

THE MEASUREMENT OF CREATIVE DIGITAL CONTENT

**A Study to Assess User Requirements for Creative Digital Content Statistics and a Possible
Collection Strategy to Address Them**

A Report for the Department of Communications, Information Technology and the Arts

by

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The Measurement of Creative Digital Content

Executive Summary

This study has been undertaken for the Department of Communications, Information Technology and the Arts between 14 April, 2003 and 19 June, 2003. The conclusions are largely based on views expressed in a user survey conducted as part of the study as well as those offered in a range of face-to-face interviews with key organisations conducted in that period. The aim of the study was to

- undertake an inventory of the data that is currently available in the public domain about creative digital content,
- make an assessment of the needs for statistical indicators of policy makers, academics, industry associations and the like, and
- suggest an appropriate statistical collection strategy that might address the user needs.

The study has concluded that:

- a) there is a need for progress to be made on the development of national and international standards for the concepts and definitions used in a digital content measurement program and the nomenclature used in delineating the field being surveyed.
- b) ABS needs to be heavily involved in any statistical program to measure digital content activity. However, it is likely that it may not be the only source of such information.
- c) there are four major uses for creative digital content statistics
 - indicators to help assess the spread of digital content products **across the economy**.
 - indicators to provide input into the future development of Australia's industrial base, particularly **in the creative and cultural industries**
 - indicators to help facilitate the efficient allocation of funds, especially **in specific creative or cultural industries**.
 - indicators to measure **the use or consumption of creative digital content products**.
- d) there is a paucity of indicators currently available that measure digital content activity and its outputs. However, there are ways in which the ABS could utilise its existing survey program to provide relevant data. Some of these options are likely to be fairly cost-effective but others may involve larger costs.
- e) as a way of overcoming gaps in any potential ABS collection strategy, DCITA should look at ways that it can make use of already existing data to supplement ABS data. It should also look to ways in which it can use already existing statistical infrastructure in organisations other than ABS as a tool for providing new indicators.

The report recommends that:

a) DCITA should consult with ABS as a matter of urgency:

- about the implementation of a collection strategy that includes the use of the following ABS surveys – the annual Economic Activity Survey, the Services Industries Surveys (for Film, TV, Radio, Museums, Libraries and Music), the annual Book Publishers Survey, the two-yearly Computer Services Industries Survey, the annual Business and Household Use of ICT surveys, the monthly and quarterly international trade in goods and services statistics and the proposed Innovation surveys,
- to submit an Australian recommendation to the OECD to upgrade the priority given to work on the definition and measurement of digital content in its Working Party on Indicators for the Information Society,
- to modify its industry and product classifications to better meet the requirements for creative digital content statistics, with the resulting definitions to be carried forward into the current review of ANZSIC, and
- to develop a set of nomenclature that could be used consistently amongst users in relation to creative digital content.

b) DCITA should continue to investigate:

- other sets of currently available (non-ABS) data that might be useful to supplement the statistics obtained from ABS
- other potential data sources for new statistics, particularly those that make use of industry association, or similar, lists that might supplement any agreed ABS collection strategy.

The Measurement of Creative Digital Content

1. Introduction

1. In March, 2003, the Department of Communications, Information Technology and the Arts (DCITA) decided to commission a study aimed at assessing the requirements for data and statistical indicators about creative digital content. The contract for the study was signed on 14 April, 2003 with a deadline for completion set at 10 June, 2003. This final report was submitted on 19 June, 2003.

2. The need for the study arose from the work undertaken as part of the first two stages of the Creative Industries Cluster Study being undertaken by DCITA and the National Office for the Information Economy (NOIE). A significant hindrance for those studies has been the lack of detailed statistical information that would facilitate a proper understanding of the growth in and impact of the digitisation of content, especially within the creative and cultural industries. This study is aimed at addressing that problem by

- undertaking an inventory of the data that is currently available in the public domain about creative digital content,
- making an assessment of the needs for statistical indicators of policy makers, academics, industry associations and the like, and
- suggesting an appropriate statistical collection strategy that might address the user needs.

3. The Stage 1 and 2 reports contain many statements about the impact of digitisation on the Australian economy that show the need for statistical indicators to help in industry policy development. For example, from the Stage 1 report¹

A key finding ... is some creative and media industries ...are undergoing significant changes and are increasingly engaged in the production of digital content and applications. In other industries, the impact of digitisation has been slower...

Another key finding is the small scale of digital content and applications development activity in Australia..... Australia's relatively small and fragmented domestic industry contrasts with the rising direct government support...

4. The Stage 2 report² contained the results of a qualitative study of four component parts of the Australian economy where digitisation was seen to be a key issue. The conclusions from this study again demonstrated areas where statistical indicators could be used to inform the policy debate. For example,

The segmentation of content industries is messy and not stable.

¹ Department of Communications, Information Technology and the Arts and the National Office for the Information Economy, *Creative Industries Cluster Study: Stage One Report*, Canberra, May 2002.

² Cutler & Company, *Producing Digital Content*, A report for the Department of Communications, Information Technology and the Arts, September 2002.

The dialogue with industry ... reinforced the complex, multi-dimensional nature of digital content production relative to other industrial activity. No one industry segment surveyed in this study is alike and different issues have arisen in each of the segments examined.

A major conclusion of this study is that digital content production is not distinctive and different in its own right, but rather that the bulk of issuesare common to content and creative industries generally.

5. These quotations are not exhaustive; they are provided merely to provide some context for the current study. They not only point to some industry and technology policy dilemmas but also to what are extremely difficult statistical measurement issues to overcome.

2. Project Outline

6. The project schedule and the terms of reference for this consultancy called for

- the preparation of a summary of the types of data currently available that might be able to assist in the policy debates about creative digital content,
- the conduct of a survey of user requirements for creative digital content statistics, based on a list of industry contacts developed by DCITA,
- the preparation of a detailed report on the survey in (b) above,
- the development of a possible collection strategy to meet the user needs emanating from the user survey, and
- the preparation of a report on the strategy for further consideration by relevant bodies, including the Statistical Working Group of the Cultural Ministers' Council.

7. The initial task for the consultancy was to examine the statistical programs undertaken by the Australian Bureau of Statistics (ABS) to determine those that might provide indicators useful for an understanding of creative digital content. A detailed report on the relevant data sources has been provided to DCITA. The major conclusions arising from that study are reported below in Section 7.

8. The survey of user requirements was carried out by the consultant in April, May and early June, 2003. The survey questionnaire was developed using normal statistical techniques including the conduct of a pilot test with a number of the key players in the industry, and the ABS. The pilot test enabled the initial questionnaire to be modified enabling the user survey to be carried out in a much more efficient manner. The user survey was conducted as an electronic mail survey, with forms being e-mailed to users during the last week in April, 2003. Forms were generally returned by e-mail, although there were some returned using facsimile means. The list of users was developed by DCITA and included Federal, State and Local Government agencies, industry associations, academics and similar bodies. Private sector businesses were not specifically targeted; rather their needs were elicited through their relevant industry associations. Approximately 100 forms were despatched to users and two e-mail reminders were sent to those who had not responded to the initial request. Twenty-nine replies were received in time for incorporation into this final report. A list of those organisations that have completed user survey questionnaires is shown as Attachment 1. A number of others provided their views on the issues over the phone.

9. In addition to the mail survey, the assessment of user needs was based on a small number of personal interviews with key personnel in organisations that were considered crucial to obtaining a more detailed perspective of user requirements for creative digital content statistics. These organisations included NOIE, DCITA, ABS, Australian Interactive Multimedia Industry Association (AIMIA), Multimedia Victoria, Arts Victoria, Creative Industries Research and Applications Centre at the Queensland University of Technology, Queensland Department of State Development, Brisbane City Council, SA Office of Economic Development, Australian Film Commission, and the NSW Film and Television Office.

10. One of the most complex parts of this project has been to come to grips with the concepts and definitions underpinning an understanding of creative digital content. The user survey questionnaire addressed this aspect in quite some detail; in addition, international agencies (mainly statistical) have also been canvassed to see if there are some lessons to be learned from statistical measurement activities in other countries. Officers from ABS and DCITA, in particular, have provided very valuable assistance and advice in this part of the project.

11. The assessment of possible collection strategies was undertaken by the consultant after discussions with relevant officers within ABS, bearing in mind the work going on in international statistical agencies. However, the proposed strategy shown below in Section 7 has been developed by the consultant and does not have any specific endorsement by ABS or any of its officials. Neither do the recommendations shown in Section 8. These have been assessed by the consultant on the basis of the findings from each of the other stages of this project.

