



2011 Census Outputs

**Maximising the utility of census data for the
widest possible set of users
(The producer's view)**

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19 September 2012

Overview



- England and Wales 2011 Census
 - The story so far and how we got here
 - User engagement
 - Looking ahead
 - Benefits realisation
- UK 2011 Census

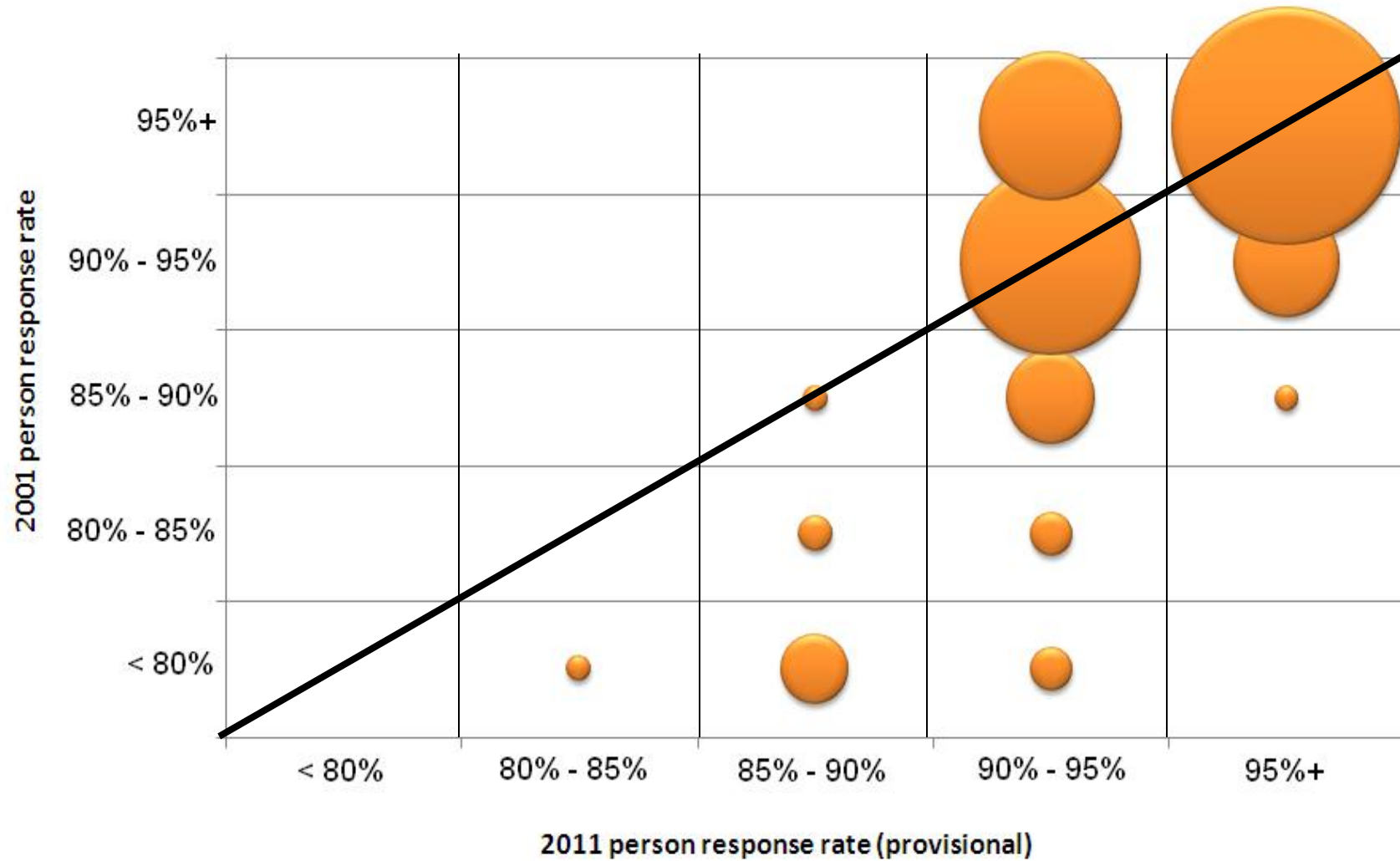
2011 Census



- 27 March 2011
- England and Wales
 - People, households, communal establishments
 - Characteristics
- Why are census data important?
 - Unique
 - Detailed information across England and Wales at low level of geography
 - Change over time (output areas)
 - Value for money
 - Targeted record swapping

