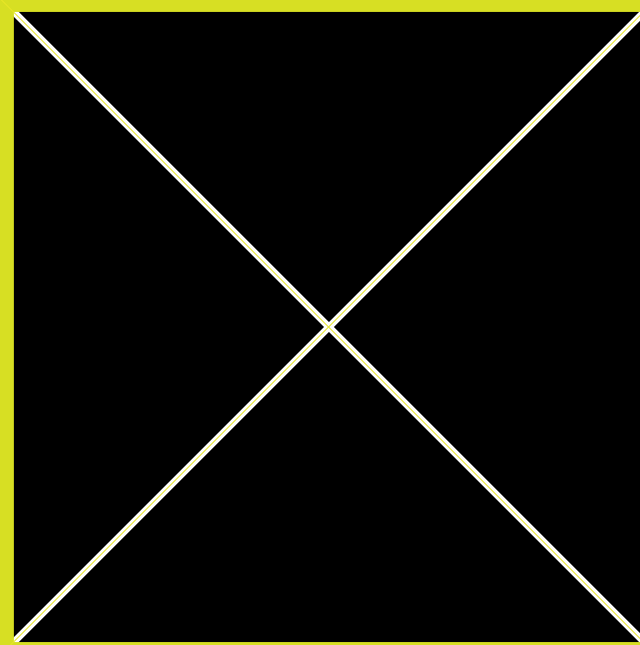


CREATIVE INFORMATICS

Annual Report
2022-2023



Director's Report

Melissa Terras & Chris Speed

Writing an introduction to an annual report is always a time to stop and reflect – which is something Creative Informatics hasn't had much time for, given the pace we've been operating at for the past five years. In that period, Creative Informatics has developed a network of 2900+ businesses and individuals working in and beyond the Creative Industries within Edinburgh and its regions, of which 683 have benefited from training and skills programmes. We have funded 136 R&D projects enabling creative SMEs to take risks and explore new business opportunities. This work has generated 45 new spin outs and start-ups, 429 new and safeguarded jobs, and created 210 new products, services and experiences, which in turn has generated over £7.5 million in further funding and investment. Looking at those figures shows why we don't have much time to pause: the project is still very ambitious, and future focused!

Looking back over the past 18-months a series of high points demonstrate our engagement and impact with contemporary debates and practices as we see data-driven technology further disrupt the creative industries. In September 2023 the *There be Dragons* exhibition at the Inspace Gallery, curated by New Media Scotland, investigated and untangled some of the messy issues around data and creativity in order to build a picture of the role that data plays in the life of the creative practitioner. The five artists/groups; Elke Finkenauer, Applied Arts Scotland, Melanie Frances, More Fun With Games and Theodore Koterwas all exhibited works that described the challenges of creating with data.



In the Autumn of 2022 Melissa was invited to visit the House of Lords to give evidence at the Communication and Digital Select Committee's Creative Future Inquiry, where – including data and experiences from the CI community (also provided as a written response to committee) – she was able to provide evidence about the need for continued funding for the creative industries, particularly around digital and data skills. Melissa also had the opportunity to comment on Brexit and the negative impact that it is having on the sector, live on Parliament TV, which was quoted in the final report published in January 2023.

Representing practitioners within our network who are operating at the cutting edge of new technologies has always been both our responsibility and pleasure. In November we hosted Rachel Maclean who has been working with collaborators within Creative Informatics on AI-generated audio for her new short film *Duck*, a darkly comedic British spy drama starring a deepfake Sean Connery. Alongside Rachel, Martin Disley, Adam Castle and Lynne Craig all contributed to the debate about the implications of AI upon identities within creative practice.

In early 2023 we partnered with the UK Creative Economy Team to present Ray Interactive, Playable Technology, Black Goblin, and SENSEcity as part of the Immersive Future Lab at SXSW 2023. The teams flew out to Austin to present and demonstrate their work to international audiences. In April, Vikki Jones and Chris Elsdon asked us to gaze even further into the future, by exploring the themes, tensions and implications of emerging technology on Edinburgh's Festivals. Made vivid through the publication of *FestForward* – a fictional, speculative cultural magazine set in 2030, panels and talks invited us to think about the preferred future for festival cultures and economies.

Recent economic analysis has shown that the Creative Informatics programme's direct impact on Gross Value Added (GVA) is £26m, with further projected impact from 2023–2026 of 27.2m – a total GVA of £53.2m



Which takes us up to our Innovation Showcase in September 2023, a two-day hybrid event and exhibition that featured a wealth of projects from both our stable and beyond, inspirational speakers, panels, and performances, including the singer and producer Chagall, and award-winning musician and technology innovator, Imogen Heap.

Behind the scenes, we've been hard at work on a forthcoming book - *Data-Driven Innovation in the Creative Industries: Creative Data Catalysts* - which will be published by Routledge in Spring 2024. The book will be free to download in open access, and we hope it will provide a summary of many of the lessons we have learnt during Creative Informatics, including: the importance of supporting equality, diversity, and inclusion in the creative industries; the need for scaffolding and support when providing funding for innovation; and guidance in navigating the ever-changing legal landscape regarding creativity and data.

