

StoryFutures ^{/ACADEMY/}

National Centre for Immersive Storytelling

Annual Report

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2020 - 2021

NFTS

NATIONAL
FILM AND
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SCHOOL



UK Research
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INDUSTRIAL
STRATEGY



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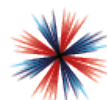
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Chair's Statement



StoryFutures Academy is the UK's National Centre for Immersive Storytelling, a 3-year project to develop cutting-edge creative training and research programmes to ensure the UK creative workforce is the most skilled in the world in the use of virtual, augmented and real-time production technology for immersive storytelling.

Initially funded as a 3-year project by UKRI-AHRC as part of the Audience of the Future programme, I am pleased to be writing the foreword to our 2020-21 Annual Report that marks a new chapter in StoryFutures Academy with its funding extended for a further 18 months from Sept 2021 to March 2023. The success of the National Centre in reaching over 2,000 beneficiaries -double the original target - as well as creating and supporting some 463 jobs, has underpinned the value it is playing to our creative economy as we tackle the challenges and opportunities of digital disruption.

As part of this new chapter the National Centre will be embarking on three new remarkable projects that will underscore its value to our world-leading creative industries:

- StoryTrails mixed reality project for FestivalUK*2022
- A Virtual Production Training and Co-Production stream
- A New Professional Placement Scheme for Early Career Scholars

The team are well placed to deliver such ambitious programmes, with 2021 marking the launch of the incredible Laika VR project from Asif Kapadia, the showcasing of Glimpse at Venice Film Festival and the development of a national network of talent training infrastructure via the incredibly successful Train the Trainer programme, this year enabling a further 9 institutions to develop XR and Virtual Production courses.

As we start to look towards a horizon beyond the pandemic, I am delighted that so much of the Centre's work will begin to find its way to real audiences again. Their response to what we create fuels our R&D and training programme and inspire the creative imaginations of those we train. This is a virtuous circle that places great storytelling at its heart and I am excited to turn the page on this new chapter.

Read on!

A handwritten signature in black ink, appearing to read 'Bal Samra', written in a cursive style.

Bal Samra
StoryFutures Academy Chair
BBC Group Commercial Director
5th October 2021



Directors' Statement

2020-21 has been another amazing year for StoryFutures Academy, seeing us complete all our KPIs and secure a crucial funding extension to continue our work into 2023. We have been able to surpass all of our overall target KPIs for the initial 3 years of funding, including training a total of **over 700 screen industries professionals**. Including students and those beyond the creative industries, **2,184 unique beneficiaries** have taken part in our programmes by August 2021. Significantly we have done this in keeping with our proud record of reflecting the UK's diversity: over 52% of participants in our programmes have been female and 23% from black, Asian or ethnic minority backgrounds. Our approach to R&D fuelled innovation and training has **unlocked over £4.4 million in total leverage** funding from partners across the UK's creative and cultural sectors.

Last year we identified 6 areas that we wished to focus our energies, which have led to some incredible results:

R&D: With our sister programme, StoryFutures, we have launched two major research reports this year on the immersive economy – one that looks at Audiences and one that looks at emerging Business Models. Attended by over 200 industry professionals collectively and downloaded nearly 1,000 times, our research continues to find value in the sectors we seek to support.

Writers Rooms: Our writers rooms have taken training in action into the real world: supporting History of (a) Painting reach SXSW and playing a key part in the major relaunch of the Imperial War Museum's Holocaust exhibitions across the UK (see case study).

Increased National Engagement: This year seeing over 25% of our beneficiaries based in the regions.

Online Training Materials: Our plans to release online materials have been voraciously consumed, with our Podcast downloaded over 3,300 times and over 500 learners enrolled on our FutureLearn course.

Tier 2 training: A focus on skills in the highly demanding, and demanded, area of virtual production has seen over 150 professionals and educators begin or enhance their learning journeys in this critical area.

Games: Over 100 applications were received for our InGAME collaboration to bring together writers and games companies, producing 12 new collaborations and one prototype.

As StoryFutures Academy enters its fourth year – the first of a new funding agreement with the Arts and Humanities Research Council – we will work increasingly hard to bring the benefits of our ongoing relationship with industry and academia to UK audiences. Our Festival2022 project, StoryTrails, will enable 50 emerging and diverse creatives to bring XR storytelling to the public in 15 towns and cities across the UK in a celebration of our screen heritage past that looks forward to the future. Our Laika VR experience will go on tour to national libraries and, with our sister R&D programme StoryFutures, we will leave behind VR headsets for members of the public to try a diverse range of immersive experience and play a role in the research and creative development that is fuelling the growth of immersive storytelling.

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We have also mapped out an exciting year ahead in the emerging world of Virtual Production. Having already trained over 150 professionals on intro and 'Tier 2' virtual production courses during 2020-21 (see section 3 case study), November will see us launch a skills sector mapping and report intervention that sets out an agenda for the UK's creative industries to capitalise on VP's amazing possibilities. Major training programmes with Epic, Warner Media and ILMxLAB are all in advanced planning and, in collaboration with Future Screens NI and InGAME, we'll be running a small group of co-productions to upskill creatives on live projects.

But we are also forging ever closer links between the brilliant research and teaching of our UK universities and the creative industries. StoryFutures Academy has developed a national network of industry-higher education collaboration for talent development that represents a way of both rapidly upskilling our professionals to enable the UK's competitive advantage in immersive technologies but also pass this benefit on to the next generation of talent. By fuelling over 12 industry-HE collaborations across all regions of the UK, we are enabling course development that is directly informed by industry know-how and need. In the year ahead, over 2,680 will benefit from this model on an annual basis. As we move into year 4 we will be supporting the amazing array of Early Career Researchers to start applying their knowledge 'on the job' in hands on professional placements with leading XR companies. These researchers have been working closely with industry over the past 3 years as part of the UK-wide Creative Industries Clusters Programme and offer a fabulous resource for industry partners to help unlock future growth and innovation.

We are incredibly proud of the team's achievement and look forward to the exciting new chapter ahead.



