



Discussion Paper:

Cultural and Creative Activity Satellite Accounts

Australia

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DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

CONTENTS

Executive summary	2
Section 1: Introduction	4
Background	4
What is a satellite account?	4
Objectives of the feasibility study.....	5
Section 2: Stakeholder needs	6
Section 3: Defining cultural and creative activity	8
Concepts	8
Cultural and creative industry supply chains (component 1)	9
Cultural and creative occupations in other industries (component 2)	10
Volunteer services to cultural and creative institutions (component 3)	11
Non-market output of market producers (component 4)	12
Section 4: Statistical model and data sources.....	13
Cultural and creative industry supply chains.....	13
Cultural and creative occupations in other industries.....	15
Volunteer services to cultural and creative institutions.....	16
Non-market output of market producers.....	17
Composition details	18
Industry linkages	18
Section 5: Data gaps and remedies	20
Section 6: Investment priorities for the satellite accounts	22
Section 7: Feedback and inquiries	24
Abbreviations	25
Appendix 1. Illustrative satellite account tables	26
Appendix 2. ANZSIC (2006) industry classes.....	35
Appendix 3. ANZSCO (Rev1.1) occupations.....	38
Glossary	40

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

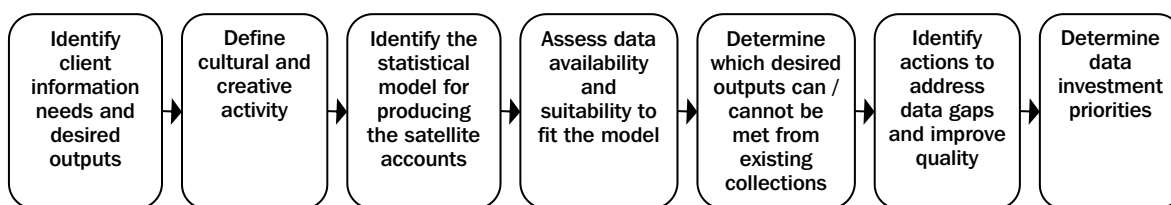
EXECUTIVE SUMMARY

In Australia and internationally, there is strong interest in the role of ‘cultural’ and ‘creative’ activity in the economy, such as highlighted recently by Australia’s National Cultural Policy *Creative Australia*. These terms are often used to describe activities connected with the arts, media, heritage, design, fashion and information technology.

To advance the development of economic measures for these activities, the Australian Bureau of Statistics (ABS) has conducted a study on the feasibility of producing cultural and creative activity satellite accounts for Australia. The feasibility study concludes it is possible for the ABS to construct Australian cultural and creative activity satellite accounts with a reasonable level of quality using currently available data. The purpose of this discussion paper is to present the findings of the study and invite comment on the proposed approach, data and investment priorities.

The feasibility study was undertaken in consultation with federal and state government organisations comprising the Cultural Ministers’ Statistics Working Group, and with Australian academics. The method used for the feasibility study is depicted in figure 1 below.

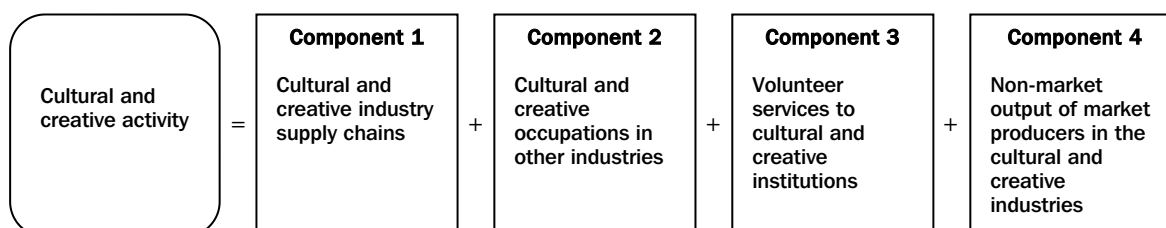
Figure 1: Feasibility study method



Stakeholders have identified three major needs from Australian cultural and creative activity satellite accounts: to measure the economic value of this segment of the economy; monitor its economic viability and reliance on volunteers and financial support from Government; and understand its linkages to the rest of the economy. This translates to a need for headline outcome measures for Australia and individual states and territories, for detail on the composition of those headline measures, and for a supply-use table that can be used for supply chain analyses.

Practical definitions of cultural and creative activity have been developed with stakeholders, starting by identifying the core cultural and creative domains (e.g. film, music, design, etc). For each domain, it is proposed that the satellite accounts would capture four components as shown in figure 2.

Figure 2: Proposed boundary for cultural and creative activity satellite accounts



Component 1 has been the focus of similar satellite accounts for other nations including Canada, Finland, the United Kingdom and Spain. Some of these cultural or creative activity satellite accounts have aspired to include components 2 and 3 but were not able to do so because of data or methodological difficulties. Components 3 and 4 are included in a satellite account the ABS has produced for non-profit institutions.

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

To outline how the four components in figure 2 are proposed to be estimated for Australian satellite accounts:

- Activity in the cultural and creative industry supply chains would be valued by drawing out the contributions of selected industries from ABS input-output tables.
- The activity in other industries performed by workers in cultural and creative occupations would be valued as a share of compensation of employees, which is also in ABS input-output tables. The share would be calculated using detailed employment and wages data from the Census of Population and Housing and ABS surveys.
- Volunteer services to cultural and creative institutions would be valued from the number of hours of volunteer work given to 'arts/heritage' organisations. Each hour of work would be valued at an hourly rate commensurate with the cost of replacing volunteer work with paid labour.
- Non-market output of market producers is intended to capture the value of goods and services supplied by non-profit institutions for free, or at prices that are not economically significant, because the production is supported by charitable contributions and other transfers. It would be estimated using Business Activity Statement data from the Australian Taxation Office.

Some stakeholders are primarily interested in 'cultural' activity, which is a relatively mature and accepted concept, while other stakeholders focus on the emerging concept of 'creative' activity. The feasibility study explored how these different needs might be met and determined it is possible to produce three separate accounts (cultural, creative, combined cultural and creative). In addition, the satellite accounts could give details by domain to the extent possible.

The most recent financial year the satellite accounts could be produced for is currently 2008-09. The ability to produce the satellite accounts in future years depends on the continued availability of various input data.

State and territory splits of Australian estimates could potentially be developed for each of the four components using a breakdown of the source data or other indicators. This would need to be assessed further once Australian accounts are developed.

Some of the details stakeholders are seeking about the composition of headline measures are not currently collected or compiled (e.g. sources of incomes and types of expenses in certain industries, and data on industry assets and liabilities). There are also a number of areas where data should ideally be updated or its quality improved. Most of these can be remedied with funding but in some cases the expense may be prohibitive. The gaps and remedies are covered in section 5.

An objective of the feasibility study is to determine the investment priorities in this area of statistics so stakeholders can share a coherent longer-term investment strategy. The ABS believes the investment priorities are to develop the first satellite accounts and the information technology infrastructure needed to produce the accounts efficiently in the future. After the satellite accounts are 'up and running' the priority would be to expand the information included in the accounts (e.g. adding details on types of income and expenses) and to improve or maintain the quality of key data inputs. The investment priorities are covered in section 6.

Feedback or inquiries from stakeholders about this discussion paper are welcome and will be considered for an upcoming ABS information paper on this topic. Feedback or inquiries should be forwarded by 30 August 2013 to:

Assistant Director
National Centre for Culture and Recreation Statistics
Australian Bureau of Statistics
GPO Box 2272
Adelaide SA 5001
E-mail: nccrs@abs.gov.au

SECTION 1: INTRODUCTION

BACKGROUND

In Australia and internationally, there is strong interest in the role of ‘cultural’ and ‘creative’ activity in the economy, such as highlighted recently by Australia’s National Cultural Policy *Creative Australia*. These terms are often used to describe activities connected with the arts, media, heritage, design, fashion and information technology.

The Australian Bureau of Statistics (ABS) publishes a compendium of statistics for selected cultural and creative activities in *Arts and Culture in Australia: A Statistical Overview* (cat. no. 4172.0). However there remains a need – particularly in government and academia – for holistic estimates of the economic contribution made by cultural and creative activity in Australia.

To advance the development of these economic measures, the ABS has conducted a study on the feasibility of producing cultural and creative activity satellite accounts for Australia. The feasibility study has been undertaken in consultation with the federal and state government organisations comprising the Cultural Ministers’ Statistics Working Group, and with Australian academics.

WHAT IS A SATELLITE ACCOUNT?

Satellite accounts provide economic estimates for selected areas of interest in a manner that is linked to, but distinct from, the national accounts. The national accounts are a comprehensive set of economic data which are fully consistent and complete within the boundary of the economic activities they cover. The national accounts record the essential elements of the economy: production, income, consumption, accumulation of assets and liabilities, and wealth. Gross domestic product (GDP) is perhaps the most recognisable and important economic statistic included.

A detailed explanation of the national accounts is available in *Australian System of National Accounts: Concepts, Sources and Methods* (cat. no. 5216.0). The main national accounts published by the ABS can be found in:

- *Australian National Accounts: National Income, Expenditure and Product* (cat. no. 5206.0)
- *Australian System of National Accounts* (cat. no. 5204.0)
- *Australian National Accounts: Financial Accounts* (cat. no. 5232.0)
- *Australian National Accounts: Input-Output Tables* (cat. no. 5209.0.55.001)
- *Australian National Accounts: Input-Output Tables (Product Details)* (cat. no. 5215.0.55.001)
- *Australian National Accounts: State Accounts* (cat. no. 5220.0).

These publications are closely followed by government and private sector economists, the media, and others to evaluate the performance of the economy including individual sectors, states/territories, industries and products.

Satellite accounts expand on national accounts by providing additional detail or by utilising alternative classifications or concepts (this can include covering an alternative boundary of activities). To date the ABS has published satellite accounts for several areas of interest:

- *Australian National Accounts: Tourism Satellite Account* (cat. no. 5249.0) draws out the economic contribution of tourism, which is implicitly included in the national accounts but not separately identified as an industry or product.

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

- *Australian National Accounts: Non-Profit Institutions Satellite Account* (cat. no. 5256.0) draws out the economic contribution of non-profit institutions (NPIs), and extends beyond the activity boundary of the national accounts to include volunteer services and the non-market output of market producers.
- *Australian National Accounts: Information and Communication Technology Satellite Account* (cat. no. 5259.0) draws out the economic contribution of the industries and products associated with 'ICT'.

Satellite accounts for cultural and/or creative activity have been published by government agencies for other nations including Canada¹, Finland², the United Kingdom³ and Spain⁴. Relevant statistical frameworks have also been released by the United Nations Educational, Scientific and Cultural Organization (UNESCO)⁵ and the European Commission⁶. These works have been considered as part of the ABS' feasibility study.

OBJECTIVES OF THE FEASIBILITY STUDY

The feasibility study has been conducted by the ABS to:

- Clarify what stakeholders need from the satellite accounts (see section 2)
- Develop practical definitions of cultural and creative activity for use in the satellite accounts (see section 3)
- Identify a suitable statistical model for the accounts and the availability of data to fit the model (see section 4)
- Identify remedies for significant data gaps (see section 5)
- Prioritise the actions required to develop and/or improve the quality of the satellite accounts (see section 6)

This discussion paper shares the feasibility study's findings, which provide a basis for coherent longer-term investment in this area of statistics. Feedback or inquiries from stakeholders are welcome and will be considered for an upcoming ABS information paper on this topic. Feedback or inquiries should be forwarded by 30 August 2013 to:

Assistant Director
National Centre for Culture and Recreation Statistics
Australian Bureau of Statistics
GPO Box 2272
Adelaide SA 5001
E-mail: nccrs@abs.gov.au

¹ Statistics Canada (2004), *Economic Contribution of Culture in Canada*, <<http://www.statcan.gc.ca/pub/81-595-m/81-595-m2004023-eng.pdf>>.

² Ministry of Education (2009), *Culture Satellite Account: Final report of pilot project*, <<http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2009/liitteet/opm13.pdf?lang=fi>>.

³ Department for Culture, Media and Sport (2011), *Creative Industries Economic Estimates: Full Statistical Release*, <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/77959/Creative-Industries-Economic-Estimates-Report-2011-update.pdf>.

⁴ Ministry of Culture (2011), *Satellite Account on Culture in Spain: Advance of 2000-2009 results*, <http://www.mcu.es/estadisticas/docs/CSCE/advance_results_csce-2011.pdf>.

⁵ United Nations Educational Scientific and Cultural Organization (UNESCO) (2009), *2009 UNESCO Framework for Cultural Statistics*, <<http://www.uis.unesco.org/culture/Documents/framework-cultural-statistics-culture-2009-en.pdf>>.