We are planning ahead for future activities, being named as core partners on two preferred bids for the UK Government's Convergent Screen Technologies and performance in Realtime (CoSTAR) programme. The 6-year CoSTAR programme will see new state-of-the-art research and development facilities set up to drive the next generation of screen technology and on-set virtual production. Once contracts are signed and the project is underway, we'll provide further information to our community as to the resources and opportunities this will present. We also take many of our skills and insight into a €6m project to develop a European Cultural and Creative Industries Innovation Policy Platform (ekip) led by Lund University with 17 partners across Europe, to support the

development of innovation policies for future cultural and creative industries. In addition we also managed to secure additional AHRC and DCMS funding to explore the potential for using Artificial Intelligence in the creative industries in Scotland, undertaking groundwork for policy makers while also running a funded call for rapid turnaround *Creative AI Music & Audio Pilot Projects*.

There are also some changes afoot at Creative Informatics towers as Chris, Founding Director, has departed for a new position at RMIT (Royal Melbourne Institute of Technology) from January 2024. As long-time Co-Director across the project, and Acting Director for the past year, Melissa becomes the Director and will drive the multi-threaded programmes into the future. We will miss Chris greatly, and wish him well in future adventures!

Operating at this scale would not be possible without an excellent team, and in particular we would like to thank our programme manager Nicola Osborne, our comms and engagement manager Emma Pirie, our programme and evaluation officer Diane Henderson, our administrative assistant Olivia Salamon, our programme and finance administrator Courtney Bates, our project and engagement manager Vic Murray, and Caroline Parkinson, the Edinburgh Futures Institute Sector engagement manager for the creative industries. It is a privilege to work with such a talented and dedicated team. We would also like to thank our longstanding partners Edinburgh Napier University, Codebase and Creative Edinburgh. Our work would not be possible without your ongoing expertise and support.



This is the last annual report for us (can you believe it?): the next report, in March 2024, will be the end of project summary, hopefully to coincide with a major celebration of the community we've built, the successes we've had, and the journey we've all been on together. We hope to see you there!

Creative Informatics in Numbers

Creative Informatics Strands

Number of supported projects

Number of applications

Resident Entrepreneur



74

281

Challenge Projects



29

101

Connected Innovators



27

148

Creative Bridge



220

317

Horizon Projects



5

18

Alumni & Participant Inclusive Creative Capital Tech Fund



10

42

Community Inclusive Creative Capital Tech Fund



12

20

Creative AI Music & Audio Fund



10

16

Creative Informatics in Numbers

Since 2018 Creative Informatics has:

CREATED OR SAFEGUARDED

429
JOBS

OVERSEEN THE DEVELOPMENT OF

210
NEW PRODUCTS,
SERVICES OR
EXPERIENCES

TRAINED
682
INDIVIDUALS

130+
R&D PROJECTS

45
SPIN-OUTS,
START-UPS
AND PIVOTS

FOR EVERY £1 INVESTED THROUGH THE PROGRAMME, CREATIVES HAVE SECURED A FURTHER £2.05 IN ADDITIONAL FUNDING AND INVESTMENT.

