

Code of Practice for Statistics

Ensuring official statistics
serve the public

Edition 2.0
February 2018



Office for
Statistics Regulation



UK Statistics
Authority

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Any enquiries regarding this publication should be sent to:
Office for Statistics Regulation, 1 Drummond Gate, London, SW1V 2QQ

About the UK Statistics Authority

The UK Statistics Authority was established under the *Statistics and Registration Service Act 2007*. The Authority is an independent statutory body. It operates at arm's length from government as a non-ministerial department and reports directly to the UK Parliament, the Scottish Parliament, the National Assembly for Wales and the Northern Ireland Assembly.

The Authority has a statutory objective of promoting and safeguarding the production and publication of official statistics that 'serve the public good'. The public good includes:

- informing the public about social and economic matters
- assisting in the development and evaluation of public policy
- regulating quality and publicly challenging the misuse of statistics

The **Office for Statistics Regulation** is the regulatory arm of the UK Statistics Authority. It provides independent regulation of all official statistics produced in the UK.

Contact us

Tel: 0845 604 1857

Email: regulation@statistics.gov.uk

Website: www.statisticsauthority.gov.uk/osr/

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Foreword

Statistics are a foundation of our society, supporting the decisions we make at home and at work, as individuals and collectively. They are part of the lifeblood of democratic debate.

This Code aims to provide the framework to ensure that statistics are trustworthy, good quality, and are valuable – that they measure the things that most need to be measured.

The Code is based on a number of key principles.

First, those producing statistics must demonstrate their integrity and professionalism. Their behaviours and actions should reflect the public interest as shown in their public commitments, attitudes and processes. Above all, the confidentiality of individuals and of business information must be protected.

Secondly, statistics have to be based on the right data sources, with transparent judgements about definitions and methods, and judgements about the strengths and limitations of the statistics. Producers should demonstrate how they assure themselves that their statistics are robust and reliable.

Thirdly, statistics must be equally available to all, and not be released partially or to selected audiences. They should be aimed at society's important questions and be produced efficiently. Producers need to constantly connect to users so their needs can be anticipated and statistics kept up to date.

The Code that follows structures the principles into three groups around trustworthiness, quality and value. It lays out the practices that will allow them to be delivered, building on the experience that has been gained since the first version of the Code.

The Code is consistent with the UN's Fundamental Principles of Official Statistics¹, with Cabinet Office guidance to ministers² and with the broader Nolan principles of propriety in public life³.

¹ <http://www.unece.org/stats/archive/docs.fp.e.html>

² <http://www.parliament.uk/documents/upload/letter-brennan-090227.pdf>

³ <https://www.gov.uk/government/publications/the-7-principles-of-public-life>

The Code is not concerned only with official statistics. It provides a framework that can apply to a much wider range of data that have not traditionally been described as official statistics. Providers of these other types of data can draw on the Code as they judge appropriate to help support public confidence.

Statistics will serve the public good if producers follow the principles and practices set out in the Code.



Sir David Norgrove
Chair, UK Statistics Authority



Ed Humpherson
Director General for Regulation

Introduction

Official statistics are an essential public asset. They provide a window on society, the economy and on the work and performance of government. They are fundamental to the judgements and decisions made by the public, by government and by an enormous range of other organisations.

This Code plays an essential role in ensuring that statistics published by government command public confidence through demonstrating trustworthiness and providing high-quality statistics that enhance public value.

Why is this Code important?

- i. Data are an essential feature of contemporary government. All of the core activities of government involve data, including making decisions on individual cases; tracking the outcomes of policies; and deciding on the need for new policies. And these data serve a wider public purpose too: helping a huge range of people (citizens, parliamentarians, media, businesses, voluntary organisations) make sense of the world and make important decisions in their work and their life.
- ii. These data can be collected through surveys; can be collated through the operation of government systems like the tax or benefit systems; or can be collated by other organisations and provided to government. But these data are not always publicly useful in their own right. Data need to be processed into useful information using statistical techniques, and then that information can, through its application to specific policy areas, provide insight and form the evidence base for key decisions.
- iii. It is an important role of government to publish a significant amount of this information as statistics, because as statistics they inform a vast range of decisions across society. Government statistics produced in compliance with this Code are called “official statistics”. They are a public asset in two senses: because they serve to inform public judgements and debate; and because they are based on

information gathered from individual citizens, organisations and businesses. As such, they are part of the lifeblood of democracy.

- iv. Because statistics are a public asset, the public must have confidence in them. There is no point in publishing statistics that do not command confidence. So the Code is built around the commitments that support confidence.

What is the case for change?

- v. We are updating the Code to reflect the changing environment of statistics and data – with more abundant data used in ever more sophisticated ways. At the same time, there has been a growing interest in how statistics are used in public discussions.
- vi. To adapt to this environment, official statistics need to be more than just a series of numbers, because statistics have value when they serve public debate. This involves moving beyond a static collect and count approach, to thinking about the questions the public are asking, and the quality of the data themselves. So this refreshed Code embeds a more ambitious notion of the purpose and value of official statistics.
- vii. We do not underestimate the shift in approach that the Code demands. It is a shift from thinking of statistics as a static output to recognising that they provide a dynamic public service.

