**TECHNICAL NOTE ADDENDUM: CHANGES MADE TO NATIONAL INDICATORS ON GROWTH IN THE CULTURAL ECONOMY AND PEOPLE WORKING IN ARTS AND CULTURE**

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Contents

[Summary 3](#_Toc131021889)

[Overview of changes 3](#_Toc131021890)

[Impact of changes 3](#_Toc131021891)

[1. Introduction and Purpose 4](#_Toc131021892)

[2. Background and Context 4](#_Toc131021893)

[3. Overview of changes 5](#_Toc131021894)

[3.1 Broaden the definition of the sector 5](#_Toc131021895)

[3.2 Change the data source for the cultural workforce indicator 6](#_Toc131021896)

[3.3 Change the measurement of the culture economy indicator to real GVA 8](#_Toc131021897)

[3.4 Revise the ‘criteria for change’ for both indicators 9](#_Toc131021898)

[4. Acknowledgements 11](#_Toc131021899)

# Summary

This purpose of this note is to provide a summary of the changes that have been made to the National Performance Framework (NPF) National Indicators on ‘Growth in the cultural economy’ and ‘People working in arts and culture’.

## Overview of changes

Following their introduction to the National Performance Framework (NPF) in 2018, the ‘Growth in the cultural economy’ and ‘People working in arts and culture’ indicators initially used temporary measures to monitor progress. Since then, Scottish Government officials have being working with key stakeholder groups to develop an improved set of measures for these indicators. These changes are set out below:

* Broaden the definition of the culture sector to include additional cultural, heritage and creative activities and rename both national indicators to better reflect the expanded sector definition.
* Change the data source of the ‘People working in arts and culture’ indicator from the ONS Business Register and Employment Survey (BRES) to the ONS Annual Population Survey (APS), to allow for better coverage of freelancers and disaggregation by socio-economic and protected characteristics.
* Change the measurement of the ‘Growth in the cultural economy’ indicator from nominal to real Gross Value Added to better track change over time.
* Revise the ‘criteria for change’ for measuring performance of both indicators, as necessitated by the above changes to the measurement of the indicators.

## Impact of changes

The primary impact on the outcomes of each change across both indicators is set out below:

* The impact of expanding the culture sector SIC code definition increased the sector’s GVA on average by around £100 million (around a 2% increase), and increased the sector’s employment level on average by around 11,000.
* The impact of using an alternate data source to measure the workforce substantially increased the estimated employment in the sector by around 50,000 on average (an approximate 55% increase). Self-employed people accounted for a large proportion of the increase in employment in the Arts, culture and creative industries sector when comparing the estimates obtained from BRES and the APS.
* The impact of changing the measurement of the sector’s GVA over time to real terms allows for a clearer assessment of real change in the sector’s economy.
* Given these changes, the criteria for change were adjusted to reflect the new methods applied which alter the year-to-year performance assessment of these indicators over time.

# Purpose

This note provides an overview of the substantial developments made to the National Performance Framework (NPF) National Indicators on ‘Growth in the cultural economy’ and ‘People working in arts and culture’ in May 2023.

It sets out the background to this development work, including the issues that initially led these indicators using temporary measures to report on progress and the stakeholder groups that the Scottish Government engaged with to address these challenges. It then sets out the changes made to each indicator, the reason for each change and its impact on the results of each indicator.

# Background

As part of the NPF refresh in 2018, a new National Outcome on Culture was added with progress measured by four National Indicators. Two of these indicators had originally used temporary measures to report on progress while work was underway to improve the measurement approach. These indicators and their previous temporary measures are set out below and an overview of the past performance of each indicator using the previous (temporary) methodology is provided in **Annex A**.

* ‘Growth in the cultural economy’ national indicator: measured by the approximate annual nominal gross value added (GVA) of the Creative Industries growth sector
* ‘People working in arts and culture’ national indicator: measured by the number of jobs in the Creative Industries growth sector

Several issues led to these measures being badged as ‘temporary’:

* The absence of an internationally agreed definition for the activities that form the culture sector. This resulted in the previous temporary measure using the pre-existing Creative Industries growth sector definition.[[1]](#footnote-1) However, most stakeholders felt that this did not cover the full range of cultural activities, such as those within the heritage sector.
* The previous temporary measure of ‘People working in arts and culture’ excludes several groups that are particularly relevant to the sector’s workforce such as self-employed workers (e.g. freelancers); employees of smaller businesses operating below the VAT threshold; those working in cultural occupations outwith a cultural business and those that work in second jobs or volunteer within the sector.
* The previous temporary measure of ‘People working in arts and culture’ does not allow for disaggregation of the workforce by socio-economic or protected equality characteristics.
* The previous set of indicators pre-date the Culture Strategy for Scotland (published February 2020). The National Partnership for Culture (NPC) and other stakeholders are keen to more closely align the vision and measurement of the Culture Strategy with the national outcome and national indicators.