£53.2m
GROSS VALUE ADDED
2019-2026

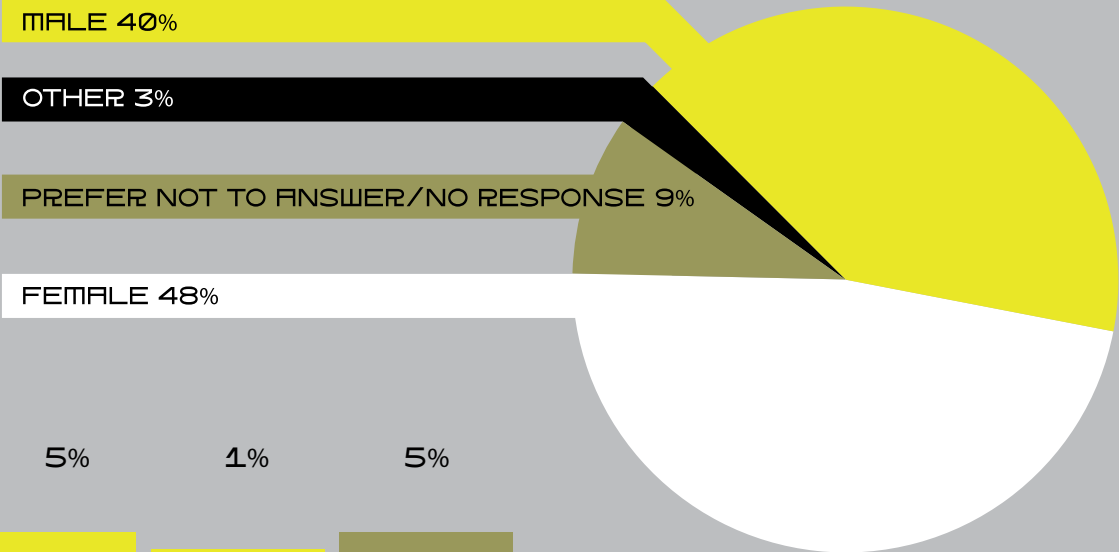
£7.5m
FURTHER FUNDING
AND INVESTMENT

Equality, Diversity and Inclusion

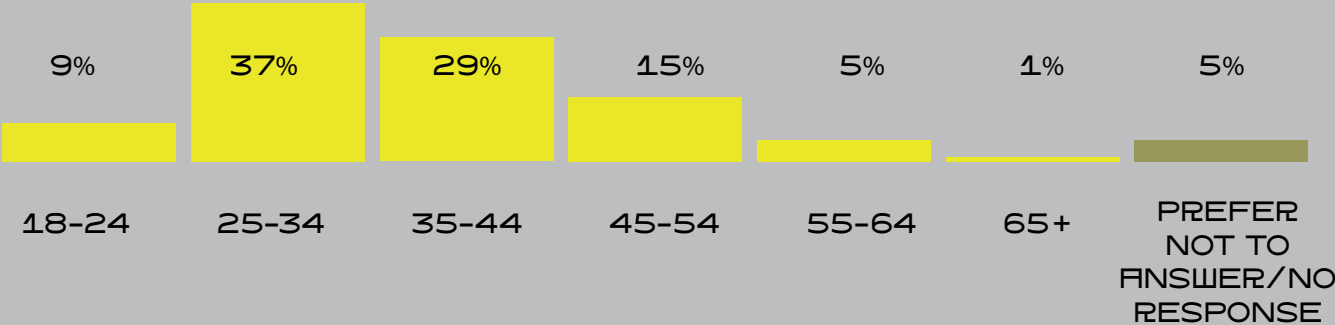
ETHNICITY



GENDER



AGE RANGE



Events and Engagement

Throughout the year, the Creative Informatics team produces and presents a variety of events and engagement activities. This provides our network with opportunities to showcase their work and engage with other creatives on a local, national and international level.

CI Labs

CI Labs are informal events that provide a meeting place for creatives of all disciplines to connect, collaborate and hear about innovative, data-driven work taking place across the creative industries.

In November 2022 we welcomed award-winning artist Rachel Maclean who has been working with the Institute for Design Informatics to produce AI-generated audio for her new short film *Duck*, a darkly comedic British spy drama starring a deepfake Sean Connery. Rachel appeared alongside researcher and artist Martin Disley, Adam Castle (producer for *Pollyanna*) and Lynne Craig, programme director at Institute of Design Informatics who each presented work ranging from interactive digital cabaret videos to voice clones to hyper realities.

CI Lab 23: Festival Futures took place at the Biscuit Factory in April and explored the themes, ideas and methods our researchers used to produce *FestForward* magazine – a fictional, speculative magazine exploring digital and data-driven futures for Edinburgh and South East Scotland's Festivals. We were joined by Ireland's finest improvising musical comedian Abandonman aka Rob Broderick who presented a scratch performance inspired by *FestForward* magazine's imagined Culture.ai platform.



Festivals

SXSW

In March 2023, we partnered with the Creative Economy Team to showcase Ray Interactive, Playable Technology, Black Goblin and SENSEcity as part of the Immersive Futures Lab at SXSW 2023. We've worked closely with these creative businesses over the past five years providing funding, mentoring and advice and were delighted to support them as they presented their innovative products at this iconic event and formed connections with potential investors and future collaborators.

Edinburgh's Festivals

Creative Informatics has engaged with several of Edinburgh's Festivals, presenting events, exhibitions and providing representation on panels and discussions. In April 2023 we were pleased to welcome a sold-out audience to our *Knitting with Data* event and support *Tactile Intelligence*, an exhibition from the Institute for Design Informatics Artist in Residence Theodore Koterwas at Edinburgh Science Festival.

In August 2023 we supported the Institute for Design Informatics curated exhibition *The Sounds of Deep Fake* as part of Edinburgh Art Festival and Edinburgh Festival Fringe while Creative Informatics programme manager Nicola Osborne presented the challenges and opportunities that working with creative AI can bring in *Can Data Unlock Creativity?* as part of the Cabaret of Dangerous Ideas at Edinburgh Festival Fringe.



Events and Engagement

Creative Informatics Innovation Showcase



The Creative Informatics Innovation Showcase took place in September 2023 as an exciting two-day hybrid event and exhibition exploring how data-driven innovation is changing the world around us. We were thrilled to be joined by inspirational leaders from across the creative industries for thought-provoking panels, in-depth conversations and special performances.

Throughout the Innovation Showcase, attendees had the chance to explore and experience some of the creative products supported by Creative Informatics in an interactive exhibition curated by Stacey Hunter (Local Heroes). In total, the Innovation Showcase featured 60 speakers, nine exhibitors and was attended by over 500 people.

Highlights:

An inspiring opening keynote from Leah Black on *Creativity, Communities, Funding and the Future*.

A panel exploring the impact of the *Creative Industries Clusters programme in Creative Catalysts* featuring Prof Christopher Smith along with colleagues from other Clusters, chaired by Melissa Terras.

Singer and producer Chagall in conversation with Edinburgh Futures Institute director of creative, Caroline Parkinson before presenting *Unlocked* – an immersive light-art installation and performance.

A special appearance from award-winning recording artist and technology innovator Imogen Heap in conversation with author and broadcaster Gemma Cairney.



Research

Creative Informatics researchers based at the University of Edinburgh and Edinburgh Napier University continue to explore key challenges for the creative industries in Edinburgh and South East Scotland, with a core focus on how the Creative Informatics programme has shifted data-driven innovation for this sector throughout the lifecycle of the programme.

Data-Driven Innovation in the Creative Industries: Creative Data Catalysts

Due for publication in Spring 2024, this open access book will explore key questions for the creative industries around engagement with digital technologies and data, considering experiences and learning from Creative Informatics alongside contributions from other voices in academia and industry.

Looking at sectors from across the creative industries, the book will bring together voices that will consider central themes including:

- ◇ How the creative industries are dealing with the increased digitalisation of our lives and society and embedding this in their work.
- ◇ Opportunities for creative and technology sectors to collaborate to embrace and embed data-led innovation in their practice.
- ◇ Ways to scaffold new connections between technologists and creative practitioners to lead social, cultural, environmental and economic innovations.
- ◇ The role of research – both academic and industry-led – in supporting data-driven innovation in the creative and cultural sectors.



