

Creative innovations drive colossal inward investment, creating jobs and generating revenue in all parts of the UK. Creative Technology (CreaTech), for example, is a hub of innovation and a significant growth sector, attracting twice as much investment as the next biggest European market in 2020, and raising nearly £1bn in venture capital investment. This places the UK's CreaTech industry third in the world for venture capital investment, just behind the US and China.

Public investment has been integral to driving this growth, with public funding from URKI – Innovate UK proving to be a catalyst for creative companies in helping them diversify business models, increase productivity and generate cutting-edge creative ideas that put the UK on the world stage, whilst responding to major global challenges and leading the charge to net zero.

Investment programmes such as Innovate UK's 'Fast Start' have been hugely instrumental in empowering the agility of the creative sector as they adapted their businesses and innovated in response to the impact of the pandemic. Longer term, flagship programmes such as the Creative Industries Clusters Programme (CICP) and Audience of the Future challenge have recognised the enormous innovation potential of the creative industries, driving job-creation and delivering significant return on investment: £55m of public investment in CICP is set to leverage an impressive £149 million in private investment by 2024.

SUMMARY OF RECOMMENDATIONS

Unlock Inward Investment

1. Expand the definition of R&D for tax purposes, enabling far more creative businesses and innovations to benefit from the relief
2. Introduce sector-specific training to better equip R&D tax inspectors to accurately assess applications received from creative businesses
3. Accompany this expansion with the extension and expansion of Creative Industries Tax Reliefs to ensure we're not left behind on the global stage

Maximise Growth Potential

4. Deliver an ambitious innovation funding settlement that unleashes the potential of creative ideas, building on the success of Innovate UK's Fast Start and UKRI's Creative Industries Clusters
5. Establish a Creative Industries Investment Bank to unlock finance, inward investment and export opportunities, benefiting a greater diversity of people, businesses and places
6. Introduce an "Innovation Enterprise Allowance" for entrepreneurs out of work and open up public funding for innovation to practitioners and freelancers with creative ideas

Incentivise Innovative Solutions

7. Introduce an "Innovation Employment Scheme", building on the model of government's Kickstart Scheme, to sponsor employers to take on creatives out of work to help their business innovate
8. Provide business rates relief for shared working spaces with access to high-cost tech and equipment for businesses and freelancers
9. Incentivise cross-sector collaboration by facilitating links between the creative industries and other key sectors in responding to global challenges

CONTENTS

1. What do we mean by “creative innovation”?
2. What does creative innovation look like?
 - a. Business
 - b. Local
 - c. Global
3. Barriers to creative innovation
4. Opportunities to unleash creative innovation

THE UK'S CREATIVE INDUSTRIES

- The creative industries contributed £115.9bn in GVA to the UK economy in 2019, which is greater than aerospace, automotive, life sciences and oil and gas sectors combined. The sector represents almost 6% of the UK's GVA.
- They were growing at four times the rate of the UK economy as a whole and experienced strong growth in all parts of the UK. Between 2010 and 2018, the sector's GVA grew by 39% in the North West and 55% in Scotland.
- The creative industries were creating jobs at three times the UK average, employing 2 million people across the UK. Employment in the sector grew by 21% in Northern Ireland and 30% in the West Midlands between 2010 and 2017.
- Almost 1 in 8 UK businesses are creative businesses and 95% of these employ 9 people or fewer.
- 32% of creative workers are freelancers, double the wider UK economy, and in some sub-sectors the figure is much higher, such as 70% in Music, Performing and Visual Arts.
- The creative industries exported £46bn in goods and services worldwide and accounted for almost 12% of UK service exports.

The **Creative Industries Federation** is an independent, not for profit, membership organisation which represents, champions and supports the UK's creative industries. Through our wide network of creative organisations, businesses and individuals, our influential policy and advocacy work and our support services, we connect creative businesses and individuals with the money, markets, government and the opportunities they need to thrive. The Creative Industries Federation, with its sister company Creative England, is part of the non-profit group, Creative UK.

www.creativeindustriesfederation.com

For further information, or any queries, please contact: Policy & Public Affairs Officer, Natalia Batchelor, at natalia@creativeindustriesfederation.com

1. What do we mean by “creative innovation”?

Defining Innovation

DCMS¹ uses a definition of innovation based on OECD’s Oslo Manual,² which defines innovation as when businesses introduce **“a new or significantly improved product... or any new or significantly improved forms of organisation, business structures or processes... The focus is therefore on the commercial introduction of any innovation rather than on its technological content”**.³

Defining Research & Development (R&D)

The Frascati definition of R&D (‘the Frascati definition’) used in official international surveys, states that *“Research and experimental development (R&D) comprise creative and systematic work undertaken in order to increase the stock of knowledge – including knowledge of humankind, culture and society – and to devise new applications of available knowledge”*.⁴

We know that creative businesses are highly innovative. Research commissioned by DCMS reveals that approximately “half (51%) of creative industries firms had introduced new or significantly improved products or services in the last three years, over a quarter (29%) had introduced new or significantly improved products or services that were completely new to the market. Additionally, a third (31%) of firms had introduced new or improved forms of organisation, business structures or processes”.⁵

Research undertaken by the consultancy OMB for DCMS confirmed that “there are high levels of research and development (R&D) among creative industries firms, with 55% of all creative industries firms having conducted R&D (following the Frascati definition) in the last year.”⁶ This is significantly higher than the economy at large, with the UK Innovation Survey 2019 showing that just 16% of all UK businesses had invested in internal R&D.

