

# Questionnaire Methodology and Development Census Testing

Results and recommendations from Sprint 8  
(July-August 2016)

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## Executive summary

### Introduction

In July/August 2016 QMD tested the Census paper forms, with a focus on selected topics/questions. The aim of testing was to ensure that questionnaire content is sufficiently developed and tested before inclusion in the next large-scale census test (March 2017).

### Methodology

We conducted testing with 25 respondents, and focused on the following target groups: general public, Maori, tertiary students, parents with children at home, and retirement village residents. Tertiary students were not well represented due to several cancellations. Testing was conducted over one week, with respondents living in central Wellington and Christchurch.

We used two testing methods in combination: cognitive tests with individuals followed by a semi-structured interview, and mass completions followed by a semi-structured group interview. Key findings from cognitive interviews and group interviews were analysed using thematic analysis.

### Key findings and recommendations

Five main themes emerged from analysis: sensitivity, value, respondent burden, error, and defective question. These are described briefly below.

**Sensitivity:** Relates to how and why respondents perceive question content to be sensitive to themselves and other people. Sensitivity is often based on the individual person's personal experiences, worldview and personal values and can affect their willingness to respond.

**Value:** Relates to the explicit or implicit value judgements that respondents make about a question and whether they perceive it as having value, or not. Whether respondents perceive a question to have value or not will affect both their willingness to answer and the quality of their response should they choose to answer.

**Respondent burden:** Relates to the ease with which respondents are able to answer questions and the extent to which they have a positive respondent experience. There are many aspects of respondent burden which respondents may experience when answering questions. Some of these arise from ambiguous or unfamiliar terms or concepts in the questionnaire, while others may be a direct effect of the poorly designed question or form.

**Error:** Relates to causes of respondent error that can affect data quality and reliability. Sources of error usually arise from poor question and form design, but may also include contextual factors specific to the respondent which can't be controlled for.

**Defective question:** Relates to respondent burden and error, specifically arising from poor question and form design. A fundamentally defective question or set of questions may negatively impact on data quality and/or the user experience.

The main themes and recommendations related to each question/topic are summarised in the table below:

<b>Dwelling Form Testing priority</b>	<b>Primary Theme</b>	<b>Secondary Theme</b>	<b>Recommendations</b>
Tenure suite <i>Primary</i>	Burden	Error	<ul style="list-style-type: none"> <li>We do not recommend this version of the tenure suite.</li> <li>Reconsider the requirement to collect "license to occupy" (LTO) data.</li> <li>Exclude or revise introduction to the tenure suite (Q5)</li> <li>Test revised question suite</li> </ul>
Housing quality suite <i>Secondary</i>	Error	Value (+ve)	<ul style="list-style-type: none"> <li>Reconsider inclusion of 'Cold' question</li> <li>Question set ready for inclusion / No further testing required</li> </ul>
Household grid (instructions) <i>Secondary</i>	No theme		Question instruction ready for inclusion / No further testing required
<b>Individual Form Testing priority</b>	<b>Primary Theme</b>	<b>Secondary Theme</b>	<b>Recommendations</b>
Three-column design <i>Primary</i>	Error		<ul style="list-style-type: none"> <li>Consider implementing three-column design</li> <li>Reconsider design of routing instruction ("go to")</li> </ul>
Iwi <i>Primary</i>	Burden	Defective	<ul style="list-style-type: none"> <li>Clarify the term "location" and its placement</li> <li>Consider an alternative design that enables respondents to report iwi and location in relation to more than one hapu/marae without having to rewrite them.</li> <li>Consider allocating more space for write-in fields to accommodate Maori names.</li> </ul>
Sex (third category) <i>Secondary</i>	Sensitivity	Burden	Reconsider use of the term "indeterminate" for the third category.
Usual address (note text) <i>Secondary</i>	No theme		<ul style="list-style-type: none"> <li>Consider changing order of notes to minimize respondent confusion</li> <li>Conduct further testing</li> </ul>
Second residence suite <i>Secondary</i>	Burden		<ul style="list-style-type: none"> <li>Consider simplifying category to "marae, papakainga"</li> <li>Conduct further testing with respondents who have a second residence.</li> </ul>
Address 1 year/5 years ago (cross-referencing) <i>Secondary</i>	Burden	Defective	Conduct further testing with respondents who have a second residence.
Religion (routing) <i>Secondary</i>	Error		Consider implementing two-question approach.
Activity limitations (screen-in routing) <i>Secondary</i>	No theme		Routing instruction ready for inclusion / No further testing required.

## Introduction

In April 2016, Questionnaire Methodology and Development (QMD) made recommendations on the inclusion or exclusion of content topics for the Census Test (July 2016) based on findings from Cognitive and Mass Completion tests.

The test findings and recommendations highlighted concerns with particular content topics and/or questions that required further concept development and/or question testing with target groups of interest before they were able to be considered suitable to be included in a large scale test with members of the public. To that end, QMD has conducted further testing of selected topics/questions to ensure that questionnaire content is sufficiently developed and tested before inclusion in the next large scale census test to be held in March 2017.

Test findings and recommendations from Sprint 8 will contribute to evidence based decision-making regarding the inclusion or exclusion of question content for Census Test March 2017.

## Research objectives

The broad research objectives of Sprint 8 were to:

- Understand how well individual questions and key concepts/definitions are understood by respondents
- Understand how well individual questions and the overall form design enables respondents to answer quickly and accurately
- Understand how new and changed questions may impact on other questions in the forms
- Understand respondent burden
- Understand public attitudes to new and changed questions which may influence their willingness to answer

Specific research objectives for each question are detailed alongside the key findings in this report.

## Focus of testing

Selected topics/questions of interest were categorised into 'primary' and 'secondary' topics of interest based on the extent of previous testing and the level of comfort in terms of their questionnaire development.

