

# StoryFutures /ACADEMY/

National Centre for Immersive Storytelling

## ANNUAL REPORT 2021-2022





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## CHAIR'S STATEMENT

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**StoryFutures Academy** is the UK's National Centre for Immersive Storytelling. In starting this programme in 2018, the Academy aimed to ensure the UK was fully equipped to maintain its leading global position for creativity, and explore the appetite for immersive storytelling as an extension of the creative industries.

The successes of StoryFutures Academy are too many for me to list here, but the positive response from industry speaks for itself: from international awards to leading talent to a pipeline of skills programmes, over 8,000 people have benefited from our unique blend of training and R&D. Furthermore, from an initial grant of £6.7m, we have unlocked an additional £11.3m investment in immersive R&D and production, demonstrating the crucial role that StoryFutures Academy plays in activating support from the wider sector.

As Chair I am particularly pleased that over 1200 of our beneficiaries are current screen industry professionals, and that over 820 jobs have been created, supported or saved via the programme. By offering CPD to the current workforce to translate their skills to immersive, StoryFutures Academy is ensuring that the UK is ready to lead the world in the creative exploitation of immersive technologies. These talented creatives ultimately go on to catalyse further opportunities and innovation in the sector, and their work is paving the way for new forms of audience experience that will shape the Metaverse and the future of content for years to come.

This has all been achieved with an unflinching commitment to inclusivity and national reach. As well as meeting and exceeding our overall diversity pledge, this year witnessed the remarkable StoryTrails

project, providing jobs and training for 50 creatives from across the nations and regions of the UK – 36.5% of whom were from ethnically diverse backgrounds. Delivered in partnership with the BFI and Niantic, StoryTrails has taken our national screen heritage and put it in the hands of a new generation of creatives who will go on to tell stories way beyond the many forms we are working with today.

We are a talent industry. From working with Asif Kapadia on his first VR film *Laika*, to David Olusoga working across XR technologies on StoryTrails to Georgina Campbell's journey through immersive audio, we have shown how a recipe for innovation and training can bring together storytelling and technology to feed an industry and audience hungry for the next big thing.

StoryFutures Academy has led the way for UK creative industries to take big steps into this exciting immersive landscape. However, we must keep up the momentum to build creatively sustainable growth:

- we need better distribution routes to reach wider audiences;
- we need more top talent to take the leap in expanding the art of immersive storytelling;
- we need to continue to build programmes that embed inclusion and innovation at every level within the industry;
- we need to ensure business and IP models are developed to reward creators and attract investors;
- and all this needs to sit alongside the creative R&D and physical infrastructure needed across the UK.

As a leader in the screen sector, I have seen first-hand how StoryFutures has built a reputation for excellence and has become synonymous with a growing appetite for immersive production. It has become a trusted source of knowledge, support and capacity building that the industry desperately needs to maintain its competitive edge. It has done that by providing a model of innovation and inclusion, training and R&D, and most importantly collaboratively operating hand in hand with the UK creative industries.

I hope this final report sets the path for continued momentum.

A handwritten signature in black ink, appearing to read 'Bal Samra'. The signature is fluid and cursive, written over a white background.

*Bal Samra*  
StoryFutures Academy Chair  
12th October 2022

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## DIRECTOR'S STATEMENT

### A CENTRE WITH NATIONAL REACH AND INTERNATIONAL HORIZONS

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Now in its fifth year of operations, StoryFutures Academy has firmly established itself as the National Centre for Immersive Storytelling, growing and developing the UK's immersive economy via our unique focus on creative content and combination of interlinked R&D and training.

Storyfutures Academy plays a critical convening role bringing together otherwise disparate parts of the industry and fusing them to build UK production capacity and sustainable growth hand in hand. This has helped companies grow into new territories, with 32 companies benefiting from developing 35 new products and services, including the hugely successful Goliath, which has won awards globally and developed a successful international tour.

Our beneficiaries form a cross section of the talent pipeline: from schools to university students, from early career researchers to industry professionals, from world-leading professors to headline talent. The 1200+ screen industries professionals we have trained are exploring new career opportunities and creating internationally recognised work. Meanwhile, over the next 3 years over 2,700 students will benefit from immersive production and development skills courses at Universities across the UK through our 'Train the Trainer' programme. From David Olusoga to undergraduates at Abertay and emerging creatives in Lincoln, SFA is building a talent pipeline that spans the breadth and depth of the UK.

The breadth of that national reach has expanded in year four to ensure that 46% of all beneficiaries

are outside of Greater London, with 51% of co-productions sourced from the nations and regions. But we push far beyond this, particularly in reflecting and developing the diversity of the UK's creative economy, and ensuring the vanguard of the emerging immersive economy reflects the UK's full range of creative voices and visions: over 25% of our beneficiaries are ethnically diverse, 51% of our beneficiaries identify as female. Through our Inclusive Design Accelerator we have worked towards developing new standards in accessibility for XR, whilst our StoryTrails programme has raised the bar for developing diverse talent: over 35% of our beneficiaries were from minority backgrounds, 19.5% identified as disabled and 19.5% were working class.

In StoryTrails we have also taken our R&D and training work and increased audience access to immersive. A national tour of 15 libraries saw audiences of over 45,000 see their towns come to life through the magic of immersive storytelling, with 38% of these audiences having never experienced immersive technologies before. Through the multiplatform nature of the StoryTrails project, our work to help screen industries grapple with the opportunities of Virtual Production (VP) will see the Uplands' film *The People's Piazza* launch on BBC Two later in 2022. Featuring a stunning artistic rendering of Covent Garden across the ages, the film will allow millions of viewers to step back in time with David Olusoga, further extending the impact our programmes have not just on industry but audiences as well.

<sup>1</sup>See comparisons for national norms in Sections 2 and 5.

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**Director's Statement Continued**

Our VP activity has yielded further success in 2021-22. Alongside delivering a feature film, we have trained over 300 professionals through our Virtual Production Labs, providing context and hands-on experience of working with these game-changing technologies. In addition, our VP Futures programme with Future Screens Northern Ireland has broken new ground in taking eight companies into a deep dive into VP, providing de-risked time on an LED wall and enabling two companies to go into experimental productions. Addressing the gaps in technical and creative skills identified in our 2021 report, *VP Futures* provided companies with mentorship from world leaders Industrial Light and Magic and Epic Games.

Collaborations with such world-leading partners speak to our international horizons. Whilst *VP Futures* attracted international investment in the UK's skills base, in 2021-22 we also built bridges for our national sector towards international export and co-production. Via our UK-Canada Immersive Exchange programme we enabled 24 companies and creatives to forge 6 successful collaborations, with immersive audio project *Intravene* having been selected for the London Film Festival and Tribeca. But the appetite for this support to international markets is huge: over 500 applications were received across both territories and, in combination with our sister programme's

*StoryFutures China* initiative, we have seen well over 400 UK companies and creatives looking for international opportunities.

These successes all speak to how we continue to achieve our mission to make the UK creative workforce the most skilled in the world in the use of virtual, augmented and real-time production technologies for storytelling. That story is not one we have finished telling yet.

We are incredibly proud of the team's achievements and look forward to continuing our mission, whatever the next chapter may hold.



*Professor James Bennett  
Co-Director, StoryFutures Academy*



*Dr Jon Wardle  
Co-Director, StoryFutures Academy*



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## ABOUT

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**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 and the Arts and Humanities Research

Council, 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:

1. Placements: Paid hands-on experience on live immersive productions for professionals and Creative Clusters' Early Career Researchers, including intensive bootcamp training sessions.

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

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

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

Workstreams can also be combined to create longform acceleration programmes such as the UK-Canada Immersive Exchange, and our virtual production accelerator VP Futures.