Creative innovation and R&D go beyond the scope of individual project development. Creatives are constantly looking for new ways to respond to challenges and evolve their business models, value creation and, where applicable, extend their audience reach. Across the UK, there is a wealth of evidence to demonstrate that our sector is a core driver of innovation not just within the creative industries, but across many other parts of the economy including manufacturing and healthcare technology.

Use of innovative craft applications in Bentley cars

Bentley, the British luxury car manufacturer with its headquarters in Crewe, is a craft-driven organisation. Its uses of traditional craft techniques, combined with technological innovation, contribute to Bentley’s

¹ In research to gauge innovation activity across the creative industries, using a metric of relevant activity in the past three years: R&D in Creative Industries Survey, Research Report, OMB Research for DCMS, 2020

² The international reference guide for collecting and using data on innovation

³ R&D in Creative Industries Survey – 2020, OMB Research

⁴ ‘Frascati Manual 2015: Guidelines for Collecting and Reporting Data on Research and Experimental Development’ OECD

⁵ Ibid.

⁶ Ibid

value added, and helps the firm to be distinctive and competitive in an international market for luxury. To achieve the quality required, Bentley invests heavily in the development of the required crafts skills. While the process of delivering Bentley's bespoke products is costly, the company reports that the finished products are highly valued by customers all over the world.

2. What does creative innovation look like?

For the purposes of this paper, we highlight examples of:

- **Business innovation**, where organisations and freelancers have pivoted and/or expanded their work to respond to the pandemic, market demand and to develop world-leading products and services;
- **Local innovation**, where the creative sector has responded to local priorities, such as social isolation, physical, mental and public health, high street regeneration and sustainability;
- **Global innovation**, where creative ideas have been harnessed in the race to net zero and innovations in sustainable packaging and global healthcare.

Business Innovation

The pandemic has caused devastation across UK business, but some of the hardest hit have been those in the live events sector, who are reliant on footfall to earn revenue.⁷ Creative businesses and freelancers have had to rethink and redesign how they operate and the services they provide, to allow them to survive the impacts of the pandemic and to connect with both existing and new audiences. Many have also pivoted to directly respond to the crisis, harnessing their creative assets and ideas to support key workers, make places safer and offer care to those who have suffered from Covid-19:

Pivoting business activities in direct response to the pandemic

- **Architecture:** Architects and designers pivoted their expertise to develop an immediate response to the crisis, applying their skills to everything from building the new Nightingale Hospitals, to looking at how public spaces might mitigate the coronavirus risk through innovative ventilation and filtration systems.
- **Publishing:** Grazia magazine responded to the crisis by spotlighting specific UK medics on their covers and offering free subscriptions to NHS workers.
- **Advertising:** Billboard Media replaced their traditional advertising with a 'Thank You NHS' advert, placed on roads leading to hospitals – specifically targeting those key workers not able to stay home.
- **Performing Arts:** English National Opera established a breathing and wellbeing programme, 'ENO Breathe', developed specifically for people recovering from Covid-19, who are still suffering from breathlessness and associated anxiety.

Covid-19 has highlighted the importance of agile business models in ensuring the survival and growth of creative organisations. Many businesses have been forced to pivot their working practices, however under these unprecedented circumstances, opportunities to increase impact and reach have been revealed and

⁷ 'Covid-19 Creative Industries Impact Survey' Creative Industries Federation, Feb 2021

accelerated. The pandemic has opened up additional funding streams for some parts of the creative industries. This has resulted in certain creative businesses securing the right investment to respond to the impact of the pandemic and pivot their business models, which has led to some extraordinary leaps forward for the creative industries, and for the UK's global competitiveness.

Innovate UK's Fast Start competition helped unlock some of these opportunities. The success of the competition led to further funding calls, including Innovate UK's £2.5 million sector specific 'Creative Industries Fund' which aims to provide targeted support for growth so that ambitious, creative businesses can reach their potential.⁸

Innovate UK – Fast Start

In Spring 2020, Innovate UK launched fast Start, a £40 million programme recognising the role of businesses in boosting the UK's reliance to the long-term impact of the coronavirus outbreak and similar situations in the future.

