

2018 Census strategy





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Statistics New Zealand
Tatauranga Aotearoa
Wellington, New Zealand

Contact

Statistics New Zealand Information Centre: info@stats.govt.nz

Phone toll-free 0508 525 525

Phone international +64 4 931 4600

www.stats.govt.nz

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1 Purpose

This document sets out the strategic direction for the 2018 New Zealand Census of Population and Dwellings. The strategy will focus our efforts, and guide our work programme and outputs for the 2018 Census in order to meet the needs of our customers.

2 Organisational context

Data is a national strategic asset. Statistics New Zealand's purpose is to empower decisions by adding value to New Zealand's most important data. The Census of Population and Dwellings has a key role in this.

To help improve outcomes for all New Zealanders, our goal is to:

- double the value of the data provided by Statistics NZ to New Zealand by 2018, with a tenfold increase in the value of data provided by Statistics NZ to New Zealand by 2030.

To meet this goal, Statistics NZ has defined several strategic roles for the department:

- provider – provide independent and trusted data
- enabler – enable New Zealand's decision-makers
- innovator – innovate to drive value for customers
- steward – steward data now and in the future.

The 2018 Census has a part to play in each of these roles and this is reflected in the strategic goals for the census.

3 Aim of the census

The New Zealand Census of Population and Dwellings (the census) has been conducted since 1851 and is a legislative requirement under the Statistics Act 1975. It produces authoritative and, in some cases, the only comprehensive population and dwelling statistics, including information on small communities and small populations. The 2018 Census will be the 34th census conducted in New Zealand.

The aim of a census in New Zealand is to produce the best possible count of the population and dwellings and provide the count, along with other related statistical information, to customers through useful and accessible products and services.

4 Background

High-quality, relevant census information is critical to New Zealand, with an estimated net present value over the next 25 years of close to \$1.4 billion¹. The census model needs to change if it is to be sustainable over time. Compelling drivers for change include:

- rising costs and the potential for efficiencies
- the ongoing trend of declining response rates (particularly for small sub-groups and small areas)²
- the increasing availability and sharing of administrative data across government
- technological advances.

As part of its Census Transformation Strategy, Statistics NZ is investigating the production of census information increasingly from administrative sources, rather than the current 'full enumeration' survey model. Internationally, countries with administrative censuses produce census information at much lower cost, and information can be produced more frequently.

In February 2014, Statistics NZ confirmed that a modernised census in 2018 is still the best available method to deliver changes needed for the next census. While existing administrative data cannot, at present, replace current census statistics, there is potential to use existing administrative data within the current census model. Transforming the census to a model based solely on administrative data remains under investigation for longer-term change, through the Census Transformation Project.

In the short-to-medium term, modernising the survey-based census model will significantly improve the efficiency and effectiveness of the census and provide a step to a census based on administrative data. Work will also be undertaken within the 2018 Census programme to further test the potential of replacing traditional census collection with administrative data. This will build on work already underway, comparing the quality of current administrative data with 2013 Census data.

In June 2014, Cabinet approved funding for a modernised 2018 Census based on a detailed business case with the following investment objectives:

- To undertake a Census of Population and Dwellings in 2018 that meets statutory requirements.
- 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.

¹ Bakker, C (2014). [Valuing the census](#). Retrieved from www.stats.govt.nz

² At a national level, the 1996 Census achieved net coverage of 98.4 percent and a response rate of 95.6 percent. The 2006 Census achieved net coverage of 98 percent and a response rate of 94.8 percent. The 2013 Census followed this downward trend, achieving net coverage of 97.6 percent and a response rate of 92.9 percent. These national rates may be higher or significantly lower for sub-populations and small population areas.

5 The 2018 Census strategy

A key part of the modernisation that underpins the 2018 Census strategy is to radically alter the mix of modes used in the current collection model. We are introducing mail-out, not delivering paper forms to every dwelling, and making the internet the primary response mode. At the same time we must maintain the accuracy of basic counts achieved in recent censuses.