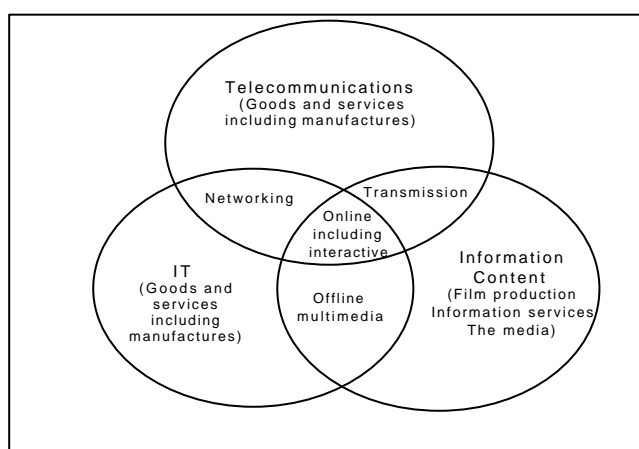
3. International Work on Measuring Creative Digital Content

12. Creative digital content does not appear to be a concept or terminology used in other parts of the world. Thus, there is no international model to use on which to base a starting point for Australian statistics. Digital content has, however, been the subject of a deal of work undertaken in OECD and this is discussed below. The concept of a digital content industry has also been the subject of some debate in terms of the development of international industrial classifications and this work is also discussed.

3.1 OECD Work on Digital Content

13. Digital content has been the subject of debate at the OECD for a number of years now, mainly through its Working Parties on the Information Economy (WPIE) and Indicators for the Information Society (WPIIS) and their parent Committee, the Committee for Information, Computer and Communications Policy (ICCP). When the WPIIS was established in 1996, it developed a work program aimed at initially defining and setting standards for the measurement of the information and communication technology sector, to be followed by the definition and measurement of the content that was communicated by that sector. In an initial discussion paper³ on the definition of the ICT sector presented to the 1997 WPIIS, the ABS presented the following pictorial representation of these areas of interest.

Figure 1 – Convergence of IT, Telecommunications and Information Sectors



14. This diagram was aimed at describing the convergence of the IT, Telecommunications and Information Content sectors of the economy. The type of presentation of the convergence of these activities was not new; this map itself was adapted from one prepared by Statistics Finland⁴. The work program for WPIIS was aimed at initially considering definitions and statistical indicators measuring the union of the IT and Telecommunications part of this diagram (including those parts in the intersection of the two ellipses), with the aim of moving onto the overlap with the Information Content sector as a second stage. One particularly important point arising from the discussions in WPIIS was that the emerging areas of interest were going to be in the products included in the intersecting parts of the ellipses.

³ Working Party on Indicators for the Information Society, OECD, *A Draft Definition of the ICT Sector*, August 1997.

⁴ Statistics Finland, *On The Road to the Finnish Information Society*, 1997.

15. The first stage of the WPIIS work moved to a successful conclusion with an agreed definition of the ICT sector being promulgated in 1998 – leading to an initial publication of internationally comparable data in 2000⁵ The second stage of the work commenced at the 1999 meeting of WPIIS, with a discussion paper presented by Gault (Canada) and Nivlet (France)⁶. While there has been some progress made on the issue, no final agreements have yet been reached on definitional issues or the indicators required for international comparisons. The main reasons for this are the more complex nature of the problem, less experience in its statistical measurement and the lesser priority placed on it. This lower priority has come about mainly because of greater emphasis in OECD on the definition and measurement of electronic commerce.

16. The WPIIS approach to its work in the information society field has been to firstly conceptualise the issue under review, followed by the establishment of a workable practical implementation strategy for the conceptual model and finally the compilation of indicators in line with that implementation strategy. The conceptual model proposed by Gault and Nivlet was for the establishment of an output described as a communication product. This communication product concept was used to describe the content that was displayed, processed, stored, and transmitted electronically by ICT sector goods and services. The business producing this communication product was one that undertook an electronic publishing activity by placing one or more pieces of information into an electronic medium, often with some other form of computer software or metadata to enable the communication product to be used effectively.

17. The major difficulty with this broad concept faced by OECD Member Countries related to the breadth of products (and businesses) that would be included in this definition – without modification, it would include all forms of electronic communication, including personal e-mails and the like. Gault and Nivlet proposed a limitation on the scope of communication products so that it should include

- only those that are marketed, and
- only those that are intended for an audience, rather than just one or two individuals.

Aside from the conceptual difficulties with the proposal, a number of WPIIS delegates also had concerns about extending the concept from a product concept to an industry concept. Using normal industrial classification rules, a business would only be classified to an industry if the majority of its output met the principles for that industry. This is likely to mean that there would be few industries that could be classified as being digital content industries. One possible solution to this problem was not to consider the concept of a content industry but, rather, to agree on a list of digital content related industries - that list to include all industries in which there is likely to be significant digital content production.

18. OECD work on defining the Content sector has not proceeded for a couple of years now. Only a small number of countries have been prepared to try to progress the issue (mainly Canada and France) and until there is a greater demand for content statistics, and a more detailed statement of user needs is forthcoming, it is not likely that the issue will be pursued further. Perhaps the outcomes from this DCITA project may supply the impetus for the work to resume!

3.2 Digital Content and Standard Industrial Classifications

19. While the digital content industry is often talked about in policy and political circles, none of the international or national standard industrial classifications separately identify digital content products or

⁵ OECD, *Measuring the ICT Sector*, October, 2002

⁶ Working Party on Indicators for the Information Society, OECD, *Defining the Content Sector: A Discussion Paper*, April 1999

industries. The International Standard Industrial Classification (ISIC) was most recently the subject of significant revision some 15 years ago. Hence it is not surprising that there is no reference to any concept of digital content. Similarly those national classifications based on ISIC, such as the Australian and New Zealand Industrial Classification (ANZSIC), make no reference to digital content.

North American Classification

20. In the mid to late 1990's, the growth of the phenomenon of the Internet forced the statistical authorities in North America (USA, Canada and Mexico) to rethink their industrial classification. In 1997 they introduced a revised classification, the North American Standard Industrial Classification (NAICS). The key difference between this classification and ISIC was the introduction of a new "Information Sector". This sector was comprised of 34 industrial classes, of which 20 were new to the previous classification, including sound recording studios, cable program distributors, and database and directory publishers. The other classes within this new sector were ones that were merely regrouped and reorganised.

21. The structure of the NAICS Information Sector is as follows:

- 511 - Publishers (excluding Internet)
 - 5111 – Newspaper, Periodical, Book and Directory Publishers
 - 5112 – Software Publishers
- 512 - Motion Picture and Sound Recording Industries
 - 5121 – Motion Picture and Video Industries
 - 5122 – Sound recording Industries
- 515 – Broadcasting (except Internet)
 - 5151 – Radio and Television Broadcasting
 - 5152 – Cable and Other Subscription Programming
- 516 – Internet Publishing and Broadcasting
- 517 – Telecommunications
 - 5171 – Wired Telecommunications Carriers
 - 5172 – Wireless Telecommunications Carriers (except Satellites)
 - 5173 – Telecommunications Resellers
 - 5174 – Satellite Telecommunications
 - 5175 – Cable and Other program Distribution
 - 5179 – Other telecommunications

22. As can be seen from a brief inspection of this list, many of the businesses that are likely to produce digital content products are included in this Sector. However, there are likely to be others that are not. Importantly, digital content is not separately identified in the classification. The inclusion of the Telecommunications sector should also be noted – this sector is not generally included in any sort of sector identifying digital content.

Japanese Classification

23. In 2002, the Japanese Statistical Agency adopted a revised industrial classification (JSIC). As part of this revision, a new Section (H) entitled "Information and Communications" was identified as part of the top-level structure of that classification. The components of this classification are as follows:

- 37 – Communications – which corresponds to Telecommunications as above, ie, excluding the Internet

- 38 – Broadcasting – which corresponds to all radio and television activities
- 39 – Information services – which is excluded from the Information Sector in NAICS (but included elsewhere in the Services sector)
- 40 – Internet based services – which corresponds to the above
- 41 – Video picture, sound information, character information production and distribution – which therefore aligns fairly closely with categories 511 and 512 above.

24. JSIC is therefore fairly similar to NAICS, but does include a category for Information Services that is likely to be considered appropriate for inclusion in any Content sector. In addition to this difference, there are some additional differences between the two classifications when a detailed comparison is made.