The Fast Start funding competition focused on *"business-led innovation in response to global disruption"*.⁹ It was sector-agnostic, using a scoring rank to select successful applicants and was highly competitive in nature. Based on previous and comparable Innovate UK programmes, there was an expectation that the Creative Industries would make up 4-6% of the funding portfolio. However, the Fast Start competition proportionally funded at least four times more Creative Industries projects than expected. Innovate UK's analysis of the competition suggests that this was due to the fact that the emergency nature of the programme made it better reflective of their needs. These needs included:

- 100% funding
- Upfront payments
- Small grants, focused on innovative and rapid responses to market needs
- Simple and streamlined application form
- Quick and responsive delivery of funding processes
- Further non-financial support for commercialisation.¹⁰

Lucky Mary, Bristol, funded by Fast Start

Lucky Mary is a cutting edge, Bristol-based Extended Reality (XR) studio which is applying R&D to enable the continuation of entertainment and live events in times of lockdown and self-isolation. Lucky Mary's 'Studio Giggle' is implementing innovative ways to continue to broadcast and engage audiences, with examples ranging from making animation projects in place of film shoots, to creating streamed events for home-based attendees in place of live events.

Future plans for the company include the launch of their XR studio at their Bristol base, which, will be the most innovative of its kind, with only a very small handful of others available globally. This state of the art space will not only bring the very highest production value and streaming experiences to all sorts of

⁸ 'Creative industries fund: fast start business growth pilot' Innovate UK

⁹ 'Business-led innovation in response to global disruption (de minimis)' Innovate UK

¹⁰ 'Creative Industries and Fast Start' Innovate UK

broadcasts and events, it will also immediately create work for a significant swathe of leading creative talent that have seen their work disappear overnight.

Animal Vegetable Mineral, London, funded by Fast Start

This virtual publisher platform is a simple-to-use, low-cost 3D exhibition publishing and marketing tool for the arts and culture sector. It is designed for individual artists, galleries and museums to create, publish and market art and cultural content, online. Unlike other virtual exhibition solutions currently on the market the virtual publisher enables bespoke and off the shelf spaces. It accommodates both 2D and 3D content at high quality and has built in marketing and sales tools designed to deliver a clear demonstrable ROI.

The application has two key components, a set of virtual production tools and an exhibition showcase application that is browser-based, platform agnostic, low-cost, flexible, secure and easy-to-use.

The team have made excellent progress and are currently testing the production tools in the market with target customers. Feedback has been extremely positive and a number of additional work packages have been identified which will enable the impact of the innovation and the speed to market to be increased.

Expanding quickly into international markets is a key part of the next phase of the commercial strategy. Tracking the positive ROI and environmental impact of the tools with new customers will be a key part of the marketing strategy.

JAM.ACADEMY, funded by Fast Start

Jam.Academy is a radical new approach to teaching games design and immersive (Virtual Reality & Augmented Reality) development. The sector is in desperate need for innovative new training methods after college and university shutdowns mean over 60,000 students studying in games-related courses, are not getting any of the industry experience to get them ready for work. In addition, the sector itself is changing, adapting to remote working practises that set to become the new normal.

The product is a remote training tool and portfolio building solution that connects users with complementary skill sets into cohorts of remote game makers, providing them with varying industry-led briefs to complete in set amounts of time, building their skills as a team as they progress. By using a unique combination of existing digital communication tools and embedding workplace mindsets and behaviours, a highly scalable and engaging platform that removes geographical barriers to entry and lets users rapidly build a credible portfolio of work can be created.

The primary innovation is using 'game jams', which are an established tool for rapid game design, and turning them into a credible learning methodology that is mapped to existing university and college-level courses. A game jam is when a group of people come together to form a team and build a game around a prescribed theme or idea over a set amount of time. Game jams teach workplace mindsets and behaviours, like adaptability, communication and problem solving, accurately reflect real studio life.

Other innovations include a shared digital workspace for cohorts (specifically for games design) direct

access to digital mentors (industry professionals that can offer advice and feedback on work) and the automatic assembling of teams based on experience and career trajectory (Creative, Technical or Design pathways).

By the end of this project, the following will be completed:

- Researched emerging industry trends for remote working and looked at best practice
- Completed remote user testing with 120 participants, developing key insights into remote cohort dynamics
- Embedded industry-specific workplace behaviours and mindsets
- Creates a 'game jam' based learning ladder with educational experts
- Developed a minimally viable digital platform
- Have a clear route to market

Prior to the pandemic, investment was already being targeted at the creative sector to unlock new innovations across products and services. Through the Creative Industries Sector Deal (2018), the £80m Creative Industries Clusters Programme established nine new R&D partnerships (see next section below) and the £33m Audience of the Future programme invested in new uses of immersive technologies, involving some 3,000 creative companies and 62 research organisations across the UK.

Audience of the Future, UKRI – Innovate UK

Launched in 2018, the Audience of the Future Challenge brings together creative businesses, researchers and technology experts to create striking new experiences to captivate the world's imagination, helping to pioneer new ways of storytelling, and growing the UK's position as a leader in creative content. **Since launch, public investment of £39 million in the Audience of the Future programme has leveraged an additional £23 million in private investment.**

One of the four Audience of the Future demonstrator projects, Dream, was run by the Royal Shakespeare Company, in collaboration with Manchester International Festival, Marshmallow Laser Feast and Philharmonia Orchestra. Inspired by Shakespeare's *A Midsummer Night's Dream*, audiences were able to directly influence the live performance from wherever they were in the world, using the latest gaming and theatre technology together with an interactive symphonic score designed to respond to the actors' movement during the show.

