

Hopeful Futures for Creative Innovation

Bristol+Bath Creative R+D was established to support equitable, meaningful, and impactful research and development (R&D) into emerging digital technologies. We were awarded £6.8M as part of a much bigger £80M programme called the Creative Industries Clusters Programme (CICP), which was run by UK Research and Innovation (UKRI) and the Arts and Humanities Research Council (AHRC), to drive innovation and growth in the UK's creative industries by getting universities and creatives to work together.



Executive Summary

The Bristol+Bath Creative R+D programme took place between 2018 and 2023. We were a collaboration led by UWE Bristol, Watershed, Bath Spa University, and the Universities of Bath and Bristol. In these five years, we established an effective R&D ecosystem for creative practitioners in the region. This ecosystem has facilitated create work that has continued beyond our programme for many of our participants, demonstrating the value of supporting thoughtful and responsible innovation in creative technology.

Our R&D projects were designed to be both innovative and inclusive; we worked hard to create safe spaces in which businesses could experiment, take risks, and make work that was rich and fulfilling. Participants were encouraged to develop ideas around the social, political, and cultural impacts of technologies — and not to focus solely on market success. The programme therefore cultivated many alternative ways of working, from practising inclusion to business development.

The work we have done in this programme has created a network of over 330 creative businesses and individuals, providing 140 investments in R&D. This has led to 72 new pieces of IP, generated more than 80 jobs and 18 new businesses. All this has attracted more than £20M of investment to support the community in the future.

Between 2018 and 2023 we spent **£3.4M** supporting R&D. We engaged with **332 creative companies and freelancers** and awarded **£1.6 million** directly to creatives across more than **140 investments**.

This led to... **£20.2 million** in further co-investment in our creative ecosystem

18 new businesses
82 new jobs
72 new prototype products or services
34 international collaborations

123 investments in new talent
29 new early-career researchers supported
634 public appearances

320+ blogs, reports, and other outputs
1.5m+ engagements with the public

Ecosystems over clusters

We want to build inclusive and caring environments for creative innovation. Central to doing this is understanding regions as creative ecosystems. This is different from the model of the ‘creative cluster’, an economic categorisation that measures the success of the creative sector in a given region with easily quantifiable outputs such as wealth generation or the production of exportable goods, but which frequently misses the rich network of creative work that supports those outputs.

Our programme framed Bristol and Bath instead as a creative ecosystem, allowing us to widen the scope of our support to include networks of people and places that propagate cultural and creative work that don’t always appear in industrial categorisations - like freelancers - or in sectors that aren’t always understood to overlap - like computer games and theatre. This alternative framing allowed us to see that the core motivating factors for creative work were not only economic success, but also supporting shared values around ways of working, and the desire to do good.

Partnership

Creative ecosystems need deep and trusting partnerships between different kinds of organisations to thrive. Universities can play a key role as anchor partners, maintaining a research and talent pipeline, and moderating

cash flow and legal support. But this partnership doesn’t go far enough — creative business and practitioners require a range of industry partners, at different scales, to truly accommodate their work. Universities also need to work with and learn from cultural organisations and organisations doing work to challenge inequalities, social exclusion, or improving access to job markets for groups marginalised by society. In our programme, we had dedicated team members - Creative Producers - who facilitated this complex net of partnerships, thus fostering new and valuable relationships for our participants.

Inclusion

One of the main aims of this programme was to redress the narrow sectors of population that make up the creative sector. A creative ecosystem approach recognises the need for more and diverse voices to contribute to creative R&D, while recognising the barriers that exist. We set out to address this challenge in the following ways:

- ▶ We funded diversity and inclusion experts to support participants in our programme and ensured the practice of inclusivity ran through all strands of the programme.
- ▶ The companies that received investment from us were required to demonstrate meaningful inclusion commitments in their project plans.
- ▶ We developed an [Inclusion Framework](#) for creative SMEs, stakeholders, and funders.

- We invested in the online journal Container, which amplifies traditionally underrepresented voices providing critical commentary on the challenges and possibilities for creative technology.
- We attempted to change our own governance structure to improve the variety of lived experience and skillsets present in our decision making processes

Sustainability

As the intensity of the climate emergency grew over the course of the project, we supported a fellowship in sustainability that created a [Framework for Creative Climate Action](#) usable by SMEs. It is geared towards creatives wanting to be more environmentally responsible within their practice but are unsure of where to start. We were then awarded £250k by AHRC to create a programme called Grounding Technologies to to understand the needs, strengths and potential of using creative technology in the field of climate action.

Hybridity

We took a human-centred approach to creative technology. We supported our participants in using technology to provoke experiences that foregrounded audience experience and questions of ethics and engagement. Many projects explored ways to embed technology into physical spaces and create joyful, unique sensory experiences for different audience groups. Merging tactile stimuli with invisible technological enhancements resulted in a

multitude of exciting shared interactions, and paved the way for new modes of audience participation.

Care and Responsibility

There are many complex dynamics to take into consideration when producing work that is physical, digital, and participatory. Through this programme, we developed methods of working that emphasised care. This meant employing a thoughtful and deliberate approach to understanding the needs of staff members, participants, and users of technology. A tenet of our approach to innovation is being aware of the vulnerabilities that emerge from the creative process, and respecting them. Our work with Consequential CIC on [Responsible Innovation](#) captures this approach.

Support Business Development

Part of our work in this programme was to reimagine how creative businesses might thrive in the future. The convention of seeking investment to then profit from a buy-out is appropriate to a vanishingly tiny proportion of creative businesses. Many of our business partners seek long-term creative and financial stability, which has an embedded relationship with places and communities. We invested in the development of business support that allowed companies to think about what form they wanted their business to take; to experiment with business structure to find a shape that worked for them.

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1. Introduction: Envisioning a healthy future for creativity and technology

The current creative industry landscape is optimised for practitioners to compete with each other in isolation. Creative businesses are subject to success metrics that exclude almost everything besides economic growth, forcing them to deprioritise their culturally important work. We believe that supporting creatives in a way that makes space for collaboration - rather than focusing solely on innovations built for the 'creative entrepreneur' - will foster a healthier, more diverse creative ecosystem.

Emerging technologies provide a unique opportunity for practitioners to develop their work, and the sector as whole, in exciting new ways. The suite of technologies available to creatives represent something more complex than productivity boosters or efficient avenues to better audience engagement; technology can enable the sector to explore untapped realms of innovation, and make unexpected things that thoroughly enrich our lives.

Between 2018 and 2023, Bristol+Bath Creative R+D provided a suite of support to businesses, creatives, artists, and thinkers in our region. Participants received funding to experiment with new and emerging technologies, connect with one another, and develop prototype products and experiences. We also offered business advice, time to carry out research, and supported all participants in showcasing their works to new audiences.

Through this five year programme, we developed an environment for the Bristol and Bath creative community

which prioritised people over technologies: we wanted to ensure that the community would benefit from research and development in a way that was sustainable and inclusive, without the need for financial returns that often come with grants and funding. This programme was therefore not led exclusively by an imperative for economic growth; it was scoped instead for using responsible innovation to create new cultural, social, and environmental benefits.

The Bristol+Bath Creative R+D programme consists of four universities (UWE Bristol, University of Bath, Bath Spa University and the University of Bristol) spanning two cities, and a world-leading centre for developing creative applications of new technology (Watershed, Bristol). Together, we wanted to celebrate the region we were based in and find out what worked best for its development.

