MAY 2023

ADVANCING A CREATIVE INDUSTRIES PRECINCT FOR SYDNEY

A F C AUSTRALIAN FASHION COUNCIL
UTS UNIVERSITY OF TECHNOLOGY SYDNEY
NSW GOVERNMENT TAFE NSW
NSW GOVERNMENT POWERHOUSE
Greater Cities Commission

Contents

Acknowledgement of Country

The Steering Committee acknowledges the Gadigal and Guring-gai people of the Eora Nation upon whose ancestral lands our institutions now stand. We would also like to pay respect to the Elders both past and present, acknowledging them as the traditional custodians of knowledge for these places.

Common terms and definitions

AFC - The Australian Fashion Council provides a unified voice to champion the Australian Fashion & Textile Industry

Creative industries – used throughout the report, creative industries refer to fashion, architecture, landscape architecture, interior design, film, media, animation, visual design, graphic design, brand design and design strategy.

GCC – Greater Cities Commission provides strategic oversight and coordination across government agencies and councils to implement City Plans.

Powerhouse Museum - Powerhouse Ultimo is a contemporary museum in the heart of Sydney with a focus on arts, science, innovation, and design.

Steering Committee – the key institutions (AFC, TAFE NSW, Powerhouse, UTS plus GCC) who commissioned this Baseline Report

TAFE NSW - TAFE NSW is Australia's largest vocational education and training provider based in New South Wales

Tech Central - made up of six neighbourhoods close to the centre of Sydney, Tech Central is the home of Sydney's tech economy.

UTS - University of Technology Sydney is a top-ranked young university in Australia, with the vision to be a leading public university of technology recognised for global impact.

About Astrolabe Group

Astrolabe Group are the recognised experts in urban growth and change management with a uniquely empathetic approach to client and community.

In preparing the report, Astrolabe has made every effort to ensure the information included is reliable and accurate. Astrolabe is unable to accept responsibility or liability for the use of this report by third parties.

Introduction

Tech Central – representing Surry Hills, Haymarket, Camperdown, Ultimo, South Eveleigh and Darlington North Eveleigh - has always been about creativity and invention. A hive of colour, commerce, and community with enduring links to fashion, design, and creative industries.

While Tech Central will draw from the new innovations and aspirations of technology, we have an ambition for it to be a creative hub of the city, too. A place to be inspired by the traditional fashion and design industries that have sustained the area for generations, enhanced by Sydney's world-class reputation for quality, invention, and design.

In response, the University of Technology Sydney (UTS), Powerhouse Museum, Australian Fashion Council (AFC) and TAFE NSW have formed a steering committee to create a thriving creative precinct to complement Tech Central. This work is also supported by the Greater Cities Commission (GCC), which is represented on the steering committee.

A successful creative precinct in Tech Central is within reach because the area already has a key advantage: the existing presence of creative industries. The process of sustaining the creativity of the precinct is not to change the current state, but to support and enhance it. This is critical to Tech Central ambitions of being the collision of creativity and tech. One cannot thrive without the other.

The first step has been to establish a baseline understanding of the creative industries within Tech Central. This *Baseline Report* explores the strategic context of Tech Central for creative industries and an understanding of industry activity today. It is supported by an *Executive Summary and recommendations for next steps* as a sperate companion document.

Astrolabe Group has undertaken this work and identified the key creative industry players in the precinct. Through a mixed method approach using qualitative engagement with local stakeholders and analysis of quantitative data, Astrolabe identified the existing businesses to understand how they currently operate, and to help us understand industry needs and aspirations.

With this information, we can start to see the kind of impact our ambition could have on the sole traders, start-ups, scale ups, and small and large enterprise that are already a vital component of Tech Central, and how we can help them to become leaders in technology and innovation – driving economic participation and growth across this critical sector.

This report has identified key enablers around skills, space, technology, finance, and sustainability, that with investment and effort from all stakeholders can drive innovation and productivity for our creative industries.

Section 1: Setting the scene

Key Insights

A successful creative precinct in Tech Central is within tangible reach because the area already has a key advantage: the existing and enduring presence of creative industries.

The process of sustaining the creativity of the precinct is not to change the current state but to support and enhance it.

Tech Central is a natural home for a creative precinct:

- Tech Central's mandate is to connect the brightest minds to solve our society's great challenges and create the technologies that will power the future.
- Tech Central is home to significant key institutions supporting research, technology, entrepreneurship, vocational training and workforce development and leadership for the creative industries.
- Creative Industries represent almost 10,000 businesses within Tech Central and are a connector to strong clustering of creative and manufacturing businesses in adjacent areas, particularly along the corridor to Sydney Airport.
- The home of the Australian Fashion Council, Powerhouse Museum, UTS and TAFE NSW, who as institutional key tenants, support the creative industries through research, training, access to space and expertise.

A creative precinct will accelerate key NSW Government priorities as an innovation state and leader in sustainability:

- Greater Sydney Region Plan, includes aspirations for Greater Sydney to celebrate the arts and support creativity to drive innovation.
- Transport for NSW's Tech Central Place-based Transport Strategy recognise creative industries as part of the innovation corridor with the opportunity to enhance productivity and collaboration through improved internal and external connectivity.
- NSW Circular's Strategic Plan 2020 – 23 sets out the vision for the state towards "a NSW circular economy driving jobs, economic prosperity and zero-carbon".
- Create NSW's Cultural Infrastructure Plan 2025 aims to "activate and revitalise unused or underutilised buildings and community spaces with cultural activities."

A creative precinct will drive economic growth:

- The creative and cultural economy contributes to $111.7 billion to the Australian economy every year. The fashion and textiles industry alone, represents $27.2 billion of this total.
- Creative industries account for about 8.1% of Australia's total workforce.
- The fashion and textiles industry see huge female economic participation, representing 77% of this industry workforce.

1.1 Overview

UTS, TAFE NSW, Powerhouse Museum, AFC and GCC have collaborated to advocate for a fashion and design precinct in Tech Central. This precinct will recognise the existing strength of the creative industries – almost 3,000 strong businesses and representing 20,742 workers in the area and the contributions they can make to an innovation ecosystem driving technology.

This report aims to understand the current creative industries ecosystem within Tech Central. This gives us a baseline understanding of the precinct and captures some of the aspirations of key tenants, industry, and students in creative disciplines.[1]

1.1.1 Area focus

The area defined as Tech Central has deep roots of activity relating to fashion and design industries along with strong institutional tenants that support innovation in the sector and workforce development.

The mission of Tech Central is technology innovation aligned to future innovation in industries that have been part of this landscape for generations.

Our creative industries are an integral component to supporting the vision of Tech Central in technology innovation, and they need to be supported, sustained, and accelerated.

Tech Central – representing Surry Hills, Haymarket, Camperdown, Ultimo, South Eveleigh and Darlington North Eveleigh is already home to some of Australia's most exciting start-ups and innovative institutions - it has always been about connection, creativity, and invention.

By 2023, the NSW Government will have catalysed this innovation ecosystem – Tech Central – connecting organisations to create a globally renowned community that pulses with inspiration and draws top talent from across the world to do their best work.

[1] See **Error! Reference source not found.** A note on methodology and terminology for creative disciplines within the scope of this study.

There are clear clusters of activity across Tech Central allowing for the pollination of ideas and transdisciplinary approaches to technology and innovation in both education and industry.

The creative industries, which this report gives context to, is amongst other clustered activity including health, education and research and digital industries. While we note that manufacturing and wholesale trade has declined, there remains a sustained cluster activity from the creative industries cluster through to Sydney Airport.

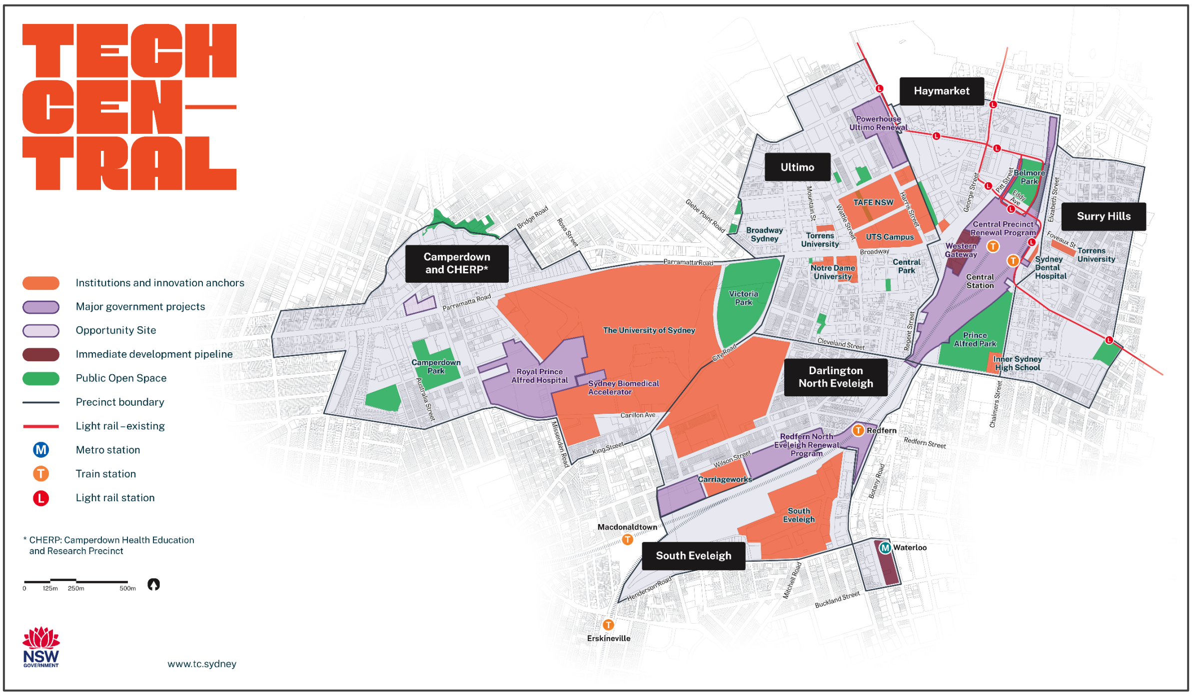

Image 1: Tech Central with key institutions and connections. Source: Greater Cities Commission.

1.1.2 Sector focus

The fashion and design industries share similar creative mindsets, spaces, and practices. Fashion is a discipline of design; design is a core facet of fashion. Creative industries often learn from and collaborate with each other.

To collect baseline data for this project, we use a definition of the fashion and design industries based on our research and engagement about the interrelated creative disciplines enabled by the area's core key institutions.

We recognise that design disciplines operate in a transdisciplinary setting - no longer separate parts of an interconnected system, but part of the system itself. Fashion and design link to disciplines such as to architecture, engineering, and medicine; they facilitate emerging technologies and methodologies that are shaping the future of innovation.

In order to develop a true, innovation economy, all disciplines must coexist in a place that enables genuine connections and mutually beneficial outcomes.

This report collectively refers to the following focus areas as *creative industries* throughout: fashion, architecture, landscape architecture, interior design, film, media, animation, visual design, graphic design, brand design and design strategy.

1.2 Methodology

We used mixed method research including data analysis, desktop research; student and business surveys; targeted interviews with education, industry, and business stakeholders; and external case study reviews.

Appendix A lists our sources and details the methodology.

1.2.1 Limitations

A qualitative engagement process used a select sample of industries operating within Tech Central that was sourced from recommendations from the Steering Committee and knowledge of industry by the Astrolabe project team.

This is not intended to be wholly representative of the sectors. In seeking insights from a cross-section of the creative industries, we invited stakeholders to participate via survey and interview. There was stronger representation and willingness to engage from some industries (including fashion) more than others (including graphic design, architecture). Engagement enabled initial insights of operating activity and future aspirations.

Quantitative data included Census data from 2021, Australian Business Register (ABR) data from 2022 and the City of Sydney's floor space audit data from 2017.

This study did not analyse the value contribution of the creative industries in Tech Central to GDP due to the size of the study area and limitations in data. Further, this study did not seek to understand the exports or wholesale sales of brands.

1.2.2 Report structure

Three areas help to position the current baseline state of creative industries within Tech Central:

Part 1: Setting the scene (this section) outlines our approach and details the place and strategic context of creative industries in the precinct.

Part 2: Baseline findings provide a thematic analysis of engagement and research.

Part 3: Future considerations provide insights based on engagement that could realise a fashion, textile and design precinct based on stakeholder insights and data analysis.

1.3 The creative catalyst

Leveraging creative industries and key institutions provides the creative catalyst to build a Fashion and Design Precinct that will enhance our creative industries developing world class technology, innovation, and sustainable practice.

1.3.1 Changing practice in creative industries

Global trends and consumer behaviours are driving a need for sustainable and thriving creative industries. Within Tech Central we have a strong creative catalyst through the area's history as a creative hub, which has the key cultural and education institutions enabling a confluence of several core moves to drive collaboration and innovation focused specifically on supporting changing needs of creative industries:

- **Tech Central:** A NSW Government investment to develop and attract business to the six neighbourhoods in Sydney that are already home to some of Australia's most exciting start-ups and innovative institutions.
- **Powerhouse Ultimo:** The $480 - $500 million NSW Government investment to renew Powerhouse Ultimo, improve connections to surrounding precincts2 and create an Ultimo Creative Industries Precinct.
- **Centre of Excellence in Sustainable Fashion and Textiles:** A UTS and TAFE NSW partnership3 that will move the precinct and industry towards sustainable, cutting-edge design technology and the onshoring of some production.
- **UTS and Powerhouse partnership:** Aimed at creating a dynamic, place-based creative industries ecosystem to expand the profile of Australian fashion, textiles, and design on the national and global stage.4
- **FashTech Lab:** An AFC program, supported by the City of Sydney and UTS, to help fashion businesses adopt 3D design technology.5
- **National Product Stewardship scheme:** A first for Australia, led by the AFC with a consortium of education institutions and innovators to transform the design industry's human and environmental impact.6

1.3.2 Concentrated resources for the creative industries

Sydney's creative energy is dispersed across its sprawling geography. While we see pockets of creative industries, there is no central location for creative industries to actively collaborate, innovate and cross-pollinate ideas, technology, and skills.

