



**The 2011 Census:  
Supplier Information Meeting – 14 July 2005**

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**Draft Information paper**

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## **INTRODUCTION**

The Office for National Statistics (ONS) has the responsibility for conducting a Census in England and Wales every 10 years, the next one being in 2011. We have considerable experience of how to collect information on every person in the country at a defined point in time and processing the data for a wide range of statistical uses.

The 2001 Census saw more automated methods of collecting and processing data than ever before, and an increase in services provided by contracted suppliers (total value £87,500,000). For 2011, we intend to build on this experience, utilising technology to further improve the census operation processes and contracting out more of the services required.

A number of reviews were carried out on the 2001 Census by external bodies, including the Public Accounts Committee, the National Audit Office and the Treasury Select Committee and the design for 2011 responds to these. It also brings a more complex set of integrated systems and the challenge is to bring together a consortium of suppliers who will help us develop these.

As mentioned above, it is the responsibility of the ONS to conduct a Census for England and Wales only, and the Northern Ireland Statistics and Research Agency (NISRA) and the General Register Office for Scotland (GROS) will also be conducting a Census in their respective countries in 2011. Both these countries have their own design and activities, which are broadly similar to the one presented here, but the main focus of this open day is on the Census in England and Wales.

GROS and NISRA will be handling the procurement of a number of their contracted services separately, but it is likely that joint solutions for key services will be developed through one contract with ONS. As an example of this joint solution, in 2001, the data processing and printing contract handled the requirements for all three Census offices.

More detail on the potential areas for joint development is given in the section 'Activities for Contracting'

ONS, in conjunction with NISRA and GROS, is taking this opportunity to engage with the market place at an early stage of our planning in order to raise awareness of our procurement plans and prepare the market to work with us.

This document contains background information on the Census;

- the 2011 Design Document, which sets out the high level processes;
- the plan for the Test and Rehearsal;
- a list of activities that we intend to contract out to suppliers;
- information on the scope of work, time scales, procurement strategy and interfaces; and
- a summary of estimated volumes.

High level requirements for each activity are provided in a separate document.

Following the Census, ONS will undertake one or more surveys for the purposes of assessing quality or coverage for example. These surveys will be carried out over a period of weeks following the initial census field work and will cover somewhere in the order of one or two percent of the population. These surveys would be included in the 2009 Rehearsal and possibly the 2007 Test.

## **CENSUS BACKGROUND**

The Census is a count of all the people and households in the United Kingdom and is normally taken every 10 years. It is compulsory and carried out under the provision of the 1920 Census Act as amended by the 1991 Census (Confidentiality) Act. It is the most complete source of social and demographic statistics available because it includes everyone.

The Census gathers important information on many different subjects such as the age, sex and ethnic composition of the population; housing, families, transport and work. It is the only opportunity for collecting

the same information about each part of the country at the same point in time, making it easy to compare and contrast different areas.

ONS carries out the Census for England and Wales and works as a partner in collaboration with the General Register Office for Scotland (GROS) and the Northern Ireland Statistics and Research Agency (NISRA) to deliver a UK Census, sharing common strengths but reflecting national differences. We will also be working closely with the Welsh Assembly Government (WAG).

The terms of the Census Act, as amended by the Census (Confidentiality) Act 1991, mean that it is an offence for any person, who is under the control of the Registrars or a supplier of any service, to disclose personal data any other person without lawful authority. No changes to the conduct of a census must compromise these statutory obligations.

Independent security and confidentiality reviews on both computer and physical security are conducted and reported to Parliament before each Census and all members of the Census organisation and outside agents providing services in connection with the Census operation are given strict instructions about confidentiality and are required to sign a legal undertaking. The 2011 Census may have a two-stage security review covering the Rehearsal and the 2011 Census, and any suppliers will be subject to both this review and audit.

## **FACTS AND FIGURES FROM THE 2001**

The census is a vast undertaking. To put things in perspective, here are a few facts and figures from the 2001 Census (England and Wales only):

### **Helpline:**

- 2.6 million calls were made to the helpline (250,000 made in one day on 23 April). Initially response was by Interactive Voice Recognition (IVR) with 404,000 calls then passed to an operator. At peak (end April-mid May) 164 operators. 12,500 emails were answered.

### **Field Operations:**

- Over 70 million documents were printed including, 30 million census forms, 28 million information leaflets and 12 million admin documents.
- 4,500 tonnes of materials were distributed to 2,000 delivery points. All unused material was subsequently collected for secure disposal.
- Translations of the Census form were provided in 26 languages.
- Some 76,000 field staff were employed, during the course of the enumeration, for periods ranging from 11 months (for Area Managers) to 9 weeks (for enumerators).
- Between 2 and 2.5 million questionnaires were handled each day by the Royal Mail during the 5 days following Census Day.

### **Processing:**

- Staff numbers employed at the processing site fluctuated between 950 and 1,400 over a period of 10 months representing an approximate average of 1,200 staff.
- The processing site had floor space the size of 5 football pitches to hold the 320,000 boxes of completed census questionnaires.
- 27.3 million questionnaires passed through the processing system. 21 scanners captured the data at a rate of 1.5 million form pages per day.
- 7 billion characters were captured and of the 75 million text responses, 75% were coded automatically.
- The images of completed Census questionnaires were transferred to over 20,000 reels of microfilm and will be stored until they become open to the public in 2102.
- All completed questionnaires were pulped under secure conditions and recycled (this recycling saved 21,000 mature trees).