Who is the Code for?

- viii. The Code benefits all of us, as users and as citizens. Compliance with the Code can give confidence to all that statistics are of public value, are of high quality and are produced by departments and public bodies that can be trusted. The need to focus on the interests of users of statistics sits at the heart of the Code. The *beneficiaries* of the Code therefore are users of statistics and citizens more broadly.
- ix. This Code applies equally to UK Government and devolved administrations and should be *used* by all those in government who produce and use statistics, including statisticians, data scientists, analysts, researchers, policy-makers, communications officers and

advisers. All who are involved in the production and release of official statistics should use this Code to understand why and how to achieve trustworthiness, quality and value, and all working in government organisations must comply with the Code when they publish official statistics, including through social media.

- x. The release of meaningful statistics into the public domain requires the commitment of not just the statisticians, analysts, and Heads of Profession for Statistics, but also of ministers, policy and communications colleagues and senior leaders within an organisation.
- xi. The Code is consistent with the Civil Service core values⁴ of integrity, honesty, objectivity and impartiality, the Nolan principles⁵ and the Ministerial Code⁶.

What is the framework for this Code?

- xii. The framework is based on three pillars: Trustworthiness, Quality and Value. Together, these pillars support public confidence in statistics.
- xiii. **Trustworthiness** is about the processes, people and systems of government organisations. It is based on the ideas of Baroness Onora O'Neill⁷ around trust and trustworthiness. As Sir David Spiegelhalter said in his President's Address⁸ to the Royal Statistical Society in July 2017, no-one can just expect to be trusted. An organisation must provide testable evidence to demonstrate that they have the interests of the public at heart, by demonstrating competence, honesty and openness. The practices under the Trustworthiness pillar set out the key commitments that must be made to support independent statistics production.
- xiv. **Quality** is about the data, and how they are processed into statistics. Following the Bean Review of Economic Statistics⁹, the Code recognises that independence of production is not, on its own,

⁴ <https://www.gov.uk/government/publications/civil-service-code/the-civil-service-code>

⁵ <https://www.gov.uk/government/publications/the-7-principles-of-public-life>

⁶ <https://www.gov.uk/government/publications/ministerial-code>

⁷ <http://www.efc.be/human-rights-citizenship-democracy/trust-trustworthiness-transparency/>

⁸ <http://www.rss.org.uk/Images/PDF/events/2017/David-Spiegelhalter-presidential-address-2017.pdf>

⁹ <https://www.gov.uk/government/publications/independent-review-of-uk-economic-statistics-final-report>

enough to guarantee worthwhile statistics. The statistics must be the best available estimate of what they aim to measure, and should not mislead. To achieve this the data must be relevant, the methods must be sound and the assurance around the outputs must be clear. These aspects of statistical production are at the heart of the practices in the Quality pillar.

- xv. Value** follows the emphasis in the UN Fundamental Principles of Official Statistics on statistics that “meet the test of practical utility”. It defines what statistics must provide for the public. This includes a coherent picture, a focus on users, an emphasis on what questions the statistics answer and a focus on innovation as the world changes. Trustworthy processes to create high-quality data may not be useful to the public if the statistics are not accessible, do not address key questions, are inefficiently produced, and do not add value or provide insight. This is why the Value pillar is so important.
- xvi.** These pillars are conceptually distinct. But they support each other. A producer of official statistics is more likely to be perceived as trustworthy where the data they provide are clearly of high quality. High-quality statistics are much more likely to provide useful answers to key questions than lower-quality statistics. And there are some cross-cutting commitments. All aspects of the Code depend on transparency about processes, methodology and content. Coherence between different statistical outputs, and collaboration between producers, are also crucial and therefore apply across all three pillars.

How should the Code be applied?

- xvii.** This Code provides producers of official statistics with the detailed practices they must commit to when producing and releasing official statistics.
- xviii.** It provides all producers of statistics with a framework that can be applied in a proportionate and flexible way to improve public confidence. We have structured the practices under the three pillars so that their purpose is clear. Where there is any question about

how to interpret and implement a particular practice, the producer should judge what action best supports the delivery of the pillars and their associated principles. The Code is a tool to guide behaviours and not a prescriptive list of requirements.

- xix.** This Code focuses on the publication of official statistics. We are clear that it does not preclude publication of statistics in new formats, on new platforms and using new types of data. The practices of the Code are consistent with a wide range of alternative formats.
- xx.** The Code's pillars and principles resonate widely with people. They are universal and can apply to any situation where an organisation wants to publish data, evidence and statistics that command confidence. So we also see value for the public in wider application of its principles – for example, to the publication of open data. We will publish a companion guide¹⁰ to support the wider application of the Code's principles beyond official statistics within government, as well as for organisations outside government that provide statistical information to the public. The guide is part of our interactive Code, presenting case studies and links to relevant good practice guidance.

How can producers of official statistics demonstrate compliance?