About this report

This report is for anyone with an interest in thinking differently about how to support creative innovation – policymakers, funders, third-sector organisations, thinkers – in a way that focuses on the people who make and consume creative work, and foregrounds questions of social justice and responsibility.

It contains five sections:

The challenge: Funding thoughtful and responsible creative technology sets out the current context of creative technology R&D and its funding alongside the wider challenges of digital technology developments.

Building an inclusive and caring environment for creative technology explores the opportunities of creative technology and how the ethos of 'creative ecology' was applied to our programme design. It considers how such thinking might foster connectivity and inclusivity in creative technology R&D.

How are creative technologists responsibly innovating for the future? outlines some of the new ideas and prototypes that emerged from our programme, and how they focus on care, access and inclusion, collective presence, and hybridity.

Organising for the future shares insights on more equitable economic futures from the programme's reports and seminars alongside practical toolkits on climate action, inclusion, and responsible business impacts.

Toolkits for change shares links to a range of resources our community has created to help support innovative R&D in the creative sector

Our programme was comprised of a range of overlapping activities that funded creative work:

Pathfinders: four themed, cohort-led R&D and prototyping processes that lasted about 12 months. The first stage of each was a fellowship programme which brought together new talent, academics, inclusion researchers, and businesses for a period of research and making. The second stage was a prototype fund where we funded companies to create workable products or services inspired by the work of the fellows.

Trailblazer scheme: we awarded 22 smaller, flexible investments to companies with new ideas, with each investment being made after a process of 'consequence scanning'. Designed by DotEveryone and Consequential, this process asks innovators to think ahead to ensure that their proposed outcomes align with their values, and to mitigate or address potential harms before they occur.

Inclusion Action Research: we employed 2 dedicated Inclusion Producers who designed and delivered a

core £150k research programme around improving diversity in the creative sector. We looked at ourselves, adapted our governance structures and tried to learn more about what we could change. We partnered with 5 local organisations as Inclusion Partners to help us understand how to work better. We made 17 investments in academics, individuals, companies, and organisations to carry out research, share their stories and trial new processes. We supported 6 inclusion fellows as part of our path finders.

Creative Ecologies: this scheme considered how we might build more equitable future creative economies. We ran a series of 5 seminars called 'Hopeful Futures' with 19 experts on alternative economics, post-colonial futures, climate action, and more. We established New Scholars, a training scheme for 15 early career researchers and PhD students.

Investigations: We supported academic research into audience engagement with new technologies, alternatives to existing creative policies, and more.

2. The challenge: funding thoughtful and responsible innovation

New and emerging technologies are offer rich and fruitful tools for building a better future for our planet. However, it sometimes feels as though there is an endless stream of newly available consumer-facing digital technologies and platforms to grapple with. These present a unique set of challenges for creative industries. On the one hand, it's hard to understand where the value lies in a sudden influx of new tools and services.

These are often over-hyped by a narrow group of power-users who benefit greatly from a new technology, but are not representative of all groups that may engage with it — or with digital technologies in general. On the other hand, the popularisation of social media and streaming services has somewhat lowered the barrier to entry when it comes to making, sharing, and consuming new creative content. Innovations in sound, video, and location-based technologies offer a rich toolkit for creatives to play around with making new experiences, products, and services which enrich our lives.

Our programme afforded university researchers, businesses, and creative practitioners the time and space to experiment with emerging technologies. Given the opportunity to explore, participants were able to discover new applications for technologies that may otherwise have been overlooked, and identify areas in which more inclusive, people-centred technologies are lacking. The drive to experiment with technology in this way highlights a strong need for technological innovations that give equal weight to both economic returns and cultural and creative impacts.

Experimenting with technology to discover novel ways of using it to make work is referred to as 'creative technology'.

This approach to R&D often sits in opposition to the UK government's belief that the creative sector should operate more like a Silicon Valley company, where the main priority is to 'innovate' in the name of financial returns.

The creative sector does not benefit from operating this way. While we know there are lots of makers, artists, technologists and thinkers who do not want to work in this way, the mainstream technology sector doesn't always support them. The development of online platforms, new app features, and new technology in general is frequently antidemocratic: creators and generalist users aren't given the chance to adapt, design, or even understand the algorithms that govern how their own content proliferates online - nor do they have a say in the policy decisions that directly shape their online experiences. These opportunities are walled-off by 'Big Tech' firms like Google, Metaverse, and X, and a minority of influential players in Silicon Valley. Decisions about the deployment of mainstream technology consequently come from a relatively small group of people with very similar lived experiences. This makes it incredibly hard for those outside this minority to imagine, let alone build, a future that works for them.

During the lifetime of the programme, we saw these challenges compounded - and our own response to them

transformed - by several overlapping external events, including: Brexit, the COVID-19 pandemic, the rise of right-wing populism, the ongoing violence of racism which the Black Lives Matter movement brought centre stage, and the Climate Emergency.

It became clear that more 'business as usual innovation' would be disastrous. Instead we sought to understand what responsible R&D would look like in practice for creative technology. The real challenge for us was to design a programme that encouraged the community to consider modes of innovation that sit outside the logics of Big Tech, working towards a future where the production and consumption of technology is more equitable, and less damaging to the environment. These considerations challenged us to become more self-critical and accountable to our actions.

The Bristol+Bath Creative R+D programme made room for questions of ethics and social justice to sit alongside those of creativity, fun, and proficiency. We are excited to share our findings in the following sections and hope they will be useful.

3. Building an inclusive and caring environment for creative technology

The Bristol+Bath Creative R+D programme was designed to provide support in two areas:

- ▶ for universities, creative businesses, and creative practitioners to experiment in making new and exciting things
- ▶ to bolster how — and where — creative work is carried out and supported in the Bristol and Bath region

We believe focusing on these two areas will have an overall positive impact on the creative sector in the region. We also considered other outcomes that were more in line with the UK government's Industrial Strategy, such as increasing productivity to support economic growth. However, the parts of the Industrial Strategy related to our work centre themselves around what economic policymakers refer to as the 'creative cluster'. This term is used to explain how local specialisms emerge in relation to the location of businesses, and how they interact with one another to generate wealth, tax revenue, jobs, and exportable goods. Essentially, people within a place or region will start to do similar sorts of work because they naturally share resources, skills, and access to markets with each other.

The problem with framing regions of creative activity as 'creative clusters' is the over-reliance on patchy economic statistics, or top-down categorisations of regional strengths – such as Bristol's TV and documentary sector, or Bath's publishing industries. Very often cluster modelling misses all the interconnected work that happens in a region

because its focus is narrowed only to which way the money is purported to be flowing - usually around bigger businesses.

We championed the idea of creative ecosystems. This approach takes into account all the different networks of people, places, and things that support creative and cultural work in an area. These networks are held together with more than just money; for instance: mutual support, opportunities, shared ethics and values, or a desire to do good.

Understanding Bristol and Bath as a creative ecosystem that makes things in a particular way, rather than a cluster that counts only its outputs, has made it clear that profitability is rarely the sole motivating factor for engaging in a creative practice, nor the sole ingredient for its success. Nor is money the sole currency: creative ecosystems thrive on the exchange of skills, access to collaborators, and inspiration. A creative ecosystem has unique values, challenges, strengths, and opportunities. Using this new framing allowed us to focus on people and process, and not just the economic worth of the region's outputs. We think of this like supporting the mycelia of connections beneath the ground that share resources and information, visible only on the surface of the earth as mushrooms; if you only count those, you miss all the stuff necessary to make them emerge.

