Guide, Steer, Repeat

Applications of AI in arts, culture and creativity and how Australia should respond

October 2024

A New Approach (ANA)

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Acknowledgements

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A New Approach (ANA) is Australia's national arts and culture think tank. We believe Australia can become a cultural powerhouse whose creativity is locally loved, nationally valued and globally influential.

Through credible and independent public leadership, ANA helps build an ambitious and innovative policy and investment environment for arts, culture and creativity. We work to ensure Australia can be a great place for creators and audiences, whoever they are and wherever they live.

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About this Analysis Paper

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Introduction and Findings

There is no longer any question *whether* Australians use artificial intelligence (AI) in arts and culture. From classrooms to lounge rooms, and from news media to social media, AI is a tool Australians *already* use to brainstorm, create, search and share. Alongside computing, the Internet and digital platforms, AI will be part of Australia's pathway to securing its place as a cultural powerhouse. Australians cannot predict how the AI story will end, but we can help write it.

This Analysis Paper takes an in-depth look at how Australians are now using AI to create, find, share and experience arts and culture. It explains how both governments and the cultural and creative industries in Australia are responding to the impacts of AI.

The examples we canvas from the past 12 months show that *why* and *how* we use AI matters. AI holds the potential to improve access, to help creators brainstorm and refine, and to connect audiences with content. At its best, it can amplify the contributions of cultural and creative activities to Australian society and wellbeing, including our prosperity, cohesion, security, health and sustainability.[1] Importantly, these examples illustrate that deciding *why* and *how* we use AI can mean the difference between generating benefits or causing harm, such as contributing to misinformation, online safety issues and privacy intrusions. This is why both governments and industry are responding throughout cultural and creative supply chains by guiding and steering towards benefits.

Everyday Australians believe that arts and culture have a direct positive impact on their ability to stay healthy, understand others, accept differences, connect with their community, learn new skills and develop new ideas, as our research with middle Australians shows.[2] With the right guardrails, AI can be part of arts and culture's response to challenges across these areas.[3] Since AI tools and how we use them will continue to evolve, it is essential that we do not simply 'set and forget' but regularly revisit how we use AI.

In this context, this Analysis Paper presents the following Findings about AI in arts and culture.

Finding 1: Australians are using AI across arts and culture, but with some caution

- Australians now use AI to create, find, share and experience a wide variety of arts and culture.
- Australians use AI across most cultural and creative domains, with common uses including drafting text, researching for work or study and generating images.
- Many cultural and creative industries are applying AI in their organisations, not only to create arts and culture but also to search and moderate content.
- Australians and their cultural and creative industries are exercising caution, which is why generative AI rarely replaces the entire creative process.

More at: How are Australians using AI?

Finding 2: Governments and cultural and creative industries are responding

- Larger cultural and creative organisations are deploying a wide range of responses, while governments are guiding certain applications of AI.
- Both governments and industries recognise the need for collaborative responses to help share the benefits of AI, including in arts and culture.
- Governments recognise the need for international and intergovernmental collaboration, and influencing overseas regulation is a key way for Australia to respond.

More at: How are governments and industries responding?

Finding 3: There is untapped potential to use arts and culture to steer AI

- Further collaboration in arts and culture can help address concerns and reduce harms.
- Governments and industries should leverage arts and culture to avoid undesirable impacts of AI and facilitate discussions about community norms.
- Cultural partnerships can help shape the impacts of AI, both within and beyond arts and culture.

More at: How are governments and industries responding?

Opportunities

Informed by these Findings, ANA identifies three high-level Opportunities:

Opportunity 1

Noting *Australians are using AI across arts and culture, but with some caution*

1.1 Cultural policies at all levels of government should explicitly acknowledge the real impacts of AI on arts and culture, both in production and consumption contexts, and commit to addressing these impacts.

1.2 Government agencies responsible for AI policy and government use of AI should consider and address the impacts relevant to arts and culture when making policy.[4]

1.3 Representative surveys by government, academia and industry on AI usage should vigilantly track why and how Australians use AI across cultural and creative activities.

Opportunity 2

Noting *governments and cultural and creative industries are responding*

2.1 Governments should take a cross-portfolio approach to regulating deepfakes that explicitly considers arts and culture. This would help steer away from harmful uses (such as misinformation) and towards benefits (such as access to arts and culture, preservation of language and heritage and incentives to create).

2.2 Major galleries, libraries, archives and museums should actively share knowledge and the benefits of AI with smaller institutions to help ensure uses of AI are beneficial for arts and culture in all communities.

2.3 Governments should harness the knowledge of Australian industry regarding the impacts of AI in arts and culture, including insights from generative AI developers, to inform domestic policy and engagement with overseas regulators of AI.

Opportunity 3

Noting *there is untapped potential to use arts and culture to steer AI*

3.1 Equip Australians to apply AI in safer, more innovative and inclusive ways by using cultural and creative activities as an accessible means to improve awareness and understanding.

How are Australians using AI?

This section captures the recent and evolving applications of AI, first summarising trends across the broader Australian population and industry. It then provides snapshots of applications within specific industry sectors from the last 12 months to illustrate the breadth and variety of use, including examples that create benefits (such as improved access) and those that cause harm. The examples show why Australians sometimes use AI with caution and why some uses of AI attract criticism and concern. This provides essential context for the government and industry responses in the following section.