## SECTION 1 ACHIEVEMENTS

Over four years we have achieved more than double our original targets in four out of twelve KPIs - highlighted in blue below.

In addition to our core remit for developing the creative industries skills and innovation pipeline, our work has been selected for international awards and festivals including:

- *Laika*, by Asif Kapadia with Passion Pictures, official selection **London Film Festival**;
- *Intravene*, by DARKFIELD, official selection of **Tribeca** and **London Film Festival**;
- *Glimpse*, by Mr Kite, official selection **Venice Film Festival** and winner at **Cannes XR**;
- *Goliath*, by Anagram, winner at **Venice Biennale**;
- *(Hi)Story of a Painting*, by Fat Red Bird, winner at **SXSW**;
- *Violence*, by Shola Amoo, official selection of **Tribeca**;
- *Common Ground*, by East City Films, official selection of **Tribeca** and winner at **Sandbox Immersive Film Festival**
- *Fireworks*, by Wilder Films official selection **Tribeca**;
- *Kindred*, by Electric Skies, official selection **Venice Biennale**;
- *Peaky Blinders: The King's Ransom*, by Maze Theory, official selection **Venice Biennale**;



KPI	TARGET	TOTAL	ACHIEVED <sup>2</sup>
Core screen talent development	620	1245 <sup>2</sup>	
Core screen talent development	100 from CICP, inc. 30 Early Career Researchers (ECRs)	80, inc. 10 ECRs	
New skills programmes	49	92	
Co-productions	27	39	
Co-production to reach regions	25%	51%	
Leverage	£3.1 Million	£11.3 Million	
New & Saved jobs	155	821	
Gender Diversity	50%	51%	
Ethnic Diversity Pledge	20%	25%	
Industry Placements	29	33	
Industry Placements	10 ECR <sup>4</sup>	6	
Regional workstream delivery	6	12	

<sup>2</sup>Key: Green = Met/Exceeded Target; Light Green = on track

<sup>3</sup>Includes figures up to end of October 2022

<sup>4</sup> See Section 7 for further discussion on ECR Placement programme.

<sup>4</sup> Figures include StoryTrails live tour and library legacy audiences up to end 2022; Laika cinema tour; London Film Festival Expanded audiences from 2020, 2021 and 2022; Venice Biennale 2020 and 2022; Tribeca Film Festival years.



With the success of the StoryTrails tour, our audience engagement will exceed 60,000 in 2021-22 alone, with our cumulative four year audience engagement exceeding over **120,000** through festivals, cinema tours, installations and exhibitions by the end of 2022.<sup>4</sup> An additional **1,000,000+ television viewers** will experience virtual production via the StoryTrails' feature film *The Peoples' Piazza* in late 2022.

In the past 12 months alone, our work has been featured in over 145 articles and covered in 85 different industry and consumer facing publications in 12 months. Meanwhile, our Social Media engagement is high and continues to grow, with over 400,000 impressions across Twitter, Facebook, Instagram and LinkedIn over the past 12 months.

## PRESS HIGHLIGHTS

[British Cinematographer](#)



[Variety](#)



[Broadcast](#)



[Televsual](#)



## PRESS AND PR COVERAGE

[Broadcast](#)



[BBC Click \(Ep. Tech For Travel\)](#)



[The Guardian](#)



## SOCIAL MEDIA HIGHLIGHTS

[Twitter](#)



[Instagram](#)



[Facebook](#)



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## SECTION 2

### NATIONAL AND INTERNATIONAL REACH

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#### National

As the National Centre for Immersive Storytelling, we have worked hard to ensure that our work reaches across the UK, including production funding and training opportunities.

46% of all our beneficiaries are outside of Greater London, with 51% of co-productions sourced from the nations and regions. This fully reflects and services the needs of the UK's creative economy, with 51% of creative industries located outside of the South East (Nesta)<sup>5</sup>.

Figure 1 demonstrates the spread of our work across the nation. Hotspots correspond with our engagement with the Creative Industries Clusters Programme, with strong activity identifiable in areas such as Cardiff, Belfast, Abertay, Bristol, York, Surrey and London serviced by Clwstr, Future Screens NI, InGAME, B+B Cluster, XR Stories and StoryFutures respectively.



**Figure 1: Location of all programme beneficiaries**

Beyond this, however, Figure 1 points to strong emerging clusters of immersive production in places such as the West Midlands, Greater Manchester and Liverpool, Brighton and East Sussex.



**Figure 2: Academic Institutions engaged with through the Train the Trainer programme**

One particularly significant aspect of our national reach is our Train the Trainer programme, as illustrated by Figure 2. Over the past 4 years, 172 university researchers and lecturers have accessed funding and mentoring from StoryFutures to develop new courses across 122 disciplines spanning the full range of STEAM: from theatre to medicine, engineering to games design. The result is a national network of over 17 institutions running 62 new or modified courses that have capacity to train 2,772 students annually. More importantly, the trainers themselves will build increased capacity within their institutions building a legacy that ensures we have the skills in our researchers and lecturers to train the next generation of industry leaders in immersive production well into the future.

Figure 3 shows the geographic spread of the beneficiaries of our Experimental Labs and Writers Room workstream, illustrating the importance of this format in reaching talent across the UK. Our pivot to a combination of remote and in-person labs, originally necessitated by the Covid pandemic, has greatly improved accessibility of our training and we continue to offer a range of remote and in-person labs and events throughout our programme.



**Figure 3: Location of Beneficiaries of Experimental Labs and Writers Rooms**

<sup>5</sup> <https://www.thecreativeindustries.co.uk/facts-figures/resources-infographics>

## CASE STUDY | AURA DIGITAL

**Programme:** VP Futures

**Company Bio:** Aura Digital Studios is a creative Multimedia Production Studio based in Belfast, Northern Ireland. Aura produces creative digital content for arts-driven projects, educational videos, narrative animation, applications, XR, Virtual Production and more.

**Project:** 'Stone Hearts and Careless People' is a supernatural romantic tragedy set in a world similar to our own. Utilising In-Camera VFX, it follows our protagonist as they discover the beautiful tragedy of living.

“The mentorship we have received from VP Futures has been invaluable and helped us manage the steep learning curve. This opportunity has accelerated our company’s understanding of virtual production workflows and methodologies. This has opened entirely new avenues for the company as well as augmenting our pre-existing workflows to be faster and more efficient.”

**Eva Robinson, Co-Founder, Aura Digital Studios Ltd**

## International

Immersive experiences created through StoryFutures Academy funding and programmes has reached over 21 international territories, largely through prestigious festivals such as Tribeca and SXSW in the USA, Venice Biennale in Italy, and Sandbox Immersive Festival in China.

One of our most significant programmes in the past 18-months has been the UK Canada Immersive Exchange programme (see Section 5).

With over 500 applications for the 24 places available, the appetite for international export and co-production opportunities is undeniably strong. Perhaps this is unsurprising, given the Immerse UK 2019 Immersive Economy Report identified that 62.3% of immersive companies were already “exporting products, applications and experiences around the globe”. With 22.3% of immersive economy companies working in media and arts, the UCIE programme was designed to build company capacity to exploit the opportunity of international markets.

“It has expanded my network and knowledge as well as given me a lot to think about including my consideration of what organizational structure I might need to establish in order to further support my growth and development in work with immersive technology”

**UCIE programme participant**

However, as we found in running the programme, SMEs’ opportunities in immersive storytelling are hampered by a lack of clear policy pathways or co-production incentives.