With this approach, we were able to seek solutions to the entrenched challenges produced by money-first innovation policies. Rather than being prescriptive, we built frameworks around existing activity in the region to foster more

equitable forms of collaboration and networking, to enable more diverse communities to participate in making and engaging with creative work.

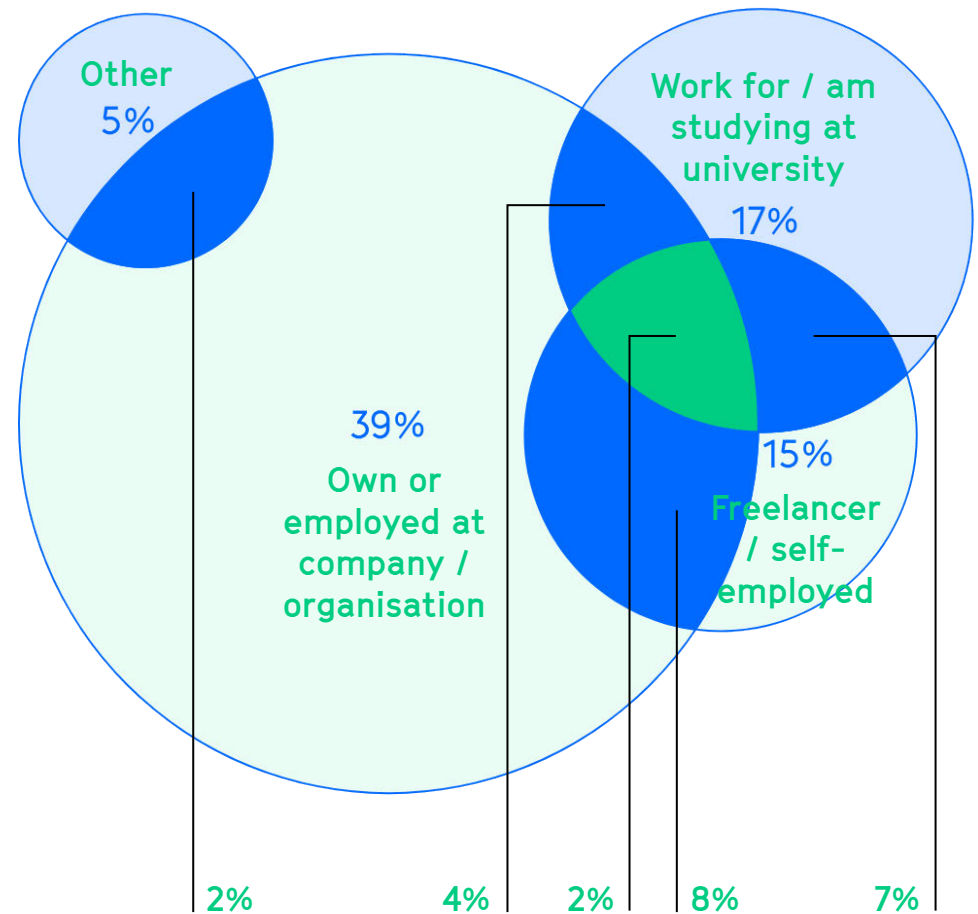
This work challenged us to think more intentionally about keeping the creative sector accessible, inclusive, ethical, and sustainable. It's important to note that even well-intentioned projects like ours aren't immune to issues arising out of mismanaged power structures, or poor representation. Creative ecosystems have their own pre-existing power imbalances, and therefore require careful support, self-reflection, and a commitment to staying as open as they can be.

3.1 From Cluster to Ecosystem

Defining the boundaries of an economic cluster is typically a top-down exercise undertaken by researchers and policymakers. They frequently rely on classifications like Standard Industrial Codes [SIC] and Standard Occupation Codes [SOC] which refer to generic categories (such as 'manufacturing' or 'production managers') that companies use at their discretion to describe their activities, or their workers' activities. Economic cluster definitions also draw from business turnover data, company registration data, and tax records.

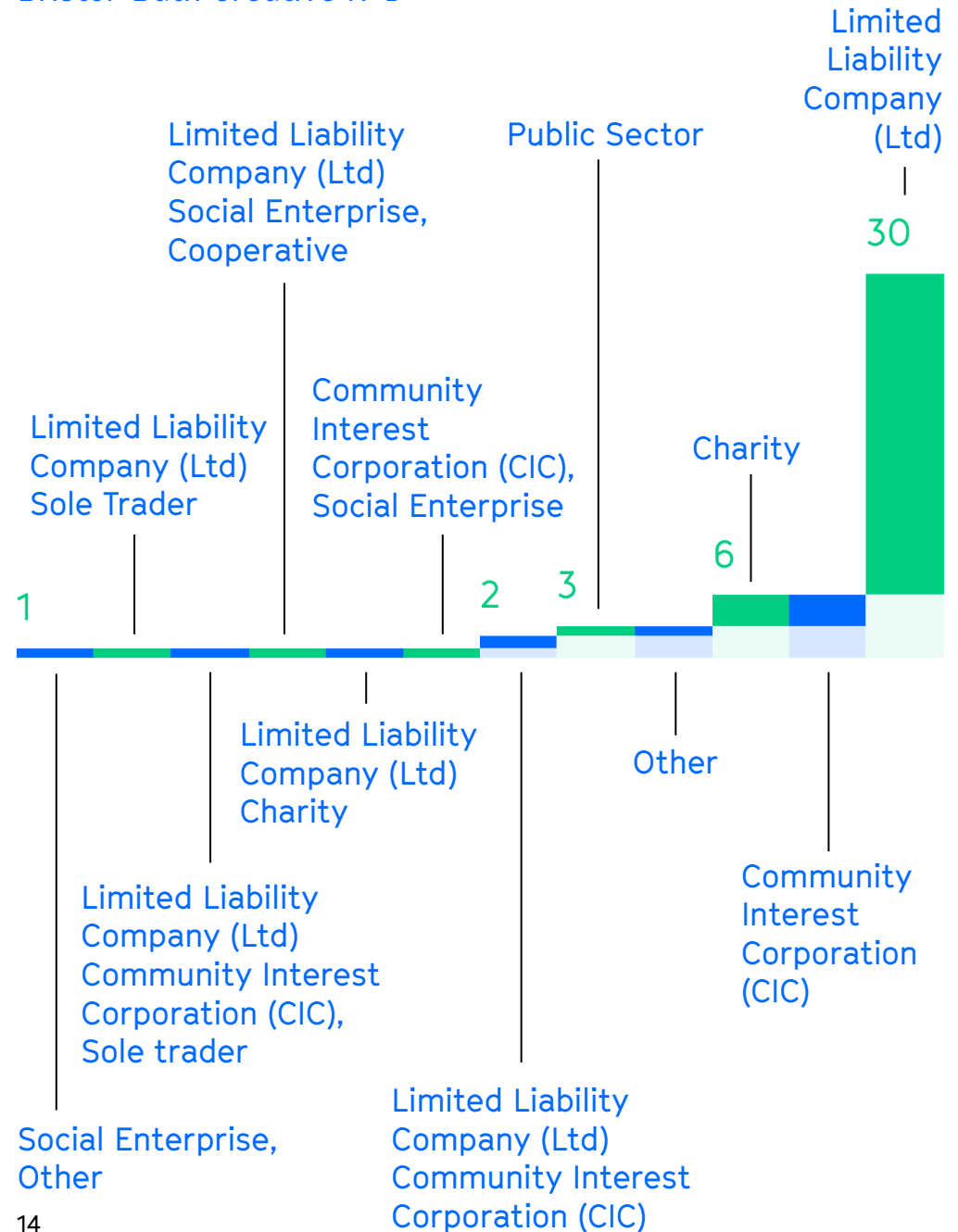
These kinds of categories don't capture how creative ecosystems work on the ground. They miss the nuance and variety of creative business forms [see Image 1], as well as the diverse and specialised work of freelancers who often work in other forms of employment, such as in universities or part time jobs to supplement their incomes [see Image 2]. Creative work often generates value far beyond just economic gains, with societal benefits that transcend easily quantifiable outputs.