Across the board

Australians now use AI to create, find, share and experience a wide variety of arts and culture, from print media and performing arts to creative services and traditional cultural expressions. This builds on ANA's 2023 Analysis Paper *Friend, Foe or Frenemy*, which showed that Australians were already applying AI in areas such as cultural creation, preservation of language and heritage and content moderation on digital platforms.[5]

Australians use AI, including generative AI, across most cultural and creative domains. This has prompted the latest federal media consumption survey to include results on awareness and use of generative AI.[6] This survey of adults found that 69% were aware of generative AI, and 41% of those who were aware had also used it.[7] A parallel, smaller survey of children suggested that:

- Awareness of generative AI was lower among children aged 0–7 (15%) and 8–10 (34%), compared to ages 11–15 (65%) and 16–17 (62%).[8]
- 43% to 44% of children in age cohorts 8–17 who were aware of generative AI also used it.[9]
- 67% of children aged 0–7 who were aware of generative AI also used it, but almost all (98%) had a parent, legal guardian or carer who had also used it.[10]

Drafting text, researching for work or study and generating images are more common uses. Among Australian adults who had used AI, these uses were more common than others such as creating music and refining text.[11]

Box 1: Arts and culture-relevant uses of AI (from federal survey of adults)[12]

- Draft written work/text responses (24% of adults who had used AI)
- Undertake research to support work or study (18%)
- Create or generate images, artwork or similar (10%)
- Ask questions (7%)
- Refine existing written work or text (4%)
- Quality check or proofread (2%)
- Create or generate music (0.3%)

Many cultural and creative industries are applying AI within their organisations. AI is enhancing searchability and interactions with collections for users and staff of galleries, libraries, archives and museums. Additionally, Australian organisations are developing AI tools for video translation creating deepfakes, providing fashion-styling advice and identifying potential cultural heritage sites. Australian firms have also launched generative AI systems to assist with the creation of images for interactive games and graphic design.

Applications of AI extend beyond the creation of arts and culture, both via digital platforms and by cultural and creative institutions. Digital platforms are increasingly using generative AI chatbots in search engines, which influences how Australians discover online arts and culture. According to the federal consumer survey on online copyright infringement, search engines remain the most popular means of seeking new online content, including music, video, interactive games and audiobooks.[13] The Microsoft Bing search engine already includes the Copilot chatbot. In addition, Google Search has introduced 'AI Overviews' in the United States (US), featuring AI-based conversational summaries above search results, with plans to reach 1 billion users worldwide this year.[14] Moreover, as our 2023 Analysis Paper *Friend, Foe or Frenemy* explained, digital platforms are also using AI to automate content moderation, addressing online safety, regulating access to copyright material, combatting misinformation and promoting privacy.[15] They are also using AI for text and speech translation, as well as for classification ratings in videos and games.

Australians and their cultural and creative industries are exercising caution when given the option to apply AI. This caution aligns with surveys on Australian attitudes and reflects how industries are piloting, testing and revising their use of AI. For example, a national survey of nearly 4,000 Australian adults revealed that 54% were worried that generative AI was being developed too quickly.[16] A further 40% thought that generative AI will harm Australian society.

Examining applications of AI across arts and culture reveals common reasons for this caution, including:

- Impacts on connections people have with arts and culture, such as trust in news and transparency in the use of AI within these fields
- Impacts on incentives to create, including issues related to copyright and employment
- Impacts on cultural and social inclusion, including respect for First Nations culture and traditional cultural expressions

These are three of the common impacts of AI on arts, culture and creativity highlighted in *Friend, Foe or Frenemy* and outlined in Appendix 1.

It is not surprising that Australians remain cautious and, at times, divided about the increasing role of AI in arts and culture. While some applications of AI have been around for many years, recent and significant investments in AI development have accelerated its scale and breadth of application and impact, both within and beyond arts and culture.[17]

Generative AI rarely replaces the entire creative process. Creators typically use generative AI as part of a creative workflow. Most applications of generative AI are for brainstorming, generating options for creative outputs or creating components that contribute to creative works. Human creators, editors, performers or reviewers are still integral to most applications at some point in the creative process.

By industry sector

Below, we illustrate the Australian applications of AI over the past 12 months, grouped by different domains of arts and culture. These domains reflect the definition of arts and culture used by ANA, based on the 2009 UNESCO Cultural Statistics Framework.[18]

In visual arts

Visual arts have seen generative AI applied across a wide range of contexts and applications, including news, portraiture, photography, promotion of arts and culture and advertising.

A state orchestra faced criticism from the Media Entertainment and Arts Alliance for using an AI-generated image to promote upcoming events.[19] The orchestra failed to label the image from Shutterstock AI Generator as AI-generated. The image contained errors, such as musicians appearing with the audience (not on stage) and people having too many fingers or hands.

The Brisbane Portrait Prize reversed an earlier decision to accept entries wholly generated by AI.[20] It updated its rules to only permit 'entries that were completed in part by generative artificial intelligence', accompanied by a 'brief description of the AI tools and methodologies employed'.

A major Australian television news outlet created and published an image of a Victorian parliamentarian, altered to show her wearing a midriff-baring top.[21] The parliamentarian publicly criticised the news outlet, suggesting that gender was a factor behind the alteration. While the news outlet attributed the alteration to 'automation by [the image editing software] Photoshop', software provider Adobe stated that the alteration 'would have required human intervention and approval'.

