Stats NZ
Tatauranga Aotearoa

Admin enumeration: Planned approach for the 2023 Census

Te Kāwanatanga o Aotearoa
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Contents

List of tables

List of figures

Purpose

Admin enumeration: Planned approach for the 2023 Census summarises Stats NZ's planned approach to designing and implementing processes to add individuals to the census file from administrative (admin) data for the 2023 Census. We describe this approach in reference to the 2023 Census: High Level Design and through an additional set of key principles for admin enumerations.

This paper is one of a collection of documents summarising our approach to the combined census model design. Other papers to read include:

- Editing, data sourcing, and imputation: Planned approach for the 2023 Census, which describes our methods for detecting and resolving errors in the 2023 Census and for using other data sources and statistical imputation to fill in gaps when people or dwelling characteristics have not been provided on census forms.
- Family and household methodology: Planned approach for the 2023 Census, which describes our methods for family coding in the 2023 Census.

Background

Overview of statistical methods for adding admin records to the 2018 Census dataset describes the statistical methods we used in the previous census to determine which records would be included in the final census unit record file as administrative (admin) enumerations, using information from the Integrated Data Infrastructure (IDI).

These methods for including admin enumerations built on approaches by other national statistical offices (Keller et al, 2018) and previous research from the Census transformation programme.

Appendix: 2018 Census admin enumeration methodology provides more details, including identified data quality issues.

The 2018 Census introduced the inclusion of individuals sourced from admin data in addition to census responses (Stats NZ, 2019). This combined-model approach replaced the use of imputed ‘substitute’ records in previous censuses (Stats NZ, 2013). The approach was not originally planned but was implemented due to the lower-than-expected level of responses in the 2018 Census.

For the 2023 Census, we will implement a combined model by design. Full field enumeration will still be the primary source of census information, with alternative data sources used to fill gaps. This includes admin data for units and a combination of admin data, historical census data, and statistical imputation for attributes.

Developing the combined model by design means we can consider the overall combination of both response and admin records in our design, and that design will be driven by output quality needs and the need to ensure understandable and statistically robust methods.

The impact of admin enumeration on census outputs

In general, admin enumeration is felt to have a positive impact on overall census outputs, compared with outputs produced using only census responses. The benefits include higher coverage and a more representative dataset (for more information, see Final report of the 2018 Census External Data Quality Panel).

Including admin enumerations means we will better measure the New Zealand population, overall and for different groups, increasing the value provided by the census.

However, we are aware there can be also negative implications to using a combined census model. These include the following.

Limitations of a higher reliance on admin data in the 2018 Census

- Not all individuals could be located at the correct location from admin data, with limitations including delays in updating addresses.
- Building full households from admin data is particularly difficult as it relies on all household members reporting their address correctly. As a result, in the 2018 Census, fewer people were able to be placed in a household and included in family and household outputs.
- There are flow-on impacts for the coverage estimation methodology, with adjustments required to account for changes in patterns and drivers of coverage errors.

Conceptual differences between census responses and admin data

- Admin data is not primarily collected for statistical purposes and may therefore have additional ethical considerations.
- Admin data generally measures an individual's usual residence better than it measures the 'census night' concept used by the census.
- There are inconsistencies between definitions of 'usual residence', with some sources relying on self-reporting (where a person describes themselves as a usual resident, but their application of 'usual resident might not meet the statistical definition of the term) and others following the statistical definition.

The 2018 Census also taught us about the difficulty of implementing a new model in a reactive manner. Key decisions had to be made under considerable time pressure, and after census day. Ideally, a framework for these decisions would be implemented beforehand, increasing transparency and objectivity, allowing for critique, and reducing risk.

2023 Census admin enumeration approach

This section provides an overview of our admin enumeration approach and then summarises the key scope statements, assumptions, and principles.

In line with the overall 2023 Census strategy, we plan to reuse elements of the 2018 Census design. However, we will also reassess aspects of the methodology identified as requiring further development. This is particularly important given the time constraints involved in the 2018 Census process and the need to consider admin enumerations alongside the overall combined census model, as well as their impact on census outputs, measurement of census coverage, and further uses such as for the estimated resident population (ERP).