Data Quality

Response rate comparison: 2001 vs 2011



Processing



**180,000 sq ft
high secure
processing
plant**



**Up to 40
articulated lorries
per day at peak**

**Documents
prepared**



... scanned

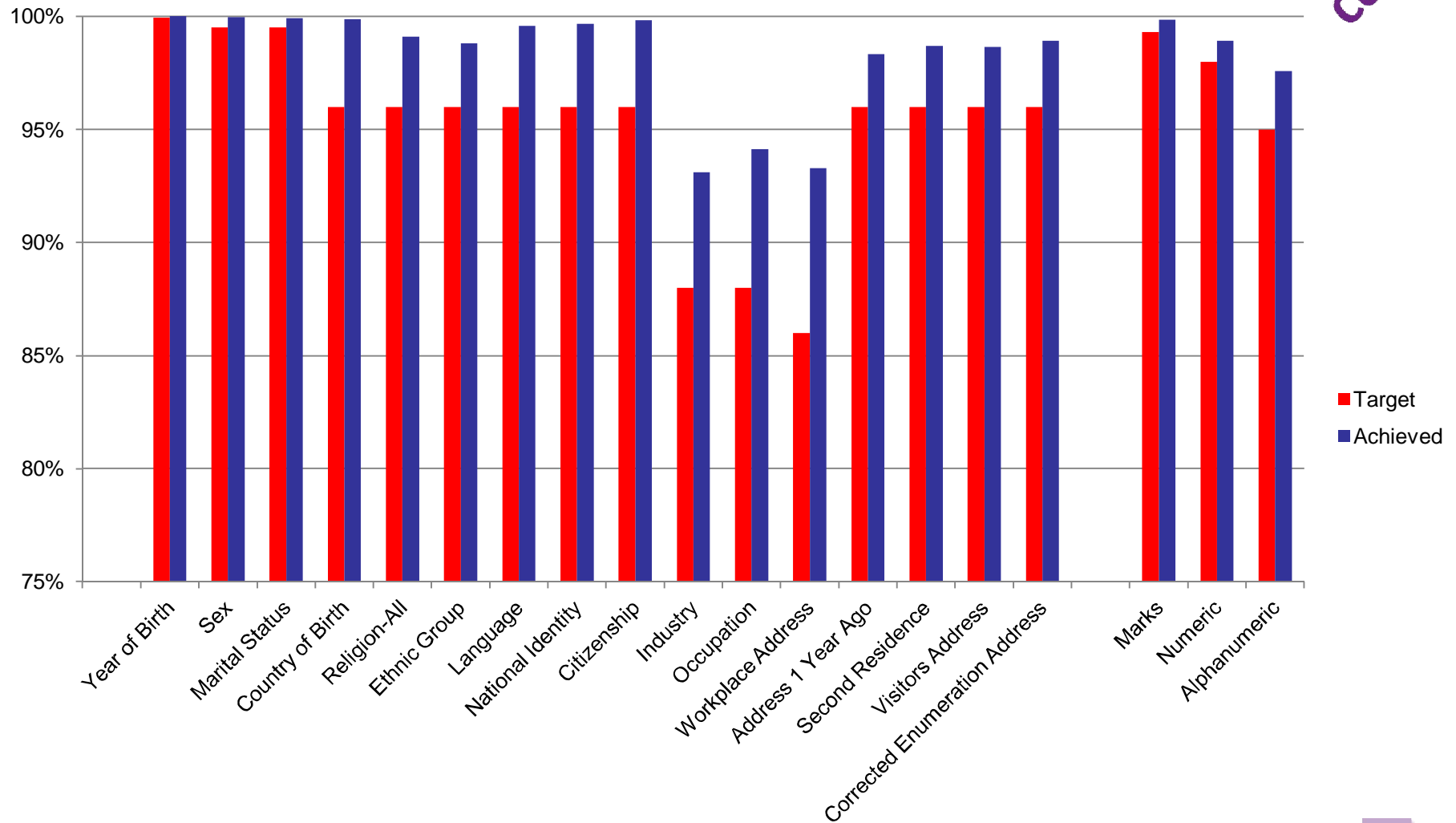


**... keyed &
coded**



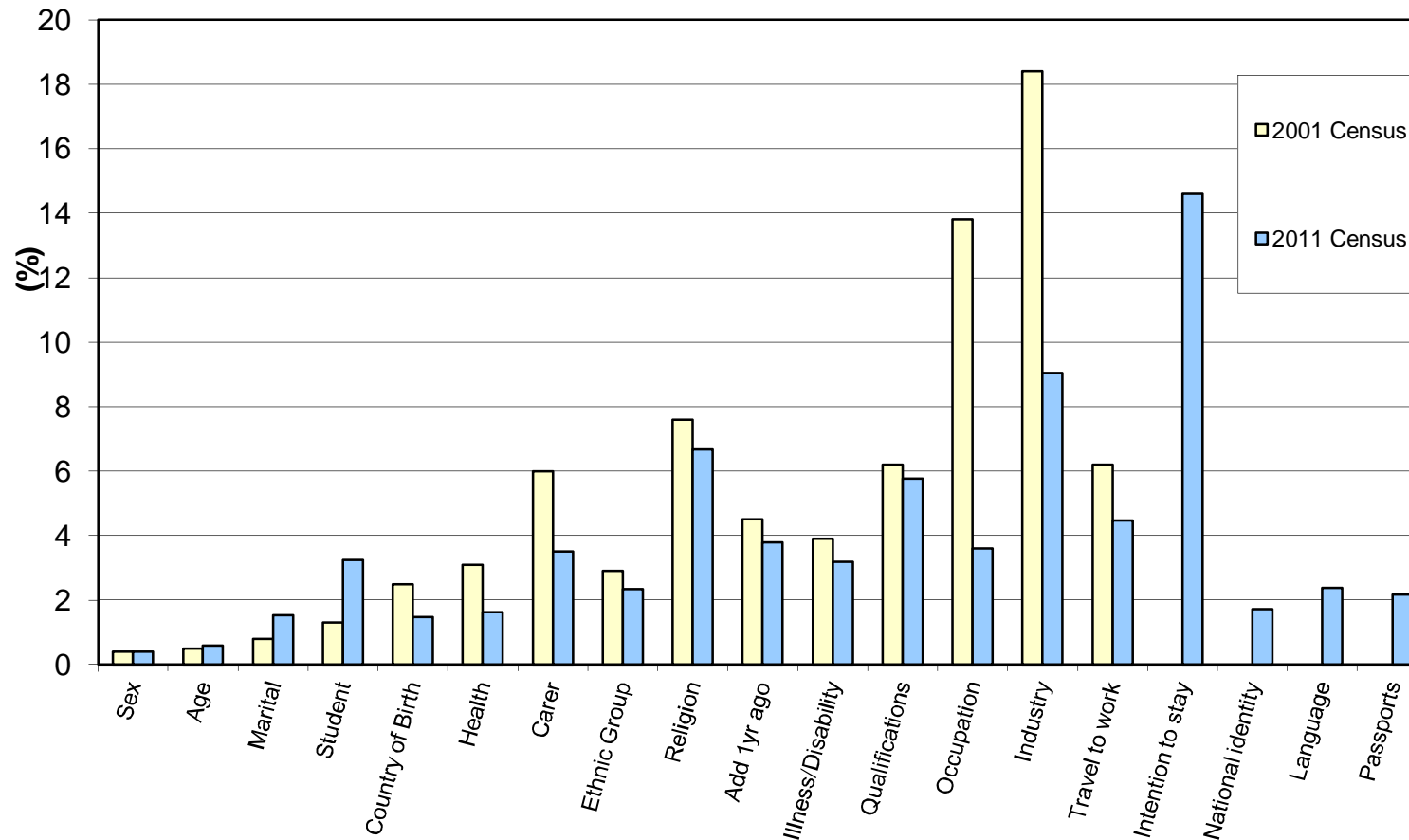
Data Quality

Capture and coding accuracy



Data Quality

Item non response



Further processing & estimation



- Edit & imputation to “correct” & fill gaps
- Match census and census coverage survey (CCS) returns
- Estimate numbers missed in each CCS sample area, extrapolate for whole country & impute “missing” records
- Apply disclosure control methods
- Quality assure the results
 - Compare to various admin data sources: school census, CIS Elderly, CIS Children, Patient Register, MYEs
 - System generated over 80,000 charts
 - Internal and external QA panels

Code of Practice



- National Statistics Code of Practice
 - The range of official statistics should meet the needs of users
 - Statistics should be produced, managed and disseminated to high standards
 - Statistics should be well explained
 - **Communication of statistical ideas**
- What does this mean for ONS and 2011 Census?