The Ballarat International Foto Biennale awarded the world's first AI art award to a Swedish artist for Twin Sisters in Love, an image of two women cuddling an octopus.[22] To distinguish this creation from photography, the organisers referred to it as an example of 'promptography'.[23]

A German not-for-profit was criticised for including images of children from Australia and other countries in an image dataset used to train popular generative AI models.[24] Human Rights Watch researchers discovered these images among over 5 billion images in the dataset, following instances of AI deepfake nude images at two Victorian schools. In response to privacy and child safety concerns, the not-for-profit has pledged to remove these images.[25]

Advertising agency The Works partnered with Sydney-based experimental art organisation Performance Space on The UnSeen Machine project.[26] This project allowed users to generate new images from a 40-year archive of images from Performance Space using generative AI. The photographers and artists responsible for the archive images consented to their use. The project also included an artist-led debate about AI in creative expression.

Australian graphic design platform Canva has introduced its generative AI tool for images, Magic Studio. Canva Shield moderates both user requests to Magic Studio and the generated images, with the aim of reducing deepfakes and abusive content.[27]

In publishing and print media

Although drafting and refining written work are common uses of AI,[33] many Australians distrust the use of generative AI in news. In a survey of nearly 5,000 Australians, 78% of those aware of generative AI expressed distrust in news completely written by generative AI. In contrast, a lower 57% indicated distrust if AI was used to assist in writing the news.[34]

Another survey of over 2,000 Australians shows a connection between awareness of AI, trust in news and comfort with AI being used in news production. Levels of comfort varied between 'soft news' (e.g. sports, arts and culture, celebrity or entertainment news) and 'hard news' (e.g. politics, crime and local news). About 39% of Australians expressed discomfort with the use of AI in reporting arts and culture news,[35] while an even higher 55% were uncomfortable with AI being used for political news.[36]

An established science magazine faced criticism for an experimental project funded by the Meta Australian News Fund and administered by the Walkley Foundation.[37] The project used OpenAI's GPT-4 model to generate web articles, with automated fact-checking based on the magazine's database of stories. This occurred alongside financial difficulties, a loss of staff and a takeover by the national science agency CSIRO. Journalists expressed concern that their material was used without consent or payment, but the Walkley Foundation stated that CSIRO had confirmed it 'would honour and pay journalists and copyright holders as appropriate'.[38]

An Australian study exploring ChatGPT for editing short fiction likened its ability to that of a 'new intern'.[39] The study compared ChatGPT's suggestions on story drafts to those from professional editors. While ChatGPT 'efficiently identified issues with tense, spelling and punctuation', it reverted Australian English text to American English and did not accommodate the author's writing preferences. The tool did not verify the author or provide suitable alternative text, often relying on clichés.

Box 2 – Agreement for OpenAI to use News Corp content

Despite distrust and discomfort with AI in news, OpenAI has reached a global agreement to display current and archived content from News Corp, including some Australian publications.[28] This agreement allows OpenAI to display news content 'in response to user questions and to enhance its products', including ChatGPT and other products based on its GPT models.[29] Since the GPT model is also used for the Microsoft Copilot chatbot in the Bing search engine, this agreement could lead to AI-generated search results for Australians seeking news.[30]

Using news content for generative AI, including in search engines, may influence how Australians use AI. News media and search engines are the two most common sources of influential information about how to use AI, according to a survey of Australians.[31] Of those surveyed, 52% said the most influential source of such information was traditional news media (TV, newspapers and radio), while 32% indicated search engines.

Existing features for accurate news and information could address some impacts of the News Corp-OpenAI agreement. For instance, Microsoft Copilot users can choose between 'creative' and 'precise' conversation styles, with a 'balanced' default.[32]

In audio visuals

A wide range of organisations in cultural and creative industries have been developing AI tools for film and other audiovisual forms.

The Sydney Opera House celebrated its 50 birthday with a generative audiovisual piece, a collaboration with music technologists Uncanny Valley and the Interactive Media Lab at the University of New South Wales.[40] The piece featured an evolving stream of music and visual art, streaming online for 744 hours and displayed in one of the House's foyers for three nights. The generative AI drew on data about the building to create layers of sound, incorporating sound recordings from ventilation systems and the Opera House's grand organ.

The National Film and Sound Archive (NFSA) has been enhancing the searchability of its collections through AI tools.[41] The NFSA conducted an AI pilot allowing staff to search based on information within collection items using automated facial recognition, text recognition and automated transcription of audio.[42] The pilot helped staff find content within a portion of the NFSA's 4 million items but also identified areas for improvement, including in facial recognition.

The Australian Centre for the Moving Image applied AI to create labels for exhibitions that can be translated into any language and to enable website users to search via video content and audio descriptions.[43] The web search features used third-party AI tools to transcribe speech from over 4,000 videos and generate image captions every 100 frames for these videos.[44]

Box 3 – Different impacts of deepfakes in different contexts

Australian firm Enigma2 has developed an AI and visual effects tool to 'seamlessly convert movie dialogue into English and other languages'.[45] This tool creates video deepfakes to make it appear as if screen actors delivered dialogue in alternative languages. This application of AI extends beyond captioning (also known as subtitling or 'subbing') and the practice of presenting video with alternative languages (known as 'dubbing'). The tool has already been applied in screen productions, including two Netflix releases.