Primary topics were seen to have more concerns and were the primary focus of testing, whereas information on secondary topics was gathered as a matter of course during the testing. Key topics of interest included in Sprint 8 testing are summarised in the table below.

Sprint 8 tested the paper Individual Form (three columns) and Dwelling Form (two columns). Testing online was out of scope due to the limited time and resources available, and issues with web access at the Wellington offices.

Table 1: Summary of Key Topics of Interest for Testing

<b>Dwelling Form Primary</b>	<b>Individual Form Primary</b>
Tenure question suite	Three-column design lwi
<b>Dwelling Form Secondary</b>	<b>Individual Form Secondary</b>
Housing quality suite Household grid (instructions)	Sex (third category) Usual address (note text) Second residence question suite Address 1 and 5 years ago (cross-referencing) Religion (routing) Activity limitations (screen-in routing)

## Methodology

### Respondents

We conducted testing with 25 respondents, and focused on the following target groups: general public, Maori, tertiary students, parents with children at home, and retirement village residents. Tertiary students were not well represented due to several cancellations. Testing was conducted over one week, with respondents living in central Wellington and Christchurch.

Respondents were recruited using purposive sampling, snowball sampling, and personal contacts to target specific groups of interest as well as via a generic recruitment drive to include members of the general public. For a detailed breakdown of respondent demographics please see Appendix.

### Testing Methods

The Census questionnaires were tested using two methods in combination: cognitive tests with individuals followed by a semi-structured interview, and mass completions followed by a semi-structured group interview. Cognitive testing allows for in-depth discussion on focus topics, and mass completions enable us to reach a wider audience while also leveraging the benefits of focus group-style discussion.

Some testing of proxy reporting was included, for example, asking a parent to consider how they would complete a question on behalf of their child. For a more detailed description of testing methods used please refer to: A144082 FINAL Plan for Sprint 8 Census testing.pdf

Over one week of testing QMD conducted:

- 12 cognitive tests
- 2 mass completions + group interviews

## Data Analysis

Key findings from cognitive interviews and group interviews were analysed using thematic analysis. Thematic analysis is an inductive method of analysis which explores the manifest (content that is noted or mentioned directly by respondents) and latent (implicit or underlying messages) themes.

## Data compilation

Tester's notes from cognitive interviews and group interviews were entered into a matrix, which was a systematic way of compiling the raw data. Each row of the matrix represents an individual respondent or group of respondents (if interviewed together), and each column in the matrix represents a question or focus of testing.

## Coding

Testers coded the raw data matrix using descriptive labels to capture the essence of what the respondent was talking about. Testers then clustered codes to identify themes, and examined how these themes related to the main research objectives. Examples of codes are: unfamiliar concepts, willingness to respond, routing errors, issues with recall, interaction with other questions, and high effort to respond.

Coding and clustering was undertaken by several team members. A process of review and discussion between the coders was undertaken to challenge interpretations, gain consensus and achieve a level of inter-coder reliability in the analysis.

Five main themes emerged from the data: sensitivity, value, respondent burden, error, and defective question. These are described below.

## Themes

**Sensitivity:** Relates to how and why respondents perceive question content to be sensitive to themselves and other people. Sensitivity is often based on the individual person's personal experiences, worldview and personal values and can affect their willingness to respond. Sensitivity toward a question may be manifest by:

1. Total non-response. This is unlikely in a cognitive setting due to the presence of an interviewer, but may be more evident in mass completions findings.
2. 'Protest' response. For example, respondents may spoil their form with message(s) expressing their displeasure, or they may select the 'object to answer' response category.
3. 'Reluctant' response, whereby the respondent in a cognitive setting gives a response but expresses displeasure or a lack of comfort in doing so.
4. Sensitivity on behalf. For example, the respondent expresses concern that another person or group of people may react negatively to the question or response options.

**Value:** Relates to the explicit or implicit value judgements that respondents make about a question and whether they perceive it as having value, or not. Whether respondents perceive a question to have value or not will affect both their willingness to answer and the quality of their response should they choose to answer. Respondents may manifest value judgements by:

1. Wondering why we ask a particular question in the census.
2. Questioning the use of the data by government.
3. Wondering about the quality of the question and responses and whether it will provide any actionable data.
4. Acknowledging the importance of a topic and the collection of relevant data (code=Value +)

**Respondent burden:** Relates to the ease with which respondents are able to answer questions and the extent to which they have a positive respondent experience. There are many aspects of respondent burden which respondents may experience when answering questions. Some of these arise from ambiguous or unfamiliar terms or concepts in the questionnaire, while others may be a direct effect of the poorly designed question or form. Respondent burden may be manifest by:

1. Difficulty in recalling the information required to form a reliable answer.
2. Difficulty in interpreting the question, including key concepts and definitions.
3. Difficulties fitting their response into the response formats and/or categories offered in the questionnaire.
4. Confusion or difficulties arising from interactions between questions.
5. Excessive effort required to answer for any other reason

**Error:** Relates to causes of respondent error that can affect data quality and reliability. Sources of error usually arise from poor question and form design, but may also include contextual factors specific to the respondent which can't be controlled for. Sources of error include:

1. Missed routing instructions
2. Question instructions missed or incorrectly followed. For example when a respondent may select more than one response category for a single response question
3. Subjective response
4. Proxy response error
5. Guessing by respondents

**Defective question:** Relates to respondent burden and error, specifically arising from poor question and form design. A fundamentally defective question or set of questions may negatively impact on data quality and/or the user experience. Sources of error include:

1. Poor question construction
2. Dissatisfaction with question/response options
3. Visual design of form e.g. lack of colour contrast or eye tracking issues