Forthcoming Revisions to Industrial Classifications

25. Many Statistical Agencies around the world are currently reviewing and revising their Standard Industrial Classifications. The new version of ISIC is due to be adopted in 2007. The introduction of the new version of ISIC is likely to coincide with new versions of the derivative classifications, such as ANZSIC and NACE, the classification adopted within the European Union. NAICS will also be revised at the same time. (In fact, there is a joint working group comprising many of the leading Statistical Agencies round the world aimed at ensuring that consistency of classifications occurs at the time of the introduction of the new classifications.) The expectation is that something like the structure of NAICS will be included in these revised classifications. Thus it can be expected that they will be a separate Information sector identified in the classifications that will include the key industries associated with publishing activities of books, newspapers, motion pictures, videos and the internet together with the broadcasting and telecommunications industries. This classification is unlikely to include other areas where digital content will become important such as Education and Health. It is unclear where Advertising will be in the revised classifications.

26. It is perhaps worth pointing out that this scenario is not universally accepted. In a paper presented to the Voorburg Group on Services Statistics at its September, 2002 meeting, Aufrant and Nivlet (France)⁷ have argued for the inclusion of an Information Economy Sector in the next revision of ISIC - with Content being specifically included as a component within that sector. Even this proposal does not combine all possible industries that might contain digital content products; in fact its main change is to include the manufacturing activities associated with computer and telecommunication goods to be included together with the corresponding services. In this respect the proposal aligns more closely to the OECD definition of the ICT sector referred to earlier than to the NAICS structure.

⁷ Voorburg Group, *Towards an Information Society Aggregate in ISIC, 2007*, Aufrant and Nivlet, September 2002.

4. The Need for Statistics on Creative Digital Content

27. The most appropriate starting point for a discussion on statistics on creative digital content is to make an assessment of what information users need. Respondents' views on this aspect were taken up in the user survey conducted as part of this study, supplemented by the personal meetings with key users where additional information was gleaned. Before discussing the key themes identified by these users, however, it is appropriate to indicate the feelings about the current situation in respect of the availability of statistical information. This was summarised by the Australian Interactive Multimedia Industry organisation who said:

In spite of the Information Industries Action Agenda identifying the content industry as one segment providing 'substantial global market opportunities' there is no accurate quantitative or qualitative data about the Australian multimedia/content industry.

4.1 The Four Key Themes

28. The user requirements deliberations have identified four broad themes that need to be addressed as part of any statistical collection activity – although it should be recognised that the themes are overlapping to a certain extent. These key themes recognise that statistics are required about both creative digital content products and creative digital content businesses. The four major themes are as follows:

- policy and program development
- the effective allocation of Government funds
- the spread of digital technology and its application across the economy, and consequential changes to industrial structures
- the use of digital content products within the economy and society generally.

4.2 Policy and Program Development

29. The first theme on policy and program development comes primarily from Federal, State and Local Government organisations all have a responsibility to develop industry programs and policies for their area of responsibility. The key functions of these programs and policies are in respect of generating employment opportunities and economic growth within those areas of responsibility. For example, Multimedia Victoria said that

The statistics would be used as key inputs to help develop policy and programs for the development of Victoria's digital content industry.

-What is the industry landscape?

-How is the industry changing?

-How does Victoria's digital content industry compare against other States and internationally?

-Potential areas for development?

30. The different levels of Government each have a slightly different focus for their programs but the general requirement for specific indicators is the same. The difference between the requirements is the *level* at which indicators are required. Federal Government Departments are generally much more interested in obtaining national statistics about their area of interest. State Governments Departments are much more concerned about their particular State, although they are very conscious of interstate

comparisons. Local Government bodies not surprisingly want indicators about specific regions with a particular State.

31. Within all levels of Government, there is a perception that employment and wealth generation is going to come to a great degree from the Creative Industries sector. Hence there is a much sharper focus on statistics for this group. The Creative Industries sector cuts across a number of the Cultural industries as noted in the Stage 2 Report⁸. Thus the emphasis given to Creative industries also implies an emphasis on Cultural industries.

32. The various universities that completed the user questionnaire have all indicated strong support for the collection of relevant indicators needed for the above purposes. These Universities are often engaged in joint projects with Government and other industry partners, providing the professional research skills required for the provision of advice aimed at generating industry and employment growth in Australia, its States and regions. An example of this type of response, from the Creative Industries Research and Applications Centre, Queensland University of Technology, is

Such data repositories should be able to answer questions that seek to geographically map the digital content products and business at both the state and national levels in Australia. Also, the data must help address issues like value chains and clusters that bring such businesses and product makers/manufacturers.

It would be great if the data could also project the futures (either through market forecasts or futures scenario building methodology) of the products and businesses, with easy to derive policy implications

33. Many of the other users consulted during the user survey had a more specific industry focus on their needs for statistical indicators. For example, a number of the film organisations had a primary focus on film production; the Learning Federation had a focus on educational content, and so on. This does not denigrate the requirement for statistics; it merely means that the specific statistics required will need to be available at a more detailed industry level in addition to the requirement that might come from State and Federal Government Departments.

34. The statistical indicators required for the general purposes described above are essentially economic in nature – they are the type of data that is often collected in standard ABS surveys of specific industries. As noted by the Australia Council,

The Council is a heavy user of SIS data. Our preference is for the range of statistics included in the SIS collections for the arts and cultural sectors to be replicated in any collection about digital content businesses.

The standard data items often need to be supplemented by a number of more detailed data item requirements that are specific to particular industries. These requirements need to be taken on board in any future statistical collections of those industries.

4.3 Allocation of Funds

35. The second key theme coming from the user survey related to the need for statistics to assist in the allocation of funds within key areas of the cultural and creative industries. The requirement for this type

⁸ Cutler & Company, *Producing Digital Content*, A report for the Department of Communications, Information Technology and the Arts, September 2002.

of data mainly comes from the agencies responsible for funding allocations. An example, from Arts Tasmania, is

For Arts Tasmania, there is a need to ensure that any funding that is directed to the production of Digital Content is directed in the right area – both to the type of activity, and to the geographic location where that content is being created.

Secondly increasing or decreasing importance of one art form over another needs to inform funding allocations.

36. Non-government and industry organisations will also require similar data to make representations to, or lobby, Government organisations in respect of the future allocation of funds provided for specific purposes. An example of this was the AIMIA suggestion of a number of potential funding initiatives that, if developed, would require monitoring via statistical information. They suggested the following initiatives:

(a) a digital media fund specifically established to support the development and distribution of new and innovative Australian content.....

(b) investment financing similar to that received by the Australian Film Industry through the Film Finance Corporation.....

(c) the establishment of an Australian virtual digital content warehouse..... (d) making use of the Partnerships For Development model.....

(e) specific funding for the fast tracking of an Australian educational industry by providing support for Australian educational content for national and export markets.....

(f) establishment (within the ICT Centre for Excellence?) of a digital media lab.....

(g) potential areas of employment and analysis of skills training requirements

(h) formalised programs to identify and facilitate the distribution of Australian content to export markets

Federal and State Government agencies will, of course be interested in obtaining indicators that might enable them to make an overall assessment of the effectiveness of past funding for these or similar initiatives operating throughout the creative industries sector.

37. The indicators required for such purposes are essentially economic in nature, relating to the allocations made, the outcomes generated by businesses receiving those allocations and employment in the sector. As a number of the allocations will be State based, data will be required at a State level.

4.4 Digital Content across the Economy

38. The third key theme for statistical indicators is in respect of digital content statistics in an economy wide sense. Federal Government Departments, such as DCITA and NOIE, have broad ranging responsibilities for the introduction of digital content technology and products throughout Australia, including the introduction of broadband services. In its response to the user survey questionnaire, NOIE said that its needs were for statistics to assist them:

- *Consider issues of industry and product transformation, evolving market structures and how Australian industry is placed to compete in these new contexts;*
- *Understand the role of ICT in products and firm transformation;*
- *Overcome the specific market and regulatory barriers faced by these firms eg, lack of venture capital, market monopolies, lack of domestic market opportunities, etc.*

- *distinguish the key cross sector alliances emerging – eg, emerging relationship between content producers such as the games industry and the traditional ICT sector.*

39. The indicators required for this purpose are primarily economic in type. It is important to have regular pictures of the way in which industry is being transformed by both ICT and digital content technology and products. The requirement is not just for the industries involved in the production of these goods and services, but in how they are being used throughout the whole economy. This implies a requirement for broadly based diffusion indicators and those involving technological product and process innovation. For firms involved in the production of digital content products, there is a need for some attitudinal indicators measuring specific market or regulatory barriers to firm growth and productivity and the existence and importance of strategic alliances and co-operation.

40. While the major requirement for such indicators is at a national level, there is also a need to understand whether there are specific problem areas at the State level.