### **Results:**

- Results were made available under the provisions of section 4 of the Census Act. Under section 4(1) reports are presented to Parliament and made available publicly. Under section 4(2) further results can be commissioned by customers.
- Between September 2002 and September 2003 some 2 billion counts, for the standard table sets, were published on the web, CD-ROM and in print.
- There were over 50,000 visitors to the website on the day following press coverage of the release of Key Statistics to ward and Output Area level.

- Finally, the results inform the annual allocation of more than £45 billion of Central Government funding to local and health authorities.

#### **Activities contracted for the 2001 Census**

For the 2001 Census we contracted a significant amount of activities with a value of £87,500,000.

These activities included:

- Field staff payroll
- Printing (excluding scannable questionnaires) and Supplies
- Delivery and Collection
- Printing scannable questionnaires
- Data Capture/coding
- Helpline
- Handling postal returns of census questionnaires

Following on from this we are looking to extend the scope of outsourcing and work with suppliers to gain the best solutions for 2011.

## **HIGH LEVEL APPROACH TO SYSTEM DEVELOPMENT AND TESTING**

### **2007 field test**

A major field test of the proposed ONS design for England & Wales will take place in 2007, which will involve delivery of census questionnaires to one or two hundred thousand households.

The key aims of the test are to evaluate:

- the effectiveness of the field operation and supporting systems in maximising response and minimising differential non-response;
- the impact on response rates of postal delivery and the inclusion of a question on income;
- the general feasibility of the proposed design, evaluating whether the key concepts work, and work together.

We have not made a final decision on the extent of system development to support the 2007 Test. The minimum requirements for systems to enable a full evaluation of the design are under development, and discussions will be held with the suppliers involved in the 2007 Test to determine how these could best be met.

### **2008 Integration Test**

Evaluation of the 2007 Test will result in a final design for the 2011 Census. Development of final systems for 2011 will start soon after, leading to a full system integration test in Autumn 2008

### **2009 Rehearsal**

The integration test will be followed by a Rehearsal in 2009, which will again involve delivery of census questionnaires to perhaps one or two hundred thousand households. The aim is that all systems and processes will be finalised and minimal changes will be expected beyond this point. After the rehearsal, suppliers will scale up the operations and put all of the infrastructure, warehousing, systems and staff in place.

### **Involvement of final suppliers**

Suppliers of key systems will work with us to develop systems and services for the 2007 test. This will ensure that they have a shared, detailed understanding of system requirements and will be able to proceed quickly with development of full systems and services for the Integration Test in 2008 and the Rehearsal in 2009.

### **Timing**

The Test and Rehearsal will be conducted in the same calendar month as the 2011 Census, which is likely to be April or May, although for the Test and Rehearsal, there is a wider window of time available.

## **PARLIAMENTARY AND LEGISLATIVE PROCESS**

The legislative process necessary to undertake a census is governed by the 1921 Census Act, and introduces certain time constraints on the operation. There are 3 stages to this process:

- White Paper
- Census Order
- Census Regulations

### **White Paper**

A parliamentary White Paper in July 2008 is the route by which the government will announce its proposals for the Census. It will say what questions are proposed and why (although some may still be provisional) and will give notification of any major changes in methodology or policy for example, collection of census returns via the internet.

**Census Order**

A Census Order will then be laid before parliament by October 2009, for approval by February 2010, detailing the agreed content, the date of the Census and information on the population base and persons responsible for making a return.

**Census Regulations**

Following agreement of the Census Order, the Census Regulations will be made authorising employment and payment of field staff and specifying their duties. They will describe the delivery and collection methodology and will include a facsimile of the Census questionnaire. The regulations must be agreed by parliament by March 2010.

**Wider UK legislative process**

Legislative responsibility for the Census in Scotland is devolved to the Scottish Parliament, and will follow the same process. The parliamentary process in Northern Ireland is dependent on the future of the Northern Ireland Assembly. If the Assembly is re-established then it will have legislative responsibility for the Census as in Scotland; otherwise, responsibility will rest with the Westminster Parliament.

ONS is in the process of transferring some legislative functions for the Census in Wales to the Welsh Assembly Government. This is likely to result in separate Regulations for Wales being made by the Welsh Assembly Government, following the same timetable.

## ACTIVITIES FOR CONTRACTING

The Introduction section has highlighted what was outsourced for the 2001 Census and in order to build on those successes and address the lessons learned, ONS has carried out an evaluation of areas of activity for 2011 to decide what can be best fulfilled for ONS by external suppliers.

