

# The value of census statistics

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**2021 Census Director, England & Wales**

# Content

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Share experience of how ONS:

- Approached valuing the benefits of the 2011 Census, to make the case for the 2011 Census in England & Wales
- Promoted the availability & potential use of 2011 Census statistics to users
- Evaluated the actual 2011 Census benefits

## Background: Why we conduct a census

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- Holds a mirror to society
- Underpins national policy making
- Used in allocating funding to local areas
- Used to plan investment & service delivery in public, private and voluntary sectors
- Base for population estimates & projections
- Gives detailed socio-demographic statistics for small areas and small population groups

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# The need for cost- benefit analysis



# The need for cost-benefit analysis

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- The House of Commons Treasury Select Committee reviewed the 2001 Census and recommended that:  
“any future Census should also be justified in cost-benefit terms.”
- ONS ensured that the business case for the 2011 Census provided a robust cost benefit analysis to justify the expenditure involved

# Quantifying census benefits: the challenge

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- The value of the census arises when users **make decisions** based on census information
- These decisions make peoples lives better
  - Such decisions might influence government policy, inform transport plans, or the number of school places, etc
- Whilst it is easy to **describe** the uses of census information, the challenge is to **quantify** those benefits in cash terms

# Making the case for a census: the business case

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- Work on the 2011 Census business case started in 2006. It described the value of the census data arising from six main uses:
  - resource allocation;
  - targeting investment;
  - service planning;
  - policy making and monitoring;
  - academic and market research, and
  - benchmark for other National Statistics.



# Approach to quantifying 2011 Census benefits

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- 800+ respondents to the 2005 census topic consultation had given information on their use of census data
  - ONS worked with a range of users to seek to agree quantified benefits
- The business case described a range of benefits but only a subset were quantified:
  - The use of census data by central government to allocate funds to local health bodies and local government in England and Wales
  - A small number of private sector uses.



# 2007 Business Case

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- The sub-set of quantified benefits amounted £945m 2012/13 – 2021/22
  - £720m after discounting
- Compared to costs of £482m
- It was accepted that there were additional benefits which had not been quant



# The importance of benefits management

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- Office of Government Commerce state:
  - ‘Deficiencies in benefits capture bedevil nearly 50% of government projects and 30-40% of systems to support business change deliver no benefits whatsoever’.
- The National Audit Office state:
  - ‘...evidence shows that two-thirds of public sector projects are completed late, over budget or do not deliver outcomes expected’.
- ONS worked actively to ensure that the value of the 2011 Census was realised

# Realising the benefits: it's all about getting users to use the data

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The benefits of the census are only realised when users make use of the data. ONS therefore:

- Ensured a high quality census
- Educated users in the results
- Results available in a variety of ways
- Promoted the results to users
  - Including new and potential users, and those who had supported the census operation

# Benefits mapping: starting with the end in mind

## Enablers



## Objectives

Quality targets :

- overall response rate of 94% and

- no local authority area or key population group to have a response rate below 80%

## End benefits





Office for National Statistics



ONS @ONS



**Social Media**

**PR**

**Infographics  
Interactive  
graphics &  
podcasts**

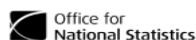
# Optimising use

**800 datasets  
published online  
8 billion cells of data**

**User case studies**

**70+ analytic articles**

**Special products**



15 February 2013

## 2011 Census Analysis: Unpaid care in England and Wales, 2011 and comparison with 2001

Author Name(s): Chris White, ONS

### Abstract

This short story presents a picture of the provision of unpaid care in England and Wales in 2011, with an overview of key findings at regional and local authority level and by area deprivation groupings. This story is also accompanied by interactive maps and video podcast.



### Introduction

This user guide provides essential information to inform the use, analysis and interpretation of the 2011 Census Microdata Teaching File. This, anonymised, random sample of census records provides a useful resource for users of census outputs to analyse census data in a way that is not possible using the standard census tables.