As in 2018, there will be several key steps in the admin enumeration process, covering the various types of non-response. Figure 1 shows the proposed high-level information flow model for these processes. The boxes represent various data steps, while the arrows represent individual processes. The numbered circles indicate processes with considerable design questions remaining.

Linking census respondents to the IDI: Census respondents will be linked to the IDI to limit the possibility of including admin enumerations for those who have already completed a census form.

Deriving an admin resident population: We will use methods from previous Stats NZ research (Stats NZ, 2018; 2021) to identify which admin records are part of both the usual resident population and the population in New Zealand on census day. Only these individuals will be eligible for inclusion as admin enumerations in the applicable steps.

We may use an additional ‘sure’ subset (referred to in 2018 as the IDI-ERP_Sure) of this admin resident population to increase our confidence that individuals are within the target population of the census and to reduce the risk of introducing over-coverage to the census file.

Adding admin enumerations into responding private dwellings: We will use evidence from census forms, in conjunction with available admin data, to determine where individuals may have been missed from a given census household. This may include individuals who are listed as absentees and have not otherwise completed an individual form. We will only include admin enumerations when evidence exists from both sources. We will update census family and household information to account for any admin enumerations that are added.

Adding admin enumerations into non-responding private dwellings: Admin households will be derived as a combination of admin individuals at a given address. We will use a statistical approach to estimate how likely a given admin household is

to be correct and therefore which admin enumerations should be included. Not all non-responding dwellings will be required to have admin enumerations.

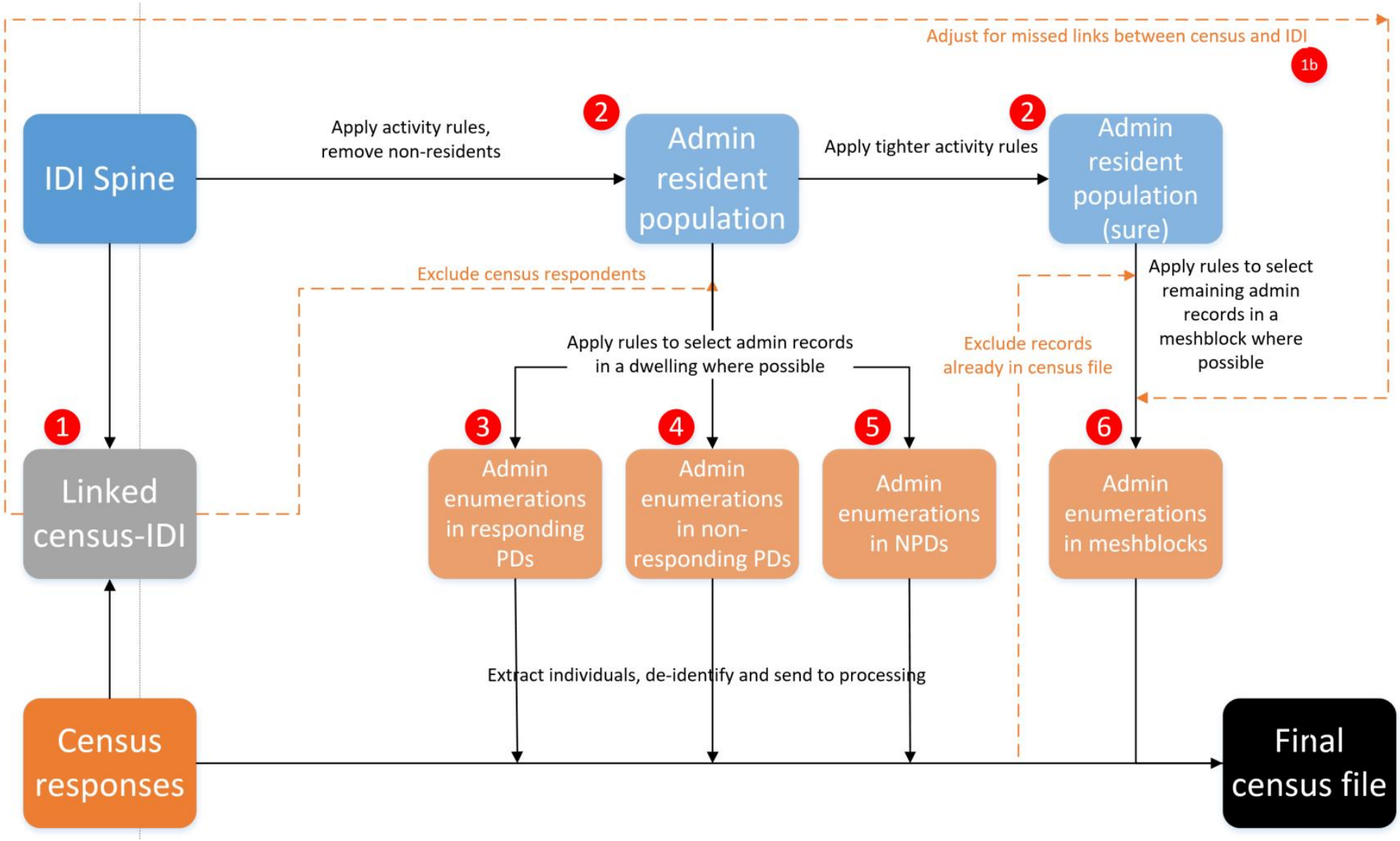
Adding admin enumerations into non-private dwellings: We intend to include admin enumerations in two specific types of non-private dwelling: prisons and defence establishments. We will source lists of census night occupants from the respective agencies (Ara Poutama Aotearoa: Department of Corrections and New Zealand Defence Force) close to census night and use this information to ensure there is no under-coverage in these dwellings.