While AI-based deepfakes could enable new forms of translation in films, they can also be weaponised to mislead people during elections and other events of democratic significance. As a recent Walkley Foundation seminar highlighted, audio and video deepfakes of world leaders are becoming common forms of misinformation, with impacts on cultural and social inclusion and on social cohesion.[46]

Such impacts are why the Australian Electoral Commission (AEC) has expressed concern about AI-based deepfakes and other misinformation. The AEC is also worried about its lack of legal powers and internal technical capability to 'detect, evaluate and respond to information manipulation about the electoral process generated by that technology [AI]'.[47] Similar concerns led France to establish a dedicated agency to combat foreign digital interference, including election information manipulation.[48]

In new media

Cultural and creative organisations are applying AI across a range of new media, much of which is available online to all Australians.

Sydney-based Leonardo.Ai is a generative AI that not only creates realistic images but also maintains consistent styles, often used for interactive game character mockups and video production storyboards.[49] Leonardo.Ai now operates on its own foundation model, trained on broad data to generate images across various applications. Until mid-2024, it used a modified version of Stable Diffusion, a popular AI image generator model from the United Kingdom.[50] Leonardo.Ai has recently been acquired by graphic design platform Canva.[51]

The Australian Centre for the Moving Image hosted an AI-assisted experience that allowed users to interact with wearable artworks through a digital mirror. Images for the wearable artworks were generated by visual artist Dr. Jess Herrington, using word prompts and images produced through Stable Diffusion.[52] These images were then translated into real-time 3D graphics, which users could 'wrap around' their faces in the digital mirror.

Virtual Veterans is a chatbot based on World War I resources from the State Library of Queensland, a digital collection maintained by the National Library of Australia's Trove, and the Australian War Memorial.[53] It allows online users of the Queensland war memorial Anzac Square to engage with archival materials by interacting with a 19-year-old soldier chatbot. There have been reported attempts to explore unintended responses from the chatbot, including queries about Doctor Who and contract law and questions posed in the guise of fictional characters.[54]

Box 4 – Contrasting impacts of AI-based chatbots on copyright infringement

The impacts of AI-based chatbots on incentives to create, specifically concerning copyright, highlight trade-offs in regulating AI applications. Chatbots are increasingly common in search engines, which are the most popular means for Australians seeking new online content.[55] Microsoft's Copilot (part of Bing Search and based on OpenAI's ChatGPT) and Google's AI Overviews (part of Google Search) are two prominent examples.[56] Any copyright regulation of chatbots should consider their varied impacts on incentives to create.

On the one hand, the development of these chatbots may involve copyright infringement. Copyright owners have expressed concerns about the copying of copyrighted materials in the training of AI models behind these chatbots. Much of this copying has occurred without the permission of copyright owners and may constitute copyright infringement.

On the other, these chatbots assist Australians in finding lawful content and reinforce copyright protection and incentives to create. The federal survey on online copyright infringement indicates that Australians use chatbots to find lawful content, with 9% of respondents accessing information directly via ChatGPT or AI.[57] Those who reported using ChatGPT or AI also reported the highest perceived success in finding the desired information.

In creative services and design

Applications of AI are emerging in fashion. One example is an AI-assisted styling service that recommends fashion items and provides styling notes to customers. For this service, an AI shortlists fashion items from hundreds of brands based on a customer questionnaire, and a human stylist then curates the items and writes styling notes for each box of items.[58]

Another fashion-related example is the use of generative AI images in place of fashion models. The founder of an agency for models over size 10 has raised concerns about job displacement in the fashion modelling industry and the harms generative AI poses to diversity in fashion.[59] As modelling agent Chelsea Bonner stated:

> "Over the last 20 years, we've made huge inroads into size diversity, into ethnic inclusion, into the use of models with different abilities and disabilities. It's been a real fight, [and] I just feel like we're going back in time."[60]

Architects in Australia are still using Midjourney and other image-generating AI tools to spark ideas and conversations, with new applications emerging in related fields.[61] For example, the NSW Government has invested $5.6 million in a trial of three AI tools to help local councils reduce development application (DA) timeframes. As the NSW Minister for Planning and Public Spaces noted:

> "AI won't replace our highly skilled planners at the core of the planning system, but it will free them up from repetitive daily tasks so that they can focus on more complex DAs."[62]

Similarly, IKEA Australia has launched an AI-based app that allows Australian customers to 'scan their living space, erase some or all existing items and drag and drop IKEA furniture and home décor to try different styling ideas'.[63]

Box 5 – Generative AI and impact on cultural and creative employment

The application of generative AI in design and visual arts has raised concerns about the displacement of workers and its impact on incentives to create. Our Insight Report *Accelerate* highlights the OECD's finding of an 'ambiguous' net impact of AI on employment:

> "AI will displace some human labour (displacement effect), but it can also raise labour demand because of the greater productivity it brings (productivity effect). AI can also create new tasks, resulting in the creation of new jobs (reinstatement effect), particularly for workers with skills that are complementary to AI."[64]

For more details, see our Insight Report *Accelerate*.[65]

In performing arts

Australian creators continue to experiment with generative AI in the performing arts, including music and dance.

