel disclosure excludes the Minister of Statistics. The Minister's remuneration and other benefits are not received only for his role as a member of key management personnel of Stats NZ. The Minister's remuneration and other benefits are set by the Remuneration Authority under the Members of Parliament (Remuneration and Services) Act 2013 and are paid under Permanent Legislative Authority, and not paid by Stats NZ.

17. Events after the balance sheet date

There have been no significant events after the balance sheet date.

18. Financial instruments

Financial instrument categories

The carrying amounts of financial assets and liabilities in each of the financial instrument categories are as follows:

2018 Actual $000		2019 Actual $000
	Financial liabilities measured at amortised cost	
9,012	Payables (excluding deferred revenue and taxes payable)	7,141
9,012	**Financial liabilities measured at amortised cost**	**7,141**
	Financial assets measured at amortised cost (2018: Loans and receivables)	
11,814	Cash and cash equivalents	31,510
3,554	Receivables	753
15,368	**Financial assets measured at amortised cost**	**32,263**

Fair value hierarchy

For those instruments recognised at fair value in the statement of financial position, fair values are determined according to the following hierarchy:

- Quoted market prices (level 1) – financial instruments with quoted prices for identical instruments in active markets.
- Valuation techniques using observable inputs (level 2) – financial instruments with quoted prices for similar instruments in active markets or quoted prices for identical or similar instruments in inactive markets and financial instruments valued using models where all significant inputs are observable.
- Valuation techniques with significant non-observable inputs (level 3) – financial instruments valued using models where one or more significant inputs are not observable.

There were no transfers between the different levels of the fair value hierarchy.

Financial instrument risks

Stats NZ's activities expose it to a variety of financial instrument risks, including market risk, credit risk, and liquidity risk. Stats NZ has policies to manage these risks and seeks to minimise exposure from financial instruments. These policies do not allow transactions that are speculative in nature to be entered into.

Market risk

Price risk

Price risk is the risk that the value of a financial instrument will fluctuate as a result of changes in market prices.

Stats NZ does not have any financial instruments subject to price risk.

Fair value interest rate risk

Fair value interest rate risk is the risk that the fair value of a financial instrument will fluctuate due to changes in market interest rates. Stats NZ's exposure to fair value interest rate risk is limited to its bank deposits.

Stats NZ does not actively manage its exposure to fair value interest rate risk.

Cash flow interest rate risk

Cash flow interest rate risk is the risk that the cash flows from a financial instrument will fluctuate because of changes in market interest rates.

Stats NZ does not have any financial instruments subject to cash flow interest rate risk.

Currency risk

Currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate due to changes in foreign exchange rates.

Stats NZ makes purchases of goods and services overseas that require it to enter into transactions denominated in foreign currencies. As a result, exposure to currency risk arises.

Stats NZ manages foreign currency risks arising from contractual commitments and liabilities by entering into forward foreign exchange contracts to manage the foreign currency risk exposure.

Credit risk

Credit risk is the risk that a third party will default on its obligation to Stats NZ, causing it to incur a loss.

Stats NZ is exposed to credit risk from cash and deposits with banks, receivables, and derivative financial instrument assets. For each of these, the maximum credit exposure is best represented by the carrying amount in the statement of financial position.

Risk management

For receivables, Stats NZ reviews the credit quality of customers before granting credit. It continues to monitor and manage receivables based on their ageing and adjusts the expected credit loss allowance accordingly. There are no significant concentrations of credit risk.

Stats NZ is only permitted to deposit funds with Westpac New Zealand (Westpac), one of the approved All-of-Government banking services, and enters into foreign-exchange forward contracts with the approved banking counterparties: New Zealand Debt Management Office (NZDMO) and Westpac. These entities have high credit ratings.

The only concentration of credit risk is the deposits held with Westpac. For its other financial instruments, Stats NZ does not have significant concentrations of credit risk. The credit ratings of banks are monitored for credit deterioration.

Security

No collateral or other credit enhancements are held for financial assets that give rise to credit risk.

Impairment

Cash and cash equivalents and receivables (Note 6) are subject to the expected credit loss model.

Credit risk exposure by credit risk rating grades, excluding receivables

The gross carrying amount of financial assets, excluding receivables, by credit rating is provided below by reference to Standard & Poor's credit ratings.

2018 Actual $000		2019 Actual $000
	Cash at bank	
11,814	AA-	31,510
11,814	**Total cash at bank**	**31,510**

All instruments in this table have a loss allowance based on 12-month expected credit losses.

Liquidity risk

Management of liquidity risk

Liquidity risk is the risk that Stats NZ will encounter difficulty raising liquid funds to meet commitments as they fall due. Prudent liquidity risk management implies maintaining sufficient cash and the ability to close out market positions.