The Scottish Government made a commitment to work with stakeholders to improve the measurement of these two indicators and to remove the ‘temporary’ measures in place. This work was led by analysts from the Office of the Chief Economic Adviser (OCEA), with input from officials from the Culture and Heritage Division, and has taken place over several years from late 2019, having been delayed by Covid-related work and other priorities.

As part of this work, Scottish Government analysts from the Office of the Chief Economic Adviser (OCEA) engaged with the Measuring Change Group (MCG), a sub-group of the NPC, in place to advise the Partnership on appropriate measures, data and research that would best support decision-making related to the delivery of the Culture Strategy for Scotland. The MCG includes representatives from academia, Creative Scotland, Culture Counts, the Edinburgh Student Arts Festival, Glasgow Life and the National Trust. Advice was also provided by the Scottish Culture Evidence Network (SCENe), which includes representatives from Creative Scotland, Historic Environment Scotland, Museums and Galleries Scotland, the Scottish Library and Information Council and the Scottish Council on Archives. Further advice and endorsement was also given by the Scottish Government’s NPF Technical Advisory Group (NPFTAG).

# Overview of changes made

To address the issues set out in section 2 above, work was taken forward to broaden the definition of the sector for use in the measurement of these indicators, review the data used in their measurement and develop new criteria of change for gauging the performance of each indicator. These were developed with input from key stakeholders linked to the Culture Strategy. Details of each change and its impact are set out below.

## Broadening the definition of the sector and renaming the national indictors

**Changes made**

While the Creative Industries growth sector definition previously used for the national indicators covers the majority of arts, culture and creative activities, there was appetite from external stakeholders to expand this definition to include additional cultural areas such as heritage. In 2021, an assessment was carried out, with input from the Measuring Change Group and SCENe, on a list of possible activities (defined using standard industrial classification ‘SIC’ codes) that could be added to the previous definition based on a number of criteria.[[2]](#footnote-2)As a result of this assessment, nine additional SIC codes, as set out in **Table 1**, were added to the previously used sector definition to create an ad-hoc ‘creative/culture’ sector definition for use in NPF purposes only. The complete set of SIC codes used to define sector is set out in **Annex B**. This change impacts the sector definition of both indicators.

**Table 1:** **SIC codes added to the previous sector definition**

|  |  |
| --- | --- |
| **Sub-sector** | **SIC 2007 code** |
| **Heritage** | 91.02: Museum activities |
| **Heritage** | 91.03: Operation of historic environment sites |
| **Audio-Visual** | 47.63: Retail sale of music and video recordings in specialised stores |
| **Audio-Visual** | 47.59/1: Retail sale of musical instruments and scores in specialised stores |
| **Audio-Visual** | 74.30: Translation and interpretation activities |
| **Audio-Visual** | 77.22: Renting of video tapes and disks |
| **Visual Art** | 70.21: Public relations and communication activities |
| **Books and Press** | 18.14: Binding and related services |
| **Books and Press** | 47.61: Retail sale of books in specialised stores |

In addition, given the change to the sector definition, stakeholders proposed adapting the names of each national indicator to reflect the broader definition. Therefore, the indicators were renamed to: ‘Growth in the arts, culture and creative economy’ and ‘People working in arts, culture and creative industries’.

**Impact**

Since 2015, the impact of expanding the culture sector definition to include the nine SIC codes set out in Table 1 has increased the sector’s GVA on average by around £100 million (equivalent to around a 2% increase) and increased the sector’s employment level by average by around 11,000. Looking at longer term year-on-year trends, the trend line of the data under the new broader sector definition runs parallel to the trend of the previous time series.

## Changing the data source for the cultural workforce indicator

**Change made**

The ‘People working in arts, culture and creative industries’ indicator was previously measured using the ONS Business Register and Employment Survey (BRES). BRES was chosen initially as it is the official source of employee jobs by industry. However, BRES only captures employment from businesses that are registered for VAT (taxable turnover of £85,000 or more). It does not provide coverage of businesses and self-employed workers operating under the VAT threshold, which are of particular significance to creative and cultural employment, given that many work freelance or in small businesses. BRES is also unable to provide equality disaggregations of the workforce.

