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2021

# **Welcome to the CAG meeting**

**Please put your microphones on mute**

14<sup>th</sup> June 2021

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# Census Advisory Group for LGAG, CGAG and HSAG

14<sup>th</sup> June 2021

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# Agenda

		Time	Item	Presenter
1	10m	13:00 – 13:10	Introduction, previous minutes and actions	Lara Phelan
2	20m	13:10 – 13:30	Data collection operation: how did it go?	Jason Zawadzki
3	30m	13:30 – 14:00	What happens between census and outputs? Quality assurance plans	Jon Wroth-Smith Jo Neagus Pete Large
4	20m	14:00 – 14:20	Outputs consultation plans	Helena Rosiecka
5	10m	14:20 – 14:30	AOB and closing remarks	Lara Phelan

# **AG (22) 01**

## **Welcome, introduction, previous minutes and actions**

**Lara Phelan**

Head of Engagement, 2021 Census Programme

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# Actions from last meeting

Action Number	Meeting	Owner	Detail	Progress
<b>Carried forward</b>				
AP01	Jun 2020	Neil Townsend	NT to inform CAG members whether 1961 census data is being uniquely loaded into NOMIS or if it will be available on UKDS	Closed. The data is getting closer to being ready for release on NOMIS. We are aiming for the initial set of data to be released early in the New Year. We haven't made any decisions about it also being made available in the UK Data Service. There is nothing to prohibit this and would be happy to discuss this based on user needs.
<b>New</b>				
AP01	Jan 2021	Dan Finch	DF to review images used for poster campaign	Closed. CAG Secretariat following up.
AP02	Jan 2021	Lara Phelan	LP to establish with JWS whether a list of CEs could be circulated to all LAs.	Closed. Rather than sharing CEs we undertook an exercise to check these in summer 2020 alongside using Geoplace (which is itself sourced from LAs) and we used data from administrative sources (for example Cushman and Wakefield data on halls of residence).

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# **AG (22) 02**

## **Data collection operation: how did it go?**

**Jason Zawadzki**

Deputy Director, Census 2021 Operations

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# The Census data collection operation went well

Most people did Census without help from us...

- National campaign reached most people
- Online census worked smoothly and was easy for respondents

For those that needed help

- Contact centre successfully dealt with high volumes of calls
- Paper made available for everyone that wanted it
- Field operation conducted in a covid safe way – protecting staff and public
- Field staff had up to date information to follow up non-responding households
- Extensive media coverage and engagement work

# Provisional household return rates

Based on proportion of occupied households (after removing those addresses field staff identified as vacant)

- Over 97% return rate over England and Wales – exceeding our 94% target
- Over 90% in every Local Authority – exceeding our 80% target
- We have also met our target of minimising the variability in return rates between areas within LAs in every LA

Final rates will be known after the CCS and estimation process



# Advertising campaign



# National media coverage

We've also reached new national audiences by looking beyond traditional news outlets.



COSMOPOLITAN



MSE

one Morning Live



# Key Population Group coverage

We've secured content in KPG outlets across print titles, online, radio and TV.

- Mostly driven by interviews with our Census community advisers, explaining the benefits for their community and addressing concerns.

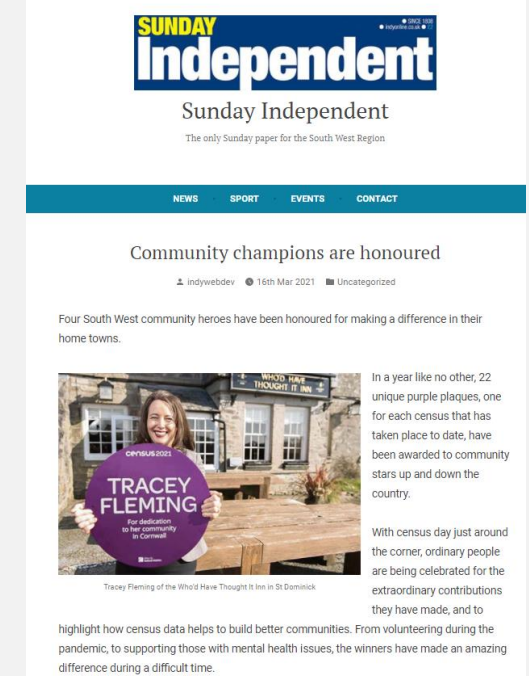
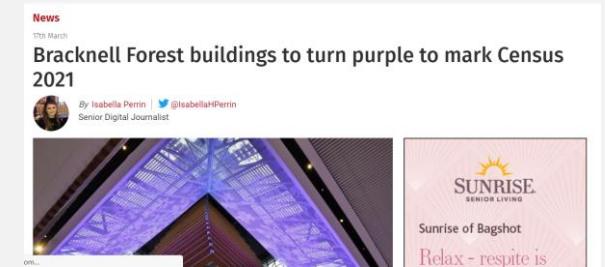
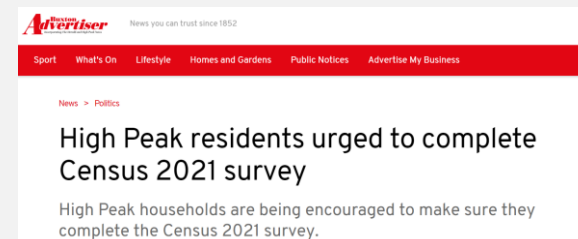