Whilst incentives for ‘Digital Content’ may exist, this is a vast and varied category. The form of Immersive (XR) content, for example, can vary from immersive audio soundscapes delivered over headphones, to augmented reality stories accessed on location through mobile phones, to hybrid live performances delivered through virtual reality headsets. Some of this content may fit neatly into an existing vertical (such as journalism, arts and culture, film, games, advertising) but in reality, most fall somewhere in between. At its best, this content can reap the benefits in terms of support and recognition from multiple sectors, however, more often new forms of digital media do not fit neatly into these existing frameworks and suffer from a lack of reliable, sustained support as a result.

In addition, existing incentives such as Creative Tax Relief, and Co-production treaties built to help foster collaboration between countries, were originally created with a different form of media in mind. As such, innovative creatives often find they either cannot take full advantage of them, or indeed aren’t even aware of them, as the way they are marketed and presented is still geared towards traditional content.

As the UK is a major exporter of creative content and production, this lack of a framework for immersive is a major barrier to growth – with no continuous, national initiatives to support this. Immersive content producers could stand to gain a lot from the same form of co-production incentives that enable traditional media projects, such as film and TV, to collaborate internationally. This includes the use of co-production treaties and the support that these can unlock in the form of tax credits, as well as ring fenced funding incentives.

## SECTION 3 TALENT

From the outset of our work we have used talent as a clarion call to the established screen industries to seize the opportunity to experiment, innovate and grow through immersive storytelling. Placing diversity at the heart of this mission, our talented ground breakers drive three seismic ripples across the industry:

1. They act as a beacon to attract aspiring and emerging creatives across the UK

2. Simultaneously, as we demonstrate below, this approach has helped develop audiences for immersive content

3. Finally, as creative innovators, talent drives R&D opportunities that push the boundaries of what immersive technologies are capable of.

From Asif Kapadia to Georgina Campbell, Sarah Gavron to Shola Amoo, we have supported inspiring talent across a range of creative disciplines to take the leap into immersive.



**Asif Kapadia**, BAFTA Award-winning filmmaker



**Cecile Emeke**, Filmmaker, Writer and Artist



**Jayde Adams**, Comedian, actress, writer and singer



**David Olusoga OBE**, Historian, Writer, Broadcaster, Filmmaker



**Fiona Campbell**, BBC3 Editor in Chief



**Fozia Khan**, Channel 4 Commissioning Editor



**Georgina Campbell**, BAFTA Award-winning Actress



**Gillian Wearing CBE**, Turner Prize Artist



**Inua Ellams**, Award winning poet



**Michael Rosen**, Author & TV Presenter



**Paul Franklin**, BAFTA Award-winning VFX Supervisor



**Shola Amoo**, Writer & Director of feature The Last Tree

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## Laika: Asif Kapadia

StoryFutures Academy worked with Oscar and BAFTA-winning filmmaker Asif Kapadia, to produce *Laika*, a Virtual Reality animation giving audiences the chance to be immersed in the moving and tragic real-life story of the first dog in space. The 15-minute short VR presentation, featuring the voices of Sophie Okonedo and Tobias Menzies, was created as a collaboration between Passion Pictures and Sheep Thief. It was funded by StoryFutures Academy, BFI, Film4 and supported by Epic Games, receiving its World Premiere at the BFI London Film Festival 2021 as part of LFF Expanded, the Festival's immersive art and XR strand.

Alongside the creative form of the work itself, one of the most ground-breaking aspects of *Laika* was its distribution: presented as part of the mainstream London Film Festival by the BFI and was then taken on tour to cinema venues across the UK in Spring 2022, with Kapadia hosting in-person Q&As following each screening. The presentation of VR in cinemas allowed venues to build distribution capacity whilst also providing unique insights into a new audience market for VR outside of festivals and specialist outlets.

This project had three main objectives: to train leading screen industry talent to translate their skills from the wider sector into immersive storytelling, to enable on-the-job training and experimental R&D within a UK production company, and to explore distribution and audience research challenges, including the role of talent in attracting new audiences to VR.

**“From the moment I first read Nick Abadzis’ fantastic graphic novel *Laika*, I have wanted to find a way to adapt it and bring it to the screen. I love the story because it is extraordinary, unique and genuinely epic. I immediately thought of *Laika* when the opportunity arose for me to make a VR film for the first time. I’ve gone on a huge journey myself during the process of making this film, I initially struggled with VR and through this project I’ve learnt more about the process and its potential and I’m now genuinely a convert. Above all I’m excited by how VR can potentially transport the viewer to a different time and place and provide a unique ‘experience’ to every other visual medium.”**

**Director, Asif Kapadia**



## Audience Research: VR in cinemas

Enabled by funding from the BFI, *Laika* toured five BFI Hub cinemas between March-May 2022 which included HOME (Manchester), Chapter (Cardiff), Watershed (Bristol), Broadway (Nottingham), and Showroom (Sheffield), with a final set of screenings at BFI Southbank in London. With 2-3 screenings per venue, the ticketed tour screened the experience to an estimated 289 people, with 25% taking part in survey research. Respondents were predominantly white (81%), with 48% identifying as male, and 39% as female.

Audience ratings of the experience were high, with over 90% rating it 4 or 5 stars. The Q&A session with Asif Kapadia was also well-received, with 92% rating it 4 or 5 stars and several commenting on his enthusiasm and insight, with 42% indicating that their familiarity with Kapadia's films was one of their motivations for attending *Laika*. Interestingly, however, it was not the director himself that was the main driver of audiences. Instead, the appeal of the story and the technology were the primary motivations.

Research also examined reactions to the context of the viewing, i.e. that it was shown inside a traditional screening room, in order to make use of existing cinema infrastructure. The benefits of communal viewing were evident, with 64% indicating they would prefer to view such content communally vs alone (9%). For some novice audience members, the fixed cinema seating 'gave me a sense of security' (female, age 67, attending alone), and another commented,

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“The communal viewing element was nice, but honestly the convenience of not having to buy and understand the kit ... is probably a bigger draw” (male, 35, attending alone).

The combination of a strong story, a well-known talent, a trusted brand such as a BFI Hub, and a communal, secure and well managed setup, are ultimately a strong draw for audiences. This was especially so for those relatively new to VR. This chimes with Kapadia’s original intention “by making this short experience I hope to not only bring the extraordinary story of Laika to a wider audience but also bring a new audience to experience VR for the first time.”

“Beautiful animation and not overwhelming with the immersion. A gut punch of an emotional and historic story. It’s a first for me, and it was well done, so you’ve opened my eyes by sticking a headset over the top of them.” (Male, age 38)

“Thought the VR experience was amazing. Having never done it before, I found the whole thing very exciting and it has convinced me that VR really does have a place in storytelling (I was sceptical before).”(Genderqueer, age 19)

### **The People’s Piazza: Mary Crisp, David Olusoga, Chris Durlacher**

*The People’s Piazza* is a 90 minute feature film commissioned by the BBC, BFI and StoryFutures Academy and made by Uplands as part of the *StoryTrails* project to explore immersive storytelling to connect history, place and identity. Inspired by George Trevelyan’s famous quote, the film explores the history of Covent Garden as the UK’s pre-eminent public place: a noisy and bustling intersection of stories and lives from across the country.

“The poetry of history lies in the quasi-miraculous fact that once, on this earth, once, on this familiar spot of ground, walked other men and women, as actual as we are today, thinking their own thoughts, swayed by their own passions, but now all gone, one generation vanishing into another, gone as utterly as we ourselves shall shortly be gone, like ghosts at cockcrow.” G M Trevelyan

To continue *StoryTrails*’ innovative use of immersive technologies to explore ‘history where it happened’, *StoryFutures Academy* commissioned a talent-led Virtual Production (VP) sequence for *The People’s*



*Piazza* to enable presenter and *StoryTrails* executive producer David Olusoga to step back in time and inhabit the *Piazza* across different moments in its history. However, in order to push the boundaries of this emerging technology, the R&D challenge was to develop an artistic, rather than photorealistic, rendering of the *piazza*. This involved a combination of R&D in script writing, performance, creative and technical production that we explore below.