Arts Centre Melbourne and the Now or Never Festival hosted an 'experimental dance performance that employs AI in the roles of playwright and choreographer', directed by dance technologist and choreographer Alisdair Macindoe.[66] Performers improvised based on directions from the AI, accompanied by video from media artist Sam Mcgilp. Audiences were invited to follow AI prompts from an onstage screen. The show included a warning that it 'may, in some rare instances, include offensive language, concepts, and content'.

Australian musicians Troye Sivan and Sia consented to have their voices used in Dream Track, an AI song generator on YouTube.[67] Users can generate up to 30 seconds of music in the voice and style of one of 10 popular musicians by prompting with the song's mood or concept. All content from Dream Track is watermarked to aid in the detection of AI-generated sounds. Google is reportedly negotiating with major recording industry firms – Sony, Warner and Universal – to expand the range of participating musicians.[68]

Another example is the robotic musician Keirzo, which raps and plays percussion in real time with human musicians.[69] Created by Australian AI robotics research fellow and jazz musician Dr Richard Savery, Keirzo was trained on recordings of consenting musicians. In addition, Koup Music applies AI to remix live sound inputs to generate new sounds,[70] such as converting inputs into sounds that mimic vocals, insects or aeroplanes.

In cultural sites and traditional cultural expressions

Applications of AI across cultural sites and traditional cultural expressions continue to emerge, spanning cultural heritage and First Nations languages.

The ARC has funded a collaborative research project involving community, research and industry on rock art in Murujuga (also known as the Dampier Archipelago).[71] The archipelago is on Australia's National Heritage List for its significant rock art and stone features.[72] As part of the project, researchers are using machine learning to better understand surface archaeological evidence.[73]

The NFSA has identified shortcomings in AI-based automated transcription of audio during its AI pilot. The transcription was not accurate for First Nations words and terms, as well as Australian colloquialisms.[74] As one of Australia's major repositories of traditional cultural expressions, how the NFSA transcribes audio from its collection is crucial. It impacts depictions of First Nations cultures and Australian cultures more broadly. The NFSA holds and preserves 'more than 25,000 works that document the unique place that First Peoples occupy within Australian society, and the diversity of their cultural and creative expressions'.[75]

How are governments and industry responding?

This section outlines initial responses from industries and governments in Australia to address the impacts of AI relevant to arts, culture and creativity. These responses aim to address the caution, criticism and concern identified in the previous section and steer AI applications towards their benefits while mitigating undesirable impacts.

Larger cultural and creative organisations are deploying a wide range of responses to guide their use of AI in arts and culture. Common responses include:

- Providing guidance to workers to preserve incentives to create
- Offering professional development to equip workers with awareness and tools
- Sharing tools across the AI development industry to tackle undesirable AI impacts
- Restricting the use of AI tools in higher-risk contexts
- Partnering with AI developers
- Offering sector-specific guidance

Governments in Australia are guiding certain applications of AI, including in areas like misinformation and education. They are also engaging in extensive consultations on the economy-wide and societal impacts of AI, with a particular focus on the intersection of copyright and AI. Over the past 12 months, there have been concerted responses from the EU and the US, among other jurisdictions.

Governments and industries recognise the need for collaborative responses to the impacts of AI in arts and culture. For instance, the federal government has committed to working with industry 'to develop options for voluntary labelling and watermarking of AI-generated materials' as part of its interim response on safe and responsible AI.[76]

Collaborative responses can help to share the benefits of AI, including in arts and culture. A recent national survey of almost 4,000 adult Australians revealed that, on average, 41% were interested in learning more about new technologies like generative AI.[77] However, interest was substantially lower among those with low household income and those with low confidence in their media ability. The President of the Australian Museums and Galleries Association has highlighted the need for larger, urban-based institutions to collaborate with smaller and regionally located institutions. This collaboration is crucial to ensure that the benefits of AI for arts and culture, as well as practices to mitigate AI risks, extend beyond urban areas:

> "We know our smaller and regionally located cultural institutions already lack resources compared to the major institutions. And the development of AI systems require significant financial investment and increased computational power."[78]

Similarly, **Australian governments recognise the need for international and intergovernmental collaboration** to realise the benefits and mitigate the risks of AI. This is why Australia signed the Bletchley Declaration on AI Safety and was one of 11 nations to sign the Seoul Declaration for safe, innovative and inclusive AI.[79] It is also why federal, state and territory Data and Digital Ministers have agreed a national framework for the government use of AI.

Influencing overseas regulation is a key way for Australia to respond to the impacts of AI, as highlighted by the Productivity Commission.[80] To date, most major AI systems have been developed overseas, with Leonardo.Ai being a rare example of a homegrown AI developer. Consequently, these systems are often developed under foreign legal jurisdictions. This context explains why US courts, rather than Australian courts, have seen numerous copyright lawsuits against AI developers from news organisations, photo and stock image suppliers, creative workers and creative industries.[81] This also provides relevant context for a recent recommendation by a NSW Parliamentary inquiry, for the federal government to better protect copyright owners from the challenges posed by generative AI.[82]

Further collaboration in arts and culture can address concerns and reduce harms. Some AI applications in deepfakes, news and education (outlined in How are Australians using AI in arts and culture?) are already raising significant concerns and causing harm. However, there may be barriers to understanding how to avoid undesirable impacts, including the technical nature of AI and varying levels of digital literacy. There may also be challenges in having complex conversations to navigate cultural differences and social conflicts.