- xxi.** Producers of official statistics must comply with this Code. They do so through their commitments to:
 - a. **Transparency:** This is at the core of many of the Code's practices, explaining what judgements producers have made about the data, methods, and their strengths and limitations, as well as what the statistics tell us about the world. These explanations are as important as the numbers themselves.
 - b. **Coherence:** To comply with this Code, producers must demonstrate that they do not simply publish a set of numbers, but that they explain how they relate to other data on the topic, and how they combine with other statistics to better explain the part of the world they describe.

¹⁰ <https://www.statisticsauthority.gov.uk/code-of-practice/>

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- c. Accountability: Producers show they comply with the Code by holding themselves accountable to adherence to clear publication policies – for example, to pre-announce official statistics and to stick to the date; and by notifying users promptly of errors and revisions.
 - d. A public focus: Producers show they comply when they communicate clearly to the public what questions the statistics address and what the statistics show about the world they describe and why.
- xxii.** Producers can further bring these actions together by making short statements of compliance with the pillars of Trustworthiness, Quality and Value.

How is compliance regulated?

- xxiii.** The UK Statistics Authority (the Authority) has a vital role in protecting statistics. The *Statistics and Registration Service Act 2007* gives the Authority the role of “promoting and safeguarding the production and publication of official statistics that serve the public good”. The Office for Statistics Regulation, as the regulatory arm of the Authority, is separate from producers of statistics and provides independent regulation of all official statistics produced in the UK.
- xxiv.** The Office for Statistics Regulation¹¹ will review compliance with the detailed principles and practices when assessing whether official statistics merit the National Statistics designation. The Office for Statistics Regulation will also conduct compliance checks¹² and systemic reviews¹³ based on how far producers comply with the Code’s principles and practices.
- xxv.** The framework of Trustworthiness, Quality and Value will also form the basis of regulatory judgements made by the Office for Statistics Regulation when commenting on the misuse of statistics.

¹¹ <https://www.statisticsauthority.gov.uk/osr/what-we-do/regulatory-approach/>

¹² <https://www.statisticsauthority.gov.uk/osr/assessment/programme-of-assessment/compliance-checks/>

¹³ <https://www.statisticsauthority.gov.uk/osr/monitoring/>

Code of Practice for Statistics

Trustworthiness

*Confidence in the people and organisations
that produce statistics and data*

Quality

*Data and methods that produce
assured statistics*

Value

*Statistics that support society's needs
for information*

The pillars and principles of the Code of Practice for Statistics

Trustworthiness

Confidence in the people and organisations that produce statistics and data

T1 Honesty and integrity

People in organisations that release statistics should be truthful, impartial and independent, and meet consistent standards of behaviour that reflect the wider public good.

T2 Independent decision making and leadership

Organisations should assign a Chief Statistician/Head of Profession for Statistics who upholds and advocates the standards of the Code, strives to improve statistics and data for the public good, and challenges their inappropriate use.

T3 Orderly release

Organisations should commit to releasing their statistics in an open and transparent manner that promotes confidence.

T4 Transparent processes and management

Organisations should have effective business processes and appropriate resources to support their statistical functions and be open about their plans, priorities and progress.

T5 Professional capability

People producing statistics should be appropriately skilled, trained and supported in their roles and professional development.

T6 Data governance

Organisations should look after people's information securely and manage data in ways that are consistent with relevant legislation and serve the public good.

Quality

Data and methods that produce assured statistics

Q1 Suitable data sources

Statistics should be based on the most appropriate data to meet intended uses. The impact of any data limitations for use should be assessed, minimised and explained.

Q2 Sound methods

Producers of statistics and data should use the best available methods and recognised standards, and be open about their decisions.

Q3 Assured quality

Producers of statistics and data should explain clearly how they assure themselves that statistics and data are accurate, reliable, coherent and timely.

Value

Statistics that support society's needs for information

V1 Relevance to users

Users of statistics and data should be at the centre of statistical production; their needs should be understood, their views sought and acted upon, and their use of statistics supported.

V2 Accessibility

Statistics and data should be equally available to all, not given to some people before others. They should be published at a sufficient level of detail and remain publicly available.

V3 Clarity and insight

Statistics and data should be presented clearly, explained meaningfully and provide authoritative insights that serve the public good.

V4 Innovation and improvement

Statistics producers should be creative and motivated to improve statistics and data, recognising the potential to harness technological advances for the development of all parts of the production and dissemination process.

V5 Efficiency and proportionality

Statistics and data should be published in forms that enable their reuse. Producers should use existing data wherever possible and only ask for more where justified.

The Principles and Practices

Trustworthiness

Confidence in the people and organisations that produce statistics and data

Trustworthiness is a product of the people, systems and processes within organisations that enable and support the production of statistics and data.

Trustworthiness comes from the organisation that produces statistics and data being well led, well managed and open, and the people who work there being impartial and skilled in what they do.

T1 Honesty and integrity

People in organisations that release statistics should be truthful, impartial and independent, and meet consistent standards of behaviour that reflect the wider public good.

- T1.1** Everyone that works in organisations producing official statistics should handle and use statistics and data with honesty and integrity, guided by established principles of appropriate behaviour in public life.
- T1.2** The collection, access, use and sharing of statistics and data should be ethical and for the public good. Those producing and releasing statistics should be free from conflicts of interest, including political and commercial pressures, that may influence the production, release and sharing of the statistics and data.
- T1.3** No action should be taken, nor public statement made, that might undermine confidence in the independence of the statistics when released.
- T1.4** Statistics, data and explanatory material should be presented impartially and objectively.