Image 1: Company types reported by surveyed fundees of Bristol+Bath Creative R+D



Understanding Bristol and Bath as a creative ecosystem, rather than a cluster, allowed us to see the myriad value exchanges between the people, places, and things that support creative and cultural work. We got a view of what was happening ‘on the ground’ in our area, and were able to develop a programme that responded to the lived experiences and needs of the sector. Crucially, this approach prioritised collaboration over competition. We paid people to work together in small research cohorts alongside academics from the four partner universities and share their learning along the way. This ‘crowding-in’ created opportunities for people — unlikely to meet each other in their usual day-to-day — to collaborate, exchange, and make exciting discoveries.

Image 2: Employment types reported by surveyed fundees of Bristol+Bath Creative R+D



This way of working gives participants richer personal and professional experiences: it makes space for interdisciplinary engagement and a cross-fertilisation of ideas, making for a more robust and trustworthy network. Furthermore, our focus was not limited to economic value production, so the social and cultural impacts of this work were evident very quickly.

During the programme we funded Roxana Vilc, an artist exploring how emerging audio technologies could enhance her work as a musician and performer. She forged unexpected collaborations and transferred skills from our workshops into her creative practice. You can read a case study of her work on page 18.

3.2. Place matters

Economic development policies often ignore how the characteristics of places affect the production of cultural and creative work; placemaking activities may like to brand cities and regions as ‘powerhouses’ or ‘creative hotspots’, but these labels glaze over what the community on the ground actually need to make this happen. Creativity happens within these communities via dialogue and collaboration. Categorising these communities as economic clusters of businesses makes invisible the localities and locales, services, venues, networks, and infrastructures which cultivate creative and cultural work.

Bristol and Bath are cities with strong creative reputations. At the 2021 census, Bristol’s population was over four times the size of Bath’s and both cities have significant areas of affluence. Bristol is a UK core city and Bath is prized for its global tourism status. Bristol is known for its grassroots and DIY creative and cultural activity, including theatre, film and TV, and music, and Bath has a strong cultural narrative around its heritage, as well as specialisms in publishing and digital.

However, we identified early on that provision of spaces to experiment with creative technology across the two cities was unbalanced. For instance, Bath was missing a shared space for creative businesses and freelancers to network. In response, Bristol+Bath Creative R+D offered substantial sponsorship to Bath Spa to run and maintain its new space,

The Studio at Palace Yard Mews, in central Bath. Responses from residents at The Studio indicate that the venue has filled a gap in Bath’s infrastructure and acted as a gateway to the wider creative ecosystem in the region. [Watch a short film about The Studio.](#)

The COVID-19 pandemic also compelled us to think differently about place and location: collaboration between the two cities was more challenging, and it became clear that what worked in one would not necessarily work in the other. The two cities were at different stages of readiness in their R&D journeys and our funding and support needed to reflect that. This was exemplified through work completed for the Bath Challenge Project, by one of our fundees, Stephen Hilton. Stephen explored the ways in which improved internet connectivity (via the new 5G network) in Bath could develop the local creative sector. You can read more about his work on page 22.

Finally, there have been considerations on how we can move from a city-wide context, to something bigger. In section 5, you can read more about our experiments with making work that has international reach while retaining its regional flavour, and how we might learn from creative ecosystems overseas.

3.3. Designing for an inclusive future

Although Bristol and Bath have a great creative reputation, they also face deep challenges around both the diversity of workforces inside and outside of the creative sector, and social mobility, including access to work and training.

Much of creative work is freelance, and therefore relies on both formal and informal networks to discover and share opportunities. This means that being well-connected becomes an economic imperative, and networking a necessary skill which excludes those without the social support and time to access and build networks. This limits the pool of creative practitioners to those with financial backing, or those from specific class or ethnic backgrounds.

We wanted to address this challenge. Our programme was designed to accommodate a dedicated full-time member of staff to think through questions of inclusion and diversity within our work. This Inclusion Producer commissioned and carried out research to better understand our creative ecosystem, and begin to address when, where, and how people were being excluded.

As part of this diversity and inclusion work, we also set up a series of funding awards for individuals and companies. Beneficiaries used the funding to examine common pitfalls and markers of success within diversity and inclusion, and then establish best practices. The result was a new framework designed to support creative enterprises in becoming more inclusive.

Funding was awarded to those who showed commitment to inclusive processes. We worked hard to ensure our own selection process was also as fair as possible and with each cohort of funded projects, we paid at least two creative practitioners with expertise in inclusion to conduct research and bring critical thinking about inclusion to our R&D cohorts.

Achieving good representation was hard in a partnership dominated by universities, where historic inequalities mean that those in a position to lead projects tend to come from a narrow demographic. We knew that building inclusivity into the programme meant first focussing on the application assessment team and interview panels. Making these teams more representative of the wider community led to better representation across the programme.

Throughout the programme, we captured our learnings so we could adapt, evolve, and respond. Nevertheless, progress toward really being able to change the make-up of our sector has been slow and limited by intersecting structural inequalities. We have learned that addressing these challenges is an active process. It is hard to mandate because every context is different. Making inclusive spaces, businesses, or projections involves co-creation and collaboration with our own communities and networks, their contexts and their global position. Finally, it involves teams, leadership groups, and individuals being able to be challenged and to challenge others to change behaviours. This is difficult work, but necessary. In the final section of this report, there are links to the Inclusion Framework for Change toolkit we produced.

Case Studies

Roxana Vilk is a freelance multi-disciplinary artist working across music, film, TV and live performance. Her work addresses themes of human rights, cultural identity, heritage, inclusion and migration.

Roxana began her involvement with Bristol+Bath Creative R+D as a fellow on the Expanded Performance pathway. The programme's creative ecosystems approach has led to serendipitous new collaborations, new skills and ideas for her creative practice.

The most impactful collaboration was with one of our partners, Squidsoup. Together, Roxana and Squidsoup won funding to prototype Circle/ادری: a live performance of music, spatially composed with Squidsoup's AudioWave technology. Circle/ادری has been performed across venues in Bristol and Bath to an audience of over 700 so far and is now being toured across the UK.

Her first engagement with us drew from her role as associate artist at Trinity Community Arts, where she ran a community-led artistic project that brings a rich diversity of cultures in Bristol together through the composition of lullabies.

When the pandemic hit and lockdown hampered the delivery of the Lullabies project, Expanded Performance offered Roxana a lifeline that allowed her to keep creating and innovating. In particular, the network of industry partners in her cohort gave her opportunities to adapt her practice in new ways. Forging connections with BBC R&D, Roxana joined the Rabbit Holes collective set up by Penny Hay at Bath Spa University, which worked with BBC R&D to explore the possibilities of adaptive podcasting.