Sustainable creative futures

Creative Informatics researchers have continued to explore data-driven approaches to sustainable creative practice and equitable creative economies. Dr Inge Panneels and Dr Susan Lechelt collaborated on a short film entitled [Data-Driven Innovation for Sustainable Creative Practice](#), which was premiered at the [New European Bauhaus Festival](#) in Brussels in June 2022, was the basis for a paper at the [British HCI conference](#) in July 2022, and was subsequently screened at [Creative Informatics Studio #23](#) in January 2023.

In March 2023, the research team presented a [panel of Creative Informatics research](#) and its relevance to sustainable creative economies at the [Creativity Knowledge Cities \(CKC\) conference](#) in Bristol. Also addressing the conference theme of New Futures for Creative Economies, research associate Vikki Jones brought together a panel of creative practitioners from around the UK to explore [Envisioning Futures for Creative Economies: Language and Power](#) in the context of how the language the creative industries use to describe their practice can have implications for building equitable and sustainable futures.



Research

Coast to Coast

Working in partnership with [Future Screens NI](#), our Creative Industries Clusters Programme colleagues in Northern Ireland, and Creative Informatics Resident Entrepreneur print publisher [Boom Saloon](#), *Coast to Coast* is a book that explores what it means to be creative in 2023, led by our research team at Edinburgh Napier University.

The book, published in September 2023 is a collection of reflections from interviews with creative practitioners in Northern Ireland and the Edinburgh and South East Scotland region, complemented by essays from academics and industry leaders.



Creative AI Demonstrator Project

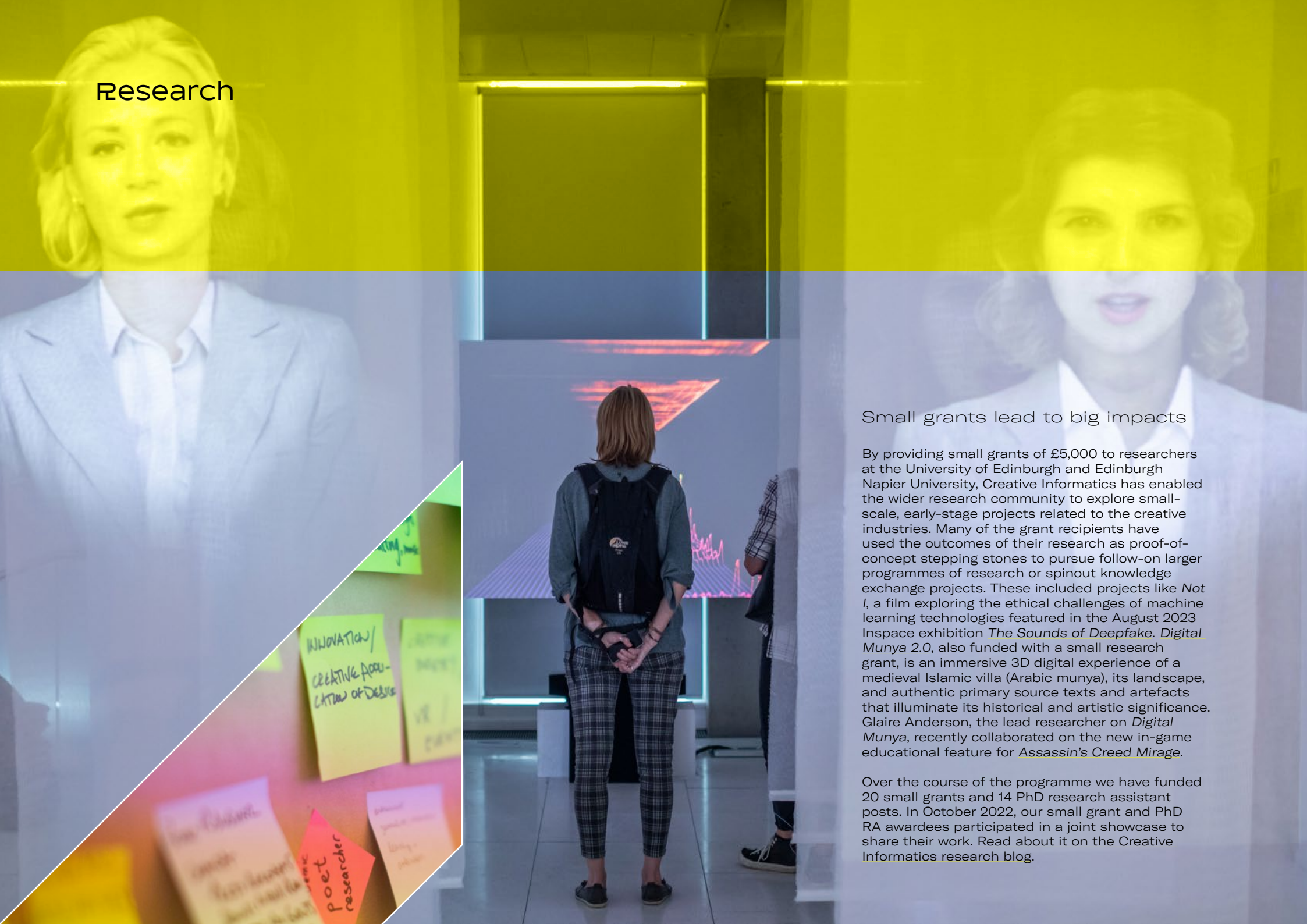
The *Creative AI Demonstrator* project is funded by the AHRC and DCMS until March 2024, with the aim of surveying existing work in Scotland that uses artificial intelligence and machine learning within the creative industries to establish where best to invest resources. To this end, the project has conducted a series of online and in-person workshops and a survey, both designed to engage with creative communities across Scotland and find out what their needs and wants are for future growth in the direction of creative AI. It has also funded ten small R&D projects on the theme of creative AI and music / audio.

