

## Modernising the New Zealand Census

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## New Zealand - profile

- Usually Resident Population: 4.2 million
- Private dwellings: 1.7 million
- 5 yearly, long form census
- Most recent census in 2013



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## Overseas born living in New Zealand at the 2013 Census

Birthplace	Number
Australia	62,610
Brazil	3,588
Canada	9,576
Chile	2,409
England	215,589
Estonia	141
Ireland	9,042
Israel	865
Japan	10,272
Korea, Republic of	26,601
Netherlands	19,818
Northern Ireland	4,713
Philippines	37,299
Poland	1,944
South Africa	54,279
United States of America	21,465

This data has been randomly rounded to protect confidentiality. Individual figures may not add up to totals, and values for the same data may vary in different tables.

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## Census drivers for change

- ⦿ Increasing cost of census
  - Including more difficult to get responses
- ⦿ Opportunities from new technologies
- ⦿ Availability of administrative data

## Census Transformation strategy

**Short-term:** Modernise the current census model and make it more efficient (cost effective)

**Long-term:** Investigate alternative ways of producing small area population and socio-economic statistics.

Includes different frequencies for census (5 or 10 yearly) and exploring the feasibility of a census based on administrative data.

## Previous modernisation

### 2006 Census

- Online response
- Automated text based field communication

### 2011 2013 Census

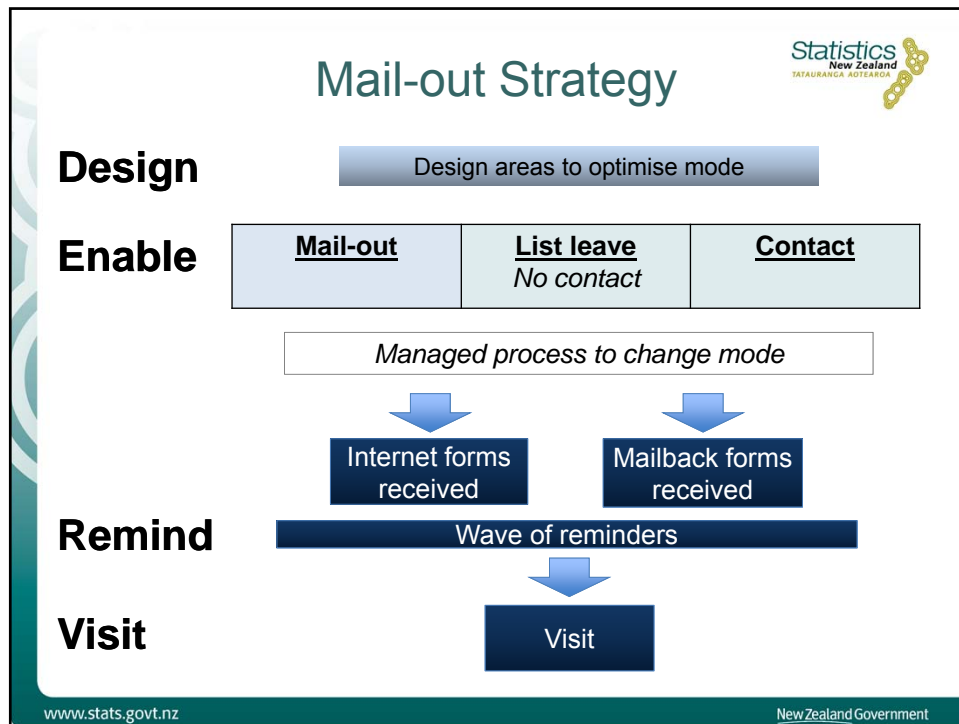
- Census cancelled, Canterbury earthquakes
- Online push at doorstep
- Automated field design
- Text based field communication
- Centralised mail-back

## Previous modernisation cont.

- ◎ Text based field communication
  - Notifying collectors that form(s) received (post or online)
  - Advice that contact centre had posted form(s)
  - Instruction to deliver form(s)
  - Other action

## 2018 Census

- ◎ Cancelled 2011 Census provided time to consider options for the future
- ◎ Advice from Stats Canada, ONS and ABS
- ◎ Predominantly mail-out model
  - Use of administrative addresses
  - Maximise self-response (↓ field costs)
  - Minimise variability in response
  - Online first (70% target)
- ◎ Embedded trial in 2013