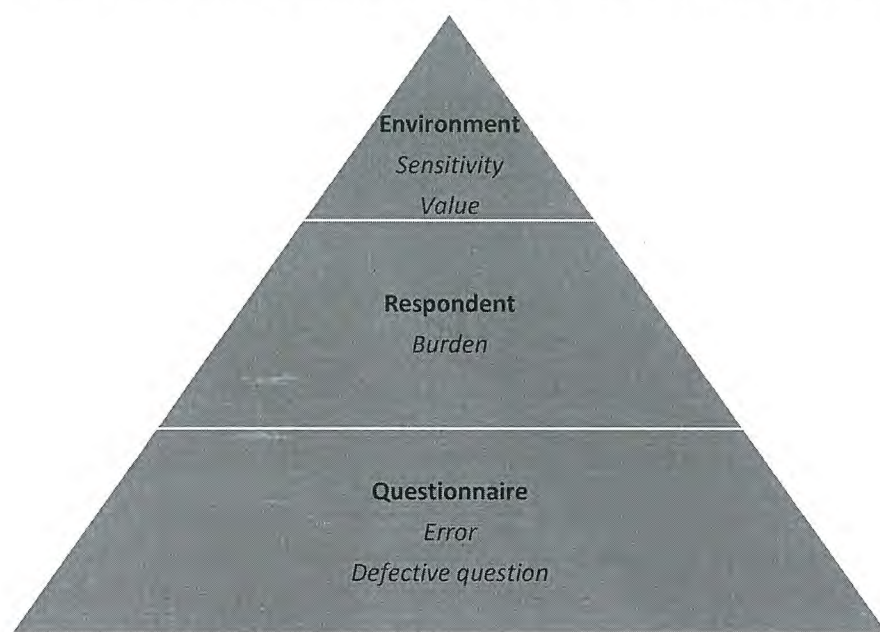
### Factors influencing form completion and data quality

The themes that emerged from the analysis map to three key factors that influence form completion and data quality:

- The 'environment' in which the question is asked
- The respondent
- The design of the questionnaire

The framework below is helpful for understanding the extent to which QMD can resolve the issues identified in census testing.

Table 2: Relationship between themes and factors influencing form completion and data quality



**Environmental factors:** Examples include the context in which a census is conducted, the societal acceptance of a question and the perceived value of the information being collected relative to the 'intrusion' of collection. As questionnaire designers our ability to influence the effects of environmental factors is minimal; if a question is found to be unacceptable to society in general, questionnaire design is not going to solve the issue. Environmental factors map broadly to our themes of "Sensitivity" and "Value".

**Respondent factors:** Relate to issues around the cognitive process in answering questions. These include a respondent's ability to understand the question, form and recall an answer, edit their answer and ultimately code their answer in a format that matches the response format offered. These are things the questionnaire designer does have some influence over, although given the diversity of respondents there is no way to address all emerging factors. Here there are also elements of value judgements, now at a more personal level rather than societal. Respondent factors map broadly to our themes of "Burden" and "Value".

**Questionnaire design factors:** Issues that are directly introduced and therefore in the control of the questionnaire designer; for example, questions that break rules of good question design or suffer from poor visual layout. Questionnaire design factors map broadly to our themes of "Error" and "Defective question".

## Key findings and recommendations

### Question quality and resolution

A high level summary of each question/topic that was a focus of testing is shown in the table below. The primary and secondary themes which emerged from analysis for each question are shown alongside a traffic light rating. The traffic light ratings indicate the overall quality and performance of the question in its current format, and the anticipated difficulty level in resolving any known issues highlighted by the testing.

Table 3: Summary of findings by question

Form	Question	Primary Theme	Secondary Theme	Quality Rating	Resolution Rating
DF	Tenure suite	Burden	Error	Red	Orange
IF	Iwi	Burden	Defective	Orange	Orange
IF	Sex (third category)	Sensitivity	Burden	Orange	Orange
IF	Three-column design	Error		Orange	Green
IF	Usual address (note text)	Defective		Orange	Green
IF	Second residence suite	Burden		Insufficient testing	
IF	Address 1 year/5 years ago (cross-referencing)	Burden	Defective	Insufficient testing	
DF	Housing quality suite	Error	Value+	Green	N/A
DF	Household grid (instructions)	No theme		Green	N/A
IF	Religion (routing)	Error		Green	N/A
IF	Activity limitations (screen-in routing)			Green	N/A

### Quality Rating

**Red** = Testing shows there are significant issues with the question in its current format which have an unacceptable impact on data quality and/or respondent experience widely. The question may also have a significant impact on other questionnaire content. The question requires significant re-work and/or re-evaluation to assess whether it should be included in the Census forms.

**Orange** = Testing shows some issues with the question in its current format which may have a minor to moderate impact on data quality and/or may negatively affect some target groups of respondents. The question may also have some minor to moderate impact on other questionnaire content. The question requires some re-work and further testing and evaluation to assess whether any known issues can be improved upon or whether known issues are acceptable to the Census programme.

**Green** = Testing shows no or few issues with the question in its current format that impact on data quality and/or respondent experience. Little or no re-work is required. Any known issues are acceptable to the Census programme.

**Resolution Rating**

**Red** = No clear way forward for questionnaire design to resolve the issues identified from testing. Roadblock reached.

**Orange** = There are potential questionnaire design solutions to known issues that can be tried and tested by QMD. Whether or not these will adequately resolve issues is unknown.

**Green** = There are quick and simple questionnaire design changes that can be made to improve the question. There is a high level of confidence that these changes will resolve known issues.

The key findings for each question are now discussed in detail in the following pages.