Analysis
SocialMedia
DataVisualisations
ReferenceTables
StatisticalBulletin

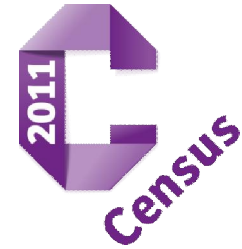


User engagement



- Consultation
 - Questionnaire
 - Outputs
 - Workshops, formal consultation, working groups
- Messages
 - Comparable with 2001 – geography, format & presentation
 - Statistical disclosure control
 - Best fit
 - .csv
 - UK outputs
 - Micro and flow data
 - Alternative population bases

First release: population & household estimates



- **16 July 2012**
- Single year of age by sex, England and Wales
- Five year age by sex, LADs/UAs England and Wales
- Household estimates
- LA quality assurance information
- Population **56.1m** on 27 March 2011
 - England 53.0m
 - Wales 3.1m
 - Females 28.5m (51 per cent)
 - Males 27.6m (49 per cent)

First release contd



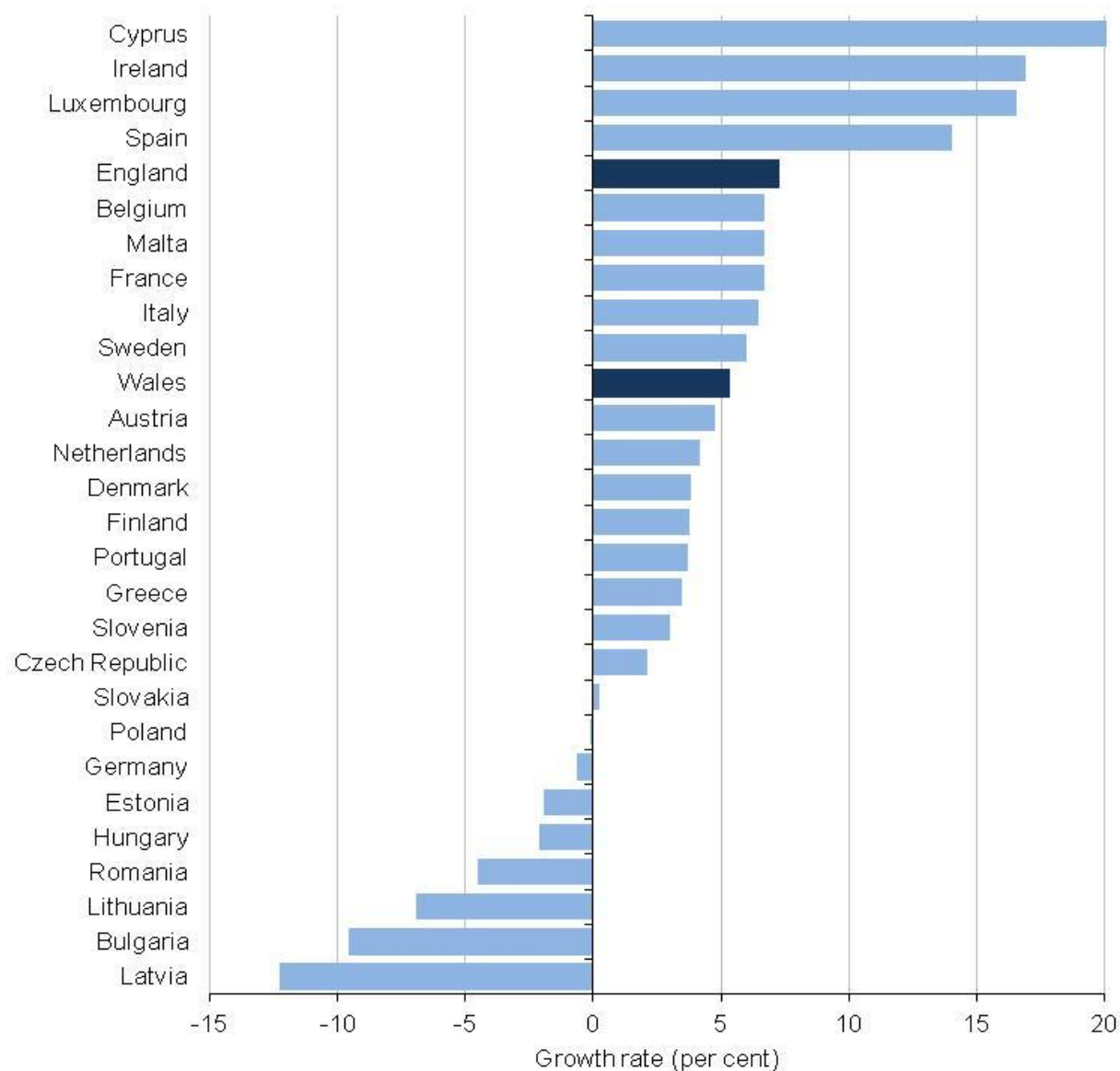
- Growth
 - Population **grew** by 3.7m (7.1 per cent) since 2001
 - **London** region saw **biggest** growth, exceeds 8m
 - Largest number **over 65s** since 1801
 - Increased numbers in **20s**
 - Increased number young **children**
- **Three** reasons for population change
 - 6.6m **births**, 5.0m **deaths** in period 2001 to 2011
 - 45 per cent of the increase
 - 2.1m is **migration**: international and internal
 - 55 per cent of the increase
 - Some births are an indirect effect of migration

First release contd



- 24 September 2012
- 2011 Census - Population and Household Estimates for England and Wales - Unrounded Figures for the Data Published 16 July 2012
- 2011 Census - Population and Household Estimates for Wales - Unrounded Figures for the Data Published 16 July 2012