[www.ons.gov.uk/census](http://www.ons.gov.uk/census)





# Analytic articles – media coverage

## A MAJOR MINORITY

2011 CENSUS

**Four million fewer Christians in England than a decade ago**

theguardian

The census

Diverging into diversity

**Migrants 'will push house prices up by an extra 10%'**

CENSUS REVEALS CHANGING UK

## WE ARE THE WORLD

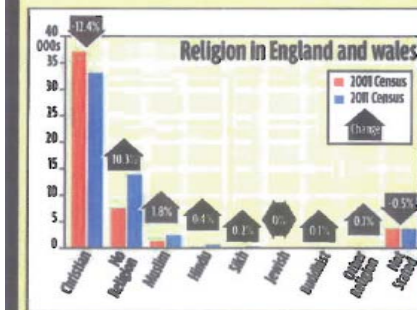
**Foreign-born residents up 3m in 10 years**

## CARING



**12%**  
..the rise in unpaid carers looking after ill relatives

## RELIGION



**59%** say they're Christian while 25% now claim to have no faith at all

## HOME OWNERSHIP

**69% 2001** **64% 2011**

## MORTGAGES

**39% 2001** **33% 2011**

## RENTERS

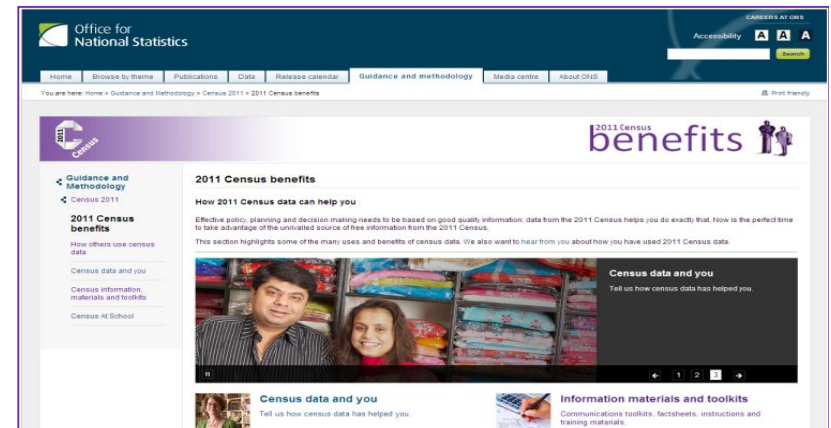
**15% 2011** **9% 2001**

For the first time in history, a majority are unmarried

# Case studies

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- Case studies illustrate how people/organisations have benefited from the 2011 Census
- Examples of case studies include:
  - Fire brigade
  - Muslim Council of Britain, Church of England
  - Sainsburys, Argos & other retailers
  - Bristol City Council
  - Diversity monitoring in the NHS

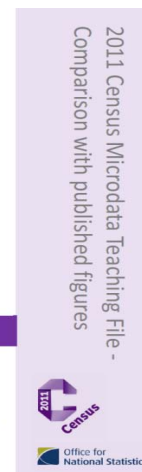
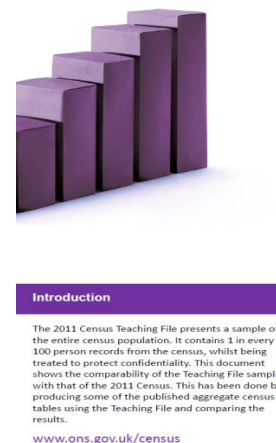


<http://www.ons.gov.uk/ons/guide-method/census/2011/2011-census-benefits/index.html>

# More microdata products

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- Samples of Anonymised Records
  - Different SARs: detail vs access restrictions
- Teaching File
  - Freely available to download from ONS website
  - 1% sample, limited detail. Learning resource
- 'How to' guide & examples of data exploration





# Proactive PR

## 2011 Census article in The Linguist



### Informing public policy

explores the ways can impact on local usage policies



**INFORMING PUBLIC POLICY**  
The census is a key source of information for public policy. It provides a snapshot of the population at a given time, which can be used to inform policy decisions. The census also provides information on the distribution of the population across different regions and ethnic groups, which can be used to inform policy decisions on housing, transport, and social services.

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### How the census helps you to mind your own business

**By Kathy Mills**

It was just over 27 years ago that the 1991 Census was conducted in England and Wales. It was a landmark event, the first time that the census had been conducted in the UK since 1981. The census provides a snapshot of the population at a given time, which can be used to inform policy decisions. The census also provides information on the distribution of the population across different regions and ethnic groups, which can be used to inform policy decisions on housing, transport, and social services.

**Depending on the type of commercial activity that you undertake, census statistics can tell you an awful lot about your employees and customers**

But what has the data got to do with your business?

