

**Introductory briefing to the Minister of Statistics:
2018 Census**

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Key messages

- The New Zealand Census of Population and Dwellings will be held on 6 March 2018.
- The census produces authoritative and, in some cases, the only comprehensive population and dwelling statistics, including information on small communities and small populations. It includes a wealth of data about New Zealanders, including ethnicity, occupation, highest level of qualification, household and family composition, iwi affiliation/Māori descent, and geographic location.
- This information is used by local and central government, for planning and to allocate funding; and by businesses, NGOs and other organisations to support decision making. A cost-benefit analysis of the census conducted in 2014 concluded that for every dollar spent on the census there is at least a \$5 return on investment for the economy.
- A new 'digital-first' model for the 2018 Census will encourage the majority of households to fill out the census online. This will mean faster processing of census data, and make contributing easier for New Zealanders.
- Stats NZ is ensuring that the digital-first Census will be carried out successfully, with a series of test runs carried out, and regular reporting via Treasury.
- Making the census increasingly digital is a step towards a census model that will use more administrative data, rather than a traditional census, to collect information.



Denise McGregor
General Manager, 2018 Census

Hon James Shaw
Minister of Statistics
Date:

Purpose

1. The five-yearly census is a high-profile, high-value project within your portfolio as Minister for Statistics. Preparations to deliver the 'digital-first' 2018 Census are well underway.

The 'digital-first' Census will be carried out on 6 March

2. The New Zealand Census of Population and Dwellings is a legislative requirement under the Statistics Act 1975. Completion of census forms is compulsory, as the census plays a key role in Stats NZ's collection and management of our most important national data.
3. On 6 March 2018, Stats NZ will run New Zealand's 34th census. The 2018 Census will be conducted through a new 'digital-first' model, which means we are aiming for 70% of responses to be collected online.
4. While online form completion has been an option since 2006, the traditional census model has been to hand deliver paper forms to every household in the country and then employ a large number of temporary staff to collect and process the forms. This model is costly, time-consuming and is not sustainable over time as the population grows.
5. In 2018, each household will instead be sent a letter with a unique access code that will enable their household to access and complete their forms securely online.
6. One of the most significant changes/benefits for the new model will be our ability to process data more efficiently – close to real-time. As well as being more valuable for data-users, this means that we will be able to use processed data to inform the operational teams who are following up with households that have not responded
7. In the future, and building on this digital-first approach, increasing use of new technology and other sources of information will shift the burden away from survey respondents. A separate briefing on Census Transformation is available to explore this.

The census will provide a wealth of information for decision makers (government, NGO, private sector)

8. The census aims to account for at least 98% of the resident population. By collecting a snapshot of New Zealand's entire population every five years, the census provides detailed information that is not available from other government sources or surveys.
9. The census produces authoritative and, in some cases, the only comprehensive population and dwelling statistics, including information on small communities and small populations. It includes a wealth of data about New Zealanders, including ethnicity, occupation, highest level of qualification, household and family composition, iwi affiliation/Māori descent, and geographic location.
10. This information is used by local and central government, for planning and to allocate funding; and by businesses, NGOs and others to support decision making. Census data is also a legally-required input for determining electorate seat numbers and boundaries.
11. In 2015, the 2013 Census data was added into the Integrated Data Infrastructure (IDI). The 2018 Census data will also be added to the IDI. The benefits provided by integrating the census data include:
 - greater data quality and coverage
 - improved information for and about Māori, and migrants
 - greater information on outcomes for population subgroups
 - the inclusion of data not collected in administrative data (e.g. family information)

- the potential for supplementary administrative data to enhance future censuses.
12. The questions for the census are determined by the Government Statistician through her statutory independence. This determination is an operational matter, and is based on the value and relevance of the information that can be collected. The final content for the 2018 Census was published on 31 July 2017, and an outline of the decisions made is provided in the appendix to this briefing.

Delivering the Census is a government priority and a key part of Stats NZ's role

13. In June 2014, Cabinet approved a five-year multi-year census appropriation, totalling \$118 million. The appropriation is being used to fund the 2018 Census programme and census related projects. This funding also covered first phase of the census transformation work.
14. A cost-benefit analysis of the census conducted in 2014 concluded that for every dollar spent on the census there is at least a \$5 return on investment added to the economy.
15. The 2018 Census programme has the following investment objectives:
- To undertake a Census of Population and Dwellings in 2018 that meets statutory requirements as outline in the Statistics Act 1975.
 - To at least maintain the quality of census information compared with the 2013 Census.
 - To improve, by 20 percent, the timeliness of census information products released to customers following a 2018 Census, compared with the 2013 Census.
 - To reduce, by 5 percent over two full census cycles, the average cost of the census, starting in 2014 and using the 2013 Census adjusted for annual inflation at 2 percent.
16. The 2018 Census has been designated a Major Project and is monitored by Treasury. In the latest triannual report in July 2017, the project status was noted as Amber, up from Red following the 14 November earthquake.