Professor James Bennett
Co-Director, StoryFutures Academy



Dr Jon Wardle
Co-Director, StoryFutures Academy

Beneficiaries

2,184

Professionals Trained

777

Jobs

463

Co-Productions

29

Industry leverage

£4.4m

Placements

26

About

StoryFutures Academy is the **UK's National Centre for Immersive Storytelling** run by the National Film and Television School and Royal Holloway, University of London. Funded as part of [UK Research and Innovation's Audience of the Future](#) industrial strategy challenge fund, the Academy provides cutting-edge creative training and research programmes to ensure the UK creative workforce is the most skilled in the world in the use of virtual, augmented and real-time production technology for immersive storytelling.

We have four workstreams:

Workstream 1

Placements on immersive productions for professionals and Creative Clusters' Early Career Researchers to acquire experience on set, including intensive bootcamp training sessions

Workstream 2

Collaborative Co-production to co-fund and commission immersive projects. These include:

- Challenge and Talent-led large scale co-productions which upskill companies and talent as well as tackle scalable R&D challenges;
- Virtual Production training development programmes

Workstream 3

Experimental R&D production Labs, which include

- Introductory Labs - an entry point for talent to get started with immersive
- Experimental Labs - introductory courses to key technical areas of immersive
- Writers Rooms - hands on training for writers and content creators

Workstream 4

Train the Trainer: build training capacity across the UK to enable the development of a national skills pipeline for immersive production.

Covid-19 Statement


2021 has continued to be challenging in terms of Covid-19. Whilst the team continued to rapidly adapt and find solutions, there are some challenges that have been insurmountable or been both an enormously successful but hugely challenging year for the programme:

Specific pandemic-related challenges for the programme include:


- Delays to our virtual production LED wall funded by EM3 Local Enterprise Partnership. Originally due to begin offering training in May, the global shipping crisis has delayed this until December.
- Some continued delay in our financial expenditure – although this has largely caught up in 2021: **figures (see finance section)**
- R&D and prototype audience testing and experiences: Whilst, with the StoryFutures R&D team, we have produced the incredibly useful and successful www.testXR.org platform for taking experimental XR projects to audiences, delivery of VR projects to audiences has remained challenging. Despite successful experiments with Cloud-XR streaming, proprietary distribution systems have prevented us from enabling large scale testing.
- We continue to have significantly reduced ability to offer in-person events, impacting our regional delivery plans and introductory labs programme.

Achievements


At the end of our first three-year funding period, we are delighted to report:



11/11
project KPIs completed including...

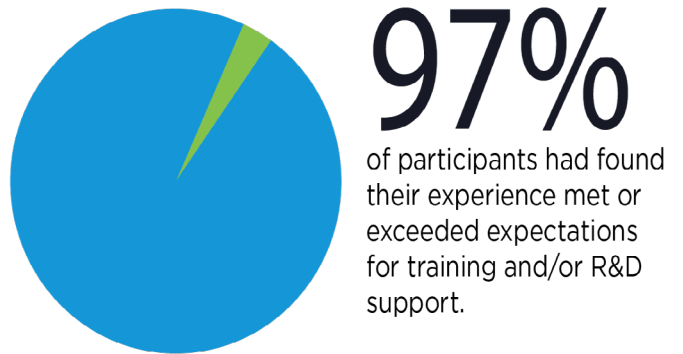
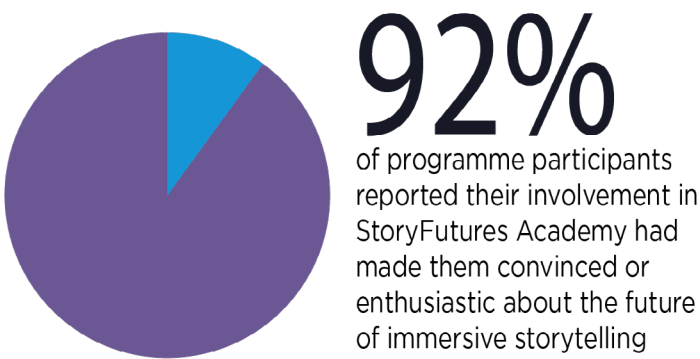


Creating or saving
463 jobs



777 total
tripling
our target number of screen industry professionals trained.

£4.4million
in leverage funding from partners






Venice Film Festival
The selection of **Glimpse** VR project by Mr Kite for Venice Film Festival



History of (a) Painting for SXSW



Laika, directed by Asif Kapadia, premiered at London Film Festival



The growth of our **Train the Trainer** scheme to embed immersive production skills across over 50 courses, upskilling over 250 academics across 20+ **UK Universities.**



The launch of our **Audience Insight Report: The Story of Immersive Users**, was attended by over 150 industry professionals and academics, with the report downloaded nearly 300 times in the first few months of its release.

Impact and Engagement

StoryFutures Academy's core remit is to engage and upskill screen industries professionals and companies, ensuring that their participation reflects the diversity of British talent, which we explore in the case studies below.

Here we detail how we address our short- and medium-term impact plans:

- **Innovation in products and services:** A new touring immersive audio installation for the Imperial War Museum and 8 national partner institutions created through our writers' room
- **Virtual Production:** Our intervention in Virtual Production has met with unprecedented demand, with nearly 1,000 applications for our training programmes in less than 6 months (see case study below).
- **Skills programmes to diverse learners:** By launching a set of open access online courses as Podcasts and MOOCs, we have reached a further 4,000 learners that are otherwise uncaptured in our KPIs and reports. These learners are global, with well over 1,000 from outside the UK and of all levels of ability.
- **Greater Diversity in immersive screen sector:** Whilst baseline measures of the immersive industry are unavailable, our overall female (52%) and BAME (23%) participation rates are far higher than their representation in creative industries overall where 36.7% are women and 11% are Black, Asian and Minority Ethnic people ([Creative Industries Federation, 2019](#)). In 2020-21, we saw 41% of our 1,130 applications for all programmes come from women and 25% from Black, Asian and Minority Ethnic people, suggesting we are continuing to find traction in promoting a diverse talent pool;
- **Audience Insight and Co-Funding:** An ongoing collaboration with the BFI, with our sister programme StoryFutures, has led to a series of linked initiatives that seek to understand immersive audience behaviours and co-fund immersive experiences that speak to gaps and opportunities in the market. This is changing the way film and television is funded in this country, as the BFI elaborate:

“Our partnership with StoryFutures and their research has allowed us at the BFI to think bigger, and differently, creatively. It's incredibly exciting for us to be a part of this, so we can inspire, develop, fund and showcase more immersive works to audiences. Thanks to research like this, soon Immersive won't feel against the natural order of things at all and we can all start to worry about what comes next.”