The enhanced multi-modal census design will modernise census operations, support improved interaction between the public and government, and reduce the real cost of census data collection.

Communication strategies to inform respondents – all people in New Zealand on census day – will need to expand, not only to call people to complete their census forms, but also to inform people about the changed collection model. For example, many people will not see a census collector on their doorstep before census day and they will not receive paper forms by default.

Given the magnitude of the planned change and the risk involved to the quality of census counts, a thorough development and testing programme is required.

6 Strategic goals

The key strategic goals for the 2018 Census are:

1. Improve data quality while modernising
2. Reduce the cost of collection operations
3. Contribute to organisational capability
4. Increase use of administrative data
5. Make digital engagement easy
6. Adopt test-driven development
7. Deliver customer-driven products and services

The following pages provide further information on these seven goals and highlight the strategies and actions to achieve them. Note that the goals are not in priority order and that some actions apply to several goals.

Strategic Goal 1: Improve data quality while modernising

Inherent risks to information quality come with change to our business model for the census. The step-change for the 2018 Census means that risks to data quality are much greater than for the 2013 Census, which was much the same as the 2006 Census. While modernising, we must protect the accuracy of basic counts, as they are the key reason for taking a census.

There are six elements of statistical quality: accuracy, relevance, coherence, timeliness, accessibility, and interpretability. All will have quality targets for 2018.

In 2018 we aim to maintain high coverage and response rates and address sub-group and subnational variation in response rates, while modernising. Specific emphasis will be on improving Māori response rates, after their decline in the 2013 Census, and on recognising the importance of census information for Māori.

Emerging data needs will be considered for new topics in the 2018 Census, but decisions on content will reflect the role the census plays in an integrated official statistics system.

Table 1
Improve data quality while modernising

Objectives and strategies	Actions
Ensure accuracy of national counts and reduce variation in subnational response rates	
<p>Design, test, and implement more modern and targeted collection approaches</p> <p>Develop new communication approaches to support the new collection process</p>	<ul style="list-style-type: none"> • Develop modern collection processes to enable real-time management of field resources • Undertake thorough development and testing of changes • Target hard-to-reach populations • Review the statistical quality management strategy • Research other models to better understand where non-response pockets will occur • Undertake a post-census coverage check, eg Post-enumeration Survey • Increase public communications to compensate for less doorstep communication • Develop public communication strategy to encourage self-response and support non-response follow-up • Diversify communication strategies to reflect population changes • Ensure an integrated communications strategy for the census, under the Statistics NZ brand
Improve Māori national and subnational response rates	
<p>Design, test, and implement specific Māori collection strategies</p> <p>Develop Māori communication strategies that support the new collection process and encourage high Māori response</p>	<ul style="list-style-type: none"> • Ensure understanding of Māori responsiveness across the Census Branch in preparation for engagement • Implement a specific strategy to improve Māori response rates • Focus on Māori when making modernisation changes • Focus on Māori when diversifying communications strategies and integrating with the Statistics NZ brand and communications strategy
Maintain relevant, coherent, and fit-for-purpose census information with lower processing cost	

<p>Improve relevance of census content and maintain quality of foremost and defining variables</p> <p>Implement the relevant changes to drive the 'make digital engagement easy' goal</p> <p>Review statistical quality management strategy</p> <p>Use administrative data to reduce cost of processing supplementary variables</p>	<ul style="list-style-type: none"> • Make necessary content changes for emerging key data needs • Make content-related changes driven by new methodologies • Make necessary content changes for foremost variables • Manage customer expectations through targeted content consultation processes • Include automatic edits, auto-filling, and prompts for the online form • Improve edit and imputation approaches • Use IDI data to improve work variable quality, and replace work and income-related responses
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Strategic Goal 2: Reduce the cost of collection operations

The cost of distributing and collecting census forms is substantial, with collection operations consuming over half the census budget. Unless major changes are made to the 'full enumeration' census model, the cost of census-taking will keep climbing with more dwellings and inflation.