4.5 Use of Digital Content Products

41. A fourth key requirement for statistical indicators of creative digital content statistics is in respect of the use or consumption of these products. While this use is closely related to third theme discussed above, it is included separately here as it relates specifically to the use or consumption of digital content products in households, businesses and Government organisations. An example of this theme is from the response by the Powerhouse Museum, which said

Above all else, I am interested in measuring customer satisfaction – and for this I need high quality data that tells me “what” people are using, “why” they are using this digital service/ content and most important “were” their expectations satisfied.

42. For this purpose the indicators required essentially relate to the number and proportion of households, firms and Government organisations using specific digital content products or with access to new telecommunications services such as broadband and the uses to which such products are being put.

4.6 Frequency of Data Collection

43. Most respondents to the user survey identified a need for statistics to be compiled regularly and frequently - on an annual basis, as a minimum. A number suggested data should be made available more regularly, with quarterly being a common answer for those that required data more often than annual. One user, the Australia Council, suggested that surveys every two or three years might be sufficient.

44. A number of the major users of data did recognise that there are costs associated with its collection – both to official statistical agencies and to the suppliers of data. Thus the frequency of data collection has to be seen as a compromise between the legitimate demands of users and the cost of those demands. They also recognised that there may need to be a combination of data sources used – with more robust ABS surveys complemented by (possibly) less robust ones coming from other sources.

4.7 Timeliness and Comprehensiveness of Statistical Indicators

45. Two aspects raised by a number of users was the need for data to be comprehensive across the creative digital content and to be made available in a timely fashion. Both aspects are crucial for many

uses of statistics as inputs to policy development in a rapidly changing environment. This feeling was succinctly summarised by AIMIA who said:

ABS statistics are woefully out of date by the time they are processed and they do not disaggregate figures on multimedia content in any meaningful way. This leaves the digital content industry in a knowledge and information vacuum.

Other users noted that some ABS surveys did take a long time to complete and for results to become available. The greater the delay in making the results available to users, the less relevant are the indicators and the greater reliance those policy makers must place on less robust statistics and anecdotal evidence. Some users argued that the lack of timeliness was a main reason to suggest that there is a need for a combination of statistics from ABS and other sources as discussed above.

5. The Definition of Creative Digital Content

46. The establishment of an agreed definition of creative digital content is an essential prerequisite for any statistical measurement program. Without such a definition, it is not possible to convey to users a consistent understanding of what the statistical indicators relate to; nor can the same consistent message be conveyed to the providers of statistical information. This problem is exacerbated if one wishes to obtain internationally comparable data – then the problem of consistency for both users and suppliers becomes even more a problem for statisticians. The aspect of definition is taken up in two parts – looking at digital content separately from the creative aspect. As part of this consideration, it is useful to remember that the concept of a product is being discussed, it relates to both goods and services and not just goods as is sometimes thought.

5.1 User Survey Responses on the Definition of Digital Content Products

47. Not surprisingly, there were a number of different definitions of digital content products suggested by respondents to the user questionnaire. The most common view seemed to be that the digital representation was the key aspect. Some of the suggestions were:

FIBRE Pty. Ltd. - Film Industry Broadband Resources Enterprise

any digital data traffic should be viewed as a digital content product

A NOIE representative

digital content products would seem logically to include those that have a digital representation

ScreenSound Australia

digital content products would include any products that are encoded in digital form

United Focus Pty Ltd

products that are in digital format and which form part of the content of a repository, collection, exhibition or archive

48. Many users agreed with the proposition that a digital content product could be viewed as an information product. However, others pointed out that this was only the case if a wide definition of “information” was adopted, thus including information irrespective of whether it was in word, sound, data or any other form. Information in this case would also include any software or metadata attached to the product necessary for its application. It was also interesting to note that NSW Film and Television Office agreed with the use of the information product concept

but with the acknowledgement that the information content itself may be comprised of or contain aspects which are inherently digital in terms of their production. That is, they may be generated digitally as well as delivered digitally

49. Another thread picked up in the responses suggested that perhaps we should be concentrating on the “communication” aspect in our definitions, rather than information. Two responses, from FIBRE Pty Ltd and the Australian Film, Television and Radio School were:

the nature of COMMUNICATIONS (not just information) is changing. We are increasingly using images to “talk” or “communicate” with each other, combined with digital audio, data = a new communications construct. That is the content. The fact that it is digital is a technological factor.

key in our use of the term is creative input in the preparation of the content application or process in order to enhance the effectiveness of the communication. Raw information would not qualify under this approach. The key words are digital, creative and communication.

5.2 User Survey Responses on the Definition of Digital Content Businesses

50. All of the above debate has been in respect of digital content as a product. When questioned about the use of a definition for digital content businesses, there were no regular definitions in place. Four specific suggestions made were:

United Focus Ltd

I'd include those businesses that derive a majority of their revenue from some or all of the following: researching, collating, creating, value-adding, archiving, warehousing or distributing digital content, or supporting those that do some or all of those activities (eg copyright lawyers).

AIMIA

Digital content businesses are those with the primary goal of utilising digital technology to create marketable products and services with an intellectual property value. All use a range of interactive tools and functions to create and bring new digital content products and services to market. They range from individual creators to whole companies or divisions of companies.

Australian Film, Television and Radio School

Business that are directly or indirectly involved in the activities outlined above in the section on the meaning of digital content.

Copyright Agency Ltd

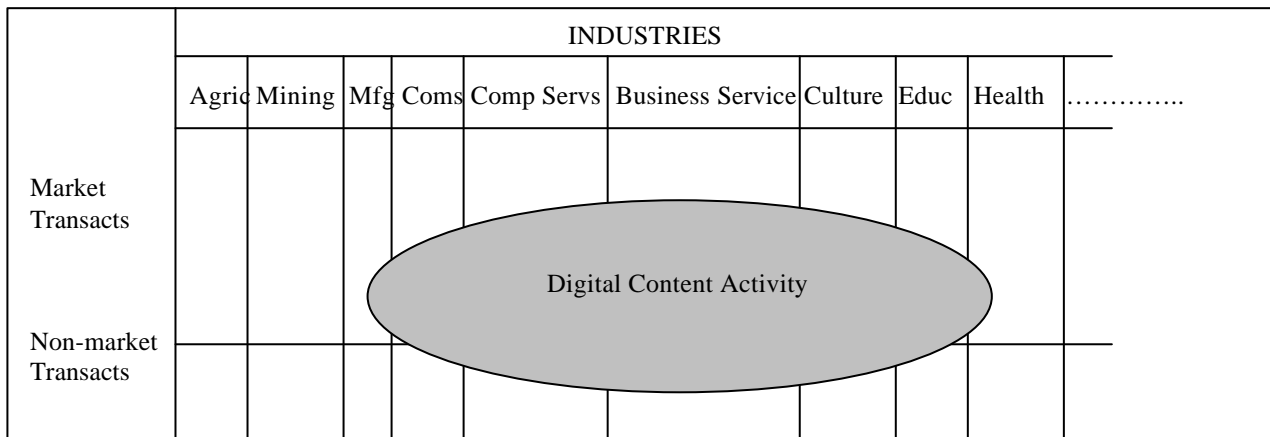
we feel strongly that any definition should include both traditional and non-traditional publishing (or “grey publishing”). This is material produced by organisations whose primary business is not publishing. Examples include professional associations that publish newsletters, and material that is produced as support for another product, such as a manual for a car..... The issue is how dependent the business is on digital content, not what proportion of their business is it.

51. Unfortunately, all three of these proposed definitions imply a different scope. The first two suggestions take the standard statistical approach of classifying a business on the basis of its predominant activity. The third also takes a logical approach in that it bases the classification on the activities performed by the business but broadens the scope to include businesses that undertake digital content activity as a secondary activity as well as those that perform those activities as their predominant activity. The fourth broadens the scope even wider, to include businesses that perform digital content activity even if it merely as an activity just supporting their normal functions and for which the products are unlikely to be sold in the market (often referred to by Statisticians as *ancillary activity*).

52. It was anticipated that there would be very few definitions of digital content businesses in operation. Thus the user survey explicitly asked a question on the potential scope for a definition, in terms of the above categories. By far the most common response was that the definition ought to include all businesses that derived any income from the sale of digital content products. In terms of the above discussion, this would include businesses that perform digital content activity as either a predominant or secondary activity, but would exclude products that are not marketed.