The following list sets out these activities:

No.	Activities
1	<b>Operational intelligence</b> <ul style="list-style-type: none"> <li>- Development of systems</li> <li>- Provision of secure communications network for field staff</li> <li>- Definition of response tracking activities required and interfaces with other services</li> </ul>
2	<b>Recruitment of field staff</b>
3	<b>Payroll for field staff</b>
4	<b>Training of field staff</b>
5	<b>Translation and Interpretation Services</b>
6	<b>Warehousing, Distributions and Collection</b> <ul style="list-style-type: none"> <li>- Warehousing, distribution and collection of field staff supplies.</li> <li>- <sup>1</sup> Possible provision of additional questionnaires etc., through a fulfilment function</li> <li>- Field staff material return or secure disposal</li> </ul>
7	<b>Public help facilities</b> <ul style="list-style-type: none"> <li>- Web Self-help Facility</li> <li>- Contact centres                             <ul style="list-style-type: none"> <li>- General assistance</li> <li>- Telephone data capture</li> <li>- Requests for questionnaires and other material</li> <li>- Technical support for web capture</li> <li>- Telephone follow-up</li> <li>- <sup>1</sup> Possible provision of additional questionnaires etc., through a fulfilment function</li> </ul> </li> <li>- Provide call information for analysis</li> <li>- Provision of equipped contact centres and recruitment/training of staff</li> </ul>
8	<b>Printing</b> <ul style="list-style-type: none"> <li>- Census questionnaires                             <ul style="list-style-type: none"> <li>- Unique ID and addressing</li> </ul> </li> <li>- Information leaflets</li> <li>- Printed matter</li> <li>- Return envelopes</li> <li>- Collating and enclosing</li> <li>- Sorting for despatch</li> </ul>
9	<b>Transportation of census questionnaires</b> <ul style="list-style-type: none"> <li>- From printer to mail provider</li> <li>- From printer to field staff</li> <li>- From mail provider to processing site</li> <li>- From field staff to processing site</li> </ul>
10	<b>Data capture operations</b> <ul style="list-style-type: none"> <li>- Development of Data Capture systems (via Paper, Web and Telephone)</li> <li>- Development of Coding systems</li> <li>- Development of supporting systems (e.g. workflow, archive)</li> <li>- Development of Image Management system</li> <li>- Provision of equipped processing and warehousing site(s)</li> <li>- Security of operations and buildings</li> <li>- Recruitment, training and payroll of processing and warehouse staff</li> <li>- Electronic receipting of returns (paper, web, telephone)</li> </ul>

<sup>1</sup> It is up to suppliers to suggest where this is best placed

	<ul style="list-style-type: none"> <li>- Storage and retrieval management</li> <li>- Data Quality management</li> <li>- Operation of Web capture service</li> <li>- Operation of Paper Capture service - including <ul style="list-style-type: none"> <li>- Image capture of paper</li> <li>- Identification of blank or incomplete questionnaires &amp; routing for follow-up</li> </ul> </li> <li>- Construction of image from web and telephone</li> <li>- Merging data from 3 capture channels</li> <li>- Coding of responses</li> <li>- Archival</li> <li>- Secure destruction of paper questionnaires <ul style="list-style-type: none"> <li>- Deliver data to ONS</li> <li>- Deliver Images &amp; Image Management system to ONS</li> <li>- Decommissioning of site(s)</li> </ul> </li> </ul>
11	<p><b>Publicity</b></p> <ul style="list-style-type: none"> <li>- Test</li> <li>- Rehearsal/Census</li> </ul>

A draft High Level Requirement document covering each area is available to give you an understanding of the requirements, scale, scope, time scales and interfaces.

It is important to note that the remaining activities will be carried out in-house, therefore there will be interfaces between these and the contracted activities. The following list sets out the activities which will be carried out in-house:

**In-house delivered activities**

- Community liaison
- Geography – Address register / list.
- Geography – Communal Establishments
- Forms Reconciliation
- Edit and Imputation – develop software and carry out
- Statistical Adjustment – develop software and carry out
- Final checks and derivation
- Data analysis
- Output delivery
- Quality Assurance
- Geography area planning
- Liaison with users
- Tabulation
- Web delivery of final data

**Involvement of other UK Census Offices**

The responsibility of the ONS is to conduct a Census for England and Wales, but NISRA and GROS will also conduct a Census in their own respective countries, at the same time.

Joint working on some activities could potentially deliver economies of scale or help to improve consistency of data. At this point in time, both organisations have given an indication (listed below) of what areas they *may* want to work with ONS on and will give a clear commitment before we start the procurement process.

Activity No.	Area	NISRA	GROS
1	Response Tracking and Operational Intelligence	Yes	Possible
2	Recruitment of field staff	No	No
3	Payroll for field staff	Possible	No
4	Training for field staff	Possible	No
5	Translation services	Yes	No
6	Warehousing, distribution and collection of field staff	Yes	Possible

	supplies		
7	Public help facility – contact centre	Yes	Possible
8	Printing of forms and printed matter	Yes	Possible
9	Transportation of census questionnaires	Yes	Possible
10	Data capture operations	Yes	Yes
11	Publicity	Possible	No

### Project Plan

This project is unusual in that it has a long lead-time to a specific date in 2011, with tests carried out in 2007, full integration testing in 2008 and a full Rehearsal in 2009. It also has a diverse range and variety of inter-linked activities to be completed to different time scales. This presents specific challenges in developing a procurement strategy which fits the design and time scales but also minimises risk.

The 2001 Census used ad-hoc suppliers to test in 1997 and the final suppliers were not brought in until January 1999, which left a shortage of time to develop and carry out a full Rehearsal and Census. This attracted criticism and has influenced the 2011 design which aims to bring final suppliers in sooner to do the development and testing and thus avoid the same problems.

Within the 2011 project plan, we have identified the following Key Dates and the time available to carry out the actions required.