The ambition for a fashion and design precinct draws from legacies that have shaped the activity within Tech Central, from the creative industries trade that currently sees almost 10,000 businesses

[2] https://www.maas.museum/powerhouse-renewal/
[3] https://www.uts.edu.au/news/tech-design/uts-and-tafe-nsw-unite-sustainable-fashion-future ; https://www.uts.edu.au/about/faculty-design-architecture-and-building/design/research/centre-excellence-sustainable-fashion-textiles
[4] https://www.uts.edu.au/news/tech-design/design-purpose
[5] https://ausfashioncouncil.com/program/afc-fashtech-lab-2022/
[6] https://ausfashioncouncil.com/product-stewardship/

in place, to the commercial institutions that brought fashion and design to the masses, and the continual knowledge transfer offered by institutions such as UTS and TAFE NSW.

This concentrated location of creative industries and institutions presented the opportunity to ensure this area remains a place for fashion and design to innovate and grow, and to positively influence the growing tech presence in the precinct as Tech Central also establishes its presence.

The steering committee made up of key tenants, will be central to driving precinct as a place that encourages collaboration, driven by technology, creativity, and innovation. As leading institutions, all make specific contributions to creative industries and can be the leaders in coordinating and collaborating with other stakeholders – including government – that will be required to build a precinct.

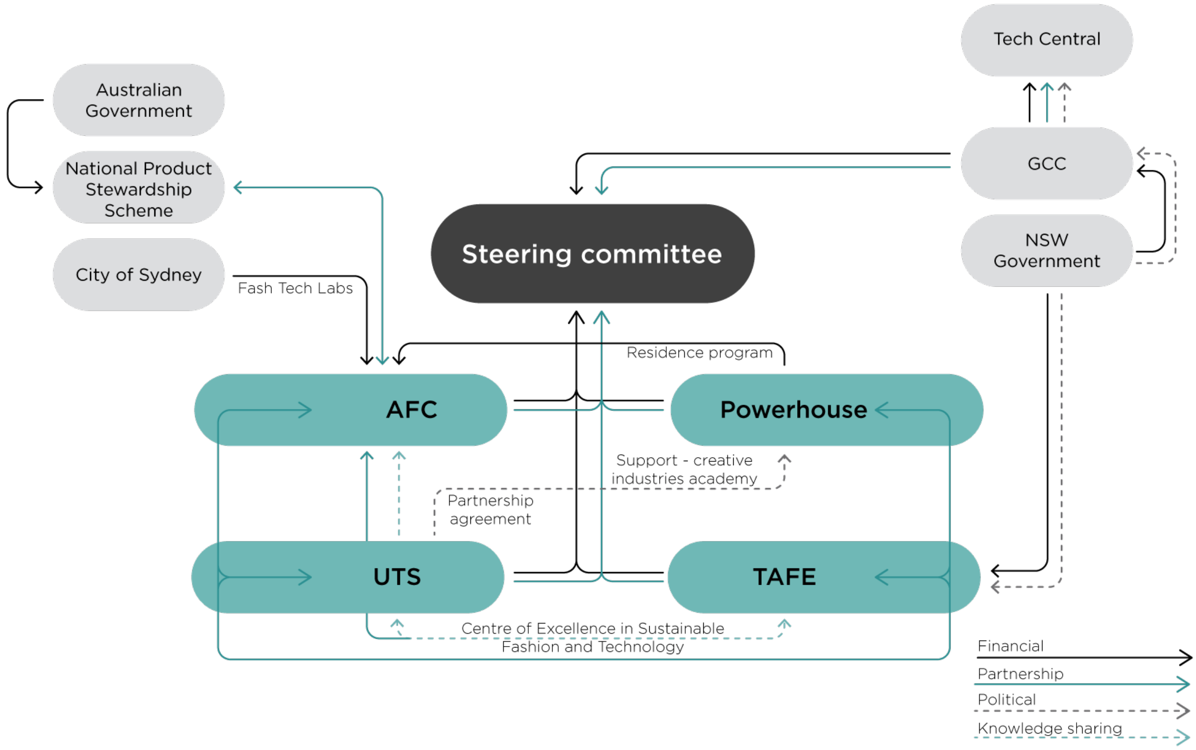

Image 3: Conceptual disagram of the Steering Committee value creating system

1.3.3 Going global

The fashion and design precinct will create a space in Tech Central that encourages diverse businesses and industries to interact with each other. Siloed and fragmented creative industries are less able to attract investors and communicate their inherent value. For example, design and technology are often considered separate industries that collaborate only occasionally; a creative precinct would allow both fields to benefit from ongoing collaboration.

A fashion and design precinct will open opportunities to recognise Australian creatives, designers, and innovators on a global scale. By building up the connections between brands and organisations, it would attract investors and key global players, allowing the precinct to evolve naturally and sustainably. This will have flow-on effects for countless other industries that would benefit from an internationally renowned creative district.

1.4 Strategic opportunities

Many industries are grappling with recent shocks, most notably the COVID-19 pandemic. For the creative industries, Sydney's inner city once burgeoning streets became ghost towns. The return to these spaces has been slow, and with an arts sector still recovering, weeknights and weekends remain quiet. Businesses burnt by lockdowns and quiet city streets are hesitant to return.

CEO of the Australian Council for the Arts, Adrian Colette puts the case for supporting the creative industries as vital to the rebuilding of city economic development following the challenges of recent years and to supporting ongoing productivity:

> ***Arts, culture and creativity can provide a vital nucleus of ideas and intellectual property, supporting skills development and generating growth. The creative sector will be vital to our future productivity.***[7]

Enabling this re-emergence of culture and creativity in the city, and across the economy, requires governments to acknowledge the importance of the arts by carving out spaces for the diverse sector and its interactions with broader industry. As Collette states, "[c]reativity is generative, it is adaptive, and it sparks new possibilities. It is not tied to one industry or form of practice, but it needs fertile ground to flourish."

1.4.1 Government's strategic priorities

The strategic case for investing in the creative industries in Tech Central is aligned to the NSW Government's strategic place-based and key industry priorities:

- Greater Sydney Region Plan, includes aspirations for Greater Sydney to celebrate the arts and support creativity to drive innovation"8
- Transport for NSW's Tech Central Place-based Transport Strategy recognise creative industries as part of the innovation corridor with opportunity to enhance productivity and collaboration through improved internal and external connectivity9
- NSW Circular's Strategic Plan 2020 – 23 sets out the vision for the state towards "a NSW circular economy driving jobs, economic prosperity and zero-carbon"10
- Create NSW's *Cultural Infrastructure Plan 2025* aims to "activate and revitalise unused or underutilised buildings and community spaces with cultural activities."[11]

Investing in creative industries is equally recognised by the Australian Government, which is currently developing a new National Cultural Policy for the next decade.

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[7] Adrian Collette (Australian Council for the Arts), August 31 2022, "Creative skills in times of crisis: how the arts can help"
[8] P. 5
[9] P. 24, 26
[10] NSW Circular, 2020, *NSW Circular Strategic Plan FY2020-2023*
[11] P. 4

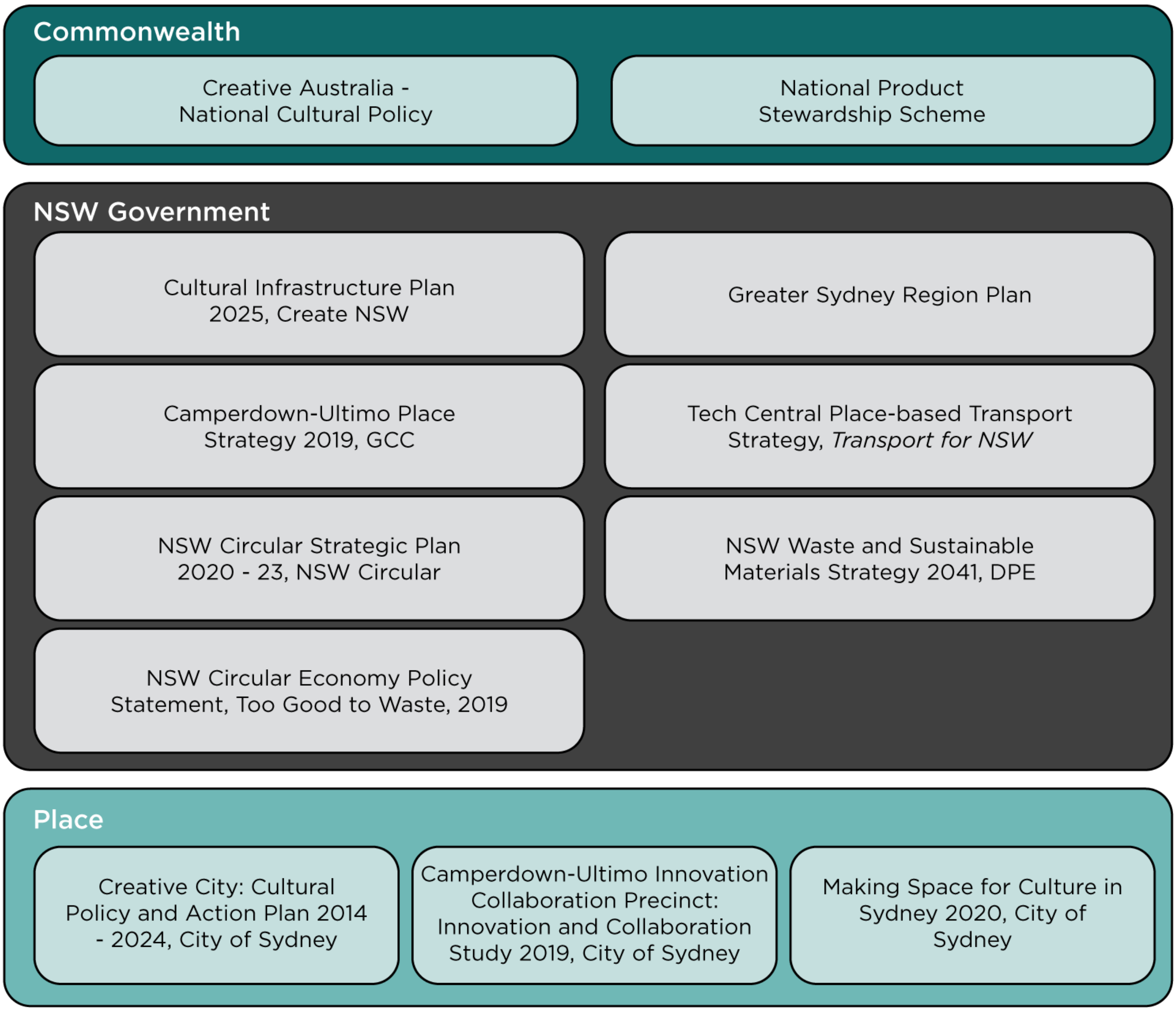

Image 4: Overview hiearchy of key of strategic place setting documents

1.4.2 Alignment to government initiatives

The table below offers insights into current initiatives being undertaken by government and partners.

Agency	Initiative	Description
Australian Government Business	Entrepreneurs' Programme	Working in business transformation this service gives business access to expert advice and financial support through grants to help progress your goals.
InvestmentNSW	Tech Central Scale Up Accommodation Rebate	Helping technology businesses in the scaleup phase of growth establish in Tech Central by providing a 40% rebate on eligible rental costs and 30% rebate on eligible fit out costs.
Greater Cities Commission	Retention of industrial and urban services land	The retention, growth and enhancement of industrial and urban services land should reflect the needs of each of Greater Sydney's three cities, and their local context. It should provide land for a wide range of businesses that support the city's productivity and integrated economy.
Environmental Protection Agency	Waste Levy and associated programs	One of the NSW Government's key priority actions is to increase recycling to limit the need for new landfills, reduce landfill disposal and turn waste into valuable resources. The Government has a range of policies in place to increase recycling and divert valuable resources from landfill back into the economy. The key economic instrument for greater waste avoidance and resource recovery is the waste levy. The Circular Textiles Network is an interconnected loop to ensure no-one has to send any textiles to landfill, provided by the EPA through the levy.
City of Sydney	Heritage Floor Space scheme	The scheme provides for owners of eligible heritage-listed buildings to be awarded heritage floor space after preparing a conservation management plan and completing agreed conservation works. The awarded heritage floor space, or HFS, can then be sold to a site that requires it as part of an approved development application. The money raised offsets the cost of conserving the heritage item.

1.5 Rationale for creative industries

Economies and how we do work is changing. Nowhere is this more evident than the creative industries, which have several consistent macro industry trends that demand a reimagining of the technology, materials and skills required for thriving industries that contribute to our cultural fabric and economic development.

We have identified the following as influential macro trends impacting creative industries:

- innovation precincts for productivity and collaboration
- labour and workforce development
- sustainable practice and climate action
- economic uncertainty and shifting priorities for land use

1.5.1 Boosting productivity through innovation precincts

Leveraging creative industries and key institutions provides the creative catalyst to build a Precinct that will enhance capabilities in developing world class technology, innovation, and sustainable practice.

There has been a proliferation of innovation precincts around the world since the 1990s[12]. An innovation precinct is not just the coinciding of like companies locating in the same area, it is an area with an intensity and scale known for its collaboration, productivity and positioning that puts it, and its brand, on the world stage. Innovation and design hubs are found in major metropolitan cities worldwide. They are celebrated and invested in, in global cities such as New York in the Garment District, and London's East London Fashion Hub. New and emerging creatives can adapt to changing industry practices and help to develop and champion technology and innovation.