Stats NZ manages liquidity risk by continuously monitoring forecast and actual cash flow requirements.

Contractual maturity analysis of financial liabilities, excluding derivatives

The table below analyses financial liabilities (excluding derivatives) into their relevant maturity groupings based on the remaining period at balance date to the contractual maturity date. Future interest payments on floating rate debt are based on the floating rate of the instrument at balance date. The amounts disclosed are the undiscounted contractual cash flows.

	Carrying amount $000	Contractual cash flows $000	Less than 6 months $000	Between 6 months and 1 year $000	Between 1 year and 5 years $000	More than 5 years $000
2019						
Payables excluding deferred revenue and taxes payable (Note 7)	7,141	7,141	7,141	-	-	-
2018						
Payables excluding deferred revenue and taxes payable (Note 7)	9,012	9,012	9,012	-	-	-

19. Explanations of major variances against budget

The following major budget variances occurred between the 2018/19 actuals and the 2018/19 budget. The budget figures for 2018/19 are those included in The Estimates of Appropriations for the year ending 30 June 2019.

Statement of comprehensive revenue and expense

Revenue Crown

Revenue Crown was greater than budget by $12.112 million. This was due to transfers or additional funding received:

- $4.500 million for a capital to operating swap.
- $6.949 million for capital to operating swaps for the 5-year Multi Year Appropriation (MYA) for the 2018 Census of Population and Dwellings.
- $663,000 for timing differences in the recognition of revenue in the 5-year MYA.

Other revenue

Other revenue is significantly higher in 2019 but is in line with budget expectations. Stats NZ received a payment of $29.3 million in 2018/19 (2018: $5 million) under its material damages and business continuity insurance as a result of the total loss of Statistics House in 2016 due to earthquake damage.

Total expenses

Total expenses were higher than the original budget by $11.668 million. During 2018/19 there were several significant changes to Stats NZ's spend profile. An additional $7.608 million was spent on the 2018 Census outputs and products and several new initiatives commenced aligning to Government priorities. Stats NZ has also faced cost pressures, particularly for remuneration, IT, and accommodation costs.

Statement of financial position

Cash and cash equivalents

Cash is $17.219 million over budget due mainly to the receipt of earthquake insurance proceeds in 2018/19.

Debtor Crown

Debtor Crown is $14.196 million lower than budget. More Crown Revenue was drawn down than expected due to the insurance proceeds being received later in the financial year than anticipated.

Non-current assets

The net book value of non-current assets is lower than budget due to a more rapid than expected transition from capital to operating expenses with the move to IT-as-a-Service.

Employee entitlements

Provisions for employee entitlements were higher than budget driven largely by changes to the valuation assumptions such as discount rates.

Equity

Equity is lower than budget due to a decision not to draw down $15.6 million of capital injections during 2018/19.

Statement of changes in equity

Total comprehensive revenue and expense

Of the $22.714 million surplus, $22.533 million has been retained to rebuild cash reserves following the use of cash to recover from the demolition of Statistics House following the 2016 earthquake. Part of the cash retained will also be used to fit-out Stats NZ's new permanent accommodation when the building is occupied in 2020/21.

Capital injections and withdrawals

The $15.627 million of capital injections were available for draw down but $4.047 million was transferred to 2019/20 and $11.580 million was used for fiscally neutral capital to operating swaps during 2018/19.

Statement of cash flows

Receipts from Revenue Crown

More Crown Revenue than budget was drawn down due to insurance proceeds being received later in the financial year than anticipated.

Purchase of property, plant, and equipment

Purchases are lower than expected due to a less expensive accommodation fit-out than originally planned and a more rapid transition than expected from capital to operating expenses with the move to IT-as-a-Service.

Capital injections and withdrawals

Refer to the explanation under the same heading for the Statement of changes in equity.

Cash and cash equivalents as at 30 June

The closing cash of $31.510 million is $17.219 million over budget due mainly to the receipt of earthquake insurance proceeds in 2018/19.

20. Adoption of PBE IFRS 9 Financial Instruments

In accordance with the transitional provisions of PBE IFRS 9, Stats NZ has elected not to restate the information for previous years to comply with PBE IFRS 9. Adjustments arising from the adoption of PBE IFRS 9 are recognised in opening equity at 1 July 2018.

Accounting policies have been updated to comply with PBE IFRS 9. This policy has been updated to reflect that the impairment of short-term receivables is now determined by applying an expected credit loss model.