Dates	Key Date	Actions
Now to <b>2007</b>	Test 2007	To procure and award contracts to support the 2007 Test
After 2007 Test		Evaluation of Test
Evaluation of Test to <b>2009</b>	Rehearsal 2009	To build the final systems to be used for the Census, carry out full systems integration test (2008) prepare for Rehearsal. Procure and award contracts for the Rehearsal and Census
After Rehearsal 2009		Evaluation of the Rehearsal
Evaluation of Rehearsal to <b>2011</b>	Census Day 2011	Scale-up of all requirements, full operations and systems test (2010) prior to Census date
2011 to end of contract(s)		Processing of data, archiving, decommissioning etc.

### Procurement Strategy

The Design of the 2011 Census and the time available does not lend itself to the “traditional” procurement method of giving suppliers detailed specifications of requirements.

The reasons for this are:

1. Key decisions will be made later in the project, thus preventing full specifications being developed now.
2. Finalisation of some of the strategies will have an impact on the design and specification of other contracted activities.
3. Detailed specifications written now would change because of reasons above.
4. Lack of time after the evaluation of the test to tender and select and give the supplier time to develop.

We *could* provide detailed specifications at this stage. However, we recognise that there would be a significant risk of substantial changes having to be made, thus escalating costs. We therefore, need to explore other ways of working with supplier(s) to develop final solutions which take account of decisions that will be made later. Other government departments are moving towards selecting suppliers who will develop “joint” solutions with them from high level requirements. At this point in time we are able to provide high level requirements and our intention is to select the final supplier(s) early with a view to jointly developing the solutions and being able to respond to and manage change as it occurs.

Although collectively in the UK, we have a great deal of experience in conducting Censuses, we feel that a partnering development approach for 2011 could make the most effective use of technology. This would go much further than 2001 and does not just "utilise technology to improve the processes" (our processes) but involves suppliers assisting with or advising on innovative and cost effective solutions.

For 2011 we are planning a phased approach to fit the timetable. For 2007, we will build some systems for testing and evaluation in order to agree the final design. We will then want all systems and suppliers in place to carry out a systems integration test in 2008 and the Rehearsal in 2009. The evaluation of the Rehearsal will conclude with agreement on the capacity within each channel and scaling up for the Census.

We have reviewed which activities have strong interfaces, what activities we want the final suppliers to be involve in from 2007 and also what services we will not be ready to contract out with until after the Test.

We have therefore grouped the activities into different procurement routes.

#### **Route A**

- Operational Intelligence & response tracking
- Data capture operations
- Printing (Census questionnaires)
- Public Interface (Contact centre and web self help facility)

This route will use the negotiation procedure, starting with an OJEU advert and working through the stages of PQQ, high level requirement, statement of requirements to select 2 suppliers to work with us through a test.

The majority of the requirements will be outputs based, with some specified.

After the test, 1 supplier will be awarded a contract for the ongoing work through to the Census.

After award of contract, we will review the design and work towards the Rehearsal in 2009. The capacity within each capture channel will be agreed after this and systems scaled up for the Census.

#### **Route B**

- Recruitment
- Payroll
- Training
- Printing (other printed matter)
- Logistics & warehousing
- Field supplies

Some of these services are only required to support the Test and a decision will be made on requirements and the procurement route for the Census.

As we will be able to specify requirements, we will use existing framework agreements or suppliers from the OGC S Cat list.

#### **Route C**

- Recruitment
- Payroll
- Training
- Printing (other printed matter)
- Logistics & warehousing
- Field supplies
- Translation & interpretation

If these services are required for the Census, we will have made decisions on the route at that time. We expect that some will go through the OJEU restricted process and some through existing framework agreements.

**Other activities**

Publicity - through the Central Office for Information (COI)

Consultancy support- through framework and S Cat lists

## **GEOGRAPHY INTERFACES**

This section relates to ONS only, the requirements for other offices will vary.

Geography will underpin all activities associated with the Census enumeration. There is no intention to contract out the provision of geographic information. ONS will define and provide this information. All systems will operate with the same data. At the heart of the Census Geography System will be a Census Address Register. This will hold details of all addresses. New addresses may be added as a result of field checks or telephone contact with the public. Geography will therefore be dynamic and it is essential that we develop controls to ensure integrity between systems.

Addresses will be linked to higher level areas. In order to manage fieldwork we will allocate workloads to teams. Teams will be associated with a tiered management structure that will be linked to Census geography. For reporting purposes we will also want to link questionnaires to more conventional administrative areas such as wards and Local Authorities.

### **Address information**

All records in the Census Address Register will contain the following information: -

- a formatted address
- a postcode
- a grid reference
- an address-type indicator such as.
  - residential
  - non-residential
  - other

Further information will be associated with residential addresses. This will include a distinction between private accommodation and communal establishments.<sup>2</sup> Communals are likely to be larger than private residences and are also likely to contain populations that require different enumeration approaches.

### **Geography interfaces**

The geography system will support a number of Census processes. The key activities will be:

- **Printing**

The vast majority of census questionnaires will have an address pre-printed. The Census Address Register will determine the type of form to be printed, the address to which it will be sent, the delivery method and any mail sorting code. The Census Address Register will also link to higher level areas. This may inform other aspects of the print process such as the requirement for a Welsh language version of the census form. The printer will supply the link between the unique form identifier and each address as the seed for the response management system.