T2 Independent decision making and leadership

Organisations should assign a Chief Statistician/Head of Profession for Statistics who upholds and advocates the standards of the Code, strives to improve statistics and data for the public good, and challenges their inappropriate use.

- T2.1** The Chief Statistician/Head of Profession for Statistics should have sole authority for deciding on methods, standards and procedures, and on the content and timing of the release of regular and ad hoc official statistics. This should include: determining the need for new official statistics, ceasing the release of official statistics, and the development of experimental statistics.
- T2.2** The Chief Statistician/Head of Profession for Statistics should actively advocate the application of the Code pillars of Trustworthiness, Quality and Value to all those involved in producing, publishing and using statistics and data in the organisation.
- T2.3** As the principal adviser and accountable officer on statistical matters within the organisation, the views of the Chief Statistician/Head of Profession for Statistics should be considered in all matters relating to statistics and data.
- T2.4** The Chief Statistician/Head of Profession for Statistics should encourage collaboration, harmonisation and innovation with other organisations, both inside and outside government and across professional groups.
- T2.5** The Chief Statistician/Head of Profession for Statistics should challenge the inappropriate use of statistics and data and reflect upon how further misuse can be prevented.
- T2.6** The Chief Statistician/Head of Profession for Statistics should report to the National Statistician on professional matters, or where in a devolved administration, to the Chief Statistician for the relevant administration.

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- T2.7** The Chief Statistician/Head of Profession for Statistics should report immediately any concerns regarding professional independence and accidental or wrongful release of statistics to the National Statistician. In devolved administrations, the Chief Statistician for the relevant administration should be informed first, except where it is inappropriate to do so.
 - T2.8** The Chief Statistician/Head of Profession for Statistics should report any concerns about continuing to meet the principles of the Code to the Director General for Regulation.
 - T2.9** In rare circumstances, an organisation may not be able to implement a specific practice of the Code. In this situation, the Chief Statistician/Head of Profession for Statistics should request an exemption from that practice of the Code from the Director General for Regulation and publish details of the exemption.

T3 Orderly release

Organisations should commit to releasing their statistics in an open and transparent manner that promotes public confidence.

- T3.1** The release of both regular and ad hoc official statistics should be pre-announced through a 12-month release calendar, giving a specific release date at least four weeks in advance where practicable.
- T3.2** Changes to pre-announced release dates or times should be agreed by the Chief Statistician/Head of Profession for Statistics. Any changes should be announced promptly, explaining the reasons for the change.
- T3.3** Access to statistics before their public release should be limited to those involved in the production of the statistics and the preparation of the release, and for quality assurance and operational purposes. Accurate records of those who have access before they are finalised should be maintained.

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- T3.4** The circulation of statistics in their final form ahead of their publication should be restricted to eligible recipients, in line with the rules and principles on pre-release access set out in legislation for the UK and devolved administrations. The details of those granted access should be recorded, together with clear justifications for access. No indication of the statistics should be made public and the statistics should not be given to any other party without prior permission for access. The list of recipients should be reviewed regularly and kept to a minimum.
 - T3.5** Statistics and data should be released on a timely basis and at intervals that meet the needs of users as far as practicable. The statistics should be released as soon as they are considered ready, under the guidance of the Chief Statistician/Head of Profession for Statistics.
 - T3.6** Statistics should be released to all users at 9.30am on a weekday.
 - T3.7** The name and contact information of the lead statistician or analyst responsible for production should be included in the published statistics.
 - T3.8** Policy, press or ministerial statements referring to regular or ad hoc official statistics should be issued separately from, and contain a prominent link to, the source statistics. The statements should meet basic professional standards of statistical presentation, including accuracy, clarity and impartiality. The lead statistician or analyst should advise on the appropriate use of the statistics within these statements.
 - T3.9** Scheduled revisions or unscheduled corrections to the statistics and data should be released as soon as practicable. The changes should be handled transparently in line with a published policy.

T4 Transparent processes and management

Organisations should have effective business processes and appropriate resources to support their statistical functions and be open about their plans, priorities and progress.

- T4.1** Organisations should be transparent about their approach to public engagement with users, potential users, and other stakeholders with an interest in the public good served by the statistics.
- T4.2** A work programme should be established and regularly reviewed. Statistics producers should be open about progress towards meeting priorities and objectives. Users and other stakeholders should be involved to help prioritise statistical plans.
- T4.3** Sufficient human, financial and technological resources should be provided to deliver statistical services that serve the public good.
- T4.4** Good business practices should be maintained in the use of resources. Where appropriate, statistics producers should take opportunities to share resources and collaborate to achieve common goals and produce coherent statistics.
- T4.5** Organisations should be open about their commitment to quality and make clear their approach to quality management. They should ensure that the organisational structure and tools are in place to manage quality effectively, and promote and adopt appropriate quality standards.
- T4.6** Independent measures, such as internal and external audit, peer review and National Statistics Quality Reviews, should be used to evaluate the effectiveness of statistical processes. Statistics producers should be open about identified areas for improvement.