Tech Central will create competition for space and talent. It can leverage the agglomeration of creative industries with deep and emerging roots, while attracting new talent and new businesses to collaborate with new and old technologies. This will improve ways of doing business, supply chains and the ability to access new markets.

1.5.2 A leading contributor to the economy and workforce participation

Design industries are built into almost every aspect of the Australian economy, not just in design specific disciplines. The creative and cultural economy contributes $111.7 billion to the Australian economy every year – about 6.4% of total output. The creative and cultural workforce of creatives, including those who work in non-creative industries, is at about 8.1% of Australia's total workforce (868,098 people).[13]

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[12] https://www.investment.nsw.gov.au/assets/Uploads/files/IPC/Full-Report-IPC-NSW-Innovation-Precincts-2018.pdf

[13] Australia's Cultural and Creative Economy: a 21st century guide, Jodie Trembath and Kate Fielding, 28th October 2020, A New Approach, retrieved from https://apo.org.au/node/309153

Within the fashion and textiles industry alone, this represents $27.2 billion to Australia's economy, generating more exports than wine and beer and employing more than 489,000 workers, including over 376,000 women, who represent 77% of this industry workforce.[14]

The COVID-19 pandemic and worldwide border closures is having a flow-on effect of skill shortages across the world. For Australia, this impacts most industries. The UNESCO report *Reshaping Policies for Creativity* found the shutdown of creative industry outlets made the sector particularly vulnerable. In emphasising the significance of creative industries across various global economies, the report noted the lack of labour protection for workers in this sector would threaten its economic contribution.[15]

1.5.3 Sustainability and climate action

The fashion and design industries need to balance how businesses can practice and produce in a way that is environmentally and socially sustainable while also meeting the demands of consumers and remaining profitable.

Reports identify the fashion and textiles industry as one of the largest contributors to global chemical pollution, CO2 emissions and waste. A report from Niinimäki et al.[16] attributes 92 million tonnes of waste per year and 79 trillion litres of water consumed to the fast-fashion industry.

Opportunities to transform the industry are in the hands of the creative industries due to their innovative and transdisciplinary qualities. Examples of this are already evident. The National Clothing Product Stewardship Scheme, led by the AFC, is a consortium aiming "to improve the design, recovery, reuse and recycling of textiles, providing a roadmap to 2030 for clothing circularity in Australia in line with National Waste Policy Action Plan Targets"[17]. In addition, UTS and TAFE NSW have partnered to establish a new Centre of Excellence in Sustainable Fashion and Textiles, an education and research centre to upskill industry for sustainability and technology, and test new sustainable methods of producing textiles and garments.

1.5.4 Economic uncertainty and shifting priorities for land use

The economic uncertainty, market shocks, social and political upheaval of the 21st century, including the COVID-19 pandemic, have shaken how businesses operate and the integrity and stability of accessing goods produced and manufactured offshore.

Coupled with economic uncertainty, over the last 10 or more years, Sydney has lost a considerable amount of industrial land to residential uses. For creative industries, this means appropriate space is at threat of rezoning and redevelopment for residential or commercial ventures.

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[14] Fashion Evolution: From Farm to Industry Accelerating the economic impact of a sector powered by women Australian Fashion Council, 9 May 2022, retrieved from https://ausfashioncouncil.com/wp-content/uploads/2022/06/2022-Industry-Modelling-Report.pdf

[15] https://www.theguardian.com/culture/2022/feb/08/unesco-warns-of-crisis-in-creative-sector-with-10m-jobs-lost-due-to-pandemic

[16] Niinimäki, K., Peters, G., Dahlbo, H. et al., 2020, *The environmental price of fast fashion*. Nature Reviews Earth & Environment, Retrieved from https://doi.org/10.1038/s43017-020-0039-9

[17] AFC, 2022, *National Clothing Product Stewardship Scheme*

Gibson and Brennan-Horley[18] note that creative precincts struggle to attract the creative tenants needed to shape and sustain a space due to the prioritisation of residential and commercial zoning, which does not align with the infrastructure that supports creativity: low-cost space, housing affordability, and industrial zoning.

[18] Gibson & Brennan-Horley, 2020, *Beyond the buzz: locating critical geographies of creativity,* In Handbook on the Geographies of Creativity. Edward Elgar Publishing. Retrieved from https://doi.org/10.4337/9781785361647

Section 2: Baseline findings

Key insights

Industry

There is a diverse and rapidly changing creative industries sector in and around the precinct. Creative industries represent 2,682 businesses.

Total floor space used by creative industry groups dropped from 47,568m^2 in 2012 to 27,252m^2 in 2017 within the City of Sydney Local Government Area (LGA).

We heard from industry that investing in graduates is critical to support the industry and retain a company's competitive edge, however, this requires significant expense for sole businesses, investment in skills and training needs to be a priority alongside the aspirations to make technology the core of the creative industries and address risks to the robustness of the industry, technology needs to enable skills growth and security in this industry, not contribute to the loss of them, shared spaces present an opportunity to leverage economies of scale to access equipment they wouldn't otherwise be able to access and use in their work.

Workforce

There has been an **overall increase** in creative industry workers and business by 6% within Tech Central between 2011 – 2021

The most notable trends were rises in architectural services, advertising services, and other specialised services, and a decline in clothing retailing and manufacturing. By gender, the creative industries in the 2021 ABS Census were 54% female and 46% male.

Most creative industry workers are between 20 and 39 years old.

The workforce is sustained largely by a local population. Around **25% of the workforce live in the precinct**; 12% commute from the Inner West LGA, 5% each from Randwick and Northern Beaches LGA.

Students

The education and development of industry skills are key values of this precinct. The current number of students enrolled in creative education at UTS is 3,170 in both Design and Architecture studies.

TAFE enrolment of students taking vocational courses in Sydney is 5,820, this includes those taking a cert II, III, IV, and Diploma level studies.

92% of students surveyed see a benefit in finding work around the areas within Tech Central, stating that accessibility and transport links, city culture, and innovation precincts are the reasons why working in this area is a preferable option.

2.1 Creative industries

2.1.1 Business in Tech Central

Our review of the Australian Business Register (ABR), ABS Census data (2011, 2016, 2021) and City of Sydney Floorspace and Employment Survey (2017), reveals a diverse and rapidly changing creative industries sector in and around the precinct.

There is a clear clustering of creative industries in the eastern part of Tech Central, surrounding Central and Surry Hills. The following map shows the spread of creative industry businesses.

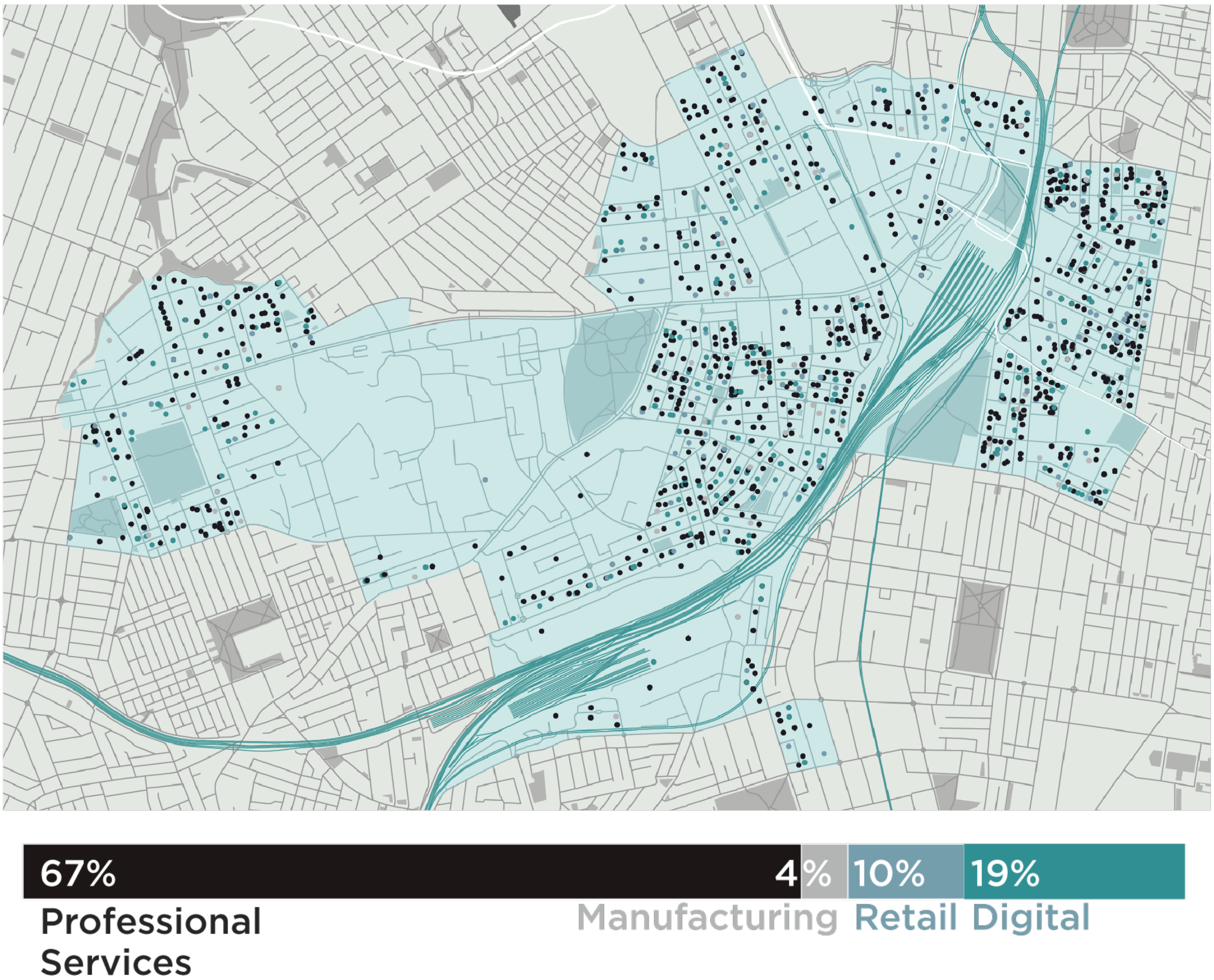


Image 5: Cluster map of creative industry businesses within Tech Central

The map represents the following creative industries activity:

Breakdown of businesses in Tech Central	
Industry	**Number of businesses**
Professional Services Including: • Advertising Services • Architectural Services • Other Specialist Design Services • Professional Photographic Services	1,793
Manufacturing Including: • Clothing manufacturing businesses • Cut and Sewn Textile Product manufacturing services • Footwear Manufacturing production businesses • Jewellery and silverware manufacturing businesses • Leather tanning, fur dressing and leather product manufacturing businesses • Other Ceramic Product Manufacturing businesses • Textile Finishing and Other Textile Product manufacturing businesses • Wooden Furniture and Upholstered Seat manufacturing businesses	115
Retail Including: • Clothing and Footwear Retailing businesses • Manchester and Other Textile Goods Retailing businesses	271
Digital Services Including: • Motion Picture and Video Production businesses • Post-Production Services and Other Motion Picture and Video Activities businesses • Reproduction of Recorded Media businesses	503
Total	**2,682**

The area now known as Tech Central has historically had strong economic activity with fashion, design, and manufacturing. As the diversity of creative industries has shifted within the area with new business types moving in, connections to this economic activity remains with a clustering of almost 10,000 businesses in the city to airport corridor, and across the Local Government Areas of the City of Sydney, Inner West and Bayside.

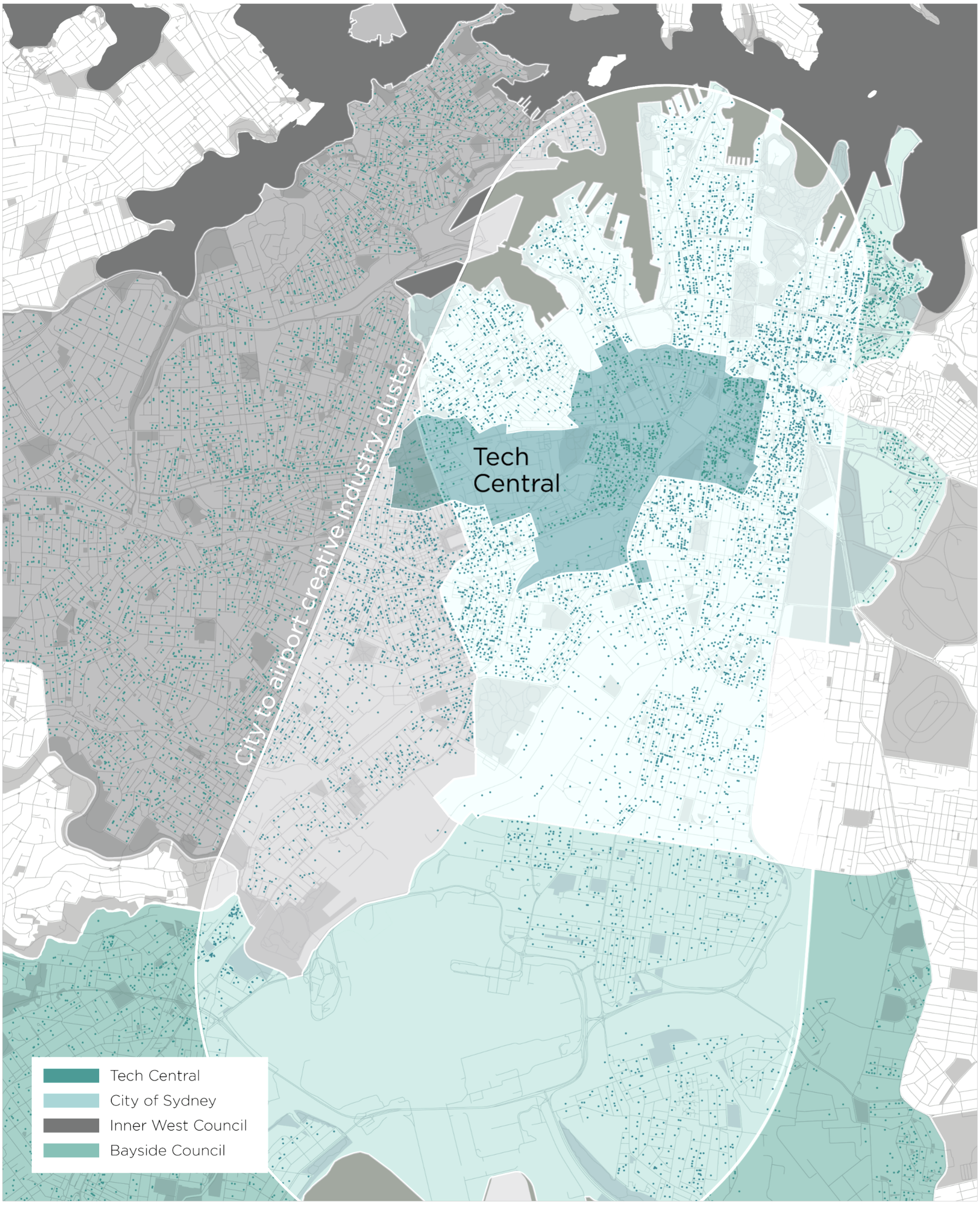


Image 6: All registered creative industries businesses within Tech Central and surrounding areas (source: analysis Astrolabe Group, data non-public ABR 2022)