Local innovation

As a sector distributed in communities across the UK, creative innovation has long contributed to local prosperity, creating jobs, ideas and wealth for towns, cities and rural regions. Unlocking creative innovation in these places has a dual benefit: it increases local businesses' ability to commercialise and scale their work, which contributes to the local economy, while also increasing the social value of living in that neighbourhood. This in turn encourages people back to high streets and towns, drives visitor economies, and helps local areas retain workers and families.

Government has recognised this role, strategically investing in ideas and places through public bodies like UKRI – Innovate UK, producing success stories that can now be evolved and upscaled. Among them is the ambitious Creative Industries Clusters Programme (CICP), delivered on behalf of UK Research and Innovation (UKRI) by the Arts & Humanities Research Council (AHRC), which aims to create jobs and drive the creation of companies, products and experiences. **It is expected to leverage an impressive £149 million in private investment by 2024.**

Creative Industries Clusters Programme (CICP)

From screen industries and digital storytelling to fashion and videogames, some of the UK's best performing and world-renowned creative businesses have received a major boost thanks to the £80 million CICP.

The CICP comprises nine research and development partnerships, which are led by universities, based around clusters in the four nations of the UK, and an independent Policy and Evidence Centre led by Nesta with partners. The programme aims to transform the extent and quality of interactions between our leading research intensive universities and creative businesses, bringing together world-class research talent from across the UK in a first-of-its-kind R&D investment.

The four immersive technology demonstrators that sit at the heart of the Audience of the Future programme are pioneering new ways of telling stories through interactive and immersive technologies in live performance, visitor experience, the screen industries, and esports. Together these two programmes have already almost doubled in size through leveraged industry and devolved administration funding.⁸

Focus on Clwstwr, Cardiff

Part of the CICP, the ambitious Clwstwr Creadigol programme provides the link between academia, industry and government to create innovative new products, services and experiences in the screen and news sectors. Based in Cardiff, Clwstwr is creating a platform for small media businesses and freelancers to compete against the highly integrated global players.

Clwstwr's first funding call received 134 expressions of interest, which represents an £8m ask from industry. 23 companies were chosen to receive the programme's first £1 million, including National Dance Company Wales, Gorilla TV and Film Hub Wales. This funding was matched by the successful applicants.

The funded projects are wide ranging, from news services for school children, to the use of 'layered reality' immersive technology to transform the way people experience dance. Plan V is developing a low-cost, virtual reality, bespoke studio to help small visual effects design studios be competitive. AMPLYFI is tipped to become Wales' first unicorn and will give journalists greater accuracy and clarity of information from online search by enhancing existing AI functionality.

Many of these projects have the potential to create and develop IP that is made and based in Wales - crucial if the region is to make its highly-respected screen industry credentials more sustainable.¹¹

¹¹ <https://creativeindustriesclusters.com/wp-content/uploads/2020/02/Clusters-Booklet-Story-So-Far-V12-web.pdf>

Focus on Future Screens, Northern Ireland

In Northern Ireland, the Creative Industries Clusters Programme – Future Screens NI – has supported the creation of Little Forget Me Nots, an embroidery start-up which supports individuals bereaved by the pandemic to create textile expressions of grief and remembrance -this is now a thriving online business which delivers significant mental health benefits to its community of amateur embroiderers. On a longer-term strategic basis, this cluster and a network of regional higher education institutions and local business partners also aims to increase youth access to cultural and creative employment in its most disadvantaged areas through the Story Engine programme, which is designed to allow disaffected young people access to media creation tools and use their output to inform regional policy.¹²

Driving Foreign Direct Investment to places across the UK: Microsoft Mixed Reality Capture technology

Innovate UK funded the Microsoft Mixed Reality Capture technology at Dimension Studio, with the Digital Catapult. This has had a significant positive effect on the development of production infrastructure in particular places across the UK. Dimension Studio, in London, was the first partner outside of the US who had access to this state-of-the-art volumetric and 3D capture technology – attracting international clients including Sky and Universal. Dimension Studio now operates in four locations, expanding into the US, working across a number of game-changing production technologies, including LED screen technology. Earlier this year DNEG announced a virtual production partnership with Dimension. The partnership will help enrich the service that DNEG offers to its filmmaking partners and help cement revolutionary real-time development capabilities into the centre of the UK's post-production sector.

Growing UK post-production facilities has had a knock-on effect to our production infrastructure. London is now the global capital for post-production and has become a catalyst for FDI across the UK. Major new studio developments are underway in every corner of the country, in the south-east of England, Cardiff, Northern Ireland, Yorkshire, Manchester and Scotland. As well as this all of the existing big studios have ambitious expansion plans.