Depending on the type of commercial activity that you undertake, census statistics can tell you an awful lot about your employees and customers. For example, if you are a retailer, you can use census data to identify the needs and preferences of your customers. If you are a service provider, you can use census data to identify the needs and preferences of your employees.

**Marketing to older people**

As the population ages, it is important for businesses to understand the needs and preferences of older people. The census provides information on the age distribution of the population, which can be used to inform marketing strategies.

**Already using census data?**

If you are already using census data, you can use the 2011 Census to update your information. The census provides information on the distribution of the population across different regions and ethnic groups, which can be used to inform marketing strategies.

## 2011 Census article in Ambulance Today magazine



**Focus on the Census Bureau**

By Census Bureau  
Office for National Statistics

**Serving local communities with 2011 Census statistics**

Ambulance services across England and Wales serve ever changing local communities and that's no easy task. More than ever before, plans and campaigns need to be based on good quality information - and FREE statistics from the 2011 Census can help you to undertake your understanding of the communities and geographic areas you are working in. What's more, you don't even have to be a statistician.

A census of the UK population takes place every ten years and the last one was in 2011. The 2011 Census provides a snapshot of the population at a given time, which can be used to inform policy decisions. The census also provides information on the distribution of the population across different regions and ethnic groups, which can be used to inform policy decisions on housing, transport, and social services.

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**Focus on the Census Bureau**

Office for National Statistics

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## 2011 Census article on use by businesses

# What users have said about the 2011 Census

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Academic users have described the 2011 Census as:

‘The best census since 1981’, & ‘The best census ever’

**“The 2011 Census revealed a treasure-trove of facts we did not know about Britain”**

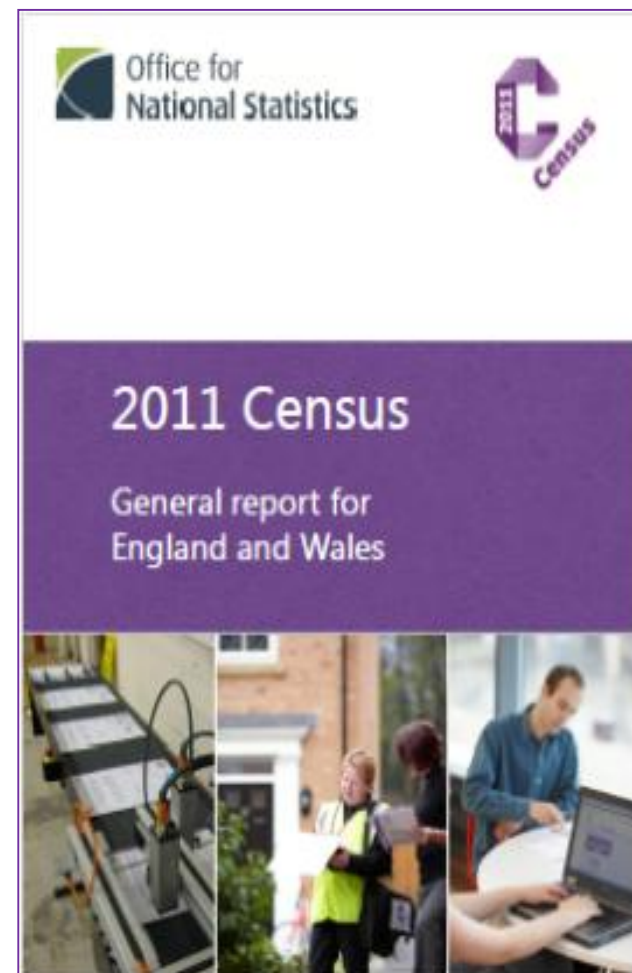


**The census is very much part of the nation's family silver’ ‘**

‘For Muslims, as much as British society as a whole, the census outputs are an opportunity for future reflection and preparation for the future’  
Muslim Council of Britain

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# Evaluating the actual 2011 Census benefits



# The actual 2011 Census benefits

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- After the 2011 Census, ONS evaluated the actual benefits achieved
  - validate the benefits claimed in the business case
- The benefits from resource allocation would be lower than estimated in 2007 because of
  - a reduction in funds allocated to local authorities
  - Changes in how funds were allocated
- In 2013 ONS re-did the benefits calculations, taking account of the known actual uses of 2011 Census information