⁶ European Commission (2012), *ESSnet-Culture: European Statistical System Network on Culture – Final Report*, <<http://ec.europa.eu/culture/our-policy-development/documents/ess-net-report-oct2012.pdf>>.

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

SECTION 2: STAKEHOLDER NEEDS

In 2008 the ABS published *Arts and Cultural Heritage - An Information Development Plan* (cat. no. 4915.0.55.002) after consultation with a wide range of stakeholders across Australia. The plan identifies the major policy and research questions in the arts and cultural heritage fields, the data needed to answer those questions, and recommends future directions for data development.

The plan describes three key needs for information about economic outcomes, all of which could potentially be met through development of satellite accounts. Further consultation undertaken for the feasibility study in late 2012 confirmed these needs remain, and enabled the requirements of stakeholders to be clarified. Their needs and specific data requirements are set out in the table below.

<i>Information needs</i>	<i>Rationale</i>	<i>Data items</i>	<i>Classification variables</i>
Measurement of economic outcomes from cultural and creative activity	To demonstrate the economic value of cultural and creative activities to Government and other potential partners. Stakeholders see this as important to fostering investment.	Gross Domestic Product (\$) Gross Value Added (\$) Output (\$) Employment (no.) Volunteers (no.) Volunteer hours (no.) Volunteer work (\$)	Industry or domain (e.g. Performing arts, Literature and print media, etc) Geography (state/territory) Sector (market/non-market)
The composition of these economic outcomes	To monitor the economic viability of cultural and creative activities (particularly the dependence on support from Government, volunteers and fundraising) and assist with targeting strategies to develop the industries. Intertwined with this is concern about international competition and the ability to maintain Australian output and opportunities for community involvement.	Income (\$) Expenses (\$) Research and Development expenditure (\$) Assets and liabilities (\$) Entities (no.)	Type of income (sales, transfers, investment income, royalties, etc) Sources of income (government, business, households, exports, etc) Type of expenditure (labour, advertising, taxes, etc) Exports and Imports Type of asset (cash, property, etc) Entity size (employment and turnover) Industry or domain Sector (market/non-market)
Measurement of supply and demand linkages with other industries	To understand the extent that cultural and creative activities are economic 'enablers' for other industries – particularly education, health, social policy, tourism and hospitality.	Purchases of output by cultural and creative industries (\$) Sales of cultural and creative output to other industries (\$)	Industry or domain Geography (state/territory)

The stakeholders consulted during the feasibility study require this information a minimum of every three years, for the most recent financial year that can be produced using available data. Appendix 1 contains a series of tables illustrating how the desired outputs might be presented (note tables 6 to 10 contain some detailed data items that are not currently able to be produced for cultural and creative industries using existing data collections).

While the terms 'cultural' and 'creative' are often used interchangeably, most stakeholders view them as covering different sets of activities. Some stakeholders are primarily interested in 'cultural' activity, which is a relatively mature and accepted concept, while other stakeholders focus on the emerging concept of 'creative' activity. The feasibility study explored the options to address these different interests, and proposes that satellite accounts be produced individually for 'cultural' activity and 'creative' activity, as well as producing an aggregate account covering both that

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

takes into account the overlap between the two. In each of the three satellite accounts, details by domain would be given to the extent possible.

Stakeholders are invited to comment on:

- *the data items and statistical output required, how frequently this information is needed, and how it would be used; and*
- *the proposal to produce satellite accounts individually for cultural activity, creative activity, and combined cultural and creative activity.*

SECTION 3: DEFINING CULTURAL AND CREATIVE ACTIVITY

CONCEPTS

An international standard for cultural and creative activity satellite accounts is yet to be established. The concepts of cultural and creative activity proposed for Australian satellite accounts have therefore been developed in consultation with the key stakeholders for which the accounts must be meaningful, whilst drawing heavily on the satellite accounts produced overseas, the statistical frameworks published by UNESCO and the European Commission, and the academic literature underpinning much of the international work.

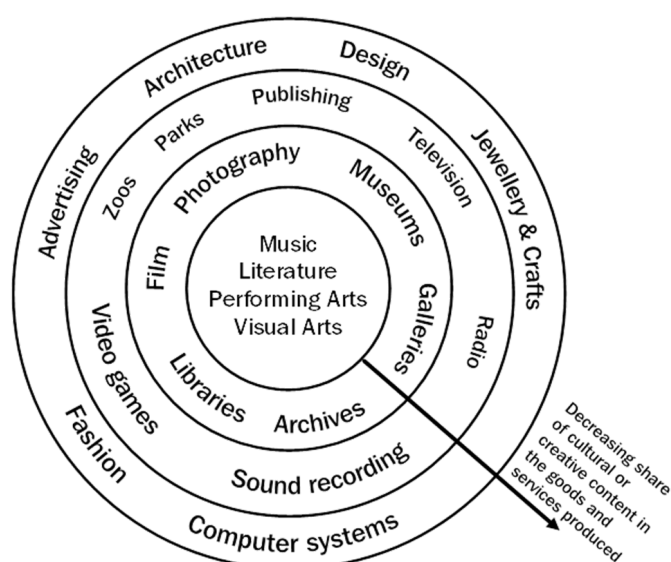
Cultural and creative activity satellite accounts for Australia would encompass productive activities broadly defined as:

- 'cultural' in that they communicate symbolic meaning (e.g. beliefs, values, traditions), require human creativity as an input, and potentially contain intellectual property; or are
- 'creative' in that human creativity is a significant and identifiable input⁷.

Using these broad definitions, it is possible for productive activities to be both 'cultural' and 'creative', and indeed, these terms are often used in overlapping ways in academic and government circles. This is also true for industries, occupations and goods and services. Deciding specifically what is 'cultural', 'creative' or 'both' obviously requires a level of subjective judgement, and as might be expected, there are a variety of specific definitions in use in Australia and overseas. However, these share substantial common ground and their differences tend to be at the margin.

Figure 3 below shows the domains (groups of activities) identified as part of 'cultural' or 'creative' by Australian stakeholders consulted for the feasibility study. The figure is based on the concentric circles model used for cultural industries by Throsby⁸. At the centre are the domains considered to produce the highest degree of cultural and creative content in their output relative to the output's commercial value.

Figure 3: Cultural and creative domains



⁷ For example, see D. Throsby (2001), *Economics and Culture*, Cambridge University Press, p4; United Nations Conference on Trade and Development (2008), *Creative Economy Report 2008*, p10, <http://unctad.org/en/Docs/ditc20082cer_en.pdf>; and European Commission (2012), p42.

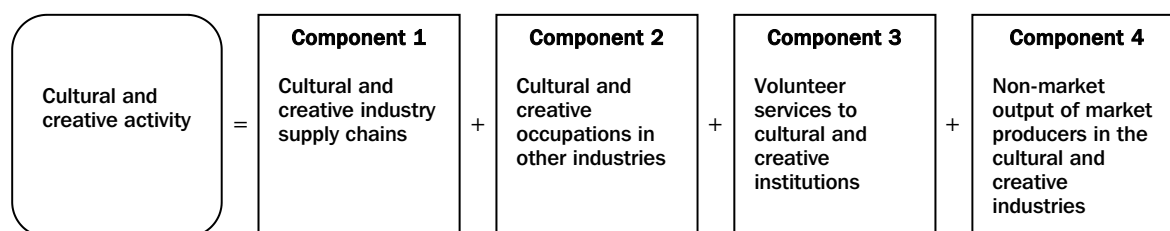
⁸ D. Throsby (2001), *The Economics of Cultural Policy*, Cambridge University Press, p26.

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

Of the domains in figure 3, zoos and parks are the only domains considered by stakeholders to solely belong to the 'cultural' segment, while fashion and computer systems are the only domains considered to solely belong to the 'creative' segment. The other domains are considered to belong to both segments.

The proposal for cultural and creative activity satellite accounts is to encompass, for all of the domains, the components shown in figure 4.

Figure 4: Proposed boundary for cultural and creative activity satellite accounts



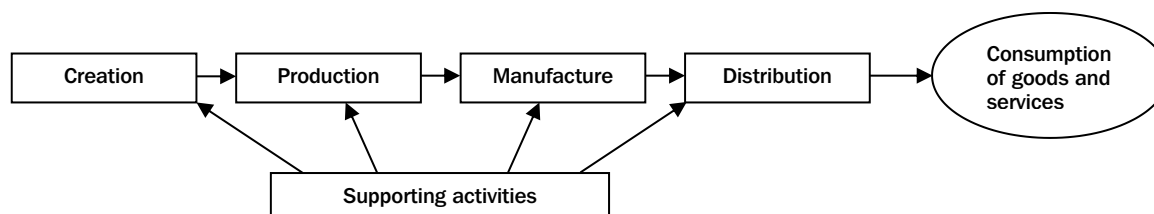
Component 1 has been the focus of satellite accounts for other nations. Some of these accounts have aspired to include components 2 and 3 but were not able because of data or methodological difficulties. Components 3 and 4 are included in the ABS' non-profit institutions satellite account and represent an extension beyond the national accounts production boundary.

CULTURAL AND CREATIVE INDUSTRY SUPPLY CHAINS (COMPONENT 1)

Similar to the satellite accounts for other nations, industry supply chains for cultural and creative domains would cover:

- Creation – industries which are the origin of cultural and creative ideas.
- Production – industries which turn the ideas into cultural and creative goods and services.
- Manufacture – industries which mass produce cultural and creative goods and services from a master copy.
- Distribution – industries which transfer cultural and creative goods and services to final consumers.
- Supporting activities – industries considered to have a significant direct supporting role to the cultural and creative activities in other parts of the industry supply chains (e.g. education and training that develops performance artists).

Figure 5: Concept of an industry supply chain for cultural and creative domains



DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

The ABS uses the *Australian and New Zealand Standard Industrial Classification* (ANZSIC) (cat. no. 1292.0) to classify entities according to their predominant industrial activities. The most detailed hierarchical level of this classification is the ANZSIC class, of which 71 from the 2006 edition of ANZSIC have been identified as part of the cultural or creative industry supply chains. A full list is contained in Appendix 2.

The ANZSIC classes were identified with the aid of the 2008 edition of the *Australian Culture and Leisure Classifications* (ACLC) (cat. no. 4902.0) and industry employment 'intensities' calculated from 2011 Census of Population and Housing data. Industry employment intensities are the proportion of total employment in an ANZSIC class that is engaged in cultural and creative occupations⁹. These are highest for the ANZSIC classes identified with the 'creation' and 'production' stages of the supply chain.

Some of the ANZSIC classes identified in Appendix 2 cover significant amounts of activities that are not cultural or creative and do not directly support cultural or creative activities. An example of this is higher education (a supporting industry) that covers entities mainly engaged in undergraduate or postgraduate teaching, of which cultural and creative fields are only one part. These ANZSIC classes would need to have out-of-scope activities removed through an apportioning process, or else be excluded altogether to prevent the satellite accounts from being overstated.

The identified ANZSIC classes include those that have a direct connection with spending by tourists on cultural and creative activities. Tourism is not an industry, or good or service, in statistical classifications but the goods and services purchased by tourists, and produced by suppliers, are all part of the economic activity measured in the national accounts. The contribution of tourism to national accounts aggregates is drawn out in the ABS' tourism satellite accounts and the same methodology used for those accounts can be used to draw out the contribution of tourism to cultural and creative activity.

CULTURAL AND CREATIVE OCCUPATIONS IN OTHER INDUSTRIES (COMPONENT 2)

Industry supply chains do not fully capture all cultural and creative activity in the economy. Cultural and creative activity is also carried out by people employed in industries outside the supply chains. An example is someone employed in the insurance industry to develop advertising content – the work activity they perform is cultural and creative in nature, even if the industry is not.

To measure the size of activity in non-cultural and creative industries, a variety of academic studies such as Higgs and Cunningham¹⁰, and the UNESCO and European Commission frameworks¹¹, propose using employment classified by both industry and occupation. As shown in figure 6 below, workers in the cultural or creative industries are said to be 'specialist' if they are employed in cultural or creative occupations and 'support' if employed in other occupations. Workers in cultural or creative occupations in other industries are said to be 'embedded'.

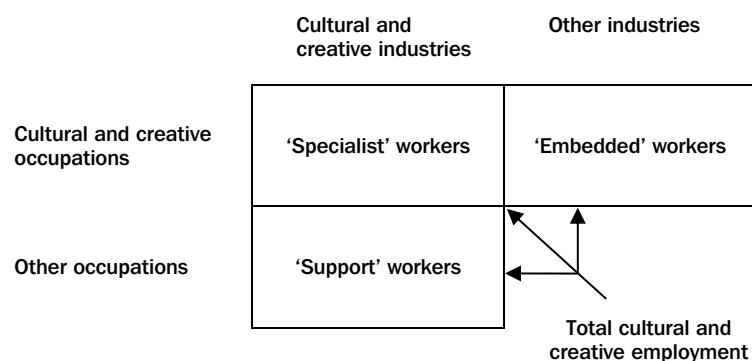
It is the activity undertaken by embedded workers (including multiple job holders) that is proposed to be captured in the second component of the satellite accounts. The activity of specialist and support workers would be captured in the industry supply chains component described above.