- The 33-acre Shepperton site has the potential for a further 20-odd sound stages following the planning permission granted to the Pinewood-Shepperton group. To add to the existing 14 sound stages which are being used by Netflix as their UK production hub.
- A 13-hectare (32-acre) studio complex will be built in Elstree, will open in early 2022. Sky Studios Elstree will become the European production base for Sky and NBCUniversal.
- Blackhall Studios has announced plans for a massive, £150 million development at the University of Reading's Thames Valley Science Park, which will create 3,000 jobs. This will be the UK's biggest film studio.
- Titanic Studios in Belfast is still leased to HBO which has just completed shooting the Game of Thrones prequel there. Belfast Harbour Studios launched two years ago. The site is run by the Belfast Harbour Commission and is expected to add further stages as well as extra office space and workshops by 2021.

¹² University of Nottingham research project conducted on behalf of The Creative Industries Foundation.

Global innovation

The contribution of the creative industries to the national and global effort against Covid-19 demonstrates the power of the sector to respond to the world's most challenging and pressing issues. The UN's Sustainable Development Goals (SDGs) highlight that alongside the pandemic, the world faces a series of serious problems including social and health inequalities, climate change, and sustainable economic growth.

Both the United Nations Conference on Trade and Development (UNCTAD) and the Sustainable Goals Fund have recognised that the creative industries have a critical role to play in the global sustainability agenda, and in recognition of this 2021 has been declared International Year of Creative Economy for Sustainable Development as: *"More than ever, we need creative thinking, innovation and problem-solving to imagine ourselves out of the challenges of inequality and vulnerability that we face daily. The creative industries, the lifeblood of the creative economy, are well placed to help."*¹³

Healthcare

Sea Hero Quest: Using CreaTech to address health challenges

Sea Hero Quest is a specially designed game, to be played on mobile phones, that can detect people at risk of Alzheimer's disease. Created by Deutsche Telekom, in partnership with game developers, Glitchers, Alzheimer's Research UK, University College London and the University of East Anglia, the game helps researchers to understand dementia more fully, by seeing how the brain works in relation to spatial navigation. As players navigate the territory of the game, researchers translate every half second of play into scientific data.

The research journal PNAS reported that Sea Hero Quest "provides a means of discriminating healthy aging from genetically at-risk individuals of Alzheimer's disease," which is particularly significant as a standard memory and thinking test is not able to distinguish between non-risk and at-risk groups. The data collected by this app is critical to Alzheimer's research – "every two minutes spent playing the game is equal to five hours of lab-based research. And having three million players globally equates to more than 1,700 years' worth of lab-based research." By April 2019, the game had been downloaded and played by more than 4.3 million people worldwide.¹⁴

FundamentalVR, London, UK & Boston, USA

Supported by Downing Ventures, Tern PLC, Epic Private Equity, Nexus Ventures, Brighteye Ventures, The Mayo Clinic, Sana Kliniken and the Founders Factory.

Fundamental VR is transforming the way surgeons prepare, practice and refine their skills through its proprietary haptic VR platform.

¹³ Marisa Henderson, UNCTAD's creative economy programme head, cited in: *Creative economy to have its year in the sun in 2021* (UNCTAD, January 2021: <https://unctad.org/news/creative-economy-have-its-year-sun-2021>)

¹⁴ 'The Mobile Game that can detect Alzheimer's Risk' University of East Anglia

FundamentalVR has designed a proprietary haptic VR platform that is replacing wet labs and cadaveric training. It offers remote, collaborative virtual training that has the potential to accelerate life science product adoption by medical professionals. The platform is hardware agnostic so it works seamlessly across multiple haptic and VR devices. Further, it is highly accessible to potential users because it works not only with a tethered haptic system, but also with stand-alone, low-cost headsets that are readily available on the market.

Throughout 2020, FundamentalVR has focused on developments in two key areas: making the platform robust, scalable and capable of being used by unlimited numbers of concurrent VR users at a time; and building software development kits. The first development allows collaboration across all parts of the platform between surgeons around the world without them having to travel – this was vital when Covid hit. The second development allow customers to amend, tweak and adjust simulations themselves.

Precision and cost-effectiveness are two of the most important requirements for FundamentalVR's clients. According to Richard Vincent, FundamentalVR's founder and CEO, the platform has dramatically reduced the cost of bringing a product to market for its pharmaceutical clients. It has also significantly increased its training efficacy when compared with traditional approaches.¹⁵

Climate change and environmental sustainability

Advanced Clothing Solutions (ACS), Glasgow

Advanced Clothing Solutions (ACS) is the UK's No.1 men's formal-wear rental specialists and have been successfully providing rental services to High Street Retailers and Independent Stockists for over 20 years.

ACS is capitalising on the lull in business demand caused by Covid-19 to transform from a Traditional Men's Hire-wear Provider to the Global Centre of Expertise in Sustainable Fashion, while expanding the size of ACS four-fold during 2021. ACS' goal is to address sustainability in fashion, as the industry in its current form is unsustainable: it is the second biggest polluting industry and is projected to use 25% of the world's carbon budget by 2050.