Adding admin enumerations into geographic areas (meshblocks): We will attempt to include any admin records that could not be included in a dwelling in a meshblock instead. These individuals will not be part of family and household statistics but will be included in other outputs. We will use a similar process to that used for non-responding private dwellings, estimating how likely it is that an individual's admin meshblock is correct. We may use additional quality criteria for these meshblock enumerations, reflecting the limitations of these records and further reducing the possibility of over-coverage.

Note that steps 3–5 in figure 1 represent independent sections of the population, based on their usual residence address determined from admin data.

For more information, see Appendix: 2018 Census admin enumeration methodology.

Figure 1 **Proposed 2023 Census admin enumeration information model**



Related 2023 Census: High Level Design scope statements

Table 1 contains a summary of scope statements from the 2023 Census: High Level Design and their relevance to admin enumeration design.

Table 1

Relevant scope statements from the 2023 Census: High Level Design		
High Level Design scope statement	Status change	Relevance to planned admin enumeration design
2. Collaborate with Treaty partners	Extend	We will engage with Māori and iwi as Treaty partners on the use of admin data, including potential approaches for adding admin enumerations into the census file. This engagement needs to take place early to allow our partners to participate in key design decisions as appropriate.
3. A combined census model by design	Fix	Admin enumeration methodology is fundamental to the combined census model. Through detailed design of these processes and related dependencies, we will be better placed to understand the impacts across the census programme and to ensure high-quality outputs. As part of the admin enumeration design, we need to consider a range of scenarios, including varying levels of census responses and how this will affect the overall combined model.
4. Maintain and develop social licence	Validate	The use of admin data is reliant on having the trust and confidence of New Zealanders. Admin enumeration design will be included in ongoing engagement to provide transparency about planned methods and support any broader social licence discussions.

Relevant scope statements from the 2023 Census: High Level Design		
High Level Design scope statement	Status change	Relevance to planned admin enumeration design
5. Ethical use of data	Validate	Access to IDI data for the purposes of both research and implementation will be assessed against frameworks such as Ngā Tikanga Paihere. Other uses of admin data, such as lists of people in prisons or defence establishments, will also need to be considered against these frameworks. Ethical use of data will also need to be monitored throughout the design phase to ensure these frameworks are met.
6. Leverage off wider Stats NZ work	Extend	We will make use of any developments to admin data methods outside the census programme. This includes work under the Mana Ōrite Relationship Agreement. It also includes ongoing research into areas such as methods for defining an admin population, admin attributes, or admin families and households within the Census transformation programme. Any developments will be considered, and where appropriate, incorporated into our admin enumeration design.
10. Privacy, confidentiality, and security by design	Validate	Any use of admin data will consider privacy, security, and confidentiality, including development of a statistical production environment. We will undertake and publish privacy impact assessments.
11. Robust testing	Fix	We will incorporate testing strategies in both our design and implementation to provide assurance of these methods. We will also consider a range of scenarios to understand the impact on, and effectiveness of, our combined design.