— Ben Luxford, Head of UK Audiences, British Film Institute

As part of our Train the Trainer programme, we worked to rapidly develop responses to the exploding demand for virtual production in the UK film and television industries. Through the support of StoryFutures Academy and leading industry stakeholders, including Epic, Mo-Sys and Nexus Studios, University of Greenwich were supported to create a training programme to address VP workflow, helping the university build industry-ready graduates with the right skills to immediately enter the workforce. The team's project focused on a specific kind of VP - a green-screen hybrid, where actors are shot in a green-screen studio and inserted into a virtual environment created in Unreal game engine.

The project consistently brought together industry experts/knowledge, academics and students. The core VP shoot team consisted of 11 students, 7 academics and 7 industry technicians or crew, creating a new agile or iterative workflow, quite different from traditional filmmaking.

In addition, the team held a 2-day VP codesign workshop with students to help create a new module to reflect these new working practices.

University of Greenwich team leader Dr Jodi Nelson-Tabor says: "Probably the most important take-away is understanding that when shooting a VP production 80% of the film is made in pre-production using this iteration workflow".

The team noted that one unexpected outcome of the VP production process as an active teaching and learning methodology, was the impact the students reportedly gained through on-set and behind the scenes participation.

The results are an eight-week VP course that will be inserted into an existing final year undergraduate module. The Co-Design Sessions with students produced frameworks that will be used to develop and deliver a workshop on VP for approximately 30+ students. In addition, the team is producing a six-week introduction to VP course for the FutureLearn platform, and a two-week VP Bootcamp for commercial clients.



Workstream 1 - Onset training and Bootcamps

Workstream 1 provides professionals with hands on training on immersive productions to acquire experience and new skills on set. StoryFutures Academy training includes an initial intensive training bootcamp covering topics such as game engines for creatives, 360 filming practice, audience behaviour insights and immersive sound design.

Year 3 saw a massive acceleration of workstream 1. Despite lockdown, 12 placements were undertaken - nearly doubling the total from the previous 2 years. Aimed at mid-level creatives, these placements help cement the learning, accelerate the application of these new skills on set or on a production as a key production team member. In so doing, the placement model supports a lifelong learning skills agenda, launching second (and even third) careers for participants who have found new job roles in the immersive sector that value their experience and reward their re-skilling creatively and financially. The placement model will be extended in 2021-22 to our FestivalUK*2022 project as well as to Early Career Researchers in the Creative Industries Clusters Programme.

StoryFutures Academy Bootcamp training in 20/21 continued its regional work with a Bootcamp for Immersive focused creatives in Manchester in partnership with Creative England; focused on the growth in Virtual Production and the rising interest in cracking TV factual entertainment formats with virtual production technologies.

Our Bootcamps function as both kick off points for our professional placements, as well as significant industry networking events that start to connect talent nationally:

Sep '20 - Immersive for Creatives in partnership with Creative England Masterclass resulting in **3 placements** with Turnspit Productions and Cooperative Innovations (Director, Paul Blinkhorn, Writers, Emma Nuttall and Leo Mercer).

Nov '20 - **Network placement Event** - Based on the huge demand from the industry for skilled creatives, we hosted a networking event to bring together trained creatives in our placement ready pool who had not yet had an opportunity to take up a placement with SME's working in immersive production who were experiencing skills gaps preventing them realising project goals and commissions.

This event held in November 2020 resulted in **3 placements**, one with nDreams (writer, Jenna Jovi - VR Games), a second with Creative Alchemy One (writer Anna Southgate - Virtual Production), and a third with Create Studio (producer, Mia Martell - AR). The Creative Alchemy One placement which took on comedy writer Anna Southgate was focussed around a virtual production project named The Circus Runaways. This pairing resulted in a hugely successful partnership between the company and Anna, which they described as being able to make comedy and VP work together seamlessly for the first time. The placement with Create Studios saw experienced luxury brand focussed producer Mia making waves in the world of AR and Heritage.

Apr-May '21 - Virtual Production with Final Pixel - 3-day virtual Bootcamp including one day 101 Intro to VP, and two specialised days for Production Designers and Technical Artists. This included:

- Deep dive into Unreal Engine and VP pipelines, plus Interviews with various members of VP teams (Production designer, Director, Technical Artists, Producer, CEO)
- 1-day set visit to Arri Studios VP volume where Final Pixel hosted a VP shoot demo.

Section 3

Resulting in **2 placements with Final Pixel** for an on-set trainee technical artist and a production designer (Diona Potopea and Francesca De Bassa). The placements are centred around an episodic VP project yet to be announced.

May '21 Immersive Tech for TV with Weavr Consortium and Potion Pictures - 2-day virtual Bootcamp

- Day one focused on innovations in broadcast sport using Mixed Reality and Virtual screens on live TV sports coverage. The Weavr Consortium explored the innovative ways esports is reaching and customising broadcasts and audience engagement using AR, and live, responsive data.
- Day two looked at the uses of immersive tech in live broadcast entertainment TV led by award-winning graphics & VFX company, Potion Pictures who created the Strictly Come Dancing AR live sets during Lockdown

Resulting in **2 placements** - 1x producer with Promod (Liliana Grzybowska) (part of the Weavr consortium) and 1x motion graphic designer with Potion Pictures (Ryan Garry). The producer placement with Promod will entail helping to produce an online stream in a game show format, with a focus on Gaming Influencers and their community. The motion graphic designer placement with Potion Pictures involves an experienced practitioner transitioning into the world of immersive technology for television, via one of the UK's most loved Saturday night live TV shows.