The Innovate UK funded ACS project will develop a Hire Service Model to provide a fully managed Clothing Hire Service to Retailers including consultancy support for customisation and implementation. It also includes a Returns Service Model that refurbishes Retailer's returned clothes. This will help retailers reduce losses in income they have faced due to Covid-19 and also reduce the costs that Retailers incur with clothing returns. UK Retailers loose £20bn annually on returned clothing with more than 50% disposed of.

This project provides ACS with a circular business model that will minimise impact on the environment and also create an Operational Excellence Model to make us the Global Centre of Expertise in Sustainable Clothing Hire. A Talent Pipeline Model will also be developed to recruit and upskill local disadvantaged job seekers, who would help to resource the ACS expansion.

¹⁵ 'UK Immersive Tech: VC Investment Report' supported by HTC's VIVE X, A. Easton, S. Beaney

Looking ahead, ACS also intends to plan for B-Corps Status in 2021 and to achieve Zero Carbon Emissions by 2025. Early indications suggest that these two outcomes would increase demand for services from ACS ten-fold by 2025.

ACS also intends to do R&D into a Sustainability Clock, which would be a real-time balanced score card that updates the savings to the planet every time an item of clothing is rented to a customer.

Future of Packaging: Arts University Bournemouth and Lush

Lush is an ethically-driven global cosmetics retailer with headquarters in Poole, Dorset. In November 2020, AUB collaborated with their research and development packaging team on a commercial project called *The Future of Packaging: Accessibility and Sustainability*. The challenge brief focused on two areas of development: enabling users with motor and/or visual impairments to access products more effectively, and reusing packaging waste within the supply chain.

Over the subsequent month, 170 AUB students responded to the challenge, forming 56 cross-disciplinary teams from every level of the university's FE and HE programmes, including 20 selected 2020 graduates. Commercial insights were briefed by Lush with mentoring facilitated by AUB staff and Lush's packaging R&D team.

The outcomes were a series of shortlisted concepts presented to a Lush panel of experts, with three teams invited to develop their concepts further with the company. Two graduates have since received the offer of paid internships at Lush as well as a summer residency in AUB's new Innovation Studio.

Simon Allen, Lush R&D Creative Production Senior Support explained: *"It was an absolute pleasure to work alongside AUB staff and students to tackle some profound issues surrounding motor and visual impairments while remaining within our packaging ethics. The students tackled this with great energy and enthusiasm and the results were staggering. I could not have asked for a better outcome. It's elevated our ways of thinking and opened the doors of AUB into the Lush world for future collaborations."*

Sustainable textiles: Piñatex™

Support from Innovate UK has been integral in developing Piñatex™, a material made from the natural fibre of pineapple leaves, that harnesses advanced technologies to create a totally sustainable natural textile. Bridging the gap between leather and petroleum-based textiles, Piñatex™ is now being sold to companies ranging from furniture producers to shoes and accessories. Innovations made through Piñatex™ not only support the circular economy but have also had a wide ranging international economic impact by working directly with farming cooperatives and creating sustainable income streams for pineapple farmers in the Philippines.

Immersive recycling programme: Copsy

London's StoryFutures partnered with Heathrow Airport during 2020 to co-develop an immersive recycling programme called 'Copsy'. The programme fused a unique combination of consumer

psychology, computer vision, emotion recognition and augmented reality (AR) technologies. It resulted in an upturn of 130% in recycled coffee cups, with over 6,000 cups recycled during the test period.

3. Current barriers to creative innovation

The limited definition of R&D in the UK

The UK currently offers tax reliefs for businesses undertaking R&D activity. HMRC currently defines R&D for the purposes of tax reliefs based on definitions set out in the UK's Generally Accepted Accounting Principles, which in turn draws upon the Frascati definition of R&D. **However, HMRC narrowed the scope of the Frascati definition such that only R&D as it relates to scientific or technological delivery is currently permitted.**¹⁶ Under the definition used by HMRC, just 14% of creative businesses qualify for the tax relief, in comparison to the 55% that would qualify under the Frascati definition.¹⁷

The qualifying expenditure permitted for freelance workers is also substantially lower than it is for employees, sitting at 65% in comparison to 100%. This sets the creative industries at a notable disadvantage, as freelancers make up a significant portion of the workforce and are routinely brought into projects for their specialist expertise and specific skillset.

Global threats to our world-leading status

There are big costs associated with under-investment. **Emerging markets such as South Korea and Japan and future-facing markets including France and Canada are investing significantly in creative innovation and education**, recognising the role our sector plays in not only developing new products and services, but future-proofing other industries too.

This paper has outlined a number of impactful interventions have been implemented in recent years, returning money, jobs and world-leading ideas to the UK's nations and regions. These interventions must now be evolved and upscaled to ambitious levels.