On the date of initial application of PBE IFRS 9, being 1 July 2018, the classification of financial instruments under PBE IPSAS 29 and PBE IFRS 9 is as follows:

	Measurement category		Carrying amount		
	Original PBE IPSAS 29 Category	**New PBE IFRS 9 Category**	**Closing balance 30 June 2018 (PBE IPSAS 29) $000**	**Adoption of PBE IFRS 9 adjustment $000**	**Opening balance 1 July 2018 (PBE IFRS 9) $000**
Cash at bank	Loans and receivables	Amortised cost	11,814	-	11,814
Receivables	Loans and receivables	Amortised cost	1,140	-	1,140
Total financial assets			**12,954**	**-**	**12,954**

The measurement categories and carrying amounts for financial liabilities have not changed between the closing 30 June 2018 and opening 1 July 2018 dates as a result of the transition to PBE IFRS9.

Appropriation statements

The following statements report information about the expenses and capital expenditure incurred against each appropriation administered by Stats NZ for the year ended 30 June 2019.

Statement of departmental budgeted and actual expenses and capital expenditure incurred against appropriations

For the year ended 30 June 2019

2018 Expenditure after re-measurement $000		2019 Expenditure before re-measurement $000	2019 Re-measurement $000	2019 Expenditure after re-measurement $000	2019 Approved appropriation[1] $000
Vote Statistics					
Departmental output expenses					
1,062	Data Futures Partnership	494	-	494	500
3,116	Services to Other Agencies RDA	2,760	-	2,760	3,651
4,178	**Total departmental output expenses**	**3,254**	**-**	**3,254**	**4,151**
Departmental capital expenditure					
5,329	Stats NZ capital expenditure - Permanent Legislative Authority (PLA) under section 24(1) of the Public Finance Act	5,267	-	5,267	10,000
5,329	**Total departmental capital expenditure**	**5,267**	**-**	**5,267**	**10,000**
Multi-category appropriation					
32,468	Stewardship of government data and statistical services	32,412	-	32,412	33,097
43,335	Population, social, and labour market data and statistical information services	52,110	-	52,110	53,028
51,289	Economic and business data and statistical information services	52,805	-	52,805	52,260
127,092	**Total multi-category appropriation**	**137,327**	**-**	**137,327**	**138,385**

2018 Expenditure after re-measurement $000		2019 Expenditure before re-measurement $000	2019 Re-measurement $000	2019 Expenditure after re-measurement $000	2019 Approved appropriation[1] $000
Multi-year appropriation					
65,705	2018 Census of Population and Dwellings	14,188	-	14,188	14,283
65,705	**Total multi-year appropriation**	**14,188**	**-**	**14,188**	**14,283**
202,304	**Total annual, multi-year, and permanent appropriations**	**160,036**	**-**	**160,036**	**166,819**

1. These are the appropriations from the Supplementary Estimates, adjusted for any transfers under section 26A of the Public Finance Act. End-of- year performance information on these appropriations has been reported on pages 15–16 and 42–47.

Reconciliation of multi-year appropriations

For the year ended 30 June 2019

The 2018 Census appropriation was established from 1 July 2014 to 30 June 2019, to provide for flexibility in planning for the 2018 Census of Population and Dwellings as a single programme over a five-year cycle and to continue the Census Transformation work programme for 18 months.

Appropriation, adjustment, and use	2018 Census of Population and Dwellings $000
Original appropriation	13,100
Adjustment for 2014/15	97,988
Adjustment for 2017/18	2,000
Adjustment for 2018/19	6,949
Total adjusted appropriation	**120,037**
Actual expenses in 2014/15	(7,024)
Actual expenses in 2015/16	(15,323)
Actual expenses in 2016/17	(17,702)
Actual expenses in 2017/18	(65,705)
Actual expenses in 2018/19	(14,188)
Total actual expenses	**(119,942)**
Balance of appropriation	**95**

Statement of departmental unappropriated expenditure and capital expenditure

For the year ended 30 June 2019

Stats NZ had no unappropriated expenses or capital expenditure for the year ended 30 June 2019 (2018: Nil).

Statement of departmental capital injections

For the year ended 30 June 2019

2018 Actual $000		2019 Actual $000	2019 Approved appropriation[1] $000
	Vote Statistics		
-	Stats NZ – Capital injection	12,781	12,781

$11.580 million of capital injections were used for fiscally neutral capital to operating swaps during 2018/19.

1. These are the appropriations from the Supplementary Estimates, adjusted for any transfers under section 26A of the Public Finance Act.

Statement of departmental capital injections without, or in excess of, authority

For the year ended 30 June 2019

Stats NZ had not received any capital injections during the year without, or in excess of, authority.

Statements of revenue and output expenses

The overarching purpose of the official statistics multi-category appropriation is to ensure the availability and promoting the use of the highest priority data and official statistical information to add value to decision-making.

The appropriation comprises the following output categories:

- stewardship of government data and statistical services
- population, social, and labour market data and statistical information services
- economic and business data and statistical information services.