During Roxana's fellowship, she attended a workshop on binaural sound, run by Real World Studios and Sennheiser. This inspired her to develop a more immersive sound experience for her lullabies, which she had been performing over Zoom during the pandemic. Roxana now creates a sound experience which entails physically holding a 'binaural baby':

"A challenge I had faced is that when I took my Zoom Microphone out and asked participants to sing a lullaby, it often became a 'performative' version, not as soft and soothing... Mike [Real World Studios] had a spontaneous idea: 'What if we could invent a "binaural baby" that would allow the singer to sing the lullaby as if it was a baby in their arms?'"



Roxana Vilc – BBC R&D

Case Studies

Stephen Hilton is the founder and director of Bristol Futures Global, a leading UK Smart Cities consultancy. Stephen joined Bristol+Bath Creative R+D as a research fellow on the Digital Placemaking pathfinder in 2019. His aim was to bring together architects, urbanists, and creative technologists to investigate the human connections often overlooked by smart cities.

His first intervention was co-organising an event in February 2020, Designing Digital Cities. This event brought together a range of international speakers, and explored the dangers and benefits of integrating technology into built environments. Read more about the event.

After establishing this network of urban stakeholders and learning from their unique perspectives, Stephen launched his Rebooting the Digital City report. This explored the pros and cons of re-localising the internet and sketched a future direction for Bristol as a digital city.

Later in 2020, Stephen became a resident at The Studio in Bath, a creative co-working community for freelancers and SMEs supported by Bristol+Bath Creative R&D. Here he partnered with UK5G, BT, Futures, and DCMS to produce Connecting Bath. This was a report that explored how the current/

planned roll-out of 5G connectivity could present new opportunities for the creative industries in Bath.

Stephen then joined the team running The Bath Challenge Project, an artist-led initiative, funded by B+B. This project explored how the creative future of Bath can be shaped by actions in the present, considering how advocacy and representation for the creative industries in Bath can be supported. This project's first output was an event in March 2022 at Bath Spa University's new creative campus. Stephen chaired a hybrid panel with local and national speakers; local artist collective MASH held an exhibition of their work for the project; and a guided walk was organised around Bath Creative Quarter.

Stephen collated his project outputs into The Bath Challenge Report, which was launched to the public in August 2022.

“It was looking at things like how creativity plays into agendas other than just the economic. Like how does it contribute to health, and wellbeing? How does it contribute to creating different types or opportunities for regeneration within Bath & North-East Somerset, that aren't all focused on the city centre? It opened up a conversation about what's the value of arts and creativity and culture with Bath? And how can it help to deliver different sorts of outputs?”



Stephen Hilton – Connecting Bath

4. How are creative technologists responsibly innovating for the future?

The COVID-19 pandemic catalysed a need for work, entertainment, and socialising to be pushed into new online contexts. Big Tech firms saw this as an opportunity to capitalise on this by adding enhancements to existing platforms or services, such as online gaming, video calls, or remote collaboration tools. Some also insisted that the pandemic made space for a 'metaverse', where users would interact with brands and each other in fully immersive three-dimensional spaces.

The participants that we funded imagined different futures for this technological shift: they used creative technology to build experiences in physical spaces, which celebrated personal interactions, intimacy, and a sense of community and care. Others examined how the move to a virtual space afforded audiences and users of technology new ways to be 'present' where they might otherwise be excluded.

Our participants rarely affixed themselves to just 'one way' of working. They worked in hybrid forms, exploring immersion as something that went beyond virtual reality, and creating sensory experiences that sought to heighten awareness of the places in which we work, live, and play. They thought deeply, collaborated with one another, and created wholly new pieces of work.

We've seen work that emphasises care, connection, purpose, play, and storytelling, demonstrating how alternative approaches to R&D can propagate value and innovation seldom recognised in the sector.

Our projects:

- Create immersive experiences using a hybrid of physical objects/spaces with digital ones, prioritising human experiences, and highlighting the materiality of digital technologies.
- Make technologies within the communities that will use them
- Put human experience and care at the heart of technology design
- Design technology for diverse audiences and highlight implicit biases in everyday software and services
- Promote creative technologies that heighten the emotional, sensory, intimate, and spiritual qualities of performance and collective experience

The creative sector can work towards a different kind of future with these values, but the infrastructure, policies, and funding mechanisms that support creative technology development need to shift priorities to enable this kind of change.

4.1. Hybrid, located, and material 'virtual' technologies

The persistent and intimate mingling of digital products with daily cultural life has created new areas of interest for researchers. Our R&D saw a clear trend towards using technology to make work that highlights the hybrid nature of virtual worlds, works that bring audiences into physical spaces and into contact with one another, while also sharing virtual experiences.

Below are some examples of works and approaches that explore the dynamics involved in engaging with physical spaces using digital technologies.

Navigating and mapping across virtual and physical spaces:

many of our participants leant on existing mapping and mixed reality technologies to make new work. Stupid Cities is a digital representation of a city which surfaces all the accessibility issues experienced by many when moving through the city. Everything Is Music is a map app which highlights specific points of interest in Bristol and Bath, and uses AR to tell the user stories about musical subcultures within the places they visit. PopMap produced a prototype app with a bespoke interface for mapping cultural events within time windows specified by the user, and provided information on the accessibility of venues.

Digital Twins: digital twinning was a theme that emerged for participants in varying ways throughout the programme. Stephen Hilton explored digital twins of entire cities to sandbox his ideas for more sustainable city planning;

researchers Naomi Smyth and Ana Levordashka worked with Lost Horizon, a new artspace in Bristol, to create VR duplicates of music festivals and venues, so that people could still visit if unable to do so in person, and Anca Salagean collaborated with the University of Bath to develop personalised photo-realistic avatars in VR.

Hybrid participation: the programme also facilitated experimentation around mixing together in-person and online experiences, as both a means of entertainment, and collaboration. In our *Here + There* Future Leaders international Labs we tested a model for international collaboration, which used a hybrid of online and in-person workshops across one week. Storyhaven was a table-top reading and roleplaying game for families that could be played at home with others online. In this game, players would co-create stories and characters alongside a live-streamed theatre performance, thus combining material objects with digital interfaces.

Digital materialities: there was a continued interest in creating new sensory experiences with physical objects and spaces in ways that keep enabling technologies hidden. The Dhaqan Collective crafted Audible Tapestries, which drew on the Somali tradition of storytelling while weaving, to ensure these traditions and cultures endure in Bristol's Somali communities, through to younger generations. For The Lantern Room, theatre-makers Raucous used bone conduction technology to craft 3D printed whalebones that transmit voices to audiences when held against the skull to create a playful and immersive sensory experience.

4.2 Technology for local communities

Many of the projects we funded used creative technologies to reconnect and improve local cultural access, civic participation, and create new experiences of community. UWE academic Professor Shawn Sobers explored notions of home, everyday life, and belonging, through his work with Fairfield House in Bath, the site of former Ethiopian Emperor Haile Selassie's exile.

Community interest company Brave Bold Drama, explored how to increase access to cultural events and experiences, particularly during the COVID-19 pandemic when digital exclusion became a severe barrier to participation. Their research extended their work to make theatre for children and older people through community art commissions in more disadvantaged areas of south Bristol.