Limited access to finance

Research shows that entrepreneurs in the creative industries find it harder to secure finance from mainstream lenders and investors than those in other sectors, in part because of the nature of their innovative ideas. Many creative businesses trade in intangible assets, which are more difficult to quantify than tangible assets and therefore harder to articulate for entrepreneurs and harder to interpret for mainstream lenders. Creative businesses are keen to use external finance: 67% of creative SMEs would welcome more information about how to secure it,¹⁸ but struggle to access what they need and feel their sector is not understood by lenders.

¹⁶ 'Claiming Research and Development tax reliefs' HMRC. Available at: <https://www.gov.uk/guidance/corporation-tax-research-and-development-rd-relief>

¹⁷ R&D in Creative Industries Survey – 2020

¹⁸ 'Access to Finance' BDC on behalf of the Creative Industries Council

A lack of tailored guidance and business support

Lack of access to business development expertise is a systemic failure within the creative industries. Given that 95% of the creative industries employ nine people or fewer, many creative businesses do not have the resources to employ commercial business development professionals. In some cases, this can mean that although creative practitioners produce world-leading creative output, they do not always have the expertise to monetise their work.

Creative businesses are also less likely to plan than SMEs generally, yet they are keen to access advice and support. 55% creative businesses knew they needed to develop their management and financial skills in order to grow their business.¹⁹ Business development experts, including accountants and legal professionals provide vital services to the creative industries. Freelancers and creative businesses of all sizes must have access to the tailored guidance, support and advice needed to commercialise their ideas and grow their businesses.

Limited access to support on Intellectual Property rights

Intellectual Property (IP) rights are a vital mechanism to support and protect creative R&D and innovation. These rights provide creative workers who contributed to innovation, and/or those who invested financially into its production, or improvement of the innovative product or process, with the ability to commercialise their ideas.²⁰ In an era of increased network accessibility, such as through the internet or creative apps, creative output can be easily digitalised and exchanged for little to no cost.

Whilst copyright, trademarks and patents are key to protecting creative innovations, IP tools such as these are often not well understood by businesses and entrepreneurs, which poses a threat to innovation and growth.

Dr Hayleigh Boshier, Expert on Intellectual Property in the Creative Industries, and Senior Lecturer in Intellectual Property Law at Brunel University

“The primary function of intellectual property is to protect and support innovation and creativity. People working in the creative industry need access to intellectual property support, in order to maximise the value of their inventions and creative outputs.

At a regional level, the government should invest in training, grants and tax breaks for the creative industries. Funding and tax breaks can enable training in intellectual property for artists, innovators and entrepreneurs, as well as support for knowledge exchange departments. Likewise, these mechanisms should be used to support the industry to upskill their workforce and reskill those who can move into the creative industries. There is a huge knowledge gap between innovators and the value of IP as a tool to protect and monetise their creations. However, there is also a growing appetite for more understanding

¹⁹ Ibid.

²⁰ ‘IP and creative industries’ The Innovation Policy Platform. Available at: <http://www.innovationpolicyplatform.org/www.innovationpolicyplatform.org/content/ip-and-creative-industries/index.html>

and support in this area, as more people recognise the value of their IP. At Brunel University Pro Bono Office, where we provide a free intellectual property audit for entrepreneurs, innovators, creators and start-ups. The service is extremely popular and so the waiting list for an appointment is very long!"

4. Opportunities to unleash creative innovation

To unlock the full potential of creative innovation, government should:

Unlock Inward Investment

1. Expand the definition of R&D for tax purposes, enabling far more creative businesses and innovations to benefit from the relief

HMRC's current definition of R&D should be expanded to the internationally recognised Frascati definition, which states that "Research and experimental development (R&D) comprise creative and systematic work undertaken in order to increase the stock of knowledge – including knowledge of humankind, culture and society – and to devise new applications of available knowledge."²¹

Under this definition, more than three times the number of current creative businesses would qualify for R&D tax reliefs.²² This would empower creative organisations to undertake R&D to meet challenges and opportunities laid out by a confluence of social and technical factors and incentivise a greater number of creative businesses to place R&D within its core mission. This in turn would generate significant positive externalities and raise the competitiveness of the creative industries as a whole.

Since the 2008 financial crisis, R&D tax incentives have become more generous in many countries to bolster their international competitiveness and stimulate long-term economic growth. Countries such as Canada, the Czech Republic and Denmark have future-facing R&D tax regimes that have served to unleash creative innovation. By broadening the definition of R&D to the full Frascati definition, and consequently placing R&D at the heart of the creative industries, government will not only ensure that our world-leading sector remains at the forefront of global creative innovation, but also act on its own commitment to increase investment in R&D in the UK to 2.4% of GDP by 2027.²³

The Creative Industries Federation has responded in full to HM Treasury's consultation on R&D tax reliefs, which can be made available on request.

