

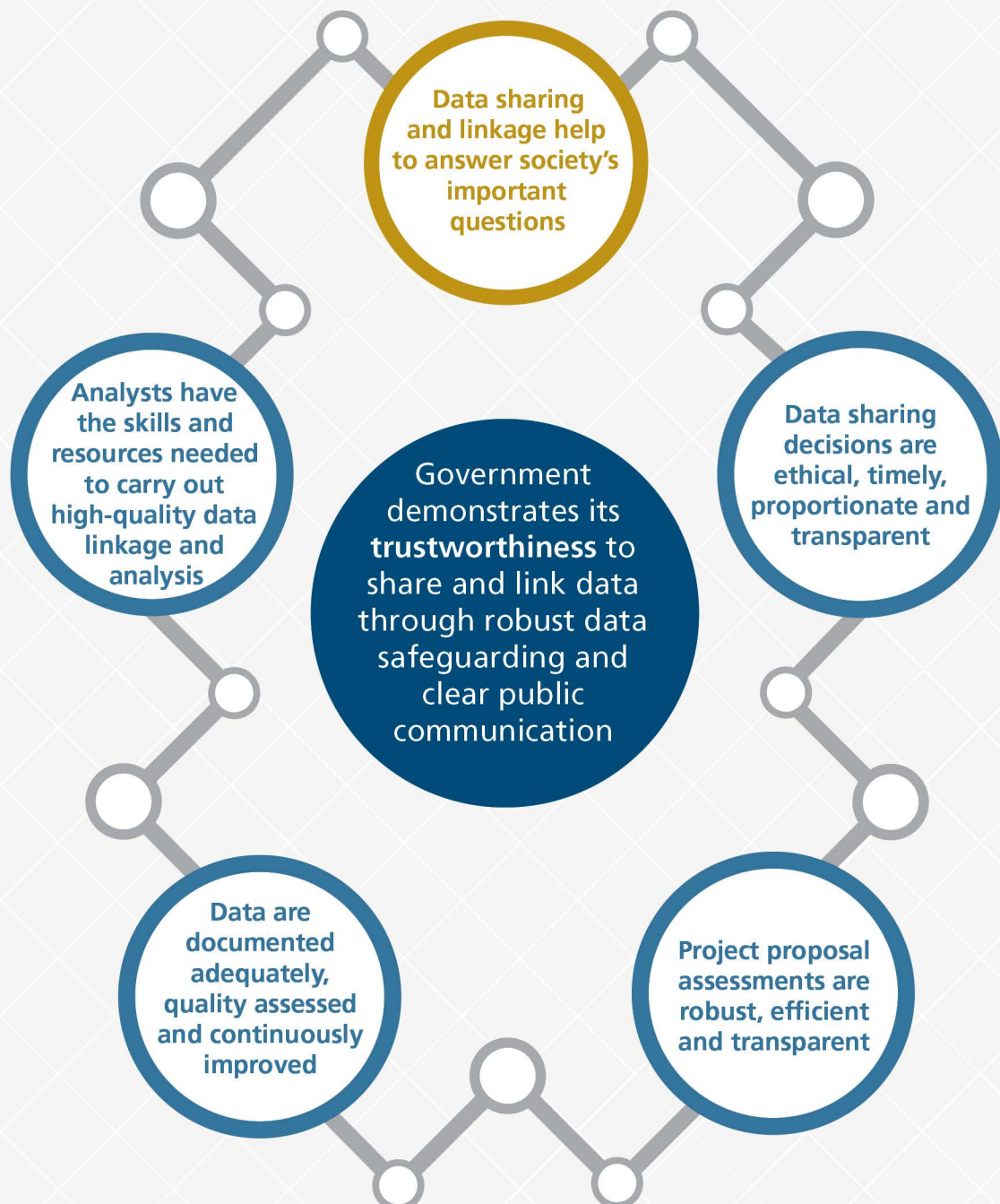
## Joining Up Data For Better Statistics

The Office for Statistics Regulation consulted widely with statistics users, producers and other organisations with an interest in data to identify outcomes that would help ensure the UK has a safe and effective data linkage system to support statistics production and statistical research. The six outcomes identified are set out below.

At the core, underpinning all other outcomes, is a system that understands the importance of demonstrating its

trustworthiness as a custodian of public data. Our recommendations for action are presented in this booklet.

We have asked the UK's National Statistician to respond with a plan of concrete actions by the end of 2018. We look forward to working with statistics users and producers to help realise their ambitions for data sharing and linkage to help answer society's important questions.



## Our recommendations for a safe and effective data linkage system

- Actively seek input from the public in major decisions about statistics production and statistical research using data linkage.
- Identify clear, consistent and meaningful language to use when engaging with the public about data safeguarding, linkage and use.
- Be advocates for safe data use to provide insights that serve the public interest.
- Produce “keeping data safe” statements using the Five Safes Framework.
- The Department for Digital, Culture, Media and Sport should develop an overarching framework for trustworthy government data use.

