For comment: 'lenses' framework for the 2023 recommendations
Methodological Assurance Review Panel paper

Executive summary

This paper introduces eight draft 'lenses' with which ONS can provide assurance on progress towards the 2023 recommendations on the future of the census and social statistics.

The Methodological Assurance Review Panel is invited to provide comments on lenses 1, 2 and 4 (Annex A), particularly as they relate to the Panel's role as the primary methodological assurance forum for work towards the recommendations. Lenses 3, 5, 6, 7, and 8 have been summarised for the Panel's information.

The Panel is asked to note that a fuller status report on progress towards the recommendations will be presented to the Panel in April/May 2021.

Background

In May 2020, the Panel reviewed a version of the high-level statistical design of the transformed population & social statistics system. It discussed work being conducted by key projects involved, including Population & Migration Statistics Transformation (PMST), Social Statistics Admin First (SSAF) and Social Survey Transformation (SST). In the period between September 2020 and March 2021, these teams have worked with colleagues with responsibilities covering methods, data acquisition & engineering, communications, engagement, user requirements, policy, ethics, and legal, to develop a framework with which to assess progress towards the recommendation.

This framework consists of eight lenses as follows:

1. Meeting essential / core user needs;
2. Being ambitious, seeking to deliver enhancements to the current system on multiple fronts;
3. Being supported by sound data and data security practices;
4. Being supported by sound methods;
5. Being compliant with the law, with ONS obligations and with UKSA ethical principles;
6. Being accepted by users, suppliers and members of the public;
7. Being cost-effective;
8. Being deliverable within an appropriate timeframe.

In the winter of 2020, version 1.0 of the framework was reviewed by the Census Research Advisory Group (CRAG), the Public Policy & Impact Board, and the CDCT Programme Board. The new version of the framework has been drafted to reflect comments from these fora and can be found at Annex A.

Following the Panel's review, we plan to reflect comments and advice, and return to the CDCT Programme Board with a final draft in April. We aim to introduce the high-level concept of the 'lenses' to external audiences in the summer, in the wake of the census field operation.

In future, the 'lenses' will be used to assess ongoing work towards the recommendation. We also plan to assess the current population, migration and social statistics model using the 'lenses', to provide a benchmark against which to assess the future recommendations.

Annex A - 'Lenses' for the 2023 recommendation

NB:

- Each 'lens' is defined by a series of statements. These statements have been listed in full below for lenses 1, 2 and 4.
- In cases where the statements relate to ONS's operational activities, the statements have not been provided in full, but rather summarised with a plain-English explanation. This applies to lenses 3, 5, 6, 7, and 8.
- The statements are draft and we anticipate that they will continue to undergo change over the coming months as they continue to undergo review from different audiences (including MARP).

1: Meeting essential / core user needs	
Users of ONS's population, migration and social statistics have essential needs that must be met by any future system in order to be successful, and this lens encapsulates those needs. These include: regular releases of information about the number of people living in the country; how they move around, and in and out of the country; their characteristics, such as age group, sex, or ethnicity; what types of housing they live in, and how those households are composed; impacts that certain life experiences and backgrounds have on different kinds of people; and the ability to detect significant changes in population at the national or local level.	
a	Coherent high-quality estimates of the size (stock) of the resident population of England & Wales and how it changes over time (flows), including patterns of international and internal migration by age and sex for all of the UK. i. Estimates have acceptable and minimal bias and variance (at least as good as the existing system over 10-year period), nationally and at local area level. ii. Estimates are produced at least as timely as current system (within one year of reference date for population size and six months for international migration) iii. Estimates are produced annually for population size and quarterly for international migration. iv. There is coherence between stock and flows estimates; and for immigration and emigration estimates. v. Estimates are comparable across time and geography (local area level and for the countries of the UK)
b	Coherent high quality estimates (size and distribution) of population sub groups, such as protected characteristics (disability, marriage and civil partnership, ethnicity, religion, sexual orientation and gender identity); Special interest groups (e.g. carers and veterans) and communities; Main Language (English/other) and Welsh Language. i. Estimates have acceptable and minimal bias and variance, nationally and at local levels (supporting annual comparisons at LA level and comparisons at LSOA level at least every 10 years) ii. Estimates are comparable across time and geography (local authorities and for the countries of the UK)
c	Sustainable and regular estimates of housing stock (occupied and vacant) / residential addresses by type, size and tenure; estimates of the size of the population in households/residential addresses and communal establishments by composition (household/families). i. Estimates have acceptable and minimal bias and variance at least as good as the existing system over 10-year period), nationally and at local area level.

	ii. Annual estimates are produced at least as timely as current system (within one year of reference date)
	iii. Estimates are comparable across time and geography (local authorities and for the countries of the UK)
d	Ability to estimate multivariate relationships from national to local area level. Specifically understanding outcomes experienced by people (morbidity and mortality, education attainment, economic status, living conditions), against characteristics (e.g. the protected characteristics) from national level at least down to LA level. Ability to identify/detect differences/changes in the outcomes experienced by people across different characteristics, regions and time. i. Ability to understand outcomes and the paths to them (lifestyle, occupation (inc. veterans), family background, mental health). ii. Ability to produce life expectancy and healthy life expectancy estimates by characteristics and by occupations to at least the same precision as the current system. iii. Availability of anonymised micro datasets to support users / researchers to conduct their own analyses (including longitudinal multivariate analysis).