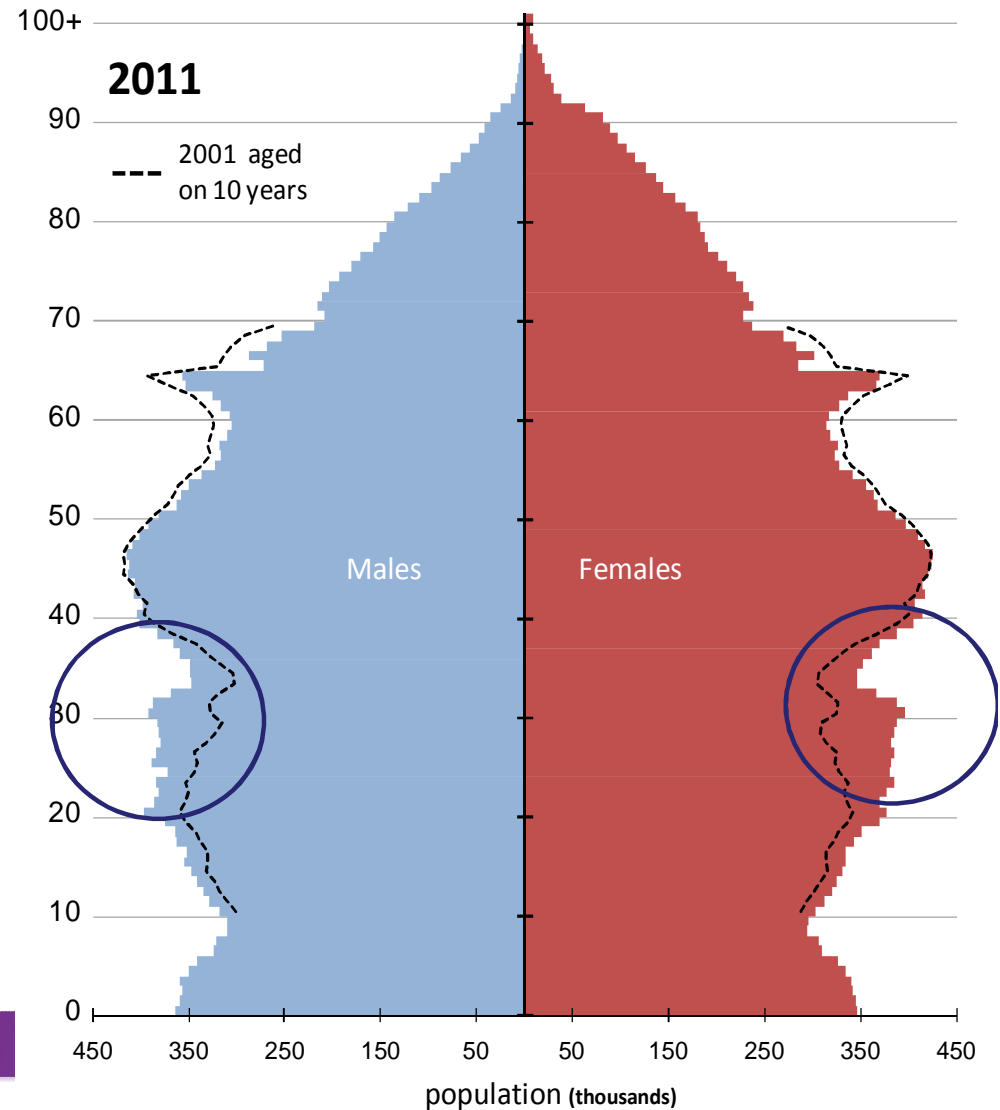
Population growth rate of EU27 countries 2001 to 2011



Age structure compared 2011 vs 2001 contd



2011 age structure
2001 overlaid
Aged on 10 years

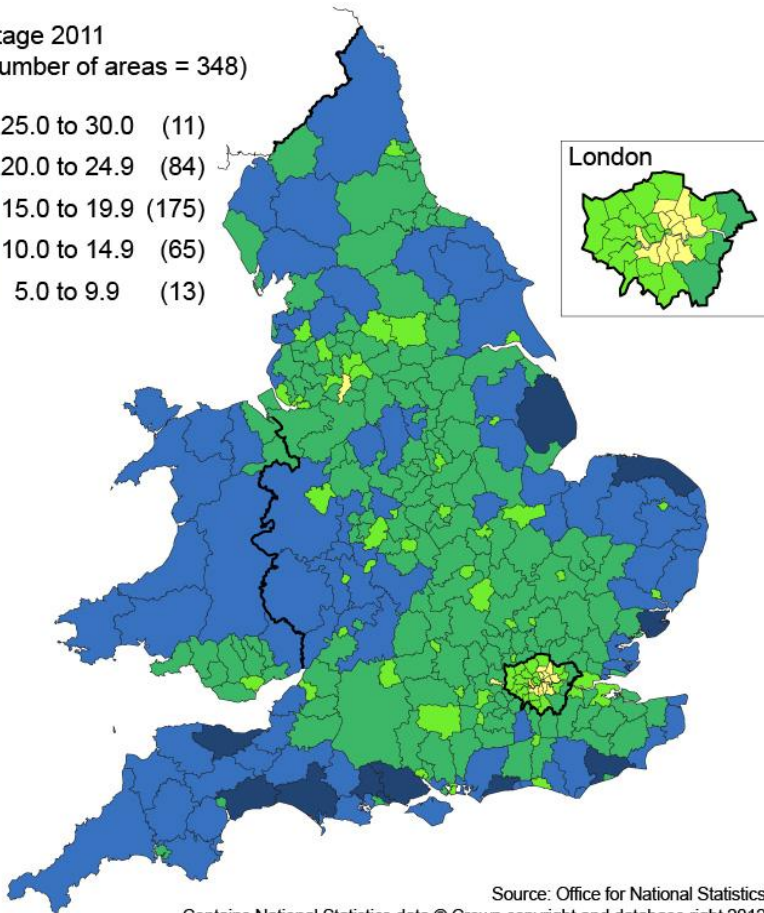


Usual residents aged 65 and over by local authority



Percentage 2011
(Total number of areas = 348)

