WA CREATIVE INDUSTRIES: AN ECONOMIC SNAPSHOT

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9 September 2019

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1. Executive Summary

The WA creative industries contributed an estimated $3.3 billion in Industry Value Add (IVA) to the WA economy in 2018-19 and generated an estimated $175.9 million in service exports. The WA creative industries employ approximately 53,000 people and there are approximately 10,000 creative businesses in WA, most of them sole traders.

There may be scope for growing the WA creative industries, particularly in the development of intellectual property and the export of creative services. Internationally the creative industries contribute $2,250 billion USD to the global economy annually, an estimated 3.0% of world GDP.[1] In Australia, creative industries contribute 3.3% of GDP, and in WA they comprise 1.4% of GSP. Nationally the creative industries employ almost 600,000 people and generate $5.4 billion in export revenue.[2]

Creative industries are defined as "those industries which have their origin in individual creativity, skill and talent, and that have a potential for wealth and job creation through the generation and exploitation of intellectual property".[3]

Employment

In 2018 creative industries in WA directly employed an estimated 38,372 people, comprising 2.5% of WA employment and making the creative industries WA's 14th largest employer.[4] According to the 2016 Census, an estimated 23,670 people also work in creative occupations within other WA industries, taking the total creative industries employment in 2016 to approximately 52,917[5], representing 4.5% of total state employment.[6]

From 2011 to 2016 the WA creative industries saw a modest rate of employment growth of 0.5%, compared to 1.2% nationally.[7] Amongst Australia's states and territories, WA has the fourth largest share of national creative industries employment (7.2 %).

From 2017 to 2018, WA creative industries employment declined by an estimated -3.8% p.a.[8] Over the same period, total WA employment grew by 0.9% p.a. and national creative industries employment grew by 2.0% p.a. Whilst we do not know for sure what has caused this decline, one possibility is a saturation of the WA market for creative services, coupled with a decline in local cultural production in the film, radio, arts and publishing domains.

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[1] EY. (2015). Cultural Times – The First Global Map of Cultural and Creative Industries. The report examines 11 cultural and creative industries: advertising, architecture, books, gaming, movies, music, newspapers/magazines, performing arts, radio, television and visual arts.

[2] Creative industries IVA figure from IBISWorld reports, for 2018-19; BYP estimates. Employment figures based on ABS Census 2016; ABS Labour Force, Detailed, Quarterly, May 2019; BYP estimates. Export figures based on ABS International Trade: Supplementary Information, Calendar Year, 2018; ABS International Trade in Goods and Services, Australia, May 2019; BYP estimates.

[3] UK Department of Culture, Media and Sport, 2001.

[4] Employment figures after 2016 are sourced from the ABS Labour Market Survey 2018. Unless otherwise indicated, figures from 2016 and earlier are sourced from the ABS Census.

[5] This calculation is based on 2016 Census data for direct and embedded employment.

[6] Embedded employment, people working in creative occupations within non-creative industries, spans across a wide range of industries. In government context, this creates a potentially complex policy environment as well as introduces challenges in monitoring growth trends.

[7] Please note that this refers to direct rather than embedded employment.

[8] Please note that this refers to direct rather than embedded employment. This data is drawn from the Labour Market Survey Quarterly Reports, whereas 2011 to 2016 data is drawn from the Census. Please see section 3.3. for more information

Aboriginal and Torres Strait Islander Australians have a higher representation in the arts and screen sectors than in the wider WA employment market. They represent almost 3.0% of employment in film, TV, radio, music, performing and visual arts. By comparison, Aboriginal and Torres Strait Islander Australians represent 1.6% of all employment in WA and 0.8% of employment in the WA creative industries as a whole.

Creative industries employment is largely based in the Greater Perth area (87.8%), with the greatest concentrations in Perth-Inner, and Perth-North West areas.

An estimated 10.0% of creative industries employment is based in regional WA (when Mandurah is included in regional WA). WA areas which have experienced significant growth include Mandurah and Perth-South West, with growth in employment from 2011 to 2016 by 13% and 19% respectively. When Mandurah is grouped with regional areas, the fall in regional creative industries employment is less marked, at -12.5% over the five years (or an annual fall of -2.6%). The growth in creative industries employment in Greater Perth is only slightly modified (a rise of 4.0% over the five years, compared to 4.1% if Greater Perth includes Mandurah).

Businesses

WA has approximately 10,000 creative industry businesses, comprising 4.4% of all WA businesses and 7.9% of creative industries businesses nationally. The number of creative industry businesses has increased by 2.0% from 2013 to 2018, lower than the statewide rate of growth in the number of businesses at 5.8%.

The number of sole traders has increased by 4.0% while the number of businesses employing 1-19 people has fallen by 1.5%, which may reflect the trend of 'disintermediation' (the reduction in the traditional 'middleman' such as record companies or bricks and mortar bookstores) which is affecting the creative industries globally. This also helps to explain the drop in total employment rates whilst the number of businesses has increased.

Exports

In 2018 WA creative service exports were valued at an estimated $175.9 million, up from $117.4 million in 2013 and representing annual growth rate of 8.4%. WA's creative services exports represent about 2.6% of the State's total services exports, which is slightly higher than the Australian average of 2.1%.

Creative industries services exports are growing faster than other WA service exports. They grew by 8.4% p.a. from 2013 to 2018 compared to a growth rate of 1.7% for WA's total service exports.

'Computer and information services' accounted for 82.4% of WA creative services exports in 2018 (compared to 76.9% nationally). This is followed by 'Licences to reproduce and/or distribute computer services', at 9.7% (compared to 7.5% nationally).

The largest growth in WA creative services exports from 2013 to 2018 was in 'Intellectual property charges for music', growing by 38.1% p.a. This is more than double the national annual growth rate in this category (14.0%). Other notable growth areas were:

- 'Licences to reproduce and/or distribute computer services', at 13.6% p.a. (compared to a national rate of 9.5% pa); and
- 'Computer and Information services', at 9.3% p.a. (compared to the national rate of 15.8%).

A notable category where WA creative services exports shrank is 'Architectural services'. WA accounts for a disproportionate amount of the total national exports in this category: it was 24.1% of national 'Architectural services' exports in 2013 and is still 12.1% in 2018. However, this is a drop of about -10.7% p.a. Other states accounting for substantial percentages of 'Architectural services' exports all saw increases over this period.

Industry Value Add

The WA creative industries contributed an estimated $3.3 billion in Industry Value Add (IVA) to the WA economy in 2018-19, representing 1.4% of total GSP. Nationally, the creative industries are the 14th highest contributor to GDP, and the 18th highest contributor to WA GSP.

Among the domains making up the creative industries, the largest contributor to IVA is the 'Software and digital content' domain. This is the case both for WA, at 56.6%, and for Australia as a whole, at 61.1%.

The Australian creative industries IVA is forecast to grow by 2.3% p.a. over the next five years in line with OECD's forecast for the overall Australian economy. It is estimated that WA's creative industries' IVA will also grow but at the slightly lower rate of 1.8% p.a. Only the 'Publishing' domain is expected to experience negative growth, at -3.2% p.a.

Summary of the creative industries in Australia and WA

Indicator	Australia	WA	Notes
Number of Businesses	125,000 businesses.	10,000 businesses.	Creative industry businesses comprise 4.4% of all WA businesses, which in turn make up 7.9% of all national creative industry businesses
Industry Value Add	$52.2 billion	$3.3 billion	This represents 1.4% of total state GSP in 2018-19. Industry Value Add measures the contribution of an industry to GDP. It is calculated as the market value of goods and services produced, minus the cost of goods and services used in their production.
Total Employment (direct + embedded)	593,800	52,900	This represents 4.5% of total WA employment. This is the number of people working in creative industries and the number of people working in creative occupations in non-creative industries.
Exports	$5.4 billion	$175.9 million	Creative industries service exports comprised 2.6% of WA's total service exports and 3.2% of Australia's creative services exports in 2018.

2. Introduction

This document sets out an economic profile of the creative industries in Western Australia. It analyses data on:

- Employment by industry segment, and employment growth
- Number of businesses, their characteristics, and business growth
- Industry Value Add (IVA) and forecast growth
- Exports of creative services
- Geographical location of creative industry employment within Western Australia
- Employment of Aboriginal and Torres Strait Islander people in creative industries
- Detailed domain analysis of the various cultural production and creative services

2.1 Defining the creative industries

Creative industries are defined as "those industries which have their origin in individual creativity, skill and talent, and that have a potential for wealth and job creation through the generation and exploitation of intellectual property".[9]

There are several approaches to operationalising this definition of the creative industries. This report uses the approach championed in Australia by the Queensland University of Technology, called a 'creative intensities' approach. This technique identifies which specific industry sub-segments should be included in the definition of the creative industries on an empirical basis. It analyses the distribution of 'creative' occupations, and an industry is designated as creative if a substantial proportion of employment in that sector hold 'creative' jobs.[10]

QUT categorises the resulting set of industries into two sectors, cultural production and creative services, each with several sub-domains. This report uses the QUT categorisation (with a small amendment – see the appendix for details):

- Cultural production:
  - Film, TV and radio
  - Publishing
  - Libraries, archives and museums
  - Music, performing and visual arts
- Creative services:
  - Advertising and marketing
  - Architecture and design
  - Software and digital content

The appendix lists the industry groups included in each of the 7 creative industries domains.

[9] UK Department of Culture, Media and Sport, 2001.
[10] The 'creative intensities' approach was originally developed by NESTA, the UK's National Endowment for Science, Technology and the Arts, 2012.

2.2 Data limitations

Many of the figures given for the creative industries in this paper (and in most other analyses of Australia's creative industries) are estimates. Estimation is necessary because national industry data is often not published at a sufficiently detailed level, so the precise figure cannot be identified.

The basis of most estimations is data from the 2016 Census. The Census is the only data source that breaks down employment figures to the required level of detail. This report uses data from the Census 2016, combined with more recent data from the Labour Market Survey, to estimate current employment trends. There is more detail on the estimation method in the appendix. A similar estimation approach is used to estimate the Industry Value Added of creative industries in Western Australia (also further described in the appendix).

For some topics, the only available data is from the 2016 Census. That is either because there is no more recent data on the topic; or because any more recent data is not available in a format that would permit estimation of creative industries figures. This is the case for three of the areas analysed in this report: embedded employment, geographic distribution of employment within the state, and employment of Aboriginal and Torres Strait Islander people.

There is limited data available on exports of cultural goods and services available through the ABS. It should also be noted that the 'creative industries' do not have a dedicated ANZSIC code. Rather, its component industries, as defined in this analysis, are spread across several of the established ANZSIC industry codes. In addition, many people work in creative occupations outside of the creative industries – for example, a graphic designer employed in a government department would be coded as working in 'Public Administration and Safety' and would not be counted as part of direct creative industries employment. The next section of this report looks at the scale of employment in creative occupations outside the creative industries.

3. Creative industries employment

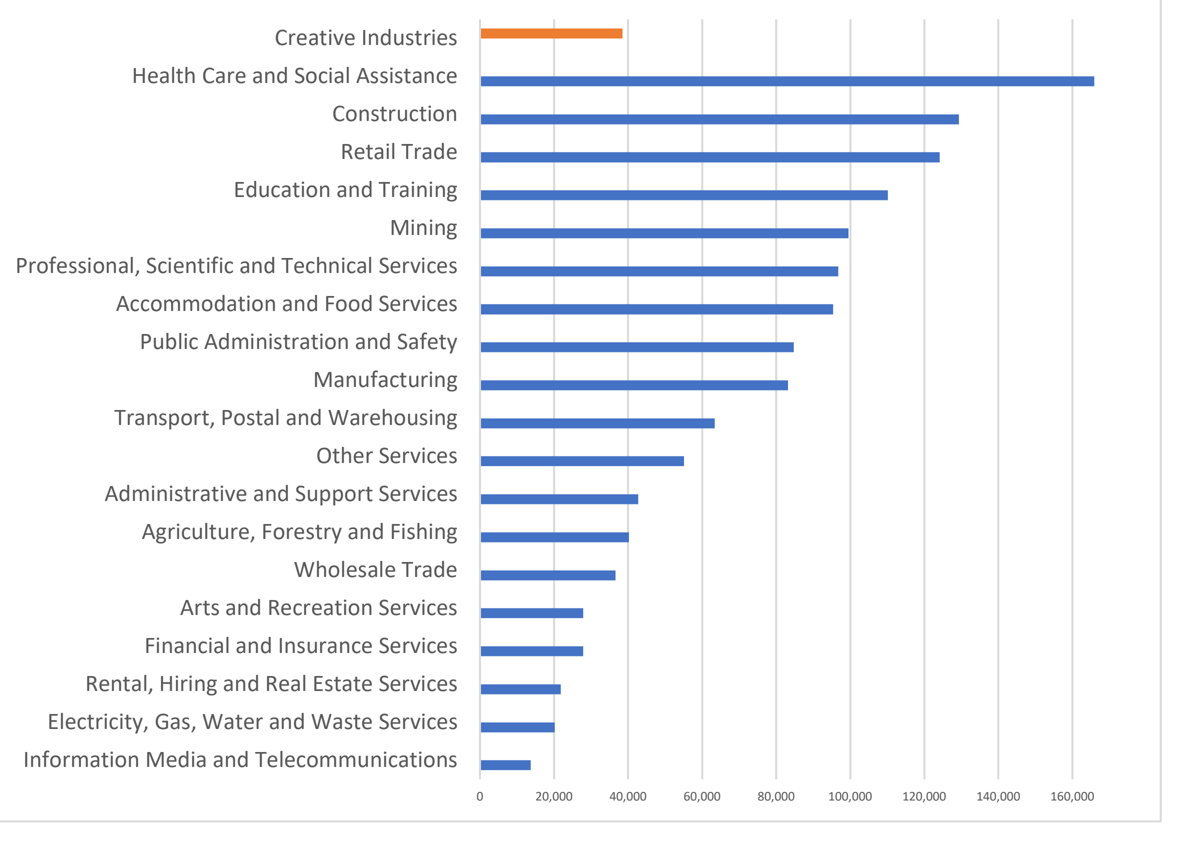
3.1 Direct employment

The WA creative industries directly employ an estimated 38,372 people (2018)[11]. This is 2.5% of all state employment. Figure 1 shows how this compares to other industries.