T5 Professional capability

People producing statistics should be appropriately skilled, trained and supported in their roles and professional development.

- T5.1** Those involved in producing and releasing statistics and data should demonstrate sound judgement. They should act professionally, work collaboratively, and behave responsibly.
- T5.2** The roles and responsibilities of those involved in the production of statistics and data should be clearly defined with supporting guidance provided to help staff carry out their roles.
- T5.3** Suitably skilled staff should be recruited using a relevant professional competency framework as appropriate and with consideration given to future organisational needs.
- T5.4** All staff involved in the production of statistics and data should be provided with training on secure data handling and quality management.
- T5.5** Staff should be provided with the time and resources required to develop their skills, knowledge and competencies.
- T5.6** Staff should seek statistical advice and guidance from the Chief Statistician/Head of Profession for Statistics.

T6 Data governance

Organisations should look after people's information securely and manage data in ways that are consistent with relevant legislation and serve the public good.

- T6.1** All statutory obligations governing the collection of data, confidentiality, data sharing, data linking and release should be followed. Relevant nationally- and internationally-endorsed guidelines should be considered as appropriate. Transparent data management arrangements should be established and relevant ethics standards met.

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- T6.2** The rights of data subjects must be considered and managed at all times, in ways that are consistent with data protection legislation. When collecting data for statistical purposes, those providing their information should be informed in a clear and open way about how that information will be used and protected.
- T6.3** Organisations, and those acting on their behalf, should apply best practice in the management of data and data services, including collection, storage, transmission, access, and analysis. Personal information should be kept safe and secure, applying relevant security standards and keeping pace with changing circumstances such as advances in technology.
- T6.4** Organisations should be transparent and accountable about the procedures used to protect personal data when preparing the statistics and data, including the choices made in balancing competing interests. Appropriate disclosure control methods should be applied before releasing statistics and data. Appropriate protocols should be applied to approved researchers accessing statistical microdata.
- T6.5** Regular reviews should be conducted across the organisation, to ensure that data management and sharing arrangements are appropriately robust.

Quality

Data and methods that produce assured statistics

Quality means that statistics fit their intended uses, are based on appropriate data and methods, and are not materially misleading.

Quality requires skilled professional judgement about collecting, preparing, analysing and publishing statistics and data in ways that meet the needs of people who want to use the statistics.

Q1 Suitable data sources

Statistics should be based on the most appropriate data to meet intended uses. The impact of any data limitations for use should be assessed, minimised and explained.

- Q1.1** Statistics should be based on data sources that are appropriate for the intended uses. The data sources should be based on definitions and concepts that are suitable approximations of what the statistics aim to measure, or that can be processed to become suitable for producing the statistics.
- Q1.2** Statistics producers should establish and maintain constructive relationships with those involved in the collection, recording, supply, linking and quality assurance of data, wherever possible.
- Q1.3** A clear statement of data requirements should be shared with the organisations that provide that data, setting out decisions on timing, definitions and format of data supply, and explaining how and why the data will be used.
- Q1.4** Source data should be coherent across different levels of aggregation, consistent over time, and comparable between geographical areas, whenever possible.
- Q1.5** The nature of data sources, and how and why they were selected, should be explained. Potential bias, uncertainty and possible

distortive effects in the source data should be identified and the extent of any impact on the statistics should be clearly reported.

- Q1.6** The causes of limitations in data sources should be identified and addressed where possible. Statistics producers should be open about the extent to which limitations can be overcome and the impact on the statistics.
- Q1.7** The impact of changes in the circumstances and context of a data source on the statistics over time should be evaluated. Reasons for any lack of consistency and related implications for use should be clearly explained to users.

Q2 Sound methods

Producers of statistics and data should use the best available methods and recognised standards, and be open about their decisions.

- Q2.1** Methods and processes should be based on national or international good practice, scientific principles, or established professional consensus.
- Q2.2** Statistics, data and metadata should be compiled using recognised standards, classifications and definitions. They should be harmonised to be consistent and coherent with related statistics and data where possible. Users should be provided with reasons for deviations from these standards and explanations of any related implications for use.
- Q2.3** Statistics producers should be transparent about methods used, giving the reasons for their selection. The level of detail of the explanation should be proportionate to the complexity of the methods chosen and reflect the needs of different types of users and uses.
- Q2.4** Relevant limitations arising from the methods and their application, including bias and uncertainty, should be identified and explained to users. An indication of their likely scale and the steps taken to reduce their impact on the statistics should be included in the explanation.

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- Q2.5** Producers of statistics and data should provide users with advance notice about changes to methods, explaining why the changes are being made. A consistent time series should be produced, with back series provided where possible. Users should be made aware of the nature and extent of the change.
 - Q2.6** Statistics producers should collaborate with topic and methods experts and producers of related statistics and data wherever possible.

Q3 Assured quality

Producers of statistics and data should explain clearly how they assure themselves that statistics and data are accurate, reliable, coherent and timely.