2.1.2 New business establishing at Tech Central

Using the City of Sydney's floor space audit, we can see there has been a slight decline in creative industries businesses established between 2007 – 2017 in Chinatown and CBD south (a change in 20 businesses or a decline of 1.3%). Creative industries businesses have seen growth in new establishments in other areas, most notably Crown and Baptist Streets and Redfern Street, where part of their geography is within Tech Central. [19]

Total floor space used by some creative industry groups dropped from 47,568m^2 in 2012 to 27,252m^2 in 2017[20].

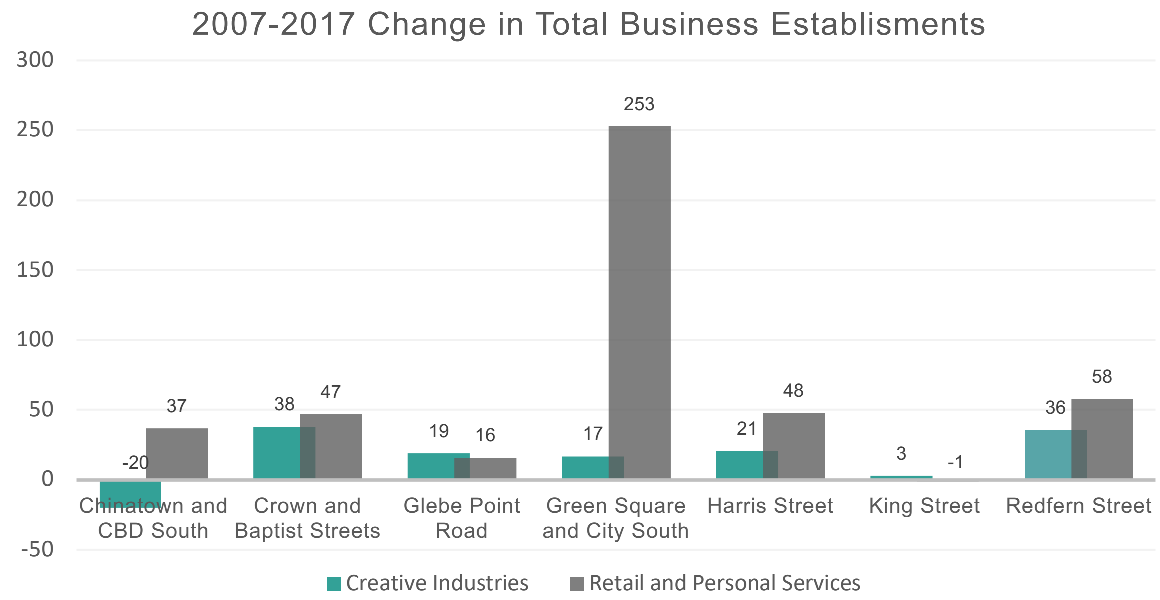
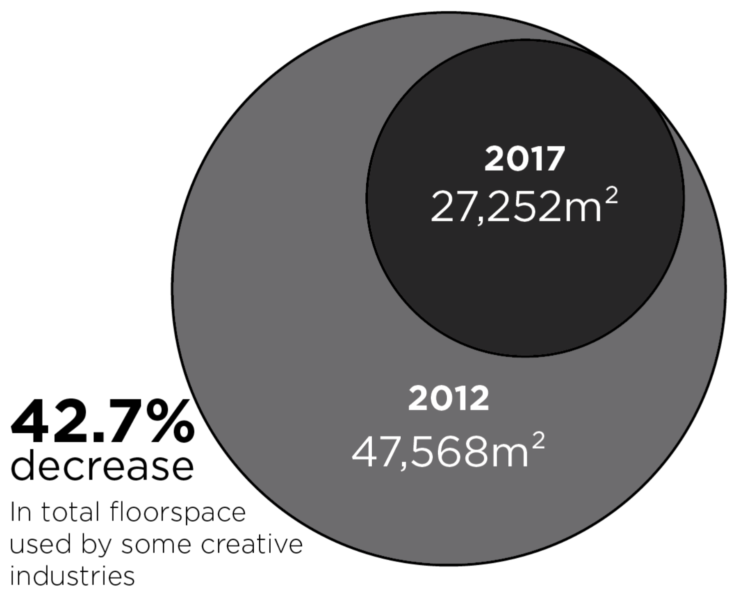


Figure 1:. Change in total business establishments by city-based industry sector by village (Source: analysis Astrolabe Group, data City of Sydney Floorspace and Employment Survey (2017)

Image 7: Decreasing floor space used by creative industries in the project geography (Source: City of Sydney, 2017).



[19] City of Sydney Employment and Floorspace Survey, analysis 2007, 2012 and 2017
[20] Ibid 12

2.2 Creative Industry workforce

There has been an overall increase in workers and business activity in the project geography between 2011 – 2021. There was a 6% total increase in the creative industries workforce between 2016 and 2021 in the area.

A comparison with Brisbane CBD, which experienced a 1% increase, over the same period revealed a similar pattern of rises and falls across creative industries. The most notable trends were the rise in architectural services, advertising services, and other specialised design services, and a decline in clothing retailing and manufacturing.

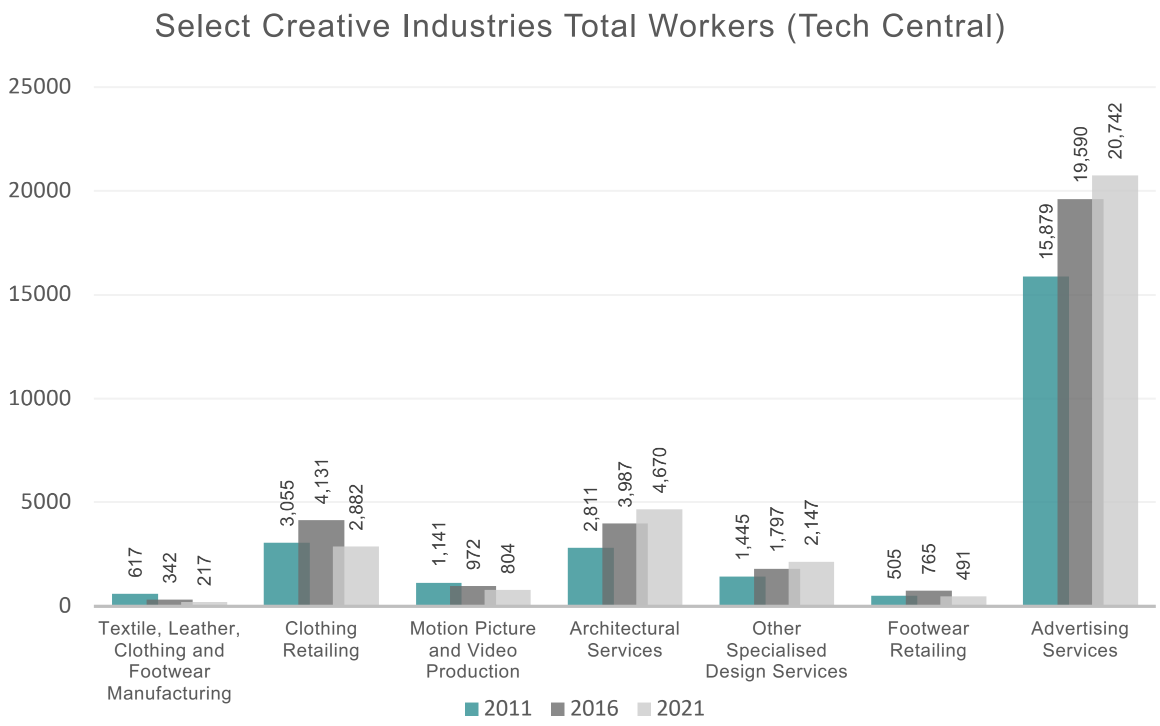


Figure 2. Creative industries total workers in Tech Central between 2011 – 2021. (Source: analysis by Astrolabe Group, data sourced from ABS census data 2011, 2016 and 2021)

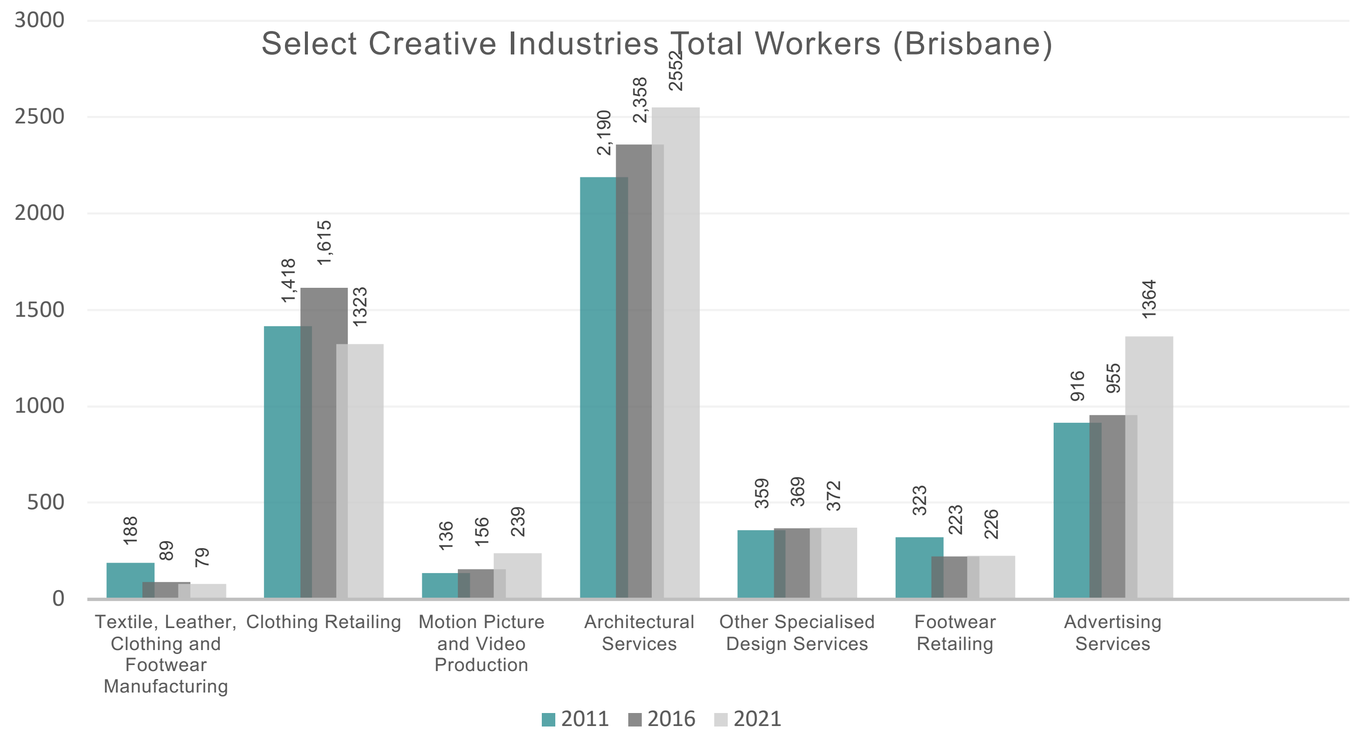


Figure 3. Creative industries Brisbane CBD 2011 – 2021 (Source: analysis by Astrolabe Group, data sourced from ABS census data 2011, 2016 and 2021)

2.2.1 Workforce profile

Workforce participation

There are 20,742 creative industry workers located in the precinct, this comprises 4.4% of the total workforce of the precinct.

A total decline in workers between 2016 and 2021 is represented across:

- 30% (1,249) decline in clothing retailing
- 37% (125) decline in textile, leather, clothing and footwear manufacturing
- 17% (34) decline in Jewellery and Silverware Manufacturing
- 42% (118) decline in Professional Photographic Services
- 36% (274) decline in footwear retailing

Architectural services are the biggest employer of the creative industries in the precinct, with a 4,670-strong workforce. This workforce increased by 17% between 2016 and 2021.