Unpleasantville made an alternative audio walking tour of Bath, which shared cultural narratives different to the dominant tourist-focussed ones. Meanwhile, the nARratives prototype offered a purposeful alternative to current AR tours. Celebrating the 'Seven Saints of St Paul's' mural series, this project made visible stories from communities that are not always represented in the digital records of a city's cultural history.

Tangle is a new creative hub situated in what would otherwise be an empty shop in Broadwalk Shopping centre, South Bristol. Their long-term vision is to become a hub, lab, and performance scratch space where they will collaborate

with the community's creatives and technologists to produce a broad spectrum of immersive experiences

There are also non-physical creative hubs, such as Elements, a community mapping platform developed by Free Ice Cream and Play:Disrupt. Elements provides a community mapping platform that visualises complex neighbourhood ecosystems in an accessible manner. It shows how a play-based platform might support better engagement in civic discourse by showing communities how they connect to one another and resources in their community.

4.3 Putting care at the heart of innovation

The anonymity that online spaces provide often highlights both the best and worst of human behaviours: traditional social media platforms (such as Facebook or Twitter), and other social spaces like Roblox, Second Life, or VRChat, have enabled users from all over the world to connect with others who share the same niche interests. However, these platforms are entirely centralised, and often support user bases which are in the millions or billions, which makes harmful content extremely tough to effectively moderate; online bullying and the proliferation of abusive materials have unfortunately become a tolerated downside of using these platforms.

Projects we supported have been thinking carefully about how to address these challenges by cultivating care, inclusivity, and shared intentions in online/hybrid spaces. These projects demonstrate a renewed political and theoretical interest in the crisis of care within creative industries, as well as the widespread post COVID-19 perception that care practices need a higher priority in activism.

Roseanna Dias' [fellowship](#) work explored how care should inform creative R&D for [Digital Placemaking](#). Her work with young people of colour adopted an 'inch wide mile deep' paradigm, to encourage slow and careful innovation which produces meaningful impact. She has continued this work with other arts organisations, creating a zine called

[Creativity and Care](#) which outlines what a care-centred R&D process would look like. When reflecting on her recent work, Roseanna highlighted how her expectations of technological innovation were profoundly challenged by the pandemic and the murder of George Floyd.

[Grace Kress](#)'s research looked into what we can do to create genuine communities of care online. Grace explored this in relation to her activism and DIY publications, finding spaces of healing, connection, and reflection in the collaborative creation of interactive, multi-media zines.

Sammy Jones conducted R&D around internet culture and website commenting. Sammy considered what commenting platforms might look like when care was designed into them.

Creative company Trigger used our funding to create With You, a free digital service created in response to the COVID-19 pandemic. Isolated patients use With You to bring together voice messages, music, and other audio shared with them from friends and family, into one playable audio track.

4.4 Technology for underrepresented audiences

Historically, technology has been designed by white able-bodied males, meaning those outside of this narrow demographic experience barriers and biases that are invisible to those who technology traditionally benefits. In contrast, our R&D projects explored how creative technologies could be developed to deliver a rich and equitable experience to different audiences.

While all our funded projects had to demonstrate inclusion in their proposals, some projects targeted demographic groups typically excluded from technology design. These included black, queer, neurodivergent and disabled communities. For example, Paraorchestra's egg-like vibrating hand-held device for enhancing D/deaf audiences' experience of musical performance, and Linus Harrison's research, which examined the potential of personalising technologies to better serve neurodiverse audiences.

As part of our efforts to bring together creative technologies and social justice action, we launched Container, a new online magazine. Container covers a wide range of concepts and ideas that intersect these two areas, including the use of deep fake technology to recover lost black family archives and the potential for simulation to support grieving. Hosting the magazine online has allowed us to experiment with a multitude of formats such as recorded conversations and richly illustrated articles. Container has reached more than 22,000 readers to date.

4.5 Heightening collective experience

Showcasing work on online platforms has its benefits: it's convenient, and has the potential to be seen by a very wide audience. But digital tools are not intuitive for everyone, and drumming up engagement is another challenge in itself. Our funded cohorts explored how technology can be used to create powerful experiences in shared, physical spaces.

Many of these explorations manifested in live performance works that sought to emphasise audience participation, and even encourage audience members to co-produce experiences while they were happening. Makers of these works sought to create emotional and spiritual experiences for audiences. Film producer and writer of VR narratives, Tanuja Amarasuriya, describes this as emotional immersion, saying:

“the private, personal, hard to measure, but deeply impactful sense of involvement that keeps us watching, listening, playing, searching, questioning, caring.”

Tanuja delved deep into questions of emotional immersion across four blogs that can be read here and developed this work through her company Sleepdogs.

Using creative technologies for this kind of immersion gives audiences a chance to connect with others in a physical space by way of a unique sensory experience. Two of our funded prototypes thoroughly explored the ways in which

embedded spatialised technology could bring audiences and performers together in a novel way.

Circle/هریاد, by Roxana Vilk and Squidsoup utilised colourful glowing orb-shaped speakers to create a mesmerising sound and light experience, where audience members were invited to sit anywhere in the performance space and fully participate.

[Watch a recorded performance](#) of Circle/هریاد
[Watch a documentary](#) about the project.

breathing.systems by Nik Rawling used spatialised sound performances to explore fluid, mediated, and granular experiences of gender, embodiment, and neurodiversity. This was achieved with live vocals which were amplified by specially designed wireless speakers, worn by the performers, creating a living network of voices emanating from moving bodies.

Measuring engagement of remote audiences: researchers on our programme also found that immersion in narrative content is characterised by moments of prolonged stillness. This is very different from all the movement required to interact with VR headsets, and therefore counters the idea that VR technology is more immersive than remote or place-based experiences.

Personalised photo-realistic avatars

Consumer VR hardware cannot currently represent avatars that are photo-realistic and personalised, but this will soon be achievable. Anca Salagean's research investigates how these 'virtual twin' avatars might be used and their influence on perception. This work has been conducted with support from the CAMERA studio and the CREATE Lab at the University of Bath, bridging the two departments and fostering a fruitful collaboration between them.

Anca's research relies on the photogrammetry and motion capture technologies used at CAMERA, as well as a mix of physiological, behavioural and qualitative measures. With this data, Anca's studies explore how human behaviour and feelings

of embodiment or presence in VR change after repeated exposure to personalised avatars.

This research has already found that realistic-looking and personalised avatars are experienced as positive features that lead to greater senses of embodiment and self-identification. Anca's ongoing work focuses on the more complex behaviour impacts that personalised avatars might have. For example, how might they influence moral decision-making? How would they affect propensity to lie?

The answers to these questions will have practical impacts on the future of VR: the ways it is used to engage with our bodily senses and the consequences for user experience.

Case Studies

Roseanna Dias

Roseanna Dias is a producer interested in the crossover between creative practice, emerging technologies, and inclusion. Having worked for several years within the core production team of Rising Arts Agency, a collaborative community of creatives mobilising for social change, Roseanna became a fellow on our Digital Placemaking cohort in 2019. Her work on the programme explored how to centre care, and support radical change-makers, with the use of digital/hybrid spaces and digital placemaking practices.

