



Office for
Statistics Regulation



UK Statistics
Authority

**Assessment of compliance with the Code of
Practice for Official Statistics**

DCMS Sectors Economic Estimates

*(produced by the Department for Digital, Culture,
Media & Sport)*

Office for Statistics Regulation

We provide independent regulation of all official statistics produced in the UK. Statistics are an essential public asset. We aim to enhance public confidence in the trustworthiness, quality and value of statistics produced by government.

We do this by setting the standards they must meet in the *Code of Practice for Statistics*. We ensure that producers of government statistics uphold these standards by conducting assessments against the *Code*. Those which meet the standards are given National Statistics status, indicating that they meet the highest standards of trustworthiness, quality and value. We also report publicly on system-wide issues and on the way statistics are being used, celebrating when the standards are upheld and challenging publicly when they are not.

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Executive Summary

Judgement on National Statistics Status

ES.1 The Office for Statistics Regulation judges that, subject to the implementation of the requirements in this report, the DCMS Sectors Economic Estimates can be designated National Statistics. The designation of the Trade statistics as National Statistics is additionally contingent upon the related Office for National Statistics (ONS) output, UK Trade Statistics, being redesignated as a National Statistic.

Key Findings

Public Value

- ES.2 Over recent years, DCMS has strived to improve the breadth and depth of these statistics, along with the presentation of their outputs. It has continuously developed and published new indicators to meet user needs. As a result, DCMS produces informative, easy-to-use statistics about the economic impact of the sectors for which it has policy responsibility.
- ES.3 The statistics team at DCMS has built strong relationships with those with an interest in these statistics, and users of the statistics spoke highly of their engagement with DCMS. DCMS has good relationships with many organisations producing similar outputs. However, even greater collaboration and harmonisation between producers could improve the coherence, and hence trustworthiness, of the statistical landscape of these policy areas. DCMS could further improve the value of these statistics by improving the explanations of the overlap between the sectors, and by providing more information about these other, similar, statistics. This would help users to find the most appropriate statistics for their needs, and ensure they are interpreted correctly.
- ES.4 The headline messages from these statistics reach wide audiences through mainstream and social media, whilst the detailed breakdowns of data have an active, interested, but more niche user base. DCMS has a good understanding of the uses and users of these statistics, and has been pro-active in seeking and responding to feedback from them. However, DCMS could go further to meet their needs by exploring ways to provide socioeconomic breakdowns for their smallest sub-sectors.

Quality

- ES.5 International industrial classifications do not describe many parts of the modern UK economy very well, including significant parts covered by DCMS. Despite this, the statistics team at DCMS has been committed to developing statistics, using innovative methods drawing on industry and statistical expertise, to meet the needs of users. The development of these statistics has involved two main strands of work, as follows.
- ES.6 The first has been in defining the DCMS sectors, based on Standard Industrial Classification (SIC) codes. These have developed over time, in a slightly piecemeal way, based on the views of sector working groups, international best practice, internal DCMS policy and pre-existing output from ONS. This approach means that the different sectors are not comparable, and that some sectors have much broader definitions than others, which is likely to bias the estimates. DCMS could improve the usefulness of the statistics by carrying out a full review of consistency and comparability of the sector and sub-sector definitions and refresh the definitions as appropriate.
- ES.7 The second strand of work has been in developing the various economic measures. DCMS has endeavoured to use official sources of data, and to draw expertise from ONS for developing the more complex measures, such as GVA. This means for most releases, the

statistics can be compared to other national data, for example presenting employment in DCMS sectors as a percentage of all UK employment.

Trustworthiness

ES.8 In choosing to develop the underpinning analysis for publication as official statistics, and by putting the outputs forward for assessment as National Statistics, DCMS is demonstrating its commitment to producing trusted statistics with integrity. However, statistics which aim to demonstrate the impact of sectors of the economy inherently risk being open to bias, as those with the knowledge to define the sectors and sub-sectors have the most to gain from seeing their sector grow. DCMS statisticians have been cautious when developing new methodologies, for example when selecting product codes to use in Trade statistics, to reduce the risk of estimates over-stating the economic impact of any given sector or sub-sector. However, when reviewing the definitions, DCMS should seek independent advice – for example from ONS – to ensure the best approach is taken to reduce any bias.

Next Steps

- ES.9 Reflecting the importance of the NS designation, and to provide users with confidence in the direction of travel, we expect DCMS to publish its plan of proposed actions to increase public value, quality and trustworthiness as a result of this Assessment.
- ES.10 We expect DCMS to report back to us by end-February 2019, whereupon the Authority will decide whether to confirm the NS designation, based upon OSR's advice.

Chapter 1: Public Value

Introduction

- 1.1 Value means that the statistics and other numerical information are accessible, remain relevant and benefit society; helping the public to understand important issues and answer key questions.
- 1.2 Value is a product of the interface between the statistics or other numerical information and those who use them as a basis for forming judgements.

Findings

- 1.3 The statistics team at DCMS developed the DCMS Sectors Economic Estimates in response to a departmental need for information about the impact of DCMS sectors on the economy. The primary use of the statistics is for the department to understand and analyse the economic impact of its policy areas. However, the statistics have a wider public value. Trade and sector bodies use the statistics to understand how their industries are changing, and to inform funding bids. Regionally they are used to analyse the impact of policies on local areas. The media use the statistics to give the public context in broader news stories.
- 1.4 Across the range of users, the economic estimates enable advocacy for, and celebration of, these sectors and enable analysis of the impact of Brexit in these areas.

Collaboration

- 1.5 Over time, DCMS has evolved these statistics in response to users' needs. We spoke to a variety of users of the statistics, both within and external to government. Many of them had had contact with the team and DCMS, and spoke very highly about the lead statistician and others they had worked with.
- 1.6 Users told us about a wide range of alternative outputs, using a variety of methods and data sources, that aim to measure the economic impact of a variety of the DCMS sectors. They had mixed views on the extent to which DCMS's outputs alone met their various needs for economic data about the sectors, without referring to these other sources. For example, for those interested in the film industry, DCMS's economic estimates of the 'Film, TV and Music' industry provide useful context. However, the granularity provided by the British Film Institute statistics¹ on revenue of, and employment in, the film industry is also required. DCMS works closely with some of the organisations producing these alternative outputs. For example, DCMS supports its Arm's Length Bodies, including the British Film Institute, to understand their responsibilities as producers of statistics under the Code of Practice.
- 1.7 However, there is an opportunity for DCMS to help users to get greater value and insight from the available statistics. DCMS should explain the alternative sources of information available, and when different ones might add useful additional insight. Through a greater leadership role, DCMS should encourage producers of alternative outputs to follow and share best practice, and to communicate clearly to users about the different sources of information available. For example, DCMS could advocate voluntary compliance² with the Code of Practice for those bodies that are not Official Statistics producers but are regularly producing statistics to inform public debate.