- Coverage in wide range of languages



# Regions

75% of all local media outlets have covered census, including interviews with CAs and CEMs, purple plaque winners, purple light up and general census news and updates



# Great support from local authorities

- 99.5% of LAs had a CLM and/or an ACLM
- 93% of LAs attended at least one Census workshop
- 88% of LAs used social media to promote the Census



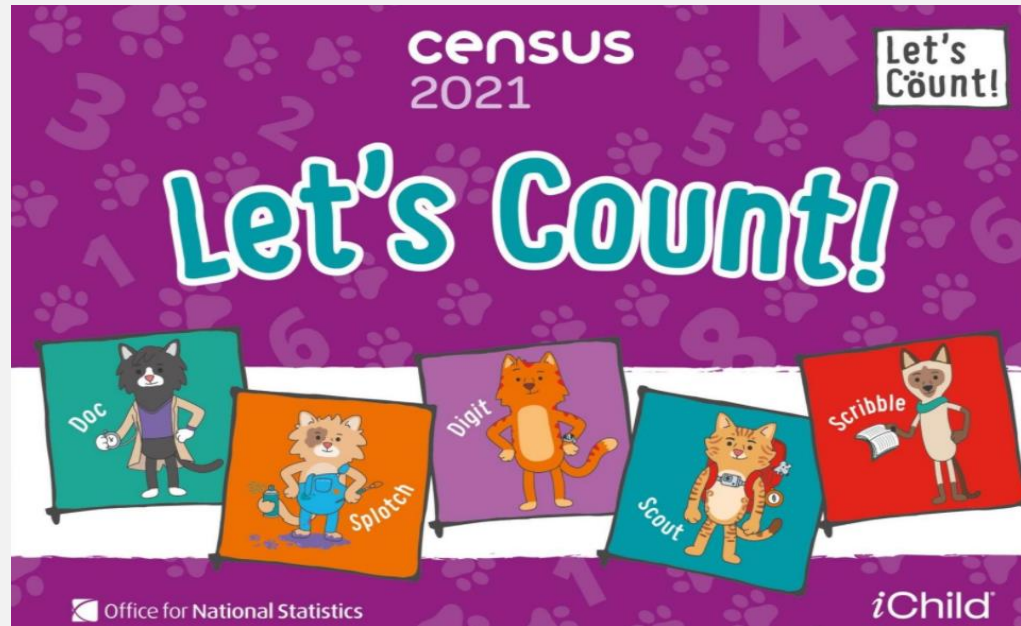


# Great support from communities

- Running events
- Publicising the census
  - On social media
  - Videos
- Translations
- Assisting people



# Census School Programme



9,027 Primary schools registered  
- exceeding target

# Census School Programme



2,146 Secondary schools registered  
- exceeding target



# Census 2021 Secondary Schools Competition Winner

This student explains to a special guest why everyone should complete the census.