Relevant scope statements from the 2023 Census: High Level Design		
High Level Design scope statement	Status change	Relevance to planned admin enumeration design
14. Data quality by design	Extend	Data quality management needs to be embedded in the design process, as well as implementation of any admin enumeration methods.
18. No change to statistical units or population concepts	Validate	The admin enumeration design will be similar to that used in the 2018 Census in terms of identifying people who should be in the census usually resident population count and prioritising the inclusion of these people into a dwelling. There is no scope to extend this to alternative concepts.
38. Re-use of existing administrative data supplies, with quality improvements	Fix	Only existing data sources are in scope for the admin enumeration process. This includes data available within the IDI, as well as population lists provided by Ara Poutama Aotearoa: Department of Corrections and New Zealand Defence Force.
40. Qualitative and quantitative analysis of administrative data	Fix	We will incorporate assessments into the quality of units eligible to be included in the census file as admin enumerations. This will inform our decisions around which admin records are high enough quality to be included in the census file.
41. Re-use of existing processing systems, with fixes	Fix	Where possible, we will use previous methods for determining and adding admin enumerations. We will look to improve the accessibility and clarity of code to make the process more streamlined and reproducible. We will also work with the Stats NZ Data Processing team to consider the interactions with the census processing system and to incorporate consistency in approach where possible.

Relevant scope statements from the 2023 Census: High Level Design		
High Level Design scope statement	Status change	Relevance to planned admin enumeration design
43. A statistical production environment for administrative data	Extend	We will implement these admin enumeration methods within the statistical production environment. Our combined model design will include considerations of confidentiality and security to ensure data is handled and transferred in a safe manner.

Assumptions

There are additional assumptions for our planned admin enumeration approach, taken from the 2023 Census: High Level Design.

- A privacy impact assessment (PIA) will be conducted in a timely manner, and the 2023 Census will be granted at least the same administrative data access as the 2018 Census.
- Over-coverage can be removed from the administrative population list to an acceptable level.
- We will respect respondents' intentions and use census responses as the default.

Changes to these assumptions may impact the timing and scope of work based on this approach. For example, continued delays in access to admin data for research purposes may limit the scope of work that is possible.

Principles

For the 2023 Census admin enumeration design, we have developed a set of key principles. These principles cover a range of design questions within the combined model space.

Census responses will be prioritised over admin enumerations

Based on the 2023 Census High Level Design, we assume that information from census responses will be prioritised over that from administrative records. This means that our general approach to admin enumerations is to consider adding people only where we have evidence they have not already been captured within census responses.

There also may be specific exceptions to this assumption.

For example, we need to consider our approach for adding admin enumerations into responding census dwellings. This adjustment for within-household non-response (sometimes referred to as ‘balancing’) incorporates information from both census responses and admin data. For 2023, we will seek to reassess the level and type of evidence required to determine whether an individual was missing, as well as our confidence relating to whether added admin records are correct. We will aim to understand how best we can utilise information from a census form to indicate need for admin enumeration, while also using this admin data to maximise the quality of family and household outputs.

A second example is around our treatment of people found to be overseas on census night and therefore outside the target population of the census. Border movement data can help us decide whether an individual was in New Zealand or not. This data is likely more accurate than completed census forms. Therefore, we plan to use border movement data to remove respondents who are overseas on census night from the census target population.

Admin enumerations in a dwelling will be prioritised over admin enumerations in a meshblock

One of the potential implications of a transition towards an admin-first census is the change from a dwelling-first focus to a person-first focus. The traditional census model enumerates people through their census night dwelling. In admin data, however, we are more confident in our ability to identify people who are usually resident within New Zealand than in our ability to determine who is usually resident within a given dwelling. This reflects the high quality and timeliness of border movement data, compared with possible lags in updating of usual residence addresses.