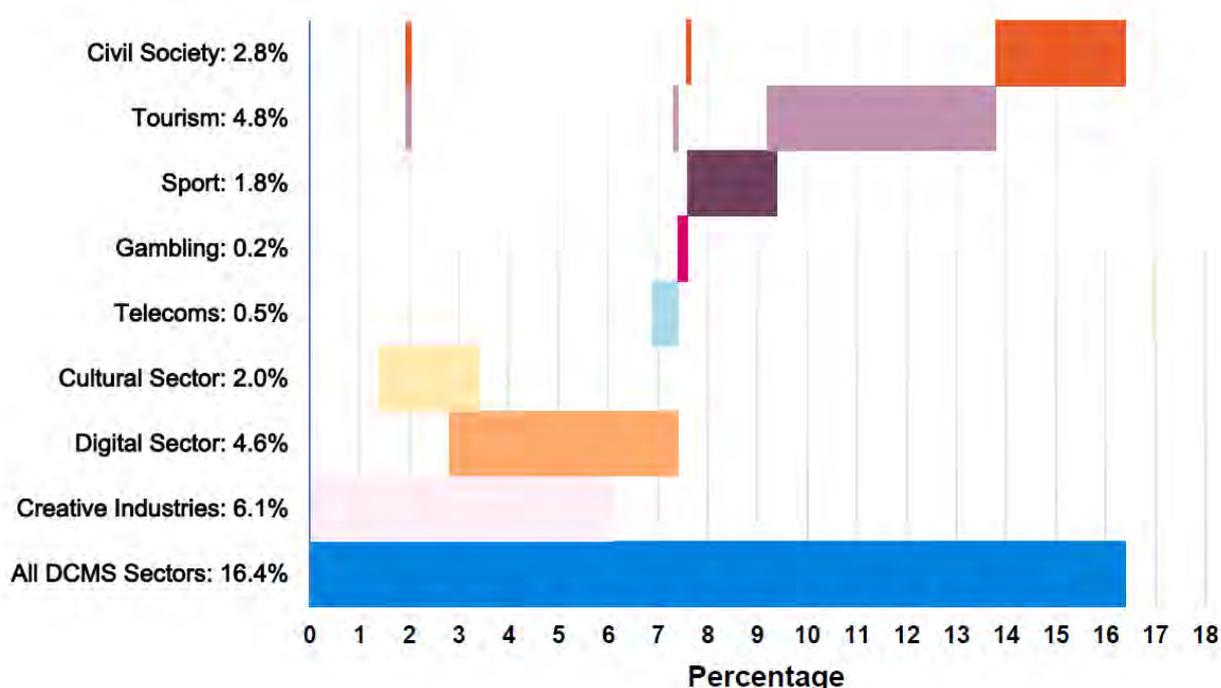
¹<https://www.bfi.org.uk/education-research/film-industry-statistics-research/statistical-yearbook>

²<https://www.statisticsauthority.gov.uk/code-of-practice/voluntary-application-of-the-code/>

Presentation and commentary

- 1.8 DCMS has continuously evolved its outputs to make them interesting and engaging. Recently it invited the Government Statistical Service Good Practice Team³ to review the presentation of its outputs, and in response to the feedback, DCMS has improved the layout and streamlined its publications. The improved publications make it easier for users to draw out headline messages and navigate to the statistics relevant to them.
- 1.9 The outputs, however, do not provide sufficient information to enable users to interpret the overlap between the different sectors – particularly the Cultural, Digital and Creative industries. Figure 1.1, below, is included in the Employment publication. The bar chart aims to show the size of the overlap between different sectors in terms of the proportion of employees who work in multiple sectors. Whilst the chart is useful for demonstrating how the DCMS sectors break down the chart it does not go far enough to help users understand why these overlaps exist and how they impact interpretation of the statistics. Based on detailed definitions included in the DCMS Sectors Economic Estimates methodology document⁴, we have produced Figure 1.2 to help visualise the overlap between the sectors.

Figure 1.1 Employment of DCMS Sectors as a percentage of total UK employment (%): 2017



Source: DCMS Sectors Economic Estimates 2017: Employment

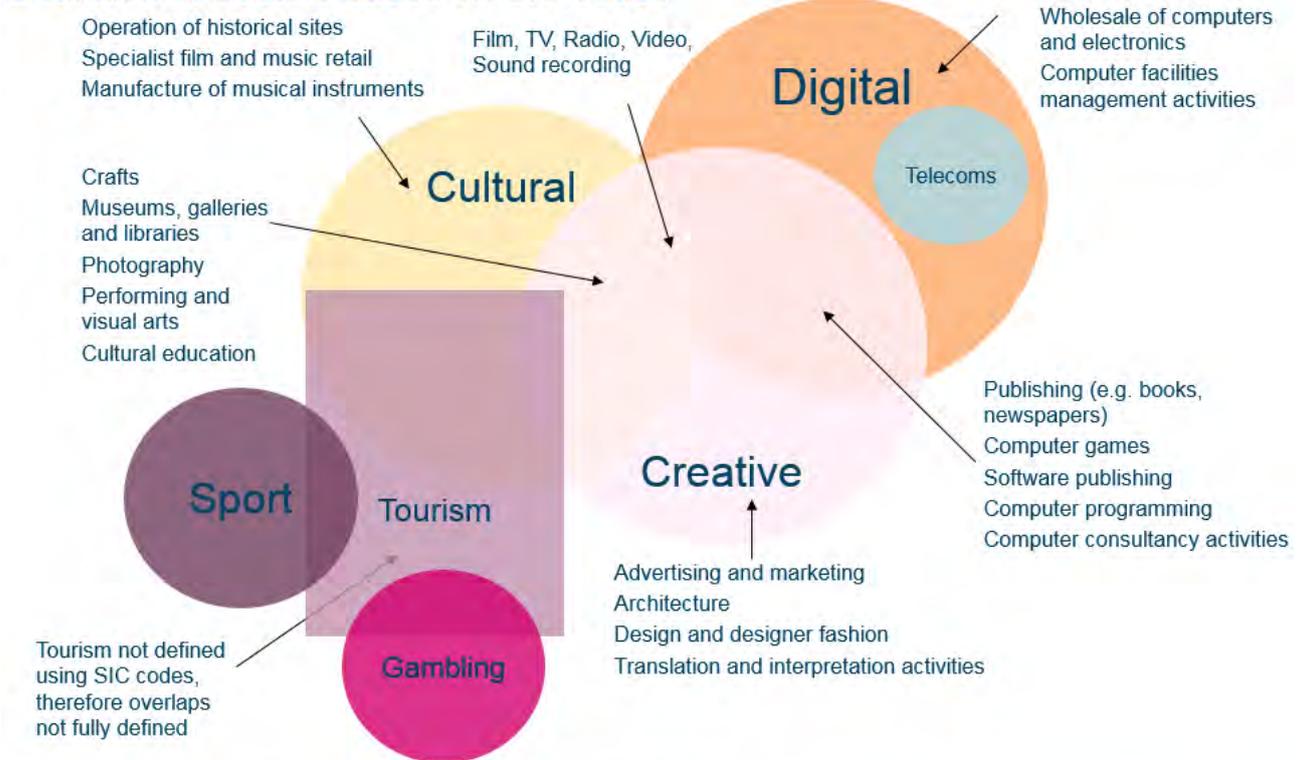
³ <https://gss.civilservice.gov.uk/about-us/support-for-the-gss/#good-practice-team>

