TECHNOLOGY ADOPTION REVIEW

The consultation response was prepared by Dr Aysem Diker Vanberg, Senior Lecturer in Law at Goldsmiths, University of London. Dr Diker Vanberg's research expertise lies at the intersection of law and technology, focusing on fundamental rights in the context of machine learning and artificial intelligence, as well as the regulation of digital platforms.

She is a member of the Executive Committee of the British and Irish Law, Education, and Technology Association (BILETA) and, alongside her colleagues, has provided advice to the government on various consultations on behalf of BILETA .Her recent contributions include responding to Ofcom's consultation on "Protecting People from Illegal Harms Online" (December 2024), the BILETA Response to the White Paper on AI Regulation: A Pro-Innovation Approach (June 2023), and the Data: A New Direction Consultation (September 2021).

This consultation response concentrates on technology adoption in the UK's creative industries and highlights structural and regulatory barriers that contribute to the UK's lower ranking in technology adoption compared to some OECD countries, particularly Germany and Estonia.

Q1) Why does the UK rank lower than some OECD countries in technology adoption? What dynamics exist in the UK, but not in countries such as Germany or Estonia that might explain it?

Barriers to Technology Adoption in the UK's Creative Industries

1. Fragmentation of the Creative Sector

The UK's creative industries are characterised by a high proportion of SMEs, small businesses, and freelance artists. Unlike Germany, where the SMEs benefit from targeted digitalisation programs, many creative businesses in the UK lack the financial and technical capacity to invest in emerging technologies.

Estonia's centralised approach to digital transformation further facilitates technology adoption across sectors, whereas the UK's more fragmented ecosystem poses challenges for widespread digital uptake.

2. Access to Funding and Investment

Despite the UK's strong venture capital ecosystem, access to funding for digital transformation in creative industries remains uneven. In contrast, Germany has long-standing state-supported digitalisation initiatives, and Estonia's proactive digital policy provides targeted support for technology-driven businesses.

3. Regulatory Uncertainty and Intellectual Property Concerns

The UK's evolving regulatory framework (post Brexit) for AI, data protection, and digital content creates uncertainty for businesses looking to integrate new technologies. The creative sector, which relies on sound intellectual property rights, faces challenges regarding AI-generated content and copyright protections. Compared to Germany and Estonia, where regulatory clarity has facilitated smoother digital transitions, UK businesses may be hesitant to invest in technologies with unresolved legal implications.

4. Skills Gap in Digital and Creative Sectors

A significant skills gap in AI, data analytics, and digital production technologies further inhibits technology adoption.

Estonia's focus on digital education and Germany's vocational training programs have contributed to stronger technology integration in their respective creative industries. In contrast, the UK faces ongoing challenges in equipping creative professionals with the necessary digital skills to leverage emerging technologies effectively.

5. Infrastructure and Digital Connectivity

While the UK has made progress in digital infrastructure, disparities in broadband access and the pace of 5G deployment remain barriers to widespread adoption of digital tools in the creative sector. Estonia's digital-first governance and Germany's industrial digitization strategies provide more consistent connectivity, supporting greater integration of AI and other digital innovations within creative businesses.

Q2) What are the biggest barriers to technology adoption in your sector and/or across sectors? Does business size and geographic location affect how firms are impacted by these barriers?

Financial Constraints & Investment Gaps

- Many creative businesses, particularly SMEs and artists, lack the capital to invest in emerging technologies such as AI, VR, and blockchain.
- Public funding for creative technology adoption is often fragmented and insufficient.

Skills Gaps & Digital Literacy

- Many creative professionals lack the technical skills to integrate AI and other digital tools into their work.
- Training programs for AI, data science, and digital innovation in creative fields are limited, making upskilling a challenge.

Intellectual Property (IP) and Legal Uncertainty

- Unclear copyright and IP laws regarding AI-generated content deter investment and adoption.
- Concerns over fair remuneration, ownership rights and in the particular the lack of an opt out model in training AI models limit the willingness of creatives to embrace AI-driven production tools.

Lack of Collaboration

- Creative businesses often struggle to access technical expertise, as collaborations between tech developers and artists/designers are not well established.
- Universities and research institutions could play a bigger role in bridging this gap.