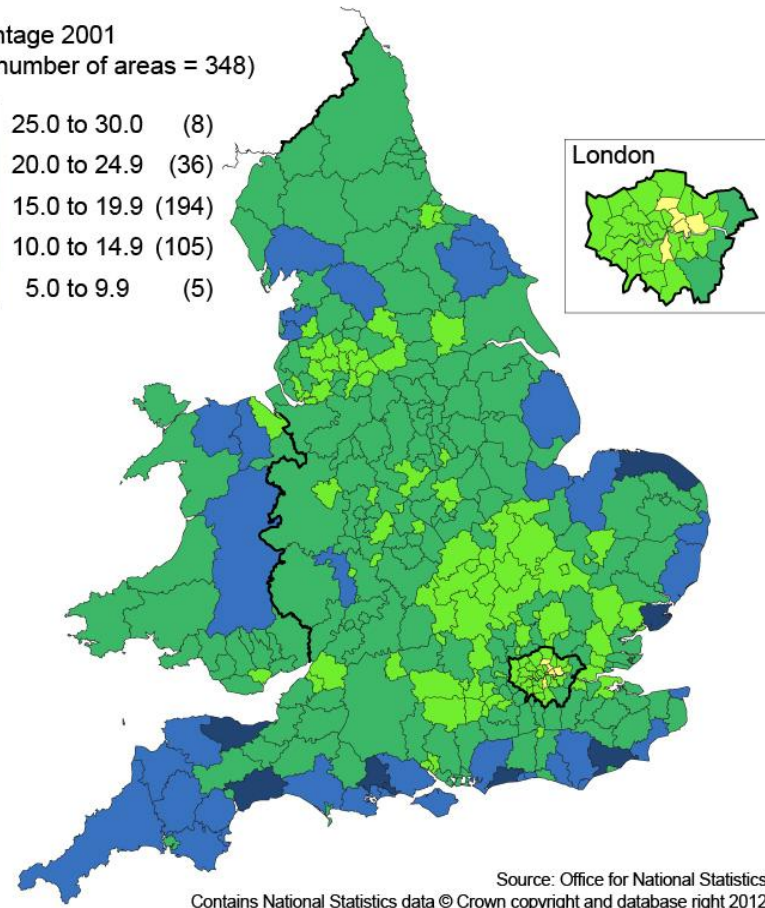
25.0 to 30.0	(11)
20.0 to 24.9	(84)
15.0 to 19.9	(175)
10.0 to 14.9	(65)
5.0 to 9.9	(13)



Source: Office for National Statistics
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Contains Ordnance Survey data © Crown copyright and database right 2012

Percentage 2001
(Total number of areas = 348)

25.0 to 30.0	(8)
20.0 to 24.9	(36)
15.0 to 19.9	(194)
10.0 to 14.9	(105)
5.0 to 9.9	(5)

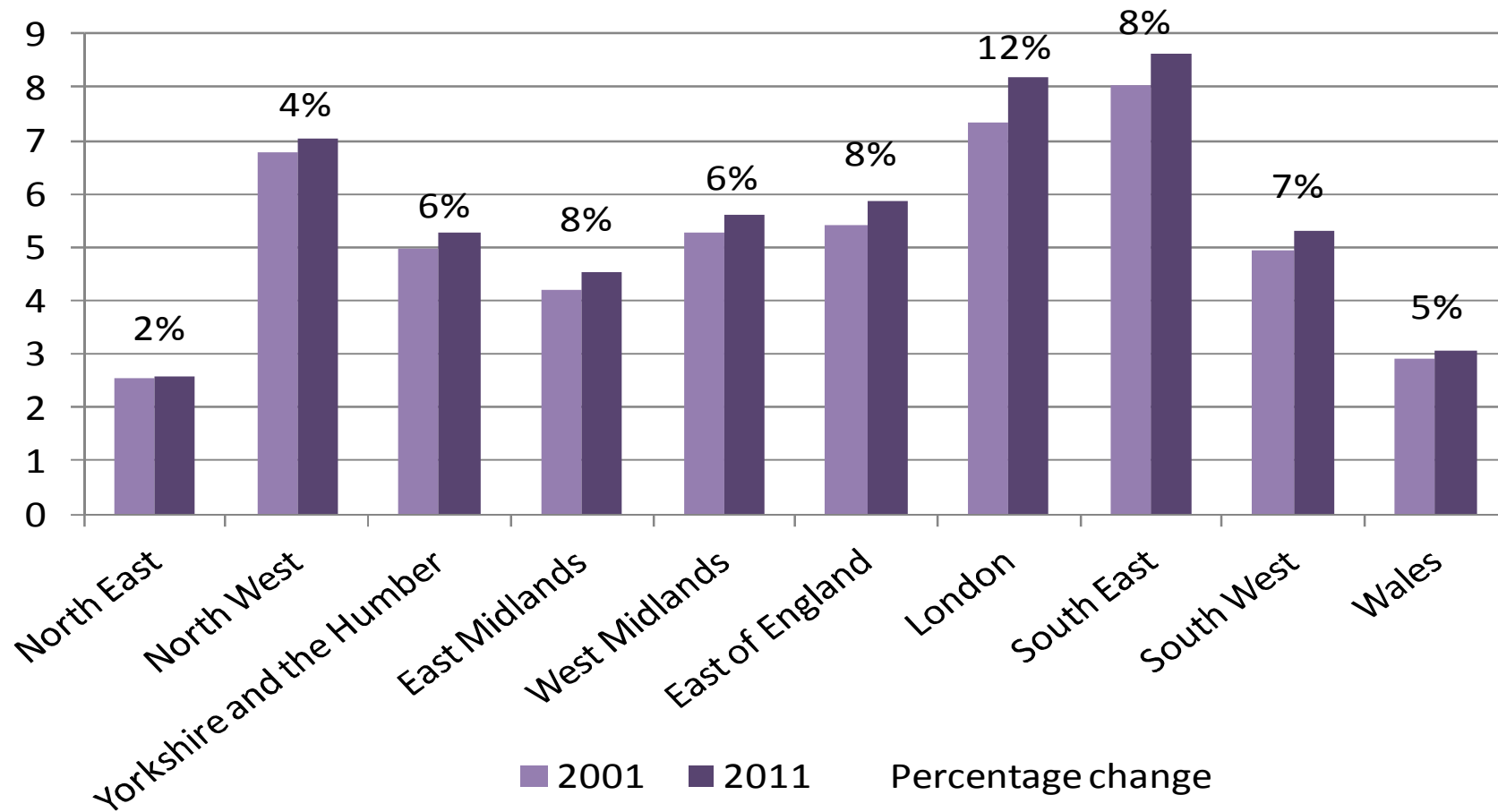


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Regional growth since 2001



Usual residents
(millions)