⁴ <https://www.gov.uk/government/publications/dcms-sectors-economic-estimates-methodology>

Figure 1.2 DCMS Sectors, Sub-sectors and overlaps

DCMS Sectors, Subsectors and overlaps

Definition of Sectors based on SIC codes



Civil Society spans across all industries, both within DCMS sectors and outside

Note: Size of shapes/overlaps not to scale

Source: Office for Statistics Regulation, based on information provided in DCMS Sectors Economic Estimates Methodology Document

- 1.10 Without further explanation, there is a risk of misinterpretation or misuse of the statistics. For example, when the creative industries figures are used by DCMS a greater emphasis is sometimes put on the more traditionally creative sectors. In March 2018, DCMS issued a press release about Creative Industries Sector Deal⁵, which said that Britain’s creative industries are “worth £92 billion, employ 2 million people and are growing twice as fast as the rest of the economy. The sector includes music, fashion, design, arts, architecture, publishing, advertising, video games and crafts.” The description of the sector did not include ‘Computer consultancy activities’ or ‘Computer programming activities’, despite these industry groups making the largest contribution in terms of employment to the Creative Industries, together accounting for a third of employment.
- 1.11 DCMS should go further to explain these overlaps, and how they have come about. For example, the computer games industry is classified by OECD as a digital industry and by DCMS as a creative industry, and so the total economic impact of computer game publishing companies appears in both the creative and digital estimates. According to DCMS methodology⁶, the computer game publishing industry has 43.1% of employees in creative occupations and the remaining 56.9% in other occupations but with the total economic impact counting towards the creative sector impact.

⁵<https://www.gov.uk/government/news/creative-industries-sector-deal-launched>

⁶https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/499683/CIEE_Methodology.pdf

Innovation

- 1.12 Our research highlighted significant use of the key headline messages from the publication for example of the value of, and the number of people employed by, the creative industries. However, it also highlighted that there are opportunities to improve the value and use of the sub-sector breakdowns. One user, a representative from the museum sector, used the headline figures but was not aware that some breakdowns are also available specifically for 'Museums and Galleries'. Others, such as the music industry, are aware of the breakdowns, but find the groupings such as 'Film, TV and Music' unhelpful for focussing in on their industries. Whilst others, such as the craft industry, have found that many of the figures such as diversity and socioeconomic breakdowns, for their sub-sectors are suppressed due to small numbers.
- 1.13 DCMS told us that it is developing interactive online data visualisations which could help a wider range of users to access and interpret the statistics. DCMS should consider whether an alternative methodology, for example combining two years' worth of data, would enable it to publish further breakdowns, for example socioeconomic breakdowns for the craft sector.

Table 1: Value – Findings and Requirements

Findings	Examples	Requirement
<p>There are multiple sources of information about the economic impact of some of the DCMS sectors, from both producers of official statistics and non-official bodies. DCMS could improve the value of its statistics, and the insight users can get from them by working more closely with these bodies to understand and explain the differences between the available statistics.</p>	<ul style="list-style-type: none"> Both DCMS and the Gambling Commission publish estimates of the economic impact of the gambling industry. Historic England and the Craft Council publish research reports providing alternative measures of the economic impact of their industries. DCMS publishes a Sport Satellite Account in addition to the sports economic estimates. Users told us that they used the Satellite Account in preference to the economic estimates. 	<p>1</p> <p>(a) DCMS should clearly reference and explain other notable sources measuring similar concepts – both official and non-official. DCMS should explain the differences between the statistics, and for those that it considers useful in specific circumstances, highlight when they might be used.</p> <p>(b) DCMS should establish a leadership role in this area. In the short term it should engage widely with producers to understand the available statistics, and longer term it should encourage collaboration, for example, by bringing bodies together to share best practice.</p>
<p>There is a significant overlap between the definition of the Creative Industries and the Digital Sector which is not consistently well communicated, and could mislead those interpreting the figures outside of the official statistics bulletin.</p>	<ul style="list-style-type: none"> Around 54% of the employment in the Creative Industries in 2016 also fell into the Digital Sector, most significantly 'IT, Software and Computer Services' which accounted for 35% of Creative Industries employment. A DCMS press release about the Creative Industries Sector Deal⁷ did not clearly explain the significance of the digital sector in the quoted creative industries definition. 	<p>2</p> <p>(a) In the statistics publications, DCMS should go further to explain and quantify the overlap between sectors, either through a more detailed graphic, or through a written explanation of the most significant overlaps.</p> <p>(b) DCMS should ensure that when the statistics are used in DCMS press releases they are clearly explained, and referenced (for example by including a link to the statistics).</p>
<p>Users could gain more value from the statistics if diversity and socio-economic breakdowns of sub-sectors were published, rather than suppressed.</p>	<ul style="list-style-type: none"> Due to small sample sizes, most of the diversity and socio-economics breakdowns for the Craft industry and Museum, Galleries and Library sub-sectors are suppressed. 	<p>3</p> <p>DCMS should investigate whether diversity and socio-economic breakdowns of employment of these sub-sectors could be published, for example biennially by pooling samples.</p>

⁷ <https://www.gov.uk/government/news/creative-industries-sector-deal-launched>

Chapter 2: Quality

Introduction

- 2.1 Quality means that the statistics and numerical information represent the best available estimate of what they aim to measure at a particular point in time and are not materially misleading.
- 2.2 Quality is analytical in nature and is a product of the professional judgements made in the specification, collection, aggregation, processing, analysis, and dissemination of data.