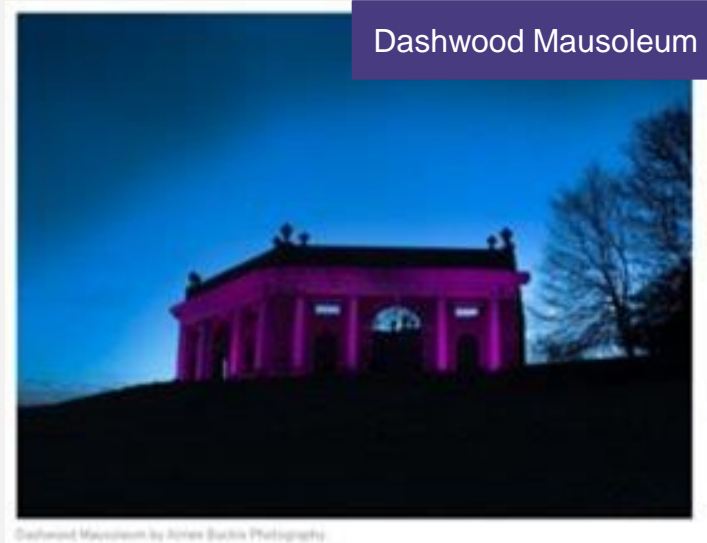
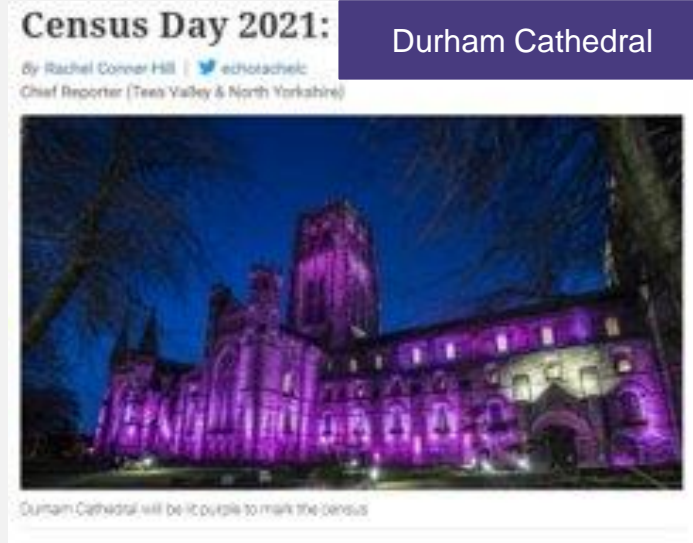
<https://www.youtube.com/watch?v=1-NQWnNMFYM>



Why everyone should complete the census - St Anselm's Catholic School

# Purple buildings

To raise awareness over census weekend of 19-21st March over 100 buildings across England and Wales were lit up purple



# Purple plaques



# We had some challenges

- Impacts of COVID-19
  - Location of students
  - Face-to-face census activities limited
    - Field staff
    - Engagement events
    - Census Support Centres
- Death of HRH Duke of Edinburgh

# Where are we now?

- Main census operation finished
  - Census electronic questionnaire closed on 24 May
- Census Coverage Survey coming to an end
- Non-compliance operation has started
- Evaluation of operation beginning

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**Thank you.**

**Any questions?**

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# **AG (22) 03**

## **What happens between census and outputs?**

### **Quality assurance plans**

**Jon Wroth-Smith | Jo Neagus | Pete Large**

Census Statistical Design

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# What we collect to what we publish

- Census statistics need to cover the whole population, not just those who complete the questionnaire
- Our aim is to count everyone once, in the right place
- Since 2001, we have used a **Census Coverage Survey (CCS)** and statistical methods to
  - Estimate non-response and overcount
  - Make statistical adjustments so that all census results represent our best estimate of the whole population (not just those who were counted)



# Processing

- Coding
- Validation and cleaning
  - remove 'false persons'
  - resolve 'multiple responses'
  - correct obvious errors (e.g. three-year-old married people)
  - impute responses to mandatory questions
  - validation built into the online questionnaire

# Quality Assurance (next session)

- Quality Assurance of census processes
- Validation of the census results
- Providing information on quality

# Coverage Estimation and Adjustment

- Census Coverage Survey
  - Independent (census address frame not used)
  - 350k households in a sample of postcodes
  - Face-to-face interviews six weeks after Census Day
  - Subset of census questions asked
- CCS records linked to census and statistical methods used to produce complete population statistics

# Coverage Estimation

Even with a variety of strategies to maximise response, it is inevitable that some people will not be counted, or will be counted in the wrong place.