Stats NZ is ensuring that the Census will be carried out successfully

17. Officials are available to brief you further on the changes to the census model for 2018 and the additional security provisions we are putting in place to protect the census data that will be submitted online.

There are five key phases for the 2018 Census operation:

18. **Prepare** [present until February 2018] – by the end of this phase, we will have completed our address lists, begun engagement with targeted communities, completed recruitment for our temporary staff and completed our system testing.
- We have successfully completed the first operational step by checking 1.8m addresses across New Zealand, for mail out. This involved 300 temporary staff plus office-based address verification and has given us assurance that we have a high quality address list.
19. **Enable** [19 February to 5 March 2018] – by the end of this phase, we will have sent or delivered access codes to every household in the country to ensure everyone has the information they need to complete the census.
20. **Census Day** 6 March 2018
21. **Remind** [7 March – 16 March] – by the end of this phase, we will have reminded all households who have not participated in the census to date that they need to participate.

22. **Visit** [16 March - 16 April] – by the end of this phase, we will have visited households who have not participated and, if necessary, begun the prosecution process for households who have refused to take part. Only around 100 people were prosecuted following the 2013 Census.

Stats NZ is ensuring that the digital first survey is fit for all New Zealanders

23. Building responsive census forms for tablet, mobile and desktop devices – to encourage as many households across New Zealand to participate online as possible. The online uptake target is 70 percent.
24. Making paper forms available upon request for those who prefer them, and a range of marketing and operational strategies will be deployed to raise awareness of the new model and encourage participation in 2018.
25. Sourcing a mixture of procured software solutions, such as Salesforce, which will be used to manage operational workloads, and utilising internal expertise where we can to build systems such as the data processing system.
26. Both the information website and the internet collection system have been built to comply with the current government web and usability standards. They have been peer reviewed and we are in the process of finalising other marketing support options for both the vision impaired and other people who may have challenges accessing and completing the online forms for the 2018 Census.

Stats NZ is testing and improving the processes required for a digital-first census

27. We have carried out a series of tests:

- Census Test (March 2016): by splitting our sample of 22,000 households between Auckland, Waikato, Wellington, and Canterbury, we tested a number of our new processes – including sending call-to-action letters, reminders and follow-up visits from field officers. The self-response rate (the number of households that responded before a field officer visited) was 32 percent, and 64 percent of households used the online form. Overall, the response rate was 59 percent.
- Census Test (July 2016): was primarily designed to see how households and individuals responded to the new, proposed questions for the 2018 Census, to inform content recommendations, and to test the new processing system. A sample of approximately 8,000 households who completed paper forms, and an online reference group of approximately 23,000 people who were sent a link to the latest version of the online forms. Overall, the response rate was 20 percent.
- Census Test (April 2017): The third and final public facing census test was held in Whanganui in April 2017. 19,000 households were asked to participate in a test bringing together as many systems and processes as possible, and to assess the impact of the proposed marketing campaign on a geographically bound sample population. The test also enabled the programme team to test operational processes that can be scaled for the 2018 Census.
- The final test was de-scoped following the 2016 North Canterbury earthquake, and delayed by one month. Ordinarily, this test would have taken place in March to simulate the timing for the census itself in 2018. Elements of the census model that were de-scoped to deliver a test in April 2017 are being tested during the remainder of 2017.

28. We are also taking advantage of other opportunities to test and learn, including:

- adapting and learning from work already underway such as moving the Agricultural Survey online to understand more about systems, processes and respondent behaviour.

- working with international partners, including Australia, Canada, the USA and the UK, and the Pacific. We have worked with colleagues at the Tokelau National Statistics Office to deliver their 2016 census, which has involved trialling some of the technology that will be used in 2018.
- learning from our Australian counterparts' experience with their 2016 Census.

Stats NZ has learned from the Australian Census

29. We have learned from the Australian experience. Recommendations from reports following the Australian census (especially with regards to communications and security), are already in place for our 2018 Census, including:

- approaching online security differently to Australia. Our online system will be protected by a 'web application firewall' and a security information and event management system. These are key security components that were missing from the Australian system.
- undertaking comprehensive load and performance testing of the online forms.