⁹ Based on H. Bakhshi, A. Freeman and P. Higgs (2012), *A Dynamic Mapping of the UK's Creative Industries*, report for the Nesta Operating Company, <http://www.nesta.org.uk/library/documents/Dynamic_mappingV12.pdf>.

¹⁰ P. Higgs and S. Cunningham (2008), 'Creative Industries Mapping: Where have we come from and where are we going?', *Creative Industries Journal*, vol.1, no.1, p7-30, <http://portal2.ntua.edu.tw/~dc/files/F04_3.pdf>.

¹¹ UNESCO (2009), p40 and European Commission (2012), p148.

Figure 6: Cultural and creative employment 'trident'



The ABS uses the *Australian and New Zealand Standard Classification of Occupations* (ANZSCO) (cat. no. 1220.0) to classify occupations according to their skill level and skill specialisation. The most detailed hierarchical level of this classification is the ANZSCO occupation, of which 132 have been identified as cultural or creative using ANZSCO edition 1.1. A full list is contained in Appendix 3.

ANZSCO occupations were identified with the aid of the ACLC and occupation employment intensities calculated from 2011 Census of Population and Housing data. Occupation employment intensities¹² are the proportion of total employment in an ANZSCO occupation that is engaged in cultural and creative industries. These are highest for the ANZSCO classes whose skill specialisations are closely associated with the 'creation' and 'production' stages of the industry supply chain.

VOLUNTEER SERVICES TO CULTURAL AND CREATIVE INSTITUTIONS (COMPONENT 3)

Volunteers are people who willingly give unpaid help to an organisation or group. This type of activity is prevalent in cultural and creative domains where people, for example, give their time unpaid as art gallery guides, as members of museum management boards, or to collect donations from the public.

Although the national accounts production boundary excludes all types of unpaid labour, it can be appropriate to include volunteer services in the boundary of a satellite account. The ABS has previously done this as part of the non-profit institutions satellite account, which includes a substantial number of non-profits from cultural and creative industries. On this basis volunteer services are proposed as an inclusion in the cultural and creative activity satellite accounts.

The ABS' non-profit institutions satellite account is based on the United Nations' *Handbook on Non-profit Institutions in the System of National Accounts*¹³. The Handbook recognises that as volunteer labour is critical to the output of non-profit institutions and their ability to produce a level and quality of service, it is important to capture and value this activity in a non-profit institutions satellite account.

¹² Based on H. Bakhshi, A. Freeman and P. Higgs (2012).

¹³ United Nations (2003), *Handbook on Non-Profit Institutions in the System of National Accounts*, <http://unstats.un.org/unsd/publication/seriesf/seriesf_91e.pdf>.

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

NON-MARKET OUTPUT OF MARKET PRODUCERS (COMPONENT 4)

Non-market output is a term used in the national accounts to describe goods and services supplied free or at prices that are not economically significant. Non-market output is excluded from the national accounts production boundary for institutions that offer the majority of their production at economically significant prices (these institutions are known as ‘market producers’).

Non-market output of market producers is, however, included in the ABS’ non-profit institutions satellite account based on the United Nations’ Handbook. The Handbook argues that if an adjustment is not made to value any non-market output produced by market units, then the value of the output of market non-profit institutions is understated, as such units can produce significant amounts of output which are supported by charitable contributions or other transfers that is not evident in sales revenue.

Such an adjustment is proposed for the non-profit institutions within the scope of cultural and creative industries to avoid their output being understated. The results of the non-profit institutions satellite account for 2006-07 suggest the practical impact of this on cultural and creative activity satellite accounts may be small or nil.

Stakeholders are invited to comment on:

- *the proposed scope of the satellite accounts, particularly components 2-4; and*
- *the industries and occupations used to define cultural and creative activity (these are listed in Appendices 2 and 3).*

SECTION 4: STATISTICAL MODEL AND DATA SOURCES

CULTURAL AND CREATIVE INDUSTRY SUPPLY CHAINS

To maintain consistency with the national accounts, it is proposed that activity in the cultural and creative industry supply chains would be estimated for Australia using a top-down approach from the aggregates published annually in the ABS' input-output tables. The input-output tables provide information about the supply and use of products in the Australian economy, and the structure of, and inter-relationships between, Australian industries. The most recent input-output tables currently available are for 2008-09 and were prepared in accordance with the international standards contained in the *System of National Accounts 2008*¹⁴.

The input-output tables present information for 111 Input-Output Industry Groups (IOIGs), which are aggregations of ANZSIC classes¹⁵. The IOIGs are not granular enough for the purpose of cultural and creative activity satellite accounts because many of the IOIGs contain ANZSIC classes that are wholly out-of-scope and/or ANZSIC classes that contain significant amounts of out-of-scope activity. The aggregate data for IOIGs would therefore need to be split.

The primary method of splitting the IOIG data to smaller industry levels would be to use the product details tables published as part of the input-output suite. The product details tables contain the value of Australian production for the 1,284 product categories in the ABS' Input-Output Product Classification (IOPC). Each product category represents the goods and services characteristic of an industry and can be mapped to the ANZSIC classes in which they are produced.

The production value of products mapped to a cultural or creative ANZSIC class can be divided by the total Australian production of the broader IOIG to form a benchmark share. The benchmark share can then be applied to the aggregate data of the IOIG, such as Gross Value Added (GVA), to derive estimates for the cultural and creative ANZSIC class. ANZSIC classes in the wholesale and retail trade industries would be handled slightly differently since their output is represented in input-output tables by the trade margins on the goods they purchase for resale. The benchmark shares for wholesale and retail would therefore be the trade margins on products mapped to cultural and creative ANZSIC classes, divided by total retail and wholesale trade margins.

Using benchmarks from input-output tables in this way requires a default assumption that all the products produced by an IOIG have an identical production function. This assumption is used in the ABS' tourism satellite accounts and is likely to be more valid for some IOIGs than others. Errors resulting from the use of this assumption at the individual ANZSIC class level are expected to tend to offset when estimates are aggregated to higher industry levels in a cultural and creative satellite account¹⁶.

The primary method of splitting IOIG data (explained above) would enable estimates to be constructed for the vast majority of ANZSIC classes in the cultural and creative industry supply chains. The remaining ANZSIC classes contain significant amounts of out-of-scope activity that would require further splitting using supplementary methods, or

¹⁴ European Commission, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations and World Bank (2009), *System of National Accounts, 2008*, <<http://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf>>.

¹⁵ An IOIG to ANZSIC concordance is contained in *Australian National Accounts: Input-Output Tables (Product Details)* (cat. no. 5215.0.55.001), Table 2. IOPG to IOPC Concordance.

¹⁶ See *Australian National Accounts: Tourism Satellite Account* (cat. no. 5249.0), explanatory note 78.

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

alternatively, activity in these ANZSIC classes could be estimated within the occupations component of the satellite account (component 2). The ANZSIC classes that contain significant amounts of out-of-scope activity are listed in the table below.

Code	ANZSIC class name	Comments
1320	Leather Tanning, Fur Dressing and Leather Product Manufacturing	Jewellery and Crafts activities in these classes are in-scope.
2029	Other Ceramic Product Manufacturing	
2599	Other Manufacturing n.e.c.	Musical instrument manufacturing is in-scope.
3020	Non-Residential Building Construction	Cultural facilities construction activity is in-scope.
3109	Other Heavy and Civil Engineering Construction	
4520	Pubs, Taverns and Bars	Patron spending during live entertainment events is in-scope. There are several existing studies that provide data on this topic but the data is not sufficient for a satellite account.
4530	Clubs (Hospitality)	
6639	Other Goods and Equipment Rental and Hiring n.e.c.	Art work, video recorder and sound equipment hiring are in-scope.
6962	Management Advice and Related Consulting Services	Casting agent services and other specialised services for cultural and creative activity are in-scope.
7211	Employment Placement and Recruitment Services	
7212	Labour Supply Services	
7299	Other Administrative Services n.e.c.	Cultural event management, arts promotion and theatre and concert booking services are in-scope.
7510	Central Government Administration	Administration activity for cultural or creative policies and programs is in-scope.
7520	State Government Administration	
7530	Local Government Administration	
8101	Technical and Vocational Education and Training	Education and training in cultural and creative fields is in-scope.
8102	Higher Education	
9499	Other Repair and Maintenance n.e.c.	Jewellery and musical instrument repair are in-scope.
9551	Business and Professional Association Services	Associations and groups which predominantly service the interests of cultural and creative industries and professions are in-scope.
9552	Labour Association Services	
9559	Other Interest Group Services n.e.c.	

The contribution of tourism to cultural and creative activity would be implicitly captured within the industry supply chain estimates. Within the ABS' tourism satellite account this contribution is already drawn out in estimates of 'cultural services' output and GVA, which are based on visitor spending allocated to heritage and the creative and performing arts. These estimates are thought sufficient to meet stakeholder needs.

State and territory splits of the industry supply chains component could potentially be developed using a method similar to how the ABS' state accounts are constructed¹⁷. Input-output tables would allow GVA for each Australian industry in the cultural and creative satellite accounts to be decomposed into their primary inputs:

- Compensation of Employees (COE), which is the total remuneration payable by enterprises to employees in cash or in kind;

¹⁷ See chapter 21 of *Australian System of National Accounts: Concepts, Sources and Methods* (cat. no. 5216.0).

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

- Gross Operating Surplus (GOS) and Gross Mixed Income (GMI), which are the incomes from production received by the owners of corporate enterprises and unincorporated enterprises; and
- Other taxes less subsidies on production, which includes employers' payroll tax, motor vehicle taxes, land taxes, municipal and improvement rates, and a number of other items.

These primary inputs of each industry could potentially then be split by state and territory based on their shares of national indicators.

- The indicators used to split COE, GOS and GMI in the satellite accounts would be different from the ones used for the ABS' state accounts, since these do not produce state data with the required level of industry granularity. Instead, the state and territory splits for a cultural and creative satellite account would be based on a combination of data directly collected by the ABS' annual Economic Activity Survey (EAS) and the Business Activity Statements (BAS) collected by the Australian Taxation Office (ATO). These sources together provide estimates of employment by state, wages and sales income for each individual entity on the ABS' Business Register. The combined data sets are used by the ABS to produce state and detailed industry estimates in *Australian Industry* (cat. no. 8155.0)¹⁸.
- Other taxes less subsidies on production would be split with an extension of the state matrices that are used for the ABS' state accounts. The matrices contain a modelled allocation of taxes and subsidies from *Government Finance Statistics* (cat. no. 5519.0.55.001).

This possible method of producing state and territory splits would need to be assessed further once Australian estimates are developed since there may be unforeseen issues with the quality of the underlying data. Also, while this method may be suitable for constructing Australian cultural and creative activity satellite accounts, it should be noted this is not necessarily suitable for broader application, particularly for industries that have many large multi-state businesses.

CULTURAL AND CREATIVE OCCUPATIONS IN OTHER INDUSTRIES

The cultural and creative activity undertaken outside of the cultural and creative industry supply chains is proposed to be valued as a share of the COE aggregates in the ABS' input-output tables. COE is the total remuneration payable by enterprises to employees, in cash or in kind, comprised of wages and salaries, and employers' social contributions (the latter includes contributions towards retirement benefits such as superannuation).

An argument can be made that the value of this activity should also include shares of GOS and GMI, which represent returns to the capital used by workers. It is not proposed to do this in the Australian satellite accounts as there are considerable conceptual and practical difficulties with identifying how the use of capital is spread within an industry across different types of workers.

COE for each industry is proposed to be apportioned to cultural and creative activity by estimating the share of total employee remuneration payable to people employed in cultural and creative occupations. Multiple jobholding is prevalent among cultural and creative occupations and consequently this estimate would factor in main jobs and secondary jobs.

- For main jobs, total employment would be based on the employment aggregates contained in input-output tables. Employment in cultural and creative occupations would be estimated by applying to the input-output employment aggregates the workforce occupation structure from Census data, adjusted for intercensal

¹⁸ See technical notes 1 and 3 in the Explanatory Notes of *Australian Industry* (cat. no. 8155.0).

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

movements using *Labour Force, Australia, Detailed, Quarterly* (6291.0.55.003). The resulting employment estimates (for total and cultural and creative) would be applied to average earnings data from the ABS' Survey of Employee Earnings and Hours (SEEH)¹⁹.