Stewardship of government data and statistical services

The scope of this output category is limited to coordination of statistical and data services for government, through leadership of the OSS, oversight of the IDI, liaison with partners and customers, provision of ministerial services, statistical and data management advice, and the operation of access channels.

For the year ended 30 June 2019

2018 Actual $000		2019 Actual $000	2019 Approved appropriation[1] $000
31,417	Revenue from the Crown	32,494	30,536
1,771	Other revenue	7,821	2,561
33,188	Total operating revenue	40,315	33,097
32,468	Total output expenditure	32,412	33,097
720	**Net operating surplus/(deficit)**	**7,903**	**-**

1. These are the appropriations from the Supplementary Estimates, adjusted for any transfers under section 26A of the Public Finance Act. End-of- year performance information on these appropriations has been reported on pages 42–47.

Population, social, and labour market data and statistical information services

The scope of this output category is limited to delivery of data and statistical information services relating to the population, environment, household economics, social conditions, and the labour market.

For the year ended 30 June 2019

2018 Actual $000		2019 Actual $000	2019 Approved appropriation[1] $000
40,523	Revenue from the Crown	46,124	48,024
2,947	Other revenue	13,260	5,005
43,470	Total operating revenue	59,384	53,029
43,335	Total output expenditure	52,110	53,028
135	**Net operating surplus/(deficit)**	**7,274**	**1**

1. These are the appropriations from the Supplementary Estimates, adjusted for any transfers under section 26A of the Public Finance Act. End-of year performance information on these appropriations has been reported on pages 42–47.

Economic and business data and statistical information services

The scope of this output category is limited to the delivery of data and statistical information services relating to business and the economy.

For the year ended 30 June 2019

2018 Actual $000		2019 Actual $000	2019 Approved appropriation[1] $000
44,229	Revenue from the Crown	45,754	45,812
6,804	Other revenue	14,582	6,447
51,033	Total operating revenue	60,336	52,259
51,289	Total output expenditure	52,805	52,260
(256)	**Net operating surplus/(deficit)**	**7,531**	**(1)**

1. These are the appropriations from the Supplementary Estimates, adjusted for any transfers under section 26A of the Public Finance Act. End-of- year performance information on these appropriations has been reported on pages 42–47.

2018 Census of Population and Dwellings

This appropriation is limited to conducting the 2018 Census, and the administration and management of the ongoing census programme, as required under the Statistics Act 1975.

For the year ended 30 June 2019

2018 Actual $000		2019 Actual $000	2019 Approved appropriation[1] $000
65,705	Revenue from the Crown	14,188	14,283
-	Other revenue	-	-
65,705	Total operating revenue	14,188	14,283
65,705	Total output expenditure	14,188	14,283
-	**Net operating surplus/(deficit)**	**-**	**-**

1. These are the appropriations from the Supplementary Estimates, adjusted for any transfers under section 26A of the Public Finance Act. End-of- year performance information on these appropriations has been reported on pages 15–16.

Data Futures Partnership

This appropriation is limited to enabling the activities of the Data Futures Partnership. The Data Futures Partnership is intended to achieve the continued support of the independent, cross-sector Data Futures Partnership to ensure New Zealand's data is used effectively to create social and economic value for all New Zealanders.

For the year ended 30 June 2019

2018 Actual $000		2019 Actual $000	2019 Approved appropriation[1] $000
1,665	Revenue from the Crown	500	500
-	Other revenue	-	-
1,665	Total operating revenue	500	500
1,062	Total output expenditure	494	500
603	**Net operating surplus/(deficit)**	**6**	**-**

1. These are the appropriations from the Supplementary Estimates, adjusted for any transfers under section 26A of the Public Finance Act. End-of-year performance information on these appropriations has been reported on pages 42–47.

Services to other agencies RDA

This appropriation is limited to the provision of services by Stats NZ to other agencies, where those services are not within the scope of another departmental output expense appropriation in Vote Statistics. This appropriation is intended to achieve the provision of shared services with other government agencies for the efficient and effective management of the Crown estate, such as the provision of shared accommodation in Christchurch and Wellington.

For the year ended 30 June 2019

2018 Actual $000		2019 Actual $000	2019 Approved appropriation[1] $000
-	Revenue from the Crown	-	-
3,116	Other revenue	2,760	3,651
3,116	Total operating revenue	2,760	3,651
3,116	Total output expenditure	2,760	3,651
-	**Net operating surplus/(deficit)**	**-**	**-**

1. These are the appropriations from the Supplementary Estimates, adjusted for any transfers under section 26A of the Public Finance Act. End-of-year performance information on these appropriations is reported on pages 42–47.