Across Australia as a whole, the creative industries account for 3.7% of employment (around 562,910).

As at the Census 2016, WA had the 4th largest share of national creative industries employment among Australian states and territories, at 7.2%. The largest shares were in NSW and Victoria at 39.2% and 29.1% respectively, followed by Queensland at 14.8%. The remaining states and territories had from 0.5%-4.8% each.

Figure 1: WA estimated direct employment by industry, 2018



Sources: ABS Census 2016; ABS Labour Force, Detailed, Quarterly, May 2019; BYP estimates.
Note: The Creative Industries figure includes components from other industries included in this chart.

[11] This figure is calculated as a moving 2-year average in the Labour Market Survey; it is the average of the2-year period from mid 2017 to mid 2019. See section 2.3 Employment growth, and the Appendix, for technical details.

Table 1: WA and Australian estimated direct employment by creative industry sector and domain, 2018

	WA CI employment		Australia CI employment	
Creative industry sector and sub-domain	*Count*	*% of CI employment*	*Count*	*% of CI employment*
Sector: Cultural production	**12,220**	**31.8%**	**167,935**	**30.0%**
Film, TV and radio	2,226	5.8%	50,077	9.0%
Publishing	2,403	6.2%	28,515	5.1%
Libraries, archives and museums	2,667	7.0%	27,066	4.8%
Music, performing and visual arts	4,924	12.8%	62,276	11.1%
Sector: Creative services	**26,151**	**68.2%**	**394,976**	**70.0%**
Advertising and marketing	1,552	4.1%	31,787	5.6%
Architecture and design	9,252	24.1%	115,518	20.4%
Software and digital content	15,348	40.0%	247,671	44.0%
Total	**38,372**	**100%**	**562,910**	**100%**

Sources: ABS Census 2016; ABS Labour Force, Detailed, Quarterly, May 2019; BYP estimates.

3.2 Embedded employment

Large numbers of people work in creative occupations within non-creative industries. These are called ‘embedded’ creative workers.

Analysis on this topic relies on data from Census 2016: this is the only source which has both sufficiently detailed industry data, and also sufficiently detailed occupation data. At Census 2016 there were 23,670 people in WA work in creative occupations within non-creative industries. At that time, direct employment in the creative industries was 29,247. Adding these together, the total creative workforce in WA was about 52,917 people in 2016; or 4.5% of total employment.

Table 2 shows the distribution of types of roles across the total creative workforce:

- Specialist workers have creative occupations and work in a creative industry.
- Support workers have non-creative occupations and work in a creative industry.
- Embedded workers have creative occupations in non-creative industries.

Compared to Australia as a whole, WA has relatively fewer support workers, and relatively larger numbers of embedded workers.

Table 2: Types of creative employment in WA and Australia, 2016

	Direct			Embedded	Direct + Embedded
	Specialist	**Support**	**Total**	**Total**	**Grand Total**
WA (count)	12,984	16,299	**29,247**	**23,670**	**52,917**
WA (% of creative employment)	24.5%	30.8%	**55.3%**	**44.7%**	**100%**
Australia (count)	162,160	246,650	**408,810**	**185,020**	**593,830**
Australia (% of creative employment)	27.3%	41.5%	**68.8%**	**31.2%**	**100%**

Sources: ABS Census 2016.

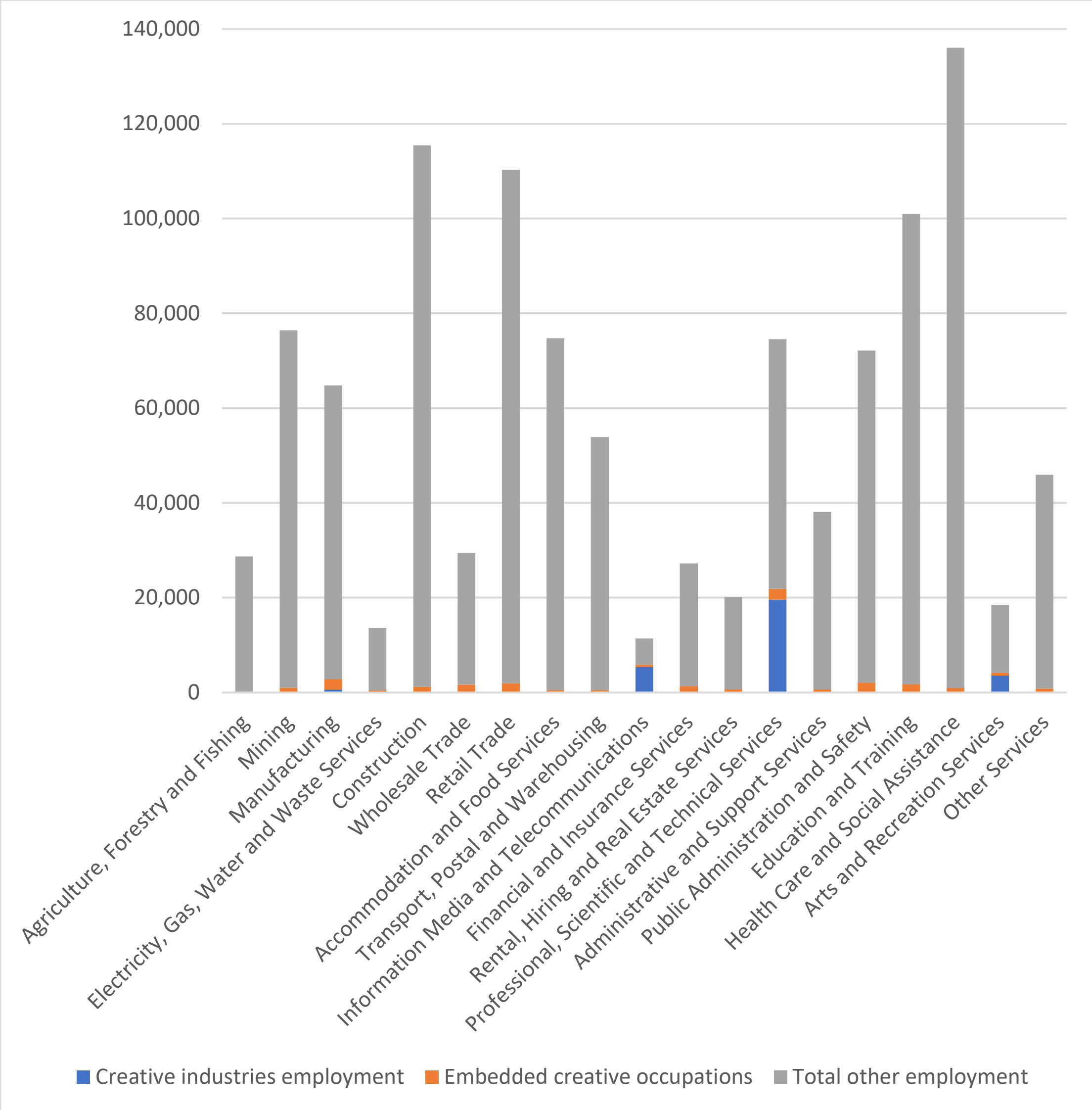
Table 3 shows the percentage of employment in each industry in WA accounted for by creative employment. In most cases this is embedded employment. In four cases, the overarching industries in Table 3 include within them parts of the creative industries.

Table 3: Creative employment across non-creative industries, WA, 2016

Industry	**% Creative employment (embedded and direct)**
Agriculture, forestry and fishing	0.6%
Mining	1.4%
Manufacturing*	3.6%
Electricity, gas, water and waste services	3.3%
Construction	1.1%
Wholesale trade	5.5%
Retail trade	1.8%
Accommodation and food services	0.7%
Transport, postal and warehousing	1.0%
Information, media and telecommunication*	25.1%
Financial and insurance services	5.1%
Rental, hiring and real estate services	3.6%
Professional, scientific and technical services*	14.3%
Administrative and support services	1.9%
Public administration and safety	2.9%
Education and training	1.8%
Health care and social assistance	0.7%
Arts and recreation services*	13.8%
Other services	1.9%
Total	**3.1%**

Sources: ABS Census 2016, analysis provided by QUT.
Note: * means the overarching industry includes sub-industries designated as creative industries in this analysis.

Figure 2: Creative industries employment and embedded creative occupations employment across main industry groups, WA, 2016



3.3 Employment growth

Employment growth in the creative industries can be tracked using two different data sources. Using Census data, we can look at changes between Census 2011 and Census 2016. The Labour Market Survey (LMS) allows us to look at the changes since 2016, in annual increments from 2016-2017 to 2018-2019. The two data sources use different approaches to counting employment, so their raw numbers are not directly comparable; total employment is consistently higher in the LMS than the Census.

From 2011 to 2016, the creative industries employment average annual growth rate (AAGR) across WA was 0.5% p.a. (lower than the general WA employment rate of 1.5% p.a.). However, in more recent years the creative industries employment growth rate has fallen into negative growth: a reduction of -3.8% p.a. from 2017 to 2018.[12] These drops do not mirror general WA employment growth rates, which have been around 0.9% p.a.

The employment trends in WA do not mirror national trends. As can be seen in Table 4, across Australia creative industries employment is consistently growing, faster than the general employment growth rate.

Table 4: WA and Australian employment growth rates, 2011 to 2018-19

	WA		Australia	
Employment	**CI**	**All industries**	**CI**	**All industries**
2011 Employment (Census)	28,472	1,084,381	371,483	10,058,355
2016 Employment (Census)	29,247	1,166,243	408,884	10,683,790
AAGR 2011-2016	**0.5%**	**1.5%**	**1.9%**	**1.2%**
2017 employment (LMS)	41,459	1,533,196	540,908	14,647,384
2018 employment (LMS)	38,372	1,560,039	562,910	15,042,342
AAGR 2017-2018	**-3.8%**	**0.9%**	**2.0%**	**1.3%**

Sources: ABS Census 2011 and 2016; ABS Labour Force, Detailed, Quarterly, May 2019; BYP estimates. See footnote 3 on calculation of LMS statistics.

Tables 5 and 6 show the trends within specific creative industries sectors and domains in WA. Table 5 covers 2011-2016 (using Census data), and Table 6 covers 2017 to 2018 (using LMS data).

Publishing is the only domain with falls in its employment rate over 2011 to 2016. All the other domains show small increases in employment rates over this period. This is the case both for WA and for Australia as a whole.

The picture changes in the most recent two years. Over the two years as a whole, in WA, all domains show decreases in employment rates with the exception of Libraries, archives, museums and galleries. This is not the same as the national pattern: across Australia, only two domains show decreases – Publishing, and Advertising and marketing.

[12] The LMS figures are calculated as moving 2-year averages. This means the figure for 2017 is an average of the 2-year period from mid 2016 to mid 2018; and the figure for 2018 is an average of the 2-year period from mid 2017 to mid 2019. This is done because of volatility in the LMS data for WA; see the Appendix for details.

Table 5: WA employment growth rates by creative industry sector and domain, 2011 to 2016

Creative industry sector and domain	WA employment (Census)		WA AAGR	Australia AAGR
	2011	2016	2011-16	2011-16
Cultural production	**9,471**	**8,984**	**-1.1%**	**-0.9%**
Film, TV and radio	1,715	1,842	1.4%	1.1%
Publishing	3,408	2,266	-7.8%	-6.6%
Libraries, archives, museums and galleries	1,038	1,188	2.7%	1.7%
Music, performing and visual arts	3,310	3,688	2.2%	1.7%
Creative services	**19,001**	**20,263**	**1.3%**	**3.3%**
Advertising and marketing	1,741	1,851	1.2%	1.9%
Architecture and design	6,515	6,887	1.1%	3.2%
Software and digital content	10,745	11,525	1.4%	3.7%
Grand Total	**28,472**	**29,247**	**0.5%**	**1.9%**

Source: ABS Census 2011 and 2016.

Table 6: WA employment growth rates by creative industry sector and domain, 2017 to 2018

Creative industry sector and domain	WA employment (LMS)		WA AAGR	Australia AAGR
	2017	2018	2017-18	2017-18
Cultural production	**13,540**	**12,220**	**-5.0%**	**1.7%**
Film, TV and radio	2,512	2,226	-5.9%	1.8%
Publishing	2,644	2,403	-4.7%	-3.6%
Libraries, archives, museums and galleries	2,534	2,667	2.6%	2.5%
Music, performing and visual arts	5,850	4,924	-8.3%	4.1%
Creative services	**27,919**	**26,151**	**-3.2%**	**2.1%**
Advertising and marketing	1,877	1,552	-9.1%	-4.2%
Architecture and design	9,434	9,252	-1.0%	0.5%
Software and digital content	16,608	15,348	-3.9%	3.8%
Grand Total	**41,459**	**38,372**	**-3.8%**	**2.0%**

Sources: ABS Census 2016; ABS Labour Force, Detailed, Quarterly, May 2019; BYP estimates. See footnote 7 on calculation of LMS statistics.

