

**Scotland's Census 2021:  
Question Design and Inclusion Evaluation Criteria -  
Questions, new questions and significantly changed  
questions**

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## 1. Introduction

This framework is designed by National Records of Scotland to evaluate the effectiveness of question design for existing, alternative, and new questions .

The framework consists of five main themes against which the effectiveness of questions and question design can be evaluated: strength of user need; lack of alternative sources; acceptability, clarity and data quality; comparability; and operational considerations.

### Strength of user need

- ✓ Data collected by the census must meet a user need for equality monitoring, policy development, resource allocation and/or service planning and delivery.

### Suitability of alternative sources

- ✓ Data collected by the census must meet a user need that cannot be met elsewhere.

### Acceptability, clarity and data quality

- ✓ Questions asked in the census must be acceptable to the majority of the public, clear and be designed with minimal respondent burden in order to obtain good quality data quality that meets user need.

### Comparability

- ✓ Data collected by the census should be comparable over time where possible, and harmonised across the UK where reasonable.

### Operational considerations

- ✓ Census questions must be considered as part of the census as a whole, where effective digital and paper design, space and financial constraints must be considered. Additionally, some questions may be required for operational purposes in the process of conducting the census.

Each theme contains a number of principle criteria. Questions are scored as high, medium, or low against each principle in the main themes, where 'high' scores are given for questions that meet the principle criteria fully and, where relevant, exceed the effectiveness of the 2011 question; 'medium' scores are given for questions that partially meet the principle criteria; and 'low' scores are given for questions that do not meet the principle criteria.

Whilst the first four of the five themes are directly about the individual question, theme five, operational considerations, takes into account a number of other considerations made when evaluating question design. These criteria may only be applicable to particular questions, but are equally important in evaluating question and questionnaire design.

Principles are not equally important in the decision making process about question design or inclusion.



Some principles are of very high priority, and scoring a high score in one of more of these principles can give a question a very high priority score regardless of scoring in other areas, for example, where the data is required to meet legislative requirements and there are no alternative sources, or for operational purposes in the process of conducting the census. These principles are marked with a star.

How the themes and principles are scored against one another is explained in [Section 2: Evaluation Themes](#).

The principle criteria in each theme, the rationale behind including the principle, a description of the evidence for the principle and where evidence is obtained, and how principles are individually scored as high, medium or low are described in [Section 3: Evaluation Criteria Grid](#).

## 2. Evaluation Themes

### Strength of user need

- ✓ Data collected by the census must meet a user need for equality monitoring, policy development, resource allocation and/or service planning and delivery.

Strong user need, identified primarily by the purpose it serves, is central to the evaluation process and is therefore critical in the assessment of whether data should be collected by the census.

The case for inclusion is strengthened if evidence is presented to show that the information is being, or would be used for important purposes such as equality monitoring, policy development, resource allocation and/or service planning and delivery.

Prime importance is given to information that is required to meet national needs. In defining national needs, the full range of national needs (e.g. policy, administration and research) and national users (e.g. national and local government, academic / other researchers and the private sector) are considered. Additionally, requirements arising from national or international legislation also strengthen the case for inclusion.

The volume of supportive responses for a topic is another indication of strength of user need, and is considered in the evaluation process.

### Suitability of alternative sources

- ✓ Data collected by the census must meet a user need that cannot be met elsewhere.

For data to be collected by the census, there must be a requirement for the information to be available at low level, detailed geographies and/or for small population sub-groups. Where a response indicated that this was a requirement, the case for inclusion is strengthened.

A key benefit of census data is the ability to analyse it in conjunction with other variables. A requirement to undertake multivariate analysis will affect whether suitable alternative sources exist and can strengthen the case for inclusion, particularly when the purpose is related to meeting national or international needs.

If there are no suitable alternative sources which can meet the need for information on a topic, the case for inclusion is strengthened.

## Acceptability, clarity and data quality

- ✓ Questions asked in the census must be clear, acceptable to the majority of the public and designed to incur minimal respondent burden in order to obtain good quality data that meets user needs.

There are a number of factors that need to be taken into account when making decisions about, and designing the content of the census questionnaire. These criteria, in conjunction with user requirements, steer the development of the questionnaire. Issues identified by these criteria may mean data are not collected despite a known user or operational need - for example, if we cannot develop a question that respondents can accurately answer, a question negatively impacts census response rates, or if confidentiality concerns prevent data release.

We use this information to help shape our plans for question testing and research in planning the census questionnaire. For example, if a question does not provide good quality data, work may be required to re-design the question in an attempt to make it easier for respondents to understand and/or provide accurate information.

## Comparability

- ✓ Data collected by the census should be comparable over time where possible, and harmonised across the UK where reasonable.