53. The relationship between the concepts of marketed and non marketed transactions is often confusing to non-specialist Statisticians. In the context of digital content production, these can be shown diagrammatically as follows:

Figure 2 - Map of Digital Content Activity



54. In this diagram, digital content activity is shown to exist in many standard parts of the Australian and New Zealand Standard Industrial Classification – listed in column headings - but not in all. Thus digital content activity can be expected to be found in some parts of the Manufacturing industry but more significantly so in other industries such as the Telecommunication industry, the Computer services industry, Business services, such as Architecture, Culture etc. Digital content activity is unlikely to be found in some other industries such as Agriculture and Mining. The industries shown in the diagram are illustrative only – there are no official statistics that show the distribution of digital content activity across industries.

55. In the diagram, digital content activity is shown as only being one part of the activities of a particular industry identified – these industries are also likely to undertake non-digital content activity. The diagram also shows that businesses in each industry are likely to have some products that are not sold in the market place but consumed within the organisation itself. Digital content activity is no different to other activities in this regard - some of the products will be sold in the market and others will not.

5.3 Creative Industries

56. The most common concept of the term “creative” is in respect of an industry notion i.e. it relates to a set of creative industries. The group of industries to be included is, however, not quite as clear cut - creative is not terminology that is used in any standard industrial classification. It is also worth noting that the requirement for statistics about the creative industry sector is not totally in respect of all industries combined – in many cases there is a need for statistics about individual parts of the sector, such as the Games sector, as noted by the Games Developers Association of Australia in their response to the questionnaire.

57. The concept of creative industries appears to have started in the UK in the late 1990’s. According to the web site for the UK Department of Culture, Media and Sport (www.culture.gov.uk), the definition of creative industries is as follows:

...the creative industries as those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property. This includes advertising, architecture, the art and antiques market, crafts, design, designer fashion, film and video, interactive leisure software, music, the performing arts, publishing, software and computer games, television and radio.

Clearly such a definition is open-ended - the list of industries is preceded by the word “includes” which implies that the list is not necessarily comprehensive.

58. The Creative Industries definition adopted within DCITA has been based on the UK definition and contains the same industries. However, the position is a little different in Queensland.

59. The Queensland Government is currently pursuing a Creative Industries Strategy for that State. Its basic concept uses almost identical wording to that adopted in the UK and in DCITA. The concept adopted in Queensland is as follows:

Creative industries have their origin in individual creativity, skill and talent. They offer new opportunities for sustained wealth and job creation through the generation, utilization and commercialization of intellectual property.

60. Despite the concepts being the same between the UK and Queensland definitions, there are differences in both the nomenclature adopted and the specific inclusions in the list. The Queensland list is as follows:

Film, Animation and Television, Fashion, Architecture and Urban Design, Music and Production, Allied Industries, Industrial design, Advertising and Marketing, Writing and Publishing, Internet and Multi Media and Electronic Games and Entertainment Software.

61. Thus the Queensland list appears to exclude art and antique markets, crafts and the performing arts that are included in the UK and DCITA lists. On the other hand, the Queensland list includes Allied Industries – although the precise meaning of this is a little unclear. In some other cases the wording of the industry titles are different but this may merely be a difference in nomenclature, with no actual difference in scope.

62. The response to the user survey by the Creative Industries Research and Applications Centre, Queensland University of Technology suggested a list-based definition based on the products being produced. Their suggested definition, based on a research proposal they have developed, is as follows:

...in focusing on a specific high growth sector of the Australian creative economy: the creative digital industries. This sector has been identified by this project's industry partners, as being of strategic value to Australia. The range of products and services that are captured by this term are extensive and include: interactive multimedia, digital film and television production and post-production, interactive and digital television, digital video arts production, computer and online games, design and advertising, educational content production, digital publishing, digital and online music, and digital applications.

63. Perhaps not surprisingly, this list is very similar to that adopted by the Queensland Government – but again uses slightly different nomenclature. It is interesting to note that the word “digital” is used frequently to describe the products, something that is not the case in other industry descriptions. It is also interesting to note that they have included a category entitled “educational content production”, which has not been included in any other definition.

64. The two issues of specific inclusions and nomenclature are both crucial to the establishment of a common definition within Australia. Without there being a common agreement on these issues, there can be no comparability between the statistical indicators compiled as part of any collection or analytical activity undertaken as part of the individual projects. The issue becomes even more compelling if one wishes to compare data internationally. The requirement for international comparability was a common theme among user responses.

5.4 The Overlap between Creative and Cultural Industries

65. As noted in the Stage 2 Report⁹ and in Brisbane's Creative Industries, 2003¹⁰, there is a considerable overlap between the concepts of Creative Industries and Cultural Industries. Within ABS, Cultural Industries have been seen as part of the Cultural and Recreational Services Division of ANZSIC, including Film and Video Services, Radio and Television Services, Libraries, Museums, Parks and Gardens, Arts and Services to the Arts. As noted earlier, however, ANZSIC is a somewhat dated industrial classification.

66. More recently (2001), ABS developed a set of Culture and Leisure classifications – known as the ACLC. There are three parts to this classification – industry, product and occupation. The industrial part of this classification includes:

- Museums, Antiques, and Collectables,
- Environmental Heritage (including Parks and Gardens),
- Libraries and Archives,
- Literature and Print Media,
- Performing Arts,
- Music Composition and Publishing,

⁹ Cutler & Company, *Producing Digital Content*, A report for the Department of Communications, Information Technology and the Arts, September 2002.

¹⁰ Cunningham, S, Hearn, G, Cox., S, Ninan, A, Keane, M, *Brisbane's Creative Industries 2003*, 2003

- Visual Arts and Crafts,
- Design,
- Broadcasting, Electronic Media and Film, and
- Other Arts.

67. The ACLC classification seems to relate more closely to the concept of Creative Industries discussed above than does ANZSIC. As such it may be a better classification to use in the measurement of Creative Industries. However, it should be noted that the ABS is reluctant to use its own survey data to measure the Culture industry identified by using the ACLC. This is because the classification schemes work in different ways, The ACLC Industry Classification includes, and groups, businesses based on the **intended purpose** of the goods and services they are mainly engaged in producing. ANZSIC groups together units which **engage in the same or similar production or service delivery processes and generally use similar technology**.

68. Because of the different conceptual bases, ABS¹¹ (see www.abs.gov.au) advises

“that it would not be possible to obtain data for these (ACLC) classes through any standard ABS industry survey. It may be possible to produce estimations of components of these classes via surveys collecting product and industry data, but any attempt to produce aggregate data for these classes should be approached with extreme caution”.

5.5 Creative Products

69. An alternative way of viewing “creative” is by considering it to relate to products. For example, AIMIA said

Digital content products include all of those combinations of image, text, audio that are delivered or accessible online. All have an intellectual property dimension, either intrinsically or in their value-add characteristics.

The view of linking the definition of a digital content product to the intellectual property dimension is often taken by people in the Film, TV and associated industries. In their view of the term, creative products are often thought of as being new products in respect of which the intellectual property rights belong to the producer of the new product. The implication of this is that it is then possible to think of digital content products that are either creative or not creative. The terminology relates to a specific characteristic of the product – whether or not it has intellectual property rights that can be attributed to the producer of the product.

70. This definition of creative products appears to be consistent with the concepts behind the UK industry definition (and those adopted in Australia, to date) – the UK definition includes reference to *the generation and exploitation of intellectual property*. The other industry definitions reported earlier use similar terminology.

5.6 Aligning Creative Digital Content Industries, Activity and Products

71. On the basis of the above discussion of definitions, user requirements and industrial classifications, it is possible to propose an alignment of creative digital content industries, activity and products. A map of this is shown overleaf, relating to the production, storage or distribution of digital content to the sectors

¹¹ ABS, 4902.0: *Australian Culture and Leisure Classification* – Chapter 2

providing the source material and the outputs produced, including creative digital content products. The map is aimed at facilitating an understanding of the statistical methodology that will need to be put into place for the adequate measurement of digital content activity.

72. In this map, the centre piece is digital content activity i.e. what might be considered to be the activity of the digital content industry. There are a number of inputs into this activity – the three on the left hand side showing the source material for digital content products. The first of these is the Creative Industries group (shown in the top left hand corner). These are the industries that contain businesses that predominately produce creative material – with the specific industries shown being those that are generally viewed as being included in this group. For these industries, the source material is likely to be the primary activity of the businesses concerned. The second group of industries, shown in the bottom left hand corner, are those that are designated non-Creative industries. They may still provide source material for the digital content activity but are those industries for which the source material is NOT part of their primary activity. **Overlapping** these two groups is the Culture Industries group, reflecting the overlap between Creative and Cultural industries noted earlier. **Practically all** of the industries shown in the Creative Industries group are also part of the Cultural group; some of the industries in the non-Creative Industries group are also part of the Cultural group.