## How the information was gathered

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- Survey of all 348 local authorities in England and Wales
- Surveys sent to commercial sector users, geo-demographers, resellers, and specialist consultants
- Meetings to follow up to survey responses from a range of sectors
  - government, voluntary bodies, businesses, etc
- User Satisfaction Survey sent to census users

# Approaches used to re-quantify the 2011 Census benefits

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- **Utility theory** - e.g. in respect of the benefits of allocating government resources to local areas
- **Equating the value of the benefits to the funding for an activity** – e.g. public policy research
- **Grossing up**- Using results from some organisations who were able to quantify benefits **to** gross up for all (e.g. Local Authorities)
- **Percentage of resource/capital spend** - Where respondents (Local Authorities; retailers) said they used census data, making assumptions about the benefit (eg % of resource/capital spend)
- **Estimating the value of a sector**- (eg housing/planning consultancy). With industry experts, estimating the percentage value attributable to data; and of which from the census

For some sectors estimates were produced using both ‘top-down’ and ‘bottom-up’ methods. The mid-point value was chosen.



# Approach – Government

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- Resource allocation
  - Impacts of misallocation to ‘winners’ & ‘losers’ from using next best source

## Public policy research

- Valued on the basis that the research was worth at least the funding devoted to it
  - Departments/ESRC spend £50m a decade on policy research using small area census data

## Department for Transport

- Value estimated at **£10.8m** a year from avoiding delays to major transport schemes



## Approach – Local Authorities (LAs)

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- A small number of LAs costed alternatives to census data. These grossed to £8m pa.
- Alternative approach: look at spend where the survey highlighted use of census data, eg
  - 1% of Capital Expenditure on Pre-primary and primary schools, etc
  - 0.1% of Children's social care ... 0.05% of Planning and Development Services; 0.01% Library services, etc
  - These added to £122m pa
- The mid-point of **£8-122m** pa was taken