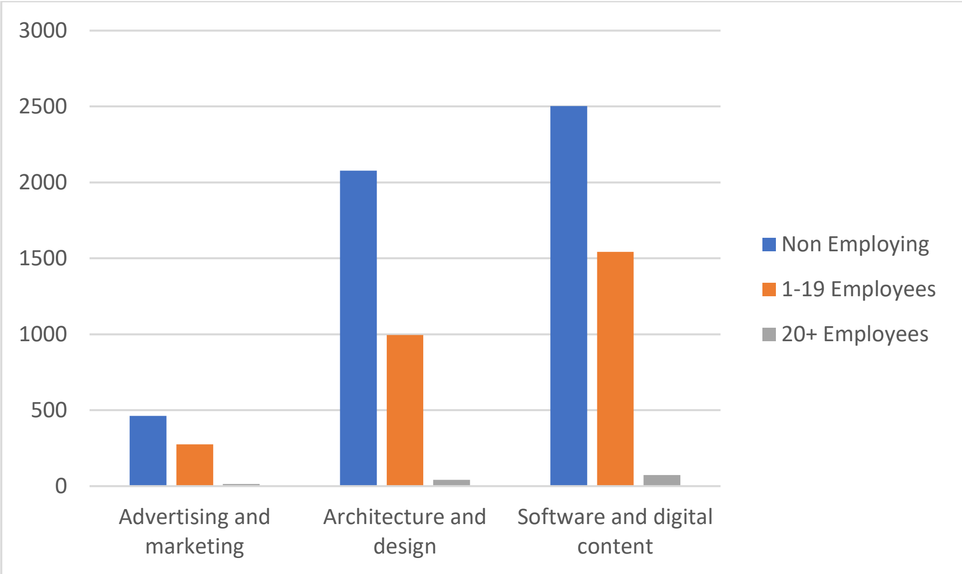
4. Businesses

4.1 Business counts and characteristics

There are some 9,983 creative industries businesses in WA. This accounts for 4.4% of all WA businesses; and 7.9% of creative industries businesses nationally.

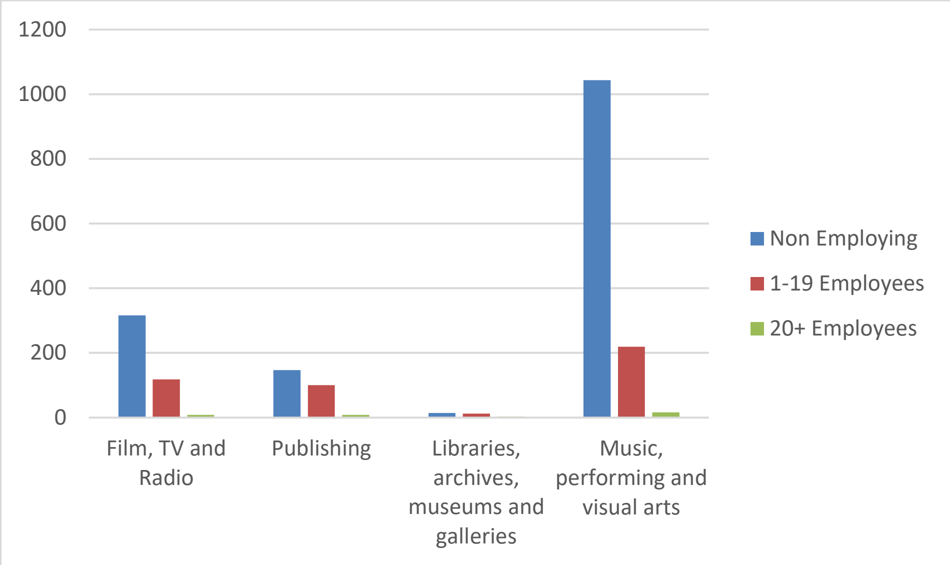
Most creative industry businesses are very small – 65.8% have no employees, and 32.7% have less than 20 employees. In WA, domains with the highest number of sole traders are Music, performing and visual arts domain at 81.6% and Film, TV and radio at 71.5%.

Figure 3: WA business size: creative domains, 2018



Source: ABS Counts of Australian Businesses, including Entries and Exits, Jun 2014 to Jun 2018; and Jun 2009 to Jun 2013.
Note: ABS does not publish business data on some of the smallest creative industries sub-domains.

Figure 4: WA business size: cultural domains, 2018



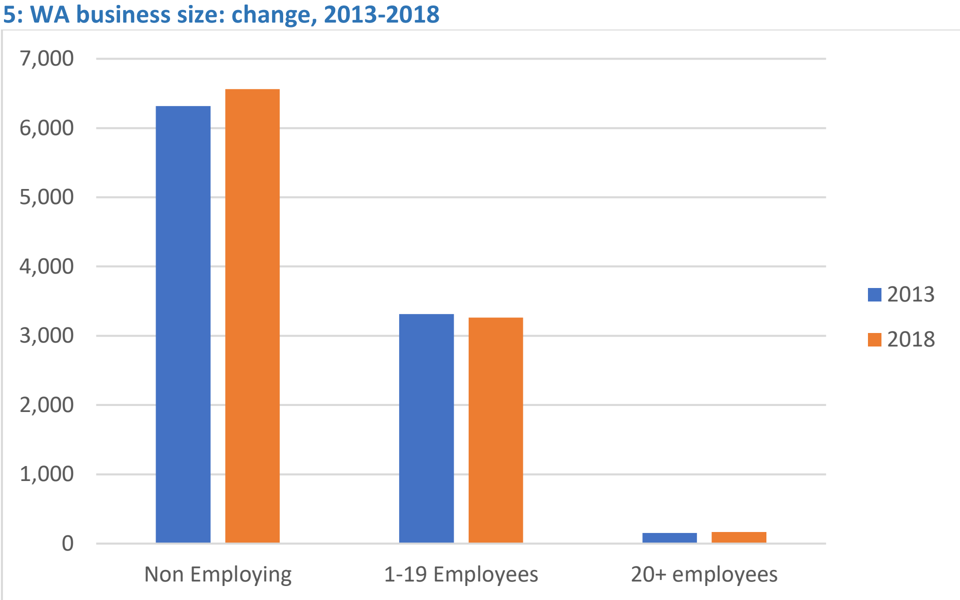
Source: ABS Counts of Australian Businesses, including Entries and Exits, Jun 2014 to Jun 2018; and Jun 2009 to Jun 2013.
Note: ABS does not publish business data on some of the smallest creative industries sub-domains.

4.2 Trends over time

The number of creative industries businesses has grown by 2.0% over 2013 to 2018. This is a lower rate than overall WA business growth in that period, at 5.8%.

As can be seen in Figure 4, the number of sole traders has increased by 4.0%, while the number of businesses employing 1-19 people has fallen by 1.5%. This trend can help to explain how total employment rates have fallen while the number of businesses has increased.

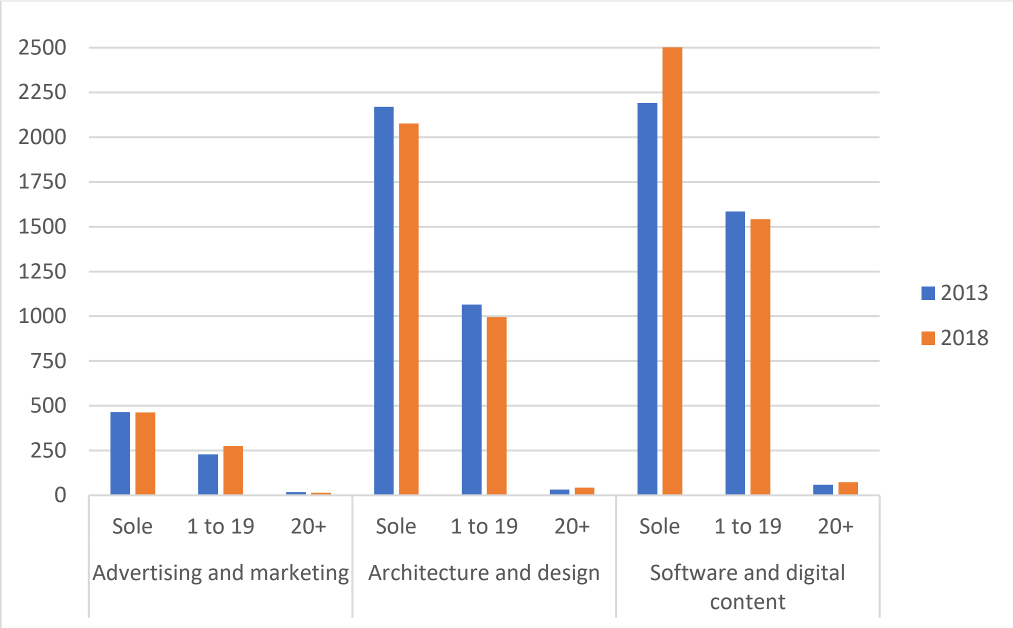
Figure 5: WA business size: change, 2013-2018



Source: ABS Counts of Australian Businesses, including Entries and Exits, Jun 2014 to Jun 2018; and Jun 2009 to Jun 2013.
Note: ABS does not publish business data on some of the smallest creative industries sub-domains.

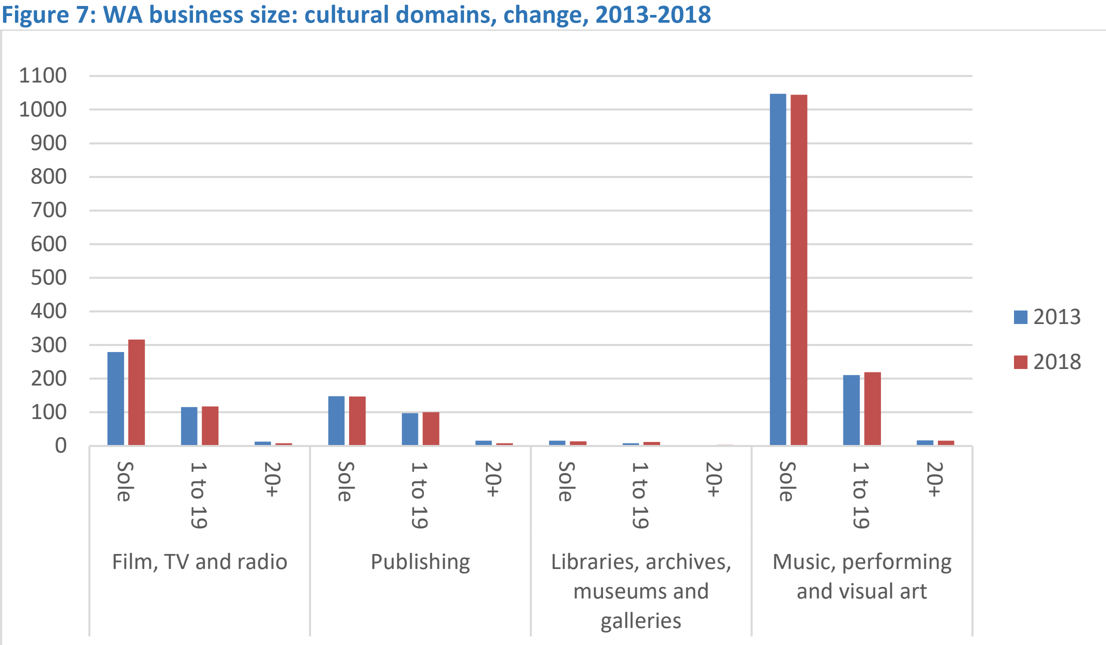
The increase in sole traders is especially marked in the Software and digital content domain, and in the Film, TV and radio domain.

Figure 6: WA business size: creative domains, change, 2013-2018



Source: ABS Counts of Australian Businesses, including Entries and Exits, Jun 2014 to Jun 2018; and Jun 2009 to Jun 2013.
Note: ABS does not publish business data on some of the smallest creative industries sub-domains.

Figure 7: WA business size: cultural domains, change, 2013-2018



Source: ABS Counts of Australian Businesses, including Entries and Exits, Jun 2014 to Jun 2018; and Jun 2009 to Jun 2013.
Note: ABS does not publish business data on some of the smallest creative industries sub-domains.

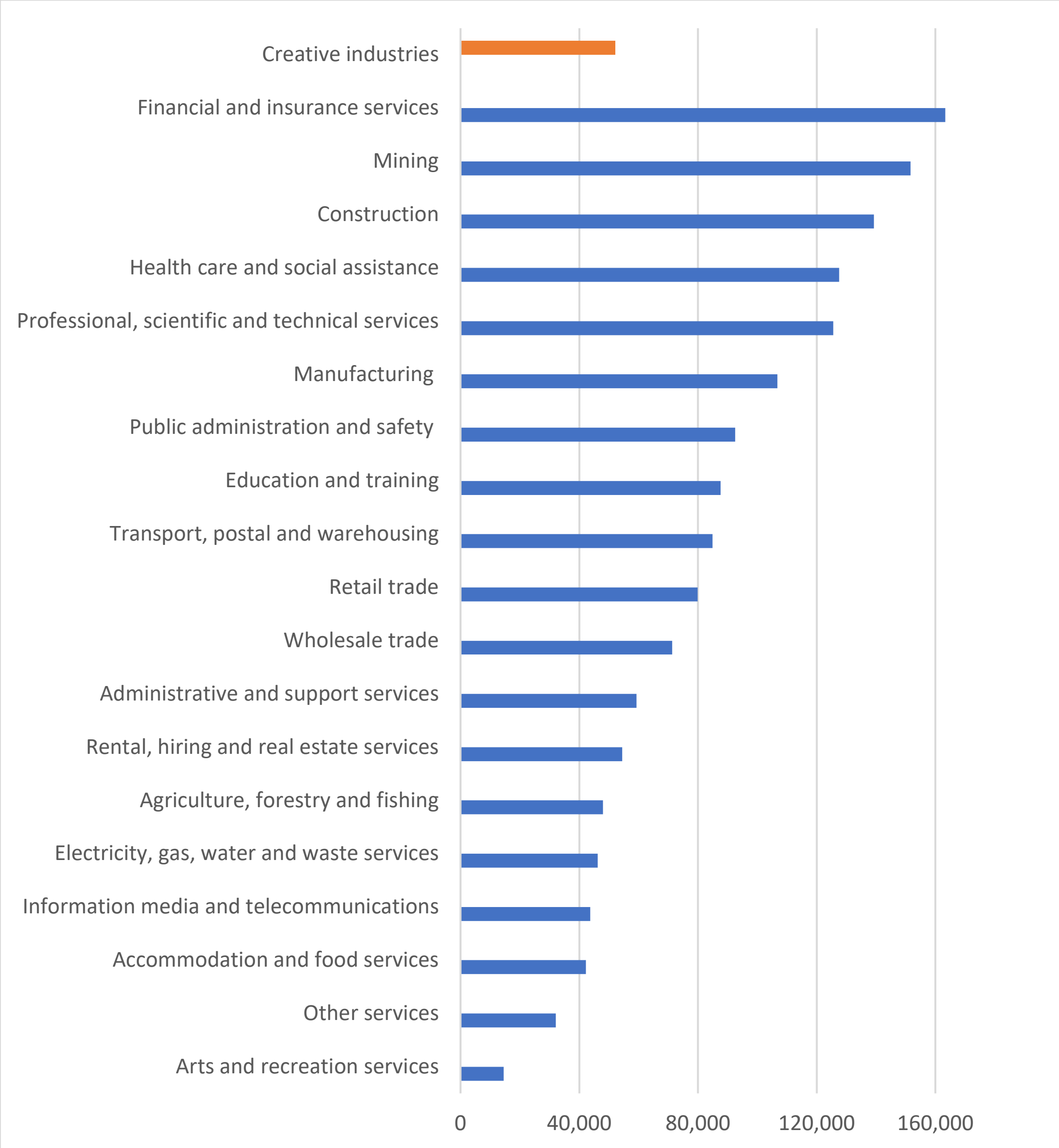
5. Industry Value Add

Industry Value Add (IVA) measures the contribution an industry makes to national Gross Domestic Product (GDP). It is calculated as the market value of goods and services produced, minus the cost of goods and services used in their production. The Australian creative industries contributed an estimated IVA of $52.2 billion in 2018-19. This is 3.3% of total GDP.