Profile: Leo Mercer – a lifelong learning journey

Leo Mercer is a writer and creative producer. After studying at the Universities of Manchester and Oxford, he founded a music theatre company, leo & hyde. He works with composers and music producers to make drama out of current popular music, telling stories exploring post-internet life and the emotional and cultural impacts of new technology.

This is his journey into immersive with StoryFutures Academy

>> Leo attends the StoryFutures Academy x Ideate Manchester Immersive for Creatives Bootcamp (September 2020). Explores the immersive landscape and tools for creative immersive production with a focus on narrative storytelling.

>>Writer for Cooperative Innovations (November '20 - January '21). Leo is offered a 5-week placement with Cooperative Innovations where he researched and wrote content for their Arts & Culture VR platform, Curatours. Leo's placement is extended by Cooperative Innovations own funding as he continues to develop projects with Cooperative Innovations.

>>Leo wins a VR commission for COP26 Glasgow Leo wins a British Council Creative Commission as part of their Climate Connection programme to support COP26 ambitions in Glasgow with a VR piece called 'The 2121 Museum of Plastic'.

>>Writer/Producer for Fat Red Bird (August '20 -). Leo is offered a 5-week placement with Fat Red Bird on the Creative XR project History of a Painting.

"I feel better connected ... increasingly embedded. Seeing ideas and being able to build [my] own ideas off of that. The biggest success is the application I made to the British Arts Council and the journey I am able to take within VR. The placement has been a big catalyst for that."

— Leo Mercer

Virtual Production with Final Pixel Bootcamp

Case Study

In partnership with Final Pixel, this opportunity created two placements for on-set training in Production Design and Technical Artistry. The 3-day Bootcamp provided the opportunity to gain an understanding of Virtual Production systems, workflows and skills with a deep-dive into the Unreal Game Engine for VP and was followed by an on-set visit which allowed participants hands-on experience designing and shooting a VP scene on an LED volume.

This Bootcamp, targeted at transferring the skills of experienced professionals from traditional screen industries, addressed the skills and talent gap currently faced by this emerging area of screen creativity. Virtual Production disrupts traditional film pipelines by moving much of the post-production work to pre-production and relies heavily on skills usually utilised by the Games industry. By introducing post-production creatives to Unreal Game Engine, this Bootcamp demonstrated the skills that are transferable from traditional screen industries to VP such as 3D modelling, assets creation and design.

This Bootcamp led to two placements:

1. Diona Potopea (3d artist and lecturer in Game art and design) worked with Final Pixel as an on-set VP Technical Artist using Unreal Game Engine to create and manage assets and for Virtual Productions.
2. Francesca de Bassa (animation/film director and production designer) worked with Final Pixel as an on-set Production Designer on live Virtual Productions.

“StoryFutures Academy realises the importance of training for Virtual Production. It’s an area which has large skills gaps ... and [we] are really keen to try and get the right sort of people into Virtual Production and also help grow the overall Virtual Production skill base”

– Michael McKenna, CEO of Final Pixel

“Since completing the Bootcamp I have joined on-set VFX team on a feature film and learnt a lot about different techniques also used for VP and other areas of VFX workflows. The Bootcamp helped me so much.”

– Eve Bolotova, VP Bootcamp Participant

Workstream 2 – Collaborative Co-production

StoryFutures Academy Co-Productions have become a vital way to support innovation, R&D, collaboration in immersive content creation. Our funding provides a unique route for the UK companies to develop new IP and exploit new markets. We provide project development support and mentorship in distribution and exploiting new markets through a mixture of lab-based hands on skills development and remote online learning.

6 co-production projects were commissioned in year three, with a cumulative total of **29 co-productions**.

Across our co-production work, our projects have supported on-the-job learning and development of 127 screen industries talent and created/supported **437 paid job opportunities** (excluding placements). These projects provide a mixture of lab-based and hands-on learning for new and intermediate individuals and companies to the immersive landscape, launching careers, business plans and new products into the immersive landscape.

Challenge-Led Co-productions

UK-Canada Immersive Exchange

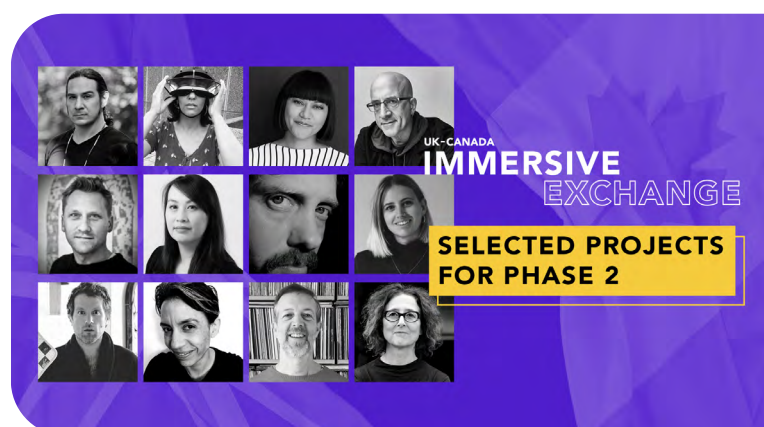
StoryFutures Academy has partnered with Arts Council England, the Canada Media Fund, The Canadian Film Centre’s Media Lab (CFC Media Lab) and Canada Council for the Arts on a new immersive talent development and co-production fund for UK and Canadian creatives. This is the first international exchange programme dedicated to immersive storytelling between the UK and Canada, representing one of the most significant post-Brexit trade markets for the UK creative industries. Twenty-four participants – 12 from the UK and 12 from Canada – six ‘Creative Leads’ and six ‘Creative Producers’ were chosen from nearly 500 applications.