Appendix – 2018 Census Risk Monitoring

1. The risks outlined in the table below are being actively managed at a programme level. A comprehensive range of mitigations are in place to address these risks, and officials are available to brief you further on the mitigations.

Risk	Risk Level	Description
Internet Collection System (ICS) Hack / System Failure	High Risk	If the ICS is hacked or fails, the site will be taken down. People won't be able to respond online, extra work required to fix and check the impact. Public relations and privacy perceptions challenges could arise - contact centre workload will increase - could negatively affect the count - trust would also be eroded.
Delivery and jointly agreed timeframes across the organisation (IT Development and Support)	High Risk	If Census is not well connected with partner business units/groups, then there is a possibility of failure to deliver key Census products and systems on time.
Costs / Financial risk - uncertainties around costs post November 2016 earthquake	High Risk	If the MYA appropriation for the 2018 Census is insufficient then Statistics NZ will need to prioritise projects which may affect the ability to re-engineer systems and operations supporting the 2018 Census and may limit the ability of Statistics NZ enterprise requirements to leverage off the census programme.
Business Continuity	Medium Risk	There is a risk that natural disasters such as flooding or fires, or events such as foot and mouth disease, terrorism, or socio-economic factors such as labour unrest within the public service or with external service providers, may impact the programme's objectives, which could affect its quality objectives and/or the department's ability to undertake the Census.
Unable to achieve anticipated 70% targets for self-response, which affects non-response follow up	Medium Risk	If we are unable to get the required self-response rates from the NZ public as well as identify and remove unoccupied dwellings then this will increase the amount of non-response follow up, increasing the number of staff/time and thus field costs.
Unable to achieve required response rates for sub-groups, targeted response groups or particular area	Medium Risk	If strategies to target and support the special populations do not lead to the required response rates from these groups this will impact on the KPIs, data quality and potentially increase the amount of field support required to remedy the situation.

<p>Poor quality of Non-Private Dwelling (NPD) Register</p>	<p>Medium Risk</p>	<p>If a poor quality NPD register is delivered (as part of the 2018 Census Operational file) then the Field Operations Project may not be adequately resourced to enumerate them and it could also cause issues when trying to produce the final Census Dwelling Frame. This will result in extra field costs, coverage error, and increased address list costs to fix NPD coverage issues</p>
<p>Statistical Location Register (SLR) database not ready for 2018 Census Operation</p>	<p>Medium Risk</p>	<p>If the SLR database is not ready for the 2018 Census Operation then census will need to create their own 2018 Census Operational file resulting in extra effort required by census, quality being negatively impacted, and corporate benefits being lost.</p>

Appendix – 2018 Census content decisions

1. On 31 July 2017, the Government Statistician released the final decision about the content for the 2018 Census. A number of potential new topics were researched, developed and tested over a three year period. These included:

Topic	Included in the 2018 Census	Excluded from the 2018 Census	To be collected via another method or Stats NZ survey
Housing quality – dampness and mould indicator and access to basic amenities	▲		
Educational address and travel to education	▲		
Intersex addition to the current biological sex question			▲
Sexual orientation			▲
Gender identity		▲	
Step families		▲	
New set of questions about disability also known as activity limitation	▲		
Licence to occupy		▲	
Ownership of other dwellings		▲	
Second address/residence		▲	

2. Following testing, we were unable to guarantee the quality of the information that we could gather via a self-completed survey like the census for topics including sexual orientation, gender and a third category for sex.
3. We are now planning to include sexual orientation as a topic in our 2018 General Social Survey (New Zealand’s biggest survey of well-being). This approach will provide a better platform for gathering information on sexual orientation and will provide us with valuable insights about collecting this topic in other surveys in the future.
4. We also tested whether we could collect information from those who are biologically intersex, as we know that they are unable to accurately represent their biological sex with a two-category question (male / female).
5. The decision to not include a third category for the sex topic reflects the challenge that statistical agencies all over the world are facing, where providing an alternative to a binary sex question (male / female) is proving difficult to design, given the need to guarantee the quality and comparability of the information captured. To date, no agency has introduced a third option for biological sex in their census.
6. Stats NZ is developing an alternative way to capture intersex population information in the 2018 Census and will work with representative groups in the lead up to the census to ensure the intersex population of New Zealand is able to answer this question accurately. At a minimum this will involve providing those who wish to identify as intersex with a paper form on which they can mark both ‘male’ and ‘female’.
7. Officials are available to brief you on the background and rationale for the content decisions.