The WA creative industries had an estimated IVA of $3.3 billion in 2018-19. This is 1.4% of total GSP. (See the technical appendix for the estimation approach.)

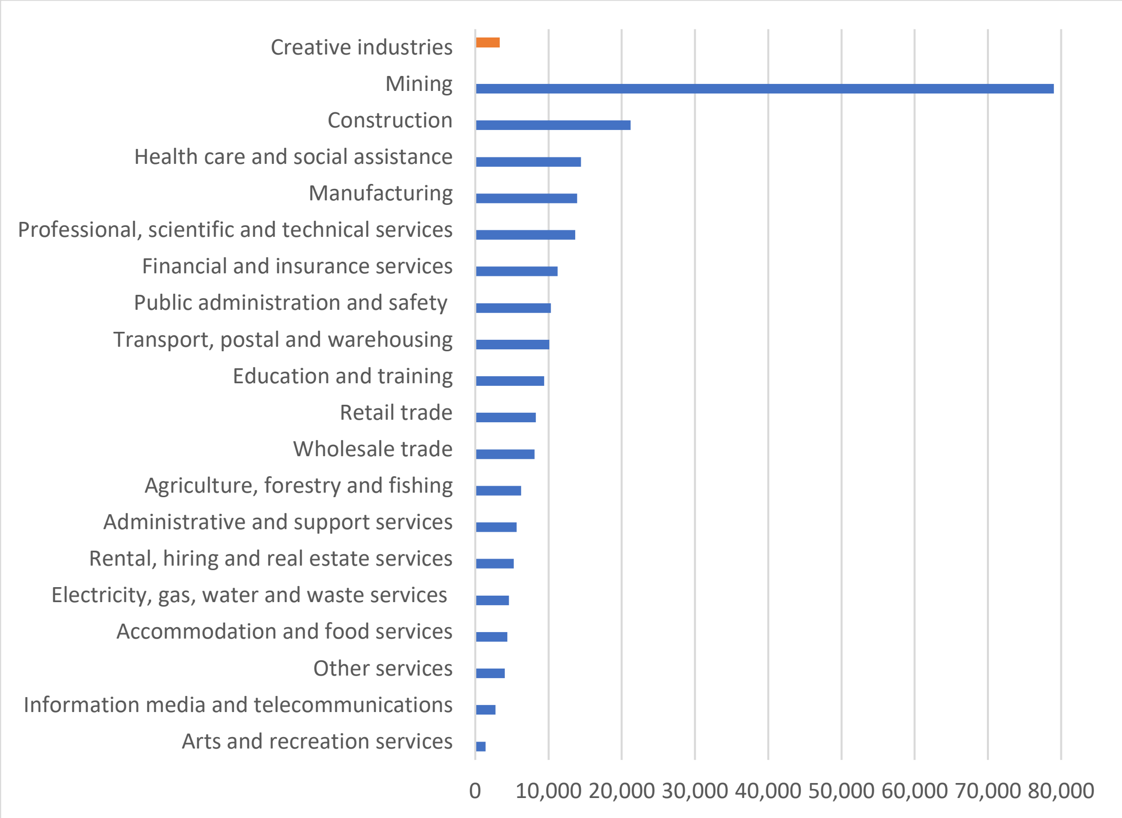
Figures 7 and 8 compare the creative industries IVA to other industries, for Australia and for WA.

Figure 8: Australia Industry Value Added, 2018-19, $mill



Sources: Creative industries figure from IBISWorld reports, for 2018-19; other industries figures from ABS Australian system of national accounts, 2017-18, for June 2018; BYP estimates.
Note: The Creative industries figure includes components from other industries included in this chart.

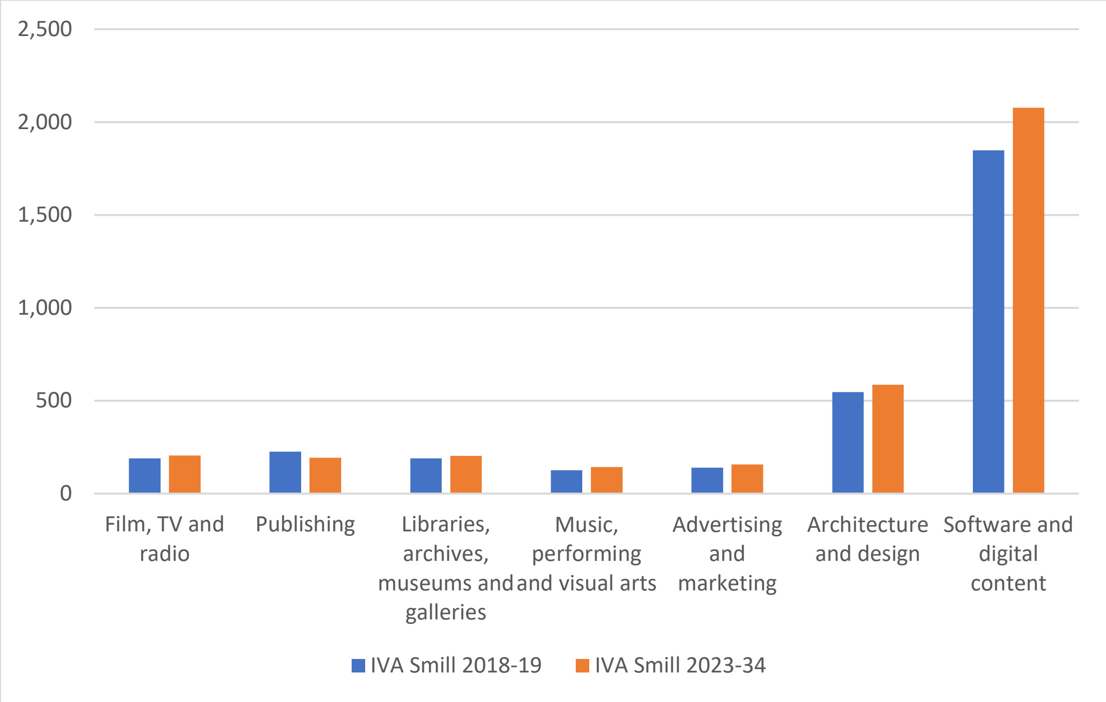
Figure 9: WA estimated Industry Value Added, 2018-19, $mill



Sources: Creative industries figure from IBISWorld reports, for 2018-19; other industries figures from ABS Australian national accounts: state accounts, 2017-18, for June 2018; BYP estimates.
Note: The Creative industries figure includes components from other industries included in this chart.

Among the domains making up the creative industries, the largest contributor to IVA is the Software and digital content domain. This is the case both for WA, at 56.6%, and for Australia as a whole, at 61.1%. The pattern in WA of IVA by domain are also similar to the national pattern in other areas. The Film, TV and radio domain is less important in WA than nationally (5.8% of creative industries IVA, cf 8.6% nationally). The Architecture and design domain is more important in WA than nationally (16.8% of WA creative industries IVA, cf 13.0% nationally).

Figure 10: WA estimate of Industry Value Added and 5-year forecast by creative industry segment ($mill), 2018-19 and 2023-24



Sources: IBISWorld reports, for 2018-19; BYP estimates.
Note: Figures are in real terms, inflation adjusted 2019 dollars.
Note: IBISWorld does not publish data on some of the smallest creative industries sub-segments.

Nationally, the creative industries IVA is forecast to grow by 2.3% p.a. over the coming five years. It is estimated WA creative industries IVA will also grow, at the slightly lower rate of 1.8% p.a.

Domains with WA growth rates above the WA average are Music, performing and visual arts (2.5%), Software and digital content (2.4%), and Advertising and marketing (2.3%). Only the Publishing domain is expected to experience negative growth, at -3.2% p.a.

These growth rates compare to the OECD's forecast for the overall Australian economy of 2.3% GDP growth in 2019, 2.5% in 2020, and 2.7% p.a. through to 2024.

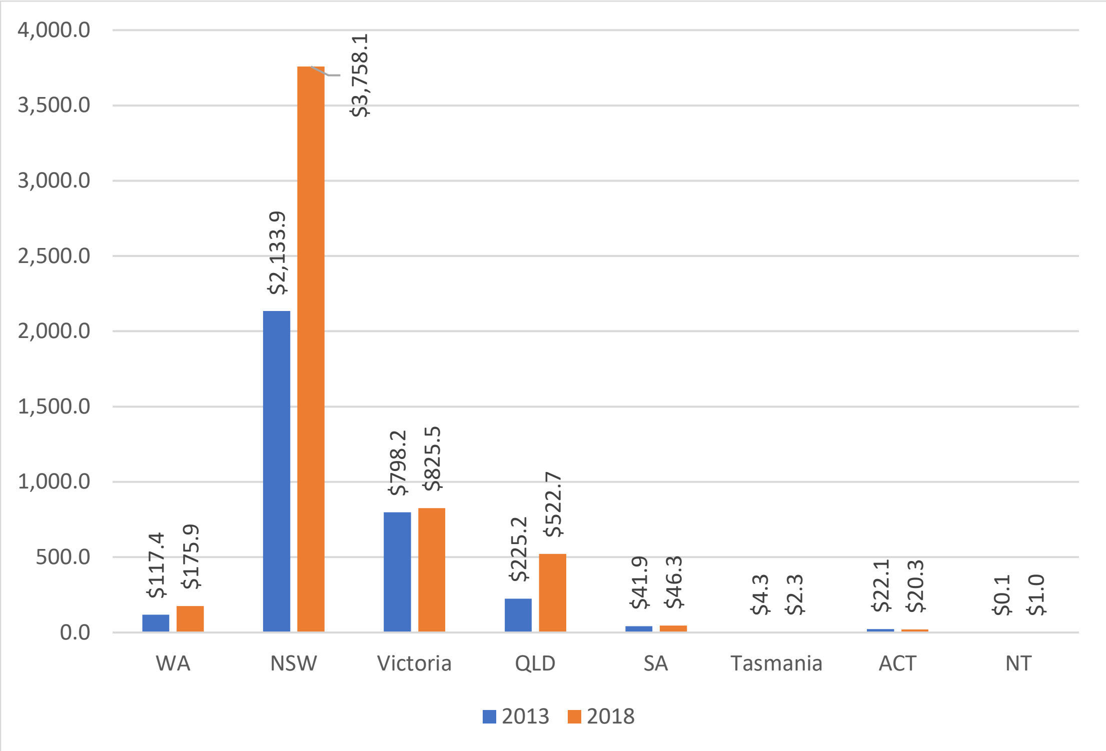
6. Exports

WA accounts for 3.2% of Australia's creative services exports in 2018. This is the fourth largest share of Australia's creative services on a state / territory basis. The largest share of creative services exports is held by NSW (67.8%), followed by Victoria (14.9%) and Queensland (9.4%).

Creative industries services exports from WA are about 2.6% of the State's total services exports, an increase from 1.9% in 2013. This is slightly higher than the Australian average of 2.1%.

Over the past five years, Australian services exports have grown an average of 9.3% p.a., and 1.7% in WA. Creative services exports have grown even faster: by an average of 10.7% p.a. across Australia, and 8.4% p.a. in WA.

Figure 11: Creative services exports, $mill



Sources: ABS International Trade: Supplementary Information, Calendar Year, 2018; ABS International Trade in Goods and Services, Australia, May 2019; BYP estimates.

The largest share of creative services exports in WA is Computer and information services, accounting for 82.4% of creative services exports in 2018 (compared to 76.9% nationally). This is followed by Licences to reproduce and/or distribute computer services, at 9.7%. (compared to 7.5% nationally). WA varies from the national pattern in having a higher proportion of creative services exports coming from Architectural services: 3.6% compared to the national average of 0.9%; and a lower proportion coming from Advertising, market research and public opinion polling: 0.6% compared to the national average of 7.0%.