2. Introduce sector-specific training to better equip R&D tax inspectors to accurately assess applications received from creative businesses

The tax inspectors who assess the applications for R&D tax relief specialise in regional areas, rather than having sector specialisms. The Creative Industries Federation's members have reported that due to the unique structure, business models and working practices of the creative sector, creative businesses applying

²¹ <https://www.oecd.org/sti/inno/frascati-manual.htm>

²² R&D in Creative Industries Survey – 2020'

²³ <https://www.gov.uk/government/publications/build-back-better-our-plan-for-growth/build-back-better-our-plan-for-growth-html>

for R&D tax relief often experience difficulties in the application process: As tax inspectors are technical rather than sector experts, they often do not have the specific industry knowledge needed to make informed decisions about applications from the creative sector. It is therefore vital that sector-specific training is mandatory for UK R&D tax inspectors.

3. Expand and extend creative industries tax reliefs to ensure we're not left behind on the global stage

Given the highly disruptive impact of Covid-19 on growth, employment and income generation in the creative industries, attracting inward investment to the UK and promoting innovation and growth across the whole of the sector is more important than ever. To enable a strong and rapid recovery, we must therefore look to both support existing tax reliefs, ensuring streamlined access that avoid additional bureaucracy, as well as explore opportunities where similar tax reliefs could be expanded to other parts of the creative industries and deliver significant benefits there also. In a time when high growth is needed quickly, it is vital that the incentive that they provide is maintained, streamlined and, where appropriate, extended to encompass more of the creative industries and support faster economic recovery.

Maximise Growth Potential

4. Deliver an ambitious innovation funding settlement that unleashes the potential of creative ideas

Creative innovation strengthens the UK's ability to achieve net zero, remain globally competitive and become more resilient. Public investment should take the shape of challenge-based innovation funds, building on the success of Innovate UK's Fast Start and Creative Industries Fund, which have supported the creative sector to respond to market failures, and major Research & Development programmes including Creative Industries Clusters, Audience of the Future and the Creative Industries Policy and Evidence Centre. R&D tax reliefs should also be expanded to include the arts, humanities and social sciences in scope.

5. Establish a Creative Industries Investment Bank to unlock finance, inward investment and export opportunities, benefiting a greater diversity of people, businesses and places

This Bank would incentivise new intermediaries providing private sector finance and should include investment through the government-owned British Business Bank (BBB) to leverage significant additional private capital. It would act as the next stepping stone to the pilot recently established by the Start-Up Loans Company – a subsidiary of the BBB – and the UK's creative industries, which will ensure money and support reaches creative entrepreneurs across the country, complement the successful business investment and grant programme delivered by Innovate UK, and be accompanied by investment readiness support, building on the government-led Creative Scale-Up programme.

6. Introduce an "Innovation Enterprise Allowance" for entrepreneurs out of work to unlock the UK's creative potential

Creative ideas are everywhere but opportunity is not. An Innovation Enterprise Allowance could build on government's New Enterprise Allowance, de-risking entrepreneurialism for those out of work yet brimming with creative solutions and business ideas. It could aim to incentivise not only those with prospects of high-

growth and new markets, but also innovative responses to local regeneration, health challenges, climate change and sustainability. This would need to be accompanied with support on the creation and protection of Intellectual Property.

Incentivise Innovative Solutions

7. Introduce an “Innovation Employment Scheme” to increase UK businesses’ capacity to generate creative solutions and ideas

Demand for creative skills is high and is set to increase as the UK economy seeks to keep up with global competitors and future-proof its workforce. An Innovation Employment Scheme could build on the model of government’s Kickstart Scheme, incentivising employers to take on creatives, with a focus on freelancers and those out of work, to support particular projects, challenges and/or business opportunities. The Scheme could be time limited and act as a “Year One” strategy in government’s ‘Build Back Better: our plan for growth’.

8. Provide business rates relief for shared working spaces with access to high-cost tech and equipment for businesses and freelancers

By facilitating access to innovative creative technologies, government will drive forwards the commercialisation of creative innovation, thus increasing the creative industries’ contribution to GVA and the UK’s international competitiveness. Business rates relief should be offered on shared working spaces that provide access to innovative creative technologies such as 3D printers and VR equipment. Other fiscal incentives should also be explored in response to the opportunities and challenges faced by particular nations and regions.

9. Incentivise cross-sector collaboration by facilitating links between the creative industries and other key sectors in responding to global challenges

It is essential to cultivate creative skills and to incentivise cross-sector and industry-education collaboration. The UK has significant standing as a leader in the global tech ecosystem, and, equally, is a preeminent creative force on the global stage. CreaTech is a significant growth sector, with UK CreaTech attracting twice as much investment as the next biggest European market in 2020.²⁴ Notably, CreaTech companies also raised more than energy tech in the same year: £981.8m in comparison to Energy tech’s £846m.²⁵²⁶

This demonstrates the power of combining creative skills with skills from other sectors, such as technology or health. Facilitating links through the use of cross-sector investment or sandpit sessions will result in creative, innovative, world-beating solutions.

²⁴ ‘Tech Nation CreaTech 2021 Report Release’. Available at: <https://www.thecreativeindustries.co.uk/downloadhub/the-createch-2021-report-release>

²⁵ <https://technation.io/the-createch-report-2021/#key-statistics>