Findings

Suitable data sources

- 2.3 Where possible, these statistics are based on well-established, official sources of data which feed into a variety of National Statistics, for example the Annual Business Survey, the Annual Population Survey and National Accounts. Where well-established, comparable sources of data are not available, DCMS presents alternative figures to provide context, but does not include them in aggregate figures. The use of such data sources enables DCMS Sectors Economic Estimates to be comparable with figures for other parts of the economy, and the UK economy as a whole.
- 2.4 We spoke to the various teams in ONS and HM Revenue & Customs (HMRC) who supply data to DCMS for these statistics. Whilst levels of engagement between DCMS and these teams has been mixed, we found that DCMS has good relationships with many of the data suppliers. Formal data sharing agreements are in place with ONS but not HMRC, which could affect the future supply of data in the format required by DCMS. DCMS should ensure that it has formal data sharing agreements in place with all of its suppliers. For transparency, we suggest that DCMS publishes these data sharing agreements.
- 2.5 Some users told us that the time lag between the reference period and publication is not ideal. For example, DCMS's Regional GVA estimates are published 14 months after the end of the reference period. Due to DCMS's dependency on other organisation to supply data, DCMS is not able to significantly reduce the time it takes to publish these statistics. However, DCMS should ensure data sharing agreements aim to minimise the time required for DCMS to receive the data required.
- 2.6 The quality of the International Trade in Services data used for the trade statistics is currently under review following the de-designation of ONS's UK Trade Statistics as National Statistics. As these quality issues may affect the quality of the DCMS Trade estimates, we will not award the National Statistics badge to the DCMS Trade estimates until we are satisfied that ONS's UK Trade Statistics meet the requirements set out in the Code.

Sound methods

- 2.7 Where possible, the DCMS sectors have been defined using combinations of (four-digit) Standard Industrial Classification (SIC) classes. Some sectors have a 1-1 mapping to a single SIC code, for example the gambling industry is represented by the SIC division (two-digit code) 92, whilst others are less straightforward. The definition for each sector is available in the DCMS methodology note.

The **Standard Industrial Classification** (SIC) is a means of classifying businesses according to the type of economic activity that they are engaged in.

The **Standard Occupation Classification** (SOC) is a means of classifying workers according to their occupations.

- 2.8 The most significant quality issues, and therefore limitations, with these statistics stem from the difficulties in defining DCMS sectors using SIC codes. In many cases, there is not a straightforward mapping from SIC codes to DCMS sectors. For example, businesses which would describe themselves as ‘cultural’ fall under a variety of classifications including retail, manufacturing, education and arts. In addition, in a given SIC class, for example 71.11 ‘Architectural activities’, some businesses would classify their activities as ‘cultural’ whilst others may not. This means that a perfect definition of each sector is not possible, and it may not be possible to identify a sector or sub-sectors fully using SIC codes.
- 2.9 Given this challenge, DCMS has used its own expertise, and that of its stakeholders to develop sector definitions. However, the approach taken to define the sectors based on SIC codes varies. The creative industries are defined using a creative intensities approach – which assumes that any industry where the proportion of employees in a creative occupation (defined using SOC codes) is above a given threshold is a creative industry. The tourism sector definition does not use this approach, this definition is instead based on a Satellite account approach⁸, which aggregates up a proportion of the activity in any relevant industry based on an internationally agreed approach. Defining the cultural industries is different again, where SIC codes are included only if they represent businesses with a ‘cultural object’ at their centre.
- 2.10 This inconsistency, in addition to the large overlap between sectors, means it is not possible to compare different sectors, as some definitions include more peripheral business activities than others. For example, Creative Industries includes the total economic value of companies undertaking ‘computer consultancy activities’ (SIC 62.02) despite only around a third⁹ of those working in these companies having been identified as having creative occupations, whilst the Cultural sector only includes those working in heritage sector who work in ‘Operation of historical sites and building and similar visitor attractions’ (SIC 91.03), despite a widely held consensus that this underestimates the heritage sector, and therefore the cultural sector.
- 2.11 ONS is currently developing a set of 5-digit SOC codes to reflect recent changes in the employment market. This work may help DCMS to identify more precisely those working in the digital sector. DCMS should review its definitions for consistency and comparability and refresh its full set of sector definitions, taking into account the SOC code changes. As a result, a more consistent approach to defining sectors should be established. This review should draw on the knowledge of sector experts, independent methodologists and those with an interest in regional data.
- 2.12 Greater London Authority Economics (GLA Economics) responded to our request for feedback about these statistics¹⁰. In this, GLA Economics set out an alternative method for estimating regional GVA for sectors and an alternative approach to deflating GVA. We suggest that DCMS, GLA Economics and others producing similar outputs work together to understand one another’s approaches, and if possible, agree on consistent methodological approaches.

⁸https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/736270/DCMS_Sectors_Economic_Estimates_-_Methodology.pdf

⁹https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/499683/CIEE_Methodology.pdf

¹⁰https://www.london.gov.uk/sites/default/files/consultation_uksaosr_assessmentdcmssectorseconomicestimates.pdf

Assured Quality

- 2.13 DCMS publishes a detailed methodology note, setting out the main sources of data and approaches to defining and calculating the economic estimates. Both this document, and the individual statistical publications, set out the main limitations of the figures. However, DCMS publishes very limited information about its approach to quality assurance. DCMS is developing a report to explain their approach to quality assurance. We consider that DCMS should publish this, ensuring that it sets out the main risks to the statistics.