- **Undercount error** – a member of the target population is missing from census
- **Overcount error** – a member of target population is counted in the wrong location or counted twice
- In 2011 Census of England and Wales undercount was estimated to be 6%, overcount – 0.6%
- Non-uniformly distributed across a population

# Coverage Adjustment

- Adjustment process adds households and persons into the census database
- Adjust so that it remains consistent with the population estimates
- Builds on previous census adjustment which began in the 2001 One-Number-Census approach
- Method for Census 2021 has changed, better meets population estimates for all key variables

# Coverage Adjustment

## Stage 1: Impute missed households (with persons)

- Add household records into the census database – copy census households from the database to meet the population estimates.
- Assign new geographical information (e.g. postcode)

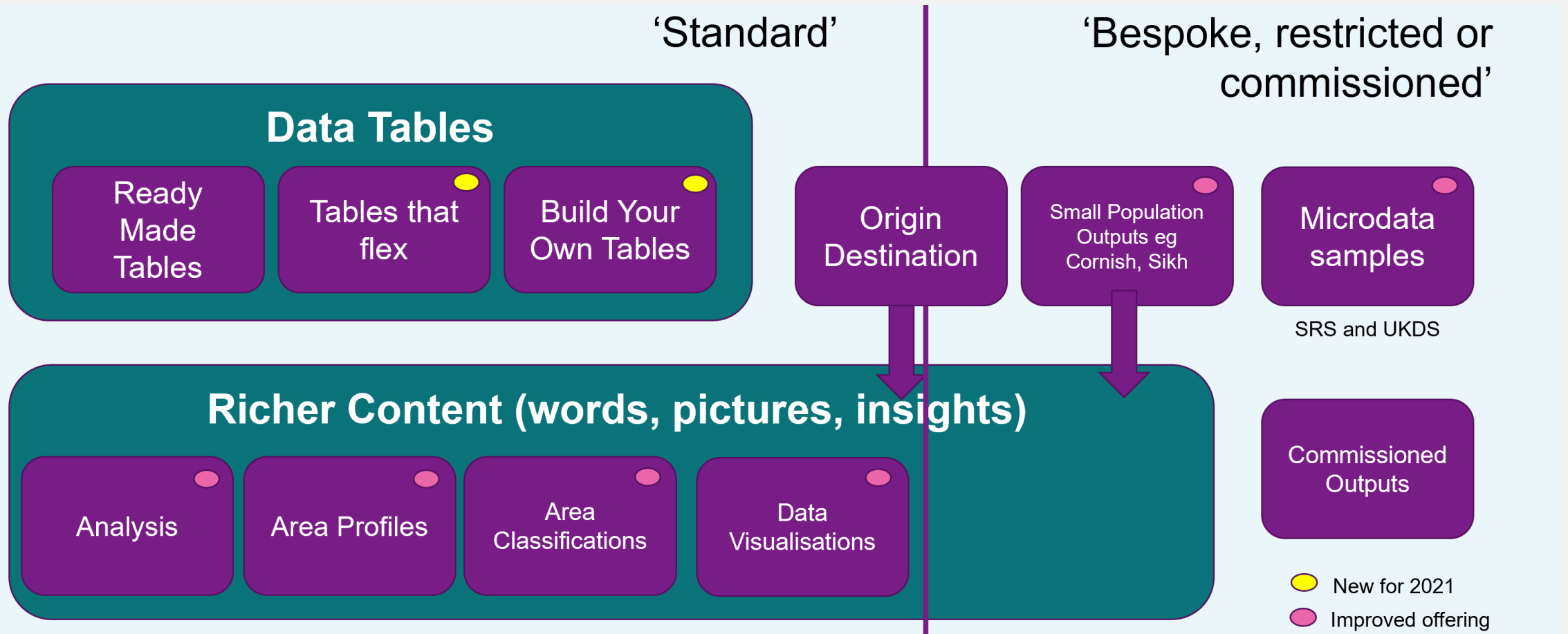
## Stage 2: Impute remaining characteristics

- Impute characteristics variables of the added records that aren't controlled for in the adjustment process.