Dwelling Form

Tenure suite

Sprint 8	Testing objectives
<p><b>6</b> The next questions (6–14) ask if this household rents this dwelling, or if anyone in this dwelling holds it in a family trust, owns it, or has a licence to occupy it. For each question, give your answer and then follow any instructions for where to go next.</p> <p><b>6</b> Does this household pay rent to an owner (or to their agent) for this dwelling?</p> <p>If the owner lives in this dwelling, mark 'no'. Don't include any service fees at a retirement village. Include any site fees at a campground / holiday park.</p> <p>yes → go to <b>7</b> no → go to <b>9</b></p> <p><b>7</b> How much rent does this household pay to the owner (or to their agent) for this dwelling?</p> <p>\$ . . . 0 0      Answer to the nearest dollar.</p> <p>each week two-week period four-week period calendar month other. Print period:</p> <p><b>8</b> Who does this household rent this dwelling from?</p> <p>private person, trust or business local authority or city council Housing New Zealand Corporation an iwi, hapū or Māori land trust other community housing provider → go to <b>15</b> other state-owned corporation or state-owned enterprise, or government department or ministry don't know</p> <p><b>9</b> Do you, or anyone else who lives here, hold this dwelling in a family trust?</p> <p>yes no → go to <b>11</b> don't know → go to <b>11</b></p> <p><b>10</b> Does that trust make mortgage payments for this dwelling?</p> <p>yes → go to <b>15</b> no → go to <b>11</b></p> <p style="text-align: right;"><i>Go to the next page</i></p> <p><b>11</b> Do you, or anyone else who lives here, have a licence to occupy this dwelling?</p> <p>An example is retirement village dwellings. It is not renting.</p> <p>yes → go to <b>15</b> no → go to <b>12</b> don't know → go to <b>12</b></p> <p><b>12</b> Do you, or anyone else who lives here, own or partly own this dwelling (with or without a mortgage)?</p> <p>yes → go to <b>13</b> no → go to <b>12</b></p> <p><b>13</b> Do you, or anyone else who lives here, make mortgage payments for this dwelling?</p> <p>yes → go to <b>15</b> no → go to <b>12</b></p> <p><b>14</b> If none of 6–13 apply, who owns this dwelling?</p> <p>or don't know</p>	<ul style="list-style-type: none"> <li>• How does the question suite introduction impact on the respondent's ability to answer quickly and accurately?</li> <li>• How does the order of questions in the suite impact on the respondent's ability to answer accurately?</li> <li>• Do respondents follow the routing instructions correctly?</li> <li>• Do respondents with a licence to occupy answer accurately?</li> <li>• Investigate the text responses given in the final ownership question (testing purposes only).</li> </ul>

## Summary of findings

### Cognitive and group interview findings

The 25 respondents were spread across the tenure categories as follows: Own ( ), Rent ( ), LTO ( ), Trust ( ), Don't know ( ).

**Burden (interpretation):** The primary theme for this question set is burden, relating to interpretation of the concept licence to occupy (LTO). All cog. test respondents, all respondents in the general public mass completion, and one retirement village resident, mentioned that they were unfamiliar with this term.

The comments of one respondent who owns their dwelling exemplify how inclusion of LTO can negatively impact on the respondent experience. On reading Q11 the respondent wondered if they had "gone wrong" in the form, and went back to check that they had followed routing instructions correctly. They hesitated to give a response, as none of the tenure questions so far applied to them. They resolved their confusion by reading ahead to Q12 (ownership).

**Error:** The secondary theme for this question set is error, which relates to missed routing, and instructions missed or incorrectly followed. The sheer volume of routing instructions, their design and complexity are all contributing to respondents losing the navigational path through the form and making response errors. Respondents commented on the need to refer back to routing instructions, especially when a page turn was involved.

The instruction to the tenure suite (Q5) was not followed correctly by several respondents. Some only read part of the instruction, assumed the question set (6-14) did not apply to them, and went directly to Q15. Most respondents found the instruction confusing (too long and difficult to understand), unhelpful and unnecessary.

**Defective question (poor construction):** Testing found this version of the tenure suite to be defective in terms of poor construction overall. Some respondents made suggestions for improvement, including what is essentially Sprint 7 / Version 1 (screener question first), and prioritising the most common tenure arrangements to minimize the reading required.

### Mass completion findings

The majority of forms completed by the two groups (general public and retirement village residents) provide evidence of the themes discussed above. This is manifested by multiple instances of non-response, routing error, and respondent confusion (as indicated by a sticker applied by respondents).

## Recommendations

### **Reconsider the requirement to collect “license to occupy” (LTO) data.**

Consistent with the findings of Sprints 5-7, inclusion of LTO is problematic as the concept is not well understood by respondents.

### **Exclude or revise introduction to the tenure suite (Q5)**

The findings strongly suggest that this introduction does not support data quality or the respondent experience.

### **We do not recommend this version of the tenure suite.**

QMD does not have an elegant solution that suggests itself based on this version of the tenure suite. This question set has now been tested with various question ordering in previous sprints. Removal of LTO from this version would simply suggest reverting to the 2013 tenure suite which would retain many of the errors observed both in 2013 and in the current and previous rounds of testing.

## Next steps

### **Test revised question suite – Actions from tenure workshop 19 August**

In a workshop involving analysts from QMD and Content, it was agreed there seems to be no possible way to directly collect LTO data due to the issues that have been consistent themes throughout testing.

QMD tabled two variants of a modified tenure suite with one of these proposing an approach to indirectly collect a measure of LTO dwellings among the occupied private dwelling population. The working group were encouraged enough by both options to progress with the following actions.

1. QMD topic leads ( ) to develop question sets to a standard ready for desktop evaluation by QMD peers.
2. Outputs from step 1 to be evaluated by QMD staff
3. QMD topic leads to respond to desktop review, incorporating suggestions as appropriate and then circulate for wider stakeholder review and comment (Content, RI and Processing).
4. Test preferred option (or both) in forthcoming QMD sprints.