- Q3.1** Statistics should be produced to a level of quality that meets users' needs. The strengths and limitations of the statistics and data should be considered in relation to different uses, and clearly explained alongside the statistics.
- Q3.2** Quality assurance arrangements should be proportionate to the nature of the quality issues and the importance of the statistics in serving the public good. Statistics producers should be transparent about the quality assurance approach taken throughout the preparation of the statistics. The risk and impact of quality issues on statistics and data should be minimised to an acceptable level for the intended uses.
- Q3.3** The quality of the statistics and data, including their accuracy and reliability, coherence and comparability, and timeliness and punctuality, should be monitored and reported regularly. Statistics should be validated through comparison with other relevant statistics and data sources. The extent and nature of any uncertainty in the estimates should be clearly explained.
- Q3.4** Scheduled revisions, or unscheduled corrections that result from errors, should be explained alongside the statistics, being clear on the scale, nature, cause and impact.

Q3.5 Systematic and periodic reviews on the strengths and limitations in the data and methods should be undertaken. Statistics producers should be open in addressing the issues identified and be transparent about their decisions on whether to act.

Value

Statistics that support society's needs for information

Value means that the statistics and data are useful, easy to access, remain relevant, and support understanding of important issues.

Value includes improving existing statistics and creating new ones through discussion and collaboration with stakeholders, and being responsible and efficient in the collection, sharing and use of statistical information.

V1 Relevance to users

Users of statistics and data should be at the centre of statistical production; their needs should be understood, their views sought and acted on, and their use of statistics supported.

- V1.1** Statistics producers should maintain and refresh their understanding of the use and potential use of the statistics and data. They should consider the ways in which the statistics might be used and the nature of the decisions that are or could be informed by them.
- V1.2** Statistics producers should use appropriate ways to increase awareness of the statistics and data, communicate effectively with the widest possible audience, and support users and potential users in identifying relevant statistics to meet their needs.
- V1.3** User satisfaction with the relevance and usefulness of the statistics and data should be reviewed routinely. This should consider the timeliness, accessibility, clarity and accuracy of the statistics and data.
- V1.4** Statistics producers should engage publicly through a variety of means that are appropriate to the needs of different audiences and proportionate to the potential of the statistics to serve the public good. An open dialogue should be maintained using proactive formal and informal engagement to listen to the views

of new and established contacts. Statistics producers should undertake public engagement collaboratively wherever possible, working in partnership with policy makers and other statistics producers to obtain the views of stakeholders.

- V1.5** The views received from users, potential users and other stakeholders should be addressed, where practicable. Statistics producers should consider whether to produce new statistics to meet identified information gaps. Feedback should be provided to them about how their needs can and cannot be met, being transparent about reasons for the decisions made and any constraints.
- V1.6** Statistics producers should periodically review whether to continue, discontinue, adapt or to provide the statistics through other means, in discussion with users and other stakeholders.

V2 Accessibility

Statistics and data should be equally available to all, not given to some people before others. They should be published at a sufficient level of detail and remain publicly available.

- V2.1** Statistics producers must provide free and equal access to regular and ad hoc official statistics.
- V2.2** Statistics, data and related guidance should be easily accessible to users. The needs of different types of users and potential users should be considered when determining ways of presenting and releasing the statistics and data.
- V2.3** The needs of people with disabilities must be considered. Statistics and data should be released using accessible communication formats and means which should work with the most commonly-used assistive technologies.
- V2.4** Statistics, data and metadata, including those available through data services, should be released at the greatest level of detail that is practicable to meet user needs. They should be consistent with common data standards and protocols wherever possible.

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- V2.5** Open and transparent information on supplementary statistical services should be made available. Where organisations decide to charge for supplementary analyses, they should make the pricing policy publicly available.
 - V2.6** Statistics, data and metadata should continue to be publicly available, including when organisational websites are changed, and be archived as required in line with relevant legislation.

V3 Clarity and insight

Statistics and data should be presented clearly, explained meaningfully and provide authoritative insights that serve the public good.

- V3.1** Statistics, data and explanatory material should be relevant and presented in a clear, unambiguous way that supports and promotes use by all types of users.
- V3.2** Statistics should be accompanied by a clear description of the main statistical messages that explains the relevance and meaning of the statistics in a way that is not materially misleading. They should be illustrated by suitable data visualisations, including charts, maps and tables, where this helps aid appropriate interpretation of the statistics.
- V3.3** Comparisons that support the appropriate interpretation of the statistics, including within the UK and internationally, should be provided where useful. Users should be signposted to other related statistics and data sources and the extent of consistency and comparability with these sources should be explained to users.
- V3.4** Advice should be given about the appropriate use of the statistics and data. The lead statistician or analyst should be visible and approachable to users, be encouraged to explain the statistics publicly and support their use.
- V3.5** Statistics producers should collaborate with experts and producers of related statistics and data to provide a comprehensive and coherent narrative for the statistical topic.

V4 Innovation and improvement

Statistics producers should be creative and motivated to improve statistics and data, recognising the potential to harness technological advances for the development of all parts of the production and dissemination process.