The need for comparison with previous censuses can be an important aspect of census analysis. Where appropriate, Scotland's Census will collect the same information as was collected in the previous census. However, changes in user need may mean that the detail of the information gathered has to change over time, and so full comparability may not be achievable.

A requirement to obtain comparable data at UK level is also considered. However, given that the census is conducted by separate agencies in different parts of the UK, the extent to which this need can be met is determined by user needs being the same or similar across the UK.

## Operational considerations

- ✓ Individual questions must be considered in the context of the census as a whole, where effective digital and paper design, space and financial constraints must be considered. Additionally, some questions may be required for operational purposes in the process of conducting the census.

Some of the data collected in the census helps to serve operational purposes in carrying out the census, as well as meeting information requirements. Hence where data serves an operational purpose, the case for its collection is strengthened. The most important of these is improving coverage of the population, as the primary aim of the census is to provide a robust count of the population of Scotland.

### 3. Evaluation Criteria Grid

1. Strength of user need					
Principle	Rationale	Evidence	High score	Medium score	Low score
 Required for equality monitoring	The census needs to provide data in line with the Equality Act, and be used for identifying and monitoring inequality in accordance with the Act.	Qualitative evidence from the Topic Consultation, and engagement with relevant stakeholders, including those representing groups with protected characteristics.	There is strong evidence that groups with protected characteristics are experiencing significant disadvantage in one or more areas.	There is some evidence groups with protected characteristics are experiencing some disadvantage in one or more areas.	There is little or no evidence groups with protected characteristics are experiencing disadvantage.
Required for policy development, monitoring and/or research	The census needs to provide data for policy development, monitoring and/or research.	Qualitative evidence from the Topic Consultation, and engagement with relevant stakeholders.	Strong evidence there is a specific policy interest, either now or highly likely by 2021, particularly at a national level.	Some evidence there is policy interest, particularly at a national level.	Little evidence there is policy interest, or policy interest is not at a national level.
Required for resource allocation and/or targeting investment	The census can provide information for resource allocation, at national or local level.	Qualitative evidence from the Topic Consultation, and further engagement with Scottish Government and relevant stakeholders.	Strong evidence that particular groups are of interest for resource allocation.	Some evidence that particular groups are of interest for resource allocation.	Little evidence particular groups are of interest for resource allocation.
Required for service planning and delivery	The census can provide information to allow service need to be identified and tailored.	Qualitative evidence from the Topic Consultation, and further engagement with Scottish Government and relevant stakeholders.	Strong evidence that particular groups are of interest for service planning and delivery. Alternative sources do not meet need.	Some evidence that particular groups are of interest for service planning and delivery. Alternative sources provide partial evidence to meet need.	Little evidence particular groups are of interest for service planning and delivery, or alternative sources meet need.

 Requirements arising from legislation (Scottish Government, UK Government, and EU) <sup>1</sup>	The census can provide data to meet legislative requirements, such as statutory duties, strategic planning, etc.	Qualitative evidence from the Topic Consultation, and further engagement with Scottish Government and relevant stakeholders.	Strong evidence of legislative need.	Some evidence of legislative need.	Little evidence of legislative need.
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**Footnote**

1) Current legislation, or legislation that is likely to be in place in 2021 or soon after.

## 2. Suitability of alternative sources

Principle	Rationale	Evidence	High score	Medium score	Low score
Small geography data are required	The ability to capture small area data is one of the unique characteristics of the census.	There are alternative survey or administrative sources which could or do provide evidence at the required level. The Digital Economy Bill <sup>2</sup> may allow access by 2021, or soon after, to additional sources of data.	There is a requirement for information at low level detailed geographies.	There is some need information at for low level detailed geographies, but information at higher geographies could be used to meet or partially meet need.	There is no clear identified need for information at low level detailed geographies.
Population subgroup data are required	The ability to capture small population data is one of the unique characteristics of the census.	There are alternative survey or administrative sources which could, or do, provide evidence at the required level. The Digital Economy Bill may allow access by 2021, or soon after, to additional sources of data. Data to meet need may be available from write in responses to existing questions where relevant (a review of 2011 responses will provide this evidence).	There is a requirement for information on small population subgroups or write in answers to existing questions are not adequate for measuring this group.	There is some need information on small population subgroups, or write in answers to existing questions could be adequate for measuring this group..	There is no clear identified need for information on small population subgroups.

### Footnote

2) The Digital Economy Bill sets out provisions to enable the disclosure and sharing of data, designed to enable more effective and efficient sharing of data between specified bodies for particular purposes. Will receive Royal Assent in April 2017. Scottish Government will have a data sharing gateway for de-identified data for research purposes (administrative data can be linked to survey data). The process will require to be accredited by the UK Statistics Authority (UKSA) (facilities, researcher, and the research project), and is required to be 'for the public good'.