Therefore, the data source for this indicator was changed to the ONS Annual Population Survey (APS). The APS is the largest annual household survey in the UK and provides information about individuals' personal circumstances and their work. It is carried out by the Office for National Statistics. The measure is based on the estimated number of people in employment aged 16 and over in the arts, culture and creative sector. Industry sector of employment is self-reported by respondents participating in the ONS Annual Population Survey and is based on the industry sector of their main job. It covers people who did at least one hour of paid work or had a job they were temporarily away from. It can provide estimates of people who are employees, self-employed, do unpaid work in a family business and people on Government-supported training and employment programs. This is in accordance with the International Labour Organisation (ILO) definition.

**Benefits and limitations**

The main benefit of using the APS is that it has greater potential to capture the various forms of employment that shape the diverse culture and creative sector ecosystem such as the self-employed, freelancers, sole traders and those working in smaller sized businesses. While BRES is likely to offer a more accurate estimate of those working in registered businesses within the cultural sector, it cannot offer the same breadth of data as the APS which also has the capacity to provide equalities breakdowns of the workforce.[[3]](#footnote-3) Given these advantages, stakeholder groups were in favour of this change.

However, disaggregation capability is dependent on sample size, which tend to be smaller for the APS and can result in less precise results compared to BRES. In addition, industry sector is self-reported by households and individuals on the APS and could be subject to more inaccuracy compared to an industry based survey like BRES. Also, the APS only covers people who did at least one hour of paid work so is unlikely to capture volunteers, which in some sub-sectors make up a large portion of the workforce, particularly within the heritage sector.

**Impact**

The impact of using the APS instead of BRES to measure the workforce substantially increased the estimate of the employment in the sector. Since 2015, the APS estimates a greater employment level of 50,000 on average, around a 55% increase. This increase is broadly in line with the estimated number of ‘self-employed or other’ in the sector, however the data sources are not directly comparable.

Over the longer-term, there is divergence in the direction and magnitude of year-on-year changes in the size of the estimated workforce across the two data sources. For example, in 2021, the size of the workforce estimated by BRES decreased by 6,000 (-6%,) but using the APS, it grew by 24,000 (17%). Further details on the difference between the estimates from each data source is provided in Table 2 below.

**Table 2: Estimates for the size of the cultural and creative workforce from both BRES and APS, based on the expanded sector definition, 2009 - 2022**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | ***Previous measure:***  **Jobs (BRES)** | ***New measure:***  **Total Employment (APS)** | **Employees (APS)** | **Self-employed and other (APS)** |
| **2009** | 85,000 | 109,000 | 82,000 | 27,000 |
| **2010** | 80,000 | 111,000 | 83,000 | 28,000 |
| **2011** | 74,000 | 114,000 | 82,000 | 32,000 |
| **2012** | 75,000 | 123,000 | 87,000 | 37,000 |
| **2013** | 78,000 | 114,000 | 79,000 | 36,000 |
| **2014** | 82,000 | 117,000 | 84,000 | 33,000 |
| **2015** | 82,000 | 128,000 | 94,000 | 35,000 |
| **2016** | 94,000 | 151,000 | 102,000 | 49,000 |
| **2017** | 87,000 | 142,000 | 99,000 | 43,000 |
| **2018** | 97,000 | 136,000 | 92,000 | 44,000 |
| **2019** | 101,000 | 138,000 | 96,000 | 42,000 |
| **2020** | 96,000 | 140,000 | 96,000 | 44,000 |
| **2021** | 90,000 | 164,000 | 116,000 | 49,000 |
| **2022** | N/A | 155,000 | 106,000 | 49,000 |
| **Source**: *Business Register and Employment Survey (BRES), SG, ONS; and Annual Population Survey (APS), Jan-Dec dataset, ONS*  **Note:** Estimates rounded to the nearest thousand. All estimates based on broadened SIC 2007 definition of the Arts, culture and creative sector.  ‘Green’ text indicates that the performance marking in the NPF would be performance improving under previous / new measurement.  ‘Red’ text indicates that the performance marking in the NPF would be performance worsening under previous / new measurement.  BRES – Survey of businesses and analysis is workplace based. Covers employee jobs and addition of a population of solely PAYE based businesses. The estimates for 2015 onwards include the addition of a population of solely PAYE based businesses.  APS – Survey of households with industry being self-reported and analysis is residence based. ‘Employees’ covers employees with main job in the sector. ‘Self-employed and other’ covers self-employment, government training schemes and unpaid family worker, as a main job in the sector. | | | | |

## Changing the measurement of the growth in the culture economy indicator from nominal to real values

**Change made**

The ‘Growth in the arts, culture and creative economy’ indicator was previously measured by approximate gross value added (GVA) in current prices, and therefore did not account for changes in the price level (inflation). To account for inflation and more robustly track change over time, GVA growth is now measured in real terms.