# A new flexible, timely and accessible approach to Census 2021 outputs

- Flexibility – the system allows users to build their own tables selecting the geography, population base and variables they require
- Timeliness – we are aiming to disseminate first results for England and Wales within 12 months of Census Day and all other main data within 24 months of Census Day
- Accessibility – we will aim to host the system on the ONS website, meaning most census data will be available from one location

# Product Overview





# Quality Assurance

# Aims for this session:

- Explain how the quality assurance of data contributes to the overall quality of the census results
- Describe how we will assure both the census processes and the final estimates
- Share our plans for comparing the census results to other sources of data
- Signpost where more information is available on our plans
- Invite suggestions of further checks or information on quality that should be published

***The Census 2021 results will only be of value when they are fit for purpose and when they are trusted by users as a basis for decisions***

# Three strands of Quality Assurance

- Quality assurance of census processes
- Validation of the census results
- Providing information on quality

# Quality Assurance of Census processes

Even with well-designed processes, error can be introduced

- sending out questionnaires
- completing questionnaires
- removing multiple responses
- coding write in answers
- correcting for non-response

# Validation of the Census results

- Population Estimates
  - National and local authority
  - Comparator sources
  - Demographic analysis
- Topic analysis

# Population estimates: Comparator sources

Include:

- 2011 Census
- Mid-year population estimates
- Admin-based population estimates
- NHS Personal Demographic Service
- Benefits/Pensions data
- School census
- Higher Education Statistics Agency
- Council Tax data on households

# An example of a standard population estimates check...



Standard checks  
cover:

Total population

Sex and age

Households

Communal  
establishments

Selected topics

Migration

Communities

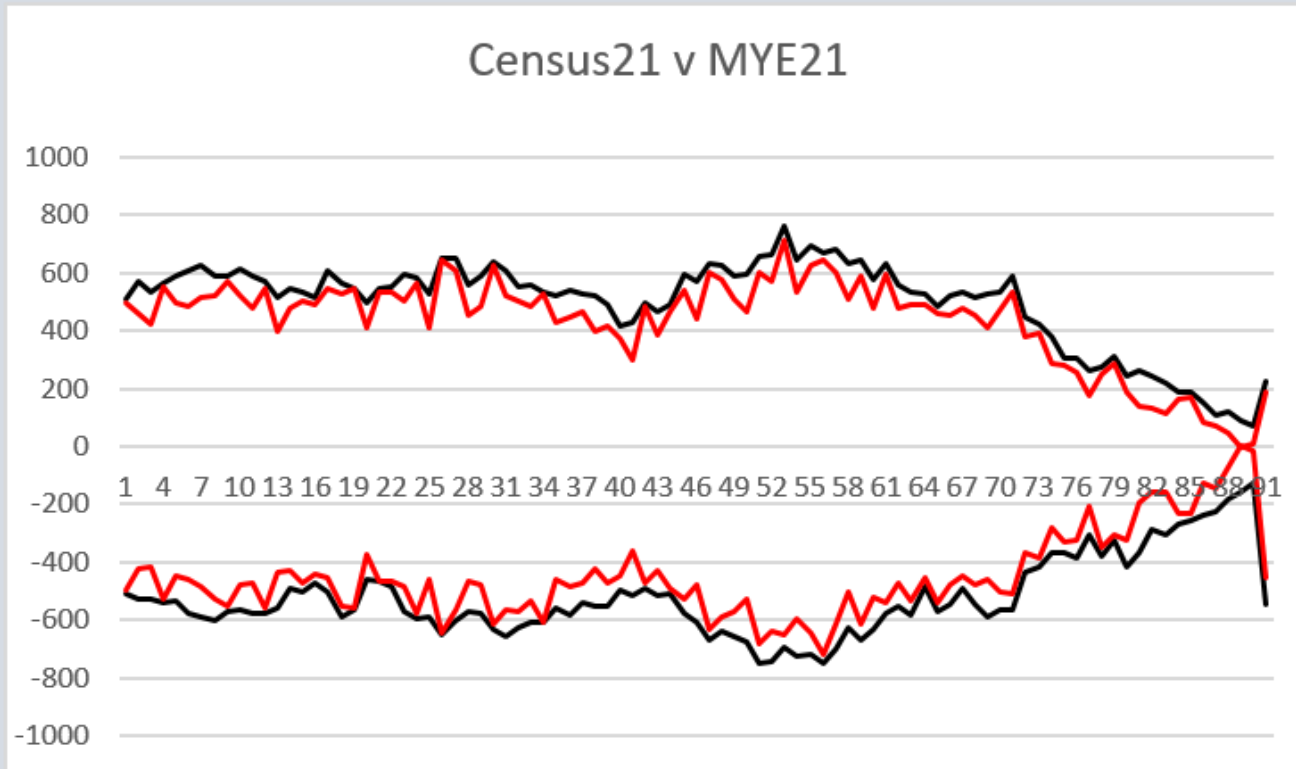
Local knowledge

Area Clayton					
Table A1: Total Population, comparator sources					
	Population	% difference to 2021 Census	Bias-adjusted % difference	Growth from 2011	Probability measure (all)
2021 Census	93019		-	4%	-
2011 coefficient of variation	3%		-	-	-
2021 MYE	95978	3%	2%	8%	0.42
2021 ABPEv2	89879	-3%	-2%	-	0.16
2021 ABPEv3	79682	-14%	-9%	-	0.18
2011 Census	93019	0%		6%	-
Census: similar areas	-	-	-	7%	-
Table A2: Standardised Mortality Ratios			Table A3: Standardised Fertility Ratios		
LA	1.02		LA		
LA probability measure	0.22		LA probability measure		
LSOA (highest)	1.42		LSOA (highest)		
LSOA (lowest)	0.98		LSOA (lowest)		

(Fictional data)

# Population pyramids

**Chart B5: Population Pyramid: Census and Mid\_year Estimate**



(Fictional data)

# Local information

**Area** Clayton

Clayton LA raised a concern in August 2020 that new housing in LSOA 010077140 would not be included in the Address Frame.

We have confirmed that 250 new addresses in that LSOA were added to the Frame in October 2020.

Clayton LA advise us that they will compare the Census results against the Mid Year Estimates and Council Tax data on households.

These are covered in the standard checks in this report.

(Fictional data)

# Quality assuring topic results

- Univariate distributions (national/LA)
- Spikes in small areas
- Age-sex profile/standardised measures
- Key multivariate relationships
- Write-in answers
- Expert Quality Assurance

# LA involvement in QA

- The Code of Practice allows us to give an LA access to the provisional unpublished data for their area
- We will be inviting LAs to help us QA their census population estimates
- Running to end January 2022, LAs will be able to provide feedback on the data for their area
- Currently working on an approach to achieve this, but it is a very tight timetable

# Signing off the data

- Quality Assurance in parallel with processing
- Independent of any contingency methods
- Evidence taken to Quality Assurance Panels
  - National population estimates
  - Population estimates for each local authority
  - Results for each topic
- Final sign-off by National Statistician

# How we developed our plans

- Lessons from previous censuses
- Other census organisations
- Proposed approach published in January 2020
- Local Authority Quality Assurance Working Group
- Local Authority Partnership Plan
- ... always open to new ideas ...

# Publishing information on quality

- Response rates and confidence intervals
- Comparisons with other sources
- ‘QA packs’ for local authorities
- Census Quality Survey report



# Other aspects of the quality assurance

- Data science outlier identification
- Spurious responses
- Census Quality Survey

# Summary

- Building on successful approaches from previous censuses
- Checking processes, population estimates and topic results
- Standard checks completed for all local authorities
- Using local and topic expertise outside the Quality Assurance team
- Published outputs to help you understand the quality of the results

# More information

- [Census Statistical Design](#)
- [Quality Assurance of the census data](#)

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**Thank you.**

**Any questions?**

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**AG (22) 04**

# **Census 2021 outputs: Content design and release phase proposals consultation**

**Helena Rosiecka**

Census Outputs User Consultation and Engagement Lead

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# Census 2021 outputs aims



## **Flexible:**

A wider range of outputs to meet the needs of a greater range of users. More control for users to create own outputs.