Workshop participants came from a range of creative, research and industry backgrounds who had varying levels of familiarity with AI technologies, from being curious about them to routinely incorporating them into their working practices. Attitudes towards creative AI ranged from the positive potential for efficiency by automating tasks and saving mental energy, its sparking inspiration to wariness around the unknown aspects of such technologies.

Early findings from workshops showed awareness of known challenges around funding, training, and legislative support for Creative AI. In addition, participants identified other key issues in terms of much-needed investment in increasing skills, in computer science, data work, the associated legal and ethical issues, and the ways in which multiple skillsets are needed in collaboration to grow Scotland's creative AI capacity in an advantageous and responsible manner.



Research



Small grants lead to big impacts

By providing small grants of £5,000 to researchers at the University of Edinburgh and Edinburgh Napier University, Creative Informatics has enabled the wider research community to explore small-scale, early-stage projects related to the creative industries. Many of the grant recipients have used the outcomes of their research as proof-of-concept stepping stones to pursue follow-on larger programmes of research or spinout knowledge exchange projects. These included projects like *Not I*, a film exploring the ethical challenges of machine learning technologies featured in the August 2023 Inspace exhibition *The Sounds of Deepfake*. *Digital Munya 2.0*, also funded with a small research grant, is an immersive 3D digital experience of a medieval Islamic villa (Arabic munya), its landscape, and authentic primary source texts and artefacts that illuminate its historical and artistic significance. Glaire Anderson, the lead researcher on *Digital Munya*, recently collaborated on the new in-game educational feature for *Assassin's Creed Mirage*.

Over the course of the programme we have funded 20 small grants and 14 PhD research assistant posts. In October 2022, our small grant and PhD RA awardees participated in a joint showcase to share their work. Read about it on the [Creative Informatics research blog](#).



Creative Horizon Projects

Over the course of our five Creative Horizon Projects, the Creative Informatics research team led forward-thinking research programmes which brought academics and industry partners together to explore what impacts emerging technologies are having, and may have in the future, for the creative industries in Edinburgh and South East Scotland.

Our research team set the theme for each Creative Horizon Project, assembling partners with a wide range of complementary skills and knowledge domains to create an environment for new questions and innovative ideas to flourish.

festforward



Envisioning equitable and sustainable digital futures for festivals: FestForward Magazine

Creative Horizon 3 explored how speculative design and participatory futuring can support the development of equitable and sustainable approaches to digital technologies and data-driven innovation for festivals in the Edinburgh and South East Scotland region. The project was co-led by Vikki Jones, Dr Chris Elsdon and Dr Ingi Helgason, and the team partnered with Glasgow-based futures design researchers, [Andthen](#).

Following interviews with people working in the festivals sector about their experiences with and hopes for the development of digital technologies and data-led approaches for festivals, the research team came together to build a series of 'provotypes' – near future scenarios brought to life by low fidelity artefacts – that were designed to prompt conversations and reflections about the opportunities and challenges festivals are working with now and by 2030.

The research produced the July 2030 edition of a speculative, fictional, cultural magazine – [FestForward](#) – which was published in print and digital versions in August 2022. The research team have presented and shared the magazine with festivals, funders, policymakers and cultural sector workers, using it to start hopeful conversations about possible and preferable futures for festivals that situate equitable and sustainable approaches alongside digital technologies and data. This conversation continued at [Creative Informatics Lab #23: Festival Futures](#), in April 2023.

Detecting Dark Matter Data:

data gaps for innovation and R&D activity in the creative industries

Caitlin McDonald, Creative Informatics
Jennie Jordan, Creative Research and Innovation Centre



Detecting Dark Matter Data: data gaps for innovation and R&D activity in the creative industries.

Our final Creative Horizon project focused on the challenges for using data to drive decision-making about the creative industries sector. Although a wide variety of quantitative and qualitative data sources on the creative industries are available, policymakers and creative practitioners alike still struggle to use data effectively as a decision support tool in their strategic thinking and planning. In particular, there is tacit knowledge that sector activity occurs which is not well-captured through traditional economic analysis mechanisms. One research participant referred to this data gap as the 'dark matter' of the sector.

To find out how to bridge these data gaps, Creative Informatics researcher Dr Caitlin McDonald partnered with researchers at the Creative Research and Innovation Centre at the University of Loughborough to interview and run workshops with stakeholders who produce, collate, and use data about the creative industries. This included policymakers and funding bodies, individual creative practitioners and creative organisations, and data aggregation services which hold and share creative industries data.

Read recommendations from the research team about how to improve the data landscape for the creative industries in our white paper [Detecting Dark Matter Data](#).



Challenge Projects

Challenge Projects offer an opportunity for creative and cultural organisations to bring forward challenges relating to their work that require innovative, data-driven solutions.