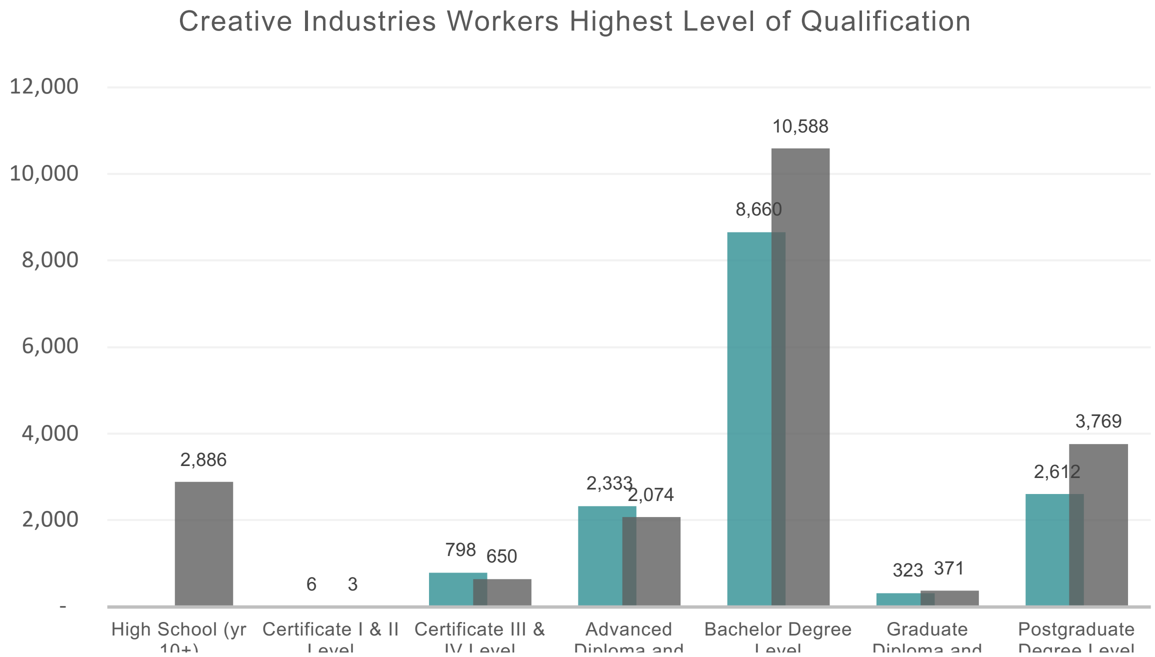
The table on the following page notes the changing workforce numbers from 2011 to 2021.

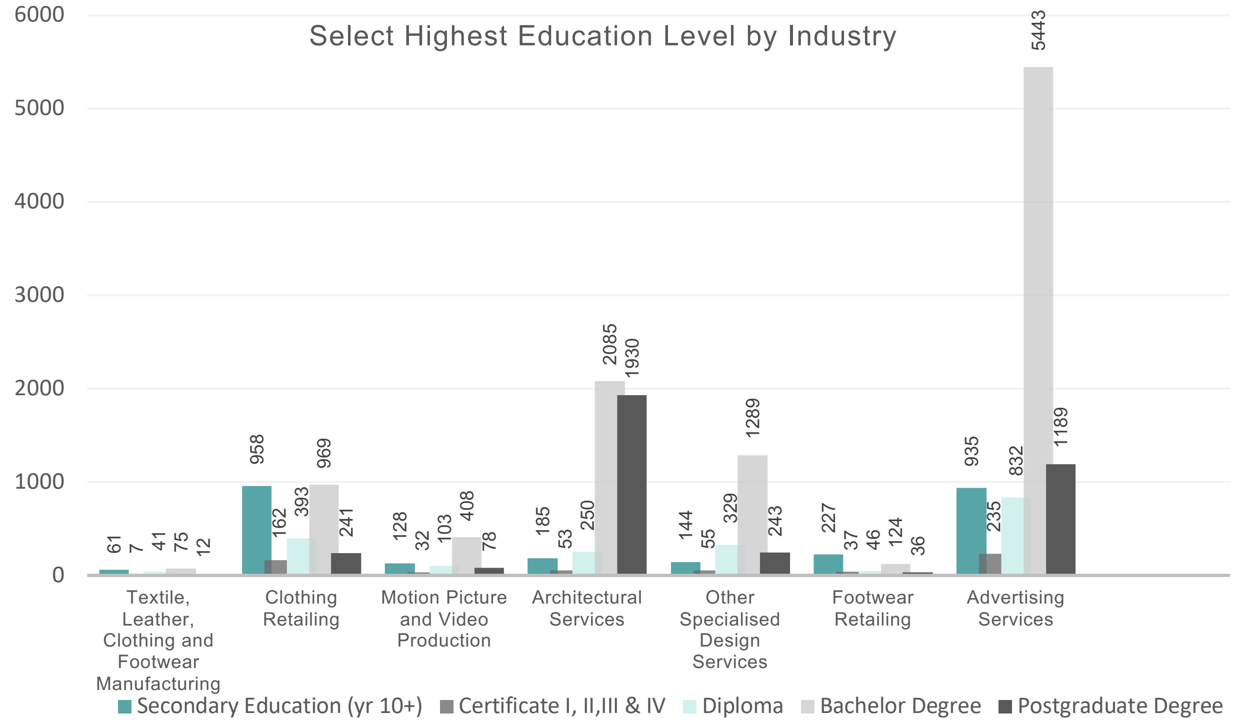
Creative industries employment changes 2011 - 2021					
Industry	**2011**	**2016**	**2021**	**Total Change (2016 – 2021)**	**Total Change (%)**
Textile, leather, clothing and footwear manufacturing	617	342	217	-125	-37%
Other ceramic product manufacturing	3	-	6	6	-
Wooden furniture and upholstered seat manufacturing	8	11	25	14	127%
Jewellery and silverware manufacturing	294	204	170	-34	-17%
Clothing retailing	3,055	4,131	2,882	-1,249	-30%
Motion picture and video production	1,141	972	804	-168	-17%
Post-production services and other motion picture and video activities	123	115	156	41	36%
Architectural services	2,811	3,987	4,670	683	17%
Other specialised design services	1,445	1,797	2,147	350	19%
Professional photographic services	268	280	162	-118	-42%
Footwear Retailing	505	765	491	-274	-36%
Advertising Services	5,609	6,986	9,012	2,026	29%
Total	15,879	19,590	20,742	1,152	6%

(Source data: ABS Census)

Qualifications

The majority (56% or 11,546) of workers in the creative industries are working in professional occupations and 60% (10,588) of all workers have obtained a bachelor's degree. The dominance of bachelor and postgraduate qualifications as the highest education attainment can be inferred as being due to the high proportion of professional services businesses in creative industries in Tech Central.





Figures 4 and 5. Creative industries workers level of qualitfication within the project geography (Source: analysis by Astrolabe Group, data from ABS census data 2011, 2016, 2021)

Gender profile

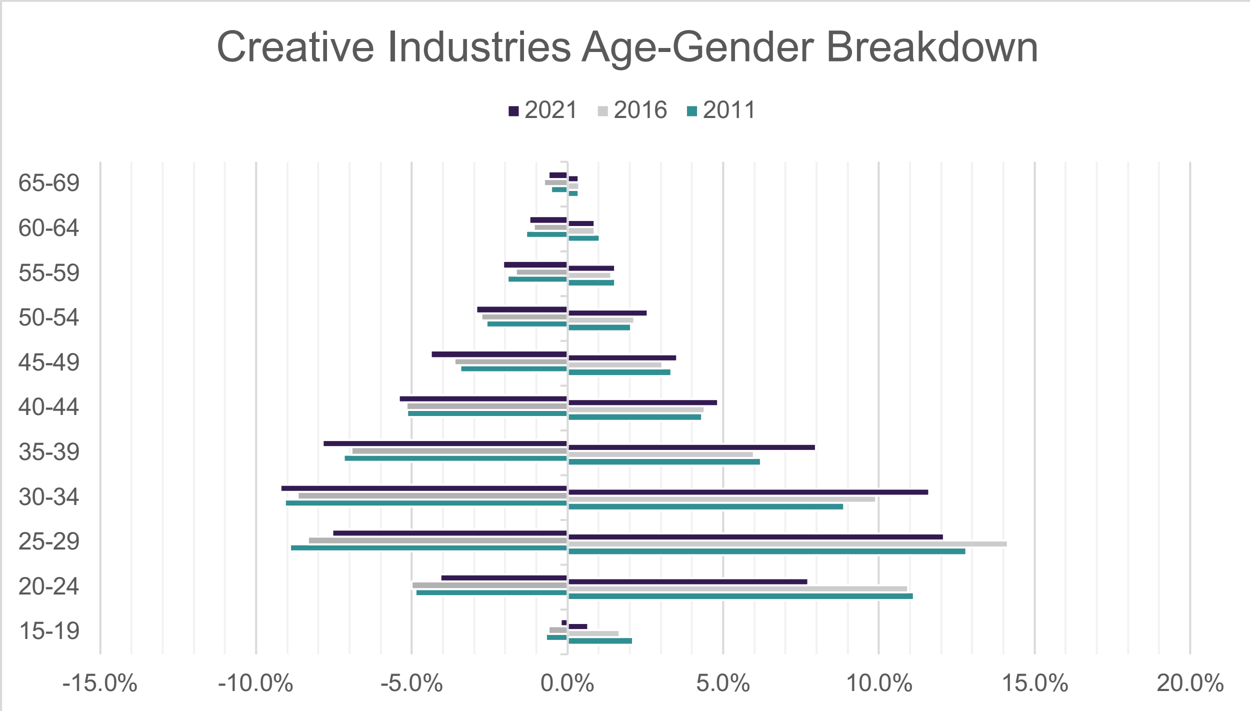


Figure 6. Age-gender breakdown of workers in creative industries in the project geography (Source: analysis by Astrolabe Group, data from ABS census data 2011, 2016, 2021)

By gender, the creative industries in the 2021 ABS Census were 54% female and 46% male. Most creative industry workers were between 20 and 39 years old.

Further research beyond the baseline would be required to understand the nuances to the age representation of workers, however, considering other baseline outputs, the following can be inferred:

- There has been a significant decrease in creative industries retail which is traditionally a high employer of younger people.
- Strong representation of professional services and highest attainment of education in Bachelor qualifications indicates workforce needs require a combined work experience and minimum education attainment for industry, which accounts for age brackets 30 years and above increasing in 2021.

Travel for work

Commuting to work indicates a significant local workforce within Tech Central in creative industries. Around 25% of the workforce live in the precinct; 12% commute from the Inner West Local Government Area (LGA), 5% each from Randwick LGA and Northern Beaches LGA; and 4% each from Waverley, Bayside and Canterbury-Bankstown LGAs.

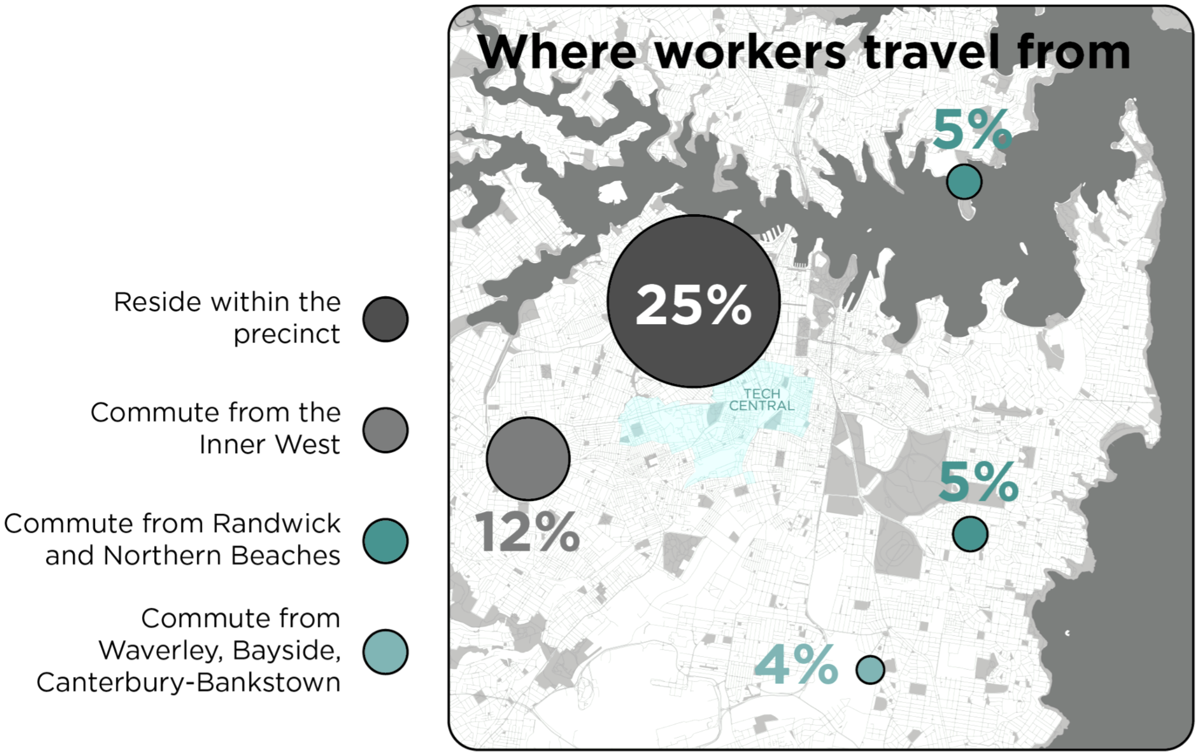


Image 8: Creative industries workers in the project geography and their place of residence (Source: data from ABS 2021)

2.3 Creative industry education and training

The Steering Committee is represented by two institutions that provide for the development of creative and design skills - TAFE NSW and UTS. The continuing investment into education and skills plays a large role in the development of the creative precinct within Tech Central.