Table 2: Quality – Findings and Requirements

Findings	Examples	Requirement
<p>There is inconsistency in the approach used to define each of the sectors (see Annex 1) which means some sectors may be overestimated whilst others are underestimated.</p>	<ul style="list-style-type: none"> The Creatives Industries are defined based on a creative intensities methodology; however, a similar approach has not been taken to define other sectors. DCMS uses a ‘Satellite Account’ approach to define the Tourism industry however, despite publishing a Sport Satellite Account, it does not use this methodology within their Economic Estimates for Sport. 	<p>4 DCMS should plan, and agree the scope and terms of reference for, a refresh of all its sector definitions: This refresh should:</p> <ol style="list-style-type: none"> aim to define sectors with a consistent methodology using for example SIC codes, SOC codes and product codes, consider innovative methods for identifying codes, take advice from sector experts, independent methodological experts (e.g. ONS), and regional experts (e.g. the Greater London Authority and Welsh Government), aim to implement the new methodology within 3 years.
<p>DCMS currently only publishes limited information about its quality assurance processes. However, it is developing a report to explain how it ensures that the outputs are of sufficient quality for users’ needs.</p>	<ul style="list-style-type: none"> The current supporting methodology document provides detail about data sources, methodology and some of the limitations of the statistics. However, it does not provide any information about DCMS’s approach to quality assurance. DCMS’s statement of compliance, which sets out at a high level its approach to quality assurance, has not been updated to reference these statistics. 	<p>5 In order to enhance the quality of the economic estimates, DCMS should publish information that assures users about quality that includes:</p> <ol style="list-style-type: none"> a detailed and accessible account of the quality assurance processes in place including the data checks carried out by data suppliers, information on the limitations and possible biases of the statistics in relation to use. <p>DCMS should update its statement of compliance to reflect the introduction of these statistics, and link to where further information can be found.</p>
<p>DCMS receives data from a variety of teams within ONS and HMRC. It has data sharing agreements in place with ONS. However, as HMRC data is technically publicly available a data sharing agreement has not been established.</p> <p>Users of the statistics said the time lag between the reference year and the publication of the statistics was not ideal.</p>	<ul style="list-style-type: none"> Without a data sharing agreement in place, there is a risk that, with a change of personnel, HMRC may not consistently provide data to DCMS. 	<p>6 DCMS should review its data sharing agreements, and ensure</p> <ol style="list-style-type: none"> an agreement is in place with each team providing data, any time lag between the producer collating the data and providing to DCMS is minimised.

Chapter 3: Trustworthiness

Introduction

- 3.1 Trustworthiness means that the statistics and other numerical information are produced free from vested interest, based on the best professional judgement of statisticians and other analysts.
- 3.2 Trustworthiness is a product of the people, systems and processes within organisations that enable and support the production of statistics and other numerical information.

Findings

- 3.3 The DCMS Sectors Economic Estimates are produced by a team of three statisticians, taking about 80 per cent of their time on the outputs. The team is part of the central analytical team within DCMS, and each team member is responsible for a separate output. Whilst not part of the team, the Head of Profession for statistics is involved in decisions about these statistics.
- 3.4 By opting to produce these statistics as official statistics and publishing in line with the Code of Practice¹¹, rather than producing only for internal purposes, the team has demonstrated its commitment to producing trusted statistics with integrity.
- 3.5 In any area close to policy, it is important to maintain independence in development of statistics. As the SIC codes do not have a clearer mapping to the DCMS sectors, the statistics team had to make difficult decisions about which codes should and should not be included. The team has sought a wide range of stakeholder views, and has demonstrated its independence by making difficult decisions based on evidence and not just the views of stakeholders, about which codes to include.
- 3.6 There have been some concerns that in the early phases of development of the Creative Industries definition, there may have been some political pressure to include a wide range of sector codes in the definition of the Creative Industries. We explored this, and found that there is a large overlap between the Creative Industries and the Digital Sector, made up of less traditionally creative industries, such as computer programming. We heard mixed views from stakeholders about whether these digital industries should be included in the Creative Industries definition.
- 3.7 DCMS has found a good way of defining some of the sectors which use multiple criteria and which arose from detailed research and a large degree of buy in from many organisations. These approaches help to demonstrate DCMS's independence and objectivity. In addition, the statistics team published clear documentation¹² explaining how the definition of the Creative Industries was developed. Going forward, Requirement 1 and Requirement 4 should help DCMS to continue to improve the integrity of these statistics.

¹¹<https://www.statisticsauthority.gov.uk/code-of-practice/>

¹²https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/499683/CIEE_Methodology.pdf

Annex 1: About the Statistics

The Statistics

A1.1 The report covers the Department for Digital, Culture, Media & Sport (DCMS) Sectors Economic Estimates which are a series of annual official statistics estimating the contribution of DCMS Sectors to the UK economy. The most recent reports are:

- *DCMS Sectors Economic Estimates 2017: Regional Gross Value Added (GVA)*¹³
- *DCMS Sectors Economic Estimates 2017: Employment*¹⁴
- *DCMS Sectors Economic Estimates 2016: Trade*¹⁵
- *DCMS Sectors Economic Estimates 2016: Gross Value Added (GVA)*¹⁶
- *DCMS Sectors Economic Estimates 2016: Business Demographics*¹⁷

A1.2 These statistics cover the contributions of the following DCMS sectors to the UK economy:

- Civil Society
- Creative Industries
- Cultural Sector
- Digital Sector
- Gambling
- Sport
- Telecoms
- Tourism

A1.3 These statistics help to answer important questions about the value and impact of sectors of the economy which can otherwise be difficult to quantify and easy to overlook. They have been important in helping to analyse some of the likely impacts of Brexit – for example by giving an estimate of the number of EU workers in different industries and the amount and types of trades that these industries do with the EU. They enable sector bodies to advocate for investment in their industries and help regional government understand their local economy. With further development, these statistics could improve the understanding of employment in more sub-sectors of the economy.