- V4.1** Statistics producers should keep up to date with developments that can improve statistics and data. They should be transparent in conducting their development activities, and be open about the outcomes and longer-term development plans.
- V4.2** Statistics producers should consider testing and releasing new official statistics initially as experimental statistics, under the guidance of the Chief Statistician/Head of Profession for Statistics.
- V4.3** Users should be involved in the ongoing development of statistics and data, exploring and testing statistical innovations, so that the statistics remain relevant and useful.
- V4.4** Statistics producers should seek to collaborate with other producers, including within the UK and internationally, when developing their statistics, overcoming practical obstacles, and sharing best practice.
- V4.5** Statistics producers should keep up to date with developments that might improve methods and quality. They should assess the added value of potential improvements and consider the likely impact on the statistics, including in relation to comparability and coherence.
- V4.6** Producers should commit to improve data presentation, enhance insight, and better meet the needs of different types of users and potential users in the dissemination of their statistics and data.
- V4.7** New and innovative ways to engage users, potential users and other stakeholders should be considered and adopted as appropriate.

V5 Efficiency and proportionality

Statistics and data should be published in forms that enable their reuse. Producers should use existing data wherever possible and only ask for more where justified.

- V5.1** Opportunities for data sharing, data linkage, cross-analysis of sources, and the reuse of data should be taken wherever feasible. Recognised standards, classifications, definitions, and methods should be applied to data wherever possible.
- V5.2** Statistics producers should make supplementary analyses available for reuse where practicable and consider the release of statistics and data that are the subject of regular queries during statistics planning.
- V5.3** The suitability of existing data, including administrative, open and privately-held data, should be assessed before undertaking a new data collection.
- V5.4** Voluntary participation in statistical data collection should be sought, rather than using statutory powers, wherever possible.
- V5.5** Statistics producers should be transparent in their approach to monitoring and reducing the burden on those providing their information, and on those involved in collecting, recording and supplying data. The burden imposed should be proportionate to the benefits arising from the use of the statistics.
- V5.6** Statistics producers should analyse the impact of new data requirements or extending existing collections on those involved in the collection, recording and supply of data, against the potential value of the statistics in serving the public good.

Annex

Supplementary notes on the Code

- i. The Code is specific but, in many cases, its principles and practices need interpretation and professional judgement. The National Statistician and the Office for Statistics Regulation will provide supplementary guidance to assist those who produce official statistics. The Chief Statistician/Head of Profession for Statistics is responsible for ensuring the principles and practices in this Code are met for official statistics and National Statistics. Within every organisation there should be clear lines of accountability for observance of the Code to underpin effective statistical production.
- ii. This Code is consistent with the United Nations Fundamental Principles of Official Statistics and the European Statistics Code of Practice.
- iii. The Code may be subject to future updates by the Office for Statistics Regulation, informed by feedback from users of the Code and the needs of others with an interest in UK statistics.

Glossary of terms

Code pillars

Trustworthiness – Confidence in the people and organisations that produce statistics and data. Trustworthiness is a product of the people, systems and processes within organisations that enable and support the production of statistics and data. Trustworthiness comes from the organisation that produces statistics and data being well led, well managed and open, and the people who work there being impartial and skilled in what they do.

Quality – Data and methods that produce assured statistics. Quality means that statistics fit their intended uses, are based on appropriate data and methods, and are not materially misleading. Quality requires skilled professional judgement about collecting, preparing, analysing and publishing statistics and data in ways that meet the needs of people who want to use the statistics.

Value – Statistics that support society’s needs for information. Value means that the statistics and data are useful, easy to access, remain relevant, and support understanding of important issues. Value includes improving existing statistics and creating new ones through discussion and collaboration with stakeholders, and being responsible and efficient in the collection, sharing and use of statistical information.

Roles

Approved researcher – Statistical analysts that have undergone an accreditation process to obtain managed access to statistical data that cannot be published openly.

Data subject – Person whose personal data is being collected, processed and stored. Under relevant legislation data subjects do not include the deceased or those who cannot be identified or distinguished from others.

Eligible recipients – Persons within government granted pre-release access to statistical releases in their final form ahead of their publication in line with Pre-Release Access to Official Statistics legislation.

Chief Statisticians for the devolved administrations – The principal advisers on official statistics in their respective Administrations, with overall responsibility for the implementation and co-ordination of professional statistical standards and for ensuring adherence with the Code.

In Northern Ireland the Chief Statistician is the Registrar General and Chief Executive of the Northern Ireland Statistics and Research Agency.

The Chief Statistician in the Scottish Government works in consultation with the Registrar General for Scotland and the Head of Profession for Health and Care Statistics.

The Chief Statistician in the Welsh Government is responsible for professional statistical standards in Wales.

Chief Statistician – The accountable officer in the official statistics producer organisation that is given executive responsibility for decision making on statistical matters. In some organisations this officer will also be the Head of Profession for Statistics; in others the Chief Statistician will delegate responsibility for professional matters to the Head of Profession for Statistics.

Director General for Regulation – Leads the Office for Statistics Regulation and has a statutory role as the Authority’s Head of Assessment, and principal adviser on the assessment and reassessment of official statistics and their compliance with the Code of Practice. The Director General for Regulation is a member of the Board of the UK Statistics Authority, reports directly to the Chair of the Authority, and operates independently from the National Statistician and all statistical producers.