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Data not available from other sources	The census has the potential to provide information where there are no other sources of data.	Are there alternative survey or administrative sources which could provide evidence at the required level. The Digital Economy Bill may allow access by 2021, or soon after, to additional sources of data. This may be linked to requirements for information at small geography or for small population subgroups.	There are no alternative sources.	There are some alternative sources, but they do not fully meet requirements.	There are alternative sources which could be used. This includes administrative sources where access could be improved through the Digital Economy Bill, or other agreements between organisations.
Other census questions are inadequate as a suitable proxy	If one or more other census questions provided similar information there is less of a need to include a separate question.	Quantitative evidence from the 2011 Census. Qualitative evidence from the Topic Consultation, and further engagement with Scottish Government and relevant stakeholders.	No other census question(s) could be used as a proxy.	A large proportion of the relevant information could be captured in another question or set of questions, offering proxy data.	The information will be captured almost entirely by proxy using a single alternative census question.
Multivariate analysis is required	A key benefit of census data is the ability to analyse a particular variable against others, providing new information. A requirement to undertake multivariate analysis will affect whether alternative sources meet user needs.	Qualitative evidence from the Topic Consultation and follow up discussions and events.	There is a requirement for multivariate analysis, particularly to meet national or international needs, that cannot be met by other data sources.	There is a requirement for multivariate analysis, to meet national or international needs, which is not fully met by alternative sources.	There is a requirement for multivariate analysis, but <ul style="list-style-type: none"> <li>• need is not at national or international level; or</li> <li>• there are alternative sources that could or do provide proxy data.</li> </ul>

### 3. Acceptability, clarity and data quality

Principle	Rationale	Evidence	High score	Medium score	Low score
Does not have a negative impact on public acceptability	<p>Census questions</p> <ul style="list-style-type: none"> <li>• should be acceptable to the majority of the public,</li> <li>• maximise response rates to the question and census as a whole, and</li> <li>• result in responses of acceptable data quality (there should be no false responses resulting from acceptability).</li> </ul>	Quantitative and qualitative question testing.	<p>The inclusion of the question</p> <ul style="list-style-type: none"> <li>• is acceptable to the majority of the public,</li> <li>• has a minimal impact on question and census completion, and</li> <li>• there is no evidence of false response resulting from acceptability issues.</li> </ul>	<p>The inclusion of the question</p> <ul style="list-style-type: none"> <li>• is within the agreed public acceptability levels,</li> <li>• there is some impact on question and/or census completion, but within the agreed levels, and</li> <li>• there is no evidence of false response resulting from acceptability issues.</li> </ul>	<p>The inclusion of the question</p> <ul style="list-style-type: none"> <li>• is not acceptable to the majority of the public, and/or</li> <li>• has a negative impact on the completion of the census and/or</li> <li>• there is evidence of false responses resulting from acceptability issues.</li> </ul>
Does not have a negative impact on respondent burden	<p>Census questions should not impose an excess respondent burden.</p> <p>Attributes contributing to respondent burden include</p> <ul style="list-style-type: none"> <li>• lengthy instructions or explanations,</li> <li>• large numbers of question response options, and</li> <li>• topics requiring a large number of individual questions to meet need.</li> </ul>	Quantitative and qualitative question testing. Stakeholder discussions. Respondent burden testing.	Response burden is acceptable	Response burden has a small negative impact.	Response burden has moderate to significant negative impact.

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Provides the information the question intends to collect (provides data that meets user need)	Census questions should capture data that sufficiently meets user need for the data.	Stakeholder involvement in developing the question. Qualitative and quantitative question testing.	The question provides information that is suitable for user need.	The question provides some information required by users, but not all.	The question does not capture data that sufficiently meets user need.
The question is clear and the data collected is expected to be of acceptable quality	Census questions should be easily interpreted by respondents, so that a high and consistent response is obtained and good quality data for distinct populations and across the population as a whole can be collected.	Question testing. Collaborative working across the Office for National Statistics (ONS), National Records of Scotland (NRS) and the Northern Ireland Statistics and Research Agency (NISRA) to share evidence.	Evidence shows data quality is likely to be high. There is a consistent and high response across distinct populations.	Evidence shows there are some data quality issues. The question is not clear to some respondents and there is some confusion in how to respond, resulting in a lower rate of consistent responses.	Evidence shows data quality is not likely to be of sufficient quality for outputs to be useable.
There is no significant impact across questionnaire modes (paper forms, and differing online modes)	There should be no negative mode effects between capturing data online or on paper.  Question design online and on paper may be different in order to improve clarity, data quality or reduce respondent burden.	Quantitative question testing to determine the extent to which responses can be coded and grouped to allow comparable outputs. Collaboration / discussions with stakeholders and working groups. Stakeholder surveys assessing technical requirements.	Question is likely to produce consistent data across different questionnaire modes. There is no difference in interpretation by respondents by questionnaire mode.	Question may produce small differences in interpretation and response, but allow comparable response data, across different questionnaire modes.	Question is likely to produce inconsistent data due to differing interpretation and responses by questionnaire mode.