Challenge Holders came with unformed or semi-formed challenges that can be co-designed with the Creative Informatics team. Up to £20,000 was available to support Challenge Respondents (individuals or SMEs) for research and development proposals to answer a Challenge Project.

“Working with our national theatre company has been a fruitful and inspiring experience. Their team are aligned with and supportive of our vision for Centrline, and our co-design relationship continues to grow. We continue to meet with relevant teams every two weeks, and are in discussion about many other areas to develop.”

Craig Fleming, Centrline

Centrline and National Theatre of Scotland

As Scotland's national theatre company, with a busy domestic and international touring programme, National Theatre of Scotland (NTS) were in need of a tool which would unlock the value of their wealth of historical touring data, and allow them to better understand their touring footprint, venue and producer relationships, capacity for audience growth and sales, and ultimately plan more efficient and impactful tours.

Centrline, a company with experience in developing software for the performing arts and productions, responded to this Challenge by proposing the development of a platform which would take a single approach to data and sharing, allowing departments to access wide data sets in collaboration and break down organisational silos, as well as reducing duplication of work.

The tool allows users to compare historical sales figures, venue and personnel data with ease and in a visual manner, is accessible across departments and empowers users to answer their own touring questions and interrogate the available data to predict sales and ensure that resources are being deployed to maximum efficiency and population coverage.

Following the production of a prototype platform, NTS have gone on to invest in Centrline, to expand its abilities and capacity, as well as potentially bringing other organisations into the platform to set a new standard of data handling and exploration across Scottish producers.





Challenge Projects

Studio Casper and the Fruitmarket Gallery

Studio Caspar is a company that specialises in community engagement and data driven design. Led by community artist Caspar J Wilson, the studio has worked on a Challenge Project with the Fruitmarket Gallery addressing how audience diversity is monitored and audience data is used. Subsequently Caspar was supported as a Resident Entrepreneur with a proposal to address the challenge of engaging, measuring and collaborating with audiences.



During the Challenge Project, Caspar and the Fruitmarket team developed *Data Diversity* - a valuable new audience survey app, following a period of extensive public engagement and expert research. This digital tool uses a unique form of language processing, coupled with a friendly and approachable design, all targeted at earning the participation of diverse voices who are the least engaged by traditional systems. The result is a survey which is now in public use alongside the Fruitmarket's new exhibition programme.

As a result of discoveries made and issues experienced during the Challenge Project about how data is conventionally collected from audiences, Caspar focused his Resident Entrepreneur placement on developing a service design product called *The Personality Machine*, informed by conversations with a number of potential client organisations in need of new ways to measure and engage audiences.

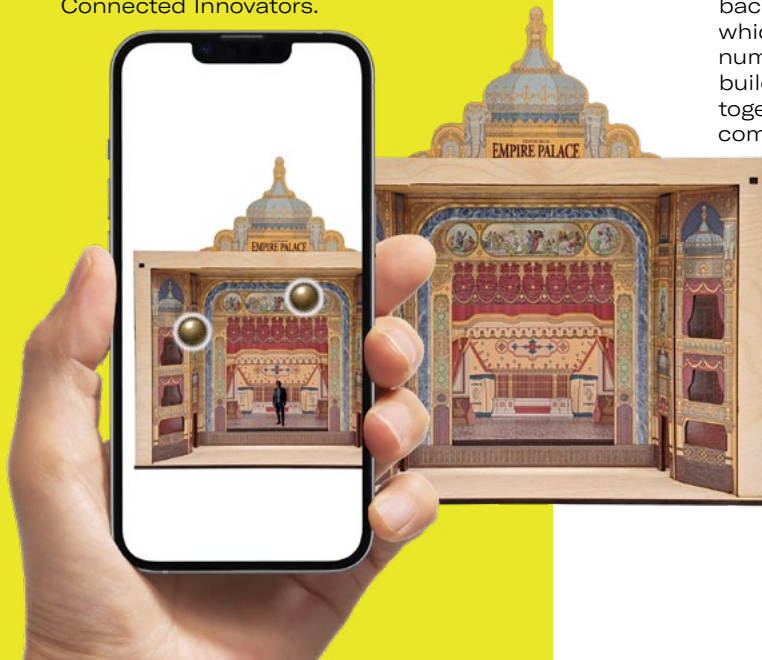
As of 21 March 2023, Studio Caspar is a limited company, which is now focusing on generating revenue from *The Personality Machine* and acquiring additional funding to expand the product.





Connected Innovators

Over the course of Creative Informatics, 27 Connected Innovators have received up to £10,000 of funding and support to develop a specific area of their creative practice or business using data or data-driven technology. Connected Innovators is delivered by Creative Edinburgh, which plays a crucial role in the Creative Informatics partnership, ensuring that our funding and development opportunities reaches its creative network of more than 5,000 members, and providing creative industries mentors for our Resident Entrepreneurs and Connected Innovators.



“Being part of the Connected Innovators has been hugely beneficial for me. It has opened me up to other innovators who have been able to share knowledge including relevant links or resources to access. With most projects there is a deadline and little time to experiment and grow. This funding has allowed me time to explore a project further and push creatively what I can achieve.”

Stuart Smith-Gordon

Stuart Smith Gordon and Ice Cream at the Interval

Stuart Smith-Gordon has worked as an interior and exhibition designer for the last 15 years and during lockdown in 2020 he decided to progress his existing business, Ice Cream at the Interval – which, up until that point, had been focused on illustrating and paper engineering model theatres with a proportion of sales going back to theatre charities – into connecting a variety of data sets which existed within the theatre buildings he had previously explored.