Local authority population growth since 2001



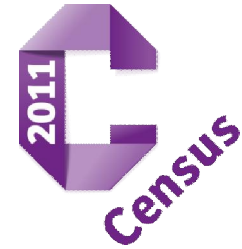
London

Local authority	Percentage change %
Tower Hamlets	26
Newham	23
Hackney	19
Hounslow	18
Greenwich	17
Waltham Forest	16
Brent	15
Redbridge	15
Haringey	15
Islington	15

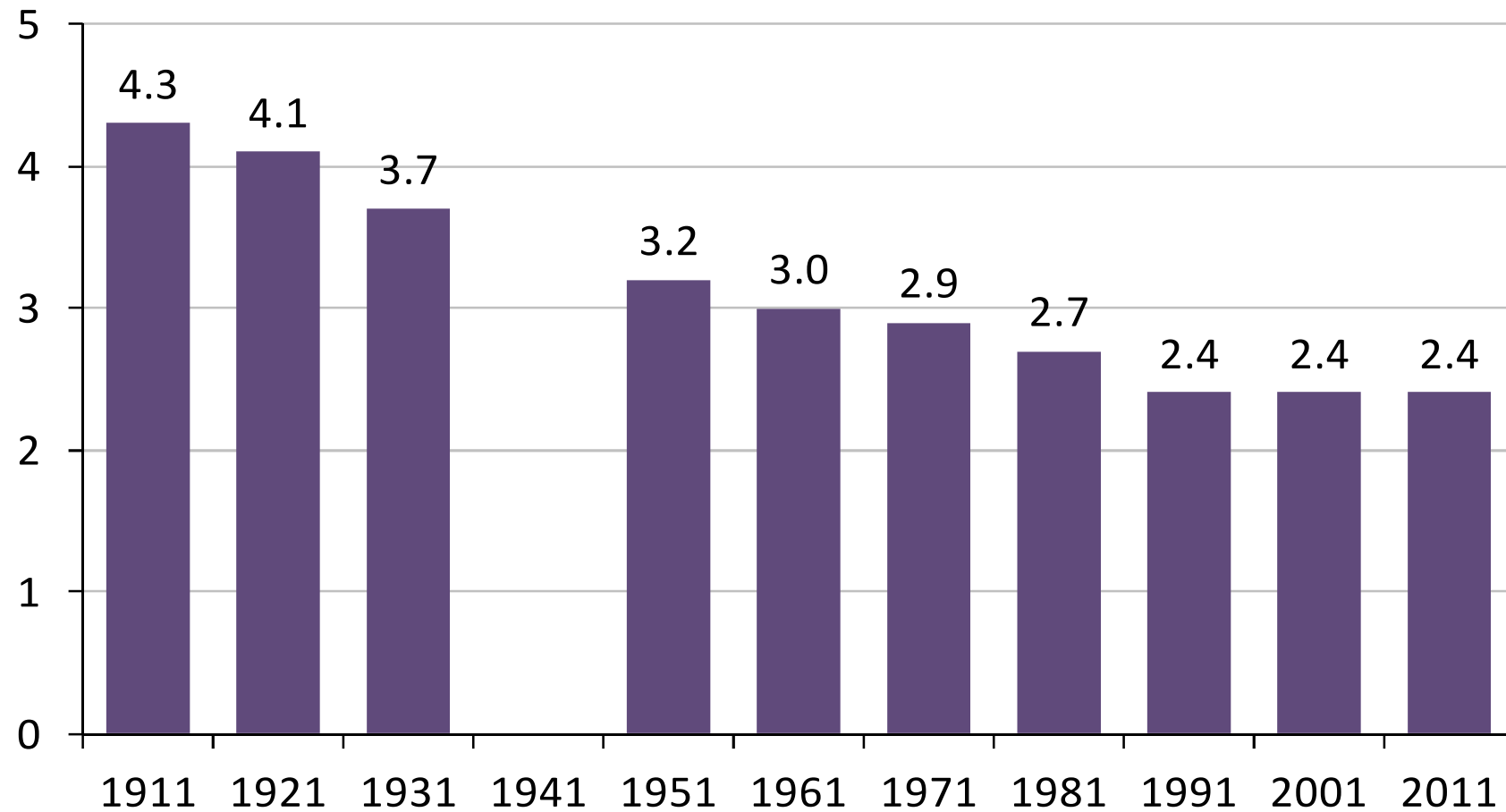
Rest of England & Wales

Local authority	Percentage change %
Manchester	19
Milton Keynes	17
Leicester	17
Peterborough	17
Slough	16
Swindon	16
South Derbyshire	16
Boston	16
South Holland	15
Uttlesford	15

Average household size



Average residents per household



Second release: quick & key statistics



- November 2012 to February 2013
- Univariate outputs on existing and new topics
- Postcode estimates
- Phased by geography
 - OA hierarchy, wards
 - Parliamentary constituencies, parishes
 - Other

Second release contd



- Unprecedented detail at output area geography
40 households, 100 people
- Comparability guidance
- Statistical bulletin
- Short stories
- Data visualisation



Third & fourth releases: local & detailed characteristics



- Third release
Local characteristics (equivalent to 2001 CAS)
 - March to June 2013
 - Contents, comparability, data visualisation
 - Less detail, lower geography
- Fourth release
Detailed characteristics (equivalent to 2001 Standard)
 - July to October 2013
 - Contents, comparability, data visualisation
 - More detail, higher geography

Subsequent releases: specialist products



- Micro data
 1. Secure
 - Individual Controlled Access Microdata Sample (CAMS)
 - Household CAMS
 2. Safeguarded
 - Individual Samples of Anonymised Records (SAR)
 - Household SAR
 3. Public Use
 - Individual SAR
 - Individual Test Dataset
- Flow data
- Small populations

