



2011 Census

Joe Traynor
Head of 2011 Census Outputs Design

Helpu i lunio'r dyfodol Help tomorrow take shape

Introduction



- Census overview
- Processes
- Output design
- Dissemination

Helpu i lunio'r dyfodol Help tomorrow take shape

Overview



- **To provide accurate census population estimates**
 - National population estimate has a 95% CI of +/- 0.2%
 - All LA population estimate has 95% CI of +/- 3.0%
 - National response rate of at least 94%
 - All LAs have a response rate of at least 80%
- **To provide accurate population characteristics**

Helpu i lunio'r dyfodol Help tomorrow take shape

Questionnaire development



Population bases

- 2001 population base same as enumeration base (12 month residency)
- Enumeration base for 2011 includes short term migrants (people resident for 3 months or more)
- Main residency base still based on 12 month residency
- Alternative population bases available for
 - short-term immigrant population base
 - workplace and workday population base
 - out-of-term population base
 - exploration of a majority-of-time population base

Helpu i lunio'r dyfodol Help tomorrow take shape

Questionnaire development



Topic	2001	2011
Visitor information (new)	X	✓
Number of bedrooms (new)	X	✓
Type of central heating (new)	X	✓
Central heating	✓	X
Bath/shower and toilet access	✓	X
Lowest floor level	✓	X
Second residence (new)	X	✓
Main Language and English Language Proficiency (new)	X	✓
Month/year of entry into UK (new)	X	✓
Intended length of stay in UK (new)	X	✓
Passports held [as a proxy for Citizenship] (new)	X	✓
National identity (new)	X	✓
Number of employees at the workplace	✓	X

Helpu i lunio'r dyfodol. Help tomorrow take shape

Data collection



- **Address register development**
 - Matching products (NLPG and PAF/AL2)
 - Address check 15% (3.6m) -240 staff
 - Communal establishments identified 3rd party data
 - LA knowledge with 80% contributing
- **Field procedures**
 - Post-out and post-back of questionnaires
 - On-line completion
 - Questionnaire tracking
 - Intensive, targeted and flexible follow up of non response
 - Three times more hours spent following up than 2001
 - Field staff targeted towards areas with lower return rate
 - Questionnaire tracking to target resources



Helpu i lunio'r dyfodol. Help tomorrow take shape

Data processing



- **Census coverage survey**
 - Similar to 2001
 - Large sample survey (approx 300,000 households)
 - 6 weeks after census day
 - Short paper based interview
- **Coverage adjustment**
 - Compare census returns with census coverage survey results
 - Adjust for households and persons estimated to have been missed
 - Uses the census coverage survey to characterise the households and persons missed
 - Final results include these adjustments

Helpu i lunio'r dyfodol Help tomorrow take shape

Data processing



- **Imputation**
 - Adjustment for item non response based on known characteristics of the individual
- **Geography**
 - Output Areas
 - Standard statistical geography
 - Developed in 2001 Standard (stable) statistical geography
 - Population 40 to 125 Households.
 - Homogeneous
 - Maintained for 2011 Census
 - Population change
 - Less than 5% change
 - Building block for all higher geographies

Helpu i lunio'r dyfodol Help tomorrow take shape

Data processing



- **Geography (cont)**
 - Workplace Zone development
 - Based on where people work rather than live
 - Aims to resolve issues from 2001 Census
 - Based on OA's and contiguous at MSOA level
 - Population threshold
 - » Minimum of 100 workers
 - » Maximum of 625
- Combining at least 3 postcodes containing no less than 100 workers
- Support for all major administrative geographies

Helpu i lunio'r dyfodol Help tomorrow take shape

Data processing



- **Disclosure control**
 - Protecting identification or characteristics of an individual, business or other statistical unit
 - Involves introducing sufficient ambiguity/damage
 - 2001 random record swapping and post tabular small cell adjustment
 - 2011 targeted record swapping – many advantages
 - Same detail as 2001
 - Additive and consistent outputs

Helpu i lunio'r dyfodol Help tomorrow take shape

Data processing –Time taken



- **Live Operational Period (March/April)**
 - CCS
 - Census adjustment
 - Imputation
 - Geography production
 - Disclosure control
 - Data manipulation
 - Quality assurance
 - Data dissemination
- **15 months – balance between quality and timeliness**

Helpu i lunio'r dyfodol Help tomorrow take shape

Outputs



- **Four distinct types of outputs**
 - Tabular data (pre-canned & commissioned)
 - Flow data
 - Micro-data
 - Meta-data
- **Defined, produced and disseminated for a broad range of census users**

Helpu i lunio'r dyfodol Help tomorrow take shape

Outputs



- **Defined**
 - Primarily via two rounds of user consultation:
 - 1st consultation December 2009 and March 2010
 - Same detail as 2001
 - Keep definition as similar to 2001 as possible
 - Avoid mistakes made in 2001
 - UK level outputs –harmonised/single source
 - More data
 - 2nd consultation closes end of April 2011
 - Primarily ensure correct decisions made
 - Still possible to submit requests (last chance)

Helpu i lunio'r dyfodol Help tomorrow take shape

Outputs



- **Disseminated**
 - Via traditional and modern methods of delivery
 - Traditional
 - Tabular outputs (excel, csv.)
 - Some printed publications
 - Primarily via web pdf. etc
 - Modern
 - API (Application Programming Interface)
 - Multi-dimensional datasets
 - Secure Data service

Helpu i lunio'r dyfodol Help tomorrow take shape

Summary



- **Major improvements**
 - Address register
 - Field procedures and data collection
 - Disclosure control
 - Workplace zones
 - UK database
 - Greater range of outputs
 - Built in comparability
 - Flexibility
 - Easier access

Helpu i lunio'r dyfodol Help tomorrow take shape



Questions?

<http://www.ons.gov.uk/census/2011-census/consultations/open-consultations/2011-output-consultation---main-statistical-outputs---second-round/index.html>

Helpu i lunio'r dyfodol Help tomorrow take shape