Stuart applied to be part of the Connected Innovators programme, with a proposal to bring back to life Edinburgh’s Empire Palace Theatre which was lost to fire in 1911. With only a small number of photographs remaining of this incredible building, further data research was needed to piece together the many missing puzzle pieces to create a complete model of the auditorium and stage.

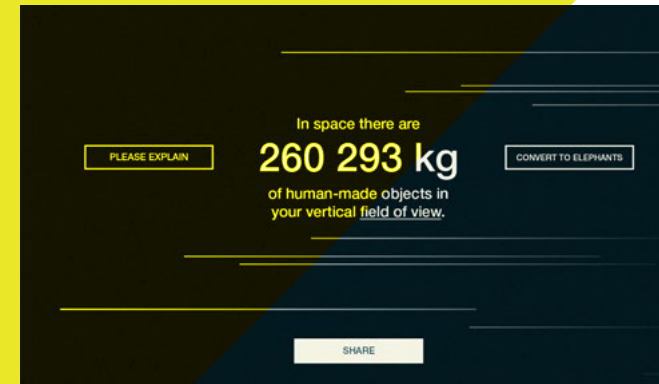
By digitising and redrawing plans, data relating to the Empire Theatre would be preserved for another generation and highlight significant built heritage. The research and development undertaken would then translated into a fully coloured version of the theatre as a wooden slot together model, which would come to life with the use of AR, animating *Topsy in Toyland* which was performed on the Empire’s stage in 1894, as well as allowing close, interactive exploration of all the data collected.

Running out of Space by Connor Moore

Having previously been Founder of creative advertising company EchoVector Ltd, and working as their product lead, Connor applied to become a Connected Innovator with his project, *Running Out of Space*, which aimed to create a scientifically accurate art installation to address the space debris problem.

The Earth’s orbital space environment constitutes a finite resource that is being used by an increasing number of states, non-governmental organisations, and private companies. The proliferation of space debris and emergence of large constellations have driven up the risk of collision in space. Connor perceived the long-term use of space, and society’s dependence on it, as being under threat.

To illustrate this, and bring the problem to the public’s attention, he created the *Orbital Mechanics Simulator*, which takes a user’s geographic co ordinates to reveal to them how much space debris is currently over their head at any given moment – both in terms of number of objects, and their cumulative weight – in an easy to understand interface. Powered by complex datasets provided by sources including the US military, the tool can be experienced at <https://connor-moore.co.uk/>, with plans for a physical installation in 2024.





Resident Entrepreneurs

Resident Entrepreneurs receive up to £12,000 of funding, plus mentoring and support to develop a new creative product or service using data or data-driven technologies. We have funded 74 Resident Entrepreneurs in total, supporting designers, artists, makers, community organisations, creative technologists and publishers to develop innovative data-driven products and services. Our final round of Resident Entrepreneurs were selected in 2022 and included DataMind, Kevin Quantum, BearHammer Games and Kate Steenhauer.

“Our experience with Creative Informatics has been invaluable. From the kick-off meeting with other grant winners and the CI team, we were inspired by the collective creativity and innovation within the community.”

Ben Cantil, DataMind Audio

Datamind Audio

DataMind Audio is a pioneering company that operates at the intersection of music and artificial intelligence. Created by musicians for musicians - and led by electronic music producer, educator-entrepreneur and technologist, Ben Cantil - their mission is to produce innovative electronic instruments that leverage the power of AI to expand and augment human creativity and capability in the realm of sound design.

In 2022, DataMind were accepted onto the final round of Creative Informatics' Resident Entrepreneur programme, proposing to use the grant to support their five-strong core team in developing a ground-breaking new AI plug-in, the *Combobulator*.



Using AI-models trained by Stability AI servers on the audio from world-class music producers (such as Tipper, Max Cooper, and Mr. Bill), the *Combobulator* transforms a live audio signal to sound like the selected music producer's unique style. Whilst this programming an AI to “hallucinate” an interpretation of an audio signal itself already represents a completely new paradigm for creative sound design, the plugin comes with many modular controls that will be familiar to all synthesizer users.

One of the most significant discoveries made during the development of the *Combobulator* was the innovative nature of their online marketplace for ethically-sourced neural networks, which will create a new economic opportunity for artists in the AI space. By curating the world's finest collection of neural networks and establishing a global marketplace for AI-generative implementations of their work, DataMind Audio is providing a new income stream for music producers to earn royalties, addressing the financial insecurity faced by artists. This represents a significant market innovation and is sure to garner positive attention in the music software industry.

Since their participation in Resident Entrepreneurs, the company has been successful in gaining a further £5,000 of R&D funding through Creative Informatics' Creative AI Music & Audio Pilot Project to retrain the *Combobulator*. This work uses an improved version of the current algorithm to scale more quickly and efficiently. DataMind were also awarded £50,000 by Innovate UK to train a number of Model Reliability Engineers, who will specialise in training the tool's neural networks in close collaboration with the artists whose styles they will be applying, with ethical considerations at their forefront.



Resident Entrepreneurs



Yaldi Games

Elena Höge of Yaldi Games applied to become a Resident Entrepreneur to develop a web-based Companion Platform to their upcoming game release, *Wholesome Out and About*.