- **Form tracking and operational intelligence**

Questionnaires will be tracked via the Response Management database. Each questionnaire will be linked to the address to which it will be delivered. An analysis of questionnaires and their status will link questionnaires via their address to higher level statutory areas such as Local Authorities and areas associated with regional field management.

- **Follow up**

Linking the Response Management database to the Census Address Register will enable generation of follow-up lists of non-returns by Census management areas or teams. These will be used to post out reminders and to support further follow up actions in the field.

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<sup>2</sup> A communal establishment is defined as 'an establishment providing managed residential accommodation'.

- **Recruitment of field staff and payroll**

Field staff may be recruited to work in specific areas. These areas will be defined in the Geography system.

- **Public help facilities**

All calls to a Contact Centre will be logged. All addresses will be captured and validated against the Census Address Register. Where address details cannot be matched they will be passed on to Census HQ who will validate them before they are added to the Census Address Register. This check will ensure that spurious or duplicate addresses are not added.

- **Data Capture operations**

Data Capture will have interfaces to the Census Address Register. The Census Address Register will be the source for verifying addresses if these are to be coded.

- **Management information**

Contractors will be asked to provide information about the progress of activities throughout the Census operation. This may require producing reports for areas associated with statutory and field management boundaries. This information will be held in the Census Geography System.

- **Census Outputs**

Output production is not in the scope of activities to be contracted out, but its success is dependent upon all previous processes maintaining the integrity of the link between a Census return and the address with which it is associated.

## SUMMARY OF MAIN VOLUMETRICS (England & Wales)

### Field staff numbers and timescales for recruitment, payroll and training

Estimated Numbers	TEST	REHEARSAL	CENSUS
Regional Managers	0	0	10
Area Managers	0-2	0-2	300
Pre-Delivery staff	130	100	5,600
Team Managers	40	30	2,000
Delivery staff	450	200	25,400
Follow-up staff (mainly extended employment)	200	150	11,000
Communal Establishment Staff	12	10	1,500
Non-compliance staff	0	0	400

Employment Dates	TEST	REHEARSAL	CENSUS
Regional Managers	n/a	n/a	April 09 – July 11
Area Managers	Aug 06 - July 07	Aug 08 - July 09	Aug 09 - July 11
Pre-Delivery staff	Sept 06 - Oct 06	Sept 08 - Oct 08	Aug 10 - Sept 10
Team Managers	Nov 06 - July 07	Nov 08 - July 09	Sept 10 - July 11
Delivery staff	Jan 07 – May 07	Jan 09 – May 09	Jan 11 – May 11
Follow-up staff	April 07 – July 07	April 09 - July 09	April 11 - July 11
Communal Establishment Staff	Jan 07 – June 07	Jan 09 – June 09	Jan 11 – June 11
Non-compliance staff	n/a	n/a	April 11 – Dec 11

### Translation services

Printed Census questionnaires must be available in English and Welsh. Bilingual (English/Welsh) versions of publicity, information material, recruitment and training documentation will also be required.

A wider range of language translations or interpreters, will be needed for information leaflets, web, contact centres, field staff, publicity and other material, than the 35 types provided in 2001.

### Warehousing, distribution and collection of field staff supplies

In 2001, over 4,500 tonnes of material was delivered to the field managers in 5 batches over a 6 month period.

Document Category	Document Variations	Volumes produced (millions)
Recruitment	100	4.6
Geography	16	0.2
Census and public forms	51	66.8
Enumeration	34	35.7
Pay	75	1.6
Intructions and Training	39	0.4
Publicity	167	1.9
Other materials (incl stationary)	64	36.2

We would expect supply despatches in 2011 to match the employment period given in the Recruitment of Field Staff document (summary above).

In 2001, collection of surplus material began 6 weeks after Census day and was completed over a 6 week period. It may be possible to reduce this period for 2011.

### Public help facilities

2001 Census contact centre experience:

- the Census helpline function of the Contact Centre was operational for three months going live approximately 1 month before Census day;

- it was open between 8.00am – 8.00pm;
- call volumes per day and per week followed the usual industry findings i.e. more calls at the beginning of the week/day dropping off as the week/day progresses;
- 2.6million calls were received;
- 29,000 calls were received on average per day;
- calls peaked at 245,000 on one day;
- the average call duration was 155 seconds;
- the IVR:advisor ratio was 3:1;
- IVR was operational 24 hours a day;
- Performance target was 90% calls answered in 15 seconds
- 16,000 emails were received.

Assuming that Census day falls around the end of April in 2011, the main Contact Centre helpline number will be available from the beginning of April until the end of June 2011. Similar timetables will be used in 2007 and 2009.

### Web Self Help facility

Will be used during the same period as the Contact Centre (April – end June 2011) However, it may need to be live for some months prior to this to raise awareness of the Census, promote participation and possibly to advertise field staff posts.

### Census form printing

Census Stage	Forms designed	Address Lists Available for				Forms ready for Collection		Max Volume Estimate
		Testing/Training		Live Process		Test & Train	Live	
		Main	Supp	Main	Supp			
2007	08/06	09/06	10/06	01/07	02/07	11/06	03/07	200,000
2009	08/08	09/08	10/08	01/09	02/09	11/08	03/09	200,000
2011	08/10	07/10	08/10	11/10	03/11	09/10	01/11*	32,000,000

\*This is likely to be a phased process running from early January to early April 2011.