- For secondary jobs, employee earnings would be estimated using data from the ABS' 2007 Survey of Employment Arrangements, Retirement and Superannuation (SEARS)²⁰. Until more recent data is collected, SEARS would provide multiple job holding rates for selected occupations and industries that can be applied to the workforce estimates described above. Average employee earnings in secondary jobs are also available in SEARS and this data could be adjusted over time for wage inflation using the ABS' *Wage Price Index, Australia* (cat. no. 6345.0).

The Australian estimates for this component of the satellite accounts could potentially be split by state and territory using the Census employment profiles of each jurisdiction, coupled with adjustments for the differences in average wages by state using *Average Weekly Earnings, Australia* (cat. no. 6302.0). This method has not been previously trialled but is expected to be feasible.

VOLUNTEER SERVICES TO CULTURAL AND CREATIVE INSTITUTIONS

The value of volunteer services in Australian cultural and creative satellite accounts is proposed to be estimated using the 'replacement cost' method that is used by the ABS' non-profit institutions Satellite Account, based on the United Nations' Handbook. In this method, each hour of a volunteer's time is valued at what it would cost to replace with paid labour²¹.

Data on volunteers are collected periodically in the ABS' General Social Survey (GSS)²². In this survey people are asked about the type of organisations they volunteered for, the number of hours they worked unpaid and the types of work activities they performed. The number of hours volunteered with the 'arts/heritage' organisation type would be multiplied by replacement wage rate assumptions based on Employee Earnings and Hours Survey data. The replacement wage rate assumptions would vary with the work activities the volunteers performed and the occupation categories to which these activities match.

The volunteer hours data required for this estimate was last collected in 2006, but may be collected again in the survey scheduled for 2014. For the reference periods in between, volunteer hours could be estimated by applying the volunteering rates from the 2006 survey to the changed Australian population levels.

Australian estimates of volunteer hours in 'arts/heritage' could potentially be split by state and territory using the GSS' state level estimates. Some of the relative standard errors on these estimates were high in the 2006 GSS and consequently it may be more appropriate to estimate volunteer hours by applying the Australian volunteering rates to each jurisdiction's population. These methods have not been trialled previously but are expected to be feasible. The replacement wage rate assumptions applied to the state estimates would be adjusted for state differences in average wages based on *Average Weekly Earnings, Australia* (cat. no. 6302.0).

¹⁹ Published in *Employee Earnings and Hours, Australia* (cat. no. 6306.0).

²⁰ Published in *Employment Arrangements, Retirement and Superannuation, Australia* (cat. no. 6361.0).

²¹ *Australian National Accounts: Non-Profit Institutions Satellite Account* (cat. no. 5256.0), p35-36.

²² Published in *General Social Survey: Summary Results, Australia* (cat. no. 4159.0) and *Voluntary Work, Australia* (cat. no. 4441.0)

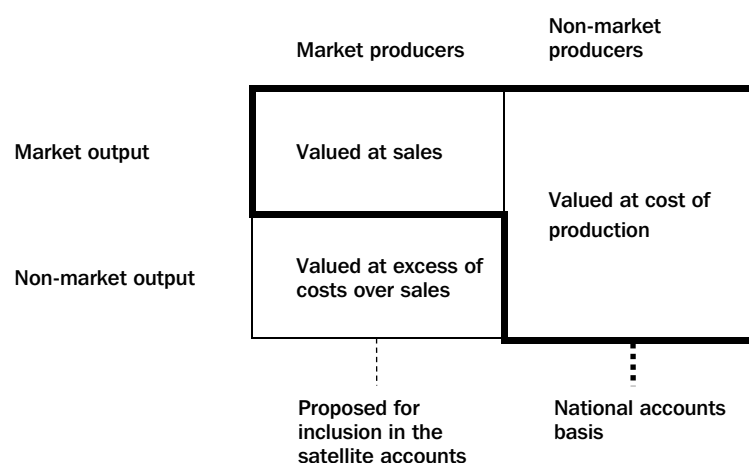
DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

NON-MARKET OUTPUT OF MARKET PRODUCERS

As explained in section 3, the non-market output of market producers has previously been estimated in the ABS' non-profit institutions satellite account and the same method is proposed for use in Australian cultural and creative activity satellite accounts.

Non-market output of market producers would be valued as the difference between the output of market units when calculated by cost summation (the standard national accounts valuation method for non-market units), and output as calculated by sales value (the standard national accounts method for market units). Where output on a cost valuation basis exceeds output on a sales valuation basis, the difference is taken to be the non-market output of market producers. Where output on a sales basis exceeds output on a cost basis, non-market output of market producers is assumed to equal zero²³. This is represented in figure 7 below.

Figure 7: Valuation of market and non-market output



The estimate of this component would be compiled for cultural and creative industries using BAS data for individual entities, like in the Australian non-profit institutions satellite account. The estimate would be restricted to market producers that are non-profit institutions.

State and territory splits of the Australian estimate could potentially be constructed using the BAS data and EAS data. EAS directly collects state details for significant businesses and this could enable the non-market output of multi-state businesses to be assigned. However, the data sources have not previously been used for this purpose and there could be unforeseen issues.

²³ *Australian National Accounts: Non-Profit Institutions Satellite Account* (cat. no. 5256.0), p35.

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

COMPOSITION DETAILS

Some of the more detailed data sought by stakeholders about the composition of Australian cultural and creative activity can be developed from existing statistical collections, while others would require new collections to be undertaken, as explained below.

Data on the types of incomes received and expenses incurred by entities are collected as part of the ABS' rolling EAS program and in selected cases data about their assets and liabilities are also collected. The range of data items in the standard EAS questionnaire are not as detailed as desired by stakeholders, however with funding, additional data items could be added to the questionnaire. The EAS produces Australian estimates for ANZSIC subdivisions, which are two levels of aggregation higher than ANZSIC classes. This delivers detail for some of the ANZSIC class aggregations in the cultural and creative industry supply chains, but not a majority. Finer industry breakdowns can become available for years when the EAS rolling program specifically targets parts of the culture and creative industries supply chain (e.g. the survey of businesses in film, television and digital games run for 2011-12). State estimates can become available in those years at ANZSIC subdivisions or lower (they are available annually for divisions with the items limited to wages and salaries, employment and sales income). In the future it may be possible for the ABS to make available details of income, expenses, assets and liabilities at finer industry levels using ATO business tax data.

Details on Research and Development (R&D) expenditure in Australia are collected annually by the ABS from businesses, government, higher education and private non-profit organisations²⁴. These collections aim to be near-complete enumerations of R&D expenditure and provide a high level of industry detail, including estimates for ANZSIC classes where confidentiality standards allow. It could be possible to use this data to compile R&D expenditure for the aggregations of ANZSIC classes which make up the cultural and creative industry supply chains, both for Australia and a split by state and territory. However, the compilation process would be fairly resource intensive.

Details on the number and size of entities in each industry can be compiled from the ABS' Business Register. Entity counts are possible for each state and territory according to each entity's main location of operation. This would be compiled consistently with the data for businesses (a subset of all entities) which the ABS currently publishes annually in *Counts of Australian Businesses, including Entries and Exits* (cat. no. 8165.0).

INDUSTRY LINKAGES

Following the estimation of cultural and creative activity by ANZSIC class, it would be possible to extend these estimates further to construct an Australian supply-use table describing the linkages between cultural and creative industries and the rest of the economy. An example of the structure of a supply-use table is given by table 14 in Appendix 1.

In the supply-use framework, product groups and primary inputs are shown in the table rows, and industries and final use categories in the columns. Figures in rows show the total supply of products, whether locally produced or imported, and how these products are used by industries as intermediate inputs to production, or consumed as final demand. At the bottom of a supply-use table, the rows show the primary inputs purchased by industries, and by final

²⁴ Published in *Research and Experimental Development, All Sector Summary, Australia* (cat. no. 8112.0); *Research and Experimental Development, Businesses, Australia* (cat. no. 8104.0); *Research and Experimental Development, Higher Education Organisations, Australia* (cat. no. 8111.0); and *Research and Experimental Development, Government and Private Non-Profit Organisations, Australia* (8109.0).

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

demand. Reading down the columns shows the inputs (intermediate and primary) into each industry, and the composition of each final demand category. Therefore all flows of goods and services in the economy are covered.

Construction of this table for cultural and creative activity in Australia would begin with the ABS' published supply-use table for Australia. GVA and output for IOIGs would be split and redefined according to the estimates of activity for cultural and creative industry supply chains. Intermediate uses would be reallocated across IOIGs in the same proportions as output.

Stakeholders are invited to comment on:

- *the estimation methods proposed for the satellite accounts; and*
- *whether their concept of cultural/creative tourism is sufficiently captured by 'cultural services' in the ABS' tourism satellite accounts.*

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

SECTION 5: DATA GAPS AND REMEDIES

In section 4 it was explained how statistics that are readily available can be used to construct Australian cultural and creative activity satellite accounts that meet many of stakeholders' needs. The next questions to consider are:

- What additional data is required to meet the remaining needs?
- How could improvements be made in areas of the satellite accounts where there are reservations about data quality?²⁵

The table below identifies the key data gaps and quality issues identified in section 4, and then suggests how these issues could be dealt with. In general, the solutions range from running a new survey, modifying an existing survey (e.g. by boosting the size of its sample or changing what data is collected), or making greater use of unit record data that is available within current collections but which would require a significant amount of processing.

<i>Data gap or quality issue</i>	<i>Potential remedies</i>
<p>1. Cultural and creative activity in the ANZSIC groups below cannot be identified directly from input-output tables.</p> <p><u>Group A</u> 1320 Leather Tanning, Fur Dressing and Leather Product Manufacturing 2029 Other Ceramic Product Manufacturing 2599 Other Manufacturing n.e.c. 6639 Other Goods and Equipment Rental and Hiring n.e.c. 6962 Management Advice and Related Consulting Services 7211 Employment Placement and Recruitment Services 7212 Labour Supply Services 7299 Other Administrative Services n.e.c. 9499 Other Repair and Maintenance n.e.c. 9551 Business and Professional Association Services 9552 Labour Association Services 9559 Other Interest Group Services n.e.c.</p> <p><u>Group B</u> 3020 Non-Residential Building Construction 3109 Other Heavy and Civil Engineering Construction</p> <p><u>Group C</u> 4520 Pubs, Taverns and Bars 4530 Clubs (Hospitality)</p> <p><u>Group D</u> 7510 Central Government Administration 7520 State Government Administration 7530 Local Government Administration</p>	<p>1.1. For Groups A-E, exclude the ANZSICs from the industry supply chains component of the satellite account. Some of the activity in these ANZSIC classes would then be automatically captured in the employment of people in cultural and creative occupations (component 2 of the satellite account). This option can be exercised for any ANZSIC individually.</p> <p>1.2. For Group A only, a list of Australian Business Numbers (ABN) is required for significant entities that belong to the ANZSIC classes and predominantly undertake the cultural and creative activities within them. This list could be compiled through desktop research and consultation with government or industry associations. Their share of total activity in the ANZSIC class would then be estimated using entity level data from existing ABS surveys or ATO business tax data.</p> <p>1.3. For Group B only, Building Approvals and Building Activity Survey records might be used to identify significant construction work on cultural facilities with some help from internet research. The value of work done on these significant jobs should be completely enumerated in the Building Activity Survey. The value of work done on significant jobs could be used to assign a share of total construction activity in input-output tables. Potentially the value of work done on less significant jobs could be separately modelled from Building Approvals.</p> <p>1.4. For Group C only, an estimate of patron spending during live entertainment events could potentially be collected via a new survey. However, this would be particularly challenging to accurately measure since patrons will have difficulty recalling their expenditure ex-post, and venues will not necessarily be able to provide sales disaggregated this way. Several non-ABS studies have been undertaken on this topic²⁶ and the resulting data was not of sufficient quality for a satellite account.</p>

²⁵ The *ABS Quality Framework* (cat. no. 1520.0) considers data quality using the criteria: relevance, accuracy, timeliness, accessibility, interpretability and coherence.

²⁶ For example, Ernst & Young (2011), *The Economic Contribution of the Venue-Based Live Music Industry in Australia*, report for the Australasian Performing Right Association, <<http://issuu.com/apraamcos/docs/livemusic?mode=window>>.