#### **Scriptwriting**

At the heart of *The People’s Piazza* is a spatial and historical analysis which draws on David Olusoga’s expertise (as seen by millions of viewers in *A House Through Time*) of using a domestic space to reveal change and continuity over time, and thus enabling contemporary audiences to understand the lives of previous generations.

The *People’s Piazza* is centred around a much larger public space, exploring how the space changed, shrinking and expanding in response to fashion, history, and economic expansion and decline. We worked with Director Chris Durlacher to consider how script and technology would need to interact in order to render this public space in a stylised form that could be inhabited by both performer and audience alike. This is a spatial story, and it was important that the architectural qualities of VP could intersect with the abstract qualities of the renditions to create narrative devices that allow the film to map the space anew.

Geographer Doreen Massey described how films can help “to criticise or to reorder the geographical imaginations we have of the world.” “Film” she added “is fantastic at portraying this aspect of intense and unexpected juxtaposition, which is a characteristic

<sup>6</sup> Massey, D (1999) ‘making connections’ *Screen* vol. 40(3).

<sup>7</sup> Jarvis, L. (2019). *Immersive Embodiment*, London: Palgrave MacMillan, p.3

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of space, and of cities in particular. ...Precisely because of its mobility, its ability to travel, to make new juxtapositions, new cartographies ...film has the potential powerfully to present this other aspect of our spatial world...".<sup>6</sup> VP enables new forms of intense and unexpected juxtaposition – putting the imagined and the real together in new ways which allow the audience to move through space and time, making certain processes more visible and enabling different kinds of presence. Budget limitations have often meant that VP has tended to be used primarily to create fictional worlds - but the R&D process has revealed how much scope there is for factual programming (and history programmes in particular) to use VP to make visible the forces which have shaped a place and to integrate locations as they are with how they are *imagined* in more-or-less real time.

### Performance

In *The Peoples' Piazza*, David Olusoga and two historians walk through several different historic moments in Covent Garden, creating a feeling of being a part of this bustling world. From an R&D perspective, Virtual Production offers immersive possibilities for performers/talent that can allow them to react more responsively in the moment. If acting is reacting, then in contrast to green-screen, VP gives actors immediate environments to interact and engage with. Being surrounded by the Piazza rather than in a green-

screen environment allows the performer/talent to respond directly to details within the space, and to allow the atmosphere to influence their performance. As this was a historical project, the historians on the shoot were impressed with the ability to see this history come to life around them, to be immersed in history itself. They responded that being immersed in life-sized environments (that had only before been drawings on a page) had research potential around the size and scale of these buildings. Being able to understand, for example, the effect of lighting changes on the architecture, or the size of a detail in relation to the body of the researcher, offers multiple opportunities for visualisation within the LED screen.

Within immersive performance contexts a great deal of focus has been on the 'user' or audience, in VR, for example, or as a participant in the works of Punchdrunk. The immersive experience is often thought of as feeling 'more fully with the body of another'.<sup>7</sup> Being able to have an embodied response to a non-human character, in fantastical surroundings increases an actor's range of experience. Virtual Production can shift theories of performing in immersive contexts away from the focus on actor relationships or VR participatory strategies, to new ways of engaging with scenarios and visual elements. Depending on the type of production—documentary, science fiction, or realistic drama—actors will need to develop and hone skills to best tell these stories.



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## Creative Production

Through the production process we addressed three important creative production training, research and development needs:

1. How to transition key well established, creatives from traditional methods of documentary to new VP driven approaches in a short time frame
2. Budgeting and scheduling for advanced VP led production
3. Briefing commissioning and managing the Virtual Art Department (VAD)

These challenges spoke to sector-wide gaps in how existing skills are transitioned to virtual production, particularly moving from traditional linear production processes and segregated departments to a more holistic and 'all at once' model.

We built a bespoke training programme for Uplands key team members, including two Executive Producers, Line Producer and Director. The programme ran from an introductory lab at Epic Games covering budget, schedule and stage operation, to a deep dive into technology and cinematography, as well a session with Oscar-winning VFX supervisor Paul Franklin and 'Fireworks' producer Annalise Davis on the

StoryFutures LED volume to see first-hand the VP processes that made the film possible.

VP processes are such that traditional post production workflows are reverse engineered requiring Producer, Director and Executives to make critical creative decisions in advance of filming. Shooting the VP scenes as In-Camera VFX sequences (ICVFX) required the four virtual versions of the Covent Garden Piazza to be designed, rendered, tested and signed off well in advance of filming. Uplands Executive Producer Mary Crisp and fellow executives modelled VP methods of documentary production alongside traditional methods giving them a clear understanding of the impact of VP methods on budgets and timelines. The Uplands team also worked through the detailed requirements of commissioning vendors and running the virtual art department (VAD) including understanding the 'brain bar', crew responsibilities, asset creation, optimisation, testing and workflow. A key part of this training involved reviewing examples of poor-quality assets, enabling the team to build real and virtual elements that were seamlessly integrated for ICVFX.

From the production of the sequence, a valuable and credible use case for VP-enhanced documentary emerged that now forms the basis of training materials for future StoryFutures Academy participants.





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## SECTION 4

# LONGFORM ACCELERATOR PROGRAMMES

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### VP Futures

VP Futures is a unique production accelerator programme delivering a package of targeted virtual production training, development and production support for creative screen industry SMEs in the UK. The programme was successfully piloted for the first time in 2022, and is run as a partnership between StoryFutures Academy (SFA) and Future Screens NI (FSNI), supported by Industrial Light & Magic (ILM) and Epic Games.

Securing £123,000 in-kind investment via a bespoke mentoring team from ILM and Epic, the programme provided specific experts in each stage of the virtual production pipeline, and delivered 1-2-1 bespoke mentorship with each company.

After a UK wide competition, teams from eight companies – Sunnyside, Engine House, Draw & Code, Liminal Stage Productions, Retinize, Aura, Soluis, and TAUNT – were selected for a two stage training and R&D programme:

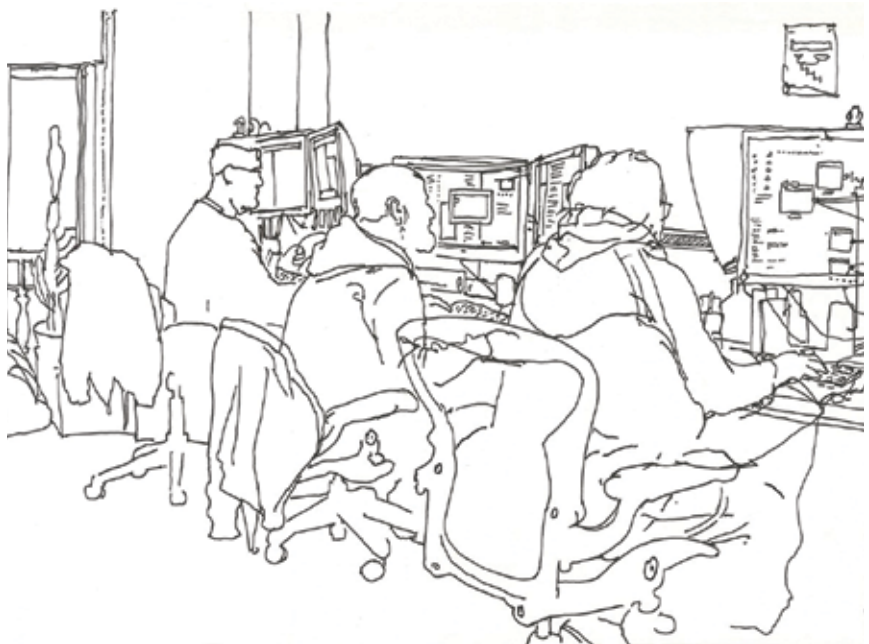
**Stage 1: Development Zone** - The eight SMEs are taken through a six-week intensive and bespoke training programme built around the company's skills development, VP development, VP production and business development needs.