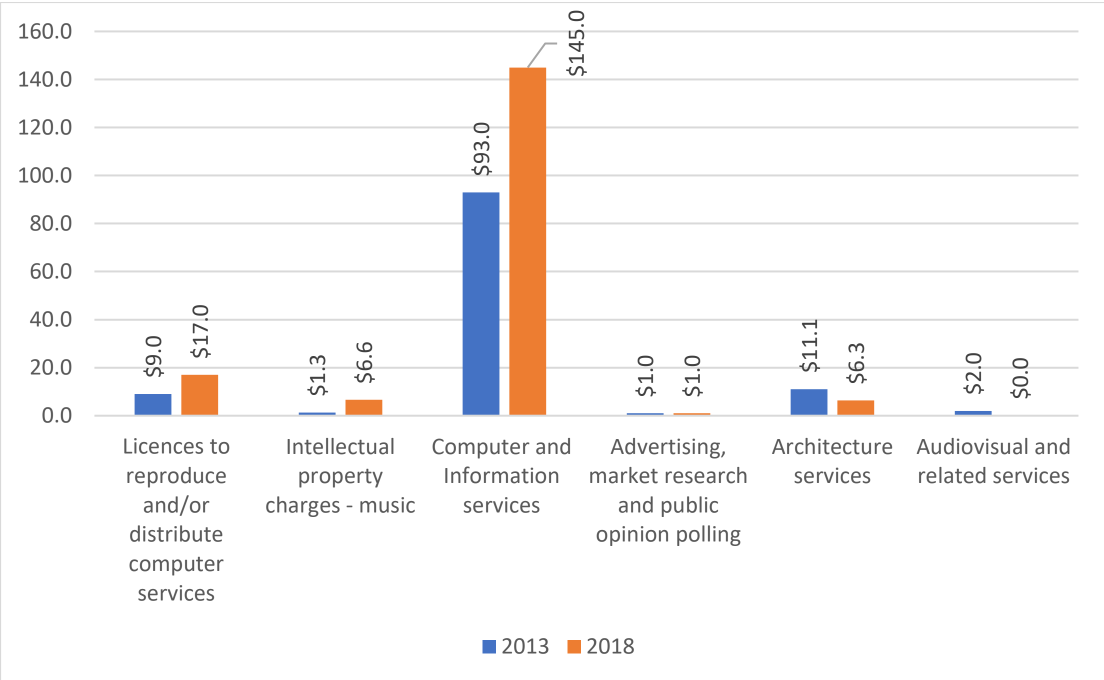
In terms of growth areas, the largest growth from 2013 to 2018 is in Intellectual property charges – music, growing by 38.1% p.a. This is more than double the national annual growth rate in this category of 14.0%. The only other state with a similar growth is Victoria, where Intellectual property charges – music grew by 32.2% p.a.

Other notable growth areas are Licences to reproduce and/or distribute computer services, at 13.6% p.a. (compared to a national rate of 9.5% pa), and Computer and Information services, at 9.3% p.a. (compared to the national rate of 15.8%).

A notable category where WA creative services exports shrank is Architectural services. WA accounts for a disproportionate amount of the total national exports in this category: it was 24.1% of national architectural services exports in 2013 and is still 12.1% in 2018. However, this is a drop of about -10.7% p.a.

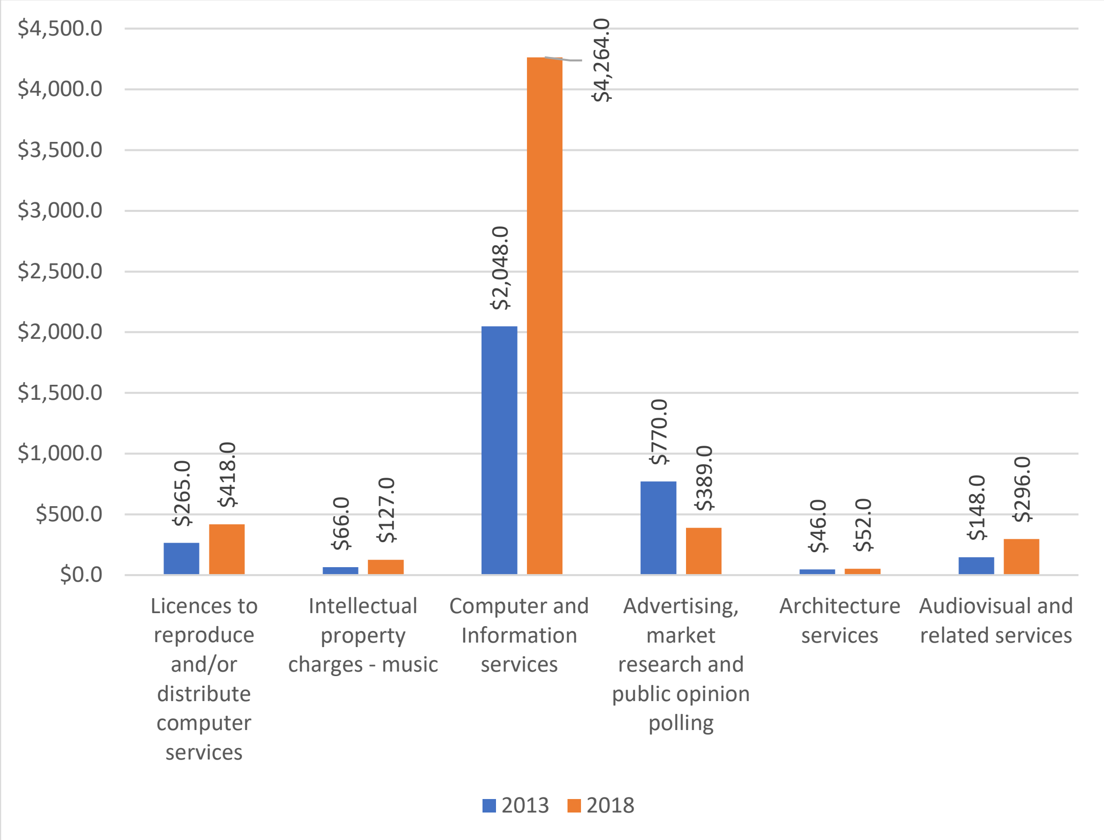
This compares unfavourably to the national growth rate in Architectural services exports over 2013-2018 of 2.5% p.a. Other states accounting for substantial percentages of Architectural services exports all saw increases over this period: Victoria from 33.1% of national Architectural services exports to 36.5%; NSW from 25.9% to 31.1%; and Queensland from 12.1% to 18.7%.

Figure 12: WA creative services exports by type, $mill



Sources: ABS International Trade: Supplementary Information, Calendar Year, 2018; ABS International Trade in Goods and Services, Australia, May 2019; BYP estimates.

Figure 13: Australia creative services exports by type, $mill



Sources: ABS International Trade: Supplementary Information, Calendar Year, 2018; ABS International Trade in Goods and Services, Australia, May 2019; BYP estimates.

While there is no data available on the specific export markets for creative services exports from Western Australia, there is some data on this at the national level. However, the data is grouped into higher-level service export categories, of which creative services exports are only a proportion.

The first such category of interest is ‘Charges for the use of intellectual property’. Around 41.8% of exports this category is due to creative services (namely, Licenses to reproduce and/or distribute computer services, and Intellectual property charges – music). The largest export markets for this category are:

- USA: 35.6% of all exports in ‘Charges for the use of intellectual property’
- Singapore: 4.6%
- Around 3% each: Netherlands (2.7%), Switzerland (2.7%), Germany (2.5%)
- Around 2% each: Thailand (2.1%), Ireland (2.1%), France (1.9%), Canada (1.8%), Malaysia (1.7%).

A second category of interest is ‘Telecommunications, computer and information services’. Around 91.3% of exports in this category is due to creative services (namely, Computer and information services). The largest export markets for this category are:

- USA: 25.1% of all exports in ‘Telecommunications, computer and information services’
- UK: 13.4%
- Singapore: 8.6%

- NZ: 5.1%
- Germany: 3.8%
- Around 2.0% each: Hong Kong (2.0%), Japan (1.7%), Switzerland (1.7%), India (1.7%), China (1.7%).

All other categories contain only a very small percentage of creative services exports, making the data unreliable as an indication of key export markets for creative services.

7. Distribution of creative industries employment

7.1 Geographic distribution

To look at how creative industries employment is geographically distributed across Western Australia, this analysis relies on data from the Census 2016. While the Labour Market Survey gives more recent creative industries employment data for Western Australia as a whole, it does not provide sufficiently detailed industry data at the sub-state level.

In the Census, detailed industry data (at the 4-digit level) is available at the SA4 level (Statistical Area 4 in the ABS geographic classification system). This splits Western Australia into ten sub-state areas. In the Labour Market Survey, only 1-digit industry data is available for SA4 areas.[13]

Under the ABS geographic classification system, the 10 SA4 areas can be grouped up into what are called Greater Capital City Statistical Areas (GCCSAs), which are designed to represent the functional extent of each of the eight state and territory capital cities. This gives two high-level groupings: Greater Perth; and the rest of WA. Tables 7 and 8 show how creative industries employment is distributed by SA4 and GCCSA.

Creative industries employment is predominantly located in the Greater Perth area (87.8%), with the greatest concentrations as a percentage of local employment in the areas of ‘Perth – Inner’ and ‘Perth – North West’.

8.5% of creative industries employment is in the rest of WA. The remainder, 3.6%, is in no fixed location.

From 2011 to 2016, Greater Perth has seen growth in its creative industries employment, particularly in Mandurah (employment up 12.7% over the five years) and Perth - South West (employment up by 18.6% over the five years). Regional WA has seen a fall in its creative industries employment levels, by 15.7% over the five years.

The rest of WA has seen falls in its creative industries employment, of -3.3% per annum (or 15.7% over the five years). Looking at this by creative industries domain, we can see the largest falls have been in the publishing domain: 49.6% over the five years, or an annual fall of -12.8%. Table 8 below gives more details.

WA also uses an alternative way to group geographic areas, developed by the Department of Primary Industries and Regional Development (DPIRD)’s Regional Development Commissions. These are based on Local Authority areas. A notable difference between the ABS GCCSA and the DPIRD categorisations is where Mandurah is allocated. The ABS designates the SA4 area called Mandurah as an urban area, part of Greater Perth. The DPIRD designates the LGAs within Mandurah (namely the City of Mandurah, and part of the Shire of Murray) as regional; they are included in the Peel Development Commission.

[13] Analysis using the LMS data was attempted. The estimation method applied was to calculate the proportions of 1-digit industries that were accounted for by 4-digit creative industries for each SA4 area in the Census 2016; and applying these proportions to the LMS data. However, the results were not credible – the trends in creative industries evident at state level were swamped by data for unrelated industries when attempting to estimate at the SA4 level.

It is not possible to show how creative industries employment is spread across the DPIRD's groupings because the Census 2016 does not give sufficiently detailed industry data by LGA area. However, we can approximate the distribution by separating Mandurah out from Greater Perth, and instead grouping it with regional areas. Tables 9 and 10 show how creative industries employment is distributed if this is done.

When Mandurah is grouped with regional areas, regional areas account for 10.0% of the state's creative industries employment, and the fall in regional creative industries employment is less marked, at -12.5% over the five years (or an annual fall of -2.6%). The growth in creative industries employment in Greater Perth is only slightly modified (a rise of 4.0% over the five years, compared to 4.1% if Greater Perth includes Mandurah).

Table 7: Creative industries employment across WA regions, 2016 and growth rates

Region (SA4 level)	CI employment (count)	Share of WA CI employment %	CI share of total employment in region %	AAGR 2011-16
Greater Perth	**25,667**	**87.8%**	**3.0%**	**0.8%**
Mandurah	418	1.4%	1.6%	2.4%
Perth – Inner	12,690	43.4%	5.6%	0.5%
Perth – North East	1,667	5.7%	1.9%	2.4%
Perth – North West	4,706	16.1%	2.9%	-0.2%
Perth – South East	3,284	11.2%	1.7%	0.7%
Perth – South West	2,902	9.9%	1.9%	3.5%
Rest of WA	**2,500**	**8.5%**	**1.0%**	**-3.3%**
Bunbury	991	3.4%	1.4%	n.a.
WA – Outback (North)	433	1.5%	0.6%	n.a.
WA – Outback (South)	518	1.8%	0.9%	n.a.
WA - Wheatbelt	558	1.9%	1.0%	n.a.
No fixed address for place of work	**1,063**	**3.6%**	**2.0%**	**5.7%**
Grand Total	**29,247**	**100%**	**2.5%**	**0.5%**

Sources: ABS Census 2011 and 2016.

Table 8: Creative industries employment across WA regions, by domain, 2016 and growth rates

Creative industry sector and sub-domain	Greater Perth employment (count)	Greater Perth AAGR 2011-16	Rest of WA employment (count)	Rest of WA AAGR 2011-16	No fixed address employment (count)	No fixed address AAGR 2011-16
Sector: Cultural production	**7,269**	**-0.7%**	**1,221**	**-4.7%**	**459**	**3.2%**
Film, TV and radio	1,463	2.0%	275	-4.7%	87	6.3%
Publishing	1,918	-7.7%	244	-12.8%	64	5.9%
Libraries, archives, museums and galleries	920	2.3%	275	5.2%	3	-15.6%
Music, performing and visual arts	2,968	3.4%	427	-3.4%	305	2.2%
Sector: Creative services	**18,398**	**1.4%**	**1,279**	**-1.9%**	**604**	**7.9%**
Advertising and marketing	1,560	0.6%	108	-4.1%	187	15.0%
Architecture and design	6,059	1.3%	656	-1.1%	178	6.7%
Software and digital content	10,779	1.6%	515	-2.5%	239	4.6%
Total	**25,667**	**0.8%**	**2,500**	**-3.3%**	**1,063**	**5.7%**

Sources: ABS Census 2011 and 2016.

Table 9: Creative industries employment across WA regions, 2016 and growth rates – grouping Mandurah with Rest of WA

Region (SA4 level)	CI employment (count)	Share of WA CI employment %	CI share of total employment in region %	AAGR 2011-16
Greater Perth	**25,249**	**86.3%**	**3.1%**	**0.8%**
Perth – Inner	12,690	43.4%	5.6%	0.5%
Perth – North East	1,667	5.7%	1.9%	2.4%
Perth – North West	4,706	16.1%	2.9%	-0.2%
Perth – South East	3,284	11.2%	1.7%	0.7%
Perth – South West	2,902	9.9%	1.9%	3.5%
Rest of WA	**2,918**	**10.0%**	**1.0%**	**-2.6%**
Mandurah	418	1.4%	1.6%	2.4%
Bunbury	991	3.4%	1.4%	n.a.
WA – Outback (North)	433	1.5%	0.6%	n.a.
WA – Outback (South)	518	1.8%	0.9%	n.a.
WA - Wheatbelt	558	1.9%	1.0%	n.a.
No fixed address for place of work	**1,063**	**3.6%**	**2.0%**	**5.7%**
Grand Total	**29,247**	**100%**	**2.5%**	**0.5%**

Sources: ABS Census 2011 and 2016.