The new collection model uses a property data frame to mail out internet access codes to households, followed by waves of reminder letters, which may include paper forms. Field staff will focus on delivering forms in those areas not covered by the mail-out, and on the extensive targeted non-response follow-up activity. Re-engineering of the collection model will increase data-processing efficiency by achieving better integration of the collection and data-processing phases.

Change to the type and extent of census communications will inform the public of the changed processes.

Extensive development and testing will successfully transform the current business model. The new model, introduced in 2018, will be extended in the next census.

Table 2
Reduce the cost of collection operations

Objectives and strategies	Actions
Reduce collection cost	
Change forms delivery process to maximise self-response	<ul style="list-style-type: none"> • Document the new business process model and develop an end-to-end statistical design • Work with the Property Data Frame Project to develop the frame • Draw on other countries' expertise • Use canvassing to improve address list quality
Redesign field operations and processes to reduce the number of field staff required	<ul style="list-style-type: none"> • Redevelop and test methodologies to support the new collection model • Produce real-time management information • Increase use of digital technologies for all field processes • Integrate systems, vendors, and business processes • Use addressing quality to identify mail-out target areas • Plan for when and how we use paper forms • Use a 'wave' approach to follow up the initial mail-out with reminder letters and paper forms • Redevelop field structure, field scheme, collector workload model, and pay methodology • Employ field staff with skills to implement targeted non-response follow-up procedures
Use enterprise collection systems	<ul style="list-style-type: none"> • Build case management functionality with the Enterprise Collection Platform team
Increase integration between collection and processing systems	<ul style="list-style-type: none"> • Build a processing system adapted for census with the Household Processing Platform team • Reduce processing effort by promoting online response and more coding by respondents • Speed up sending fieldbook information to the processing centre

Strategic Goal 3: Contribute to organisational capability

The census is a large operational activity, progressively integrating with corporate initiatives under Statistics 2020 Te Kāpehu Whetū (Stats2020). The 2018 Census will collaborate in and contribute to modernisation across a range of Statistics NZ projects including the household processing platform, the property data frame, the Enterprise Collection Platform, and dissemination tools and services.

The census will integrate with corporate and all-of-government information technology initiatives.

Table 3
Contribute to organisational capability

Objectives and strategies	Actions
Improve corporate efficiency by integrating with other corporate business processes	
Collaborate in a range of Stats2020 projects	<ul style="list-style-type: none"> • Build collection case management capability with the Enterprise Collection Platform project team • Work with the Property Data Frame Project to develop the frame • Specify census requirements for the Household Processing Platform • Develop customer-driven census products integrated with other corporate products • Enable Statistics NZ to benefit from census-product expertise • Use corporate and all-of-government procurement processes
Grow our people	
Ensure census staff maximise their skills and experience	<ul style="list-style-type: none"> • All census staff have development plans, incorporating Statistics NZ requirements • Census staff contribute to corporate projects
Use corporate and all-of-government information technology (IT)	
Integrate census, corporate, and government IT processes and platforms Partner with other agencies to deliver and use shared services	<ul style="list-style-type: none"> • Use the Geospatial Management System to develop electoral and automatic rebasing systems • Use corporate dissemination platforms • Use all-of-government IT services, especially IT infrastructure • Include Census in the corporate IT Disaster Recovery solution • Make participation in the census easy, in line with Better Public Services Result Area 10 • Develop and implement a procurement strategy

Strategic Goal 4: Increase use of administrative data

Statistics NZ will use more administrative data in the 2018 Census. An administratively sourced address list of most New Zealand households will be used to mail out internet access codes, efficiently reusing existing information, in line with the Government ICT Strategy. Administrative data may supplement responses from some groups (eg overseas visitors) and will help with coding some variables. The Census Transformation project will continue to explore the wider use of administrative data in the census.