Housing quality suite

Sprint 8	Testing objectives
<p><b>19</b> In winter, is this dwelling difficult to heat?</p> <p>yes – always                      yes – sometimes                      no</p> <p>or don't know – eg I haven't lived here in winter</p> <p><b>20</b> Is this dwelling damp?</p> <p>A damp dwelling may feel or smell damp, or have damp patches on the walls, ceiling, floor or window frames.</p> <p>yes – always                      yes – sometimes                      no</p> <p>or don't know</p> <p><b>21</b> Can you see mould in any part of this dwelling that, in total, is larger than an A4 sheet of paper?</p> <ul style="list-style-type: none"> <li>• Mould (mildew) may grow on the walls, ceiling, floor, doors, window frames, curtains or blinds.</li> <li>• Mould can be black, white, green, brown, red, etc.</li> <li>• An A4 sheet is the size of 1 page of this 4-page form.</li> </ul> <p>yes – always                      yes – sometimes                      no</p> <p>or don't know</p>	<ul style="list-style-type: none"> <li>• Can respondents answer quickly and easily?</li> <li>• What is the impact of splitting 'yes' into 'always' and 'sometimes'. Does this increase response burden? Does it increase some respondents' comfort in answering yes?</li> </ul>
<b>Summary of findings</b>	
<p><b>Cognitive and group interview findings</b></p> <p>Most respondents answered quickly and easily, and testing found no evidence of increased burden related to category revisions.</p> <p><b>Error (subjectivity):</b> Consistent with the findings of recent sprints, respondent feedback related predominantly to the subjective nature of the questions. For example, responses to the cold question reflect personal preference and recent temperatures, and responses to the damp question depend on the time of year.</p> <p><b>Value (positive):</b> Several respondents volunteered positive feedback on the collection of data about cold dwellings, in relation to the housing quality issue in NZ.</p> <p><b>Mass completion findings</b></p> <p>There was very low prevalence of anyone selecting options that indicated housing quality issues. Consistent with the findings of Sprint 7, there was a very strong correlation between 'cold' and 'damp' questions suggesting that only one question may be needed to understand these dimensions of housing quality.</p>	
<b>Recommendations</b>	
<p><b>Question set ready for inclusion / No further testing required</b></p> <p><b>Reconsider inclusion of 'Cold' question</b></p> <p>The 'Cold' and 'Damp' questions appear to be highly correlated, which suggests that these questions are acting as proxies for one another and only one of these measures is needed as an indication of housing quality.</p>	

### Household grid (instructions)

<b>Sprint 8</b>			
<p><b>23</b> Starting with yourself as Person 1, please give the following details for all the people who are staying here in this dwelling tonight. Include any babies, children, and visitors.</p> <p>Person 1                      Person 2                      Person 3                      Person 4</p>			
<p><b>Testing objective:</b> Are respondents clear about who to include?</p>			
<b>Summary of findings</b>			
<p><b>Cognitive and group interview findings</b></p> <p>Most respondents were clear about who to include and had no issue with completing the household grid. Only one respondent missed or incorrectly followed instructions, and did not start with themselves. They suggested Person 1 should be renamed 'You/Yourself' to make this clearer.</p> <p><b>Mass completion findings:</b> No issues to report.</p>			
<b>Recommendations</b>			
Question instruction ready for inclusion / No further testing required			

### Individual Form

#### Three-column design

<b>Sprint 8</b>		
<p><b>1</b> What is your full name?</p> <p>first name</p> <p>middle name(s), if any</p> <p>family name</p>	<p><b>5</b> How long have you lived at the address or overseas country given in 4?</p> <p>less than one year</p> <p>or                      years</p> <p><b>6</b> On the night of Tuesday 9 August 2016, which address are you at?</p> <p>at the address in 4</p> <p>at another address.</p> <p>Print the address you are at:</p> <p>street number                      flat number</p>	<p><b>9</b> Which ethnic group do you belong to?</p> <p><i>Mark the space or spaces which apply to you.</i></p> <p>New Zealand European</p> <p>Māori</p> <p>Samoan</p> <p>Cook Island Maori</p> <p>Tongan</p> <p>Niuean</p> <p>Chinese</p>
<b>Testing objectives</b>		
<ul style="list-style-type: none"> <li>• What is the respondent's first impression of the form?</li> <li>• Does the respondent raise any issues related to the three-column design while completing the form?</li> <li>• Does the design impact on question comprehension or data quality?</li> <li>• What is the respondent's overall impression of the form design after completion?</li> <li>• Do respondents have any difficulty reading the activity limitations question in matrix format?</li> </ul>		



## Summary of findings

### Cognitive and group interview findings

Most respondents did not notice the three-column design until probed, and most found it to be an acceptable approach.

Asked about the three-column design following completion, some respondents described it as “compact”, “more crowded”, “more structured” and “more interesting”.

While most respondents did not experience any issues with readability, some observed that the 3-column format required more care to complete, due to the “narrow” text, smaller squares, and limited space in the write-in fields.

**Error:** The main theme associated with this question is (potential) error. This relates to respondent comments about routing instruction – specifically the absence of ‘go to’ instructions, which resulted in less navigational clarity for some users. One respondent felt this slowed them down initially, as they took a little longer to process what they were supposed to do. Another respondent suggested using ‘question’ before the referencing numbers to make navigation clearer.

## Recommendations

### Consider implementing three-column design

Caveat: Consider implications of three-column design for Individual Form in Te Reo.

### Reconsider design of routing instruction (“go to”)

While testing found that the 3-column design is generally an acceptable approach for most respondents, it’s recommended that the “go to” instruction be reinstated for improved clarity.