**Impact**

The impact of this change decreases the sector’s GVA growth over time as inflation is now adjusted for when assessing changes, meaning it better tracks real change in the sector’s economy.

## Revise the ‘criteria for change’ for both indicators

**Changes made**

The changes above necessitated a revision to the criteria for change used to track the performance of each indicator. Scottish Government analysts sought the views of the Measuring Change stakeholder group and NPFTAG on the appropriate criteria for change for each indicator. These changes are set out below:

New performance criteria for the cultural workforce indicator

The previous criteria for change for the ‘People working in arts, culture and creative industries’ indicator used a fairly arbitrary figure of +/-1,000 jobs based on the previous data source, BRES. The new data source, the APS, has a larger degree of variability and a higher overall employment level than BRES. Scottish Government analysts advised that it would be difficult to calculate upper and lower bounds for statistical significance in line with approaches used for the existing APS-based national indicators. It may be possible to refine the methodology in future however, the new criteria for change is based on movements of +/-10,000 in annual employment (including both employment and self-employment). This would be roughly in-line with experimental confidence limits and significance testing for each year and would allow for growth in the sector over the coming years.

New performance criteria for the culture economy indicator

The previous criteria for change for the ‘Growth in the arts, culture and creative economy’ indicator, was +/- 2% change in nominal GVA, which was in place as a proxy to account for inflation. As the new approach accounts for real terms changes in GVA, the new criteria for change is based on movements of +/-£100m in annual real GVA. In the last few years, this is equivalent to an approximate +/-2% change so is consistent with the previous method and simpler to interpret.

**Impact**

A retrospective assessment of performance under the new criteria for the workforce indicator indicates that, between 2009 - 2021, there would have been four instances of ‘performance improving’ and eight instances of ‘performance maintaining’. For illustrative purposes, under the previous method, there were six instances of ‘performance improving’, one instance of ‘performance maintaining’ and five instances of ‘performance worsening’, however these approaches are not directly comparable given difference in data source. The advantage of using the new approach is that thresholds are set at a level that accounts for a large degree of variability in the data to help to more robustly assess annual performance of the indicator.

A retrospective assessment of performance under the new criteria for the growth indicator indicates that, since 2008, there would have been four instances of ‘performance improving’, three instances of ‘performance maintaining’ and five instances of ‘performance worsening’. Under the previous method, there were eight instances of ‘performance improving’, one instance of ‘performance maintaining’ and three instances of ‘performance worsening .The advantage of the new approach is that inflation is now fully adjusted for when assessing performance over time so is a better assessment of real change in the sector’s impact on the economy.

# Acknowledgements

The authors take full responsibility for the content of this report and the changes that were made to each indicator, but gratefully acknowledge the contribution of a wide range of people who have provided support and guidance throughout. Special thanks go to the members of the National Partnership for Culture’s Measuring Change Group and Scottish Culture Evidence Network (SCENe) who provided advice and expertise in helping to develop these indicators.

**Annex A: Previous national indicator performance**

**Growth in the cultural economy**

Before changes were made to this indicator, the Approximate gross value added (GVA) for Scotland’s Creative Industries sector was estimated at £4,379.0 million in 2020, up by 3.2% (in nominal terms) on 2019. While there has been an increase in approximate GVA over the latest year, there has been a reduction of 11.3% since 2017.

**People working in arts and culture**

Before changes were made to this indicator, in 2021, there were 78,000 jobs in Scotland’s Creative Industries sector, down by 9,000 jobs (-10.3%) on 2020. The decrease over the latest year was driven by a fall in jobs in ‘Software/electronic publishing’.