Where possible, we will aim to include admin enumerations into specific dwellings. While admin enumerations in meshblocks are likely to improve the overall representation of people within the census file, these people are not attached to a dwelling and cannot contribute to detailed information about families and households. Family and household methodology: Planned approach for the 2023 Census discusses some of the impacts of having admin enumerations that are not included in these outputs.

A key focus of our admin enumeration design will therefore be to include as many people as possible into dwellings, while still maintaining assurance that these added records are of sufficient quality. Further work in this area may involve extending the predictive models used in 2018 to give us a better understanding of the reliability of given admin records.

A framework will be used to determine thresholds for the acceptable quality of admin enumerations

We need to incorporate data quality by design within our admin enumeration approach.

A key consideration for the 2023 Census is to develop a framework for making decisions about quality thresholds for admin enumerations based on the level of response and the estimated quality of available admin data. We expect this framework will either replace or extend the manual decision-making process used in the 2018 Census. Covering an appropriate range of possible scenarios ahead of time and indicating our general preference for risk levels should provide transparency into any choices that are made, as well as help with broader contingency planning.

As with the 2018 Census, we intend to consider the trade-offs between national counts and more detailed subpopulations. We will only include admin enumerations where we are confident of their quality and that they add value to census outputs. In particular, we need to have strong evidence for the given individuals being part of the usual resident population and that we are including them in their correct geographic location.

The extent of admin enumerations will be driven largely by the response rate achieved: the higher the response rate, the fewer admin enumerations included in the census file. We intend to develop an admin enumeration design and threshold framework that can be applied regardless of the level of response.

We will use quality criteria similar to those used in the 2018 Census to understand how well our suggested methods are performing at different thresholds. The relationship between census and admin information for census respondents will inform our assessment of quality for non-respondents.

Our quality criteria, as part of our overall approach to measuring quality, will inform our decision-making process and help us understand what impact different response rates may have on the effectiveness of the combined model.

A te ao Māori lens will be considered throughout the admin enumeration design

Māori populations were among those disproportionately impacted by the lower response rate achieved in the 2018 Census. While the admin enumeration process ensured a better representation of the Māori population than would otherwise have been achieved without it, non-optimal implications remain unresolved relating to other key attributes, such as iwi and family variables. Questions relating to social and cultural licence also remain unanswered, particularly in relation to the use of admin

data and people's right to self-identify in the census (which may differ from their response to some admin collections). We will address these questions ahead of the 2023 Census.

Final report of the 2018 Census External Data Quality Panel provides the following recommendation.

> **R 2. Stats NZ should** prioritise engagement and investment to ensure:
>
> > **2a** There is genuine partnership with Māori communities, organisations and iwi to develop and implement decision-making and governance mechanisms, to ensure meaningful involvement of Māori in future censuses. This includes Stats NZ actively addressing the acceptability of the extensive use of administrative data in future censuses and issues of social license and Māori data sovereignty specifically for the 2023 Census.
> >
> > **2b** There is a real voice for members of all communities, especially Pacific peoples and new migrants, in decision-making on data about them, including the use of admin data in the census.

We need to consider these impacts throughout the design of the combined model. We are working with the Stats NZ Communications and Engagement and Te Ao Māori teams to develop a detailed engagement plan for this work, inviting the participation of the relevant communities, organisations, and iwi, where possible. Furthermore, we have developed a te ao Māori capability uplift plan for the Stats NZ Census Methodology team.

Our aim is to improve our understanding of methods and ensure we can work towards better representation within census outputs.

Detailed design questions

This section describes some of the more detailed design questions to be undertaken as part of the admin enumeration design. These are grouped based on the numbers in Figure 1 above.

Linking between 2023 Census responses and IDI Spine

- How do we assess the quality of the links between census respondents and the IDI Spine in terms of its impact on the final census file?
- What census record types do we link to the IDI (and how)? What impact does this have on various record types, such as absentees?

Adjusting for linkage error between 2023 Census responses and the IDI Spine

- Can we improve the linkage error adjustment methodology to better account for small population counts and any other observed limitations of admin data?

Deriving the admin resident population eligible for inclusion in the 2023 Census file

- What population do we use to search for eligible admin enumerations? Is this the same for all types of admin enumeration?
- How confident do we want to be that an individual is a New Zealand resident? What impact is there on our methods for measuring census coverage?
- How can we best incorporate the outcomes-based measure of migration from the Migration Data Transformation?