Iwi

Sprint 8	Testing objectives
<p><b>11</b> Are you descended from a Māori (that is, did you have a Māori birth parent, grandparent or great-grandparent, etc)?</p> <p>yes                      don't know                      no → to <b>14</b></p> <p><b>12</b> Do you know the name(s) of your iwi (tribe or tribes), hapū and marae?</p> <p>yes                      no → <b>14</b></p> <p><b>13</b> Please give the name(s) of your iwi (tribe), hapū (sub-tribe) and marae? Provide as much detail as you can.</p> <p>See the back of the Guide Notes for help.</p> <p>iwi:                      hapū:                      marae:                      location:</p> <p>iwi:                      hapū:                      marae:                      location:</p> <p>iwi:                      hapū:                      marae:                      location:</p> <p>iwi:                      hapū:                      marae:                      location:</p>	<ul style="list-style-type: none"> <li>• Are respondents happy to just provide as much detail as they can e.g. do people give hapu without providing an iwi?</li> <li>• Is there any negative effect on a respondent only knowing some but not all things about their Maori identity?</li> <li>• How do people use the 'marae' and 'location' fields?</li> <li>• What level of detail do people provide for 'location'?</li> <li>• What guidance would people like when answering this question? Is a list of iwi adequate help or do respondents need more?</li> </ul>

**Summary of findings**

**Cognitive and group interview findings**

This set of questions was applicable for three cognitive test respondents, all of whom answered yes to Q11 (descent) and yes to Q12 (iwi screener) without difficulty. No mass completion respondents indicated that they had Maori ethnicity, Maori descent, or iwi/hapu/marae.

All three respondents were happy to just provide as much detail as they could, although one respondent commented that they “feel bad” about not being able to recall all relevant information about their Maori identity.

Respondents provided locations that relate to iwi and marae. The respondent who provided a location for marae felt this was redundant as marae are associated with a physical location. The same respondent noted that if we use rohe, that would imply a larger area eg. te Tai Rawhiti/East Coast.

**Burden:** The primary theme associated with the iwi question (Q13) is burden, with all respondents struggling to recall the names or spelling of all relevant information. Respondents commented that the list of iwi in the guide notes is helpful, and that they would look up names of hapu and marae on the web via smartphone.

Testing also highlighted the effort required to answer, with respondents having to repeat the names of iwi and location. One respondent suggested the following design to avoid rewriting the same information:

Iwi	
Iwi	
Iwi	
Hapu	
Hapu	
Hapu	
Marae	
Marae	
Marae	
Location	
Location	
Location	

**Defective question (visual design):** Testing found scope for improvement in relation to two aspects of visual design. Two respondents commented on the need for more space in the write-in fields, particularly for hapu and marae. One respondent didn’t notice the marae and location labels, and thought the fields repeated iwi and hapu only.

### Recommendations

Clarify the term “location” and its placement so that it’s clear whether location responses relate to iwi, hapu or marae.

Consider an alternative design that enables respondents to report iwi and location in relation to more than one hapu/marae without having to rewrite them.

Consider allocating more space for write-in fields to accommodate Maori names.

### Next steps

- In relation to the findings of Sprint 7, Customer Needs and Data to provide clarification on the ‘location’ response field and what this is asking for.
- Conduct further testing.

Sex (third category)

Sprint 8	Testing objectives
<p><b>3</b> What sex are you?                      male                      female                      other, please state:</p>	<ul style="list-style-type: none"> <li>Investigate reactions and attitudes to third category.</li> <li>Investigate potential facetious response.</li> </ul>
<b>Summary of findings</b>	
<p><b>Cognitive and group interview findings</b></p> <p>The “other” category was not applicable for any respondents. Most respondents did not comment on this question.</p> <p><b>Sensitivity (on behalf):</b> The main theme associated with this question was respondent sensitivity on behalf of other people. One respondent commented that, “I don’t think it should be ‘other’. It’s a false binary and not fair to people to choose other and write something in.” This respondent felt that ‘intersex’ would be more appropriate.</p> <p>Another respondent, who had a trans partner, said that while they generally avoid labels, their preference is to refer to gender rather than sex. When prompted, they expressed dissatisfaction about the term “indeterminate”. The respondent questioned whether the write-in response for ‘other’ would be recognised; when this was confirmed they reacted positively about people being about to answer for “who they are”.</p> <p><b>Burden (potential):</b> One respondent suggested the potential for burden in terms of correctly interpreting ‘sex’. They wondered if the question is referring to biological sex or gender.</p> <p><b>Mass completion findings:</b> no issues to report.</p>	
<b>Recommendations</b>	
<p><b>Reconsider use of the term “indeterminate” for the third category</b></p> <p>Consistent with the findings of parallel testing with LGBTQI respondents in Sprint 5, and the general public in Sprint 7, these findings suggest “intersex” or “other-write in” would be preferable to “indeterminate” for the third category.</p>	
<b>Next steps</b>	
<p>As stated in the QMD report for Sprint 7:</p> <ul style="list-style-type: none"> <li>Customer Needs and Data to assess Census Test (July 2016) data to look to any supporting evidence of sensitivity to the term ‘indeterminate’. E.g. non-response rates, respondent feedback and any comments written on paper forms.</li> <li>Customer Needs and Data to re-assess the rationale for the use of the term ‘indeterminate’ and advocate for using an alternative term to ‘indeterminate’ for the third sex category.</li> <li>Customer Needs and Data to investigate what terms other overseas statistical agencies are using and provide advice on an alternative term to ‘indeterminate’.</li> </ul>	

Usual address (note text)

Sprint 8	Testing objectives
<p><b>4</b> Where do you usually live?</p> <p>Tertiary students – give your term-time address. Refer to the guide notes for more help.</p> <p>in New Zealand. Print the address where you usually live:</p> <ul style="list-style-type: none"> <li>• street number      flat number</li> <li>• street name</li> <li>• suburb or rural locality</li> <li>• city, town or district</li> </ul> <p>or overseas. Print the name of the country where you usually live:</p>	<p>Does the note text help tertiary students to answer usual address accurately, quickly and easily?</p>
<p><b>Summary of findings</b></p>	
<p><b>Cognitive and group interview findings</b></p> <p>Only one respondent was a tertiary student and they were able to answer this question accurately, quickly and easily as they lived in their own home.</p> <p><b>Defective question (visual design):</b> There was one instance of potential error related to the visual design. One group interview respondent was initially confused by the tertiary student note, commenting “I’m not a tertiary student so I don’t answer this one”, before following the group’s consensus to complete.</p> <p><b>Mass completion findings:</b> no issues to report.</p>	
<p><b>Recommendations</b></p>	
<p>Consider changing order of notes (“Refer...” first then “Tertiary students...” ) to minimize confusion for non-tertiary student respondents.</p> <p>Conduct further testing with tertiary students and the general public to determine the most effective wording and structure for note text.</p>	