With the adoption of a multi-channel approach to collection of Census data, it is possible there could be a reduction in the number of questionnaires to be printed and processed.

### Other Printing

Key:

CAM – Census Area Manager

CDM – Census District Manager

CTL – Census Team Leader

ERB – Enumerator Record Book

Document Category	Document Variations	Volumes produced
CAM materials eg address labels, paper & videos, CDM Recruitment forms, Pay forms & Publicity fact sheets (UK)	68	672,000
Geography maps & forms, ERBs, CDM instructions, CDM Pay materials, videos (UK)	60	454,979
Enumerator and CTL Recruitment forms (including envelopes), pay and training materials	85	8,118,854
Public forms: Household, Individual, Continuation, Communal establishment, Translations, Postback envelopes & contact leaflets, EN carrying bags, alarms, Publicity campaign forms, EN workbooks & training videos	99	128,141,725
Forms Boxes, labels, tape & tape gun	11	820,060
All Census Coverage Survey materials	62	1,827,000

### Transportation of census questionnaires

To follow printing of census questionnaires, see table above for maximum volumes.

Delivery to the supplies distributor will need to reflect the enumeration timetable. It will require collection of census questionnaires from the printer and delivery to the distributor approximately 6 – 8 weeks prior to Census day.

Delivery to the Mail Service may be staggered over either a 1 - 3 week period or a 3 - 5 day period prior to Census day.

Collection of returned questionnaires from Mail Service Provider sites may need to be carried out on a daily basis after Census day, depending on the Mail Service Provider's constraints with storage. This could continue for six weeks after Census day. Thereafter, assuming postal returns will have reduced to very small numbers, mail will be re-directed to a designated address.

Collection of boxes of completed questionnaires from some 2,000 - 5,000 Team Managers will begin some 6 weeks after Census day.

### Data Capture operations

With the adoption of a multi-channel approach to collection of Census data, it is possible there could be a reduction in the number of questionnaires to be processed and stored.

Warehouse to be close to or at the processing site with a capacity to receive, check in, sort and store a maximum of around 27 million questionnaires.

Processing site must be equipped to prepare a maximum of around 27 million questionnaires for scanning, data capture and coding, and provide fully equipped accommodation for workflow, system administration, and ONS staff.

The receipting system must be sized to check in a maximum of around 27 million questionnaires ideally within 24 hours of receipt, with a possible 5 million questionnaires a day at peak.

Following scanning, there could be a maximum of 176 million blank pages to be deleted.

Identification of incomplete questionnaires. Based on information from 2001 there could be around 1.3 million records for which basic demographic data is missing

The volumes coded in 2001 are shown below. Note these are UK figures.

Question	Volume Coded	% Coded Automatically	% Coded Manually
Country of Birth	3,780,151	81.6	18.4
Religion	1,045,874	74.4	25.6
Ethnic Group	3,866,964	75.7	24.3
Address 1 year ago	4,720,878	83.6	16.4
Workplace address	22,056,446	71.8	28.2
Industry	27,970,005	66.8	33.2
Occupation	29,611,276	72.2	27.8

In 2001, there were around 26.36 million responses coded by operators, the bulk of which were Industry, Occupation and Workplace address. It would take approximately 400 staff to code this data over a period of 26 weeks. It is likely that changes to the type of information required in 2011 will increase the number of questions that require an address to be coded.

## SUMMARY OF MAIN VOLUMETRICS (Northern Ireland)

### Field staff numbers and timescales for recruitment, payroll and training

Estimated Numbers	TEST	DRESS REHEARSAL	CENSUS
Area Managers	0-1	0-1	5-10
Census District Managers	0-1	0-1	90-120
Team Leaders	0-1	0-2	250-350
Enumerators	6-8	8-10	2,000-3,000
Follow-up staff (mainly extended employment)	2-3	3-6	1,000-2,000
Non-compliance staff	0	0	95-130

In Northern Ireland the Non-compliance staff were not a separate grade. The Census Area Managers and the Census District Managers were all trained in non-compliance issues and there was time built in to their normal duties.

Employment Dates	TEST	DRESS REHEARSAL	CENSUS
Area Managers	Aug 06 - July 07	Aug 08 - July 09	Aug 09 - July 11
Pre-Delivery staff	Sept 06 - Oct 06	Sept 08 - Oct 08	Aug 10 - Sept 10
Team Leaders	Nov 06 - July 07	Nov 08 - July 09	Sept 10 - July 11
Delivery staff	Jan 07 – May 07	Jan 09 – May 09	Jan 11 – May 11
Follow-up staff	April 07 – July 07	April 09 - July 09	April 11 - July 11
Non-compliance staff	0	0	April 11 – Dec 11

### Translation services

Printed Census questionnaires will be available in English.

A range of language translations or interpreters will be needed for information leaflets, web, contact centres, field staff, publicity and other material. Translated material in 8 languages was available in 2001.

### Warehousing, distribution and collection of field staff supplies

The timetable for delivery of field supplies in Northern Ireland will broadly match that of England and Wales. Whilst precise volumetric information on the various document types is not available for Northern Ireland, an equivalent number of document variations are likely to be required. Applying a 3% population share can derive an estimate of the numbers to be produced.