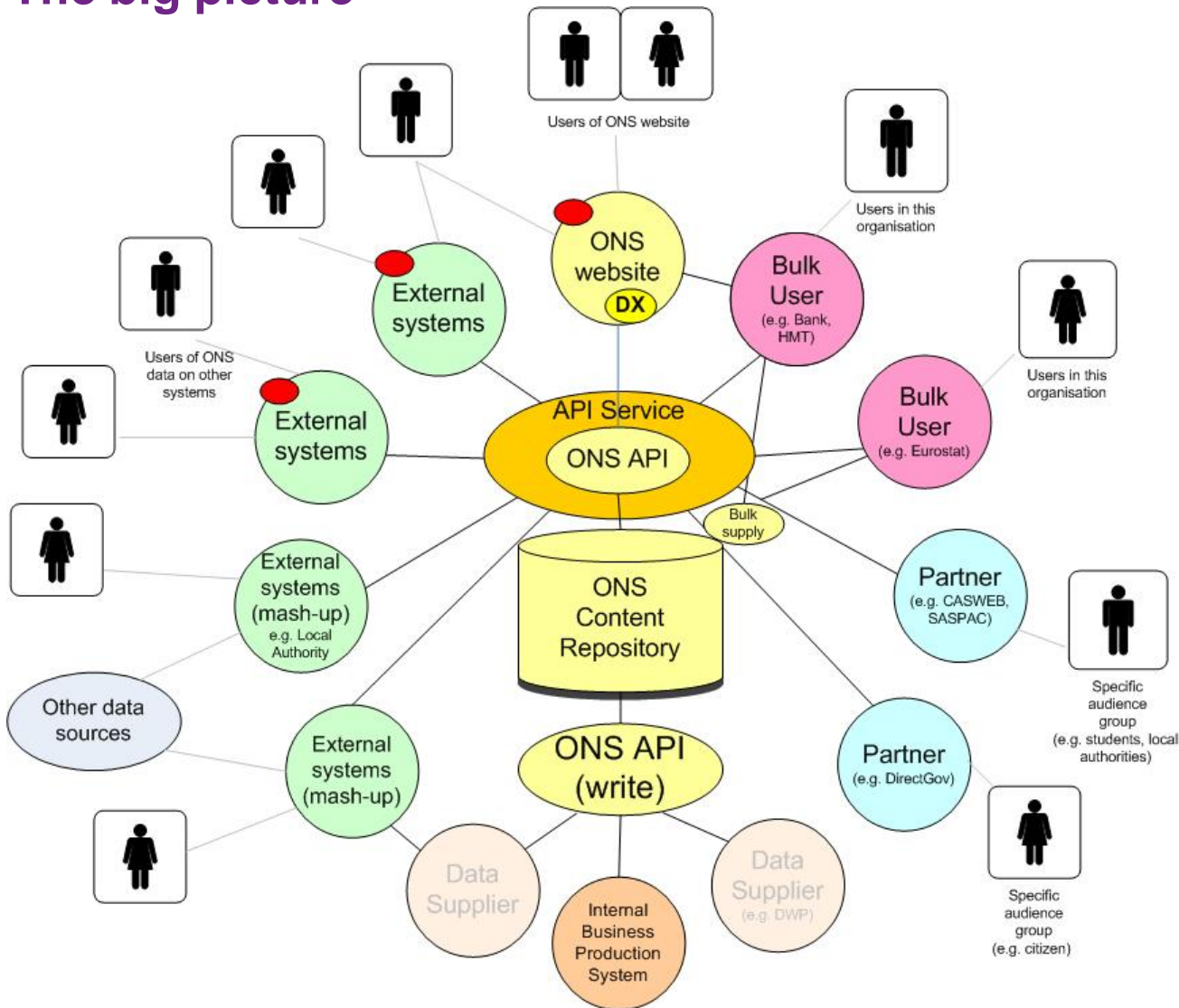
Subsequent releases: specialist products contd



- Alternative population bases
 - Short term residents
 - Workplace
 - Workday
 - Out of term
 - Majority of time
- Commissioned tables
- Flexible tables

Getting the data used

The big picture



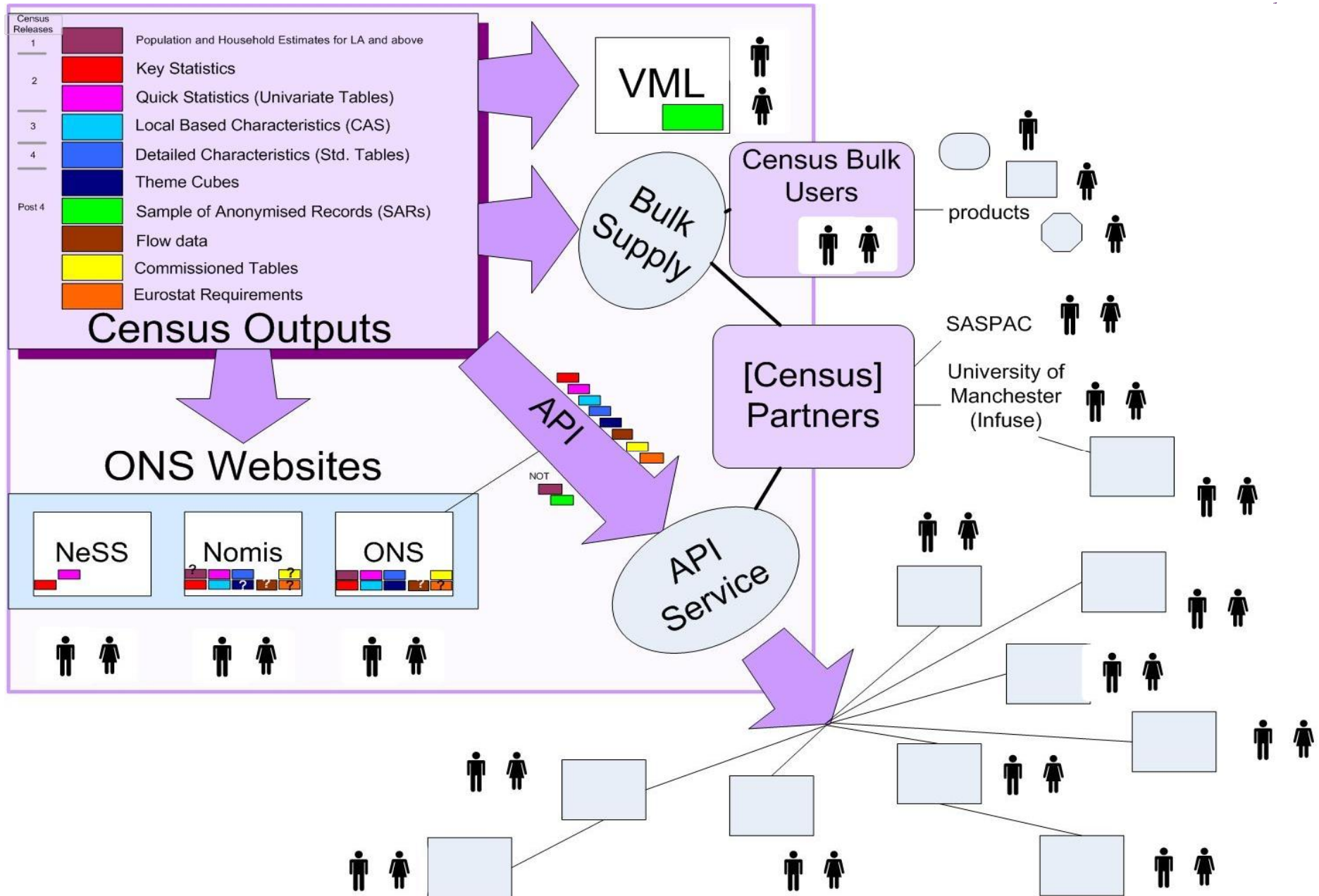
- Extend reach of ONS data
- Enable and encourage re-use – derive full value from the data
- Open data
- Understand audiences and user needs