Second residence question suite

Sprint 8	Testing objectives
<p><b>14</b> Do you have another New Zealand address that you stay at for more than 30 days in total a year?</p> <p>yes</p> <p>no → <b>17</b></p> <p><b>15</b> Which of the following best describes that other address?</p> <p>If you have more than one other address, answer for the one you spend the most time at.</p> <p>parent or guardian's address</p> <p>partner's / boyfriend's / girlfriend's address</p> <p>a term-time address for a school student</p> <p>traditional home ground, marae, papakāinga</p> <p>working away from home address</p> <p>holiday home, bach or crib</p> <p>other family or friend's address</p> <p>or other. Please give a description:</p> <p><input type="text"/></p> <p><b>16</b> Please give that other address:</p> <p>street number      flat number</p> <p><input type="text"/></p> <p>street name</p> <p><input type="text"/></p> <p>suburb or rural locality</p> <p><input type="text"/></p> <p>city, town or district</p> <p><input type="text"/></p>	<ul style="list-style-type: none"> <li>• Does the note text for usual address help tertiary students to answer second address accurately, quickly and easily?</li> <li>• Do the categories enable respondents with second residence to respond accurately, quickly and easily?</li> <li>• Are respondents willing and able to provide a second address?</li> <li>• Seek evidence of false negatives and false positives.</li> </ul>

## Summary of findings

### Cognitive and group interview findings

This set of questions was not sufficiently tested. Only one respondent was a tertiary student and they did not have a second residence. Only one respondent reported a second residence after being probed about the categories for residence description.

One Maori respondent felt that “traditional home ground” is probably too broad for the address concept. Similarly, another Maori respondent commented that “marae and papakainga” would be sufficient - “traditional home ground” is less precise.

**Burden (interpretation):** Consistent with the findings of recent sprints, the primary theme associated with this set of questions is burden, related to interpreting the concept of second residence. A respondent reporting on behalf of their child provides one example. Having answered no to the screener question, they then incorrectly marked “term time address for a school student” and considered giving the school address, even though the child does not attend boarding school.

Only one respondent reported an actual second residence, although they initially answered no to the screener question, suggesting a potential for false negative responses. After discussion around the second address response categories they gave multiple responses (papakainga and other family or friend’s address). They did not give an address in Q16.

**Mass completion findings:** There were two instances of non-response to Q14 (screener question), which may be the result of visual design. As one cognitive test respondent commented, this question could be easily missed at the bottom of the page (after iwi).

## Recommendations

### Consider revising category to read “marae, papakainga”

Simplifying this category would reduce it from two lines to one.

### Analyse responses from July 2016 Test

As stated in Sprint 7 report: QMD recommends analysing responses from the July 2016 Test to better understand how respondents are using the second address purpose categories. In particular, what do respondents enter in the ‘other’ category and what overlap is there between ‘other’ responses and the pre-defined response categories. QMD also recommends looking at non-response levels for this question to look for evidence of sensitivity or address fatigue.

There is no good solution which recommends itself to help clarify the ‘30 days per year’ criteria for respondents. Previous rounds of testing have attempted to make this clearer to respondents by specifying ‘in the last 12 months’ however this led to unintended error with respondents providing a previous address as their second address where they had been at their current address for less than 12 months.



Address 1 year/5 years ago (cross-referencing)

Sprint 8	Testing objectives
<p><b>17</b> Where did you usually live on this date 1 year ago?</p> <p>not born 1 year ago → <b>19</b></p> <p>at my usual address, given in <b>4</b></p> <p>at my census night address, given in <b>6</b></p> <p>at my other address, given in <b>16</b></p> <p>at another New Zealand address:</p> <p><b>18</b> Where did you usually live on this date 5 years ago?</p> <p>not born five years ago → <b>19</b></p> <p>at my usual address, given in <b>4</b></p> <p>at my census night address, given in <b>6</b></p> <p>at my other address, given in <b>16</b></p> <p>at my address one year ago, given in <b>17</b></p> <p>at another New Zealand address:</p>	<p>Does cross-referencing enable respondents to answer accurately, quickly and easily?</p>
<b>Summary of findings</b>	
<p><b>Cognitive and group interview findings</b></p> <p>Cross-referencing generally enabled respondents to answer quickly and accurately. When probed, two respondents felt that ‘Q4’ or ‘Question 4’ would be clearer than just the number.</p> <p><b>Burden:</b> Consistent with the findings of recent sprints, the main theme associated with the questions themselves was respondent burden. This related to recalling the information required to form a reliable answer (particularly for five years ago), and interactions between questions.</p> <p>For example, two respondents “guessed” their address five years ago as they had moved a lot in this period of time, which has potential for error. Two respondents who had been at their current address for over 5 years expected to be automatically routed past these questions.</p> <p><b>Defective question (visual design of form):</b> One respondent commented that they found the jump from usual and census address (Q4-6) to Maori heritage (Q11-12) and back to addresses again (Q14-18) “a bit confusing”.</p> <p><b>Mass completion findings</b></p> <p>Within the retirement village group there were two instances of non-response to both questions, and one instance of multiple response (usual and census night address) for Q17.</p>	
<b>Recommendations</b>	
<p>Conduct further testing with respondents who have a second residence.</p>	

Religion (routing)