**Stage 2: Production Zone** - SMEs pitch for production funding, which see two companies selected to move to hands-on training framed by an R&D context in which innovation and process, rather than saleable assets or IP, are the outcome. One NI and one non-NI company are selected with shoots taking place at LED Volumes at Future Screens NI and StoryFutures Academy respectively.

VP Futures ultimately aims to upskill UK creative content businesses and studios in Unreal VP and real-time content origination, development and production via mentoring and de-risked access to LED Volume facilities. The programme is designed to bring the games and screen sectors into virtual production and address the skills gap identified by StoryFutures

Academy's 2021 report: ['Virtual Production: A Global Innovation Opportunity for the UK'](#). In particular, the programme was designed to address the clear need for highly creative, technical artists who can write code, problem-solve, and communicate effectively with creatives while fixing complex technical issues; all within the fast-paced film and TV set environment.

Throughout the programme the process was documented by StoryFutures visual ethnographer, Dr Claude Heath, to build a picture of the skills existing, developed or required.



**“It’s been a totally inspiring and rewarding experience to meet, mentor and be part of such a forward looking programme as VP Futures by StoryFutures Academy and Future Screens NI. Each group brought so much to the table in terms of ideas and enthusiasm to learn about the new and highly dynamic world of Virtual Production. As world leaders in this space we are thrilled to see and be part of training and mentoring the next generation of Virtual Production specialists in the UK.”**

**Ben Morris, Creative Director, Industrial Light & Magic (ILM) – London**

## CASE STUDY | SUNNYSIDE PRODUCTIONS

**Company Bio:** Sunnyside Productions was founded by Andrea Miller and Jerry Foulkes to create and produce factual, specialist factual and factual entertainment television programmes and formats. Credits include How Clean Is Your House, Jimmy's Food Factory, Imagine, Restoration And Celebrity Home Secrets.

**Project:** *The Surreal Life* tells the story of a great, undiscovered surrealist, who shaped some of the 20th century's greatest masterpieces.

As well as a learning opportunity, the intent behind this project is to create material to support a potential TV commission, in which scenes would be transformed using VP methodologies, creating an innovative and exciting way to tell this extraordinary surrealist tale. This ambitious project ultimately involved a crew of approximately 30 people, most of which were given the opportunity to work with VP technology for the first time. It also drew in expertise from Cinematographer, Aaron Rogers, who has worked on HBO's *House of the Dragon*.

“VP Futures was an incredible opportunity to go from almost zero knowledge about filming for Virtual Production to a really solid grounding in the terminology, techniques and potential of a VP shoot. The mentorship from ILM and Epic Games, as well as the mentorship from the project leaders, was exceptional.”

Jon Gilbert, Screenwriter, Sunnyside Productions



“We were supported at all times and the learning curve was phenomenal; we went from being near-total novices to (not quite) experts in six weeks! As a crash course in VP, it was both intensive and highly rewarding and has left us feeling confident and inspired to continue our journeys into shooting with VP.”

Andrea Miller, Producer/ Director, Sunnyside Productions





### UK-Canada Immersive Exchange

VP Futures is a unique production accelerator. The UK-Canada Immersive Exchange is a talent development and co-production programme for UK and Canadian creatives and producers, who wish to work with immersive technology. The programme is supported by an international partnership between StoryFutures Academy, and Arts Council England in the UK, and the Canada Media Fund, Canadian Film Centre and the Canada Council for the Arts in Canada.

This programme was developed as a response to Immerse UK's analysis of the UK's immersive economy having strong export-readiness alongside StoryFutures' own work that suggested immersive SMEs and creative talent are hampered by a lack of clear policy pathways or co-production incentives compared to other creative industries' sectors. Tackling this barrier to growth, the programme aimed to better prepare creative companies and individuals to work together on international collaborations; accessing talent, financial support, audiences and business opportunities across borders.

Launched in August 2020, the programme received around 500 applications from which 24 UK and Canadian participants were selected to take part. Six collaborative projects developed by this cohort were awarded a total of £300,000 (CAN \$510,000), which included two 'audience-ready' projects, each receiving a total of up to £100,000, and four 'prototype' projects, receiving approximately £25,000 each.

Since completion of the programme, both audience-ready projects *Intravene* (see case study) and *The Galaxicle Implosions*, have had well-received audience facing showcases, and all four prototype projects (*Radio Ghost*, *Acorn*, *Gloaming* and *Alone Together*) were featured as part of a showcase at SXSW 2022, as part of the ACE Future Arts and Culture programme. *Radio Ghost* (formerly *DATUM*) also premiered at LIFT Festival in London, followed by a sold out tour in Germany in July 2022. *Radio Ghost* has also been longlisted for the Lumen Prize for the 'interactive award.'



## CASE STUDY | INTRAVENE

Intravene is an immersive audio experience using binaural and spatial sound to plunge listeners into the heart of the overdose crisis in Vancouver. It is a ground-breaking partnership of immersive and documentary experts and drug user activists: [DARKFIELD, Crackdown](#) and Brenda Longfellow. The original collaboration was put together by Brenda Longfellow and Andrea Salazar, whilst taking part in the UK-Canada Immersive Exchange, where the project was then awarded a grant to produce an 'audience-ready' project.

Over 20 minutes, Intravene Episode One: Benzos, immerses listeners in the intense audio environment of the Overdose Prevention Site (OPS) where a user has inadvertently injected a hit contaminated with benzodiazepines. Tracing the story of the new challengers thrown up by benzos, Intravene brings the audience into the world of users, activists and policy makers.

**“The UCIE programme SFA made available was a truly unique experience for me as a producer and for Darkfield as a company.**

**Firstly as a professional, the wide range of workshops and industry talks given during the programme were incredibly nourishing.**

**The subjects we explored were handpicked in such a relevant way to support the professional development of the participants towards creating partnerships**

**to develop creative work in XR. The workshops made for that understanding to be applied and learnt and paved the way to collaborate with the potential partners.**

**Darkfield was lucky enough to get the [production] funding and the ongoing support and mentorship that the next phase of the opportunity offered alongside the monetary contribution.**

**I can honestly say that, on top of guiding us and allowing us to create one groundbreaking piece of immersive factual artwork in collaboration with our international partners, this programme changed and improved our practice as a company in an invaluable way.”**

Andrea Salazar, Executive Director, Darkfield

This project went on to secure a Canadian Social Science and Humanities Research Insight Development grant for \$60,000 (£41,000), which the team is using to produce additional podcasts and support the container show in London. *Intravene* had its world premiere at Tribeca 2022, and has been selected for the BFI London Film Festival 2022.

## SECTION 5

# AUDIENCE FACING TRAINING AND R&D

One of the most crucial ways StoryFutures works is by building prototypes and full products that are experienced by real users 'in the wild'. This real world testing and development builds rich research insights into immersive user behaviours that inform sector development but, as importantly, thrill audiences with the magic of immersive storytelling.