Governments and industries should leverage arts and culture to avoid undesirable impacts of AI and facilitate discussions about community norms. Arts and culture are already equipping Australians to apply AI in safer, more responsible, innovative and inclusive ways. They also support conversations about the role of technology in society.

Examples of how arts and culture are helping to tackle the challenges AI poses to social cohesion and cultural inclusion include:

- An AEC exhibition engaging with 100,000 children at the Museum of Australian Democracy and reaching millions more online once digitised.[83]
- A wide range of cultural and creative activities linked to civic engagement and social cohesion, as noted in the federal *Strengthening Australian Democracy* report.[84]
- Federal support for social cohesion through funding activities of the Special Broadcasting Service and a religious museum.[85]
- A Questacon exhibition prompting visitors to consider issues of ownership, creativity and bias in AI.[86]
- A national research partnership among universities and cultural institutions exploring ways to address misinformation through media literacy and cultural institutions.[87]

Arts and culture in Australia can also play a direct role in shaping the development of AI and its future impacts. This could involve homegrown AI platforms, such as Leonardo.Ai (which generates AI images for gaming, video and graphic design), or AI tools developed and operated by Australian cultural and creative institutions.

Cultural partnerships can help shape the impacts of AI, both within and beyond arts and culture. ANA's Insight Report *Thriving through Thick and Thin* found that cultural partnerships can help address the nation's biggest challenges, and tools are available to help cultural and creative entities to work together and with others.[88]

Industry responses

Cultural and creative industries recognise the wide-ranging impacts of AI in arts and culture and are responding in various ways. Common types of responses include:

- **Providing guidance to workers to preserve incentives to create.** The Arts Law Centre has provided information sheets about the use and creation of copyright material involving AI.[89] The Media, Entertainment and Arts Alliance has updated standard contracts to help voiceover artists and screen performers control AI use of their creations.[90]
- **Offering professional development to equip creative workers** with better awareness of AI impacts and tools to manage them. The Walkley Foundation for Journalism is hosting an eight-part AI and Journalism Training Program.[91] The Australian Institute of Architects has included sessions on AI in its continuing professional development.[92]
- **Sharing tools across the AI development industry to tackle undesirable AI impacts.** For example, Canva plans to share its in-development technology free of charge to help reduce bias in the outputs of their text-to-image generative AI.[93] Cultural and creative institutions developing a range of AI tools are encouraged to share them more widely.
- **Restricting the use of AI tools in higher risk contexts.** Google has an in-house policy not to return AI Overviews for 'hard news topics' in Google Search and has limited satire and humorous content to improve accuracy.[94] This policy would be welcomed by many Australians who are uncomfortable with AI in political news.[95]
- **Partnering with AI developers.** For example, some media organisations see value beyond licensing fees in their partnerships with AI developers. News Corp's CEO highlights an opportunity to help OpenAI understand 'the character of contemporary editorial content'.[96]
- **Offering sector-specific guidance.** The higher education sector, the public sector and the digital platform industry have issued sector-specific guidance. See examples in the Box below.

Box 6 – Examples of guidance for specific sectors

Australian universities are providing guidance to staff and students on the use of AI.[97] This includes specific instructions on writing queries and prompts for generative AI tools to ensure they generate useful, accurate and appropriate outputs. This guidance builds on earlier principles for the use of generative AI in education and research, such as those published by the Group of Eight.[98]

The federal, state and territory governments have agreed on a national framework for the government use of AI.[99] This framework will guide how AI is used by governments, which is directly relevant to arts and culture. This is because the 'Public Administration and Safety' industry employs the most creative workers outside of the creative industries, as recent analysis of latest Census data shows.[100]

The Digital Industry Group's Code of Practice on Disinformation and Misinformation, which covers most major digital platforms, recognises the social impacts of misinformation and disinformation, including those involving AI.[101] This industry guidance may need to be complemented by government regulation. For instance, the federal government has consulted on a draft misinformation law that would empower a regulator. The AEC has also called for legal powers to combat misinformation and disinformation in the electoral context.[102]

Government regulation and guidance

Governments in Australia are continuing to develop society- and economy-wide regulations and guidance in response to the impacts of AI, including those relevant to arts, culture and creativity. These efforts are welcome, given that Australians remain cautious about certain uses of AI. A recent national survey of 4,000 adult Australians found that 74% agreed that 'laws and regulation are needed to manage the risks associated with generative AI'.[103]

Education and misinformation are two early areas of federal government action. Federal guidance is now available for schools, teachers, parents and students on the use of AI in education, alongside emerging state-level guidance.[104] This includes specific advice for educators to consult and obtain permission from First Nations people when 'developing AI systems with or about Aboriginal and Torres Strait Islander Peoples'. It also warns educators that biases in AI training datasets can lead AI systems to 'provide misinformation about Indigenous knowledges and identities.'