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

<i>Data gap or quality issue</i>	<i>Potential remedies</i>
<p><u>Group E</u> 8101 Technical and Vocational Education and Training 8102 Higher Education</p>	<p>1.5. For Group D only, administration activity on cultural or creative policies and programs could be estimated by surveying specialist government units (e.g. offices for the arts). Employment or wages in these units would be divided by the ANZSIC class totals to derive a share that can be applied to the input-output table aggregates.</p> <p>1.6. For Group E only, the share of activity in education and training in cultural and creative fields could be estimated using student course data from the National Centre for Vocational Education Research and Department of Industry, Innovation, Science, Research and Tertiary Education.</p>
<p>2. Earnings of multiple jobholders, by occupation and industry, have not been collected since SEARS 2007. Updated data would eventually be needed for the occupations component of the satellite accounts.</p>	<p>2.1. Multiple jobholders are identified in the Labour Force Survey each month. Their working hours and earnings in secondary jobs are likely to be collected each August starting in 2014, through the Characteristics of Employment supplementary survey. Questions would also need to be added to capture the industry and occupation of secondary jobs.</p> <p>2.2. Personal Income Tax (PIT) and Pay As You Go (PAYG) Withholding data from the ATO may be able to fill this need in the longer term, given taxpayers identify separate ABNs for each employer. PIT and PAYG data would need to be analysed in detail in order to determine their suitability for this purpose.</p>
<p>3. The GSS' state and territory estimates of volunteer hours for 'arts/heritage' organisations have high relative standard errors (typically 25-50%).</p>	<p>3.1. Boost the GSS sample size. Only a small percentage of people reached by this survey are volunteers and therefore a substantial increase (e.g. 100%) in the GSS sample would be needed to make a noticeable improvement in the quality of volunteering data. This is likely to make it prohibitively expensive.</p>
<p>4. Detail on income, expenses, assets and liabilities are infrequently collected for many parts of the cultural and creative industry supply chains. When surveys are run, they often do not provide estimates for ANZSIC classes or as much detail as sought by stakeholders.</p>	<p>4.1. Boost the samples of EAS surveys on industries that include cultural and creative activities. This would enable income and expense estimates to be produced for selected groups of ANZSIC classes as well as at higher ANZSIC levels. These sample boosts would be quite expensive. The collection of assets and liabilities would require a further allocation of resources, as would the collection of a wider range of income and expense details than on the current standard EAS questionnaire.</p> <p>4.2. Business Income Tax (BIT) data from the ATO may be able to fill this need in the longer term. BIT data contains detail on the income and expenses of a business by type, as well as assets and liabilities. BIT data is not currently used for this purpose and would need to be analysed in detail in order to determine its suitability.</p>
<p>5. Published R&D expenditure does not provide estimates for many of the ANZSIC classes which comprise the cultural and creative industry supply chains.</p>	<p>5.1. Use R&D expenditure data to compile estimates for the aggregations of ANZSIC classes which make up the cultural and creative industry supply chains, both for Australia and a split by state and territory. A significant amount of compilation work would be required to produce and check the confidentiality of data tailored in this way.</p>

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

SECTION 6: INVESTMENT PRIORITIES FOR THE SATELLITE ACCOUNTS

A key objective of the feasibility study is to determine the possible investment priorities for developing Australian cultural and creative activity satellite accounts. Listed in the table below are the actions which the ABS believes are the highest priorities and the outcomes that would be expected if these investments were to occur. The priority order is based on the ABS' assessment of the benefits each action would generate relative to the costs to stakeholders of investing in this work.

The ABS believes most of the information sought by stakeholders can be met to a reasonable level of quality using currently available data, coupled with the methods described in this discussion paper. The ABS therefore sees the top priorities as developing the first satellite accounts and the information technology infrastructure needed to produce them efficiently. Provided that the required input data continues to be available, the priority after the accounts are 'up and running' would be to expand the information included in the accounts (e.g. R&D expenditure, details on types of incomes and expenses) and improve or maintain the quality of data inputs (e.g. updating multiple jobholding data).

<i>Actions (in order of priority)</i>	<i>Expected outcomes</i>
<p>1. Develop the first 'experimental' cultural and creative activity satellite accounts for Australia, covering all components of the accounts which can be produced readily (at low cost) using existing data collections.</p>	<p>1.1. Australian satellite accounts for 'cultural and creative activity', 'cultural activity' and 'creative activity' in the most recent year for which data is available (currently the most recent year is 2008-09). The accounts would contain:</p> <ul style="list-style-type: none"> ▪ GDP on the satellite account basis and its components, such as volunteer services; ▪ employment and entity counts; and ▪ a supply-use table showing industry linkages with cultural and creative activity. <p>1.2. Development of the information technology infrastructure required to compile the satellite accounts efficiently in future periods.</p> <p>1.3. Publication of the accounts on the ABS website with the tag of 'experimental', designating a new product which may require refinement after user feedback is received.</p>
<p>2. Develop state and territory splits of the Australian aggregates. The feasibility of this would need to be assessed further once Australian accounts are developed and would depend on the quality of the input data.</p>	<p>2.1. State and territory estimates for 'cultural and creative activity', 'cultural activity' and 'creative activity' if feasible and practical. The estimates would be produced on the same basis as the Australian accounts but may possibly have less industry detail than at the national level.</p> <p>2.2. Development of the further information technology infrastructure required to compile the state and territory satellite account estimates efficiently in future periods.</p> <p>2.3. Publication of the state and territory estimates on the ABS website, provided the estimates are of satisfactory quality. The state and territory estimates would have the tag of 'experimental'.</p>
<p>3. Establish ongoing annual production of the cultural and creative activity satellite accounts for Australia, and state and territory splits if feasible. This is dependent on the continued availability of the various input data, particularly input-output tables.</p>	<p>3.1. Continuation of the original satellite account outputs for future years. The 'experimental' tag would be removed as methods and quality become established.</p>

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

<i>Actions (in order of priority)</i>	<i>Expected outcomes</i>
4. Trial the supplementary methods of including cultural and creative activity for the ANZSIC classes whose contributions cannot be identified directly from input-output tables. For detail see the table in section 5, points 1.1-1.3 and 1.5-1.6.	4.1. A possible increase in coverage of the satellite accounts, due to the refinement of estimation methods for ANZSIC classes relating to the 'crafts' domain and a range of supporting activities.
5. Compile R&D expenditure estimates for the aggregations of ANZSIC classes which make up the cultural and creative industry supply chains, both for Australia and a split by state and territory.	5.1. Australian and state/territory estimates of R&D expenditure for cultural and creative domains, or similar industry aggregations.
6. Analyse BIT data to determine whether it is able to provide details of income, expenses, assets and liabilities at an acceptable quality level.	6.1. A report on the suitability of the BIT data file for producing estimates of income, expense, assets and liabilities for the cultural and creative industries. A positive finding would enable these details to be compiled at significantly lower costs than by running industry surveys (the subject of action 7).
7. Boost the samples on EAS surveys in cultural and creative industries. Also add questions to acquire key details not included on the current standard EAS questionnaire (assets and liabilities, greater detail on incomes and expenses). The costs associated with this action may be prohibitive and therefore it is only proposed once the potential use of BIT data has been thoroughly explored (as per action 6 above).	7.1. Detail on income, expenses, assets and liabilities for selected groups of ANZSIC classes that are in the cultural and creative industry supply chains. Data for most ANZSICs could be collected at least once in every 5 years as part of the EAS program.
8. Analyse PIT and PAYG data to determine whether it is able to be used to compile estimates of multiple jobholding by industry and occupation.	8.1. A report on the suitability of the PIT and PAYG data files for producing estimates of the earnings by multiple jobholders, by industry and occupation. A positive finding would enable these details to be compiled at significantly lower costs than by adding questions to a Labour Force Survey supplement (the subject of action 9).
9. Update multiple jobholding data by adding questions to the Characteristics of Employment Labour Force Supplement Survey.	9.1. Prevention of significant understatement or overstatement of multiple jobholding in cultural and creative occupations. This data is one of the inputs to the estimate of activity in cultural and creative occupations (component 2 of the satellite accounts).

Stakeholders are invited to comment on the investment priorities for developing and improving the quality of cultural and creative satellite accounts.

SECTION 7: FEEDBACK AND INQUIRIES

This discussion paper presents the findings of the ABS' feasibility study into cultural and creative activity satellite accounts. Feedback or inquiries from stakeholders are welcome and will be considered, as part of plans to take this work forward, for an upcoming ABS information paper on this topic. The information paper will present a final ABS position on the proposed approach, data and investment priorities.

Feedback from stakeholders is particularly sought on:

- the data items and statistical output required, how frequently this information is needed, and how it would be used;
- the proposal to produce satellite accounts individually for cultural activity, creative activity, and combined cultural and creative activity;
- the proposed scope of the satellite accounts, particularly components 2-4;
- the industries and occupations used to define cultural and creative activity (listed in Appendices 2 and 3);
- the proposed estimation methods;
- whether their concept of cultural/creative tourism is sufficiently captured by 'cultural services' in the ABS' tourism satellite accounts; and
- the investment priorities for developing and improving the quality of the satellite accounts.

Feedback or inquiries should be forwarded by 30 August 2013 to:

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ABBREVIATIONS

'000	thousand
\$m	million dollars
ABN	Australian Business Number
ABS	Australian Bureau of Statistics
ACLIC	Australian Culture and Leisure Classifications
ANZSIC	Australian and New Zealand Standard Industrial Classification
ANZSCO	Australian and New Zealand Standard Classification of Occupations
ATO	Australian Taxation Office
BAS	Business Activity Statement
BIT	Business Income Tax
COE	Compensation of Employees
EAS	Economic Activity Survey
GDP	Gross Domestic Product
GMI	Gross Mixed Income
GOS	Gross Operating Surplus
GSS	General Social Survey
GVA	Gross Value Added
IOIG	Input-Output Industry Group
IOPC	Input-Output Product Classification
nec	not elsewhere classified
nfd	not further defined
no.	number
PAYG	Pay As You Go
PIT	Personal Income Tax
R&D	Research and Development
SEARS	Survey of Employment Arrangements, Retirement and Superannuation
UNESCO	United Nations Educational, Scientific and Cultural Organization

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

APPENDIX 1. ILLUSTRATIVE SATELLITE ACCOUNT TABLES

Note tables 6 to 10 contain some detailed data items that are not currently able to be produced for cultural and creative industries using existing data collections.

Table 1: Share of Gross Domestic Product

	<i>Financial year</i>
Gross value added of cultural and creative industry supply chains (\$m)	-
<i>plus</i> Net taxes on products of cultural and creative industry supply chains (\$m)	-
<i>plus</i> Compensation of employees for cultural and creative occupations in other industries (\$m)	-
<i>equals</i> Cultural and creative activity GDP—national accounts basis (\$m)	-
Cultural and creative activity GDP—national accounts basis (\$m)	-
<i>plus</i> Volunteer services to arts/heritage institutions (\$m)	-
<i>plus</i> Non-market output of market producers in cultural and creative industry supply chains (\$m)	-
<i>equals</i> Cultural and creative activity gross value added on a satellite account basis (\$m)	-
<i>plus</i> Net taxes on products of cultural and creative industry supply chains (\$m)	-
<i>equals</i> Cultural and creative activity GDP—satellite account basis (\$m)	-
Cultural and creative activity GDP—national accounts basis share of GDP (%)	-

Table 2: Cultural and creative supply chain activity by domain - Financial Year

	<i>National accounts basis</i>					<i>Non-market output of market producers – satellite account basis</i>
	<i>Output</i>	<i>Compensation of Employees</i>	<i>Gross Operating Surplus and Mixed Income</i>	<i>Taxes less subsidies on production</i>	<i>Gross Value Added</i>	
	\$m	\$m	\$m	\$m	\$m	\$m
Museums	-	-	-	-	-	-
Environmental heritage	-	-	-	-	-	-
Libraries and archives	-	-	-	-	-	-
Literature and print media	-	-	-	-	-	-
Performing arts	-	-	-	-	-	-
Design	-	-	-	-	-	-
Broadcasting, electronic or digital media, and film	-	-	-	-	-	-
Music composition and publishing	-	-	-	-	-	-
Visual arts and crafts	-	-	-	-	-	-
Fashion	-	-	-	-	-	-
Other culture goods manufacturing and sales	-	-	-	-	-	-
Supporting activities	-	-	-	-	-	-
Total cultural and creative industry supply chains	-	-	-	-	-	-

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

Table 3: Imputed Compensation of Employees by ANZSIC division - Financial Year

<i>ANZSIC division</i>	<i>Cultural and creative occupations in non-supply chain industries</i> \$m	<i>Contribution to total</i> %
Agriculture, Forestry and Fishing	–	–
Mining	–	–
Manufacturing	–	–
Electricity, Gas, Water and Waste Services	–	–
Construction	–	–
Wholesale Trade	–	–
Retail Trade	–	–
Accommodation and Food Services	–	–
Transport, Postal and Warehousing	–	–
Information Media and Telecommunications	–	–
Financial and Insurance Services	–	–
Rental, Hiring and Real Estate Services	–	–
Professional, Scientific and Technical Services	–	–
Administrative and Support Services	–	–
Public Administration and Safety	–	–
Education and Training	–	–
Health Care and Social Assistance	–	–
Arts and Recreation Services	–	–
Other Services	–	–
Total	–	–