4. Comparability					
Principle	Rationale	Evidence	High score	Medium score	Low score
Comparability across time	Consultation and stakeholder engagement revealed a strong need for comparability with 2011 and earlier census data, allowing monitoring over time.	Qualitative evidence from the Topic Consultation and follow up discussions and events. Quantitative evidence from 2011 census.	Inclusion will not affect comparisons over time and there is a requirement for comparability over time.  Or, stakeholder engagement has revealed a need for new or different information as more important than comparability over time.	Inclusion will affect comparisons over time to some extent, but the effect can be reliably estimated.	Inclusion will have major effects on comparability over time and this does not meet need.
Harmonisation across the UK	Consultation and stakeholder engagement identified a strong need for UK level data.	Qualitative evidence from the Topic Consultation and follow up discussions and events. Collaboration with ONS and NISRA through topic and working groups, including the harmonisation group.	Inclusion will allow harmonisation across the UK and the question is directly comparable to ONS and NISRA.	Inclusion will allow harmonisation across the UK and the question is comparable enough to ONS and NISRA to allow harmonisation.	Inclusion will not allow harmonisation across the UK as the question is different to ONS and NISRA, meaning the data is not comparable and aggregation is not possible.
International Comparability	Some users identified a need for international comparability. Some UK level data is required to meet international requirements arising from legislation.	Qualitative evidence from the Topic Consultation and follow up discussions and events. Collaboration with ONS and NISRA through topic and working groups, including the harmonisation group.	There is a need for international comparability, and this need is met.  Or, this is a Scotland specific question and no harmonisation is required.	There is a need for international comparability, and this need is partially met.	There is a need for international comparability, but the need is not met.

## 5. Operational considerations

Principle	Rationale	Evidence	High score	Medium score	Low score
Does not have a negative impact on financial or processing concerns for Scotland's Census 2021	Questions should not present major coding problems, require extensive processing, or significantly add to the cost of the census.	Working across NRS census areas, including budget evaluation and monitoring, based on 2011 census evaluation.	Minimal impact on financial or processing costs or system development or efficiency.	Moderate impact on financial or processing costs or system development or efficiency.	High impact on financial or processing costs or system development or efficiency.
 Maximising coverage or population bases	NRS uses some of the data collected operationally in the process of conducting the census. Of most importance is maximising coverage, as the primary aim of the census is to provide a robust estimate of the usually resident population. Other operational uses include coding derived variables, routing respondents and validation.	Working across NRS census areas, based on 2011 census evaluation.	Inclusion maximises coverage or population base. For example, aiding respondents in identifying who should be included in the form, identifying duplicates and missing data, identifying usual residents, used in different output bases.	Inclusion allows coding of derived variables to support some key outputs (where a user need is identified), even if there is no user need identified for outputs relating directly to the question. For example supervisory status is required to derive Socio-economic classification (NS SEC). A medium score is also allocated where the question is used in adjustment for non-response. For example, economic activity last week is used in estimating economic activity characteristics of non-respondents.	Inclusion allows automatic routing for online respondents. A low score also applies where questions are used for validation, for example cross-checking between age and marital status.

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Effective online design	Online delivery is the priority so questions and design must work across a range of digital formats, and be accessible to users with particular needs.	User research testing. Digital assessment.	Questions can be designed for digital first delivery that maximise response and data quality.	Questions can be designed for digital first delivery but there are minimal impacts on maximise response and data quality.	Questions can be designed for digital first delivery but there are significant impacts on maximise response and data quality.
Space constraints	Limits on length of the full form impact on which questions are asked and how the individual questions sit together across the full form.	Quantitative and qualitative question testing, respondent burden testing.  Collaboration across ONS, NRS, and NISRA through working groups and topic groups.	Inclusion has little or no impact on the design and length of the full Census form.	Inclusion has some impact on the design and length of the full Census form.	Inclusion has significant impact on the design and length of the full Census form .
Impact on financial or processing concerns for other organisations	<ul style="list-style-type: none"> <li>• Will the question be used by other organisations?</li> <li>• Is the cost to organisations of changing their systems to collect new/revised questions significant?</li> <li>• Is the question likely to be adopted by other surveys?</li> </ul>	As the census is 10 yearly, often providing baseline data, other sources of information are required to meet user need between censuses. To provide a good framework for evidence, consistency in data collection is important, to allow timely and relevant evidence.	Organisations are likely to adapt systems to collect the same (or equivalently similar) data.	Organisations may adapt systems to collect the same (or equivalently similar) data.	Organisations are unlikely to adapt systems to collect the same (or equivalently similar) data.