Selecting admin enumerations into responding private dwellings

- What, if any, is the scope for manual intervention (or other clerical review) of this enumeration process?
- What criteria do we use to determine from census forms where individuals could be missed?
- What level of evidence is required to add an admin individual into a household?

Selecting admin enumerations into non-responding private dwellings

- How do we better use covariate information to identify households/addresses that are of high quality (or low quality)?
- Are there alternative models/approaches we should consider?
- Do we still need to have a household size limit, and if so, what size should this be?
- What quality thresholds do we use? How are these affected by differing response rates or modes?
- How do we apply these thresholds? Are all records below a threshold included, or do we use the probabilities in another way?

Selecting admin enumerations into meshblocks or other geographic areas

- How do we better use covariate information to identify addresses that are of high quality (or low quality)?
- Are there alternative models/approaches we should consider?
- What quality thresholds do we use? How are these affected by differing response rates or modes?
- How do we apply these thresholds? Are all records below a threshold included or do we use the probabilities in another way?

This is not intended to be an exhaustive list of questions, and more will likely be added during the admin enumeration design process. Where possible, these questions should be answered through quantitative analysis of various options, and in consultation with relevant business services across the programme.

References

Keller, A, Mule, V, Morris, D & Konicki, S (2018). A distance metric for modelling the quality of administrative records for use in the 2020 U.S. Census. *Journal of Official Statistics, 34*(3), 599–624. http://dx.doi.org/10.2478/JOS-2018-0029.

Stats NZ (2013). 2023 Census data user guide. Retrieved from www.stats.govt.nz.

Stats NZ (2018). Experimental population estimates from linked administrative data. Retrieved from www.stats.govt.nz.

Stats NZ (2019). Dual system estimation combining census responses and an admin population. Retrieved from www.stats.govt.nz.

Stats NZ (2021). Experimental administrative population census: Data sources and methods. Retrieved from www.stats.govt.nz.

Appendix: 2018 Census admin enumeration methodology

The 2018 Census introduced new methodology for determining which records were included in the census file as admin enumerations, using information from the Integrated Data Infrastructure (IDI). These methods for including admin enumerations built on previous Census Transformation research, as well as approaches by other national statistical offices. For more information, see Overview of statistical methods for adding admin records to the 2018 Census dataset.

Most notably, Stats NZ had already developed methods for:

- identifying a resident population from admin data, referred to as the IDI-ERP (see Experimental population estimates from linked administrative data)
- selecting the best usual residence address for each individual
- identifying family relationships and creating households (see The potential for linked administrative data to provide household and family information).

The 2018 Census admin enumeration methodology used these as key inputs, with extensions to identify which records were high enough quality to include in the final census file.

Linking 2018 Census respondents to the Integrated Data Infrastructure explains the process followed to identify people who were already counted in census responses and therefore should not also have been included as admin enumerations. Overall, almost 98 percent of census responses were linked, although this was lower for those included only on a dwelling form or household listing.

Our final approach consisted of three broad steps for including records in the census file. Census responses were prioritised over any admin enumerations, and admin enumerations in a dwelling were prioritised over admin enumerations that could only be placed in a meshblock.

Step 1: Census responses

Census responses, including both individual forms and people listed as belonging to a household without an individual form, take priority.

Step 2: Admin enumerations in dwellings

Where possible, admin enumerations were added to dwellings, meaning they could also be included in family and household outputs. For the 2018 Census, we applied three separate methods to include people in a dwelling, dependent on whether their admin address was at a responding private dwelling, a non-responding private dwelling, or a non-private dwelling.

Admin enumerations in responding private dwellings

We added admin records into responding private dwellings only within strict conditions. To include these individuals, we required:

- evidence from the living arrangements question that another individual could be missing, for example, where a respondent listed that they lived with a child, but we had no evidence of that child within the household
- evidence in the admin resident population of an individual at the same address who had the corresponding missing relationship.

We used this conservative approach, requiring consistent information from both a census form and admin data, to maintain the principle of respecting respondents' intentions where possible.