A1.4 Information in this Annex is based on the DCMS Sectors Economic Estimates methodology document¹⁸

Data Sources and Methods

A1.5 DCMS has used a range of definitions based on international, UK or internally agreed definitions in order to define the DCMS sectors. Where possible, definitions are based on the Standard Industrial Classification 2007¹⁹ (SIC) codes. This means nationally consistent sources of data can be used and enables international comparisons. The use of SIC codes

¹³<https://www.gov.uk/government/statistics/dcms-sectors-economic-estimates-2017-gva>

¹⁴<https://www.gov.uk/government/statistics/dcms-sectors-economic-estimates-2017-employment>

¹⁵<https://www.gov.uk/government/statistics/dcms-sectors-economic-estimates-2016-trade>

¹⁶<https://www.gov.uk/government/statistics/dcms-sectors-economic-estimates-2016-gva>

¹⁷<https://www.gov.uk/government/statistics/dcms-sectors-economic-estimates-2016-business-demographics>

¹⁸ <https://www.gov.uk/government/publications/dcms-sectors-economic-estimates-methodology>

¹⁹https://onsdigital.github.io/dp-classification-tools/standard-industrial-classification/ONS_SIC_hierarchy_view.html

also allows DCMS to estimate which parts of the economy are included in multiple sectors and avoid double counting.

A1.6 The following table gives details on the definitions for each sector

Sector	Details of definition
Creative Industries	<p>The Creative Industries were defined in the Government's 2001 Creative Industries Mapping Document²⁰ as "those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property". Based on this definition DCMS worked closely with stakeholders to determine which occupations and industries should be considered creative.</p> <p>These were determined on the basis of creative intensity:</p> <ol style="list-style-type: none"> 1. Through consultation a list of Creative Occupations was identified 2. The proportion of creative jobs in each industry was calculated (the creative intensity) 3. Industries with creative intensity above a specified threshold are considered Creative Industries <p>The definition is a UK definition based on international industrial classifications.</p>
Cultural Sector	<p>DCMS produced a definition of the Cultural sector to reflect UK policy based on the availability of data through the existing SIC codes (down to 4 digits). DCMS have defined the Cultural sector as those industries with a cultural object at the centre of the industry.</p>
Digital sector	<p>The definition used in this release was developed by the OECD using SIC codes and therefore has the advantage of international comparability.</p>
Gambling	<p>The definition of gambling used in the DCMS Sectors Economic Estimates is consistent with the internationally agreed definition, SIC 92, Gambling and betting activities.</p>
Sport	<p>For these outputs, the statistical definition of sport has been used, which incorporates only those 4-digit SIC codes which are predominately sport.</p> <p>DCMS also publishes estimates of sport in its DCMS Sport Satellite Account²¹, based on the EU agreed Vilnius definition. The Vilnius definition²² is a more comprehensive measure of sport which considers the contribution of sport across a range of industries, for example sport advertising, and sport related construction. However, primarily due to the time lag with the sport satellite account, the statistical definition is being used in the DCMS sectors to maintain consistency with the other sectors.</p>

²⁰<https://www.gov.uk/government/publications/creative-industries-economic-estimates-methodology>

²¹<https://www.gov.uk/government/collections/sport-satellite-account-for-the-uk-statistics>

²²https://ec.europa.eu/eurostat/documents/6921402/0/Vilnius+Definition+Sport+CPA2008+official+2013_09_19.pdf

Telecoms	The definition of telecoms used in the DCMS Sectors Economic Estimates is consistent with the internationally agreed definition, SIC 61, Telecommunications.
Tourism	<p>Tourism is defined by the characteristics of the consumer in terms of whether they are a tourist or resident. This, therefore, differs from traditional industries which are defined by the goods and services produced themselves, and means that a different approach to defining the industry is used.</p> <p>The UK estimates are based on the methodology and definition set out in the UN International Recommendations for Tourism Statistics 2008 (IRTS 2008)²³.</p> <p>The ‘tourism industries’ are a broad category that can be used to define tourism however they are much more extensive than tourism alone (e.g. hospitality). Therefore, ratios are calculated (primarily based on tourism spend data from surveys) which can then be applied in order to obtain direct tourism estimates. There is also a tourism contribution from outside the tourism industries which is described as ‘other consumption products’.</p> <p>Once calculated, the tourism ratios are applied to give estimates for tourism GVA, employment and enterprises. Exports and Imports for tourism are from estimates of spend by overseas residents in the UK and spend by UK residents overseas respectively. Data are taken directly from the ONS International Passenger Survey, in which there is no attempt to classify goods and services or spend by industry.</p>
Civil Society	<p>The Office for Civil Society, part of DCMS, is responsible for charities, voluntary organisations or trusts, social enterprises, mutuals and community interest companies. The Civil Society sector is not like a traditional industry and therefore data are not readily available in the usual data sources. Where possible, data are provided from official sources. Some estimates from other sources are quoted to provide a wider context but cannot be added to the official results. It is therefore likely that the estimates for the civil society are an underestimate for this sector.</p> <p>For employment, people who work in a “charity, voluntary organisation or trust” are reported in the DCMS estimates. There are no reported estimates for exports or imports of goods and services for civil society.</p> <p>For GVA in current prices, an estimate for charities has been published. The Civil Society figure published covers non-market charities in the NPISH (non-profit institutions serving households) sector. It does not include market provider charities who have passed the market test and therefore sit in the corporate sector (these data are not currently measured by ONS on a National Accounts basis), mutuals, social enterprises or community interest companies. An estimate of the economic contribution of volunteering is also provided, but this is not included in the “All DCMS Sectors” total due to it being part of the informal economy and therefore not part of the traditional methodology of calculating GVA. An estimate for the Office for Civil Society has not been included in the GVA expressed in chained volume measures.</p> <p>For the business demographics, the Civil Society sector cannot be uniquely identified in the Annual Business Survey; the data source used</p>

²³<https://unstats.un.org/unsd/tradeserv/tourism/Methodology.htm>

	for the other DCMS Sectors. Contextual information on the number of businesses in the Civil Society sector is provided. However, these are non-official statistic sources and therefore should not be added to the other DCMS Sector totals.
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DCMS Sectors Economic Estimates: GVA