### StoryTrails: Emerging creatives, spatial storytelling and the Metaverse

StoryTrails was commissioned by UnBoxed2022 and funded in partnership with StoryFutures Academy, StoryFutures, the BFI and Niantic. Designed as an experiment in creativity, StoryTrails used location-based immersive storytelling to bring together past, present and future in shared space, stimulating a conversation about who we are, and where we are going. Taking StoryFutures innovation and training programmes into the public domain at scale, StoryTrails took place across 15 towns, trained 50 creatives, created 100s of immersive stories served across VR, AR and 3D scanning. Our aims were to:

- Develop a national talent base that was representative of UK diversity for immersive storytelling, building UK capacity for immersive production
- Increase audience access to immersive technologies and storytelling by focusing on reaching and designing for culturally under-served audiences
- Explore the potential of immersive technologies to represent UK screen heritage from the BFI and BBC in innovative ways that both broadened and recontextualised access to our national media archives
- Examine the value and impact on audience behaviours and emotions between sense of belonging, pride, community connection and immersion
- Create an R&D intervention on the nature of the emerging Metaverse to spark not only interest and understanding in what it is, but also stimulate debate about the technical, ethical, creative and physical challenges of real and digital world's colliding

On any measure StoryTrails was hugely successful:

- Reached an audience of over 57,000 and counting via a live tour and a legacy offering in

libraries across the UK, representing one of the UK's largest live audiences for a location-based immersive experience. Crucially, it massively extended access to immersive for audiences: 38% of StoryTrails visitors had never experienced immersive before, compared to a national average of 15%.<sup>8</sup>

- Trained and enabled 50 creatives from across the UK in immersive storytelling. These creatives over-indexed on every diversity measure compared to UK creative industries, including ethnicity and race, gender, class and disability. Further trained 50+ librarians who will continue to run StoryTrails in 15 libraries, enabling over 70,000 visitors to experience StoryTrails in 2022.
- Leveraged \$(USD)500,000 and a further \$(US)250,000 in-kind from Niantic in support of innovation for locating archives into public places via augmented reality, being described by the BFI as their most innovative use of archive ever.
- Had a dramatic impact on audiences' sense of belonging, with 70% of local visitors reporting that StoryTrails made them feel connected to their city, with people's sense of belonging increasing by 20%.
- Coverage of StoryTrails in Broadcast, The Guardian and a slew of local media outlets generated impact in 'the people's Metaverse', questioning who gets to curate stories and content, whose voices are heard and what is the meaning and nature of digital public space.
- Just as importantly, it was universally loved by audiences:



- 89% people rated VR experiences 4\* or higher
- 85% people rated AR experience 4\* or higher
- 91.4% people gave 3D experiences 4\* or higher

<sup>8</sup> Based on a nationally representative sample of 1,000: 15% of UK audiences have never experienced immersive technologies.

## CASE STUDY | CREATING 3D STORIES WITH LIDAR SCANNING AND PSYCHOGEOGRAPHY

Guy Debord defined psychogeography as “the study of the precise laws and specific effects of the geographical environment, consciously organised or not, on the emotions and behaviour of individuals.”<sup>9</sup> Based on R&D experiments with scanning, StoryFutures Academy and ISO Design created a format that enabled creatives to build an emotional map of their town in the present. A series of 3D story dioramas are built through thousands of scans of real people and real places that can be pieced together not as a one-to-one representation of the physical world, but a creative re-imagination of places as told through local voices.<sup>10</sup> As Shiobhan Lyons argues, psychogeography “focuses on our psychological experiences of the city, and reveals or illuminates forgotten, discarded, or marginalised aspects of the urban environment.”<sup>11</sup> The end result is a compelling, emotionally powerful piece of immersive cinema and a new map of the UK that lets us explore our connections to each other and in doing so see our towns and cities differently.

There were many innovation challenges in the creation of these installations and developing a 3D scanning aesthetic flexible enough to work on handheld IOS devices but creatively rewarding enough to withstand public scrutiny. The software needed to be easy to use by complete novices, enabling them to think about the intersection between place and history as an emotional cartography of storytelling: identifying scanning possibilities in the way a photographer or cinematographer might think through a traditional 2D camera lens. The final product needed to have accessibility at its heart: a frictionless multi-user experience that allowed collective viewing but also promoted interested users to explore an interactive touch screen experience in their own time.

Featured on [BBC Click](#) (July 2022) as a storytelling and technical innovation, our StoryMaps were loved by audiences across the UK with 91% of users rating the experience 4\* or above.



StoryTrails Cyclorama cinema Omagh 1996

<sup>9</sup> Introduction to a Critique of Urban Geography, 1955

<sup>10</sup> ISO Design 2022.

<sup>11</sup> <https://theconversation.com/psychogeography-a-way-to-delve-into-the-soul-of-a-city-78032>

## CASE STUDY | INNOVATION IN THE USE OF ARCHIVE

The Mobile AR trails set out to use moving image archive in new and innovative ways; particularly the way audiences were to engage with archive within a site-specific experience. The intent was to reanimate BFI and BBC archive using immersive technologies to imprint local history on place, to reinvigorate audience connection to public places and create a sense of pride in our shared past.

Simon McCallum, BFI Archive Projects Curator, reports “We are always looking for new ways of expanding access to and understanding of our film heritage, and StoryTrails allowed us to take archive into immersive generations on a scale we have never seen before.”

By imprinting archive on place, StoryTrails enabled visitors to relive a moment from the past, attempting to create a sense of ‘presence’. Early analysis suggests that the presence achieved using archive

in augmented reality had a significant impact on the pride people felt about living in their city.

Existing formats of AR storytelling predominantly focus on cultural and heritage sites themselves, and there are a number of these at historic sites across the UK. What was particularly innovative about StoryTrails was the project’s focus on public place rather than one specific heritage site, as well as the project’s rich media mix of video, stills, audio and 3D animations. In doing so StoryTrails speaks to the possibility of a “people’s Metaverse”, using a spatial documentary form to raise questions about the technical, ethical, creative and physical challenges of real and digital worlds colliding. By bringing together screen heritage and new voices telling untold stories, StoryTrails looks to the past to imagine a future in which our shared digital spaces are democratic.

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## Coventry City of Culture: Positive Realities

SFA were approached by regional development agency Create Central who were charged with creative industries growth under West Midlands Combined Authority (WMCA) industrial strategy. SFA agreed to support WMCA-based SMEs on a joint funded innovation programme, with Create Central providing a route to eligible SMEs, SFA supporting training and mentoring, and Coventry City of Culture securing a pathway to audiences for a prototype experience. The Positive Realities programme had the twin benefits of developing the immersive capabilities of WMCA SMEs new to this sector and becoming a co-creation project to support the wellbeing of young people in Coventry. A brief was developed in partnership with Coventry-based charity Positive Youth which embedded co-creation with young people into the production process. Following a series of workshops and a rigorous selection process, Birmingham-based collective and immersive newcomers JellyBob were awarded a grant to develop a virtual performance experience that would be programmed into Coventry UK City of Culture 2021/2.

Mentored by SFA and AR specialists Arcade, *Urban Jungle*, is a smartphone AR experience which debuted at Coventry's CVX Festival in February 2022. It hosted a series of virtual performances by established and up-and-coming talent – from spoken word and grime artists to dance and circus performers. Audiences used smartphones at locations around FarGo Village to trigger these virtual forms of busking, which was billed as a virtual companion to CVX and “a festival of art and performance in your pocket”. The experience was promoted on social media by Coventry 2021, it was received positively by audiences and stakeholders alike.

Research conducted by StoryFutures about the co-creation process and audience experience found that:

- As a co-creation project, 23 young people were involved at some point during the project, with 15 regularly contributing in co-creation sessions. Of these 96% indicated they enjoyed the co-creation process and 82% felt that co-creation enabled them to influence decisions in their neighbourhood.
- Interview data indicated that they felt they were able to create and project a version of Coventry that was more representative of the city's cultures, creating a safe space for them to express their passions and share them with others in their town, giving a strong sense of pride and achievement.
- The project was highly aspirational for several participants, who valued the opportunity to get experience with green screen filming, capturing performances with AR, and creating digital content while working with industry professionals. For several this stoked aspirational ideas for their future.
- Overall, audiences agreed with the statement “This experience has made me curious about finding out more about the different communities of Coventry” and enjoyed the experience strongly.