Sprint 8	Testing objectives
<p><b>20</b> What is your religion?</p> <p>no religion → <b>22</b></p> <p>Christianity → <b>21</b></p> <p>Buddhism</p> <p>Hinduism</p> <p>Islam → <b>22</b></p> <p>Judaism</p> <p>other religion. Print what it is: _____</p> <p>or</p> <p>object to answering → <b>22</b></p> <p><b>21</b> Which of these, if any, are you?</p> <p>Anglican</p> <p>Catholic</p> <p>Presbyterian</p> <p>Methodist</p> <p>Ratana</p> <p>Ringatu</p> <p>other. Print what it is: _____</p> <p>or</p> <p>object to answering</p>	<p>Do respondents follow the routing instructions correctly?</p>
<p><b>Summary of findings</b></p>	
<p><b>Cognitive and group interview findings</b></p> <p>Most respondents followed the routing instructions correctly.</p> <p><b>Error:</b> Two respondents marked no religion in Q21, missed the routing instructions and answered Q22 based on the denomination with which they were associated as a child.</p> <p><b>Mass completion findings:</b> No significant issues to report.</p>	
<p><b>Recommendations</b></p>	
<p><b>Consider implementing two-question approach</b></p> <p>Although the two instances of error may have been avoided with the 2013 design, the two-question approach tested in Sprint 8 is preferable. It is a more feasible solution for a three-column design, and is consistent with the two-question approach used online.</p>	

Activity limitations (screen-in routing)

Sprint 8	Testing objectives
<p><b>28</b> If you are answering on behalf of someone aged less than 5 → <b>60</b> Otherwise → <b>29</b></p> <p><b>29</b> This question is about difficulties you may have doing certain activities because of a health problem.</p>	<ul style="list-style-type: none"> <li>• Is the screen-in routing instruction clearly understood?</li> <li>• Is the screen-in routing instruction followed correctly?</li> </ul>
<b>Summary of findings</b>	
<p><b>Cognitive and group interview findings</b> Respondents understood and correctly followed routing instruction.</p> <p><b>Mass completion findings:</b> No issues.</p>	
<b>Recommendations</b>	
<p>Routing instruction ready for inclusion / No further testing required.</p>	

Other questions

IF / Addition of Middle name	
<p><b>1</b> What is your full name?</p> <p>first name</p> <p>middle name(s), if any</p> <p>family name</p>	<p><b>Summary of findings</b> No issues to report. One respondent asked why the middle name is asked in the Individual Form and not the Dwelling form.</p>

## Appendix: Respondent demographics

Sprint 8 involved testing with a total of 25 respondents.

### Usual address



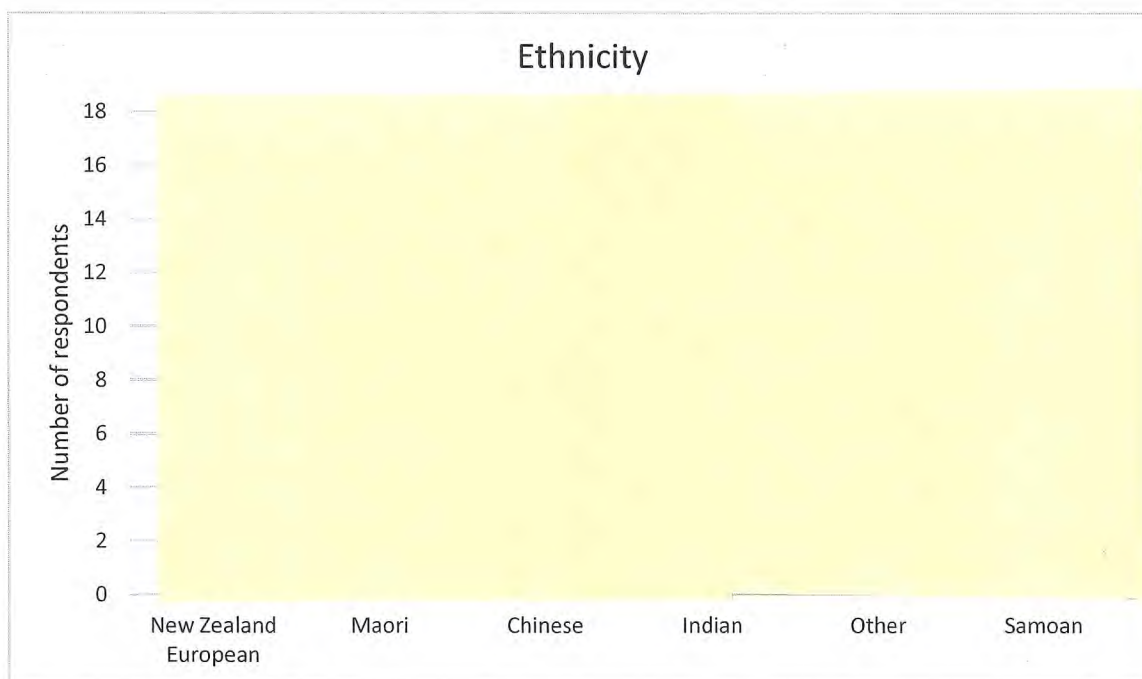
### Age



### Sex



### Ethnicity





		Total (of 25)	Wgtn	Chch			
<b>Usual address</b>	Wellington						
	Christchurch						
	Other						
<b>Tenure</b>	Own						
	Rent						
	Licence to Own (LTO)						
	Trust						
	Don't know						
<b>Age</b>	15- 24 years						
	25-34 years						
	35-44 years						
	45-54 years						
	55-64 years						
	65+ years						
<b>Sex</b>	Male						
	Female						
	Indeterminate						
<b>Ethnicity</b>	New Zealand European						
	Maori						
	Samoan						
	Cook Island Maori						
	Tongan						
	Niuean						
	Chinese						
	Indian						
	Other						
<b>Target groups</b>	General public						
	Maori descent						
	Tertiary students						
	Retirement village residents						
	Parents with children at home (proxy reporting)						