- A1.7 The GVA publication provides estimates for the contribution of DCMS sectors to the UK economy, represented by:
- GVA, shown in current prices
 - GVA, shown in chained volume measures (i.e. adjusted for inflation)
- A1.8 The chained volume measures have previously been presented as experimental statistics to encourage feedback. Going forward, this experimental status will be removed.
- A1.9 The following data sources are used in the production of GVA estimates:
- Blue Book Consistent Supply and Use²⁴
 - Quarterly National Accounts²⁵
 - Unsuppressed Annual Business Survey approximate GVA (aGVA) estimates
 - Tourism Satellite Account²⁶
 - Balanced GVA for the non-market charities element of Non-profit institutions serving households (NPISH)
- A1.10 The most reliable estimate of GVA comes from the Supply and Use tables (SUT), which contain balanced data drawn from many different sources. However, as the DCMS sectors are defined at four-digit SIC level, and the SUT matrix is at a higher level, a method for breaking down the SUT estimates of GVA is applied, using aGVA data from the Annual Business Survey.
- A1.11 Tourism estimates are produced separately by the ONS Tourism Intelligence Unit, based on the methodology and definition set out in the UN International Recommendations for Tourism Statistics 2008 (IRTS 2008)²⁷. The Civil Society GVA figures are based on NPISH data.
- A1.12 Once a GVA estimate has been calculated for each sector, the overlaps between sectors are calculated, where a one-to-one mapping is available, and the overlap is estimated. GVA for the latest year is initially published as provisional and are updated when the “final” data are available the following year
- A1.13 For details on the chained volume measure see the DCMS Sectors Economic Estimates methodology document

DCMS Sectors Economic Estimates: Regional GVA

- A1.14 The Regional GVA publication provides estimates for the contribution of DCMS sectors to the UK economy, represented by GVA estimates for each of the 9 English regions, Wales,

²⁴<https://www.ons.gov.uk/economy/nationalaccounts/supplyandusetables/datasets/inputoutputsupplyandusetables/summarytables>

²⁵<https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/quarterlynationalaccounts/aprtojun2017>

²⁶<https://www.ons.gov.uk/economy/nationalaccounts/satelliteaccounts/bulletins/uktourismsatelliteaccountukta/2015>

²⁷<https://unstats.un.org/unsd/tradeserv/tourism/Methodology.htm>

Scotland and Northern Ireland. The following data sources are used in the production of regional GVA estimates:

- ONS Regional Gross Value Added balanced tables²⁸
- Unsuppressed ABS aGVA estimates

A1.15 As with the national GVA estimates, a method for breaking down the regional estimates using aGVA data from the ABS is applied, and the overlaps identified. Estimates for Tourism and Civil Society are not produced, and the estimates are not adjusted for inflation.

DCMS Sectors Economic Estimates: Trade

A1.16 The Trade publication provides estimates for the contribution of DCMS sectors to the UK economy, represented by:

- Imports and Exports of Services
- Imports and Exports of Goods

The publication includes the top countries of origin and the top destination countries for exports and imports of goods and services, as well as a breakdown of trade with EU and non-EU countries.

A1.17 Estimates of imports and exports of services are based on data from the International Trade in Services (ITIS) survey²⁹. The data are first limited to organisations that are listed as belonging to a SIC code for one of the DCMS sectors. Data for each relevant SIC code are aggregated up for each DCMS sector and for all DCMS sectors combined within statistical disclosure rules.

A1.18 Civil Society is not included in the DCMS sector totals, and the outputs are not adjusted for inflation. Estimates of imports and exports for Tourism are based on a different methodology from other DCMS sectors. Estimates of imports and exports of goods are based on:

- Data for goods trade with EU countries, collected through Intrastat³⁰, a survey of trading businesses
- Data for non-EU trade in goods, collected from customs declarations made to HMRC when goods leave or enter the UK (Customs Handling of Import and Export Freight (CHIEF) system).

The Intrastat survey and CHIEF data are listed in Combined Nomenclature 2008 (CN08) format, based on an internationally standardised system of coding for classifying goods for trade. A conversion between DCMS sector 4 digit SIC codes and CN08 codes to specify a set of CN08 codes linked to DCMS sectors has been developed. However, there are some SIC codes which do not have any corresponding CN08 codes.

A1.19 In response to user feedback, the CN08 list has been expanded to include more items than originally identified for the Craft sub-sector. Estimates of the value of imports and exports of goods in DCMS sectors only cover Creative Industries, Cultural sector, Digital sector and Sport.

A1.20 Imports and exports for the tourism sector are based on estimates from the International Passenger Survey³¹, and assume that imports of tourism are equal to spend by UK

²⁸<https://www.ons.gov.uk/economy/nationalaccounts/supplyandusetables/datasets/inputoutputsupplyandusetables/summarytables>

²⁹<https://www.ons.gov.uk/businessindustryandtrade/internationaltrade/methodologies/internationaltradeinservicesqmi>

³⁰<https://www.uktradeinfo.com/Intrastat/AboutIntrastat/Pages/AboutIntrastat.aspx>

³¹<https://www.ons.gov.uk/surveys/informationforhouseholdsandindividuals/householdandindividualsurveys/internationalpassengersurveyips>

residents on trips abroad and exports of tourism are equal to spend by overseas residents during visits to the UK. These figures represent trade in goods and services combined.

DCMS Sectors Economic Estimates: Employment

- A1.21 The Employment publication provides estimates of the number of jobs in the DCMS sectors. It includes various breakdowns. Estimates are based on the Annual Population Survey³². To count the occupations, the data are restricted to those who are employees or self-employed and to those who work in a DCMS sector, and then data are weighted according to person weightings. Overlaps between sectors are estimated and subtracted from the total figure. All figures under 6,000 are suppressed in order to prevent any disclosure of personal data.
- A1.22 For Civil Society, the employment estimates are based on those who report “work in a charity, voluntary organisation or trust” in the APS, however, this gives an underestimate. Provisional tourism employment figures are estimated based on the Tourism Satellite Account.

DCMS Sectors Economic Estimates: Business Demographics

- A1.23 The Business Demographics publication provides estimates of the number, size, turnover etc. of businesses within the DCMS sectors. Where possible, estimates are based on the Annual Business Survey³³ (ABS). ABS data are published at the four-digit level and the relevant SICs are aggregated to produce estimates of the number of business by various characteristics for each DCMS sector and for all DCMS sectors.
- A1.24 Data are drawn from a variety of sources, including the Charity Commission’s Charity Register Statistics³⁴ and Community Interest Companies regulator³⁵, in an Annex, to provide further information about organisations within the Civil Society sector, which do not appear in the ABS.