During her fellowship, Roseanna produced the Spaces of Care podcast series, which gave air time to radical thinkers and artists from diverse backgrounds to reflect on what care looks like in different creative contexts. The themes and connections Roseanna established in doing this work have persisted through her subsequent practices. She now co-leads the Creativity + Care: Research and Development project with Josephine Gyasi from Knowle West Media Centre. This ongoing project has enabled the production of

Conversations about Digital Activism, a zine based on ideas explored in an *event* Roseanna ran during her fellowship with us.

In 2022, Roseanna founded Studio Susegad, an ‘organisational container’ for her long-running work in developing strategies of radical care within cultural production. Studio Susegad seeks to support those often marginalised by traditional production processes with critical thinking, curatorial production, and engagement expertise. The same year, Roseanna won £2,500 of test funding within our Inclusion Action Research pathfinder, with which she brought together six collaborators to interrogate how individual practices of inclusion and care might be transformed into an organisational framework.

“The process of bringing people together...it was a really beautiful process. [...] I am leading something that’s very personal, you know, but in the professional space. And so it felt like it was like, almost a rite of passage, of being recognised by my peers as the leader of this thing, and them blessing me with their support and solidarity.”

Case Studies

Paraorchestra

Paraorchestra is the world's first large-scale ensemble of professional disabled and non-disabled virtuoso musicians. Their mission is to redefine what an orchestra can be by playing to different kinds of audiences with different kinds of needs. During our programme, they considered how assistive technologies could improve audience experience, specifically the d/Deaf community. They began to focus on how they could use technology to convert sound waves — in real time — into vibrations, or other sensory experiences, that were rewarding for audience members, no matter what level of hearing they had.

“We were clear that we didn't necessarily want a device or a piece of technology that would become like a replacement for hearing music, or experiencing sound in a space. But instead, it would be something that could be used maybe intermittently, or could be used at certain points at a show, at the choice of that user.” (Lloyd, Paraorchestra)

Paraorchestra collaborated with Steve Symonds, a designer, technologist, and musician, to develop a hand-held device for a D/deaf audience to interact with the orchestral performance in a non-intrusive and autonomous way.

“Earlier this year, a small, wooden, and rather beautiful egg-shaped device arrived by courier to my flat. Steve's prototype — the TouchSound, as is its working title — had an output for a microphone, a power button, and 'volume' control, and was roughly the size of an elongated tennis ball.” (Taken from Lloyd's blog. Read more [here](#)).

Lloyd and Hannah from Paraorchestra spent the rest of their R&D time testing and iterating the TouchSound. They are now planning the next steps for Paraorchestra to incorporate the technology into performances.

Case Studies

Nik Rawlings

Most spatial sound design relies on the simulation of space through software encoding, and the use of fixed arrays of speakers to create immersive sound environments. Nik Rawling's project *breathing.systems* has created a system that offers an alternative, by using a wireless and mobile multi-speaker array that can be physically moved in space to rapidly create spatial sound performances and recordings.

Nik's prototype expanded on their previous work with fluid, relational bodies of sound, using performers as speakers to amplify Nik's voice live, in real-time — which has not been possible before. *breathing.systems* was performed at Trinity Community Arts in Bristol in August 2021 and at BEYOND Conference in October 2021.

“Winning the funding and being able to launch the project when I did, you know, really turned my career around. [...] I had never really taken my creative practice like particularly deeply seriously before. I think I had no real understanding of funding and of these processes and working with stakeholders and stuff like that. So it was a really great learning curve to go through.”

Nik was selected for the British Council-funded

Down the Wire Live project, for which they made new international work around mental health and neurodiversity. Following a month-long residency in Glasgow in late 2022 and a month in Alexandria in January 2023, Nik showcased their new work as a performance and exhibition in both Egypt and Glasgow in Spring 2023.

“Now, really the business is around practice and implementing the system in exhibitions and performance design; teaching, workshopping, and my own practice. But I think all of those things are working towards a kind of proving ground for the tech. [...] Where I'm using the equipment, you know, I'm learning a lot through that process, and I'm managing to interact with quite a few different types of users.”

Nik has longer-term aspirations for the development of their speaker system. Further iterations could involve streamlining the existing system, exploring mounting options for the speakers, refining speaker fidelity and developing audio plugins specifically designed for wireless, multi-channel speaker systems, which would give creators greater control over their operation. These innovations would have wider applications.

Watch Nik talking about their work [here](#) and find more info about the prototype [here](#).



Nik Rawlings – *breathing.systems*

Measuring Engagement in Remote Audiences

The COVID-19 pandemic drastically changed the way people experience cultural events. With the closure of cultural institutions, such as museums and theatres, people were increasingly turning to remote access to arts and culture content. This shift has created new challenges for artists, institutions, and researchers alike, particularly with regard to understanding audience engagement.

Bringing together current advances in psychological research and computer vision, a research team from the University of Bath and University of Bristol developed Trace, a web-based media player with motion tracking capabilities, which they could use to test 200+ international participants during the months of world-wide lockdowns. The primary goal was to determine whether audience engagement could be measured through remote methods, and if so, how. Participants were asked to watch a 30-minute segment of the play *The Bullet and the Bass Trombone* by Sleepdogs, while the web-based tool recorded their movements.

Results showed that engagement was associated with bodily stillness. Participants who were more engaged with the performance tended to move less during the play, whereas those who were less engaged tended to move more.

This study demonstrates that it is possible to measure audience engagement remotely using a web-based tool with motion tracking capabilities. The finding that bodily stillness is associated with engagement has significant implications for artists and cultural institutions seeking to create engaging remote experiences. The results of this study highlight the potential of technology to support and enhance the remote audience experience.

The motion-tracking method has since been used in a major research project, conducted in collaboration with the Bristol Old Vic Theatre. The findings will help Bristol Old Vic develop on-screen experiences that create the same sense of connectedness and magic as a live theatre experience.

5. Organising for the future

Creative environments which foster inclusive and progressive modes of innovation are difficult to cultivate because capitalism — the dominant system in our lives — leaves little room to imagine, let alone develop, alternatives.

At Bristol+Bath Creative R+D we wanted to look for existing opportunities to create spaces in which we could work differently; we were inspired by a strand of activist work referred to as ‘diverse economies’, which describes existing alternatives to the economy of money, such as economies of sharing, gifting, and collaboration. These kinds of exchanges happen all the time, and are all things that are very much present in the everyday practices of creative work.

This thinking is a stepping stone to show us how we can collectively work towards alternative systems of thinking, providing a hopeful start for organising for a future for innovation that is equitable, and based on values beyond the economic.

5.1. Imagining the alternatives

[Watch the full seminar series](#)

In the Autumn of 2021, we hosted a series of seminars called Hopeful Futures. Across 5 events we drew together 15 futurology experts, radical thinkers on anti-colonialism and alternatives to capitalism, and climate activists, from Bristol, Bath, and the rest of the world. We wanted to hear from these experts to help us think about how to make better alternative spaces for responsible creative innovation.

The seminars touched on many new, wide-ranging concepts such as:

- ▶ ‘Planetary consciousness’ and ‘collective vulnerability’.
- ▶ The difference between quiet and radical change, and the timeframes required for both.
- ▶ Nuanced framings of growth, including cyclical growth, and compromise over shared desires for different futures.

This work inspired us to think about how we can start to make changes in the way we work. One way we did this was to support local creatives in experiments with the use of ‘meanwhile spaces’ – the use of vacant properties such as shops, shopping centres, or offices, as temporary community resources. One project we supported in this way was called ‘In the Meanwhile’, undertaken in partnership with Bath Spa University, where vacant shops in the centre of Bath and nearby Twerton were taken over and filled with local creative content, enticing visitors inside to engage in activities other than shopping, and challenged the idea that culture is simply a conduit for generating foot traffic for local businesses.