Work has begun to address Australians' concerns about misinformation, which is among the highest in the world, according to a survey of over 2,000 Australians.[105] The federal government consulted in 2023 on a draft law before Parliament to regulate digital platforms for misinformation and deepfakes.[106] This draft law would build on the industry Code of Practice mentioned above by empowering the media and communications regulator to:

- Gather information from digital platforms or require record-keeping about misinformation on their services
- Request an industry body to develop an industry misinformation code where it is unlikely that the industry would otherwise develop such a code and to register and enforce the code
- Create and enforce an industry standard where a code of practice is deemed ineffective

This draft law would differ from the EU approach outlined in the Box below.

Box 7 – EU approach to misinformation and deepfakes

The EU has recognised misinformation, including through deepfakes, as one of the key risks of AI. As Margrethe Vestager, Executive Vice President of the European Commission, says, 'One of the most daunting risks is that we may not always be able to distinguish what is fake from what is real'.[107] The European Union is addressing this risk by requiring transparency in the use of generative AI:

> The AI Act offers a straightforward response to this problem. AI-generated content will have to be labelled as such, so that everyone knows immediately that it is not real. That means providers will have to design systems in a way that synthetic audio, video, text, and images are marked in a machine-readable format, and detectable as artificially generated or manipulated.[108]

It remains unclear whether such labelling will be feasible or provide sufficient transparency. As generative AI tools evolve, automated detection tools still struggle to consistently and accurately identify AI-generated content, including deepfakes.[109]

Government agencies and parliaments are also conducting extensive consultations, covering a wide range of applications in and beyond arts and culture:

- **Consultations on policy options for safe and responsible AI,** led by the federal Department of Industry, Science and Resources. Their latest discussion paper on safe and responsible AI highlighted the 'overwhelming view' that 'voluntary compliance with Australia's AI Ethics Principles is no longer enough in high-risk settings'.[110] Accordingly, the Department has developed options for mandatory guardrails for the use of AI in 'high-risk' settings and has been seeking public input. The Department proposes to use a set of principles, including 'adverse impacts on human rights', to establish what AI uses are 'high-risk'.
- **Consultation on copyright and AI,** led by the federal Attorney-General's Department (AGD).[111] Following roundtable discussions in 2023, AGD has convened a Reference Group to discuss these issues, starting with the use of copyright material such as text, images, audio and video to train AI. ANA is a member of the Reference Group.
- **Parliamentary inquiries into AI,** including a NSW Parliament inquiry into AI in NSW and an Australian Senate committee on adopting AI.[112]

Australia is not alone in considering whether and how to respond to the impacts of AI. It can learn from early acting jurisdictions, such as the EU and the US. In some cases, these overseas responses may affect the impacts of AI in Australia or vice versa. In other cases, governments in Australia can borrow from the playbook of other regions.

The EU AI Act is notable as the world's first wide-ranging AI law, with likely impacts extending beyond the EU. It regulates providers and deployers of AI systems whose outputs are intended for use in the EU. The US executive order on AI also warrants attention, as it will directly impact many major developers based in the US, including Amazon, Anthropic, Google, Inflection, Meta, Microsoft and OpenAI. See Appendix 2 for highlights from EU and US regulation of AI, including initial industry responses to government regulation.

Conclusion

This Analysis Paper has shown that while AI is becoming part of Australian arts, culture and creativity, Australians are applying AI with some caution. For example, many Australians use generative AI to assist with text but generally for drafting rather than refining.[113] Similarly, many cultural institutions are using machine learning to improve the searchability of their collections, though some are finding that these applications are not always accurate or culturally appropriate.

Governments and cultural and creative industries are responding to these developments and steering towards more desirable impacts. Cultural and creative industries are already providing guidance to themselves, their firms and workers to address risks and align practices with community expectations. Governments are also reviewing the applications and impacts of AI – including those in arts, culture and creativity – with emerging responses in the education and misinformation spaces.

Arts and culture can also play a crucial role in steering AI towards positive benefits and impacts. Organisations responding to the society-wide effects of AI are already tapping into cultural and creative activities to help shape AI's impact. Arts and culture can help break down barriers to learning and facilitate the complex conversations essential for adapting AI's effects on our organisations and communities. Governments and cultural and creative industries should explore partnerships to leverage arts and culture to shape AI's impacts.

AI holds the potential to help Australia secure its place as a cultural powerhouse. Unlocking this potential requires the right guidance and steering, effective partnerships across governments and industries and the leveraging of cultural and creative activities.

ANA will continue to monitor this area and collaborate with other organisations to understand and address the impacts of AI, including working with the federal government and representatives from cultural and creative industries on the copyright and AI reference group.

Appendix 1 – Common impacts of AI relevant to arts, culture and creativity

These impacts are summarised from ANA's Analysis Paper *Friend, Foe or Frenemy*.[114]

On cultural and social inclusion

AI-based content recommendation and generative AI can amplify or create biases that affect how people are presented and which content connects with audiences. AI-generated deepfakes and misinformation can be exploited to harm social cohesion or seed conflict. On the other hand, applying AI to accurately create captioning, classify content and connect searchers with information can improve social cohesion and cultural inclusion.

On incentives to create

AI, especially generative AI, can impact remuneration for cultural and creative occupations. These impacts can arise when AI applications substitute for, rather than complement, human creation. AI can also affect copyright incentives. In the face of generative AI, these incentives need to be maintained and adapted as a source of revenue for arts and culture activities. There may be upstream impacts where copyright materials are used as inputs to generative AI and downstream impacts where outputs involving generative AI attract copyright protection.