Infrastructure & Access to Cutting-Edge Technology

- High costs and limited access to advanced computing power (e.g., cloud services, AI models, 3D rendering tools) create a barrier.
- Many creative businesses lack reliable broadband, particularly in rural areas.

Q3) What is the evidence for technology adoption across different sizes of businesses?

Evidence indicates that technology adoption within the UK's creative industries varies significantly based on business size. Larger businesses often have the resources to invest in advanced technologies, while small and medium-sized enterprises (SMEs) face distinct challenges.

Larger Businesses:

- **Resource Availability:** Large companies can allocate substantial budgets to technology adoption, enabling them to integrate advanced tools such as artificial intelligence (AI) into their operations. For instance, WPP's acquisition of New Commercial Arts highlights the need for scale to innovate with AI, a capability smaller agencies might struggle to achieve independently. WPP, WPP Acquires New Commercial Arts <https://www.wpp.com/en/news/2024/09/wpp-acquires-new-commercial-arts accessed 14 February 2025

SMEs

- **Financial Constraints:** Many SMEs lack the capital to invest in emerging technologies. (See Techuk response to the House of Lords (14 Nov 2024)< https://www.techuk.org/resource/techuk-submits-evidence-on-scaling-ai-and-creative-industries-firms.html> accessed 11 February 2025)
- **Skills and Training:** SMEs often face challenges in upskilling staff to effectively implement new technologies.

Q7. What current policies and/or initiatives support technology adoption in your sector and/or across sectors?

Have these policies been successful at supporting technology adoption and why? Examples from the following categories are of interest:

- **national government**
- **devolved, regional and local government**
- **industry bodies**
- **business-led, including individual companies**

National Government Initiatives

- **Creative Industries Cluster Programme (CICP):** Launched in 2018 by UK Research and Innovation (UKRI), the CICP invested £55 million to foster research and innovation across nine creative clusters. These clusters included professionals from sectors like fashion, film, and gaming with academic experts to drive technological advancements.

- **Creative Industries Sector Vision (SV):** This document outlines the UK Government and industry's ambition to support the creative industries in England and across the UK, detailing policies and strategies to promote growth and innovation. Although the SV is a welcome initiative, it has been criticised for lacking concrete action plans to achieve its aims and for insufficient funding.

Industry Bodies

- **Creative Rights in AI Coalition:** Established to ensure that the development of AI respects and protects the rights of creators, this coalition has published key principles for copyright and AI policy, advocating for government adoption to safeguard creative works.

Business-Led Initiatives

- **UK Games Fund:** A government-funded program supporting the UK's independent games development sector, the UK Games Fund provides grants to assist with prototype game development, fostering innovation and technological adoption among small and medium-sized enterprises (SMEs).

Assessment of Success

The above initiatives have contributed to advancements in technology adoption within the UK's creative industries. For instance, the CICP has successfully united diverse sectors to drive innovation. The UK Games Fund has been instrumental in supporting SMEs in the gaming sector, leading to increased innovation. Additionally, industry bodies like the Creative Rights in AI Coalition are working to ensure that technological advancements, particularly in AI, do not compromise the rights of creators (artists). However, challenges persist, particularly for SMEs facing financial constraints and skills shortages.

Q9) What international examples of technology adoption in creative industries have been most successful, specifically from countries with economies similar to the UK and/or any novel or effective approaches from other countries?

Several countries with economies comparable to the UK have successfully implemented initiatives to foster technology adoption in their creative industries. Notable examples include:

Canada

Canada Media Fund (CMF): The CMF supports the creation of innovative content across digital media platforms. The CMF announced in March 2024 that it will invest $357M in the

Canadian television and digital media industries during our new fiscal year starting April 1, 2024.

South Korea

Content Korea Lab: the Korea Creative Content Agency (KOCCA) established Content Korea Lab (a corporate support centre) to support creators and start-ups in the content sector. This initiative offers resources such as co-working spaces, mentorship, and funding opportunities. It focuses on integrating advanced technologies like AI and VR into content creation.

Singapore

Media Development Authority's (MDA) Interactive Digital Media Programme Office: The Media Development Authority's (MDA) Interactive Digital Media Programme Office is a division within the MDA responsible for overseeing and promoting the development of interactive digital media content in Singapore, including initiatives to support the creation and distribution of innovative digital media products like games, web applications, and mobile apps.