5.2. Rethinking business

The creative economy is part of a political and economic system where the only metric for success is whether this year's rates of production and consumption are higher than last year's. After working closely with creative individuals and organisations, it's clear that their motivations span far beyond financial growth. This realisation has pushed us to rethink approaches to creative business.

Creative workers are constantly faced with concerns around precarious contracts, and the pressure to stay in competition with each other, which ultimately drives down pay. There is also an evident desire to make work in a way that is thoughtful and sustainable, and not just another avenue for accumulating wealth. Through our programme, we looked at the options creative practitioners have for 'doing business' could change in order to minimise, or distinguish, these challenges.

Changing the organisational status of a creative business, adopting new inclusive frameworks, or taking responsibility for carbon and environmental impacts all require a lot of knowledge and resource. The challenge is compounded by the prevalent mindset that gears investment towards much larger businesses, when in fact much of Bristol and Bath's creative sector is freelancer, micro- and SME.

To address these problems, Dr Malu Villela and Dr Alice Willatt (University of Bristol) explored refactoring creative

businesses from shareholder-owned models, to community-owned ones. They found that radical changes like this aren't always necessary to make an impact: the bureaucratic barriers involved in setting up alternative businesses can be tedious and daunting. It's possible for businesses to adapt their current ways of working towards fulfilling their social and environmental goals, such as setting up fairer employee/freelancer contracts, or adopting open-book accounting methods. [Read more about Malu and Alice's research on our website.](#)

Dr Liz Roberts (UWE Bristol) explored how policymakers and stakeholders were tackling this need for change. Responsibility for making the sector more resilient, fairer, environmentally sustainable, and inclusive cannot and should not fall exclusively on creative businesses and individuals; there are many structures at play which both create opportunities and barriers to change. Investors, banks, funders, local authorities, national governments, other city-level and 'alternative' organisations all play a role. Change often needs to start small but this question of scale remains pertinent, given the significant influence of these interacting economic and organisational structures. [Read more on our website.](#)

Tarek Virani at UWE Bristol has also conducted research into what makes creative and cultural businesses resilient to shocks like the pandemic, and has developed a toolkit to help businesses assess their readiness for such challenges. You can find out more about this toolkit in section 6.

We supported Dr Gill Wildman, Director of Upstarter Incubator, to develop Hopeful Finance, a project inspired by her creative business development work as part of Bristol +Bath Creative R+D. Hopeful Finance focuses on creative business and the investment they need as they progress from R&D into a viable business. The common thinking of the R&D journey is based on a Silicon Valley model: of idea development through R&D, into a business proposition, and to progress by connecting with equity investors. Many programmes, incubators and funding opportunities follow this thinking. Our experience shows that for a creative business, raising the typical forms of investment - equity based investment from angels investors or Venture Capitalists - is not impossible, but for the majority of creative R&D projects it is a huge challenge. Gill has been working with creative companies to instead discover what forms of money might work best for them. She has also been working with investors of all kinds, to discover what's possible, and what stops them from investing in the creative sector more often.

5.3. Building connections across cultures

Our *Here + There* programme rethought what internationalisation meant for creative companies in Bristol, Bath, and across the world. Rather than focus on a business model that involves colonising new markets with products dreamt up at home, we wanted to understand what could happen when collaboration sat at the heart of making work that moved across borders.

We wanted to build international collaborations that were equitable and just while keeping under consideration the possibilities of new technologies, the climate crisis, and a shifting political landscape. The programme sought to find mechanisms to nurture international connections and communities when we physically cannot be present or connect.

We were able to support partnerships across Nigeria, South Africa, South Korea, Canada, and Australia. These projects experimented with developing an existing creative technology product for audiences or markets elsewhere in the world, building suitable relationships to other cultural and economic contexts while finding new revenue streams to scale work and bringing together experts from around the world who understand different markets, economies and models of production and distribution.

The *Here + There* prototype teams developed several forms of international creative R&D. These included curating hybrid events across borders, marketing hyper-local, place-based experiences in cities across the world, and internationally touring theatre productions that minimised environmental impacts and supported circular economies.

[Read more about Here+There in a report written by Watershed and Made Culture in Lagos.](#)

6. Toolkits for change

We hope that this report has shed some light on the work we supported and achieved with Bristol+Bath Creative R+D. With our research and that of the R&D projects we funded, we sought to be both challenging and inclusive. We worked hard to create safe spaces in which artists could experiment, take risks, and make work that was rich and fulfilling. Participants were encouraged to develop ideas around the social, political, and cultural impacts of technologies — and not to focus solely on market success.

We ended up exploring many alternative ways of working, from ways to carry out innovation that is responsible, to critical ways to practise inclusion to ways of supporting business development. We have documented these practices, processes and learnings and collectively created shareable toolkits and frameworks to help companies and organisations become more green, responsible, and inclusive. You can read more about these below.

Key Learnings: we drew together the key lessons we've learnt from running Bristol+Bath Creative R+D about running creative cluster programmes. We looked at the overarching design of the programme and how its delivery lived up to our key aims, which were to enhance collaboration, creativity, inclusion and open innovation. We hope our learnings can provide guidance to those planning to design and deliver similar R&D programmes in the future.

[Access a pdf of our key learnings.](#)

Responsible Innovation: We commissioned Dot.Everyone to develop recommendations on how to design and invest in creative technologies responsibly. Dot.Everyone explored the consequences of ubiquitous technology use through workshops with product owners, programme fellows, and the B+B executive team. Two participants from this part of the programme developed these ideas and formed [Consequential](#), a community interest company that helps other organisations innovate in responsible ways. [Read about Consequence Scanning on our website.](#)

Inclusion Framework: inclusion has been a key consideration of Bristol + Bath Creative R+D since its inception. Evident in many of the works and collaborations across the 5-year programme. We wanted to explore how we could codify and share the knowledge, learning and ideas of inclusion practice, and make this accessible to the wider sector. Born from insights from Inclusion Action Researchers, Inclusion Fellows, real-world case studies and Inclusion expertise - below we offer a framework to guide projects in increasing equity within a project, asking where change can come from, whatever stage they're in. [Access the Inclusion Framework on our website.](#)

Climate Action Toolkit: Watershed has produced a climate action toolkit which offers an actionable framework for small creative companies to make progress toward net zero. Climate Action researcher Zoe Rasbach spent over a year scoping existing resources, conducting interviews and workshops, asking what was needed and how action

could feel most achievable, and trialled the toolkit with Watershed's own teams. [View the Toolkit on our website.](#)

International collaboration: In 2022, Made Culture in Lagos, Nigeria and Watershed embarked on a 9-month collaborative enquiry connecting our cities and network in a new experimental knowledge production process. This report brings together the process for producing collective thinking, including the tools and concepts it inspired, and insights towards building equitable and just international collaborations. We hope our enquiry inspires others to think forward towards globally connected futures and contribute to an ever-growing body of collective thought. [Read the report from the enquiry on our website.](#)

Creative Resilience Toolkit: Tarek Virani (UWE Bristol) worked with researchers and creative businesses across the country to develop an online diagnostic tool which allows creative and cultural micro-businesses to assess their level of resilience to external shocks like the pandemic. [Explore the toolkit.](#)

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