Using these rules, 20,643 admin enumerations were included in the 2018 Census file in responding private dwellings. Family and household details were updated to account for these added individuals.

Admin enumerations in non-responding private dwellings

For private dwellings that did not respond to the 2018 Census, we attempted to add full high-quality admin households. We developed statistical models to predict the probability that a given admin household was correct. Admin households that met a given quality threshold were then included in the census file.

For the 2018 Census, we set this threshold such that we were more confident than not that the admin household was exactly correct or that we had the correct household type and most of the household members correct.

Predicting the quality of admin location information for use in the 2018 Census provides more detail on these methods.

A total of 57,609 admin households were added, including 141,411 admin enumerations.

Admin enumerations in non-private dwellings

We added admin enumerations into two specific types of non-private dwellings: prisons and defence establishments. These were identified as having substantial undercount in census responses and could have a sizeable impact on small area counts.

Ara Poutama Aotearoa: Department of Corrections and the Ministry of Defence each provided datasets containing unit records for all individuals in their respective dwelling types on census night, including core demographics and the specific dwelling they were in. We used these files to add admin enumerations up to the total count suggested by the two agencies – through the IDI for Ara Poutama Aotearoa data and directly based on the information provided for the Ministry of Defence data.

We included a total of 4,707 admin enumerations from prison or penal institution data and 798 admin enumerations from defence establishment data.

Step 3: Admin enumerations in meshblocks

After applying the previous methods, we were left with admin individuals who we were not able to include in a census dwelling but who we still wanted to consider for inclusion in the census file. We applied additional criteria to include those who were deemed to be of high enough quality.

We applied further adjustments to this population to be more confident we were only considering admin individuals that should have been in the 2018 Census usually resident population.

- Adjustment for admin over-coverage: We used a stricter set of rules to include people in the admin population, requiring them to have been active in multiple admin datasets.
- Adjustment for missed links: We estimated the number of links missed between the 2018 Census and the IDI Spine and reduced the admin population by the corresponding breakdowns. This adjustment aims to offset potential duplicates at the aggregate level.

With the remaining population, we applied a similar model to that used to include admin enumerations in non-responding private dwellings. We developed this model to predict the probability that an individual's admin meshblock was correct. Those with probabilities greater than 0.5 were included in the census file.

As with the previous threshold decisions, this cut-off was selected as a trade-off between improving the overall census distributions and reducing any errors at the individual level. Alternative decisions could have impacted the final 2018 Census outputs.

In total, we included 357,294 admin enumerations directly into meshblocks.

2018 Census data quality issues

In general, the use of admin enumerations was regarded as having a positive impact on overall 2018 Census outputs. However, there were limitations due to higher reliance on admin enumerations, including the following.

- Fewer people were able to be included in households, reducing the overall value of family and household outputs. Certain populations, such as people with Māori or Pacific ethnicity, were more likely to be admin enumerations into meshblocks and therefore to be under-represented in family and household information.

- Some other variables are not well represented in alternative data sources. For example, iwi data was not available in admin sources, and so no admin enumerations had an associated iwi affiliation value.
- The increased use of admin data raised additional questions around social and cultural licence and highlighted the need for more engagement in the future.

There are also general implications of combining admin data with census responses.

- Determining usual residence can be difficult as there are delays between an individual moving and them notifying any agency of their move. This means that latest address information in admin data may not reflect an individual's actual status on census day.
- There can be conceptual differences between information collected from census responses and in administrative data. For example, the New Zealand census uses a *de facto* concept, meaning individuals should be included based on their census night address. Admin data, on the other hand, generally represents a usual residence concept and is unlikely to contain information verifying an individual's precise census night location. Official migration statistics use an outcomes-based measure of residence, meaning an individual's residence status is based on their travel up to 16 months after a given move. Census night residence is self-defined as where an individual generally considers themselves to reside.

Additional lessons learned through the 2018 Census were around the difficulty of implementing a new model in a reactive manner. Key decisions had to be made under considerable time pressure and after census day. Ideally, a framework for such decisions would have been implemented beforehand, providing more transparency to the process and reducing risk.

Allowing more time to develop the detailed methodologies for the 2023 Census will also allow for better understanding of the detail involved with combined census and admin data and will contribute to making the best use of these available sources.