73. It is important to note that further work needs to be done to reach agreement on precisely which industries are included in each group – without that agreement, comparability across regions and States within Australia and across different countries cannot be achieved. If that comparability is to be at an international level, agreement will need to be reached through an international agency, such as OECD.

74. The other avenue for obtaining source material for digital content activity is from overseas, and this is recognised at the top of the map.

75. The other key inputs into digital content activity are the products of the ICT sector – being either software or metadata that enables the source material to be used in the way intended and the telecommunications medium to enable the product to be delivered in digital form.

76. A major issue for survey takers is to be able to identify the businesses that are performing the digital content activity. The specific industry codes allocated to these businesses may be spread across many industry sectors, as demonstrated in Figure 2. In some cases they may be in the ICT sector, as is likely with computer games industry; in others, the digital content activity may be carried by film or television businesses, museums or one of many other possibilities. This is one of the major statistical problems that have to be overcome before it is possible to survey businesses that perform digital content activity.

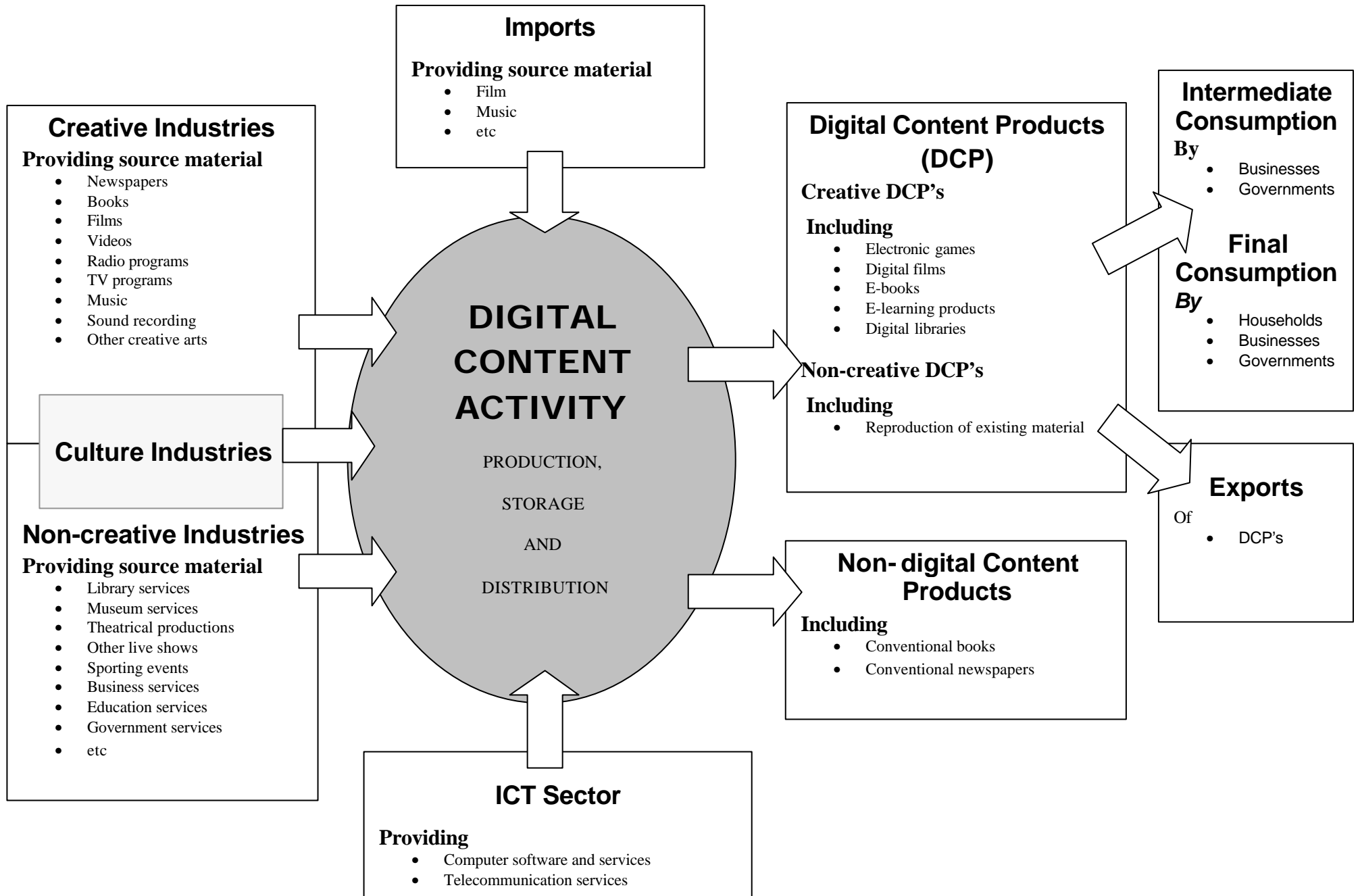
77. In some cases, digital content activity may be carried out to produce digital content outputs that are only for further use within that business and not for sale outside it. It would thus be excluded from normal statistical measurement activities as the traditional way of measuring activity is by using the standard measures of *sales value*. This non-marketed, or ancillary, activity is also represented in Figure 2. If information about this non-marketed activity is required, this will need to be collected in different ways to those used for normal industry surveys.

78. The outputs of the digital content activity are shown emanating from the digital content activity on the right hand side of the map in Figure 3, broken down initially into digital content products and non-digital content products. Non-digital content products are likely to be information products that are distributed in their traditional form, such as standard books and newspapers. Within the group of digital content products, there is a disaggregation into creative digital content products and non-creative digital

content products, with the distinguishing feature between the two being based on whether the new product carries its own intellectual property rights.

79. Reflecting the requirement to provide a measure of the use of digital content products, the extreme right hand side of the map shows a disaggregation of the demand for the products into the various sectors of the economy, households, Businesses, Governments and exports to the rest of the world.

MAP OF DIGITAL CONTENT ACTIVITY AND PRODUCTS



6. Data Currently Available

80. This part of the report looks at the availability of data that might be suitable to assist in a study of creative digital content. The report concentrates on ABS data because it is generally the best source for comprehensive and reliable data that is suitable for policy development and monitoring. It is also the only data source that is likely to be able to provide data structured in such a way as to enable international comparisons to be made – a requirement seen as highly important by key users of creative digital content statistics.

81. ABS data does, however, have some deficiencies from the point of view of users. As noted earlier, respondents to the user survey have made some negative comments on the timeliness of ABS survey results. There have also been some desire expressed about being able to have forecast or predictive data in this area. This is generally an area into which ABS is reluctant to tread.

82. The other data sources reported in this part of the report are those identified by users in their response to the user survey questionnaire. They are identified as reported in that survey; no attempt has been made to evaluate them for usefulness to meet the user requirements stated earlier in this report. It is likely, however, that such data sources will need to be used to supplement any future program of statistical collection undertaken by ABS.

6.1 ABS Statistics

83. The table below shows the ABS collections and data sources that could be used to obtain creative digital content indicators, together with their scope and frequency. Also included is an assessment of the extent to which they provide indicators that are relevant for a study of creative digital content.

84. The table shows that there are only minimal digital content indicators available from any survey that ABS conducts. The major surveys that produce indicators are the annual Book Publishers and Retailers surveys, and the supply and demand surveys for information and communication technology products. The data and surveys about international trade can also be used to provide useful information.

85. There are a number of surveys that include all or part of the creative industries. Mostly these surveys are conducted as part of the ABS program of Services Industries Surveys; within this program surveys of particular industries are mostly conducted on an infrequent basis, even if they are included as part of a regular program of surveys. Hence, while there is a current survey program that might produce relevant material, the program will not supply the statistics in a frequency sufficient to meet user needs.

86. Another problem with these surveys is that they do not generally separately identify digital content products. Without such identification, it will never be possible to measure the output of digital content products.

87. Nevertheless, the survey program used by ABS does provide a number of avenues for the collection of creative digital content statistics. These possibilities are discussed in Section 7 below.

ABS COLLECTIONS AND DATA SOURCES SUITABLE FOR PROVIDING CREATIVE DIGITAL CONTENT INDICATORS

Title	Scope	Frequency	Industry Indicators	Product Indicators
Business Register snapshot	All industries	On-going	Number of businesses for ANZSIC industries	No product data available.
Economic Activity survey	All industries	Annual	Income, expense and other financial data for ANZSIC industries	No product data available.
Book Publishers survey	All book publishing activity	Annual	Income, expense and other financial data. Employment.	Types of books sold. Electronic books separately identified.
Book Retailers survey	All book retailing activity	Annual	Income, expense and other financial data. Employment.	Types of books sold. Use of Internet/ other technologies Sale/ receipt of products electronically
Film and Video Production survey	All businesses in Film and Video Production industry	Irregular	Income, expense and other financial data. Employment.	Types of films, videos, television productions, non-television production.
Motion Picture Exhibition survey	All businesses in Motion Picture Exhibition industry	Irregular	Income, expense and other financial data. Employment.	Venue types and characteristics.