Table 4: Volunteer work and imputed value of services - Financial Year

	<i>Number of volunteers</i> '000	<i>Annual hours volunteered</i> '000	<i>Imputed value of volunteer services</i> \$m
Arts/heritage organisations	–	–	–

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

Table 5: Employed persons (main job) by ANZSIC division - Financial Year

ANZSIC division	Cultural and creative supply chain industries		Cultural and creative occupations in other industries '000	Total '000
	Cultural and creative occupations '000	Other occupations '000		
Agriculture, Forestry and Fishing	-	-	-	-
Mining	-	-	-	-
Manufacturing	-	-	-	-
Electricity, Gas, Water and Waste Services	-	-	-	-
Construction	-	-	-	-
Wholesale Trade	-	-	-	-
Retail Trade	-	-	-	-
Accommodation and Food Services	-	-	-	-
Transport, Postal and Warehousing	-	-	-	-
Information Media and Telecommunications	-	-	-	-
Financial and Insurance Services	-	-	-	-
Rental, Hiring and Real Estate Services	-	-	-	-
Professional, Scientific and Technical Services	-	-	-	-
Administrative and Support Services	-	-	-	-
Public Administration and Safety	-	-	-	-
Education and Training	-	-	-	-
Health Care and Social Assistance	-	-	-	-
Arts and Recreation Services	-	-	-	-
Other Services	-	-	-	-
Total	-	-	-	-

Table 6: Income source by domain - Financial Year

	Museums \$m	Environmental heritage \$m	Libraries and archives \$m	...	Performing arts \$m	Supporting activities \$m	Total \$m
Received from government	-	-	-	...	-	-	-
Received from non-profit institutions	-	-	-	...	-	-	-
Received from other businesses/ organisations	-	-	-	...	-	-	-
Received from households	-	-	-	...	-	-	-
Received from other sources	-	-	-	...	-	-	-
Total revenue	-	-	-	...	-	-	-

... other domains

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

Table 7: Income type by domain - Financial Year

	<i>Museums</i>	<i>Environmental heritage</i>	<i>Libraries and archives</i>	<i>...</i>	<i>Performing arts</i>	<i>Supporting activities</i>	<i>Total</i>
	\$m	\$m	\$m	...	\$m	\$m	\$m
Sales of goods	-	-	-	...	-	-	-
Income from services provision							
sales of services	-	-	-	...	-	-	-
rent, leasing and hiring income	-	-	-	...	-	-	-
volume based government funding	-	-	-	...	-	-	-
sponsorships	-	-	-	...	-	-	-
membership fees	-	-	-	...	-	-	-
Total income from service provision	-	-	-	...	-	-	-
Transfers							
from government for current operations	-	-	-	...	-	-	-
from government for capital equipment	-	-	-	...	-	-	-
from resident related or affiliated enterprises	-	-	-	...	-	-	-
from non-resident related or affiliated enterprises	-	-	-	...	-	-	-
donations, bequests and legacies from households	-	-	-	...	-	-	-
donations from businesses	-	-	-	...	-	-	-
donations from philanthropic trusts/foundations	-	-	-	...	-	-	-
Total transfer income	-	-	-	...	-	-	-
Investment income							
interest	-	-	-	...	-	-	-
dividends	-	-	-	...	-	-	-
other investment income	-	-	-	...	-	-	-
Total investment income	-	-	-	...	-	-	-
Royalties income	-	-	-	...	-	-	-
Other income	-	-	-	...	-	-	-
Total revenue	-	-	-	...	-	-	-

... other domains

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

Table 8: Use of income by domain – Financial Year

	<i>Museums</i>	<i>Environmental heritage</i>	<i>Libraries and archives</i>	<i>...</i>	<i>Performing arts</i>	<i>Supporting activities</i>	<i>Total</i>
	\$m	\$m	\$m	...	\$m	\$m	\$m
Labour costs	-	-	-	...	-	-	-
Transfers paid							
to resident related and affiliated organisation	-	-	-	...	-	-	-
to other residents	-	-	-	...	-	-	-
to non-residents	-	-	-	...	-	-	-
donations	-	-	-	...	-	-	-
Total transfers paid	-	-	-	...	-	-	-
Purchases of goods and services							
payments to other businesses for staff	-	-	-	...	-	-	-
membership fees paid	-	-	-	...	-	-	-
materials and goods for use by this organisation	-	-	-	...	-	-	-
finished goods for resale	-	-	-	...	-	-	-
advertising, marketing and promotion	-	-	-	...	-	-	-
Total purchases of goods and services	-	-	-	...	-	-	-
Interest	-	-	-	...	-	-	-
Current taxes	-	-	-	...	-	-	-
Depreciation and amortisation	-	-	-	...	-	-	-
Other expenses	-	-	-	...	-	-	-
Saving	-	-	-	...	-	-	-
Total use of income	-	-	-	...	-	-	-

... other domains

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

Table 9: Capital account by domain - Financial Year

	<i>Museums</i>	<i>Environmental heritage</i>	<i>Libraries and archives</i>	<i>...</i>	<i>Performing arts</i>	<i>Supporting activities</i>	<i>Total</i>
	\$m	\$m	\$m	...	\$m	\$m	\$m
Surplus from current operations	-	-	-	...	-	-	-
Depreciation and amortisation	-	-	-	...	-	-	-
Capital transfers, receivable from government	-	-	-	...	-	-	-
Gross saving and capital transfers	-	-	-	...	-	-	-
Gross fixed capital formation							
Dwellings and other buildings and structures	-	-	-	...	-	-	-
Intangible assets	-	-	-	...	-	-	-
Other	-	-	-	...	-	-	-
Total gross fixed capital formation	-	-	-	...	-	-	-
Land acquisitions	-	-	-	...	-	-	-
Changes in inventories	-	-	-	...	-	-	-
Disposal of capital	-	-	-	...	-	-	-
Net lending (+)/net borrowing (-)	-	-	-	...	-	-	-
Total capital accumulation and net lending (+)/net borrowing (-)	-	-	-	...	-	-	-

... other domains

Table 10: Balance sheet by domain - Financial Year

	<i>Museums</i>	<i>Environmental heritage</i>	<i>Libraries and archives</i>	<i>...</i>	<i>Performing arts</i>	<i>Supporting activities</i>	<i>Total</i>
	\$m	\$m	\$m	...	\$m	\$m	\$m
Total assets	-	-	-	...	-	-	-
Non-financial assets	-	-	-	...	-	-	-
Property, plant and equipment	-	-	-	...	-	-	-
Inventories	-	-	-	...	-	-	-
Other assets	-	-	-	...	-	-	-
Financial assets	-	-	-	...	-	-	-
Cash and deposits	-	-	-	...	-	-	-
Investments held with fund managers	-	-	-	...	-	-	-
Liabilities	-	-	-	...	-	-	-
Provision for employee entitlements	-	-	-	...	-	-	-
Other liabilities	-	-	-	...	-	-	-
Net worth	-	-	-	...	-	-	-

... other domains

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

Table 11: Research and development expenditure by domain - Financial Year

	<i>Museums</i>	<i>Environmental heritage</i>	<i>Libraries and archives</i>	...	<i>Performing arts</i>	<i>Supporting activities</i>	<i>Total</i>
	\$m	\$m	\$m	...	\$m	\$m	\$m
Business	-	-	-	...	-	-	-
Federal Government	-	-	-	...	-	-	-
State / Territory Government	-	-	-	...	-	-	-
Higher Education	-	-	-	...	-	-	-
Private non-profit	-	-	-	...	-	-	-
Total	-	-	-	...	-	-	-
... other domains							

Table 12: Exports and imports by domain - Financial Year

	<i>Museums</i>	<i>Environmental heritage</i>	<i>Libraries and archives</i>	...	<i>Performing arts</i>	<i>Supporting activities</i>	<i>Total</i>
	\$m	\$m	\$m	...	\$m	\$m	\$m
Exports	-	-	-	...	-	-	-
Re-exports	-	-	-	...	-	-	-
Imports	-	-	-	...	-	-	-
Net exports	-	-	-	...	-	-	-
... other domains							

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

Table 13: Number of entities by domain - Financial Year

	Museums no.	Environmental heritage no.	Libraries and archives no.	...	Performing arts no.	Supporting activities no.	Total no.
Operating at start of financial year							
Employment size							
Non employing	-	-	-	...	-	-	-
1-19	-	-	-	...	-	-	-
20-199	-	-	-	...	-	-	-
200+	-	-	-	...	-	-	-
Turnover size							
Zero to less than \$50k	-	-	-	...	-	-	-
\$50k to less than \$200k	-	-	-	...	-	-	-
\$200k to less than \$2m	-	-	-	...	-	-	-
\$2m or more	-	-	-	...	-	-	-
Entries							
Employment size							
Non employing	-	-	-	...	-	-	-
1-19	-	-	-	...	-	-	-
20-199	-	-	-	...	-	-	-
200+	-	-	-	...	-	-	-
Turnover size							
Zero to less than \$50k	-	-	-	...	-	-	-
\$50k to less than \$200k	-	-	-	...	-	-	-
\$200k to less than \$2m	-	-	-	...	-	-	-
\$2m or more	-	-	-	...	-	-	-
Exits							
Employment size							
Non employing	-	-	-	...	-	-	-
1-19	-	-	-	...	-	-	-
20-199	-	-	-	...	-	-	-
200+	-	-	-	...	-	-	-
Turnover size							
Zero to less than \$50k	-	-	-	...	-	-	-
\$50k to less than \$200k	-	-	-	...	-	-	-
\$200k to less than \$2m	-	-	-	...	-	-	-
\$2m or more	-	-	-	...	-	-	-
Balancing item							
Employment size							
Non employing	-	-	-	...	-	-	-
1-19	-	-	-	...	-	-	-
20-199	-	-	-	...	-	-	-
200+	-	-	-	...	-	-	-
Turnover size							
Zero to less than \$50k	-	-	-	...	-	-	-
\$50k to less than \$200k	-	-	-	...	-	-	-
\$200k to less than \$2m	-	-	-	...	-	-	-
\$2m or more	-	-	-	...	-	-	-
Operating at end of financial year							
Employment size							
Non employing	-	-	-	...	-	-	-
1-19	-	-	-	...	-	-	-
20-199	-	-	-	...	-	-	-
200+	-	-	-	...	-	-	-
Turnover size							
Zero to less than \$50k	-	-	-	...	-	-	-
\$50k to less than \$200k	-	-	-	...	-	-	-
\$200k to less than \$2m	-	-	-	...	-	-	-
\$2m or more	-	-	-	...	-	-	-

... other domains

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

Table 14: Supply-Use table showing cultural and creative industries – Basic prices (\$m) – Financial Year

SUPPLY	USE	Cultural and creative industries			Other industries			Final consumption	Gross Fixed Capital Formation		Changes in inventories (Q6)	Exports (Q7)	Final uses (Q1 to Q7)	Total supply		
		Museums	Performing arts operation	...	Advertising services	Telecommunications	Health care services		...	Gambling					Households (Q1)	Government (Q2)
Cultural and creative products	Publishing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Motion picture and sound recording	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	...	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Heritage, creative and performing arts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Aquaculture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Coal mining	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	...	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Health care services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total Intermediate Use	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Compensation of employees (P1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross operating surplus & mixed income (P2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Taxes less subsidies on products (P3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other taxes less subsidies on production (P4)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Complementary imports (P5)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Australian Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Competing imports (P6)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Uses (T3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gross value added (V1) = P1+P2+P4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gross domestic product (Total V1+Total P3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
...	other products or industries	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