## 2013 Census embedded trial

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🎯 Mail-out, self-response – Oamaru District

Goals

- Understand initial response rates without field staff
- Working with administrative address information
- Reaction to online option only

Design

- Stable, compliant area selected, high internet
- Ability to revert to traditional model
- No system development
- Letterbox delivery by field staff

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## 2013 Census embedded trial - Outcomes



Method of response	Percentage of all households	
	Oamaru	New Zealand
<u>Self-response of a full household</u>		
Online only	55%	30%
Mail-back only	29%	8.6%
Full household substitutes	4.3%	3.3%

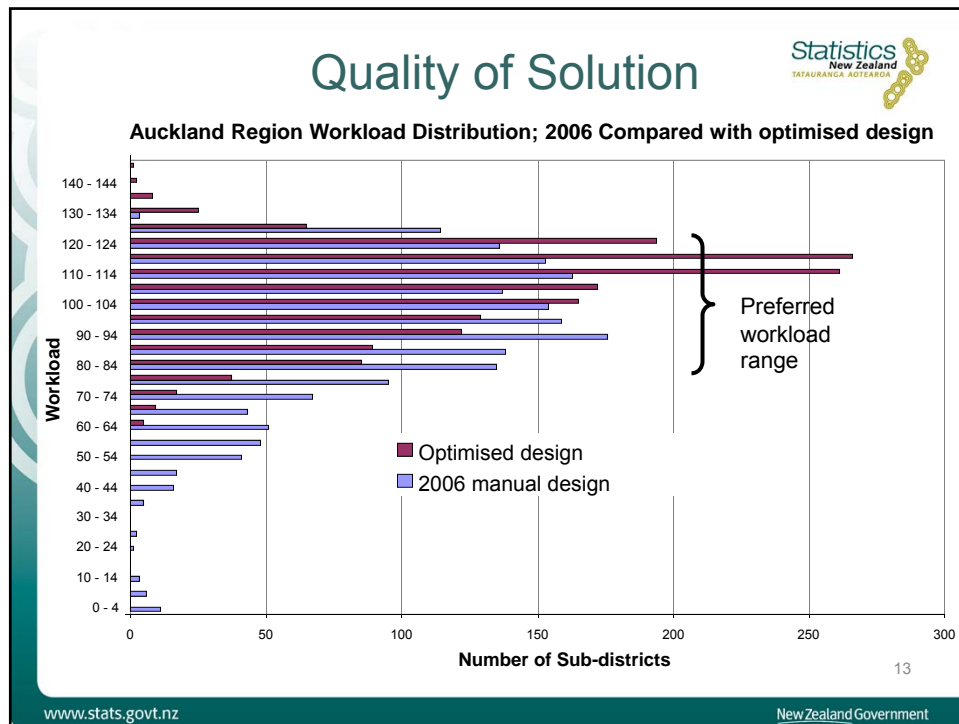
- ⊙ High full household self-response is achievable
- ⊙ More paper than expected
- ⊙ Helped people to understand the model
- ⊙ Confidence – buy in for change

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## Automated area design – 2011/13 Census Faster + better

- ⊙ Building from meshblocks to create enumerator areas
- ⊙ Based on classical operations research algorithms.
- ⊙ Optimisation on:
  - equalised workloads
  - compact physical shape
  - contiguous meshblocks
- ⊙ About 8 minutes for the Auckland region, 9,823 meshblocks.

Part of the Auckland solution



## Area Design for 2018

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- ⊙ Building on optimised area design at the 2011/13 Census
  - Canvassing areas
  - Mail-out areas
  - List leave areas
  - Contact areas
- ⊙ Predictive non-response modelling
- ⊙ Dynamic allocation of non-response follow-up workload

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## Collections Strategy for Stats NZ

- ⦿ Improving respondent experience
- ⦿ Standardising collection processes
- ⦿ Administrative data first
- ⦿ Improving design of collection systems and processes

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## Transforming Collections

- ⦿ Case management
- ⦿ Smart Forms Tool
- ⦿ Communications

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Any questions?

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