Finland

Finland's "Demola" Co-Creation Platform: Demola brings together university students and local, European and international companies to co-create innovative solutions, including those in the creative industries. This model promotes the adoption of new technologies by fostering collaboration between academia and industry.

14. **What approach or policies should government consider to accelerate technology adoption across the economy and/or within sectors?**

Strengthening University-Industry Collaboration

- **Increase the number of dedicated creative technology hubs** at universities to serve as R&D centres where businesses, researchers, and creatives co-develop and test emerging technologies like AI, and virtual production. For instance, the Centre for Creative Technologies at the University of Bristol collaborates closely with local creative industries, including filmmaking, animation, documentary production, and live performance and it has been ranked among the UK's top 10 creative clusters. This demonstrates that to enable technology adoption, the number of dedicated creative technology hubs need to be increased.
- **Expand Knowledge Transfer Partnerships (KTPs)** to incentivise collaboration between universities and creative businesses, ensuring that research-led innovation reaches SMEs and artists. or instance, the partnership between Acme Studios, which develops new purpose-built artist studios, and Central Saint Martins demonstrates that KTPs effectively enhance business productivity and upskill staff members. Government funding to expand KTPs is crucial for accelerating technology adoption."
- **Fund practice-based PhD programs** focused on the intersection of AI and the creative industries, allowing students and researchers to work directly with businesses on real-world challenges. For instance, the South and East Network for Social

Sciences (SENSS) offers PhD studentships on various themes, including sustainability and climate change, health and well-being, justice, institutions, and social change, among others. These studentships also include a mandatory industry placement of approximately three months. In this vein, it would be beneficial to offer a similar PhD studentship for students researching the adoption of technology in the creative industries, which could also include placements within relevant SMEs in the creative sectors.

Enhancing Digital & AI Skills Training for Creatives

- **Develop modular, flexible training programs** for AI, VR, and digital content creation, accessible to SMEs and freelancers who lack the time/resources for full-degree programs.
- **Subsidise short courses** in creative arts and technology, delivered by universities and industry partners. There are a few universities such as the City St George's University of London that offer short courses on filmmaking, event management etc. However, if the government could subsidise these courses, it would be very helpful in upskilling individuals working in creative industries.

Targeted Financial Incentives for SMEs & Startups

- **Expand R&D tax credits for creative businesses** investing in AI, automation, and digital production. Currently the Government allows qualifying companies to increase their amount of allowable expenditure and claim tax reliefs. However, it could be useful to revise this to ensure that SMES can spend more on adopting technologies
- **Introduce technology adoption grants** specifically for creative sector SMEs to access new tools, ensuring that smaller firms are not left behind.
- **Develop a "Creative Digital Voucher Scheme"** that allows creative businesses to access expert advice and technical support from universities and research centres.

Ethical & Legal Frameworks for Creative AI

Develop clear IP guidance to support creators navigating generative AI technologies. In this regard, the results of the Copyright and AI: Consultation dated December 2024 and the subsequent steps taken to adapt the IP legal framework are crucial to develop a clear legal framework.

Support AI governance research at universities to explore fair monetisation models for artists using AI-generated content.

Encourage the adoption of Responsible AI Standards tailored to the creative sector.

Improving Digital Infrastructure for the Creative Economy

- **Invest in affordable access to cloud computing and AI tools** for smaller creative firms.
- **Expand high-speed broadband access** to ensure creatives outside urban centres can fully participate in digital transformation.

- **Create open-access AI and digital production labs** at universities, accessible to creative professionals and students alike.

Goldsmiths University hosts expertise in many of the areas listed above, including computing and AI, digital arts, creative enterprise, and the regulation of emerging technologies from legal and ethical perspectives. My academic colleagues and I would be keen to offer advice and insights based on our research and practice, when it comes to developing and piloting initiatives to strengthen the collaboration between creators, SMEs and universities. Such initiatives have a strong potential to address existing skills gaps and issues around equitable access to infrastructure and technology. Goldsmiths' expertise in AI ethics and data protection also makes it a strong partner for shaping ethical AI policies in creative industries.