APPENDIX 2. ANZSIC (2006) INDUSTRY CLASSES

Code	ANZSIC class name	Segment	Domain	Comments
1320	Leather Tanning, Fur Dressing and Leather Product Manufacturing	Both	Visual arts and crafts	Partially in-scope. Associated with crafts.
1351	Clothing Manufacturing	Creative	Fashion	Wholly in-scope.
1352	Footwear Manufacturing	Creative	Fashion	Wholly in-scope.
1611	Printing	Cultural	Literature and print media	Partially in-scope. Photocopying is out-of-scope.
1612	Printing Support Services	Creative	Literature and print media	Wholly in-scope.
1620	Reproduction of Recorded Media	Cultural	Other culture goods manufacturing and sales	Wholly in-scope.
2029	Other Ceramic Product Manufacturing	Both	Visual arts and crafts	Partially in-scope. Associated with crafts.
2591	Jewellery and Silverware Manufacturing	Creative	Visual arts and crafts	Partially in-scope. Coin minting is out-of-scope.
2599	Other Manufacturing nec	Cultural	Other culture goods manufacturing and sales	Partially in-scope. Included for musical instrument manufacturing.
3020	Non-Residential Building Construction	Cultural	Supporting activities	Partially in-scope. Included for construction of cultural facilities.
3109	Other Heavy and Civil Engineering Construction	Cultural	Supporting activities	Partially in-scope. Included for construction of cultural facilities.
3712	Clothing and Footwear Wholesaling	Creative	Fashion	Wholly in-scope.
3732	Jewellery and Watch Wholesaling	Both	Visual arts and crafts	Partially in-scope. Watch and clock wholesaling are out-of-scope.
3735	Book and Magazine Wholesaling	Cultural	Literature and print media	Wholly in-scope.
3739	Other Goods Wholesaling nec	Cultural	Other culture goods manufacturing and sales	Partially in-scope. Included for musical instrument and recorded media wholesaling.
3800	Commission-Based Wholesaling	Cultural	Other culture goods manufacturing and sales	Partially in-scope. Included for its role in reselling cultural and creative goods.
4242	Entertainment Media Retailing	Cultural	Other culture goods manufacturing and sales	Wholly in-scope.
4244	Newspaper and Book Retailing	Cultural	Literature and print media	Wholly in-scope.
4251	Clothing Retailing	Creative	Fashion	Wholly in-scope.
4252	Footwear Retailing	Creative	Fashion	Wholly in-scope.
4253	Watch and Jewellery Retailing	Creative	Visual arts and crafts	Partially in-scope. Watch retailing is out-of-scope.
4259	Other Personal Accessory Retailing	Creative	Fashion	Partially in-scope. Briefcase and luggage retailing are out-of-scope.
4273	Antique and Used Goods Retailing	Cultural	Other culture goods manufacturing and sales	Partially in-scope. Coin and stamp dealing are out-of-scope.
4279	Other Store-Based Retailing nec	Cultural	Other culture goods manufacturing and sales	Partially in-scope. Included for retail art gallery operation and musical instrument retailing.
4310	Non-Store Retailing	Cultural	Other culture goods manufacturing and sales	Partially in-scope. Included for direct selling of books.
4320	Retail Commission-Based Buying and/or Selling	Cultural	Other culture goods manufacturing and sales	Partially in-scope. Included for selling and buying of books.
4520	Pubs, Taverns and Bars	Both	Performing arts	Partially in-scope. Included for the activity generated at venues during live entertainment performances.

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

Code	ANZSIC class name	Segment	Domain	Comments
4530	Clubs (Hospitality)	Both	Performing arts	Partially in-scope. Included for the activity generated at venues during live entertainment performances.
5411	Newspaper Publishing	Both	Literature and print media	Wholly in-scope.
5412	Magazine and Other Periodical Publishing	Both	Literature and print media	Partially in-scope. Racing forms publishing is out-of-scope.
5413	Book Publishing	Both	Literature and print media	Wholly in-scope.
5419	Other Publishing (except Software, Music and Internet)	Creative	Literature and print media	Partially in-scope. Calendar and diary publishing is out-of-scope.
5420	Software Publishing	Both	Broadcasting, electronic or digital media, and film	Wholly in-scope.
5511	Motion Picture and Video Production	Both	Broadcasting, electronic or digital media, and film	Wholly in-scope.
5512	Motion Picture and Video Distribution	Both	Broadcasting, electronic or digital media, and film	Wholly in-scope.
5513	Motion Picture Exhibition	Both	Broadcasting, electronic or digital media, and film	Wholly in-scope.
5514	Post-production Services and Other Motion Picture and Video Activities	Both	Broadcasting, electronic or digital media, and film	Wholly in-scope.
5521	Music Publishing	Both	Music composition and publishing	Wholly in-scope.
5522	Music and Other Sound Recording Activities	Both	Music composition and publishing	Wholly in-scope.
5610	Radio Broadcasting	Both	Broadcasting, electronic or digital media, and film	Wholly in-scope.
5621	Free-to-Air Television Broadcasting	Both	Broadcasting, electronic or digital media, and film	Wholly in-scope.
5622	Cable and Other Subscription Broadcasting	Both	Broadcasting, electronic or digital media, and film	Wholly in-scope.
5700	Internet Publishing and Broadcasting	Both	Broadcasting, electronic or digital media, and film	Wholly in-scope.
6010	Libraries and Archives	Both	Libraries and archives	Wholly in-scope.
6632	Video and Other Electronic Media Rental and Hiring	Cultural	Broadcasting, electronic or digital media, and film	Wholly in-scope.
6639	Other Goods and Equipment Rental and Hiring nec	Both	Other culture goods manufacturing and sales	Partially in-scope. Included for art work, video recorder and sound equipment rental.
6921	Architectural Services	Both	Design	Wholly in-scope.
6924	Other Specialised Design Services	Both	Design	Wholly in-scope.
6940	Advertising Services	Both	Design	Wholly in-scope.
6962	Management Advice and Related Consulting Services	Cultural	Supporting activities	Partially in-scope. Included for artist / entertainer management services.
6991	Professional Photographic Services	Both	Visual arts and crafts	Wholly in-scope.
7000	Computer System Design and Related Services	Creative	Design	Wholly in-scope.
7211	Employment Placement and Recruitment Services	Cultural	Supporting activities	Partially in-scope. Included for casting agency operation.
7212	Labour Supply Services	Cultural	Supporting activities	Partially in-scope.
7299	Other Administrative Services nec	Cultural	Supporting activities	Partially in-scope. Included for cultural event management, arts promotion and theatre and concert booking services.
7510	Central Government Administration	Cultural	Supporting activities	Partially in-scope.
7520	State Government Administration	Cultural	Supporting activities	Partially in-scope.
7530	Local Government Administration	Cultural	Supporting activities	Partially in-scope.

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

Code	ANZSIC class name	Segment	Domain	Comments
8101	Technical and Vocational Education and Training	Cultural	Supporting activities	Partially in-scope.
8102	Higher Education	Cultural	Supporting activities	Partially in-scope.
8212	Arts Education	Cultural	Supporting activities	Wholly in-scope.
8910	Museum Operation	Both	Museums	Wholly in-scope.
8921	Zoological and Botanical Gardens Operation	Cultural	Environmental heritage	Wholly in-scope.
8922	Nature Reserves and Conservation Parks Operation	Cultural	Environmental heritage	Wholly in-scope.
9001	Performing Arts Operation	Both	Performing arts	Wholly in-scope.
9002	Creative Artists, Musicians, Writers and Performers	Both	Performing arts	Wholly in-scope.
9003	Performing Arts Venue Operation	Both	Performing arts	Wholly in-scope.
9499	Other Repair and Maintenance nec	Cultural	Supporting activities	Partially in-scope. Included for jewellery and musical instrument repair.
9551	Business and Professional Association Services	Cultural	Supporting activities	Partially in-scope.
9552	Labour Association Services	Cultural	Supporting activities	Partially in-scope.
9559	Other Interest Group Services nec	Cultural	Supporting activities	Partially in-scope.

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

APPENDIX 3. ANZSCO (REV1.1) OCCUPATIONS

Code	Occupation name	Segment
131100	Advertising, Public Relations and Sales Managers nfd	Both
131113	Advertising Manager	Both
131114	Public Relations Manager	Both
139911	Arts Administrator or Manager	Both
139912	Environmental Manager	Cultural
142112	Antique Dealer	Cultural
149912	Cinema or Theatre Manager	Cultural
210000	Arts and Media Professionals nfd	Both
211000	Arts Professionals nfd	Both
211100	Actors, Dancers and Other Entertainers nfd	Both
211111	Actor	Both
211112	Dancer or Choreographer	Both
211113	Entertainer or Variety Artist	Both
211199	Actors, Dancers and Other Entertainers nec	Both
211200	Music Professionals nfd	Both
211211	Composer	Both
211212	Music Director	Both
211213	Musician (Instrumental)	Both
211214	Singer	Both
211299	Music Professionals nec	Both
211311	Photographer	Both
211400	Visual Arts and Crafts Professionals nfd	Both
211411	Painter (Visual Arts)	Both
211412	Potter or Ceramic Artist	Both
211413	Sculptor	Both
211499	Visual Arts and Crafts Professionals nec	Both
212000	Media Professionals nfd	Both
212100	Artistic Directors, and Media Producers and Presenters nfd	Both
212111	Artistic Director	Both
212112	Media Producer (excluding Video)	Both
212113	Radio Presenter	Both
212114	Television Presenter	Both
212200	Authors, and Book and Script Editors nfd	Both
212211	Author	Both
212212	Book or Script Editor	Both
212300	Film, Television, Radio and Stage Directors nfd	Both
212311	Art Director (Film, Television or Stage)	Both
212312	Director (Film, Television, Radio or Stage)	Both
212313	Director of Photography	Both

Code	Occupation name	Segment
212314	Film and Video Editor	Both
212315	Program Director (Television or Radio)	Both
212316	Stage Manager	Both
212317	Technical Director	Both
212318	Video Producer	Both
212399	Film, Television, Radio and Stage Directors nec	Both
212400	Journalists and Other Writers nfd	Both
212411	Copywriter	Both
212412	Newspaper or Periodical Editor	Both
212413	Print Journalist	Both
212414	Radio Journalist	Both
212415	Technical Writer	Both
212416	Television Journalist	Both
212499	Journalists and Other Writers nec	Both
224200	Archivists, Curators and Records Managers nfd	Both
224211	Archivist	Both
224212	Gallery or Museum Curator	Both
224611	Librarian	Both
225100	Advertising and Marketing Professionals nfd	Both
225111	Advertising Specialist	Both
225113	Marketing Specialist	Both
225311	Public Relations Professional	Both
232000	Architects, Designers, Planners and Surveyors nfd	Creative
232100	Architects and Landscape Architects nfd	Both
232111	Architect	Both
232112	Landscape Architect	Both
232300	Fashion, Industrial and Jewellery Designers nfd	Both
232311	Fashion Designer	Both
232312	Industrial Designer	Both
232313	Jewellery Designer	Both
232400	Graphic and Web Designers, and Illustrators nfd	Both
232411	Graphic Designer	Both
232412	Illustrator	Both
232413	Multimedia Designer	Both
232414	Web Designer	Both
232511	Interior Designer	Both
232611	Urban and Regional Planner	Both
233916	Naval Architect	Creative
234314	Park Ranger	Cultural
234911	Conservator	Both

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

Code	Occupation name	Segment
249211	Art Teacher (Private Tuition)	Cultural
249212	Dance Teacher (Private Tuition)	Cultural
249213	Drama Teacher (Private Tuition)	Cultural
249214	Music Teacher (Private Tuition)	Cultural
261100	ICT Business and Systems Analysts nfd	Creative
261111	ICT Business Analyst	Creative
261112	Systems Analyst	Creative
261200	Multimedia Specialists and Web Developers nfd	Both
261211	Multimedia Specialist	Both
261212	Web Developer	Both
261300	Software and Applications Programmers nfd	Creative
261311	Analyst Programmer	Creative
261312	Developer Programmer	Creative
261399	Software and Applications Programmers nec	Creative
272411	Historian	Cultural
272611	Community Arts Worker	Cultural
312111	Architectural Draftsperson	Cultural
361114	Zookeeper	Cultural
392000	Printing Trades Workers nfd	Cultural
392100	Print Finishers and Screen Printers nfd	Cultural
392111	Print Finisher	Cultural
392112	Screen Printer	Cultural
392211	Graphic Pre-press Trades Worker	Cultural
392300	Printers nfd	Cultural
392311	Printing Machinist	Cultural
392312	Small Offset Printer	Cultural
394212	Picture Framer	Cultural
399300	Gallery, Library and Museum Technicians nfd	Cultural
399311	Gallery or Museum Technician	Cultural
399312	Library Technician	Cultural
399411	Jeweller	Both
399500	Performing Arts Technicians nfd	Cultural
399511	Broadcast Transmitter Operator	Cultural
399512	Camera Operator (Film, Television or Video)	Cultural
399513	Light Technician	Cultural
399514	Make Up Artist	Both
399515	Musical Instrument Maker or Repairer	Cultural
399516	Sound Technician	Cultural
399517	Television Equipment Operator	Cultural
399599	Performing Arts Technicians nec	Cultural
399611	Signwriter	Cultural
399915	Photographer's Assistant	Cultural
451400	Gallery, Museum and Tour Guides nfd	Cultural
451411	Gallery or Museum Guide	Cultural
561911	Classified Advertising Clerk	Cultural

Code	Occupation name	Segment
599711	Library Assistant	Cultural
599912	Production Assistant (Film, Television, Radio or Stage)	Both
599913	Proof Reader	Cultural
639511	Visual Merchandiser	Cultural
711912	Motion Picture Projectionist	Cultural
899500	Printing Assistants and Table Workers nfd	Cultural
899511	Printer's Assistant	Cultural
899512	Printing Table Worker	Cultural