Information and Communication Technology survey	All businesses in Information and Communication Technology industries	Two-yearly	Income, expense and other financial data. Employment	Sales of various types of ICT goods and services - including sale of various types of software.
Business Use of Information technology survey	Private sector businesses in most industries	Annual	Use and planned use of technologies. Use and planned use of Internet. Web presence. Employment. Sales.	A number of Internet indicators are available, but no digital delivery indicators.
Household Use of Information Technology	All households	Annual	Computer and Internet access. Reasons for not having access. Access to household technologies. Frequency of computer use. Place of access. Activities for which Internet accessed.	Type of goods purchased over the Internet . A number of other Internet indicators are available, but no digital delivery indicators.
Household Use of Information Technology	All households	Annual	Computer and Internet access. Reasons for not having access. Access to household technologies. Frequency of	Type of goods purchased over the Internet. A number of Internet indicators are available,

			computer use. Place of access. Activities for which Internet accessed.	but no digital delivery indicators.
International merchandise trade	All goods imported and exported	Monthly	Value of imports and exports classified by industry.	Value of imports and exports for several commodities that could be considered to be Creative products.
International Trade in Services survey	All services imported and exported	Quarterly	Value of imports and exports classified by industry.	Value of imports and exports for several commodities that could be considered to be Creative products.
Census of Population and Housing	All households in Australia	5 yearly	Employment by ANZSIC class.	No product data available.

6.2 Other Statistical Sources Reported in User Survey

88. In the user survey, respondents were asked whether they had collected or compiled any data that could be shared and would be suitable for the measurement of creative digital content. The main sources reported were as follows:

Creative Industries Research and Applications Centre, Queensland University of Technology

Cunningham, S., Hearn, G., Cox, S., Ninan, A., and Keane, M. (2003). Brisbane's Creative Industries 2003. Report delivered to Brisbane City Council, Community and Economic Development. April. Report and Companion Volume can be downloaded from the web at this address:
<http://www.creativeindustries.qut.edu.au/research/cirac/reading.jsp>

Australian Film Commission

We have undertaken an extensive survey of federal and state film agencies. This includes a category for multimedia production.

The AFC has compiled an extensive range of data sources on the film, video and interactive media industries in Australia. Please see our web site especially

Get the Picture:

<http://www.afc.gov.au/GTP/index.html>

including the Interactive media section:

<http://www.afc.gov.au/GTP/newmedia.html>

The AFC uses a variety of sources including retail tracking via GfK marketing, the Australian Bureau of Statistics, Waterlow New Media Information, Paul Budde Communication, IDC Australia Pty Ltd, [www.consult](http://www.consult.com.au) - 10th Australian IAP Report, Australian Visual Software Distributors Association, Inform Pty Ltd, Office of Film and Literature Classification, Video Trader, ACNielsen - Australian TV Trends 2001

ScreenSound Australia

Number of items, titles or segments digitised at high resolution for preservation - ie creation of a 'digital master file' which can be used and re-used for subsequent digital production, and re-purposing of digital content.

Digital products transcoded for web or broadband services.

Packaged, value-added including interactive vs 'raw footage'

Physical digital formats vs networked digital objects, e.g. how many sales of games as a CD-ROM in shrink-wrapped box vs downloaded files.

Copyright Agency Limited

We have undertaken several studies on the value of copyright, through the Centre for Copyright Studies, including the report by the Allen Consulting Group mentioned previously. These are all available from our website at <http://www.copyright.com.au/reports.htm>

Games Developers Association of Australia

...Inform Media in Sydney already collect sales data and they would be able to do industry specific surveys for games (as would many other agencies but these guys at least already know the space)...

89. It is suggested that the sources mentioned by these organisations should be examined for their suitability for incorporation into an overall statistics strategy, especially to supplement those areas where ABS is not able to meet the user demand for data.

6.3 Australian Taxation Office Data

90. In addition to these data sources, the other potential source for business statistics is the Australian Taxation Office (ATO). While the ATO does not collect any information in respect of digital content, it does have a Business Register that is consistent with the ABS Business Register and can be used to classify business counts by industry. Thus, if user requirements can be defined in terms of ANZSIC

classes, the ATO is also a potential source for business counts and financial information collected as part of the Australian Taxation system.

7. Conclusions

91. On the basis of this study it is possible to draw some initial conclusions about the measurement of creative digital content.

7.1 National and International Standards

92. The first of these relates to the need to develop some national and international standards for the concepts and definitions to be adopted in the measurement program and the nomenclature used in delineating the field being surveyed. Clearly, from a national viewpoint this agreement must include ABS. Of particular importance here is their work associated with the current revision of the ANZSIC, and other international industrial classification standards. In addition, ABS should also be involved in other conceptual work undertaken in international organisations of which Australia is a member, notably OECD. OECD's Working Party on Indicators for the Information Society must be encouraged to renew efforts to define and measure digital content.

7.2 ABS to Collect Data

93. The second conclusion that can be drawn relates to the need to have ABS involved in a program to measure this activity. ABS must be involved because:

- It enables the efficient conduct of statistical collections
- It provides the cheapest option both for the collectors of the statistics and the providers of the information
- It facilitates the comparison of results across a number of statistical collections
- It provides the basis for internationally comparable data by the utilisation of common standards in respect of industries and products.

94. The alternative to using ABS surveys and data is to develop series from other sources. As noted earlier, there have been a small number of data sources identified that could be used to supplement surveys that ABS might be able to develop. However, these would generally be seen as being complementary to the main data source. They may be used in cases where ABS is unable to meet the identified user requirements because statistics are not able to be collected sufficiently frequently, or cannot provide the necessary level of detail (eg regional data) or for some other reason. The option of conducting surveys outside the ABS, using lists maintained by industry associations and the like, should only be considered where ABS is unable to provide an appropriate service to users.

95. There are often long lead times for the development of new surveys, or for making changes to existing surveys (for legitimate reasons). Thus ABS involvement at an early stage in the discussion of this report and in evaluating the options proposed is of critical importance. The need for good reliable measures of creative digital content is becoming greater by the day.

7.3 User Needs for Statistics

96. The third conclusion relates to the assessment of user needs for creative digital content statistics. Responses to the user survey questionnaire identified four major uses for creative digital content statistics. These are shown below with a suggested set of indicators that would enable the user requirements to be met. The relative priority for the suggested set of indicators is shown in brackets – with (H), (M) and (L) indicating high, medium and low priority indicator. The priority rankings are the

subjective assessment of the consultant based on responses to the user survey, interviews held and the general research undertaken as part of this project.

97. The four main requirements are for:

a) indicators to help assess the spread of digital content products **across the economy**. In terms of the map in Figure 3 above, these indicators relate to the businesses undertaking the activity in the central part of the map, and the products being produced shown on the right-hand side of the map. The indicators required for this aspect are:

- value of local production of specific digital content products (H)
- value of local production of the non-digitised version of the content products referred to above (H)
- numbers of businesses producing specific digital content products, classified by broad industry group and State (M)
- employment of businesses producing digital content products, and the proportion of these actually working on creating digital content products, classified by State (M)
- income, expenses, value added, and profits of businesses producing digital content products, classified by broad industry group and State (L)
- research and development undertaken by businesses producing digital content products, classified by broad industry group and State (M)
- value of imports and exports of specific digital content products (H)

b) indicators to provide input into the future development of Australia's industrial base, particularly **in the creative and cultural industries**, with particular interest in the extent to which this development can be attributed to the digitisation process. In terms of the map in Figure 3 above, these businesses relate to those on the left-hand side of the map. The indicators required for this aspect are:

- number of businesses, classified by specific industry categories within the creative and cultural sectors (H)
- employment (in total and by type) of businesses, classified by specific industry categories within the creative and cultural sectors (H)
- income, expenses and profits of businesses, classified by specific industry categories within the creative and cultural sectors (H)
- value of imports and exports within specific industry categories within the creative and cultural sectors (H)
- proportion of sales that relate to creative products (M)
- proportion of products that relate to digital products (M)
- proportion of businesses that produce digital products (M)
- source of content for creative and digital content products (M)

c) indicators to help facilitate the efficient allocation of funds, especially **in specific creative or cultural industries**. In terms of the map in Figure 3 above, these are the industries in the upper left-hand side of the map. The indicators required for this aspect are:

- number of businesses receiving specific funding allocations (H)
- products produced by businesses receiving specific funding allocations (H)
- employment (in total and by type) of businesses receiving specific funding allocations (H)
- sales of businesses receiving specific funding allocations (M)
- proportion of sales generated by specific funding allocations (M)

d) indicators to measure **the use or consumption of creative digital content products**. In terms of the map in Figure 3 above, these products are those listed on the right-hand side of the map. The indicators required for this aspect are:

- proportion of businesses, Government organisations and the population with access to/using specific creative digital content products (H)
- demographic characteristics (gender, age, location, occupation etc) of population with access to/using specific creative digital content products (H)
- characteristics of the businesses and Government organisations with access to/using specific creative digital products (H)
- benefits obtained from the use of specific creative digital content products.