Throughout the initial Talent Development stage of the programme, which began on 9th November 2020, the 24 participants were brought together in the same virtual spaces to collaborate and engage in weekly creative, content and business-focused sessions. Additionally, all participants received a fixed development grant of £2,000 (CAD 3,400) to contribute towards their time spent on the talent development stage. This culminated in an opportunity to pitch for co-production financing, with a total co-production fund of £300,000 (CAD \$510,000) on offer.

The pioneering programme between the two countries, both recognized as leaders in immersive production, will for the first time provide structured opportunities for international collaboration and knowledge exchange in this important growth area for the arts and creative industries

Six creative projects have been awarded a total of £300,000, as part of the next phase of the UK-Canada Immersive Exchange - a talent development and co-production programme for UK and Canadian immersive technology creatives and producers

From this talent development group, 6 co-productions have been chosen, including two ‘audience-ready’ projects, each receiving a total of up to £100,000, and four ‘prototype’ projects, receiving approximately £25,000 each, with the finished projects previewing in early 2022.



Prototype Projects

Acorn - an artistic experience that immerses users into the wonder of nature and the power of rewilding. Led by Chi Thai Founder of Last Conker, a BFI Vision awarded Production Company working across international film and television, animation and immersive, and Casey Koyczan, interdisciplinary artist, composer, and VR/360/XR producer.

Alone Together - a means to meet and engage with virtual beings, while navigating what's real. Produced by Dustin Harvey, theatre maker and creative director; project curator of XOSecret, and Jon Meggitt, co-founder, Arcade, a digital practice specializing in immersive technology. The wider creative team includes Koumbie (Afro Viking Pictures) and Taylor Olson (Afro Viking Pictures)

Datum - a location-based augmented-audio ghost-hunt. Jointly led by Persis Jade Maravala, artistic director of ZU-UK, working in games, performance and technology; writer and director of Hotel Medea, Binaural Dinner Date, Pick Me Up (& Hold Me Tight); making playable art for the Post Normal, and Lynn Hughes, part of the creative team behind immersive and narrative experience Les Alts. Datum will be developed with Jorge Lopes Ramos, ZU-UK.

Gloaming - an immersive multi-site VR experience that simultaneously connects audiences at sunrise and sunset across the world. A creative partnership between Dave Lynch, artist, director, researcher and co-founder of Immersive Networks; creators of multisensory stories and performances across art, science, society and technology, Leonie Rae Gasson, director of cross reality experiences, 360 film and live performance.

Audience-Ready Projects

The Galaxicle Implosions - a live multiplatform, semi-improvised entertainment experience.

A collaboration led by RACHAEL HOSEIN, co-founder/CCO, Flipside XR; Director,, New Media Manitoba Board of Directors; co-founder, Winnipeg Alternate Reality Club and FRED DEAKIN, multidisciplinary artist; musician; half of the Mercury/Brit nominated band Lemon Jelly; founder/director of digital design studio Airside. With creative support from John Luxford, Lesley Klassen, Rob Armstrong, Chris Clarke, Katy Schutte and Chris Mead.

Intravene - an immersive sound project exploring the overdose crisis. This project is being developed by Andrea Salazar, co-founder and executive director, Darkfield, a multi-sensory sonic theme park as well as makers of 3D storytelling at home experiences, alongside Brenda Longfellow, interactive director; award-winning filmmaker; professor, Department of Cinema & Media Arts, York University, Garth Mullins, host and executive producer of the podcast Crackdown and Sam Fenn, Senior Producer of Crackdown. The wider creative team includes David Rosenberg, Glen Neath and Victoria Eyton (Darkfield).



StoryFutures Academy continues to impact the definition of 'film', deepening its relationship with the BFI to expand core funding programmes to enable immersive projects to be funded and supported by the nation's film institute. The BFI and StoryFutures Academy Short Form Animation Fund launched in July 2021 with the aim of supporting growth in the UK animation sector.

In 2021, StoryFutures Academy partnered with BFI in a new partnership and contributed a grant of up to £50,000 each to support two animated projects that are intended to be immersive in nature, through virtual or augmented reality content. Supporting higher-budgeted animated work of up to 15 minutes in length, the Short Form Animation Fund can support narrative short form projects in any animated technique or genre and for any platform, including cinema, digital platforms, and immersive.

Awards of £30,000 to £120,000 are available for successful projects which are due for selection in November 2021. The Fund is supported by National Lottery funding and operated by the BFI Film Fund.

Bridges to Industry

The StoryFutures Academy Bridges to Industry programme supports emerging screen creatives at the NFTS to develop their skills in immersive technologies and expand their storytelling abilities into VR or AR.

The 2020 Bridges to industry program commissioned two productions:

- Network, is a 6 min VR documentary that takes the audience on a spiritual journey to explore the roots of trees and asking the user to use their hands to interact with digital objects. The team is a made up of a collaboration between animation, games and documentary NFTS students.
- Don't Feed the Pigeons, is a 10 minute VR experience that leans on gaze-based interaction and puts the user in the middle of a bus shelter, observing a number of disparate characters and their impact on sharing a space with a group of pigeons.

Workstream 3 - Experimental Labs and Writers Rooms

5.1 Experimental Labs

Experimental Labs are a crucial point of entry for UK creatives to engage with the potential of immersive storytelling, acting as a gateway to not only the landscape of AR, VR and MR but also to the opportunities available through the wider StoryFutures Academy workstream.

Year Three of our Lab programme pivoted to an online learning experience in order to navigate the impact of Covid19. This allowed for a different demographic of participant to participate as barriers to travel and time were reduced. 101 students on VP and VR experimental labs this year, with direct exposure to the latest storytelling technologies and trends. Their backgrounds ranged from games design and animation through to producing and marketing.

With changing Covid19 guidelines we now offer one day in person or remote Introductory Labs for those new to immersive and a programme of higher-level training for those looking to develop skills in focused areas such as game engines, spatial audio and image capture technology.

A total of 248 industry professionals attended Experimental Labs at StoryFutures Academy in year three, compared with our original yearly target of 30. In this regard, the pandemic has facilitated a new way of working that is driving up reach. As we move forward, we'll be working on this hybrid model to maintain high reach but also develop deeper engagements and longer learning journeys with physical training returning.