This goal is consistent with Statistics NZ's strategy of 'administrative data first'. Statistics NZ intends to change the balance of administrative data and direct surveys. The department's aim is that by 2020, administrative data will be the first source of information, supplemented where necessary by direct collection.

Table 4
Increase use of administrative data

Objectives and strategies	Actions
Achieve collection efficiencies by using administrative data	
Use administrative sources of address data in the new census collection process Investigate using administrative data to replace census forms altogether	<ul style="list-style-type: none"> • Build a property data frame with the Geospatial team for mailing out internet codes to most households • Ensure legislative changes needed to use administrative data are made in time • Use management information to measure coverage and response rates in real time • Investigate data sources for replacing census forms altogether for some non-private dwelling types and unit non-response
Use administrative data to improve processing efficiency and data quality	
Use administrative data in the coding process	<ul style="list-style-type: none"> • Replace manual coding of workplace address and industry with administrative data • Experiment with administrative data for imputation • Use many administrative data sources for evaluation during field operations and traditional data evaluation
Use administrative data to reduce respondent burden in post-2018 censuses	
Use the 2018 Census to test replacing some questions with administrative data in the next census	<ul style="list-style-type: none"> • If feasible, substitute administrative data for responses in 2018 and beyond • If feasible, include an embedded test for the next census in the 2018 Census
Use the 2018 Census as a benchmark for assessing alternative administrative models	
Collaborate with the long-term census transformation strategy	<ul style="list-style-type: none"> • Make data from the 2018 Census available for the Census Transformation project • Design the 2018 Census processing system to integrate with administrative sources
Integrate census data with data from other collections	
Use the 2018 Census to test data integration and substitution for the next census	<ul style="list-style-type: none"> • If feasible, substitute administrative data for census data in the census after 2018

Strategic Goal 5: Make digital engagement easy

The internet is the first place many people go to for information. New technologies and applications bring people and content together and allow the repurposing and reuse of data and information in ways that until recently were either impossible or not considered.

For the 2018 Census, online response will be the primary response mode, as opposed to mail-back or collector pick-up of paper forms. The online response rate is expected to

exceed 70 percent, with up to 20 percent of forms mailed back and 10–15 percent picked up by collectors. Statistics NZ will promote the online option to maximise uptake as well as enhancing the collection systems for a more environmentally sustainable business model.

Statistics NZ will introduce online consultation to increase customer participation. This will precede targeted consultation on content and outputs. Communications across all census phases will be driven by developments in online social media.

Table 5
Make digital engagement easy

Objectives and strategies	Actions
Make it easy for customers and data suppliers to interact digitally with Statistics NZ	
Use a customer- and supplier-centric design and delivery approach	<ul style="list-style-type: none"> • Understand issues and design from supplier and customer points of view • Use marketing techniques and clear communication messages • Develop processes and systems that make it easy for the respondent to participate in the census • Prototyping and usability testing
Make online the primary response mode by transforming collection and communications	
Design the questionnaire for the online form and mobile devices Ensure paper forms capture essential information without constraining the online form	<ul style="list-style-type: none"> • Improve data quality with the online form • Enable respondents to fill in their forms anywhere, anytime • Enable the 'hard to reach' to use the online option, while removing cost and improving access
Use digital communication channels to promote and support the new collection model	<ul style="list-style-type: none"> • Maximise use of social media to promote the census and improve response rates • Target communications to specific subgroups and regions with intelligent use of real-time data
Make online the dominant mode for respondent help and communication	
Encourage respondents to use online help for collection and dissemination activities	<ul style="list-style-type: none"> • Redesign online respondent help • Introduce additional online help and support mechanisms
Develop smarter online forms	
Improve online-form usability and emphasise 'online first'	<ul style="list-style-type: none"> • Review the questionnaire development process • Improve the way online help is stored, presented, and selected • Cater for more types of computer devices