How to get census results



- **Population and household estimates July 2012**
 - ONS website
- **Key and quick statistics from November 2012**
 - Neighbourhood statistics website, NeSS
 - Over ten times as many concurrent users as before
 - Signposted from the ONS landing page
 - NOMIS website
 - www.nomisweb.co.uk
 - Bulk supply for those who want the complete set of data
 - Re-sellers
- **Local and detailed characteristics from March 2013**
 - ONS website
- As data explorer and API come online, census data will make increasing use of added functionality

2011 Census dissemination overview





Maximising the benefits

- Identify **policy areas** that census data can support
- Engage government departments to exploit census results
- Ensure **easy access** to data – accessible tools and systems
- Fully **utilise** all the census data – eg new questions, cross-classifications
- Identify **new users** – make outputs interesting and meaningful to ‘me’, media stories, case studies
- **Add value** by ensuring that the statistics are enhanced eg analysis, data visualisation
- Deliver **innovation** where appropriate
- **Encourage use** through initiatives, competitions, media
- **Develop partnerships** with external users who can add value and reach
- Benefit realisation **quantification**

Analysis plans



- Rolling series of analytical products in conjunction with other ONS specialists
- **Analytical centre for census (ACC)**

Maximising the benefits contd



- census.ac.uk, take census data in bulk and create an area of the site to allow users to access figures

A screenshot of the census.ac.uk website as seen in a Firefox browser window. The browser's address bar shows 'census.ac.uk'. The website header includes the 'CENSUS.AC.UK' logo with the tagline 'moving you closer to the data', a search bar with 'Quick search' and 'Advanced search' options, and a navigation menu with links for 'Home', 'Data Support Units', 'Available data', 'News', 'Contact us', and 'MyCensus'. The main content area is divided into several sections: a 'Login' section with a list of links like 'Register', 'Quick guide', and 'FAQs'; a 'Welcome' section with a photo of a woman and child and text about the ESRC Census Programme; a 'First time here?' section with information for new visitors and links to 'Register' and 'Quick guide'; a 'Need Help?' section with links to 'Login help', 'Help desk', and 'Search help'; a 'Do you know which data you want?' section with links to 'Data Support Units', 'Census guides', and 'Advanced search'; an 'Anything else you'd like to know?' section with various resource links; and a 'How have you used census data?' section with links to 'Do you have a case study?' and 'Do you have derived data?'. On the right side, there are four small images: a family lifting a child, a row of houses, an elderly couple sitting on a bench, and another row of houses. The browser's status bar at the bottom shows 'Secure Search' and 'McAfee' security icons.

Maximising the benefits contd



- DirectGov, promoting census outputs to the general public and signposting to the ONS site

A screenshot of a Microsoft Internet Explorer browser window displaying the DirectGov newsroom page. The browser's address bar shows the URL: http://www.direct.gov.uk/en/NI1/Newsroom/DG_190456. The page title is "Using the census to trace your family history : Directgov - Newsroom - Microsoft Internet Explorer". The DirectGov logo is at the top left, with the tagline "Public services all in one place". The page content includes a main article titled "Using the census to trace your family history" published on Friday, 27 August 2010. The article text states: "Detailed information from each census is made public a hundred years later. It can then be used to help trace your family tree. Read on for tips on where to start, or to share your family history online." Below the article is a section titled "Sharing your family stories online" which includes a photograph of three children and text explaining how to share family discoveries. To the right of the main article is a "Did you know?" section with three bullet points: "in 1851, 16 Warwickshire chimneysweeps were children aged 5 to 9", "in 1891, London and Middlesex had 13,807 blacksmiths", and "from 1891 to 1991, the population of Wales got". The page also features a sidebar with "Browse by subject" and "Browse by people" categories, and a right-hand column with "Related RSS Feeds", "Volunteering made easy", "National Minimum Wage changes", and "Directgov news". The browser's taskbar at the bottom shows several open applications, including "Using the census to...", "Oliver Doerle - Inbox...", "Divisional Brief", and "Microsoft PowerPoint...". The system clock in the bottom right corner shows the date as Friday, 1 October 2010 and the time as 17:38.

UK harmonisation



- Northern Ireland (NISRA) first release 16 July 2012
 - 1,180,900 (+7%)
 - Phase 2, 19 September 2012
- Scotland (NRS) first release December 2012
- UK (ONS) first release as soon as figures available
- NISRA & NRS online prospectus
- Harmonisation guidance
- Monthly two day harmonisation workshops
 - Agreement on naming convention, numbering, titles, content, metadata, derived variables
 - UKCHC
 - UKCC

UK database



- Agreement in place for single unit record UK database
- Technical challenges
- Legal gateways to be established
- Eurostat 31 March 2014

Prospectus and contact details



- Online dynamic prospectus 26 March 2012
 - Describes plans and products
 - Timetable updated on an ongoing basis
 - Table layouts and classifications
 - Glossary
- Sign up for email alerts via census pages
www.ons.gov.uk
- Contact
census.customerservices@ons.gsi.gov.uk



Census