Table 10: Creative industries employment across WA regions, by domain, 2016 and growth rates – grouping Mandurah with Rest of WA

Creative industry sector and sub-domain	Greater Perth employment (count)	Greater Perth AAGR 2011-16	Rest of WA employment (count)	Rest of WA AAGR 2011-16	No fixed address employment (count)	No fixed address AAGR 2011-16
Sector: Cultural production	**7,061**	**-0.7%**	**1,429**	**-4.1%**	**459**	**3.2%**
Film, TV and radio	1,432	1.9%	306	-3.7%	87	6.3%
Publishing	1,834	-7.9%	328	-10.9%	64	5.9%
Libraries, archives, museums and galleries	906	2.7%	289	3.7%	3	-15.6%
Music, performing and visual arts	2,889	3.3%	506	-2.2%	305	2.2%
Sector: Creative services	**18,188**	**1.4%**	**1,489**	**-1.1%**	**604**	**7.9%**
Advertising and marketing	1,539	0.6%	129	-2.6%	187	15.0%
Architecture and design	5,963	1.2%	752	-0.6%	178	6.7%
Software and digital content	10,686	1.6%	608	-1.5%	239	4.6%
Total	**25,249**	**0.8%**	**2,918**	**-2.6%**	**1,063**	**5.7%**

Sources: ABS Census 2011 and 2016.

7.2 Employment of Aboriginal and Torres Strait Islander people

The most recent source of data on employment among Aboriginal and Torres Strait Islander people is the 2016 Census. Unfortunately, the Labour Force Survey – Australia's main source of more recent employment data, publishing updates quarterly – does not provide information on respondents' indigeneity.

According to the Census 2016, Aboriginal and Torres Strait Islander people account for 1.6% of employment in Western Australia, and for 0.8% of employment in the creative industries.

Two creative industries domains show higher employment of Aboriginal and Torres Strait Islander people than the state average: Film, TV and radio, at 2.9%; and Music, performing and visual arts, at 2.6%.

In the domain of Libraries, archives, museums and galleries, employment of Aboriginal and Torres Strait Islander people is similar to the state average, at 1.4%.

The remaining creative industries domains all show lower levels of employment of Aboriginal and Torres Strait Islander people than the state average:

- Publishing: 0.5%
- Advertising and marketing: 0.7%
- Architecture and design: 0.4%
- Software and digital content: 0.2%

Table 11: Aboriginal and Torres Strait Islander employment in creative industries in WA, 2016

Creative industry sector and sub-domain	Indigenous employment	Total employment	Indigenous employment as % of state total
Sector: Cultural production	**177**	**8,984**	**2.0%**
Film, TV and radio	53	1,842	2.9%
Publishing	11	2,266	0.5%
Libraries, archives, museums and galleries	17	1,188	1.4%
Music, performing and visual arts	96	3,688	2.6%
Sector: Creative services	**67**	**20,263**	**0.3%**
Advertising and marketing	13	1,851	0.7%
Architecture and design	30	6,887	0.4%
Software and digital content	24	11,525	0.2%
Total	**244**	**29,247**	**0.8%**

Sources: ABS Census 2011 and 2016.

Data from Census 2011 can be used to look at trends over time. Overall, there has been a small decline in the proportion of creative industries employment held by Aboriginal and Torres Strait Islander people, from 0.9% of the total to 0.8%. In most sub-domains the proportions have remained stable. There was an increase in the proportions of employment in the Film, TV and radio domain (from 2.3% to 2.9%); while there was a decrease in the proportions of employment in the Music, performing and visual arts (from 3.8% to 2.6%).

Table 10: Aboriginal and Torres Strait Islander employment in creative industries in WA, 2011

Creative industry sector and sub-domain	Indigenous employment	Total employment	Indigenous employment as % of state total
Sector: Cultural production	**195**	**9,471**	**2.1%**
Film, TV and radio	39	1,715	2.3%
Publishing	12	3,408	0.4%
Libraries, archives, museums and galleries	19	1,038	1.8%
Music, performing and visual arts	125	3,310	3.8%
Sector: Creative services	**48**	**19,001**	**0.3%**
Advertising and marketing	3	1,741	0.2%
Architecture and design	23	6,515	0.4%
Software and digital content	22	10,745	0.2%
Total	**243**	**28,472**	**0.9%**

Sources: ABS Census 2011 and 2016.

8. Domain Analysis

8.1 Film, TV and radio

The Film, TV and radio domain in WA showed positive employment growth over the five years from 2011-2016 (1.4% growth p.a.); but has fallen into negative growth in the most recent two years (-5.9% growth p.a. over 2017 to 2018).

The recent negative growth is due to employment losses across the motion picture and video industries, and in radio broadcasting. The industry of television broadcasting is still showing employment increases.

The WA growth forecast for Film, TV and radio IVA over the next five years is positive, at 1.6% p.a. Data on the IVA contributions is only available for five of its constituent groups – see Table 8 for details.

WA accounts for 4.4% of Australia's Film, TV and radio employment, less than its share of total Australian employment (which is 10.4%).

Table 12: Film, TV and radio domain key statistics, 2018

	WA CI businesses		WA CI direct employment			Est. IVA 2018-19 ($ mill)
	Count	% of Aus.	Count	% of Aus.	AAGR 2017-18	
Film, TV and radio	**444**	**6.1%**	**2,226**	**4.4%**	**-5.9%**	**190**
5500 - Motion picture and sound recording activities, nfd	-	n.r.	-	-	-	n.a.
5510 - Motion picture and video activities, nfd	-	n.r.	35	3.5%	-10.8%	n.a.
5511 - Motion picture and video production	360	6.1%	606	4.0%	-10.8%	45
5514 - Post-production services & other motion picture and video activities	59	6.8%	50	3.4%	-10.8%	12
5600 - Broadcasting (except internet), nfd	-	n.r.	-	-	-	n.a.
5610 - Radio broadcasting	19	7.8%	357	4.0%	-22.6%	30
5620 - Television broadcasting, nfd	-	n.r.	11	2.0%	6.0%	n.a.
5621 - Free to air television broadcasting	6	5.1%	1,032	5.7%	6.0%	73
5622 - Cable and other subscription broadcasting	-	-	134	3.1%	6.0%	31

Sources: ABS Census 2016; ABS Labour Force, Detailed, Quarterly, May 2019; ABS Counts of Australian Businesses, including Entries and Exits, Jun 2014 to Jun 2018; IBISWorld reports, for 2018-19; BYP estimates. See footnote 3 on calculation of LMS statistics.
n.r. stands for 'not relevant', indicating there was no businesses and/or employment in this category across Australia in the relevant year(s).
n.a. stands for 'not available', indicating no data was published in this category.

8.2 Publishing

The Publishing domain in WA had negative employment over the five years from 2011-2016 (-7.8% growth p.a.); and this has continued in the most recent two years (-4.7% growth p.a. over 2017 to 2018).

Employment losses are seen right across the constituent industries.

The WA growth forecast for Publishing IVA over the next five years is negative, at -3.2% p.a. Data on the IVA contributions is only available for 4 of its constituent groups – see Table 9 for details.

WA accounts for 8.4% of Australia's Publishing employment, less than its share of total Australian employment (which is 10.4%). However, it has relatively higher proportions of the newspaper publishing employment.

Table 13: Publishing domain key statistics, 2018

	WA CI businesses		WA CI direct employment			Est. IVA 2018-19 ($ mill)
	Count	% of Aus.	Count	% of Aus	AAGR 2017-18	
Publishing	**251**	**7.7%**	**2,403**	**8.4%**	**-4.7%**	**226**
1612 - Printing support services.	59	9.5%	121	5.6%	-9.9%	6
5400 - Publishing (except internet and music publishing), nfd	-	n.r.	224	7.1%	-18.1%	n.a.
5410 - Newspaper, periodical, book and directory publishing, nfd	-	n.r.	26	13.2%	-2.4%	n.a.
5411 - Newspaper publishing	23	6.5%	1,694	12.1%	-2.4%	187
5412 - Magazine and other periodical publishing	66	7.2%	137	2.8%	-2.4%	11
5413 - Book publishing	83	7.8%	193	4.9%	-2.4%	22
5419 - Other publishing (except software, music, internet)	13	8.1%	8	4.5%	-2.4%	n.a.
6020 - Other information services	7	5.1%	-	n.r.	-2.4%	n.a.

Sources: ABS Census 2016; ABS Labour Force, Detailed, Quarterly, May 2019; ABS Counts of Australian Businesses, including Entries and Exits, Jun 2014 to Jun 2018; IBISWorld reports, for 2018-19; BYP estimates. See footnote 3 on calculation of LMS statistics.
n.r. stands for 'not relevant', indicating there was no businesses and/or employment in this category across Australia in the relevant year(s).
n.a. stands for 'not available', indicating no data was published in this category.

8.3 Libraries, archives, museums and galleries

The Libraries, archives, museums and galleries domain in WA showed positive employment growth over the five years from 2011-2016 (2.7% growth p.a.); and has continued to experience positive growth in the most recent two years (2.6% growth p.a. over 2017 to 2018). The growth in recent years is due to libraries employment; museums employment has fallen over that time.

The WA growth forecast for Libraries, archives, museums and galleries IVA over the next five years is positive, at 1.4% p.a.

WA accounts for 9.9% of Australia's Libraries, archives, museums and galleries employment, similar to its share of total Australian employment (which is 10.4%).

Table 10 shows the figures by constituent industries. It should be noted that industry 8910, labelled 'Museum operation' by the ANZSIC coding system, in fact includes art galleries.[14]

Table 14: Libraries, archives, museums and galleries domain key statistics, 2018

	WA CI businesses		WA CI direct employment			Est. IVA 2018-19 ($ mill)
	Count	% of Aus.	Count	% of Aus	AAGR 2017-18	
Libraries, archives, museums and galleries	**22**	**7.9%**	**2,667**	**9.9%**	**2.6%**	**190**
6010 - Libraries and archives	4	3.2%	1,670	11.1%	5.1%	117
8910 - Museum operation	18	11.8%	997	8.3%	-1.4%	73

Sources: ABS Census 2016; ABS Labour Force, Detailed, Quarterly, May 2019; ABS Counts of Australian Businesses, including Entries and Exits, Jun 2014 to Jun 2018; IBISWorld reports, for 2018-19; BYP estimates. See footnote 3 on calculation of LMS statistics.

8.4 Music, performing and visual arts

The Music, performing and visual arts domain in WA showed positive employment growth over the five years from 2011-2016 (2.2% growth p.a.); but has fallen into negative growth in the most recent two years (-8.3% growth p.a. over 2017 to 2018).

Employment losses are seen right across the constituent industries.

The WA growth forecast for Music, performing and visual arts IVA over the next five years is positive, at 2.5% p.a. Data on the IVA contributions is only available for three of its constituent groups – see Table 11 for details.

WA accounts for 7.9% of Australia's Music, performing and visual arts employment, less than its share of total Australian employment (which is 10.4%).

The segment is dominated in employee and business numbers by creative artists, musicians, writers and performers.

[14] Both art galleries and art museums are included. The category also includes historic or heritage places, and all types of museums. Excluded are retail art galleries: these do not have an independent industry code and so their numbers cannot be identified. The ANZSIC coding system groups these in '4279 – Other store-based retailing not elsewhere classified'.

Table 15: Music, performing and visual arts domain key statistics, 2018

	WA CI businesses		WA CI direct employment			Est. IVA 2018-19 ($ mill)
	Count	% of Aus.	Count	% of Aus.	AAGR 2017-18	
Music, performing and visual arts	**1,293**	**7.8%**	**4,924**	**7.9%**	**-8.3%**	**126**
2591 – Jewellery and silverware manufacture	133	9.8%	1,161	10.3%	-5.2%	29
5520 – Sound recording and music publishing, nfd	-	n.r.	-	-	-100%	-
5521 – Music publishing	3	1.7%	-	-	-100%	n.a.
5522 - Music and other sound recording activities	106	8.0%	-	-	-100%	n.a.
9000 – Creative and performing arts activities, nfd	-	n.r.	244	12.1%	-6.5%	n.a.
9001 - Performing arts operations	113	8.1%	648	7.1%	-6.5%	64
9002 - Creative artists, musicians, writers and performers	891	7.5%	2,206	7.1%	-6.5%	n.a.
9003 - Performing arts venue operation	47	9.3%	622	8.7%	-6.5%	33
R000 – Arts and recreation services, nfd	-	n.r.	43	100%	100%	n.a.

Sources: ABS Census 2016; ABS Labour Force, Detailed, Quarterly, May 2019; ABS Counts of Australian Businesses, including Entries and Exits, Jun 2014 to Jun 2018; IBISWorld reports, for 2018-19; BYP estimates. See footnote 3 on calculation of LMS statistics.
n.r. stands for 'not relevant', indicating there was no businesses and/or employment in this category across Australia in the relevant year(s).
n.a. stands for 'not available', indicating no data was published in this category.

8.5 Advertising and marketing

The Advertising and marketing domain in WA showed positive employment growth over the five years from 2011-2016 (1.2% growth p.a.); but has fallen into negative growth in the most recent two years (-9.1% growth p.a. over 2017 to 2018).

The WA growth forecast for Advertising and marketing IVA over the next five years is positive, at 2.3% p.a.

WA accounts for 4.9% of Australia's Advertising and marketing employment, less than its share of total Australian employment (which is 10.4%).

Table 16: Advertising and marketing domain key statistics, 2018

	WA CI businesses		WA CI direct employment			Est. IVA 2018-19 ($ mill)
	Count	% of Aus.	Count	% of Aus.	AAGR 2017-18	
6940 - Advertising services	**758**	**6.7%**	**1,552**	**4.9%**	**-9.1%**	**139**

Sources: ABS Census 2016; ABS Labour Force, Detailed, Quarterly, May 2019; ABS Counts of Australian Businesses, including Entries and Exits, Jun 2014 to Jun 2018; IBISWorld reports, for 2018-19; BYP estimates. See footnote 3 on calculation of LMS statistics.