	<ul style="list-style-type: none"> • Investigate the benefits of a resumable online form • Investigate using multiple languages for online census forms • Build predictive text features into the online form • Investigate the use of code files and address list information to automate some responses • Introduce more online edits, respondent prompts, and auto-filling capability • Integrate the address list with online form responses
Increase public participation and awareness of census statistics	
Use online technology for consultation, communication, and dissemination activities	<ul style="list-style-type: none"> • Use online consultation processes • Increase the use of social media for communications • Increase the amount of census information available online • Make all output and dissemination activities available online

Strategic Goal 6: Adopt test-driven development

Extensive testing will ensure the 2018 Census meets important information needs. A comprehensive testing programme will verify the end-to-end impact of modernising the 2018 Census.

An enhanced test-driven development model will be used to manage the level of change in a modernised census. This will ensure that an optimal mix meets key performance indicators and investment objectives, and delivers quality information, within budget.

Table 6
Adopt test-driven development

Objectives and strategies	Actions
Use the testing programme to reduce risk and ensure quality	
Integrate the testing programme with the develop-test-learn-revise cycle, emphasising reduction of risk associated with change Plan early and ensure sufficient budget for development and testing	<ul style="list-style-type: none"> • Create an integrated test strategy and plan • Use international experience to develop best-practice testing methodologies • Conduct a series of tests, including a major field test in 2015/16 and a dress rehearsal in 2017 • Use an iterative process of testing early and often, refining the test plan as findings emerge • Use the 2018 Census to support the transformation testing programme • Use evidence from the testing programme for timely and robust decision-making • Set up a sufficiently resourced testing team early • Bring forward procurement to ensure suppliers participate in the major tests • Implement a comprehensive risk-management strategy
Use testing as a sound platform for future census transformation	
Use the 2018 Census Programme to inform the Census Transformation project	<ul style="list-style-type: none"> • If feasible, conduct embedded tests during the 2018 Census • Incorporate Census Transformation test plans into 2018 Census test plans • Include the Census Transformation project team as a reviewer of key 2018 Census documents

Strategic Goal 7: Deliver customer-driven products and services

The Census of Population and Dwellings is part of an integrated national social and population statistics system. It provides benchmark population counts at national and local levels on a regular basis, to satisfy legislative requirements. It has a unique role as an important source of demographic, social, and economic data for small geographical areas and sub-populations.

Customers' expectations of timely delivery of census data are increasing – they are no longer willing to wait the usual seven to nine months from census day. Statistics NZ will need to modernise systems, processes, and products and services to disseminate census data sooner. This will involve using corporate developments such as the dissemination platform. It will mean looking internationally to other agencies for products, services, and confidentiality methods that can be used to produce the 2018 Census outputs.

Customers expect to access data in different formats from different platforms, wherever they are. To support these changing priorities, the systems and processes used to disseminate census data will have to change.

Table 7
Deliver customer-driven products and services

Objectives and strategies	Actions
Use modern dissemination methods to improve customer access to data	
Ensure confidentiality methods meet the needs of a range of customer-driven products and services	<ul style="list-style-type: none"> • Focus on customer information needs when developing products and services • Extend the range of customer-defined products • Change confidentiality methods to support an updated product mix, including on-the-fly confidentiality
Release census information to customers earlier than we did for the 2013 Census	
Use corporate dissemination platforms by default, with census-specific tools only when needed	<ul style="list-style-type: none"> • Change data collection, processing, and evaluation to deliver final census data earlier • Test output production systems and processes in time for early operational use • Plan dual output production phases (early and status quo) of all products and services, while managing the associated risk
Introduce mobile and interactive dissemination	
Develop mobile-optimised products and dissemination technology to widen support of embedded census data	<ul style="list-style-type: none"> • Build or procure products optimised for the mobile customer • Regular use of infographics, mapping, and other visualisations, to support dissemination communications objectives • Introduce tools to give customers more control over data