**Annex B: New sector SIC code definition used in national indicators**

|  |  |  |
| --- | --- | --- |
| **Table 3: New expanded definition of Creative, culture and arts sector** | | |
| **Cultural  Domains** | **SIC 2007 Code** |
| **Visual Art** | SIC 73.11: Advertising agencies |
| SIC 73.12: Media representation |
| SIC 71.11: Architectural activities |
| SIC 90.03: Artistic creation (70%) |
| SIC 47.78/1: Retail sale in commercial art galleries |
| SIC 31.09: Manufacture of other furniture |
| SIC 16.29: Manufacture of other wood products (30%) |
| SIC 32.12 Manufacture of jewellery and related products |
| SIC 32.13: Manufacture of imitation jewellery and related articles |
| SIC 23.41 Manufacture of ceramic household and ornamental articles (35%) |
| SIC 23.49 Manufacture of other ceramic products (35%) |
| SIC 23.13 Manufacture of hollow glass (15%) |
| SIC 23.19 Manufacture of other glass (15%) |
| SIC 47.79/1: Retail sale of antiques and antique books |
| SIC 95.24: Repair of furniture and home furnishings |
| SIC 13: Manufacture of textiles (25%) |
| SIC 14: Manufacture of wearing apparel (20%) |
| SIC 15: Manufacture of leather and related products (20%) |
| SIC 74.1: Specialised design activities (25%) |
| SIC 71.12/1: Engineering design activities for industrial process and production |
| SIC 74.1: Specialised design activities (75%) |
| SIC 70.21: Public relations and communication activities |
| **Performance** | SIC 90.01: Performing arts |
| SIC 90.02: Support activities to performing arts |
| SIC 90.04: Operation of arts facilities |
| SIC 78.10/1: Motion picture, television and other theatrical casting |
| **Audio-Visual** | SIC 59.2: Sound recording and music publishing activities |
| SIC 18.20/1: Reproduction of sound recording |
| SIC 32.2: Manufacture of musical instruments |
| SIC 74.20/1: Portrait photographic activities |
| SIC 74.20/2: Other specialist photography (not including portrait photography) |
| SIC 74.20/9: Other photographic activities (not including portrait and other specialist photography and film processing) n.e.c. |
| SIC 18.20/2: Reproduction of video recording |
| SIC 59.11/1: Motion picture production activities |
| SIC 59.11/2: Video production activities |
| SIC 59.12: Motion picture, video and television programme post-production activities (25%) |
| SIC 59.13/1: Motion picture distribution activities |
| SIC 59.13/2: Video distribution activities |
| SIC 59.14: Motion picture projection activities |
| SIC 58.21: Publishing of computer games |
| SIC 62.01/1: Ready-made interactive leisure and entertainment software development |
| SIC 59.11/3: Television programme production activities |
| SIC 59.13/3: Television programme distribution activities |
| SIC 59.12: Motion picture, video and television programme post-production activities (75%) |
| SIC 60.1: Radio broadcasting |
| SIC 60.2: Television programming and broadcasting activities |
| SIC 47.63: Retail sale of music and video recordings in specialised stores |
| SIC 47.59/1: Retail sale of musical instruments and scores in specialised stores |
| SIC 74.30: Translation and interpretation activities |
| SIC 77.22: Renting of video tapes and disks |
| **Books and Press** | SIC 90.03: Artistic creation (30%) |
| SIC 58.11: Book publishing |
| SIC 58.13: Publishing of newspapers |
| SIC 58.14: Publishing of journals and periodicals |
| SIC 58.19: Other publishing activities |
| SIC 18.11: Printing of newspapers |
| SIC 18.129: Other printing (not labels) |
| SIC 18.13: Pre press and media services |
| SIC 63.91: News agency activities |
| SIC 18.14: Binding and related services |
| SIC 47.61: Retail sale of books in specialised stores |
| **Heritage** | SIC 91.01: Libraries and archive activities |
| SIC 91.02: Museum activities |
| SIC 91.03: Operation of historic environment sites |
| **Digital Industries** | SIC 58.29 Other software publishing |
| SIC 62.01/2: Business and domestic software development |
| SIC 62.02: Computer consultancy activities |
| **Cultural Education** | SIC 85.52: Cultural Education |
| **Note:** Shaded cells indicate the additional SIC codes that were added to the previous sector definition, which was based on Creative Industries growth sector. | |

1. The Creative Industries growth sector definition is built up from a range of Standard Industrial Classification 2007 codes, and more information on the specific codes included is available at: <https://www.gov.scot/publications/growth-sector-statistics/> [↑](#footnote-ref-1)
2. # The criteria for assessment were whether the activity: uses cultural or creative input; promotes participation in cultural/creative activities; is endorsed by stakeholders; is included within other definitions of culture or creative industries used by other statistical bodies such as DCMS or Eurostat.

   [↑](#footnote-ref-2)
3. These equality dissagregations can be found in the [Equality Evidence Finder](https://scotland.shinyapps.io/sg-equality-evidence-finder/#equality-npf-top) of the NPF [↑](#footnote-ref-3)