**“Urban Jungle was a great addition to CVX Festival and other youth focussed events this year, and it's great to see the winning companies go on to forge new collaborations and networks in Coventry and beyond in relation to their immersive project and work.”**

Creative Director Coventry 2021,  
Chenine Bhatena.



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## SECTION 6

# SKILLS PIPELINE: RESEARCH X INDUSTRY COLLABORATIONS

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Since our inception in 2018, StoryFutures Academy has released a series of skills reports charting the needs of the immersive production sector. In November 2021 we released the latest instalment: *'Virtual Production: A Global Innovation Opportunity for the UK'*, mapping the emerging demands for VP skills across not only immersive, but also the film and TV industry. The report identified both the hard and soft skills demands required to translate innovation practice into economic growth. Mapped via a unique skills mandala, we demonstrated how VP collapses workflows and linear production operations to bring Preproduction, Production and Postproduction together.

The report identified many gaps and pain points in the workflows and pipelines of both Production and Postproduction talent in the UK, revealing a significant skills shortage. Demand for talent and training far outstrips supply. There is a clear need for highly creative, technical artists who can write code, problem-solve and communicate effectively with creatives while fixing complex technical issues; all within the fast-paced film and TV set environment.

The report recommends that the following areas may benefit from immediate and direct action from industry and training-providers:

- **Enabling on-the-job training:** through Professional placements, CPD training and extension of VFX-Houses successful Academies schemes.



- **Improving on-set communications between departments:** supporting CPD test shoots which de-risk the learning process.



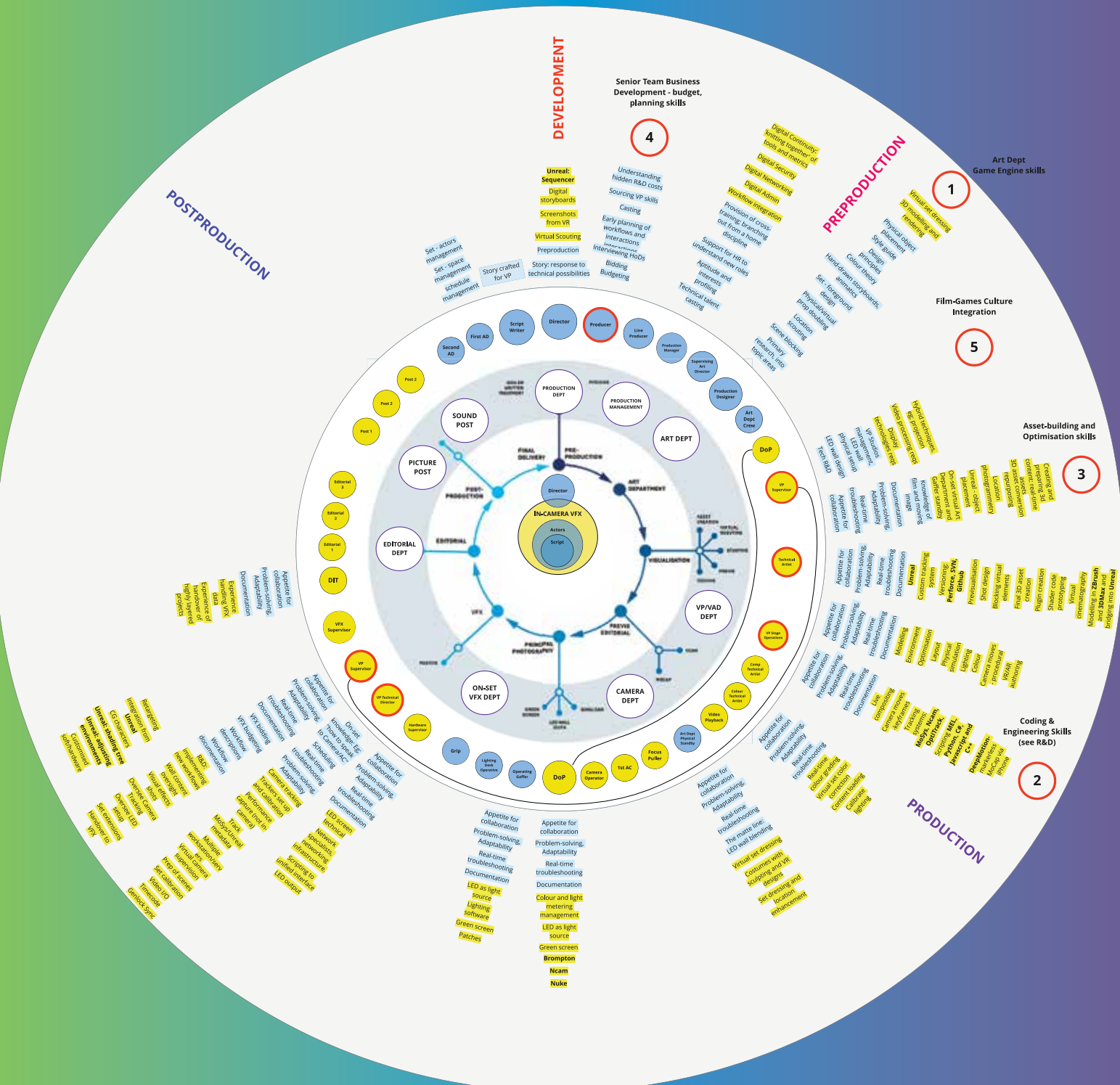
- **Addressing the lack of common language:** creating an open-source ontology and a 'Play Book' of common VP concepts.



The report has informed StoryFutures Academy's VP Futures, Early Career Researcher and Train the Trainer programmes, enabling researchers and companies involved to understand how to build up the right skills within their teams. A further update to this report, based on learning from this programme, is planned for Autumn 2022.



# The Virtual Production Skills Mandala



## DEVELOPMENT

Senior Team Business Development - budget, planning skills

4

- Unreal Sequencer
- Digital Storyboards
- Screenshots from VR
- Virtual Scouting

Understanding hidden R&D costs  
Sourcing VP skills  
Casting  
Early planning of workflows and interactions  
Interviewing HoDs  
Preproduction  
Bidding  
Budgeting

Story crafted for VP  
Story: response to technical possibilities

## POSTPRODUCTION

## PREPRODUCTION

1

Art Dept Game Engine skills

Film-Games Culture Integration

5

Asset-building and Optimisation skills

3

Coding & Engineering Skills (see R&D)

2

## PRODUCTION

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## Early Career Researcher x Industry Collaborations

Based on the success of the Bootcamp and Placement model used to facilitate industry training and collaborations, SFA adapted this approach with the aim of connecting Early Career Researchers (researchers within eight years of their PhD award) with SMEs working in the creative immersive industries, enabling them to collaborate on an immersive R&D project that would enhance the researcher's specialism and provide academic support to an industry partner. The aim of the programme was to further unlock the skills and knowledge of the AHRC's Creative Industries' Clusters Programme (CICP) for industry growth by enabling ECRs developed through the CICP to work on projects directly linked to their research with SMEs. In particular, the programme aimed to test, develop and commercialise insights and prototypes from early career researchers in a manner that brokered collaborations and mutual benefit for both company and ECR. Thus the programme provided companies with an exclusive window to commercialise any IP emerging from collaborations, drawing on the strength of researchers to work over longer time periods and companies' drive to market.

ECRs and Immersive Companies from across the UK interested in embedding research practice into their immersive productions, were invited to an R&D Networking Bootcamp in order to meet potential collaborators. They were then given the opportunity to apply for up to £12,000 funding to develop an R&D prototype together. During this time the placed Early Career Researcher will support creative immersive companies in their research and development of an innovative project aligned to areas of UKRI strategic importance and industry need inclusive design; the green economy and sustainability; audience behaviour; AI and machine learning.