Head of Profession for Statistics – Heads of Profession for Statistics are responsible for overseeing their own organisation’s statistical functions, and meeting their organisation’s statistical needs. They are also responsible for implementing the provisions set out in statistical legislation and the Code of Practice, both within their own organisation and more generally across the UK statistical system. Heads of Profession play a key role in building public trust in official statistics.

Lead official in an arm’s length body – The senior statistician or analyst in an arm’s length body that has been given the responsibility to lead on professional matters by the organisation and liaises with the Head of Profession for Statistics in a sponsoring department.

Lead statistician or analyst – The person who is professionally accountable for the production of statistical outputs.

National Statistician – Head of the Government Statistical Service and the government’s principal adviser on official statistics. The National Statistician is an executive member of the UK Statistics Authority Board and has executive responsibility for the Office for National Statistics as the Authority’s Chief Executive and Permanent Secretary.

Statistics

Ad hoc official statistics – Statistical analyses produced and released where there is a pressing need for official statistics in the public interest.

Experimental statistics – A subset of newly developed or innovative official statistics undergoing evaluation. Experimental statistics are developed under the guidance of the Head of Profession for Statistics and are

published in order to involve users and stakeholders in the assessment of their suitability and quality at an early stage.

National Statistics – Official statistics assessed as fully compliant with the Code are given National Statistics status by the Office for Statistics Regulation, in line with the *Statistics and Registration Service Act 2007*.

Official statistics – Statistics produced by crown bodies, those acting on behalf of crown bodies, or those specified in statutory orders, as defined in section 6 of the *Statistics and Registration Service Act 2007*.

Types of information

Data – Characteristics of facts or information, usually numerical, such as observations, opinions, events or transactions, from which conclusions may be drawn. They are the product of collecting information (source data). They can also be the subject of statistical processing (processed data).

Data services – Internet-based tools and resources that enable access to a variety of curated data and statistics. The statistics and data made available through data services are often compiled using common data standards, and supported by metadata and other guidance material.

Explanatory material/related guidance – Information that supports the use and understanding of the statistics and data, and is available with the statistics; describing, for example, the sources, method, quality, analysis, and providing a narrative about the main findings, policy/operational context and use.

Metadata – Information or data that defines and describes other data. This can be to help with the discovery and identification of data, for example, through naming and labelling; by describing different data types, relationships with other data and their characteristics; or to help with data management by indicating when and how it was created, different file types or any other technical information.

Statistical microdata – Sets of records containing information on individual persons, households or businesses which are used in the production of aggregate statistics. Access to microdata is often controlled to protect the confidentiality of individual persons or businesses.

Statistics – A collection of measures about a particular attribute compiled from a set of data. Statistics are used for making generalisations or inferring conclusions about particular attributes, at an aggregate level, for example, about a particular subset of the population.

Types of data – Data may be collected in different ways, including: census, surveys (such as sample surveys of households or businesses), returns from administrative systems, as open data from the large-scale release of government department operational data, and privately-held data from individual private sector organisations (such as business operational data, and data available through web-scraping).

Other terms

Common data standards, classifications and protocols – Agreed definitions, procedures and ways of working with statistics and data that facilitate their consistency, comparability, coherence and reuse.

Ethical – In accordance with the rules or standards for right conduct or practice, especially in terms of the standards of a profession.

Ethics standards – Best practice frameworks that address the ethical impact and implications of research and data science. They apply in areas which include, but are not limited to: privacy, anonymity, transparency, trust, responsibility, data collection, curation, analysis and use.

Limitations – Inherent weaknesses in the quality of statistics, data or statistical methods that should be understood in order to ensure their appropriate use and interpretation.

Public good – Defined in the *Statistics and Registration Service Act 2007* in terms of the Authority's statutory objective to promote and safeguard the production and publication of official statistics that serve the public good. This includes informing the public about social and economic matters; assisting in the development and evaluation of public policy; and regulating quality and publicly challenging the misuse of statistics.

Quality standards and guidance – Documentation produced to ensure that statistics and data are produced to consistent and appropriate levels of quality and are suitable for their intended uses.

Relevant legislation – Laws passed by the UK or devolved legislatures that have a direct impact upon the design, collection, processing, storage, publication or use of statistics and data.

Scheduled revisions – Planned amendments to published statistics in order to improve quality by incorporating additional data that were unavailable at the point of initial publication.

Security standards – Standards relating to disciplines such as information security, IT service management, IT governance and business continuity, that can be implemented in order to achieve externally assessed and certified compliance.

Statistical services – Include providing information, advice and technical assistance in relation to statistics; providing quality assessment in relation to statistics; conducting statistical surveys and analysis; collecting, adapting and developing data.

Unscheduled corrections – Amendments made to published statistics in response to the identification of errors following their initial publication.

Voluntary application – We advocate the framework of Trustworthiness, Quality and Value to be considered by official bodies and by organisations outside government in relation to the publication of statistics and data that have the potential to enhance debate. This approach is flexible, and entirely optional. We consider that such an ambition has the potential to raise standards and to enhance the profile of the Code.