7.4 Development of a Possible ABS Collection Strategy

98. The fourth general conclusion that can be drawn is that there is a paucity of indicators available that measure digital content activity and outputs at this time. There are some surveys that provide detail about the industries providing the source material for digital content, but these mostly do not separately identify digital content. Some data sources can be used to provide some of the indicators, such as imports and exports. Others, such as the Services Industries Surveys program and the 5 yearly Population Censuses, do provide some indicators, but not at a sufficient degree of frequency to meet the key user needs. In other cases, there are survey vehicles that seem to be suitable for adaptation to provide relevant statistical indicators.

99. In terms of the above summary of user requirements, it is possible to conclude as follows:

Requirement (a) - there are no ABS surveys that measure the production of digital content products across the economy. To obtain such indicators would require a survey that is essentially economy wide – and conducted annually. One ABS survey that meets this requirement is the annual Economic Activity survey. That survey does not currently identify specific product data but presumably could be modified to do so for specific products. A better option may be to use this survey to provide the list of businesses for a second (supplementary) survey that identified the products being produced in digital form. The only other alternative would be to develop a new survey aimed at collecting the type of information required – with the consequential impact on costs from both the Government and the providers of statistical information. Almost certainly, the costs associated with this latter option would render it unviable.

Requirement (b) - there is no current ABS survey covering all the creative and cultural industries. The ABS does have a statistical program (Service Industries Surveys) that provides a suitable vehicle for such indicators for those industries included in the program. Currently, a number of the creative and cultural industries are part of the Services Industries program, but not all. Industries included in the survey include Film, TV, Museums, Libraries and Music. For these industries, the major obstacle to meeting user needs is the frequency with which the surveys are conducted. Currently the relevant industries are included in the survey only every three years – and the identified requirement is for data every three years. Thus, for those industries, a seemingly simple solution would be to change the frequency of the existing surveys to annual. This would be a fairly expensive collection option. A cheaper alternative could be for the current surveys to be used to identify those businesses that are producing digital content products and provide a framework for smaller surveys of just those businesses in the following two years. There is an annual Book Publishing survey that could be utilised to provide statistics for that industry. There is also a two-yearly Computer Services survey that, if modified slightly, might enable the identification of the Computer Games industry – provided the businesses that produce computer games

can be separately identified. For other industries not discussed above, the only solution would be to develop an annual survey for those industries.

100. A major issue to resolve at an early stage in this process is to align creative and cultural industries with the Australian and New Zealand Standard Industrial Classification. The ABS surveys are conducted using the ANZSIC as the way in which surveys are structured. Hence, the alignment will be necessary if the surveys are to separately identify the industries and products required by users of creative digital content statistics.

Requirement (c) - there is no annual ABS survey that would enable the easy provision of the information needed for monitoring industry support and financial allocations.. However, as this data is required for the same industries as for requirement (b) above, the solution adopted for requirement (b) could be used to meet this need.

Requirement (d) - is in respect of the use, or consumption, of digital content products. This type of survey is different from the industry surveys normally conducted by ABS. However, the ABS does have a survey program that measures the use of ICT products by businesses, Government and households. These vehicles would seem to provide a suitable survey vehicle for the measurement of the use of digital content products. The current survey program involves a two yearly frequency – which is probably appropriate for creative digital content products as well, at least at this current stage of digital content activity in Australia. This would seem to be a relatively cheap way in which some statistical indicators could be compiled.

101. A second aspect of this requirement relates to looking at the ways in which creative digital content products, and telecommunications services more generally, are changing the ways in which industries and products are being transformed. This type of use is the sort of indicator that could possibly be included in an economy-wide Innovation survey – the conduct of which ABS is currently planning. If the indicators could be added into the current planning round for this survey, the strategy would seem to be very cost-effective.

7.5 Supplementation of Possible ABS Collection Strategy

102. It is highly unlikely that ABS will be able to provide data to meet all the needs discussed above. Thus it could be expected that DCITA, and other users, will need to supplement the statistics that ABS is able to provide. Development of strategies to supplement ABS data can only take place after it has been determined which areas of user need are to remain unmet. Thus it is important for DCITA to consult with ABS as a matter of urgency to ascertain what the future ABS statistical strategy might be.

103. There appears to be two specific ways in which non-ABS data might be used to supplement an ABS collection strategy. The first is to use already existing data sets, as reported in Section 6 above. The second will be to utilise lists already compiled by industry associations (and similar organisations) as a framework for additional data collection, probably concentrating on qualitative and forward looking indicators. DCITA is encouraged to continue work to investigate both of these options.

8. Recommendations

104. This study has concluded that there are many aspects of the measurement of creative digital content that require additional work, involving definitions and classifications required for national and international comparability, possible adaptation of existing ABS surveys and the development of new surveys in some areas. If user needs are to be met for more frequent data, the frequency of specific industry survey programs may need to be adjusted.

105. Users have made it clear that they wish to compare Australia's performance in respect of creative digital content with that of other countries. This implies a need to use international definitions and classifications as part of the statistical compilation process. Unfortunately, however, there are no such standards. Australia needs to encourage and support international efforts to develop such standards. It can best do this by urging OECD's WPIIS to re-include this field into its work program for this year, and onto the agenda for future meetings of WPIIS.

106. One of the obstacles for the provision of data about Australia's cultural and creative industries and digital content goods and services arises from the definitions being used to define those sectors and products. Currently they do not align with the Australian and New Zealand Standard Industrial Classification or the associated Product Classification; unless some action is taken to remedy this situation, it is likely that the same situation will continue to exist after the current revision of ANZSIC.

107. It is also clear that there is some confusion of nomenclature between different parties involved in policy making, research and statistical compilation activities in respect of creative digital content. This issue needs to be addressed by developing a set of standard nomenclature for the field. While it would be possible for DCITA to develop specific nomenclature, its implementation would need the support and promulgation by ABS. Thus it is important to have ABS heavily involved in developing such nomenclature in the first instance.

108. This report therefore recommends that

a) DCITA should consult with ABS as a matter of urgency to:

- establish the viability of a collection strategy for creative digital content statistics that includes the use of the following ABS surveys – the annual Economic Activity Survey, the Services Industries Surveys (for Film, TV, Radio, Museums, Libraries and Music), the annual Book Publishers Survey, the two-yearly Computer Services Industries Survey, the annual Business and Household Use of ICT surveys, the monthly and quarterly international trade in goods and services statistics and the proposed Innovation surveys
- submit an Australian recommendation to the OECD to upgrade the priority given to work on the definition and measurement of digital content in WPIIS
- modify the industry and product classifications to better meet the requirements for creative digital content statistics, with the resulting definitions to be carried forward into the current review of ANZSIC
- develop a set of nomenclature that could be used consistently amongst users in relation to creative digital content.

b) DCITA should continue to investigate:

- other sets of currently available (non-ABS) data that might be useful to supplement the statistics obtained from ABS
- other potential data sources for new statistics, particularly those that make use of industry association, or similar, lists that might supplement any agreed ABS collection strategy.

Attachment 1

List of Organisations Completing User Survey Questionnaires

Arts Tasmania

Multimedia Victoria

National Office for the Information Economy

Department of Communications, Information Technology and the Arts (Communications Research Unit)

NSW Department of State and Regional Development

SA Office of Economic Development

WA Department of Culture and the Arts

FIBRE Pty Ltd

Queensland University of Technology

University of Technology, Sydney

AFI Research Collection, School of Applied Communication, RMIT University

Australia Council

Australian Film Commission

Film Australia

AusFilm

Australian Film Television and Radio School

New South Wales Film and Television Office

ScreenSound Australia

Australian Centre for the Moving Image

Metro Screen

National Association for the Visual Arts

The Le@rning Federation

Australian Music Centre Ltd

Powerhouse Museum

United Focus Pty Ltd

Copyright Agency Limited

Australian Interactive Multimedia Industry Association (AIMIA)

Games Developers Association of Australia