Currently TAFE offers many different levels of education in practical skills and their current enrolment numbers could be as much as 10,000. TAFE operates throughout the state and can encompass many different types of education such as certificates, diplomas and short up-skilling courses. This means that it is hard to gauge an official enrolment number, but we do know that there are at least 5,135 students enrolled in creative arts and culture subjects, 685 students in textiles, clothing and footwear, 110 in jewellery manufacturing, and 352 in digital and interactive game development in Sydney.

As UTS operates as a single institution rather than a collection of smaller ones, their numbers were easier to understand. The total number of students enrolled in creative courses at UTS are 4,812. This includes those enrolled in undergraduate, postgraduate and research courses. The breakdown of this is that there are 1,605 students enrolled in design courses (both undergraduate and postgraduate), 1,574 students enrolled in architecture (both undergraduate and postgraduate), 1,499 enrolled in building and environment courses, 106 enrolled in research courses, and 28 in Institute for Public Policy and Governance courses.

2.3.1 Future student aspirations

Most student survey responses indicated that access to a physical space and specifically designed supports programs are essential to support innovation. Space, technology, and sustainability are all important and influential factors for students as they consider future work choices.

Slightly more than half of the students surveyed view the precinct as leading NSW and Australia in technology and innovation for the fashion and design industries. Over 90% of them said that they would prefer to work within this precinct once they have finished their studies, highlighting how valuable this space will become for the newer generations of designers and creatives in Sydney.

How students participate in work activities during study was demonstrated by 22% having some experience in being part of a start-up. Of those who have been part of start-ups, many have commented on how the experience has allowed them to gain new skills vital for their professional careers.

2.4 Insights from engagement with creative industry

2.4.1 Creative Industry types

The following provides key insights from industry engagement through interviews and surveys. Each creative industry type has at least one semi-structured interview with an industry representative as part of engagement process.

Animation, film and media

As a world-class industry, the Australian film and media industry recognises its role in investing in graduates to support the industry and its own competitive advantage. However, this requires significant expenses for a sole business that is not always feasible.

The industry requires investment and needs to communicate better what qualifications are suitable to provide access to work in the creative industries and the types of roles available. There is an opportunity for people trained in STEM (science, technology, engineering and mathematics) to understand that their skills are relevant and sought after in the creative industries and is a viable career path.

For this industry, the discourse of sustainability was more relevant to its work in supporting and futureproofing the industry through investing in skills and innovation rather than physical production of goods.

Architecture

Architects note there are “moments” of a process that allow for all stakeholders to come together, sometimes facilitated by bodies such as the Institute of Architects. There are other moments, and spaces, like building sites that organically allow for the transferal of ideas and the convergence of diverse skills and knowledge. However, these spaces are becoming fraught due to contracts and liability, making these collaborations more complex.

We heard that industry representatives see a benefit in a space for people and businesses to pitch ideas and share lessons - ultimately a place to be curious that invites people seeking a relationship not a transaction.

When it came to technology and sustainability, we heard discussions around enabling the industry to calculate carbon and the embodied energy of a building as a priority for their market. Some firms already engage in these practices and others seek further innovation and development.

Fashion

In the fashion industry, knowledge and experience of working with different materials and techniques is often held by people rather than institutions. This knowledge is accumulated through a lifetime of experience.

There is no clear process to uncover these skills and expertise – it requires people to create their own supply chains and leverage connections. Some skills are held by one or few people, notably a population who is ageing. Less people have practical and trade skills, and more are trained in concept design. This will impact productivity in the Australian context and create a risk to the robustness of the industry if this knowledge is not transferred to the next generation.

Various macro trends shape the fashion industry. For example, the COVID-19 pandemic impacted the capacity and demand for skills, as disrupted supply chains and lockdown orders affected Western Sydney, where most manufacturers are based. This was exacerbated by the nature of factory managers and workers being generational and linked to different migrant communities.

There are financial barriers to employing someone with certain skills. If the pool of skills diminishes and there is no pipeline to replace them or build the industry, technology will become redundant. Investment in skills and training needs to be a priority alongside the aspirations to make technology the core of the creative industries. Technology needs to enable skills growth and security in this industry, not contribute to the loss of them.

Design strategy and graphic, visual and brand design

The breadth of the visual design industry means there are many differing needs. Many businesses use technology and software as their main tools of the trade, which allows them to work wherever there is a computer. Physical spaces may be less important as many people work in fluid working spaces, often meeting clients in shared public spaces. There was uncertainty about how physical collaborative spaces allow for better connections and some saw little value in the concept in collaboration.

However, others viewed shared spaces as an opportunity to leverage economies of scale to access equipment they would not otherwise be able to access and use in their work. One stakeholder explained that typical co-working spaces do not work for creative design practices, which are typically catered towards start-ups, who are in a different growth phase to creative design practices, which are usually already established.

While access to technology and equipment such as 3D printing and large format printing is available through UTS, a barrier to access has been capacity, skills and finding the right time to engage with the technology. Despite this, there is a desire to engage in this type of technology. Studios frequently collaborate with other businesses that have a skillset or access to technology or software that they do not currently have in-house.

Technology and data access and storage will remain a priority for people working in design disciplines. Many want more certainty on renewable energy and will make a conscious effort towards circular practices.

Interior design

We heard there are no, or none that they are aware of, spaces for industry to come together. For some stakeholders, the space that facilitates most of this sharing is digital and social media. However, there was interest in participating in a space that would facilitate collaboration and idea sharing.

We heard a minor concern about the issue of confidentiality when sharing with similar firms, yet sensed benefits in collaborating with other industries to innovate and develop new products and practices.

Sustainability is a priority for these stakeholders. However, for many clients, the use of sustainable materials is seen as a luxury not business as usual.

Landscape architecture

Discussions indicated there is scope for skills development or upskilling, and addressing this need is limited when there is no physical space that enables collaboration for the industry to gather.

There is an appetite for more collaboration and a culture of design critique, and a call for more dialogue in this space, while balancing commercial competitiveness. The precinct is an ideal location for this industry given the high concentration of architects and landscapes architects already present, and the additional access to UTS and the University of Sydney.

Technology influences many aspects of landscape architecture. There is a commercial imperative to be innovative and embed sustainability in the whole-of-life workflow of the industry. This includes designing and delivering materials that enable adaptation and re-use. Investing in technology in-house is critical to business effectiveness and to staying up to date.

Environmental sustainability has long been a focus of the profession, which works to ensure equitable and efficient public spaces without degrading the environment and spaces.

2.5 Insights from engagement with creative industry by theme

2.5.1 Skills

What we heard about the state of skills in the creative industries aligns with current discourses about Australia's labour market and skills pipeline.

Fashion designers discussed the decline in the required practical skills needed, whereas the broader industries noted the misalignment between training and industry needs, a missing pipeline for local skills and talent, and a siloed industry struggling to attract diverse skillsets. There has been an emerging trend of students choosing fashion design rather than fashion production. This misalignment with skills and industry needs has created a drive in the industry to create new modes of producing textiles and garments that are more desirable and pay higher wages.

The fashion and textile industry were observed as being late in adopting technology and innovation due to risk aversion and antiquated business models, meaning an investment in new skills for the next generation of workers has not been prioritised.

Creative industry skills pipeline is missing, as is investment

The creative industries rely on highly skilled workers. For example, architecture and pattern makers require specialist knowledge and experience to translate a concept into a tangible object that has aesthetic form and effective function.

However, the required training to equip industry with the right skills, with a stable pipeline to sustain the industry, is diminishing. Fashion stakeholders gave us examples of the trend for students to follow career pathways as designers and less so as makers. The risk is that these career trends are creating a gap between designers who create concepts and the skills needed to produce them, as knowledge of production informs designs.

The lack of skills and a missing skills pipeline for Australia's creative industries was the forefront of many discussions with stakeholders. In the fashion industry, the message is simple: they cannot find the workforce with the skills they need. Many designers and brands still traditionally produce garments and are reliant on a small pool of manufacturers.

In addition to the diminishing pipeline of skills, investment in the creative industries was seen as missing. This impacts industry resilience and places a burden on businesses to invest time and money in producing and securing industry talent. Stakeholders did not view business as the concern, rather, the expectation that businesses are upholding the industry without private or government investment.

Businesses specialising in interior design, architecture, landscape architecture and animation describe their workforces as being adaptable and flexible. Adaptability is essential, as creative industries require workers to continuously learn and update their proficiency in software and new programs. Investment in staff and resources is a constant and sustained cost for businesses to remain relevant and competitive.

For example, one animation company had a research and development team dedicated to software development to ensure the Australian industry is on par with the global market. As such, the risk for these industries was not a loss of skillsets as a result of an ageing generation of workers, but the intensive resources needed to sustain this workforce.

The creative industries require diverse and transferable skillsets

While policy interventions may help to address skills shortages to rebuild a resilient industry, there is demand for other skillsets throughout the sector. A large population of creative industry workers have an undergraduate qualification, specifically a bachelor's degree. If we assume that the higher level of communication and analytical skills required to complete a bachelor's degree can be adapted for any field, then graduates may have the skills to apply their training (and diverse backgrounds) to a new context – the creative industries.

Our animation and fashion brand stakeholders both discussed the demand for STEM graduates in their businesses, and in turn, sectors. There is transferable knowledge of engineers and other disciplines trained in certain software used in animation and film, particularly in developing new software. A fashion stakeholder noted the valuable skillsets and knowledge of data analysts in interpreting trends from sale and inventory datasets.

With these examples of how STEM graduates may be suited to a career in the creative industries, the next step is for creative industries to effectively communicate the need for, and to attract people with these skillsets.

We heard that the priority is to invest in industries and create pathways to ensure knowledge is not lost. When we consider technology in the context of skills, the message from businesses was technology needs to enable skills growth and security not contribute to the loss of them.

2.5.2 Space

Finding industry-led and supported spaces that allow ideas and people to converge organically is becoming increasingly difficult. Spaces that connect people are commonly curated with an underlying agenda, and are expensive to hire, or ill-equipped to facilitate innovation.

We heard that the creative industries lack a space that allows people to connect and collaborate, to learn and grow, and to experiment with new technology and processes. For example, 45% of survey respondents stated there was no physical space (industry or grassroots led) that allows them to connect with other businesses or industry professionals.

A space for cross-pollination and collaboration

Our baseline survey indicated an even split between those who did or did not have access to physical or online space that allow them to collaborate with other firms. Our qualitative analysis of where these spaces are located found that there are many existing spaces, but they are curated online.

For those who identified the lack of space, most agreed a physical or online space would be beneficial to their industry. One suggested that "somewhere that allowed for informal and serendipitous interactions would be of great value" and another said "Physical space is always great. It is chance meetings, spontaneous conversation that leads to new ideas/opportunities".

Various stakeholders told us of individually led events or networks, with some formally labelling themselves as precincts.[21] However, others said they relied on informal networks that businesses and individuals have organised of their own accord, with their own connections forming the basis.

An interior design stakeholder, spoke about the value of the Chippendale Creative Precinct for highlighting the diversity of creative industries within the suburb and how this encouraged a cross pollination of ideas and talent that has benefited their business.

A major fashion stakeholder said that the industry lacks effective and practical collaboration to address challenges. A collaborative voice to overcome the skills shortage, disruptions to local supply chains, material waste or import pressures could be united, signifying the power and influence of this industry to policymakers, investors and citizens.

The cross pollination of ideas and collaboration is critical to the creative industries given the Australian industry is relatively small. Fashion and technology stakeholder said the strength of the industry relies on collaboration rather than competition; with one stating “the future of fashion is in collaboration”.

A space to host resources, training, and technology

Many stakeholders wanted an industry space that mimicked the offerings of formal education facilities, with centralised resources, training and technology that would be accessible to businesses seeking a space to be innovative, but without the means to invest in technology or services independently.

Two-thirds of survey respondents, alongside many of our interviewees, noted the value of a space to trial technology and test processes and products before committing to investment. However, respondents acknowledged that, especially for fashion design, a large amount of space would be needed to host technology related to production and manufacturing.[22]

We also heard that people seek a space for ongoing learning and training, specifically the resources to equip businesses with the skills and expertise needed to start, develop and grow a business, such as access to accountants or lawyers who can advise businesses on decision-making and strategy.

Sydney’s creative industries lack proper channels to collaborate with others in the industry. This makes it harder for start-ups and incubators to develop connections that then bring in other investment and financial support. Tech Central already has space to support tech start-ups with resources and networks. While their work is primarily focused on STEM technology start-ups, the design strategy stakeholder raised the importance of making space for the arts and creative industries in the start-up ecosystem and providing right advice and resources.

[21] Chippendale Creative Precinct – see: https://www.art-almanac.com.au/chippendale-creative-precinct/

[22] For example, Publisher Textiles described the large amount of space needed for printing, their factory is 600m^2 and require 40m long tables for printing.

Afterpay Case Study - a space to establish an innovative ecosystem

Any space must be able to be adapted to the needs of different disciplines. It should allow businesses to be innovative by providing the right technology, resources and networks.

As Tech Central gains momentum, the network of people working and designing in the precinct will also grow. Afterpay has recognised this growth and is relocating its Sydney offices to Ultimo. It sees Tech Central as a great motivator given the critical mass of talent.

People and space will establish Tech Central as an innovation district, given the contributions of a diversity of disciplines and the proximity of skills intersecting and converging to bring new ideas to persistent issues. Afterpay sees its investment as part of its support for creative industries. It will aim to hire up-and-coming talent or partner with education institutions to nurture the start-up ecosystem.

Afterpay has created Flagship stores, which use advanced technology to collect in-time retail and shopper behaviour data. A space in Tech Central could provide opportunities for businesses to experiment and innovate new pathways for retail. Alternatively, it could host businesses to connect to the global market through virtual broadcasting of fashion and art shows or provide spaces for people to launch their products or services.