GLOSSARY

Assets	Assets are a store of value over which ownership rights are enforced by institutional units, individually or collectively, and from which economic benefits may be derived by their owners by holding them, or using them, over a period of time (the economic benefits consist of primary incomes derived from the use of the asset and the value, including possible holding gains/losses, that could be realised by disposing of the asset or terminating it).
Balance sheet	A balance sheet is a statement, drawn up in respect to a particular point in time, of the values of assets owned and of the liabilities owed by an institutional unit or group of units. A balance sheet may be drawn up for institutional units, institutional sectors and the total economy.
Basic prices	The basic price is the amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any tax payable, and plus any subsidy receivable, on that unit as a consequence of its production or sale. It excludes any transport charges invoiced separately by the producer. Output sold at prices that are not economically significant (see also Economically significant prices) is not valued at these prices. Rather, such output is valued at its cost of production.
Compensation of employees	Compensation of employees is the total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done by the employee during the accounting period. It is further classified into two sub-components: wages and salaries; and employers' social contributions. Compensation of employees is not payable in respect of unpaid work undertaken voluntarily, including the work done by members of a household within an unincorporated enterprise owned by the same household. Compensation of employees excludes any taxes payable by the employer on the wage and salary bill (e.g. e.g. payroll tax).
Consumption of fixed capital	Consumption of fixed capital is the value of the reproducible fixed assets used up during a period of account as a result of normal wear and tear, foreseen obsolescence and the normal rate of accidental damage. Unforeseen obsolescence, major catastrophes and the depletion of natural resources are not taken into account.
Economically significant prices	Economically significant prices are prices which have a significant influence on both the amounts producers are willing to supply and the amounts purchasers wish to buy.
Employers' social contributions	Employers' social contributions are payments by employers which are intended to secure for their employees the entitlement to social benefits should certain events occur, or certain circumstances exist, that may adversely affect their employees' income or welfare—namely work-related accidents and retirement.
Exports of goods and services	The value of goods exported and amounts receivable from non-residents for the provision of services by residents.
Financial intermediation services indirectly measured (FISIM)	Banks and some other financial intermediaries are able to provide services for which they do not charge explicitly, by paying or charging different rates of interest to borrowers and lenders (and to different categories of borrowers and lenders). For example, they may pay lower rates of interest than would otherwise be the case to those who lend them money and charge higher rates of interest to those who borrow from them. The resulting net receipts of interest are used to defray their expenses and

provide an operating surplus. This scheme of interest rates avoids the need to charge their customers individually for services provided and leads to the pattern of interest rates observed in practice. However, in this situation, the national accounts must use an indirect measure, namely FISIM, of the value of the services for which the intermediaries do not charge explicitly. Whenever the production of output is recorded in the national accounts, the use of that output must be explicitly accounted for elsewhere in the accounts. Hence, FISIM must be recorded as being disposed of in one or more of the following ways: as intermediate consumption by enterprises; as final consumption by households or general government; or as exports to non-residents.

Gross domestic product

Gross domestic product is the total market value of goods and services produced in Australia within a given period after deducting the cost of goods and services used up in the process of production, but before deducting allowances for the consumption of fixed capital. Thus gross domestic product, as here defined, is 'at market prices'. It is equivalent to gross national expenditure plus exports of goods and services less imports of goods and services.

Gross mixed income of unincorporated enterprises

Gross mixed income of unincorporated enterprises is the term reserved for the surplus accruing to owners of unincorporated enterprises from processes of production (as defined for gross operating surplus) before deducting any explicit or implicit interest, rents or other property incomes payable on the financial assets, non-produced non-financial natural resource assets (such as land) required to carry on the production and before deducting consumption of fixed capital. However, GMI is measured after the deduction of FISIM and the insurance service charge. The owners, or other members of their households, may work without receiving any wage or salary. Mixed income therefore includes both gross operating surplus for unincorporated enterprises and returns for the proprietors' own labour (akin to wages and salaries). In practice, all unincorporated enterprises owned by households that are not quasi-corporations are deemed to fall into this category, except owner-occupiers in their capacity as producers of housing services for own final consumption, and households employing paid domestic staff (an activity which is deemed to generate zero surplus).

Gross national expenditure (GNE)

Gross national expenditure (GNE) is the total expenditure within a given period by Australian residents on final goods and services (i.e. before allowances for capital goods and services used up during the period in the process of production). It is equivalent to gross domestic product plus imports of goods and services less exports of goods and services.

Gross operating surplus (GOS)

Gross operating surplus is a measure of the surplus accruing to owners from processes of production before deducting any explicit or implicit interest charges, rents or other property incomes payable on the financial assets, non-produced non-financial natural resource assets (such as land) required to carry on the production and before deducting consumption of fixed capital. However, GOS is measured after the deduction of FISIM and the insurance service charge. It excludes gross mixed income which is the surplus accruing to owners of unincorporated enterprises. Gross operating surplus is also calculated for general government, where it equals general government's consumption of fixed capital.

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

Gross State Product (GSP)	Gross State Product (GSP) is defined equivalently to Gross Domestic Product (GDP) but refers to production within a state or territory rather than to the nation as a whole. See Gross Domestic Product (GDP).
Gross value added (GVA)	Gross value added is defined as the value of output at basic prices minus the value of intermediate consumption at purchasers' prices. The term is used to describe gross product by industry and by sector. Basic prices valuation of output removes the distortion caused by variations in the incidence of commodity taxes and subsidies across the output of individual industries.
Imports of goods and services	The value of goods imported and amounts payable to non-residents for the provision of services to residents.
Industry	An industry consists of a group of establishments engaged in the same, or similar kinds, of activity.
Input-Output Industry Group (IOIG)	IOIGs are based on the Australian and New Zealand Standard Industrial Classification (ANZSIC) and the I-O tables are published at this level of industry.
Input-Output Product Classification (IOPC)	The IOPC is the detailed level product classification, organised according to the industry to which each product is primary. I-O tables are compiled at this level of product classification.
Input-output tables	Input and output tables are a means of presenting a detailed analysis of the process of production and the use of goods and services (products) and the income generated in the production process; they can be either in the form of (a) supply and use tables or (b) symmetric input and output tables.
Institutional units	An institutional unit is an economic entity that is capable, in its own right, of owning assets, incurring liabilities, and engaging in economic activities and in transactions with other entities. There are two main types of institutional units, namely persons or groups of persons in the form of households, and legal or social entities whose existence is recognised by law or society independently of the persons, or other entities, that may own or control them. The individual members of multi-person households are not treated as separate institutional units. Legal or social entities that engage in economic activities in their own right, such as corporations, NPIs or government units, are considered institutional units as they are responsible and accountable for the economic decisions or actions they take.
Intermediate consumption	Consists of the value of the goods and services used as inputs by a process of production, excluding the consumption of fixed capital.
Liability	A liability is an obligation which requires one unit (the debtor) to make a payment or a series of payments to the other unit (the creditor) in certain circumstances specified in a contract between them.
Margins	If the transactions are valued at basic prices, the margins are recorded as intermediate Consumption (e.g. transport, wholesale trade) of the intermediate users or final buyers. If transactions are valued at purchasers' prices the value of margins is included, along with taxes less subsidies on products with the purchasers' price of the good to which the margin relates.
Market output	Output that is sold at prices that are economically significant or otherwise disposed of on the market, or intended for sale or disposal on the market.
Non-market output	Goods and services produced by any institutional unit that are supplied free or at

	prices that are not economically significant.
Non market output of market producers	Is an imputation to measure the output of NPIs engaged in market production that is not measured when output is valued through sales. It is calculated as the difference between output for market units when calculated by the prescribed valuation method for non-market units of cost summation, and output as calculated by the prescribed method for market units of valuation by sales. Where output on a cost valuation basis exceeds output on a sales valuation basis, the difference is taken to be the non-market output of market producers. Where output on a sales basis exceeds output on a cost basis, non-market output of market producers is assumed to equal zero.
Non-profit institutions	Non-profit institutions are legal or social entities created for the purpose of producing goods or services whose status does not permit them to be a source of income, profit or other financial gain for the units that establish, control or finance them.
Other subsidies on production	Other subsidies on production consist of all subsidies, except subsidies on products, which resident enterprises may receive as a consequence of engaging in production. Other subsidies on production include: subsidies related to the payroll or workforce numbers (including subsidies payable on the total wage or salary bill), on numbers employed, or on the employment of particular types of persons, e.g. persons with disabilities or persons who have been unemployed for a long period.
Other taxes on production	Other taxes on production consist of all taxes that enterprises incur as a result of engaging in production, except taxes on products. Other taxes on production include: taxes related to the payroll or workforce numbers excluding compulsory social security contributions paid by employers and any taxes paid by the employees themselves out of their wages or salaries; recurrent taxes on land, buildings or other structures; some business and professional licences where no service is provided by the Government in return; taxes on the use of fixed assets or other activities; stamp duties; taxes on pollution; and taxes on international transactions.
Output	Output consists of those goods and services that are produced within an establishment that become available for use outside that establishment, plus any goods and services produced for own final use.
Primary inputs	Primary inputs include compensation of employees, gross operating surplus and gross mixed income, taxes less subsidies on products, other taxes less subsidies on production and imports.
Producers' prices	The producers' price is the amount receivable by the producer from the purchaser for a unit of a good or service.
Production	An activity carried out under the responsibility, control and management of an institutional unit that uses inputs of labour, capital and goods and services to produce output of goods and services.
Production boundary	The national accounts production boundary includes: <ul style="list-style-type: none">▪ the production of all individual or collective goods and services that are supplied to units other than the producers, or intended to be supplied, including the production of goods and services used up in the process of producing such goods and services;▪ the own-account production of all goods that are retained by their producers for their own final consumption or gross capital formation; and▪ the own-account production of housing services by owner-occupiers.

DISCUSSION PAPER: CULTURAL AND CREATIVE ACTIVITY SATELLITE ACCOUNTS

Purchasers' prices	The purchaser's price is the amount paid by the purchaser, excluding any deductible tax, in order to take delivery of a unit of a good or service at the time and place required by the purchaser. The purchaser's price of a good includes any transport charges paid separately by the purchaser to take delivery at the required time and place.
Research and development	Research and development (R&D) is creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and to enable this stock of knowledge to be used to devise new applications. It is included in intellectual property products as a produced fixed asset.
Subsidies on products	A subsidy on a product is a subsidy payable per unit of a good or service. The subsidy may be a specific amount of money per unit of quantity of a good or service, or it may be calculated ad valorem as a specified percentage of the price per unit. A subsidy may also be calculated as the difference between a specified target price and the market price actually paid by a purchaser. A subsidy on a product usually becomes payable when the product is produced, sold or imported, but it may also become payable in other circumstances, such as when a product is exported, leased, transferred, delivered or used for own consumption or own capital formation.
Supply and use tables	Supply and use tables are in the form of matrices that record how supplies of different kinds of goods and services originate from domestic industries and imports, and how those supplies are allocated between various intermediate or final uses, including exports.
Taxes on production and imports	Taxes on production and imports consist of 'taxes on products' and 'other taxes on production'. These taxes do not include any taxes on the profits or other income received by an enterprise. They are payable irrespective of the profitability of the production process. They may be payable on the land, fixed assets or labour employed in the production process, or on certain activities or transactions.
Taxes on products	A tax on a product is a tax that is payable per unit of some good or service. The tax may be a specific amount of money per unit of quantity of a good or service (quantity being measured either in terms of discrete units or continuous physical variables such as volume, weight, strength, distance, time, etc.), or it may be calculated ad valorem as a specified percentage of the price per unit or value of the goods or services transacted. A tax on a product usually becomes payable when it is produced, sold or imported, but it may also become payable in other circumstances, such as when a good is exported, leased, transferred, delivered, or used for own consumption or own capital formation.
Total factor income	Total factor income is that part of the cost of producing the gross domestic product which consists of gross payments to factors of production (labour and capital). It represents the value added by these factors in the process of production, and is equivalent to gross domestic product less taxes plus subsidies on production and imports.
Visitor	A visitor is defined as any person 'taking a trip to a main destination outside his/her usual environment, for less than a year, for any main purpose (business, leisure or other personal purpose) other than to be employed by a resident entity in the country or place visited'.

Volunteers Volunteers are people who willingly give unpaid help, in the form of time, service or skills, to an organisation or group. Included in this category are the volunteer component of boards of management, fundraising committee members and auxiliary members.

Wages and salaries Wages and salaries payable in cash include the value of any social contributions, income taxes, etc., payable by the employee even if they are actually withheld by the employer for administrative convenience or other reasons, and paid directly to social insurance schemes, tax authorities, etc., on behalf of the employee. Wages and salaries may be paid as remuneration in kind instead of, or in addition to, remuneration in cash. Separation, termination and redundancy payments are also included in wages and salaries.

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