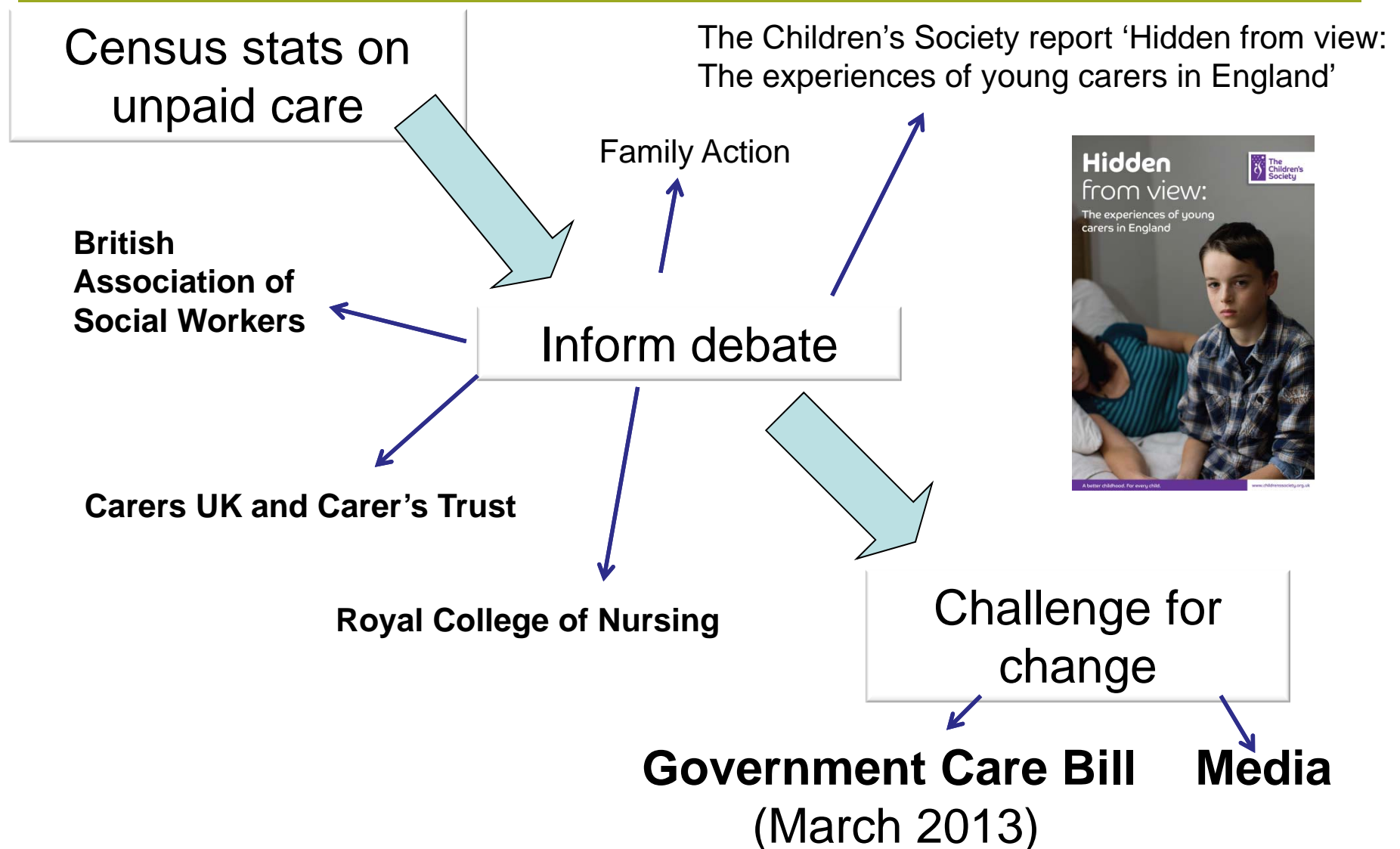
# Approach - Retail sector

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- Oxford Institute for Retail Management & ONS estimate:
  - 2011 UK retail estate worth £227bn, turnover £311bn, investment of £8.7bn
  - Assume 1% census contribution to investment = £87m pa
- Alternative estimate derived with advice from one retail chain to give a value of £20m pa
- An estimate of **£50m** taken for the value of census data to the retail sector



# We were unable to quantify some important uses - inform policy debate



# Census delivers benefits to users

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- Compared to the 2007 business case, the quantified benefits from resource allocation to local areas was much reduced
- But a wider range of census uses were found through extensive engagement with users
  - Many of these could be valued and included in the benefits valuation for the first time
  - Still remains a challenge of how to value policy development and monitoring
    - **Any ideas welcome?**

# The value of the 2011 Census

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The reassessment of the 2011 Census benefits was concluded in January 2014

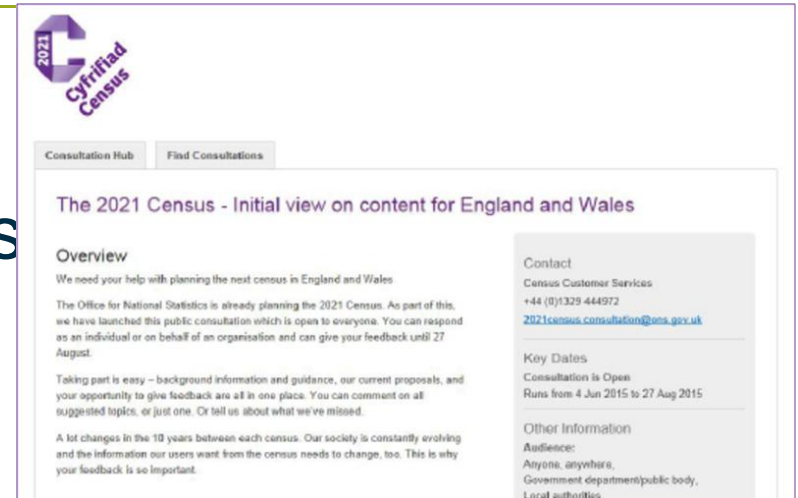
- Re-valued 2011 Census benefits were:

**£490million** each year

- Which is significantly higher than was estimated in the 2007 business case
- The 2011 Census cost £482m in cash prices
  - Giving a payback period of just over a year

# 2021 Census consultation

- ONS is consulting on the content of the 2021 Census
- Consultation runs until 27 August
- Please tell us about your needs for census information
  - And your uses of census data



<https://consultations.ons.gov.uk/census/2021-census-topics-consultation>

# Conclusion

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- It is easy to **describe** the uses of official statistics, such as the census
  - but it is challenging to **quantify** in cash terms
- ONS has found we can not do this alone:
  - a variety of methods may be necessary
  - informed and validated by experts and users
- There are still challenges – such as valuing the benefit to society from census data that helps government put in place policies to support social cohesion?

**THANK YOU  
ANY QUESTIONS?**