Intentional spaces/culturally designed and lead spaces

There is limited access to purposefully designed spaces for the needs and desires of the First Nations people. If a space is not built and lead by Aboriginal stakeholders, money and resources are less likely to be distributed to support Aboriginal people and businesses.

Our broad finding that not enough industry spaces exist for business or individuals strengthens the argument from stakeholders that in general there is a lack of investment in the creative industries. While issues of investment were initially introduced in relation to skills and the skills pipeline, these findings suggest there is also insufficient support for physical needs of creative industries.

2.5.3 Technology

One of our key lines of inquiry was the relevance of technology to creative industries, how it is used, the opportunities it creates, barriers to access, and whether it can encourage sustainable practices.

Technology enables the everyday operations of businesses

Technology, particularly Software as a Service (SaaS), is fundamental in the everyday function and operation of businesses. Technology connects businesses with their employees, clients, and ideas – as is expected given the digital nature of our world.

There are barriers to accessing and using technology

Many fashion designers use traditional forms of design and production. Business operations are determined by the skillset and training of their workers, with many experienced designers, pattern makers, cutters and sewists maintaining the skills in which they were initially trained. The practices and processes of these businesses are not yet suited to new technology and there is not a workplace culture of continual professional development which limits introducing new technology. This is a crossroads moment for the industry as technology could help create a resilient workforce; however, the skills and experience needed do not exist.

While we heard much about the expectations around technology, many noted the barrier of not knowing what kind of technology is available and what might be relevant to their business. Tied to this is the few opportunities for businesses to trial technology before committing to an investment.

We heard that alongside improving access to technology, what is needed is the possibility of trialling technology and offering training. Technology available on the market may not have been used in individual’s initial or formal training, and in some cases, businesses have outsourced processes that require technological literacy.

Opportunities of technology and barriers of its associated cost

As we heard from stakeholders across the industry, technology is an enabling tool that allows industries to innovate practices, streamline processes, reduce production and operation costs, and work to address wicked problems facing the industry, including ongoing skills shortage and waste of excess materials. Technology was seen as a vehicle for opportunities however, the current access to technology is a hinderance to businesses given the financial burden required to invest in it.

Across our engagement with fashion designers there were discussions of the potential benefits of advanced manufacturing technology to their production and the industry more broadly. However, the cost of this machinery is prohibitive to small and medium sized businesses, especially given their relatively small minimum order quantities (MOQs).

Similarly for the animation studios, they described the ongoing expense of software, hardware, and the investment in staff. As previously described, investing in skills is one of the largest expenses for a business in the creative industries and the financial burden is often left to individual companies to bear.

Without this financial freedom to invest in technology the industry risks not innovating further or remaining a relevant player in the global market. A fashion stakeholder focused on circular design saw the importance in the fashion industry's ability to innovate in order to become a sustainable and circular industry. As such, they are working to try to reduce costs for the resource recovery sector by improving the information about textile composition so that they can be more easily sorted and processed.

2.5.4 Sustainability

Understanding how businesses engage in sustainable practices, particularly how technology might make sustainable practices more achievable and viable was a key line of inquiry. We asked stakeholders to subjectively identify if they engaged in sustainable practices and heard that 88% of survey respondents considered their business as doing so.

Some stakeholders conceptualise their sustainable practices less in terms of materiality and production and more in terms of investing in people and skills to ensure their industry is resilient in the face of future challenges. In this vein, stakeholders described that current barriers to sustainability are caused by lack of access to some technology and the skills shortage.

One fashion stakeholder defined sustainably as the intentional production of everything onshore in Australia. This has required it to compromise on the range of products it offers as there is not the technology nor skills onshore to support a wider range.

We asked stakeholders "Do you see technology as enabling sustainable practices/processes?". The question was considered from various viewpoints and different perspectives emerged. A recurrent finding was that SaaS technology, and the associated data it produced, can create efficiencies, and contribute to more sustainable business models.

A large fashion stakeholder said that software integrated into its operations helped to monitor forecasting, manage inventory, plan yields and reduce excess stock and waste. Previously they had worked across five platforms that did not speak to each other; now, technology is the priority from design through to retail.

However, this requires an experienced data analyst to bring these systems together and provide informed insights. This emphasises that technology requires the right skills; the creative industries need to demonstrate more opportunities available for diverse skillsets.

In the context of fashion design, technology can reduce waste by digitising patterns. A growing field of professionals have the skillset and software to create digital samples of clothing, which allows designs to be edited and tailored to fit perfectly before any fabric has been cut. A fashion designer stakeholder discussed how new pattern making technology allows brands to visibly see waste before producing it.

In the long term, investment in technology could trace raw materials and inform the interventions that may compromise whether a material is good for the environment or people. Tracing a material used for production could broaden the possibilities for circular design and practices. Tracing a material after the fact can also draw attention to the carbon footprint of a product or service and force a reconfiguration of processes and practices that lead to its creation.

Citizen Wolf, defined as a “technology company fits, that exists within the fashion space”, sees technology as enabling the processes and practices that make sustainability an integrated feature of design and production. It creates garments to individually fit the shape of a person’s body – in part by using laser printing. This reduces the waste associated with designing a tailored garment and the possible consumer waste of buying a product that is ill-fitting and throwing it away.

Views of consumers and the market will also influence business choices. An interior designer stakeholder discussed there is little appetite for sustainable material from the client side and sustainable products are often perceived as a luxury. Technology could streamline the production and use of sustainable materials in products and as such make sustainability a more viable option for a range of clients.

2.6 Lessons from other places

Understanding the development of other creative precincts can help us understand some successful attributes of the current state in Tech Central and identify potential challenges and barriers.

Here we focus on four case studies:

- Collingwood KIN Fashion/ A Room to Create
- NYC Garment District
- East London Fashion District
- Aalto Design Factory (Helsinki)

Collingwood KIN Fashion/A Room to Create

Melbourne is known to be a hub for design and fashion within Australia with its inner suburbs being popular amongst designers, artists, and creatives. With growing rental prices and a housing crisis, prioritising spaces in the city for the creative industry is becoming increasingly difficult. However, in the suburb of Collingwood a partnership between Yarra City Council, Yarra City Arts and KIN Fashion transformed an old historic church hall into a space dedicated to supporting artists and creatives with affordable and sustainable spaces.

The Room to Create is the program that has emerged from this partnership and is aimed at building a hub for Indigenous artists and designers to work and display their work. Focusing on underutilised council owned buildings, this program offers short-term tenancy and subsided rent, making it an affordable option for creatives.

KIN fashion has been one of the occupants of this space in and has been instrumental in bringing Indigenous designers into a collaborative space that is tailored for them and can help them connect to experts in local manufacturing techniques and newer textiles and fashion digital technology. The design space in Collingwood was piloted by eight Indigenous Australian designers and creatives. Through these initial partners KIN Fashion has been able to see the capacity of the industry through a holistic approach to design and the needs of both the creatives and the wider needs of the fashion industry in Melbourne in general.

NYC Garment district

Like the rag trade district of Sydney, the New York garment district has been deeply embedded within the New York landscape. Also like Sydney, from mid-last century the manufacturing workforce started to decline losing as much of 95% of its workforce including highly skilled trades.

This trend has been actively addressed by the NYC government, with a commitment preserving and ultimately rebuilding what is recognised as an important creative and economic contributor:

- Grants and subsidies to protect industry – grants for clothing businesses
- Special Garment Center District zoning
- Incentives for labels to relocate their operations and manufacturing

Land use has been a central lever to maintain the garment industry. This includes a tax incentive plan meant to support continued clothing manufacturing in the Garment District, which will allow for affordable long-term leases for garment manufacturing and manufacturing-adjacent businesses”[23]

Maintaining the Garment District in Manhattan means saving valuable employment opportunities and preserving an industrial ecosystem unique to Midtown Manhattan. Moving production would have meant moving jobs and disconnecting production from fashion education, warehousing, and display.

East London Fashion District

This district provides some key insights for Sydney with a synergy of the core attributes between the two locations – from the key institutions, existing industry and government priorities.

The District was created through collaboration between the London College of Fashion, University of Arts London, Greater London Authority, British Fashion Council, UK Fashion and Textiles, other fashion focused companies and the local councils (Boroughs) of the areas in East London. The area has a rich history in fashion and manufacturing which continues to encourage fashion brands and small-scale boutique fashion manufacturing to work in the area.

As of 2017, the fashion industry contributed £1.4 billion (Over $2 billion AUD) to the London economy and had increased by 57% from 2010 to 2015[24]. As London is considered one of the fashion capitals in the world, alongside places like New York City and Milan, fashion exports play a significant role in the United Kingdom’s trade portfolio. In 2015 fashion, textiles and apparel exports in the UK were worth £8.5 billion.

The aim of the District was to create an ecosystem where fashion, design and manufacturing are led by innovation. It is guided by five key pillars that inform the collaboration of government, industry and education:

- Skills: To develop fashion skills creating opportunity and a pipeline of talent
- Investment: To increase access to finance and investment
- Innovation: To stimulate innovation, exploit technology and support enterprise
- Connections: To act as a coordinating hub to create a connected fashion community
- Spaces: To increase affordable fashion space for all scales of fashion business

Through these pillars, the District can address the challenges of supporting this creative industry. The District leads the collaboration between stakeholders – bringing investment, access to expertise and space for identified projects within the pillars. It continues to build an ecosystem – connecting retail, designers, and manufacturers.

The District aimed to become a place for learning and collaborating with younger designers and achieved this through the addition of the London College of Fashion’s new campus. The development of partnerships between businesses and industries with the aim of re-establishing

[23] https://fashionista.com/2018/06/new-york-garment-district-ida-program-fashion-production#:~:text=The%20new%20plan%20includes%20an,manufacturing%20and%20manufacturing%2Dadjacent%20businesses.

[24] East London Fashion Cluster – Strategy and Action report

London as a Creative Fashion Capital. It has developed innovation challenges and events to showcase the expertise of the industry within East London and build a global reputation which will bring further investment in place.

Through the branding of the District, it has developed and deepened the unique selling position of the district as high end, small batch and small scale quality goods.

Aalto Design Factory (Helsinki)

The Aalto Design factory is an interdisciplinary design hub that unites students, teachers, researchers and industry in Helsinki, Finland. It was founded in 2008 and was the first step in developing Aalto University which brought together Helsinki University of Technology, Helsinki School of Economics, and the University of Art and Design Helsinki.

The Design Factory was originally built around the idea of creating the best possible environment for product design practices and education. However, now it has developed into a design district, or factory, which is a base for a variety of interdisciplinary collaboration that can be anything from combining mathematics and the arts. Where Aalto Design Factory differs from other design precincts is through its focus on research and experimentation rather than just straight collaboration and innovation. Even though its physical footprint is only the size of one factory building, it has connections to 34 design hubs globally, including a design factory at Swinburne University in Melbourne.

Due to the immaterial nature of the objectives of the Design Factory it is hard to capture what makes it a successful design precinct. The most valuable aspect of this district/factory are its community and partners, from both the university and industrial sectors. Through an internal study conducted in 2011 they were able to single out five key areas that the Design Factory thrived in providing. These areas are, interaction, action, support, personal work, and the Aalto Design Factory entity. Throughout all these areas common themes that remained constant are, collaboration with a diverse cohort and partners, motivation and support on project development, and a passion for co-creation.

The Aalto Design Factory is currently directed by Kalevi Ekman; however, it has a unique non-hierarchical collaboration environment for students, teachers, researchers, and industry partners. This unique governance structure is one of the ways that this creative hub has been able to stand-out and withstand times of uncertainty while maintaining their core values.

Section 3: Future considerations

A confluence of factors would support the integration of a creative industries precinct including: strong key institutions; existing private creative industry; government and private industry commitments; and support for the enduring historical legacy of fashion and design within the Tech Central precinct.

A defined precinct would enable the strong collaboration across different institutions and industries to do more than identify the challenges facing the creative industries – it would provide the levers for them to flourish and innovate.

The growth of Tech Central makes way for this precinct and the creative industries to state their place in the landscape of the changing city. The creative industries are a key factor for Tech Central in transforming urban life as they allow a dialogue between contemporary design culture and the built environment.

3.1 Key enablers

From our industry discussions about opportunities and challenges we gleaned consistent themes, which can be framed as industry enablers. As described in the baseline findings, these enablers are skills, space, sustainability, and technology.

Framing these insights as enablers allows us to show that while they might currently be challenging to growth and success, with intervention and support these could unlock creative industries.

3.2 Building on strong foundations of support for the creative industries

Key tenants are already working to overcome industry challenges and support workforce development. The larger institutions have the resources and connections to transform the geography of underdeveloped public space into a connected, resourced and innovative site that pays justice to the role the creative industries already play in the local, state, and national economy and the social and cultural livelihoods of communities.

The activities expressed in the table below provide opportunities for creatives to access resources, engage in knowledge transfer and access spaces to showcase their work. New programs and funding opportunities could leverage these programs and identify the right stream of financial and technological investment.

Steering Committee activity

UTS & TAFE	Centre of Excellence in Sustainable Fashion & Textiles
Powerhouse Museum	Powerhouse Creative Industries Residency Program
AFC	AFC FashTech Lab Australian Fashion Trademark and Campaign National Clothing Product Stewardship Scheme AFC Directory
UTS	Offering qualifications in, Fashion & Textiles Design, Design, Architecture and Building New Masters of Design (UTS) The Product Stewardship Centre for Excellence
TAFE NSW	Qualifications is design related fields including: • entertainment and production design • graphic design and illustration • jewellery design and manufacture • interior design • 3D animation and concept art • fashion and textile design and • fashion technology

3.3 Next Steps

An Executive Overview and recommendations have been developed as a separate document to consider the next steps for the Steering Committee and partners in supporting creative industries within Tech Central and beyond.

Appendix A – Methodology

This report was developed with a strong engagement focus, with demographic and spatial analysis to strengthen insights.