“I also love the hands on approach of demystifying the tools and the general attitude of everyone talking that there were plenty opportunities for discovering new ways of doing things, rather than obstacles and problems.”

– Minttu Mantynen, Image Capture Technology Lab July 2021

“The interactive sessions were excellent and the break-out rooms worked really well with someone available to answer questions in-depth to smaller groups.”

– Sucharita Ghosh-Stephenson - LiDAR and Volumetric Capture for Immersive Storytelling March 2021



5.2 Writers Rooms

Writers Rooms continue to be a popular offer for industry professionals and a significant success of StoryFutures Academy. 49 participants took part in our Writers Rooms in 2020-21, with two particularly important programmes offered that turned training opportunities into real world products and services for audiences globally to enjoy:

Creative XR

Led by Professor Adam Ganz, StoryFutures Academy collaborated with Digital Catapult for the 2020 Creative XR programme, joining funding and offering writers room support to help develop returnable narratives and formats for immersive storytelling. Five projects were selected for mentoring and development support in narrative form, whilst the entire Creative XR cohort benefited from a series of workshops. This included a masterclass on Spatial Storytelling by multi-award winning VR director Celine Tricart and Liam Young Master of Science in Fiction and Entertainment at Sciarc in Los Angeles.

A significant success of the programme was shifting the emphasis to the inclusion of projects that offered scalable narrative formats that could be sold episodically or internationally. The support offered these projects included advice on rights and formats as well as receiving ongoing mentoring. (Hi) story of a Painting by Gaëlle Mourre and Quentin Darras was not only selected for showcase at SXSW in Austin, Texas but also one of just three Creative XR projects to share a total of £189,000 further funding from Digital Catapult and Arts Council England to help realise a further five-episodes of the series to tell the story of an artwork's context, meaning and significance through time.

Writing for UploadVR, Jamie Feltham described History of (a) Painting as “arguably one of the most immersive and impressive experiences you can see in a headset today”.

“Can’t get enough of hearing creative perspectives of immersive performance, storytelling, theatre from people with a passion for pushing the boundaries of extended reality”

- Co-founder of ArtsXR, Chris Follows (Twitter)

Building on the learnings from our 2020 lockdown immersive audio writers room, we launched an ambitious training in action programme to enable 6 writers to produce new works for the launch of a new Holocaust exhibition at the Imperial War Museum and its 8 partner institutions around the UK.

The Second World War and Holocaust Partnership Programme (SWWHPP) which is generously funded by the National Lottery Heritage Fund partnered with StoryFutures Academy to enable each partner institution to create an experience designed to connect with diverse communities explore a specific aspect of the Second World War or the Holocaust. Using cutting edge binaural sound design, including work from PhD student Rich Hemmings, we supported 6 writers in interpreting Holocaust History in new ways for audiences to build a touring digital installation that will provide a unique, immersive sound experience for visitors and will also be available online.

Our 6 writers represented our commitment to diversity, with Amina Atiq, Nicola Baldwin, Mercedes Kemp, Glenn Paterson and Michael Rosen coming from across the UK to write for binaural sound.

These will be launched at the opening of the brand-new Holocaust and Second World War Galleries at IWM London in October 2021 before touring the regions in 2022 and 2023.



5.3 Virtual Production

Virtual Production is a rapidly growing area of content production. By combining CGI, game-engines, and virtual and augmented reality technologies, Virtual Production enables completely new ways of making film and TV, from virtual scouting, to set design, to real-time, on-set visual effects. Virtual Production techniques will impact upon many core disciplines within filmmaking, from cinematography, to production design, VFX, animation, directing and beyond.

StoryFutures Academy's vision is to become a national and international leader in training provision for virtual production techniques within the screen industries, becoming a distinct workstream within our programme. Building on the work done to date, StoryFutures Academy will continue to develop this piloting phase throughout 2021 and 2022, to build the groundwork for this longer term vision (see below).

There is significant need for training initiatives to ensure the UK's creative workforce is best placed to capitalise on this opportunity. To this end StoryFutures Academy has been actively piloting training approaches in this area since November 2020, and in this short time have already reached over 160 beneficiaries. This is in addition to those taking part in existing Game Engine Introductory Labs that are already run by StoryFutures Academy.

101 participants have attended Virtual Production Introductory Labs, featuring insight from Director Hasraf 'Haz' Dulull, which provide a safe space for people to begin understanding how VP technologies are already being deployed to tell compelling stories, and how it might affect their practice in future.

43 participants have attended On-set Training Workshops with Paul Franklin, Oscar-winning VFX Supervisor and Director of short film Fireworks, which uses VP techniques. The Virtual Production team included expertise from DNeg and Dimension Studios.

3 student placements in the Production, Assistant Directing, and Camera departments were completed on Fireworks.

2 professional placements in Production Management and Production Co-ordination were completed on Fireworks.

11 participants attended a boot camp offered with creative studio Final Pixel, to provide training for the roles of On-set Technical Artist, and a VP Production Designer / Art Director.

These activities also included industry representatives from Sky, BBC Studios, New Pictures, and Left Bank Pictures, as well as 15 educators from disciplines such as games, producing, and cinematography.

“The openness of the two speakers another positive responses to questions was excellent. The practical ‘next steps’ to get involved with virtual production were clearly outlined and I left feeling motivated to start a virtual production project.”

- VP Intro Lab Trevor Hearing March 2021

“For me, a person who doesn't know much about VR and virtual production, it was very interesting to know the basics and the tools that we can use to do it. It felt very accessible.”

- VP Intro Lab Marina Lemos Demartini Dec 2020

StoryFutures Academy Virtual Production Objectives:

Develop Training Formats and Workshops

This will focus on three main models:

Introductory Labs - an easy first step for those looking to understand VP

Focused Labs - targeted, practical workshops aimed at key disciplines e.g. Directing, Producing, Production Design, Cinematography, VFX

Placements - facilitating on-set learning through the placement of key talent within companies working in VP

Conduct Skills Research

This research will result in a published report which will map out the specific skills being developed, and needed, by the UK's creative industries for working with virtual production.