## **Timely:**

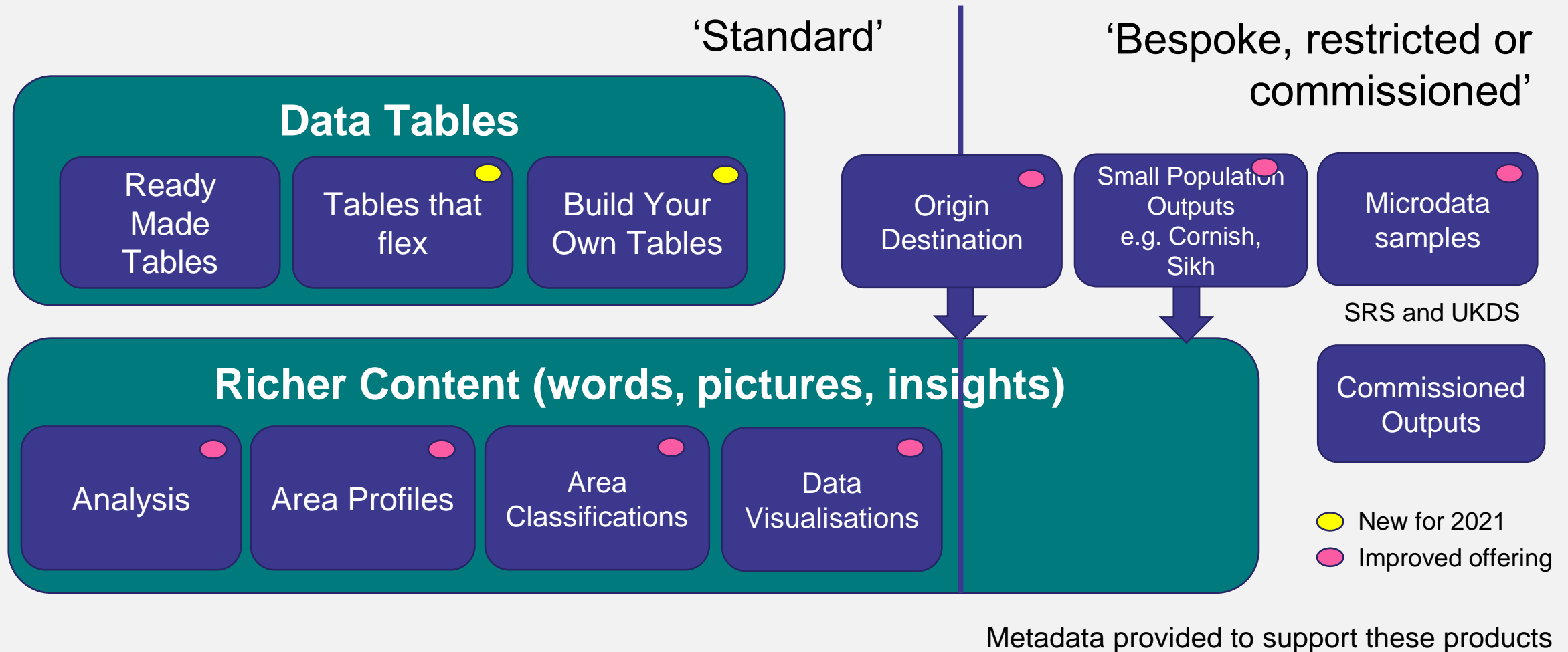
We aim to make outputs available sooner than for the 2011 Census.



## **Accessible:**

Available in ways that suit users needs, with supporting information to enable understanding of the data.

# Product overview



# Background to the consultation

- Purpose of a census
  - Provide a snapshot of the population and its characteristics
  - Help the government, health authorities and many other organisations to:
    - Target resources more effectively
    - Plan services such as housing, education, health and transport
- New impacts to consider for Census 2021 data
  - More rapid changes to some societal characteristics, due to the coronavirus pandemic and the UK exiting the European Union
  - Production of UK statistics – Scotland holding their census in 2022



# Consultation objectives

- Describe current thoughts and proposals for census outputs and dissemination
  - Get a steer on priorities
  - Get feedback on specific proposals
  - Establish to what extent we will meet users' needs
- Consultation acts as a draft Outputs Prospectus to
  - Provide information on planned approaches and reasoning
  - Seek reaction in terms of suitability, gaps, priorities

# What the 'Census 2021 outputs: content design and release phase proposals' consultation will cover

# Consultation topics overview

- The consultation will be structured into sections, allowing users to pick and choose the topics they want to consult on:
  - Shape of outputs and analysis release schedule
  - Main changes to variables compared to the 2011 Census
  - Proposals for potential new derived variables
  - Population base specifications
  - Census 2021 geographies
  - Census 2021: In a period of change
  - Release of paradata, data on how Census 2021 information was collected