2: Being ambitious, seeking to deliver enhancements to the current system on multiple fronts
In transforming the population, migration and social statistics system, ONS has an opportunity to provide a new and improved offer to its users, and meet user needs even better than it did before. This lens will assess the potential for ONS to deliver on these ambitions, which include a more accessible, responsive and flexible system to user requirements; a system that is fully inclusive of the whole population; which provides faster indicators of morbidity, economic activity and population movement; a system that is agile to new developments, requirements and capabilities; and a system which provides new insights through the integration of multiple sources using new and innovative techniques. All of which support decisions and investment to improve people's lives.

a	A statistical system that offers accessible and responsive analytical capability, enabling the user to access the information they need and in the way they want it; remaining relevant to their changing and ongoing needs. i. User defined geographies - enabling users to define boundaries to capture the areas, communities and spaces, on which they can generate statistics of interest. ii. An ability for users to create direct interfaces (e.g. via Application Programming Interfaces (APIs)) with the ONS systems to receive real time feeds of the data they require. iii. An ability for users to build their own tabulations, via an easy to use interface, containing timely statistics about the areas and population groups that they are interested in. iv. An ability for non-technical users to retrieve the statistics they need through a user interface that can translate a user question (e.g. what is the population of Southampton) into a statistical output that best meets their need. v. Availability and access to anonymised micro datasets (including longitudinal data), which integrate data across multiple sources (e.g. survey, administrative and commercial), providing new insights into the population not possible through existing data sources (limited in size or content), such as the ONS Longitudinal Study, the Census Anonymised Records and ONS survey micro datasets. vi. An ability for the system and its underlying data to build statistical or micro/individual level models to inform decision making for the public good (i.e. what happens if… scenarios).

b	A fully inclusive statistical system that provides frequent and timely statistics for the whole population (not just those living in private households), with the ability to identify groups and communities of interest (as outlined below).
	
	    i. Fully inclusive statistics to inform the delivery of appropriate services and infrastructure at both national and local level to meet the demands of the whole population (addressing intercensal gaps such as people living in communal establishments, travellers, circular migrants, homeless, illegal migrants, children & young people, etc.).
	
	    ii. A fully inclusive statistical system that takes an inclusive approach throughout e.g. to data collection, processing, reporting and dissemination (putting the individual at the heart of all these processes).
	
	(note: this section will be developed following the recommendations of the National Statistician's Inclusive Data Taskforce)

c	A system that can track key indicators of the health, economic activity and movement of the population in near real time to identify, for example, where support and services are needed. Ensuring statistics are available and comparable across local authorities and the countries of the UK.
	
	    i. Ability to identify changes in morbidity and mortality at local area and across population groups (e.g. ethnic groups, age groups, students, by occupations, etc)
	
	    ii. Ability to identify changes in people's spending, debt, saving and economic status which impact wellbeing / health and the wider economy.
	
	    iii. Ability to identify changes in the day-time and night-time populations over the days and months of the year to understand where services and infrastructure are needed – including changes due to seasonal migrants and student populations.

d	A statistical system that can support an understanding of the outcomes people experience in life, set against their characteristics, lived experiences and behaviours, while identifying associated impacts on society, business/the economy, and the environment. Providing key insights to support effective decision making and resource allocation to improve people's lives.
	
	    i. Supports the safe integration of survey, administrative and other commercial data , ensuring privacy and confidentiality, whilst delivering new insights through sound statistical and data science techniques.
	
	    ii. Delivers longitudinal analysis capturing experiences and outcomes through childhood (from birth, early years education to higher education) to adulthood; covering educational attainment, physical and mental health, whether in poverty, economic activity (and occupations held) and income, training and education, crime, homelessness; set against characteristics, family relationships, parenthood, caring responsibilities and the living environment (accommodation and place). Providing an understanding of social mobility, and where support, funding and policy initiatives are needed across health, employment, education, transport, housing and recreational services.
	
	    iii. Provides an understanding how people's actions, movements and behaviours have impacts locally and nationally, covering international and internal migration and travel, flows between accommodation types and tenures (inc. into communal establishments); consumption of goods and services; and property transactions. Providing insight into where local and national services and infrastructure (transport and construction) are needed; and where policy and resources can be targeted to

	support economic growth (and "levelling up") and improvements to the environment.

	3: Data
	This lens covers ONS's confidence in its internal data service, and the importance of this meeting business needs, ONS data principles and security standards. It also covers the need to build in flexibility to cater for future data needs, and the metadata needed to support the system.

	4: Methods
a	Methodological research investigates current best methods and also evaluates/explores standard methods and practices across National Statistical Institutes. Decisions on approaches to adopt are based on quantitative evidence of their quality, obtained through empirical analysis or simulation studies.
b	Limitations arising from the methods, including assumptions, levels of bias and uncertainty, are understood and quantified and explained clearly for users.
c	Methods have been quality assured and peer reviewed by internal governance, external experts and in some cases through peer-reviewed publications.
d	Methods and the decisions underpinning their choice are transparent, and information/details on them are publicly accessible (within privacy and security constraints)

	5: Compliant
	This lens encompasses ONS's compliance with the law, its ethical obligations, its commitment to the Code of Practice for Official Statistics, its completion of relevant impact assessments, and its commitment to work closely with other UK NSIs on the future of UK-wide statistics.

	6: Accepted
	This lens stipulates that ONS's stakeholders should be aware of the recommendation; that they have had meaningful opportunities to engage with ONS, and that there is evidence to show acceptance of the benefits of the model.

	7: Cost-effective
	This lens surrounds the cost-effectiveness of the future system.

	8: Deliverable
	This lens covers the operational deliverability of the future system, covering logistical requirements internal to ONS.