This will help StoryFutures Academy and others to understand where the biggest opportunities and gaps are in VP training provision in the UK.

Build Infrastructure and Training Capabilities

Delivering VP training requires access to key technical equipment including an LED wall and visual assets, which will be installed at NFTS, with the support of Royal Holloway, University of London, in mid-2021. This facility will support both industry training and student learning at both institutions.

Build Production Partnerships

Partnering with active VP productions can offer valuable opportunities for training, from set-visits to industry and student placements.

StoryFutures Academy will look to develop partnerships with existing productions, as well as supporting two original VP co-productions to help showcase the potential of this technology to industry.



StoryFutures Academy's Virtual Production Introductory Labs have been designed to help people understand how Virtual Production technologies are already being deployed to tell compelling stories, and how it might affect their practice in future. The labs are run in small groups, and are intended to provide a forum for discussion and debate about Virtual Production techniques, develop new thinking and grow a community of practice.

This half day Introductory Lab is aimed at creative professionals from the screen industries such as producers, directors, production designers, VFX Supervisors, cinematographers, who are new to Virtual Production and wish to learn more about the potential of these new tools, and the current state of this emerging industry.

Due the large volume of participants who apply for our VP Intro Labs, they are run as online sessions. The key areas covered include a comprehensive overview of the Virtual Production landscape, and the technology enabling this content. In our 2020/2021 labs, Asa Bailey, Director of Virtual Production provided participants with an opportunity to experience and discuss a range of Virtual Production content examples and a case study from a professional with hands-on experience in this sector.

Asa is a Cinematographer and Director and one of the earliest pioneers of virtual production, having worked with DreamWorks, Universal Pictures, Unreal Engine, Unity and Netflix. As a trainer with StoryFutures Academy, Asa helps build bridges between departments and enable all crew to feel immersed in the story world they will create together.

“I always want the best possible user experience for all the crew. Ultimately, I am responsible for the virtual production systems. However, ethically, I am also responsible for using technology to reduce the productions environmental impact. Creatively, I support the Director and HODs to be fully immersed in real-time storytelling from day one.”

– Asa Bailey

Workstream 4 - Developmental

The developmental workstream is aimed at building capacity in the UK's universities to train a next generation of immersive innovators. The workstream's primary focus is on developing a national pipeline of educators and learners, bringing research, teaching and industry closer together to benefit one another. In 2020-21 we aimed to further build capacity in the UK immersive ecosystem by launching a free online course on immersive storytelling as well as a second Train the Trainer cohort that increased the range of disciplines working with immersive technologies. In particular, we have sought to bridge the divide between STEM and the Arts, bringing together subjects as diverse as computer science, drama, medicine, media arts and psychology.

6.1 Massive Online Open Course: FutureLearn

In April 2021, we launched a Massive Open Online Course on the FutureLearn platform introducing learners to immersive production. "How to Make and Sell Your First Immersive Experience" is a six-week course exploring all areas of immersive production - AR, VR and MR. The course introduces immersive storytelling techniques and the technology used to create immersive experiences, including 360 filmmaking, the role of game engines, immersive audio, 3D object capture and AR creation. In the final week of the course, students learn how to market their immersive work, understanding how this differs from traditional media.

The course was hosted by immersive industry experts and academics and included recorded lectures, hand- on activities and diverse learning suggestions to allow for varying degrees of technical knowledge. It also included industry examples and interviews with experts in the fields covered - an area that was highlighted by learners in reviews.

In less than 6 months, 604 learners have joined the course with 9,246 individual sections completed by learners. 45% are 36-55 years old and 35% are 18-35 years old. 50% of learners are from the UK.

The course has scored 4.8/5 stars in reviews.

"An absolutely phenomenal course. The contacts and curation of resources alone are spectacular. There's so much packed into this course... I'm ecstatic I have resources now that I can utilise in my own practice, teaching and consulting"

"It's really inspiring and brilliantly put together"

"I pick it up and run with it, it is leading me to create new ideas and connect to companies and people I otherwise would not."

"Thank you for making such awesome content available! Experts sharing their industry knowledge is something that is unparalleled"

"This course has given me a great basis to begin my journey in creating an innovative, contemporary 360 video artwork"

6.2 Train the Trainer: Building a skills pipeline

Over our two programmes of Train the Trainer our programme has created or modified over 50 courses, upskilling nearly 250 educators across the UK to deliver training in immersive technologies to over 1,000 students annually. After two cohorts of the programme, nearly 2700 students have taken gained skills in immersive technologies that are directly informed by the knowledge and needs of leading industry professionals.

Our 2nd cohort of Train the Trainer programme comprised 7 lead universities:

- University of the West of England
- University of Surrey
- University of Greenwich
- De Montfort University
- Royal Holloway University of London
- Queen Mary University London
- Manchester Metropolitan University

The programme of support offered by Train the Trainer included three intensive two-day Bootcamps to learn a range of new immersive narrative, technical and pedagogical skills, as well as encouraging teams to collaborate and share their knowledge. Additionally, teams were supported throughout by industry mentors and the StoryFutures Academy tech team.

These projects delivered new innovative approaches to teaching; from Falmouth University's virtual rehearsal space bringing technicians and performers together using Mixed Reality tools; Bath Spa's new insights into how VR and AR storytelling experiences can be better marketed to audiences; Queen Mary University of London exploring how to upskill science and engineering students to communicate their findings using immersive techniques; and University of the West of England's "Can You Hear Me Now?" creating a forward-looking teaching programme supporting students in designing and developing dynamic and sophisticated immersive soundscapes.

"It's a brilliant programme that builds such strong foundations as well as an ongoing ripple effect in terms of continued learning."