# Shape of the release schedule

- We will share the shape of the Census 2021 outputs and analysis release schedule, in line with commitments to release first Census 2021 findings within one year of Census day and all main outputs within two years of Census day.
- We will consult on:
  - The recommended order in which data and analysis is released within phases
  - The level of detail available in the data tables provided
  - User need for area profiles for particular geographies

# Main changes to variables compared to the 2011 Census

We will consult on:

- Statistics required from the new Census 2021 questions  
e.g. sexual orientation, gender identity and armed forces veterans
- Proposals to simplify age and country of birth classifications  
e.g. one classification for EU country of birth, instead of two for countries who joined the EU before 2001 and those who joined between 2002 and 2011
- Statistics required from new response options to questions asked in Census 2021  
e.g. option in 2021 to select if a marriage or civil partnership is with someone of the same or opposite sex
- User need for data on whether a respondent filled in the Census 2021 questionnaire themselves or for someone else

# Proposals for potential new derived variables

We will consult on:

- Proposals for how existing Census 2021 data can be used to help identify new insights into questions not directly asked in the Census 2021 questionnaire. This is done through cross-referencing Census information with itself or alternative data sources.
- Examples include indicators of:
  - Population aged 16-24, not in employment, education or training
  - Skills mismatch
  - Multigenerational households, including more than two generations
  - Key/critical workers
  - Temporarily away from work
  - COVID risk
  - COVID business risk

# Population base specifications

We will consult on:

- Proposed ‘main population base’ data tables  
e.g. Usual residents, households, usual residents in households, communal establishments, usual residents in communal establishments, household reference persons (HRP)
- Proposed ‘alternative population bases’ data tables  
e.g. Workplace, workday, out of term, short term population, second address
- Proposed ‘small population bases’ data tables  
e.g. Cornish (national identity), Kashmiri (ethnic group), Jain (religion)
- An indication of the types of tables users will be able to build themselves from our new flexible data sets
- What analysis users plan to conduct and therefore requirements for additional tables

# Census 2021 geographies

We will consult on:

- Approaches to geographical boundary changes made after April 2022



# Census 2021: In a period of change

- Census 2021 is a snapshot in time on 21 March 2021
- Due to the coronavirus (COVID-19) pandemic and the UK exiting the European Union, the UK is facing rapid societal change.
- Our aim for Census 2021 outputs is to deliver timely, accurate statistics that help people understand that change and inform their future decision-making and service provision.
- We will consult on:
  - ‘Travel to work’ data required for future transport planning
  - Statistics required for ‘workplace zone’ geographies
  - Potential areas of change around:
    - Migration, health, unpaid care, places of residence, economic activity and hours worked, occupation and industry

# Release of paradata

We will consult on

- User need for statistics on how Census 2021 data was collected at lower geographies or split by other variables
- Examples include:
  - Proportion of households returns completed online, by paper or other means
  - Household versus individual response rates
  - Whether census forms were completed in English or Welsh

# Timeline and engagement opportunities

# Timeline of consultation related activities

**Spring/Summer 2021:** Publication of the Census 2021 Outputs consultation, including the shape of our proposed data and analysis release schedule

Consultation remains open for public feedback and is supported via a series of webinars and informative publications

**Winter 2021/2022:** Publication of consultation response feedback and how we will use it

Publication of the Census 2021 Outputs Prospectus, a document detailing our data products, services and our indicative release schedule

**March 2022:** First release of Census 2021 data

# Other engagement opportunities

- We are conducting user research to improve how people will be able to find, access and use our Census 2021 data products
- We host working groups for data users and the UK Census offices to share information and feedback on the design, creation, storage and dissemination plans for Census 2021 outputs and UK-wide data products
  - UK Census 2021 and 2022 data
  - Census microdata
  - Census origin-destination

For more information or to volunteer to take part, contact us at: [census.outputs@ons.gov.uk](mailto:census.outputs@ons.gov.uk)

# Keep in touch

- Register for '2021 Census outputs' email updates on [GovDelivery](#), for information on consultations, webinars and latest news
- Learn about specific products or release plans, on the [Census 2021 Outputs webpages](#)
- Contact us at [census.outputs@ons.gov.uk](mailto:census.outputs@ons.gov.uk)



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**Thank you.**

**Any questions?**

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# AOB and closing remarks

**Lara Phelan**

Head of Engagement, 2021 Census Programme

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