Astrolabe Group was asked to determine the key players and stakeholders within the precinct, how they operate, the opportunities accessible to them to grow or change, and the barriers that might be stifling their capacity.

Engagement approach

The project team used a mixed methods approach to gather insights from stakeholders identified by the Steering Committee, and from recommendations through institutions, peak bodies, and chambers of commerce within the precinct geography, as well as fieldwork mapping.

Our overall engagement approach focuses on meaningful and well-informed engagement with stakeholders.

- Consultation processes should be easily accessible
- Stakeholders should be given adequate opportunity to participate
- Stakeholders should be adequately notified of proposed consultation
- Adequate time should be given for stakeholders to participate in consultation
- Outcomes of consultation should be reported back to stakeholders

Engagement breakdown

Engagement method	Number of responses
Business survey	28
Student survey	49
Semi-structured interviews	16
Informal interviews	9[25]

Our interviewed were both face to face and conducted on Microsoft Teams, as indicated below.

Stakeholder categories	Stakeholders
Key tenants	UTS
	Australian Fashion Council
	Powerhouse Museum
	TAFE NSW
	Greater Cities Commission
Invested place stakeholders	City of Sydney
	Bayside Council

[25] Interviews participants: RAMP TRAMP TRAMP STAMP, Fisch Designs, COMMAS, Camp Cove Swim, Slate FVX, CHADA

	UTS BCII
	UTS Start-Ups
Fashion	Cue
Fashion	Romance was Born
Fashion	Publisher Textiles & Papers
Fashion	The Iconic
Fashion	Afterpay
Fashion	Ginger and Smart
Fashion	KITX
Fashion	First Nations Fashion and Design
Fashion	Centre of Excellence in Sustainable Fashion & Textiles
Fashion	Citizen Wolf
Fashion	Comma
Fashion	Camp Cove Swim
Fashion	Ramp Tramp Tramp Stamp
Design	Fisch Designs
Architecture	TZG
Film, Media, Animation	Mighty Nice
	Slate VFX
Graphic Design	ExtraBlack
Interior Design	Chada
Landscape Architecture	Environmental Partnership
Design Strategy	Stone and Chalk
Case study participants	East London Fashion District
	Yarra City Council & KIN Fashion

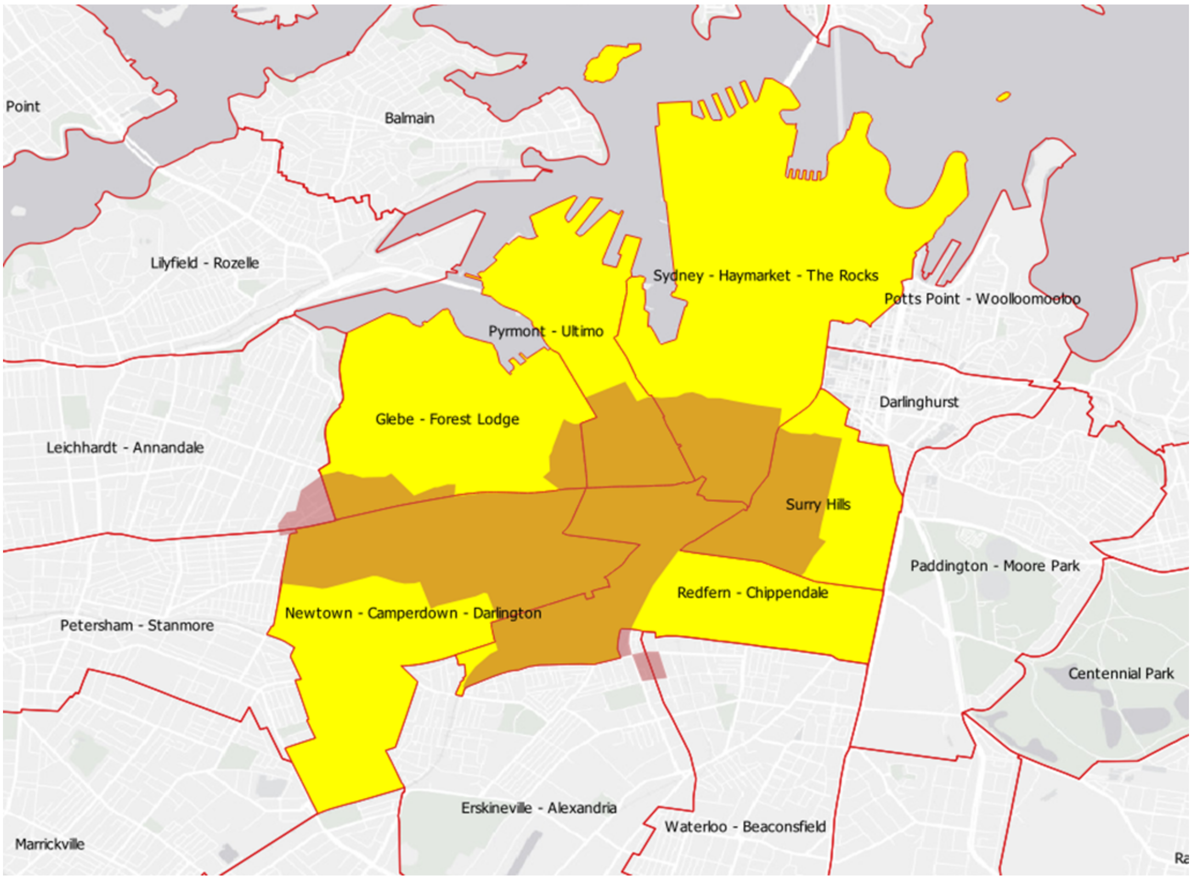
Data analysis

Establishing a baseline understanding of the total creative industries workforce within the precinct was determined using ABS census data 2011, 2016 and 2021, non-public Australian Business Register (ABR) data and City of Sydney Floorspace and Employment Survey (2017).

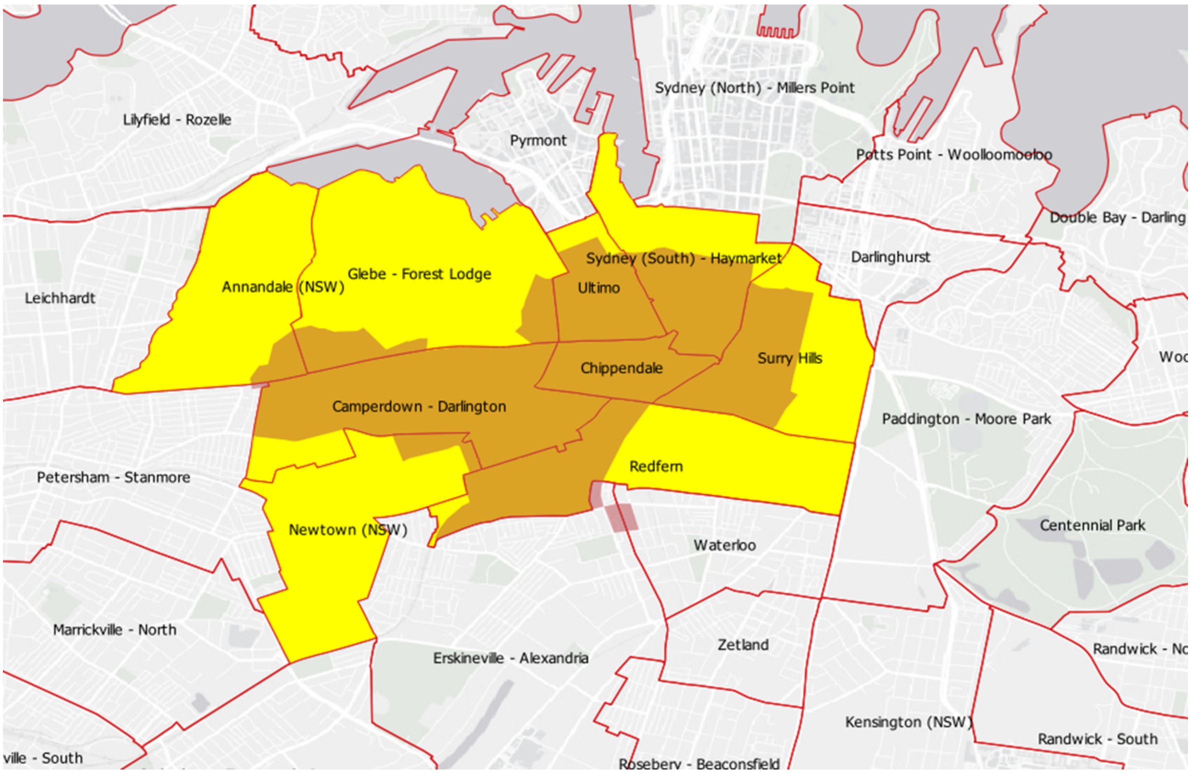
There are a number of limitations with the analysis worth noting:

ABS census data

In the 2021 census, the ABS split the SA2 (Statistical Area Level) of Sydney - Haymarket - The Rocks into Sydney (South) - Haymarket and Sydney (North) - Millers Point. This was also done for the previous SA2 of Pyrmont - Ultimo which became Pyrmont and Ultimo. Although this allows us to better understand the statistics of works in the Tech Central precinct for 2021, since the SA2s more closely align with the precinct's borders, we need to think carefully about how we compare the different census data. For this reason, we have used the 2016 and 2011 SA2 regions for our 2021 analysis for a better understanding of the change across the previous decade.



2011/2016 SA2s



2021 SA2s

Education attainment

Another point of interest in our data is the highest level of education analysis. Unfortunately, during the 2011 census collection, the question which captured a worker's highest level of education was not asked, meaning we do not have this information to compare across the 2016 and 2022 datasets.

ANSIC codes – employment classification

We used the following Australian New Zealand Standard Industrial Classification (ANZSIC) codes for the analysis of the census data and non-public ABR data. As is evident from this list, there are activities listed within each code that is not relevant to our analysis, however, the data cannot be further distilled into specific sub-categories of the ANZSIC codes.

ANSIC Codes	Primary Activities
42510 Clothing Retailing	• Clothing accessory retailing • Clothing retailing • Foundation garment retailing • Fur clothing retailing • Glove retailing • Hosiery retailing • Leather clothing retailing • Millinery retailing • Sports clothing retailing • Work clothing retailing

90029 Other Creative Artists, Writers and Performers	• Cartooning • Celebrities/Media presenters • Choreography service • Comedians • Composing (including musical composition) • Costume designing • Creative arts service • Dancers (not dance group) • Journalistic service • Playwriting or screenwriting • Producing or directing • Sculpting • Set designing service • Speaking service (including radio and television announcing) • Theatre lighting design service • Writing (including poetry and comedy)
69240 Other Specialised Design Services	• Commercial art service • Fashion design service • Graphic design service • Interior design service • Jewellery design service • Signwriting • Textile design service • Ticket writing
69210 Architectural Services	• Architectural service • Drafting service, architectural • Landscape architectural service • Town planning service
55110 Motion Picture and Video Production	• Motion picture production • Television commercial production • Television program production • Video production
55140 Post-production Services and Other Motion Picture and Video Activities	• Computer graphic, animation and special effect post-production service • Developing and printing motion picture film • Film or tape closed captioning • Film or video transfer service • Motion picture film reproducing • Motion picture or video editing service • Motion picture production, special effects • Post-production facility, motion picture or video • Post synchronisation sound dubbing • Sound dubbing service, motion picture

	• Subtitling of motion picture, film or video • Teleproduction service • Titling of motion picture film or video • Video conversion service (between audio and visual media formats)
13 Textile, Leather, Clothing and Footwear manufacturing	• 131 Textile Manufacturing • 132 Leather tanning, fur dressing and leather product manufacturing • 133 Textile product manufacturing • 134 knitted product manufacturing • 135 clothing and footwear manufacturing
2029 Other Ceramic Product Manufacturing	• Bathroom fixture, vitreous china, manufacturing • Brick, fireclay, manufacturing • Brick, refractory, manufacturing • Cement, refractory, manufacturing • Ceramic goods manufacturing • Clay paver manufacturing • Clay, refractory, manufacturing • Crockery manufacturing • Crucible, refractory, manufacturing • Earthenware, table or kitchen, manufacturing • Flowerpot, ceramic, manufacturing • Graphite crucible or foundry accessory manufacturing • Insulator, porcelain, manufacturing • Pipe, ceramic, manufacturing (including vitreous china or porcelain) • Porcelain goods manufacturing • Pottery goods manufacturing • Refractory product manufacturing • Roof tile, clay or terracotta, manufacturing • Silica brick, refractory, manufacturing • Stoneware pipe or fittings manufacturing • Terracotta goods manufacturing • Tile, ceramic, wall or floor, manufacturing • Vitreous china goods manufacturing • Zirconia, ceramic, manufacturing
2511 Wooden Furniture and Upholstered Seat Manufacturing	• Bedroom suite, wooden, manufacturing • Chair manufacturing (except dental chairs fitted with mechanical devices) • Dining room furniture, wooden, manufacturing • Disassembled furniture, wooden, manufacturing • Disassembled kitchen furniture, wooden, manufacturing • Furniture part, wooden, manufacturing • Furniture reupholstering

	• Lounge suite manufacturing • Office furniture, wooden, manufacturing • Outdoor furniture, wooden, manufacturing • Seat, upholstered, manufacturing • Table, wooden, manufacturing • Upholstered furniture manufacturing
2591 Jewellery and Silverware Manufacturing	• Badge manufacturing n.e.c. • Coin minting • Costume jewellery manufacturing • Custom-made jewellery manufacturing • Diamond cutting • Gem cutting • Goldsmithing • Lapidary work • Medal manufacturing • Silverware manufacturing • Trophy manufacturing
6991 Professional Photographic Services	• Portrait photography service • Professional photography service • Street photography service • Studio photography service • Video filming of special events (e.g. birthdays, weddings) • Wedding photography service

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