### Public help facilities

2001 Census contact centre experience:

- the Census helpline function of the Contact Centre was operational for three months going live approximately 1 month before Census day;
- it was open between 8.00am – 8.00pm;
- call volumes per day and per week followed the usual industry findings i.e. more calls at the beginning of the week/day dropping off as the week/day progresses;
- 43,149 calls were received;
- 514 calls were received on average per day;
- the average call duration was 190 seconds;
- the IVR:advisor ratio was approximately 2:1;
- IVR was operational 24 hours a day;
- Performance target was 90% calls answered in 15 seconds
- A further 4,150 calls were received direct to Census Office indicating that callers experienced difficulty in getting through;
- 258 emails were received.

**A summary of the number of calls received is outlined in the table below**

<b>Week commencing</b>	<b>Number of Calls</b>
01 April	57
09 April	2333
16 April	5150
23 April	17234
30 April	8562
07 May	2272
14 May	3604
21 May	1854
28 May	948
04 June	620
11 June	298
18 June	154
25 June	63
<b>Total</b>	<b>43149</b>

Assuming that Census day falls around the end of April in 2011, the main Contact Centre helpline number will be available from the beginning of April until the end of June 2011. Similar timetables will be used in 2007 and 2009.

**Web Self Help Facility**

Will be used during the same period as the Contact Centre (April – end June 2011). However, it may need to be live for some months prior to this to raise awareness of the Census, promote participation and possibly to advertise field staff posts.

**Census form printing**

<b>Census Stage</b>	<b>Forms designed</b>	<b>Address Lists Available for</b>				<b>Forms ready for Collection</b>		<b>Max Volume Estimate</b>
		<b>Testing/Training</b>		<b>Live Process</b>		<b>Test &amp; Train</b>	<b>Live</b>	
		<b>Main</b>	<b>Supp</b>	<b>Main</b>	<b>Supp</b>			
<b>2007</b>	08/06	09/06	10/06	01/07	02/07	11/06	03/07	10,000
<b>2009</b>	08/08	09/08	10/08	01/09	02/09	11/08	03/09	10,000
<b>2011</b>	08/10	07/10	08/10	11/10	03/11	09/10	01/11*	1,000,000

\*This is likely to be a phased process running from early January to early April 2011.

**Transportation of census questionnaires**

To follow printing of census questionnaires, see table above for maximum volumes.

Delivery to the supplies distributor will need to reflect the enumeration timetable. It will require collection of census questionnaires from the printer and delivery to the distributor approximately 6 – 8 weeks prior to Census day.

Delivery to the Mail Service may be staggered over either a 1 - 3 week period or a 3 - 5 day period prior to Census day.

Collection of returned questionnaires from Mail Service Provider sites may need to be carried out on a daily basis after Census day, depending on the Mail Service Provider's constraints with storage. This could continue for six weeks after Census day. Thereafter, assuming postal returns will have reduced to very small numbers, mail will be re-directed to a designated address.

Collection of boxes of completed questionnaires from some 250-350 Team Managers will begin some 6 weeks after Census day.

### **Data Capture operations**

Warehouse to be close to or at the processing site with a capacity to receive, check in, sort and store a maximum of around 1million questionnaires.

Processing site must be equipped to prepare a maximum of around 1 million questionnaires for scanning, data capture and coding, and provide fully equipped accommodation for workflow, system administration, and NISRA staff.

The receipting system must be sized to check in a maximum of around 1 million questionnaires ideally within 24 hours of receipt.

Following scanning, there could be a maximum of 7 million blank pages to be deleted.

Northern Ireland coding volumetrics are included in the UK table presented below.

<b>Question</b>	<b>Volume Coded</b>	<b>% Coded Automatically</b>	<b>% Coded Manually</b>
Country of Birth	3,780,151	81.6	18.4
Religion	1,045,874	74.4	25.6
Ethnic Group	3,866,964	75.7	24.3
Address 1 year ago	4,720,878	83.6	16.4
Workplace address	22,056,446	71.8	28.2
Industry	27,970,005	66.8	33.2
Occupation	29,611,276	72.2	27.8

To estimate a separate figure for Northern Ireland apply a 3% population share to the numbers in the table.

## SUMMARY OF MAIN VOLUMETRICS (Scotland)

### Field staff numbers and timescales for recruitment, payroll and training

Estimated Numbers	TEST	REHEARSAL	CENSUS
Regional Managers	3	nk	22
District Managers	4	nk	175
Team Leaders	12	nk	700
Enumerators	120	nk	7,000
Follow-up staff	5	nk	nk
Communal Establishment Staff	0	nk	nk
Non-compliance staff	0	nk	nk

Employment Dates	TEST	REHEARSAL	CENSUS
Regional Managers	Aug 05 - July 06	Aug 07 - July 08	Aug 10 - July 11
District Managers	Oct 05 – July 06	Oct 07 – July 08	Oct 10 – July 11
Team Leaders	Nov 05 – July 06	Nov 07 – July 08	Nov 05 – July 11
Enumerators	Mar 06 – July 06	Mar 08 – July 08	Mar 06 – July 11
Follow-up staff	HQ staff	HQ staff	July 11 – August 11
Communal Establishment Staff	n/a	n/a	April 11- July 11
Non-compliance staff	n/a	n/a	nk

### Translation services

Printed Census questionnaires must be available in English and Welsh. Bilingual (English/Gaelic) versions of publicity, information material and the Public census forms will also be required.