8.6 Architecture and design

The Architecture and design domain in WA showed positive employment growth over the five years from 2011-2016 (1.1% growth p.a.); but has fallen into negative growth in the most recent two years (-1.0% growth p.a. over 2017 to 2018).

This fall is entirely due to employment losses in the professional photographic services industry. The architecture and other specialised design industries show 1.3% employment growth.

The WA growth forecast for Architecture and design IVA over the next five years is positive, at 1.4% p.a.

WA accounts for 8.0% of Australia's Architecture and design employment, less than its share of total Australian employment (which is 10.4%).

Table 17: Architecture and design domain key statistics, 2018

	WA CI businesses		WA CI direct employment			Est. IVA 2018-19 ($ mill)
	Count	% of Aus.	Count	% of Aus.	AAGR 2017-18	
Architecture and design	**3,096**	**9.2%**	**9,252**	**8.0%**	**-1.0%**	**547**
6921 - Architectural services	1,388	10.6%	5,207	8.8%	1.3%	321
6924 - Other specialised design services	1,168	8.1%	2,899	7.2%	1.3%	175
6991 - Professional photographic services	540	8.8%	1,146	7.2%	-13.7%	51

Sources: ABS Census 2016; ABS Labour Force, Detailed, Quarterly, May 2019; ABS Counts of Australian Businesses, including Entries and Exits, Jun 2014 to Jun 2018; IBISWorld reports, for 2018-19; BYP estimates. See footnote 3 on calculation of LMS statistics.

8.7 Software and digital content

The Software and digital content domain is the single largest creative industries domain in terms of employment. It showed positive employment growth in WA over the five years from 2011-2016 (1.4% growth p.a.); but has fallen into negative growth in the most recent two years (-3.9% growth p.a. over 2017 to 2018).

The WA growth forecast for Software and digital content IVA over the next five years is positive, at 2.4% p.a. Data on the IVA contributions is only available for 4 of its constituent groups – see Table 14 for details.

WA accounts for 6.2% of Australia's Software and digital content employment, less than its share of total Australian employment (which is 10.4%).

The domain is dominated in both employee and business numbers by the Computer system design and related services group.

Table 18: Software and digital content domain key statistics, 2018

	WA CI businesses		WA CI direct employment			Est. IVA 2018-19 ($ mill)
	Count	% of Aus.	Count	% of Aus.	AAGR 2017-18	
Software and digital content	**4,119**	**7.6%**	**15,348**	**6.2%**	**-3.9%**	**1,847**
5700 - Internet publishing and broadcasting	122	7.9%	37	2.9%	-15.6%	50
5420 - Software publishing	102	8.1%	-	n.r.	-	-
5900 – Internet service providers, web search portals, and data processing services, nfd	-	n.r.	-	-	-	n.a.
5921 – Data processing and web hosting services	134	9.3%	-	-	-100%	-
7000 - Computer system design and related services	3,761	7.5%	15,311	6.3%	-3.6%	1,798
J000 – Information media and telecommunications, nfd	-	n.r.	-	n.r.	-	n.a.

Sources: ABS Census 2016; ABS Labour Force, Detailed, Quarterly, May 2019; ABS Counts of Australian Businesses, including Entries and Exits, Jun 2014 to Jun 2018; IBISWorld reports, for 2018-19; BYP estimates. See footnote 3 on calculation of LMS statistics.
0.9n.r. stands for 'not relevant', indicating there was no businesses and/or employment in this category across Australia in the relevant year(s).
n.a. stands for 'not available', indicating no data was published in this category.

8.8 Relative importance of creative industry domains in WA

Figure 14: Creative industry domains: employment growth from 2011 to 2016 by forecast IVA growth (bubble size = WA employment in 2016)

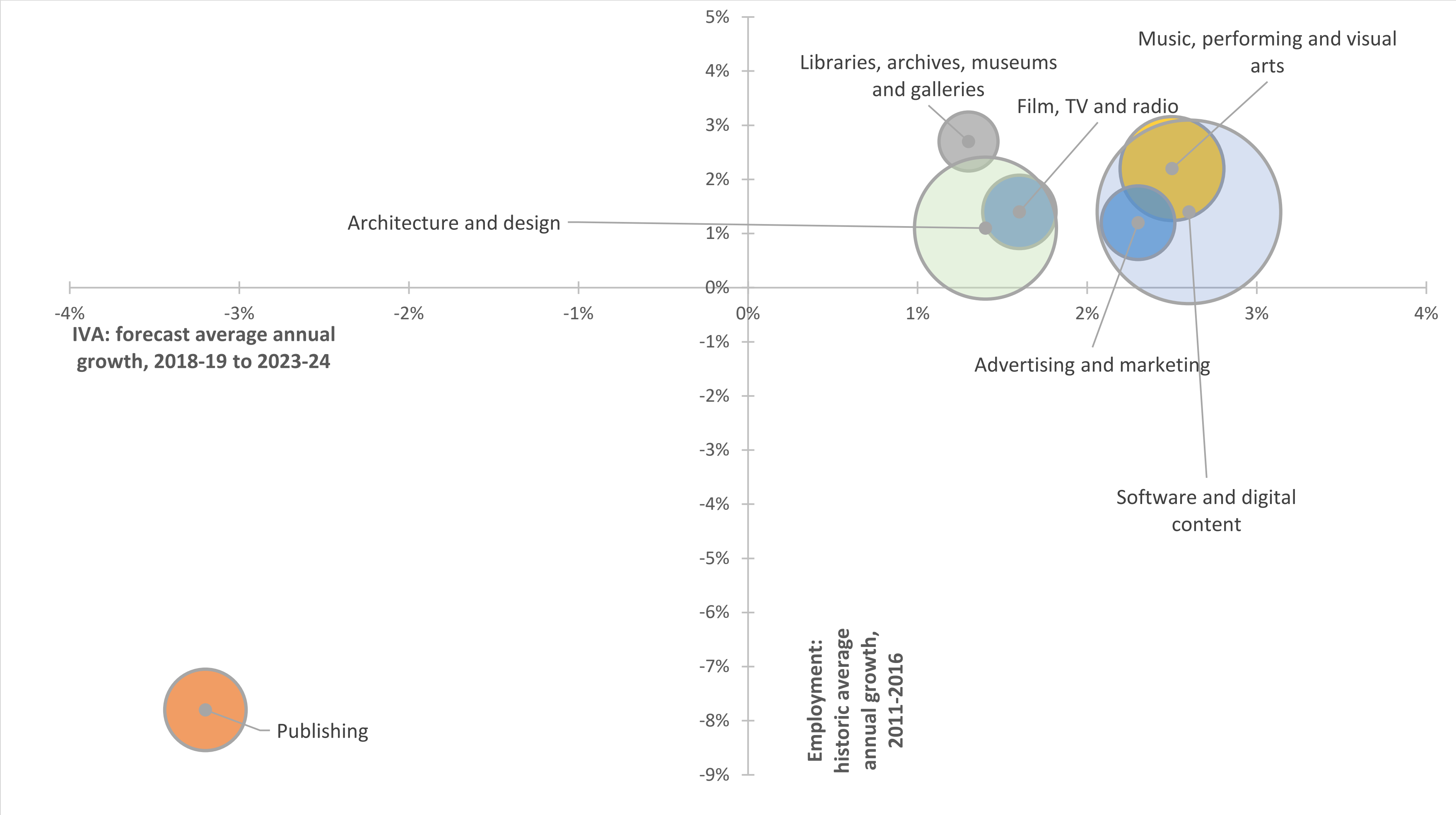
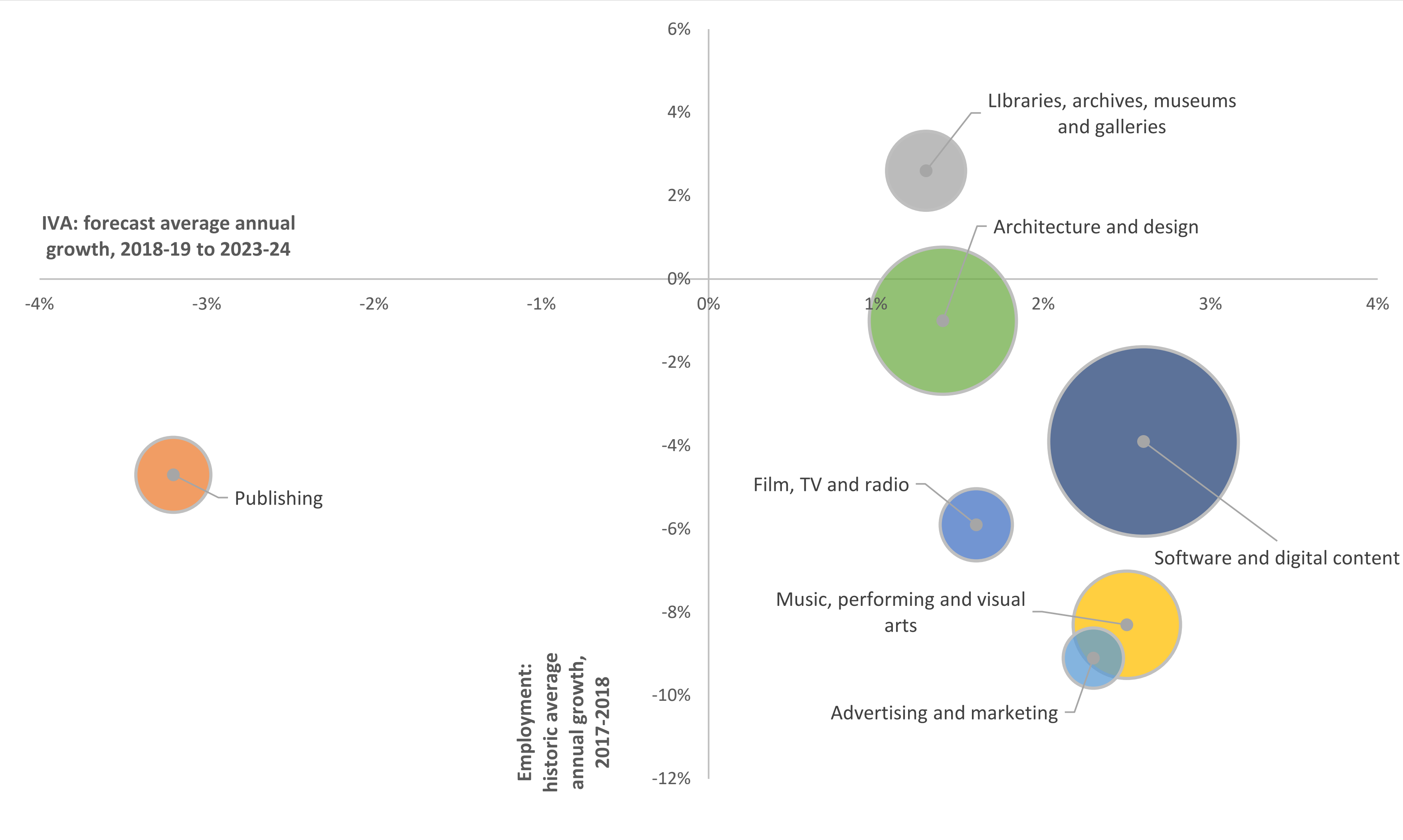


Figure 15: Creative industry domains: employment growth 2016-17 to 2018-19 by forecast IVA growth (bubble size = WA employment in 2018)



9. Technical appendix

Over time there have been a variety of efforts made to define the creative industries, both in Australia and internationally. What these efforts generally have in common is that they are rooted in industry classification systems, the internationally-agreed ways of grouping and classifying industries for the purposes of national economic statistics. In Australia this is the ANZSIC system – the Australian and New Zealand Standard Industrial Classification System.

The ANZSIC system itself does not have a grouping for the creative industries. Therefore, definitions of the creative industries aim to pick out those industry segments (classified by ANZSIC within other groupings) that are in fact 'creative'. For example, architecture is generally considered part of the creative industries; in ANZSIC it is grouped in the category of 'professional, scientific and technical services'. Another example is jewellery making, grouped by ANZSIC in the broad 'manufacturing' category.

9.1 Definition and categorisation of the creative industries

This report follows the QUT (2018) definition of the creative industries. Table 15 lists the industries that are included (identified at the 4-digit ANZSIC code level).

This report modifies the QUT categorisation system slightly: it separates out a grouping of 'Libraries, archives, museums and galleries' as a stand-alone domain. In the QUT categorisation, 'libraries and archives' are located in the 'Publishing' domain, while museums and galleries sit in a 'Visual arts' domain.

This change in turn would leave 'jewellery and silverware manufacture' as the only item within the 'Visual arts' domain. It is therefore merged with the domain 'Music and performing arts', which is modified to 'Music, performing and visual arts'.

Table 19: Definition and categorisation of the creative industries

CULTURAL PRODUCTION	
Film, TV and Radio	
5500	Motion picture and sound recording activities
5510	Motion picture and video activities
5511	Motion picture and video production
5514	Post-production services and other motion picture and video activities
5600	Broadcasting (except internet)
5610	Radio broadcasting
5620	Television broadcasting
5621	Free-to-air television broadcasting
5622	Cable and other subscription broadcasting
Publishing	
1612	Printing support services
5400	Publishing (except internet and music publishing)
5410	Newspaper, periodical, book and directory publishing
5411	Newspaper publishing
5412	Magazine and other periodical publishing
5413	Book publishing

5419	Other publishing (except Software, Music and Internet)
6020	Other information services
Libraries, archives and museums	
6010	Libraries and archives
8910	Museum operation
Music, performing and visual arts	
2591	Jewellery and silverware manufacturing
5520	Sound recording and music publishing
5521	Music publishing
5522	Music and other sound recording activities
9000	Creative and performing arts activities
9001	Performing arts operation
9002	Creative artists, musicians, writers and performers
9003	Performing arts venue operation
R000	Arts and recreation services, nfd
CREATIVE SERVICES	
Advertising and marketing	
6940	Advertising services
Architecture and design	
6921	Architectural services
6924	Other specialised design services
6991	Professional photographic services
Software and digital content	
5700	Internet publishing and broadcasting
5420	Software publishing
5900	Internet service providers, web search portals and data processing services
5921	Data processing and web hosting services
7000	Computer system design and related services
J000	Information media and telecommunications, nfds

9.2 Estimation approach: employment

The creative industries definition picks out the industries that are creative, selected at the most detailed possible level of the ANZSIC classification system, the fourth level. However, not all published data on industries is broken down to the fourth level – often data goes only to the first or second level. This means that figures for the creative industries sometimes have to be estimated.