On connections people have with arts and culture

When Australians cannot distinguish between human creations and those involving generative AI, it hinders their ability to understand who created the works and how. This can impact people's connections with arts and culture, especially when there is insufficient attribution to human creators and a lack of transparency about the use of generative AI.

On freedom of expression

When AI-based systems are used to moderate content (for example, for copyright or age-appropriateness) and recommend content on digital platforms, this can affect freedom of expression. While recommendations can amplify expression, blocking content can equally mute it.

Appendix 2 – Overseas government responses to AI

The 2024 EU AI Act explicitly recognises the challenges AI poses 'to artists, authors, and other creators and the way their creative content is created, distributed, used and consumed'.[115] While the law was passed in March 2024 and entered into force in August 2024, obligations on providers and deployers of AI systems will progressively come into effect by mid-2026. Arts and culture-relevant provisions from the AI Act include:

- Obligations on high-risk AI systems, with adverse impacts on certain rights being of 'particular relevance when classifying an AI system as high risk'. These rights include those of persons with disabilities, gender equality, freedom of expression and information and intellectual property rights.
- Obligations on general-purpose AI providers to require compliance 'with Union copyright law', including allowing copyright owners to opt out of a copyright exception for the use of their material to train AI.[116]
- Obligations on general-purpose AI providers to provide a detailed summary of the content used for training the general-purpose AI model.
- Obligations on deployers of AI systems that generate deepfakes to 'disclose that the content has been artificially generated or manipulated'.

Box 8 – Industry responses to EU government regulation

One EU AI Act obligation requires providers of AI systems to enact policies that comply with Union copyright law, including ensuring that copyright owners can opt out of a copyright exception for the use of their material to train AI.

Implementing this obligation, as well as opting out, will require industries to work at scale, given the vast datasets used for AI training and the large quantity of publicly accessible copyright material.

Two notable industry responses with the potential to work in tandem with this obligation are:

- Music industry giant Sony Music opting out of this copyright exception for music compositions and recordings in its catalog, through letters to 700 AI developers and music streaming services, along with a public statement.[117]
- Spawning, a firm offering large-scale tools that enable rights holders to opt out, and generative AI developers to filter out opted-out copyright materials from datasets used for training AI.[118] Its Do Not Train Registry already includes data use preferences for 1.5 billion items, providing an efficient way to opt out of the use of copyright material to train AI.

The US President's late 2023 executive order was aimed at making 'our world more prosperous, productive, innovative, and secure' while avoiding 'societal harms such as fraud, discrimination, bias, and disinformation'.[119] This order provides for some actions within this term of government, in contrast to the lasting obligations of the EU AI Act.

Relevant to arts and culture, the executive order has sought:[120]

- Guidance from the US Secretary of Commerce on 'existing tools and practices for digital content authentication and synthetic content detection measures' to protect people from 'AI-enabled fraud and deception'
- Recommendations for further executive actions on copyright and AI, including addressing recommendations from the US Copyright Office's study into AI. One of the first recommendations is a new federal law to provide redress for harm caused by unauthorised 'digital replicas'.[121]
- 'Principles and best practices for employers', covering a range of issues, including 'job-displacement risks and career opportunities related to AI'

Box 9 – US government-brokered commitments to AI safety from major AI firms

The White House has also brokered 'voluntary' commitments to the safe, secure and transparent development of AI from seven major AI firms: Amazon, Anthropic, Google, Inflection, Meta, Microsoft and OpenAI.[122] The commitments, announced in July 2024, include:

1. Ensuring products are safe before introducing them to the public
2. Building systems that put security first
3. Earning the public's trust

Australia was one of 20 countries consulted by the Biden-Harris administration on these voluntary commitments. It is unclear whether Australia or any of these countries influenced the commitments. While France, Germany, Italy and the Netherlands were also consulted, the EU was not.

Because these AI industry commitments have only been voluntary and are not enshrined in law, their impact beyond the current government remains uncertain.

Appendix 3 – Top 3 AI considerations for cultural and creative organisations

The following points may be useful for creative and cultural organisations that are considering developing policy and processes regarding the use of AI in their activities.

Transparency

- Australians now use AI to create, find, share and experience arts and culture, but with some caution.
- Telling Australians and other organisations when AI has been used can help them steer away from harmful uses to beneficial uses.
- Consider informing others about AI-generated content, AI-enabled decisions and interactions with AI.

Cultural and social inclusion

- ANA research shows middle Australians believe arts and culture can help them understand others, accept differences and connect with their community.
- Deciding when and how to use AI tools affects inclusion of Australians in arts and culture.
- AI has helped to translate works, caption video and improve access to collections.
- AI has also been used to create deepfakes and misinformation, which can harm social cohesion or seed conflict.

Where to obtain guidance

- Cultural and creative organisations can often obtain guidance on AI from industry peak bodies on why and how to use AI.
- Smaller cultural and creative organisations may be able to obtain knowledge and guidance from larger organisations in the same field.
- The federal Department of Industry has published a Voluntary AI Safety Standard, which includes guardrails that help promote transparency and inclusion.

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Age	Respondents	Aware	Use (% of aware)
0–7	359	58	67%
8–10	197	67	43%
11–15	191	125	44%
16–17	137	82	43%
0–17 (total)	884	332	(not reported)

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