A wider range of language translations or interpreters, will be needed for information leaflets, web, contact centres, field staff, publicity and other material, than the 35 types provided in 2001.

### Warehousing, distribution and collection of field staff supplies

The timetable for delivery of field supplies in Scotland will broadly match that of England and Wales. Whilst precise volumetric information on the various document types is not available for Northern Ireland, an equivalent number of document variations are likely to be required. Applying a 8% population share can derive an estimate of the numbers to be produced.

### Public help facilities

2001 Census contact centre experience:

- the Census helpline function of the Contact Centre was operational for three months going live approximately 1 month before Census day;
- it was open between 8.00am – 8.00pm;
- call volumes per day and per week followed the usual industry findings i.e. more calls at the beginning of the week/day dropping off as the week/day progresses;
- 170,000 calls were received;
- 1,900 calls were received on average per day;
- calls peaked at 69,000 on one day;
- IVR was operational 24 hours a day;

Assuming that Census day falls around the end of April in 2011, the main Contact Centre helpline number will be available from the beginning of April until the end of June 2011. Similar timetables will be used in 2006 and 2008.

GROS evaluation of the calls in 2001 showed that a number of factors influenced the number of calls:

- Publicity running in the weeks before the Census made people think that they should have a Census form and they called the Helpline to try to get one.
- Enumerators, when not making contact, leaving a note saying that they would return 'within a few days'; if this did not happen, the caller would call the Helpline.
- Repeat callers trying, unsuccessfully, to speak to an adviser
- To a lesser extent, slow throughput of returned forms by Royal Mail resulted in irate householders who had posted their forms back telephoning the Helpline when an Enumerator called back for the form because it had not come through the postal system.

Therefore, while in 2001 we estimated the call volume would be about 25,000 and underestimated by perhaps 85%, we again expect to be able to reduce call volumes. Expected call volumes will be determined by the outcomes from the 2006 Census Test and 2008 Rehearsal and by the experience in the 2006 Census Test in the Republic of Ireland,

### Web Self Help facility

This will be used during the same period as the Contact Centre (April – end June 2011) However, it may need to be live for some months prior to this to raise awareness of the Census, promote participation and possibly to advertise field staff posts.

### Census form printing

Census Stage	Forms designed	Address Lists Available for				Forms ready for Collection		Max Volume Estimate
		Testing/Training		Live Process		Test & Train	Live	
		Main	Supp	Main	Supp			
2006*	10/05	10/05	10/05	12/05	12/05	01/06	03/06	50,000
2008	10/07	10/07	10/07	12/07	12/07	01/07	03/08	50,000
2011	08/10	07/10	08/10	01/11	01/11	09/10	01/11	2,200,000

\*Procurement completed.

### Other Printing

Other printing is likely to be about 8% of the volume of ONS. Some low volume materials will be produced locally.

### Transportation of census questionnaires

Transportation follows the printing of census questionnaires (see table above for maximum volumes). Delivery to the supplies distributor will need to reflect the enumeration timetable. It will require collection of census questionnaires from the printer and delivery to the distributor approximately 6 – 8 weeks prior to Census day. Delivery may be to the Mail Service or to the 175 Census District Managers and may be staggered over either a 1 - 3 week period or a 3 - 5 day period prior to Census day.

Collection of boxes of completed questionnaires will be from a location specified by the 175 Census District Managers on one day at a time to be arranged to suit the Census District Manager. It will begin some 6 weeks after Census day.

### Data Capture operations

With the adoption of a multi-channel approach to collection of Census data, it is possible there could be a reduction in the number of questionnaires to be processed and stored.

A Warehouse should be close to or at the processing site with a capacity to receive, check in, sort and store a maximum of around 2.2 million questionnaires.

The processing site must be equipped to prepare around 2.2 million questionnaires for scanning, data capture and coding, and provide fully equipped accommodation for workflow, system administration, and HQ staff.

Following scanning, there could be a maximum of 15 million blank pages to be deleted.

Identification of incomplete questionnaires. Based on information from 2001 there could be around 1.3 million records for which basic demographic data is missing

Scottish volumes are about 8% of the 2001 UK volumes coded shown below.

<b>Question</b>	<b>Volume Coded</b>	<b>% Coded Automatically</b>	<b>% Coded Manually</b>
Country of Birth	3,780,151	81.6	18.4
Religion	1,045,874	74.4	25.6
Ethnic Group	3,866,964	75.7	24.3
Address 1 year ago	4,720,878	83.6	16.4
Workplace address	22,056,446	71.8	28.2
Industry	27,970,005	66.8	33.2
Occupation	29,611,276	72.2	27.8

Again, taken from UK volumes given by ONS, in 2001, there were around 26.36 million responses coded by operators, the bulk of which were Industry, Occupation and Workplace address. It would take approximately 400 staff to code this data over a period of 26 weeks. It is likely that changes to the type of information required in 2011 will increase the number of questions that require an address to be coded. Scotland is about 8% of these volumes.