- Mentor, Deepa Mann Kler

"When you are learning about emerging technology – you don't know what you don't know. The Train the Trainer programme gave us as novices to immersive storytelling a chance to learn from more experienced producers. We were able to experiment with different immersive tech, find out about new ways of approaching work through sprint style workflows, and gain inspiration from other universities. ... As a result of this programme, we are using a number of the learnings and sharing this with other academics and students through our new skills curriculum that embeds storytelling and creative communication for the QMUL engineering faculty. "

- Heather MacRae, Chief Executive Ideas Foundation and honorary fellow at Queen Mary University London

R&D Initiatives

The National Centre for Immersive Storytelling is housed within the Creative Cluster StoryFutures, which focuses on R&D in next generation storytelling across story form, business model and audience insight. Our work draws on those research strengths, with a particular focus on:

1. Story form via our writers room, led by Professor Adam Ganz, in which professional writers are exposed to the methodologies and approaches of interactive writing, world-building and spatial storytelling. This research looks at creative writing practice across theatre, audio, film, television and immersive environments to build fused approaches to storytelling for AR, VR and MR technologies (see IWM case study).
2. Audience Insight, which brings together psychology, ethnography and electronic engineering to help creatives understand immersive audience behaviours and the opportunities for technologies to be adapted to address or target these. All projects funded via StoryFutures Academy are provided with one-to-one access to researchers, who are able to develop audience insight plans or assist with R&D technology solutions. This builds understanding of market possibilities, whether in simple terms of enjoyment and immersion, through to more complicated and nuanced measures such as well-being, learning journeys and more.

“This is a great report and an incredibly useful resource. It’s certainly given us a solid direction for development moving forward, there’s a lot to work on but lots of positives too, which is very encouraging!”

- Jessie Mangum, Echoes of Crystal Palace AR Kickstart Project

StoryFutures Academy's [Immersive Audience's Report](#) was a ground-breaking study that pulled together psychology, ethnography and sector mapping to get a true sense of how immersive technologies are being used, experienced and valued by audiences. Based on 4 large scale survey data sets, 2 long range tracking studies, a series of case studies and experiments, the report found 5 key areas of value for audiences, commissioners and makers of immersive experiences:

- **Economic:** AR is at a point of mass adoption, but with both AR and VR the technology is often perceived to have a large degree of friction that is a barrier to more extensive use. Developing experiences that are cognisant of these frictions will be crucial for future growth.
- **Social:** Whilst the most common use of AR is inherently social - in the form of AR filters on social media platforms - VR turns out not to be as isolating individualist experience as it is commonly believed to be. Users want to experience VR in a social way, as it often becomes a form of family entertainment, experienced multi-generationally.
- **Emotional:** If part of the question of the economic value of immersive storytelling is its lack of user reach, there is early evidence to suggest its value may lie in the depth of its user engagement. Immersive storytelling can impact users emotionally in ways that can lead to at least short term behaviour or cognitive changes.
- **Reputational:** Our case studies indicate that experimentations with immersive storytelling provide brands and makers with a positive impact on their brand and increase user engagement.
- **Cultural:** Immersive storytelling, especially VR, offers users new ways of seeing - not only of seeing other worlds, but seeing their own world through others' eyes. In so doing the potential is for opening up a space where users can not only see, but experience, difference. At its most profound, immersive storytelling can enable new cultural understandings of difference to emerge that provide for another order of things, another kind of politics.

Pathways to Impact review

- Early Career Researcher Development: in 2022 we will run a programme to enable ECRs to undertake paid professional placements at immersive companies, aiming to enhance and develop the cross-cutting industry careers of a new generation of academics.
- Remove: 'new ways of using and monetising data': Data has not been a core part of our remit or skillset of the team. Whilst projects such as our support for Violence have used data in ways that help their funding journeys, these remain commercially sensitive and subject to NDA.
- Add: Increased export and international trade opportunities for UK creative immersive sector



Major Changes

The most fundamental change for StoryFutures Academy in 2020-21 has been the successful extension of our programme. Originally due to complete in August 2021, our funding has now been secured with the AHRC until March 2023. The extension makes a few small shifts in our priorities for the year ahead, including more closely collaborating with the Creative Industries Clusters Programme (see 'The Future' section below). Outside of the extension, the major change of 2020-21 has been the work undertaken to win a commission from FestivalUK*2022:

- Festival2022: In the February of 2021, with our sister programme StoryFutures we successfully won one of 10 x £7m commissions from the Department of Culture Media and Sport to deliver 'StoryTrails' a training and R&D experiment in immersive storytelling, archives, and diversity in the creative industries. StoryTrails has, and will, become a major work package of StoryFutures Academy delivering a major training programme for 50 diverse emerging creatives that will develop and apply their skills in a range of immersive experiences for audiences to take part in during the summer of 2022.



The Future

In the final 18 months (until March 2023), across our programmes, we will create 400 beneficiaries trained, of which 100 will be from CICP, including at least 30 Early Career Researchers. We will support at least a further 75 jobs, 15 co-productions and ensure our participants are at least 20% BAME and 50% female participants. We will undertake the following workstreams:

Experimental Labs & Writers Rooms

- Open-access Experimental Labs and Writers Rooms will continue to offer a hugely popular and crucial entry point for engaging industry practitioners and researchers alike.
- Tailored Labs will be developed with Clusters to offer the highest value support on a regional level.
- All Labs will feature an increased number of creative R&D case studies and content sourced from CICP partners; showcasing this work to a national audience.

Embedded Placements

- The existing placement programme, which offers advanced-level training by placing industry professionals within immersive companies, will continue to be offered.

- In parallel, the model will be adapted to offer placement opportunities for early-career researchers within production environments - encouraging two-way sharing of knowledge and establishing valuable connections for future collaboration.

Collaborative Co-productions

- We will extend the InGAME model to 5 Clusters working in Immersive production.
- We will continue high profile, flagship co-productions, such as that with Asif Kapadia, which represent a combined opportunity for top-level talent, early-career professionals and researchers alike.

Developmental Training

- Our Train the Trainer Scheme will be delivered for CICP award-holders, enabling time and support to put their R&D into min. 20 courses that develop a national pipeline of skills for immersive production and benefitting hundreds of UK students.



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