- Maximise opportunities to identify the questions that society wants answered by exploiting existing networks of senior leaders e.g. Heads of Profession, Chief Statisticians, Directors of Analysis and Chief Scientists.
- Ensure that policy makers and external experts are actively involved in processes to identify questions.
- Ensure that departmental areas of Research Interest Statements explore cross-cutting interests across departments, and are produced with input from all analytical professions.
- Enable more exploratory analysis to take place before research questions are finalised, including through the use of synthetic data.

- Agree common information governance frameworks to harmonise practice across government departments.
- Consider placing the responsibility for signing off data sharing agreements with more senior staff.
- Explore the contribution that risk assessment tools could make to decision-making about data shares.
- Publish materials related to data shares, including mandatory and voluntary Data Protection Impact Assessments, to support transparency.



Government demonstrates its **trustworthiness** to share and link data through robust data safeguarding and clear public communication

Data sharing and linkage help to answer society's important questions

Data sharing decisions are ethical, timely, proportionate and transparent

**Project proposal assessments are robust, efficient and transparent**

**Data are documented adequately, quality assessed and continuously improved**

**Analysts have the skills and resources needed to carry out high-quality data linkage and analysis**

- Design data access application processes and support materials with user input and seek ongoing feedback on systems when they are live.
- Signpost users to other sources of data of potential interest to them.
- Work with health data users and NHS Digital to scope the terms of an independent review of NHS Digital's health data sharing and access processes.
- Identify data sources most in need of additional documentation and metadata and work with data owners to address gaps.
- Create a central registry of administrative data sources.
- Ensure that each step in the data linkage process is documented using a common framework.
- Ensure that statistical experts are consulted and participate in the design process for new data systems.
- Identify mechanisms for data users to feedback information about data quality to data collectors to help improve data at source.
- Recognise resource needs – including the imbalance of demands placed on data holding departments – and either address them with additional inputs, or be clear about what constraints are faced and their implications.
- Work together to identify resource-efficient solutions to infrastructure requirements (e.g. data storage space, software).
- Identify creative solutions to cut the cost of data extracts charged by external contractors; address this issue in any future contracts.
- Develop a new data linkage skills strategy to support the expansion of opportunities for training and development in this area.
- Identify effective mechanisms to bring in external expertise on data linkage methods and analysis from academics and other experts.
- Ensure the professional development needs of staff who support the data access process are met, including opportunities to network and share practice with people in other organisations in similar roles.
- Continue to innovate and share practice around the delivery of safe data settings, especially virtual solutions.
- Develop a network of accredited safe settings with common operating standards to act as a single entry point for data users.

## Who we are and why we are interested in data linkage

The Office for Statistics Regulation (OSR) is the regulatory arm of the UK Statistics Authority. We provide independent regulation of all official statistics produced in the UK. We aim to enhance public confidence in the trustworthiness, quality and value of statistics produced by government. Our interest in data linkage is underpinned by the Code of Practice for Statistics' three pillars of trustworthiness, quality and value:

- Statistics add **value** when they answer society's questions. Many questions cannot be answered without sharing and linking data. As a result, a greater willingness and ability to share and link data is an essential prerequisite for improved official statistics.
- Without a focus on the **quality** of the data – their source, how they have been collected and processed, any biases and incompleteness in the data – the results could be misleading.
- Custodians of public data must demonstrate their **trustworthiness** by safeguarding data robustly during and after the sharing and linkage process, and by being open to public scrutiny. Organisational trustworthiness is at the core of OSR's work and is a key component of the first pillar in the Code of Practice.

Data linkage should be a vital component of the official statistics landscape. Value is being squandered because this is not currently the case. New powers have been given to the statistics system via the Digital Economy Act 2017 that have the potential to unlock new sources of data and transform the official statistics landscape. Users' aspirations within and beyond government are high and their demand is clear: make this work.

There are some powerful examples of data linkage being used in government to provide insights and drive policy change. Our report *Joining Up Data for Better Statistics* highlights many such projects, and we know there are more. However, these success stories remain the exception, and the concern is that the efforts and time required to create linked data resources discourages others seeking to do similar work. The recommendations presented here are designed to help change this picture.

OSR is one of many organisations with an interest, and part to play, in delivering the changes required to ensure that data sharing and linkage are used to maximum effect for better statistics. The key to success will be harnessing and coordinating all available opportunities for leadership on data sharing and linkage issues.

The full report *Joining Up Data for Better Statistics* can be downloaded here: <https://www.statisticsauthority.gov.uk/publication/joining-up-data/>

Questions or comments? Please contact us: [regulation@statistics.gov.uk](mailto:regulation@statistics.gov.uk)

To find out more about our work, visit: <https://www.statisticsauthority.gov.uk/osr/>