Wholesome Out and About is a relaxing and fun life simulator that connects players with nature and teaches you real life skills as you explore beautifully crafted nature environments, from forests to grasslands, over wetlands and Alpine mountains. Players can discover and gather more than 90 types of plants and fungi in their natural habitat, while learning to identify them and improving their real-life foraging skills.

The game contains real data on plants, recipes and crafting instructions - but this is only accessible inside the game, which can reduce the conversion rate at which players recreate activities from the game in real life. With their Resident Entrepreneur grant, Yaldi created a mobile friendly web platform which syncs each player's individual game data by using a Player ID system, transferring data from the game to the web platform so, for instance, players can look up the ingredient list to a recipe they made inside the game while grocery shopping.

Additionally, the companion platform and the Player ID System will be an important catalyst for user-generated content, allowing players to not only pull data from the game but also add data to it, potentially turning *Wholesome Out and About* into a gamified Wikipedia.

Yaldi Games' recent kickstarter reached an incredible £138,000, almost quadrupling its original target. We can't wait to see what *Wholesome Out and About* achieves over the next few months.





Inclusive Capital Projects and Community Creative Tech Fund

In January 2023, Creative Informatics was awarded an additional £250,000 by AHRC CIC to fund a range of Inclusive Capital Projects, which were split into five strands of activity:

- ◇ Creative Informatics Participant & Alumni Tech fund, awarding £30,000 to 10 previous CI participants to purchase essential hardware and workspace to further their data driven work.
- ◇ Inclusive Innovation Workspace fund, awarding £25,000 worth of hotdesking space over a period of two years to applicants working on EDI focused projects. Locations across the city include the Melting Pot, Tribe Party, Sierra Metro, EFI and Bayes Centre. Currently, five creative entrepreneurs have been placed across three locations, with further applications being assessed by a monthly review panel.
- ◇ TC2 body scanner, purchased for £50,000 for the University of Edinburgh to conduct inclusive body shape research.
- ◇ Creative Edinburgh were allocated £25,000 to support the upgrading of facilities to support the membership and the creative sector more widely.

The final strand of activity was the creation of the Community Creative Tech Fund, which was open to organisations working on EDI focused projects and for the benefit of local and marginalised communities. This represented a rare opportunity for these organisations to be supported in acquiring new or additional hardware and upgrading facilities to expand their work and impact.

Working with the Creative Communities Hub, based at WHALE Arts, a series of workshops were held across the city to raise awareness of the fund amongst targeted communities, and to support and advise organisations in making their applications. These sessions led introduced a large number of grassroots organisations and established charities to the Creative Informatics network, who are now in the position to benefit from the programme's activities and opportunities, as well as the support of the wider Creative Informatics community.

20 applications were received, the majority from organisations previously unconnected with Creative Informatics, of which 12 received full or partial funding. They included:

Leith Theatre
Euan's Guide
Lung Ha Theatre
Collective Text
Community Wellbeing Collective
Grantonhub
WHALE Arts
North Edinburgh Arts
Screen Education Edinburgh
Produced Moon
Tinderbox
Craigmillar Now

In addition to funding, several organisations have been offered bespoke data planning consultancy sessions with members of the Creative Informatics team to ensure their purchases are being used to create maximum impact, efficiency and with a lasting legacy beyond the end of the Creative Informatics programme.



The Future

Nicola Osborne



Creative Informatics is due to run until the end of March 2024, but as you can imagine we have been planning for the future for a while now and want to share some of the ways you will see Creative Informatics in the future.

We think the most important part of Creative Informatics is the incredible creative community of Edinburgh and South East Scotland. We have been thrilled to blur the boundaries around creativity, data and technology, helping people working in these spaces to find each other and access support. This type of networking, connection, and community will be supported into the long-term through Creative Tech Scotland, a brilliant initiative from our colleagues at the Edinburgh Futures Institute (EFI). Creative Tech Scotland has already run two wonderful Annual Gatherings (with lots of CI participation) and will be continuing into the future with an events programme to bring creatives working with data and technology together. We hope many of those who have engaged with CI will be part of these.

Creative Informatics will also be continuing through a series of new projects including our participation as core partners in two preferred bids in the UK Government's Convergent Screen Technologies and performance in Realtime (CoSTAR) programme, a 6-year initiative to create state-of-the-art research and development facilities and drive the next generation of screen technology and on-set virtual production.

We are working with Abertay University (home of InGame) and CI partner Codebase, to establish the CoSTAR Realtime Lab across two sites, in Water's Edge studios in Dundee, and at Edinburgh College of Art. We are also working with Goldsmiths, University of London and the BFI to deliver the CoSTAR Foresight Lab, which will research the impact of the UK-wide programme and look at emerging developments for the screen and performance sector. We are delighted to be working with such fantastic partners and look forward to sharing more information on how creatives across Scotland will be able to benefit from access to these new facilities).

Creative Informatics' insights, and the team's expertise, will also be contributing to ekip, the European Cultural and Creative Industries Policy Platform, an EU-funded project (€6m) in collaboration with 16 partners across Europe, to develop policies that support innovation for future cultural and creative industries. We will also be continuing to engage with the exciting European EIT Culture & Creativity (in which we are a partner), sharing forthcoming funding and development opportunities open to creatives in the UK.

In addition to these confirmed projects, we continue to seek new ways to support and collaborate with creative industries SMEs and larger creative and cultural organisations. You will also see that some of our researchers and experts in both University of Edinburgh and Edinburgh Napier University working in 'Creative Informatics' as both universities now have research groups associated with this programme and the wider creative, data, and technology space.



Thanks

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