Uses and Users

- A1.25 The main aims of the Economic Estimates are to:
- Monitor and benchmark the performance of the industries in the DCMS sectors
 - Inform policy evaluation and development,
 - Enable advocacy of the industries, with Government and other funders, on a set of consistent figures
- A1.26 DCMS use the statistics to:
- Provide advice to Ministers
 - Inform discussions with treasury about funding settlements.
 - Analyse the impact of Brexit policies on the UK economy, for example on imports and exports, and the movement of people
 - Celebrate the impact, and success, of the DCMS sectors

³²<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologies/annualpopulationsurveyapsqmi>

³³ <https://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/annualbusinesssurvey>

³⁴ <https://www.gov.uk/government/statistics/charity-register-statistics>

³⁵ <https://www.gov.uk/government/publications/cic-regulator-annual-report-2016-to-2017>

A1.27 Local and regional government use the statistics to:

- Provide advice to Ministers
- Identify local risks from Brexit (e.g. to employment in the area)

A1.28 Industries and their representative bodies use the statistics to:

- Advocate for funding from Government, and other funders
- Provide background, context and comparison for their research

A1.29 The media use the statistics to report on the DCMS sectors, and for context when reporting on wider issues, for example on the take-up of creative GCSEs.

Annex 2: The Assessment Process

- A2.1 This Assessment was conducted from December 2017 to August 2018.
- A2.2 This report was prepared by the Office for Statistics Regulation and approved by the Regulation Committee on behalf of the Board of the UK Statistics Authority, based on the advice of the Director General for Regulation.
- A2.3 The regulatory team – Louisa McCutcheon and Jo Mulligan – agreed the scope of and timetable for this assessment with representatives from DCMS in December 2017. Documentary evidence for the assessment was either extracted from publicly available information or provided by the statistical team at DCMS. We met with the DCMS statisticians to review compliance with the *Code of Practice for Statistics*³⁶, taking account of the evidence provided and researched.
- A2.4 Part of the assessment process involves our consideration of the views of users. We approach some known and potential users of the set of statistics, and we invite comments via an open note on our website. This process is not a statistical survey, but it enables us to gain some insights about the extent to which the statistics meet users' needs and the extent to which users feel that the producers of these statistics engage with them. We are aware that responses from users may not be representative of wider views, and we take account of this in the way that we prepare Assessment reports.
- A2.5 We received 25 responses from the user and data supplier consultation. The respondents were grouped as follows:

Summary of respondents to the assessment consultation

Users

Policy	4
Voluntary Sector	1
Local/regional government	1
Arm's Length Bodies	3
Trade Umbrella Organisations	2
Trade Bodies	7

Data suppliers

Government	7
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Key documents

- A2.6 Evidence provided by DCMS included the following material:
- DCMS statistics statement of compliance
 - DCMS statistics work plan
 - Evidence of visualisation developments
 - Standard Occupational Classification (SOC) Review Documents³⁷
 - Information on Statistical Disclosure Control
 - Revised data access agreements for the LFS/APS data
 - DCMS blog article on DCMS Sectors Economic Estimates

³⁶ <https://www.statisticsauthority.gov.uk/code-of-practice/>

³⁷ <https://gss.civilservice.gov.uk/guidances/standard-occupational-classifications/>

- Methodology documents
- Pre-release access lists
- Recent consultations for the DCMS Sectors Economic Estimates

Contact us

A2.7 For any queries about this assessment, or the work of the Office for Statistics Regulation in general, please email regulation@statistics.gov.uk.

Annex 3: Next Steps

Responding to the assessment report: what the Office for Statistics Regulation and DCMS should expect from each other

A3.1 The publication of the Assessment report represents a key milestone in the assessment process, but should not be viewed as the end point. The next phase, to meet the Requirements set out in this report, is critical to delivering the value, quality and trustworthiness to achieve and maintain National Statistics status. The next steps are as follows:

- immediately following the publication of the report, the Office for Statistics Regulation will arrange a meeting with the statistics team to talk through the detail of the Requirements and to ensure a common understanding
- the HoP can follow up with the Assessment Programme Manager about the Director General for Regulation's letter that accompanies this Assessment Report. The letter: draws out the key findings; provides advice about where the statistics team is likely to need senior management support and direction and conveys any findings that have wider implications for the producer body and statistical system
- the HoP is encouraged to:
 - i) develop an action plan to meet the Requirements to the timetable set out in paragraph ES.10 of this report
 - ii) agree the action plan with their senior management, and confirm that it is appropriately resourced
 - iii) share the action plan with the Office for Statistics Regulation, publish it alongside the statistics, and explain to users and suppliers how it will engage with them in delivering the plan
 - iv) seek out peers and support services that can help in delivering the plan
 - v) agree with the regulatory team, how often, and in what form, the statistics team would like to engage about progress against the action plan – for example, some teams choose to meet with the regulatory team once a month
- the statistics team should provide full formal written evidence to the Office for Statistics Regulation by the deadline of end-February 2019 as set out in paragraph ES.10 of this report. There is no set format for reporting, except that DCMS should demonstrate that it has addressed the findings given in Tables 1 and 2 and provide links to any published or internal documents as support
- the regulatory team will review the evidence within 10 working days and arrange to provide feedback to the statistics team. As part of this process, the regulatory team will talk again to users to establish how their experience of the statistics has changed. When the regulatory team is satisfied that the Requirements have been fully met, their conclusions will be quality assured by Office for Statistics Regulation's senior management and then presented to the Authority's Regulation Committee to confirm designation. The Director General will then write publicly to the lead official to confirm the decision

- in the event that Requirements are not fully met within the agreed timetable, the Authority will implement [escalation procedures](#).

A3.2 Based on experience, the Office for Statistics Regulation strongly encourages statistics teams to:

- engage with the detailed thinking of the Assessment report, and revisit it regularly. The regulation team will be seeking evidence that the statisticians are demonstrating curiosity and are challenging their own thinking around delivering value, quality and trustworthiness. The Requirements in this report should not be viewed as a simple checklist
- view the responsibility for meeting the Requirements as falling to the organisation, not just the team that produces the statistics.
- engage users early, not just to keep them updated, users can often offer valuable insight and expertise
- contact the regulatory team at any time if there are any questions or concerns

A3.3 Responsibility for complying with the Code of Practice does not end with the award of the National Statistics designation. It is the statistics producers' responsibility to maintain compliance and also to improve the statistics on a continuous basis. The Office for Statistics Regulation encourages statistics producers to discuss promptly with the regulatory team any concerns about whether its statistics are meeting the appropriate standards. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated only when standards are restored.