The basis of most estimations is data from the 2016 Census. The Census is the only data source that breaks down employment figures to the fourth level of the ANZSIC codes (also called the 4-digit level).

The other main employment data source used in this report is the Labour Market Survey. This has data only at the third level of the ANZSIC codes. Figures for the 4-digit level are estimated as follows:

- For each 4-digit industry, we use Census 2016 data to see what proportion of its overarching 3-digit industry it accounts for in terms of employment.
    - For example, the 2016 Census tells us there were 537 people in WA working in the fourth-level industry classification of 'jewellery and silverware manufacture'. This industry sits

within a broader third-level grouping called 'other manufacturing', and we can calculate it accounts for 61% of employment in that broader grouping.

- We then apply this proportion to the 3-digit data in the Labour Market Survey.
    - For example, the most recent labour market data from May 2019 tells us there were 1,628 people employed in 'other manufacturing'. We then estimate there must be around 952 people employed in 'jewellery and silverware manufacture' (calculated as 61% of 1,628).

9.3 Estimation approach: Industry Value Added

Industry Value Added figures for WA have been estimated in this report. Estimation is required because no data source has information on both IVA at the 4 digit ANZSIC level and at the state level:

- The ABS publish state-level IVA figures only at the 1-digit ANZSIC code level.
- The ABS publish national IVA figures only at the 2-digit ANZSIC code level.
- IBIS estimate IVA for many industries at the 4-digit level, but only at the national level.

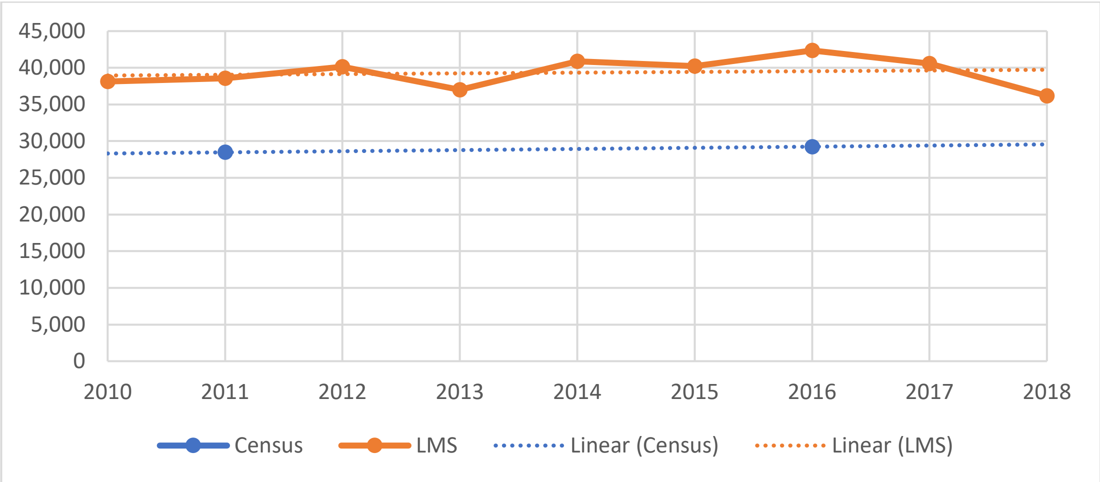
The steps are as follows:

- For each 4-digit industry, we calculate how much of the national employment level is accounted for by employment in WA. (This is done using the estimated Labour Market Survey data described above).
- We then estimate WA's proportion of national IVA as being equal to their proportion of employment.

9.4 Volatility in Labour Market Survey data for Western Australian creative industries

Creative industries employment in WA, when analysed using data from the Labour Market Survey, appears to be quite volatile. It is possible this is an artefact from how the LMS data is gathered and doesn't reflect genuine trends. To look at this question, we analysed whether LMS data over time has broadly reflected trends in the Census.

Figure 16: WA creative industries employment – comparing Census to Labour Market Survey trends



Sources: ABS Census 2016 and Census 2011; ABS Labour Force, Detailed, Quarterly, May 2019; BYP estimates.

Figure 15 compares LMS and Census data for Western Australian creative industries employment. Points to note:

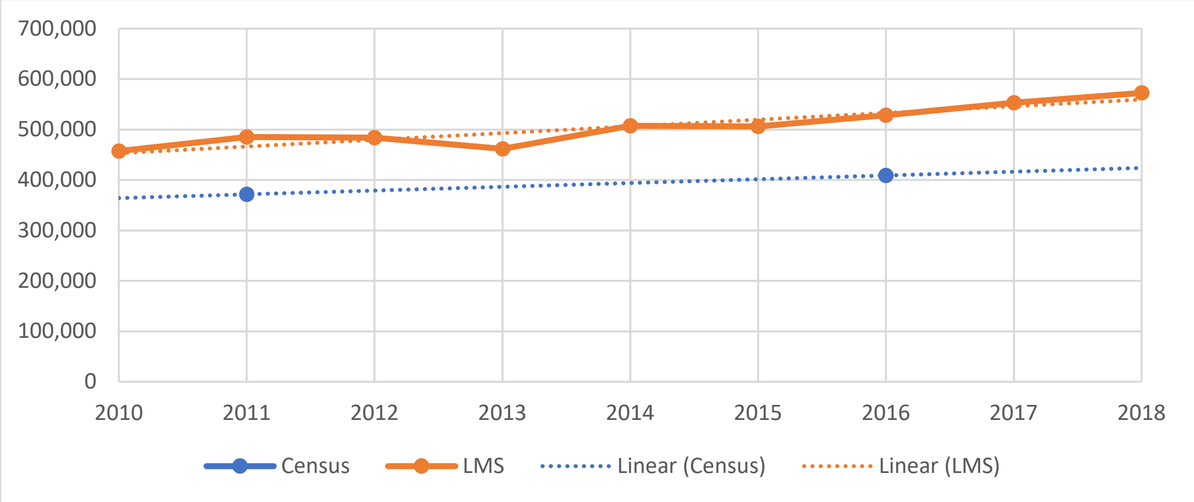
- The linear trend lines for both datasets follow a broadly similar trajectory.
- The 2016 figure from the LMS is notably higher than the trend according to either data set.
    - According to the Census, creative industries employment increased 3% from 2011 to 2016; but according to the LMS it increased 10%.
    - In 2011, the LMS figure for employment was 36% higher than the Census figure; while in 2016 it is 45% higher.

Based on the patterns in figure 1, it appears that the LMS is simply a noisier or more volatile data source than the Census, and that both data sets suggest a similar overall trend.

Figure 16 below looks at data for Australia as a whole. It shows that on a national level LMS data tends to be more stable around its own linear trend line:

- According to the Census, creative industries employment increased 10 % from 2011 to 2016; and the LMS figure is fairly close to this at 9%.
- In 2011, the LMS figure for employment was 31% higher than the Census figure; and in 2016 it is a very similar 29% higher.

Figure 17: Australia creative industries employment – comparing Census to Labour Market Survey trends



Sources: ABS Census 2016 and Census 2011; ABS Labour Force, Detailed, Quarterly, May 2019; BYP estimates.

Based on this analysis, we decided to use rolling two-year averages for the LMS employment data. This has the effect of smoothing out some of the jumpiness in the recent LMS data for WA, while maintaining the overall trend.

This means the LMS figure for 2017 is an average of two annual figures: for 2016-17, and for 2017-18. The figure for 2018 is an average of the two annual figures for 2017-18 and 2018-19.

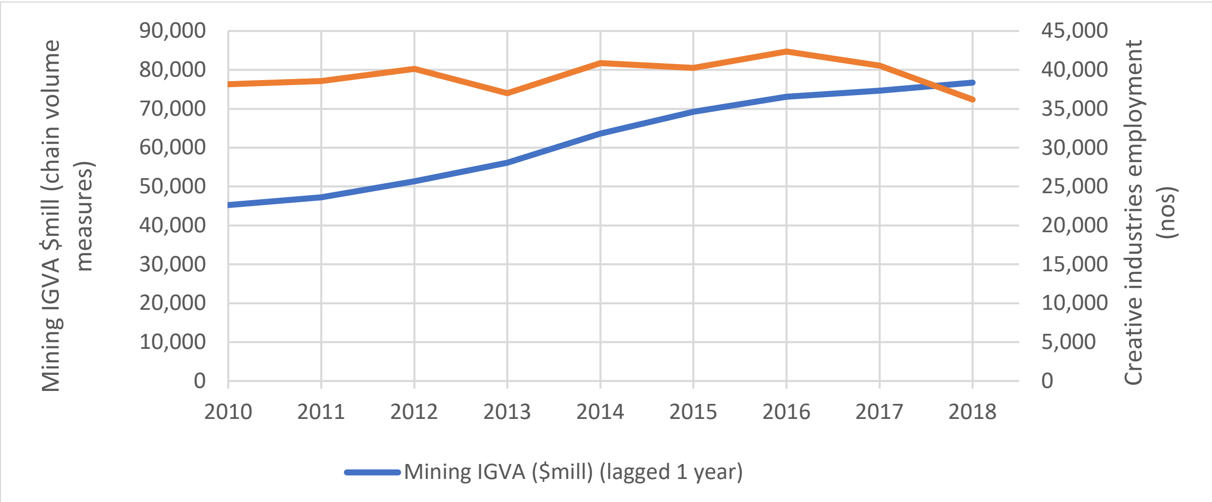
9.5 Relationship between creative industries employment and mining trends in WA

It may be that creative industries employment numbers in WA are genuinely quite volatile, either on a cyclical level or in relation to trends in mining (the dominant industry in WA in terms of Industry Value Added).

Figure 17 shows how creative industries employment trends (from the LMS) compare to Industry Gross Value Added (IGVA) in mining. The mining IGVA is lagged by a year – so the lines show the match between e.g. 2018 creative industries employment, and 2017 mining IGVA. There does not seem to be a clear correlation in their movements, though the downturn in creative employment from 2016 does occur at the point where mining growth began to slow down.

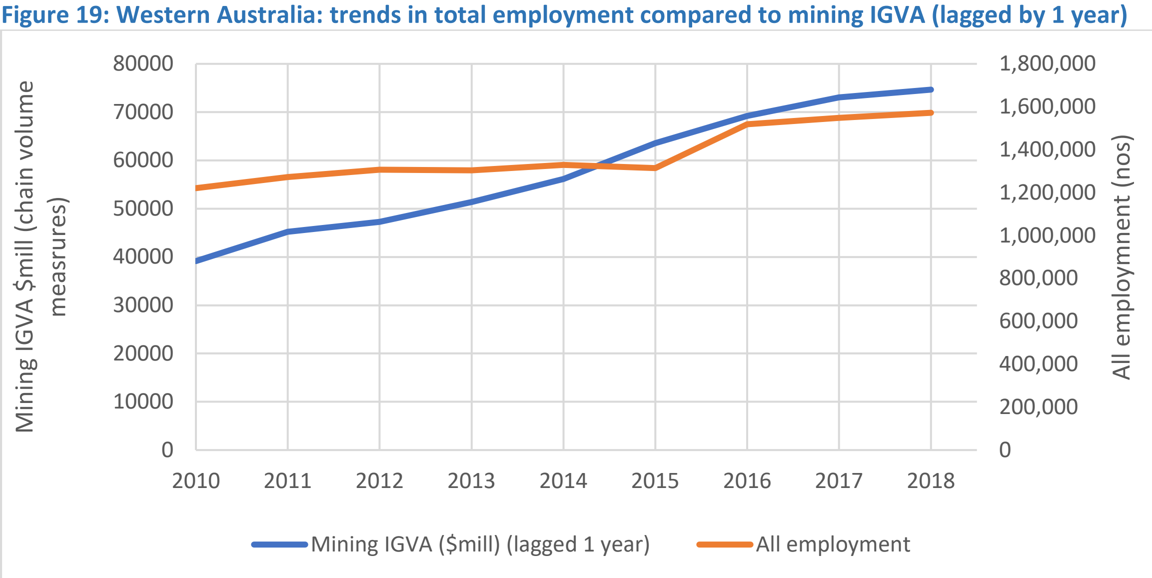
Figure 18 shows the same comparison, but for total state employment. Here there does seem to be a correlation, but only from 2015 on: annual changes in total employment are similar to those in the previous year's mining IGVA.

Figure 18: Western Australia: trends in creative industries employment compared to mining IGVA (lagged by 1 year)



Sources: Labour Force, Detailed, Quarterly, May 2019; ABS Australian national accounts: state accounts, 2017-18, for June 2018.

Figure 19: Western Australia: trends in total employment compared to mining IGVA (lagged by 1 year)



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IBISWorld Industry Report J5610: Radio broadcasting in Australia
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BYP Group is a specialist evaluation, research and strategy consulting firm in the creative industries and social impact sectors. We work in Australia and internationally. BYP Group comprises three core principals: Jackie Bailey, Hung-Yen Yang and Sarah Penhall. We also work with a network of professionals on a project needs basis.

Our clients include the USA National Performance Network, Australia Council for the Arts, Diversity Arts Australia, Create NSW, Creative Victoria, Film Victoria, Museums & Galleries NSW, Arts Centre Melbourne, The Australian Ballet, Multicultural Arts Victoria, Asialink, Deakin University, Western Sydney University, Macquarie University, Cox Inall Ridgeway, City of Sydney, Penrith City Council, Wagga Wagga City Council and others.

We are professional members of the Australian Social and Market Research Society and the Australasian Evaluation Society. We are also members of the Federal government's select research and evaluation panel, the NSW Government's prequalified supplier list, and the Ian Potter Foundation Evaluation Panel.

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