The R&D Bootcamp brought together 10 ECRs and 14 immersive SME representatives to explore the value of research to industry innovation. Three teams were successfully selected for support and are currently undertaking an 8-12 week R&D research residency working together on an innovation research project.

## Insight on ECR Industry Collaborations

In the process of developing this placement model we encountered a number of practical challenges which we observed to be a barrier for collaboration between ECRs and industry, even where the interest and intent to collaborate exists:

- Aligning the specialism and availability of the researcher with the timeframe and demands of a live project is extremely challenging
- We observed common mismatches in expectations from both sides. For example, the industry partner being unable to open up their R&D to external parties, or expecting unachievable outputs (such as business models for commercial success), or for the researcher to fill a traditional production team role. We also identified common expectations of researchers, such as the desire to observe industry and integrate these observations into their research, or the need for a technical partner or developer to house or build their prototype, neither of which are always possible or of mutual benefit.
- Limitations placed on researchers by their HEI, such as capped hours or teaching timetables, [BGC1] made entering collaborative partnerships challenging to some.

While the bootcamp and ECR-led placement model we developed went some way to overcome these challenges, we believe a longer-term programme of work that learns from, and iterates on, this first round of projects would be most appropriate for further lowering the barrier to collaboration. However, as this is outside the scope of this programme, we believe the most pressing need is to concentrate on delivering fundamental abilities for collaborative R&D with industry, including a focus on interdisciplinarity, knowledge exchange and transferable skills.

## Collaborative Projects

### Phil Carlisle, University of Lincoln + Immersive Networks

Phil Carlisle specialises in AI and machine learning research. His project with Immersive Networks, "Machine Learning enabled recommender systems for co-creative Immersive Narrative content generation", centres around voice activated AI to generate content for immersive spaces/images.

## Train the Trainer Outcomes:



### Laryssa Whittaker, Royal Holloway, University of London + MunchingSquare

Dr Laryssa Whittaker specialises in immersive audience behaviour. With MunchingSquare, this project aims to develop a novel approach for musical performance that simultaneously accommodates both live and virtual audiences. It will consist of a hybrid event broadcasting live capture with artist's facial expressions in social VR space. They will work collaboratively with their chosen artist to create the VR space visuals and explore the impact this has on both the artists' performance (physical and virtual), as well as the audience in receipt.

### Mary Stewart-David, University of York + FANDCO

Mary Stewart-David is the lead researcher of a small team alongside colleagues David Gochfield and Daniel Lock. Between them they have a wealth of practical and research-based experience in immersive theatre and virtual production technologies. With FANDCO, this project will develop a new live show incorporating VR, performance capture and live improv performance and audience participation, measuring the impact of XR on first time performers.

### Train the Trainer

In this, its third and final cohort, Train the Trainer worked with five teams who trained 27 academics. With the specific aim of bridging the divide between HEI education and the immersive industry skills-gap, the scheme's interdisciplinary approach united academic specialists from subjects as diverse as: Built Environment & Architecture, UX Design, Acting for Screen, Games Design, Immersive Media, Creative Social Media, Computer Science, Drama and Psychology. Each project brought together academic teams with industry collaborators ensuring that the skills developed via the projects feed into the talent pipeline in an industry-relevant way.

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.

All five projects delivered new innovative approaches to teaching:

- Develop a national talent base that was representative of UK diversity for immersive storytelling, building UK capacity for immersive production
- University of Plymouth's actor training for Virtual Production utilises real-time mapping using a 360 Dome for the volume
- Ulster University's response to industry expectations on graduate skills embraces shared-learning for both students and tutors on recently redesigned Graphic Design and UX courses
- Birmingham City University has been discovering the benefits of multi-disciplinary collaboration while developing a VR game-for-good about the impact of energy consumption
- Royal Holloway, University of London's collaboration with immersive studio Playlines has developed a digital-first course that explores how to tell stories in the metaverse with inclusive design embedded throughout
- Cardiff University is offering an introduction to immersive production for all students regardless of the undergrad course. This workshop-led programme provided masterclasses with industry professions and practical training, preparing students to respond to an industry brief from the Cardiff GLAM sector.

Over the single cohort, 12 new or modified courses were developed, with nearly 500 students benefiting from these new courses each year.

**"Train the Trainer is structured so that you work closely alongside other immersive storytelling projects, allowing academics to learn from each other's projects both in format and content."**

**Dr. Will Shüler, Senior Lecturer in Drama and Theatre Studies, StoryFutures Academy**

**"[Train the Trainer] has a sense of community and support. It was also useful for our team to present our project to the other teams for feedback and direction. We particularly enjoyed the opportunities to speak in smaller groups with StoryFutures staff, experts and the mentoring team."**

**Terry Quigley, Senior Lecturer, Belfast School of Art and Senior Lecturer, Faculty of Arts, Humanities & Social Sciences, Ulster University**

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## SECTION 7

# DIVERSITY AND INCLUSION

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The StoryFutures Academy programme has committed to overall diversity targets of 50% female and 20% ethnically diverse beneficiaries. We take a portfolio approach across the programme and capture this information by self-reporting through surveys.

To date we have consistently met and exceeded our Black, Asian and minority ethnic target, at the end of our fourth year we have 25% of our beneficiaries self-report that they are from ethnically diverse backgrounds.

We have achieved our gender target of 50% female participants, but we intend to increase this in the coming year by continuing to work with industry based groups, such as Women in Film and TV.

In addition to these overall targets, we have also developed initiatives which specifically look to increase the diversity and inclusivity of the immersive industry in new ways, such as the Inclusive Design Accelerator and StoryTrails projects.

### Inclusive Design Accelerator

The Inclusive Design for Immersive Experiences Challenge offered SMEs the opportunity to work directly with InGAME and StoryFutures Academy, Open Inclusion and XR Access, to learn how to apply innovative approaches and new toolkits to inclusive design practice in XR. Embedding better inclusive design in the creation, development, production and testing of immersive content and experiences, ultimately provides a better experience for all, and not just those with permanent lived experiences of disability. To all of us who temporarily or situationally move, sense, think or feel differently, inclusive design fundamentally improves the reach, user experience and consistency of immersive experiences.

With access to cutting-edge expertise in inclusive design, immersive production, commercialisation support, audience insights and user testing, the programme included focused workshops to help teams upskill and embed innovative user-centred design practises into productions in two stages:

- **The Inclusive Innovation Lab** – a four-day highly interactive programme designed to rapidly train SMEs in the practice of inclusive innovation and design using the Innovation Design Canvas.
- **The Inclusive Design Accelerator** – two teams selected for a remote eight-week programme to test and embed inclusive innovation concepts and user-centred features within existing, near-to-market IP.

Selected companies included 3Finery, 3DNovations, The VR Hive, Yaldi Games, Echobubbles, Copper Candle, Forest Tribe, Trial & Error, Hyper Luminal and Sugar Creative.

The Inclusive Design Lab equipped each SME to pitch for entry to the Inclusive Design Accelerator and £35,000 development funding. Pitches were created and submitted on the final day of the programme and were judged by Open Inclusion, InGAME, StoryFutures Academy and external domain specialists.

**“We created the Inclusive Design Challenge to help develop confidence, understanding and capabilities in the practice of inclusive innovation for immersive content. Embedding inclusive design practices improves UX quality, consistency and durability. This programme will ultimately empower companies to do better business by creating better things as well as creating immersive experiences that are enjoyable and accessible to everyone.”**

Fiona Kilkelly, Acting Head of Immersive, StoryFutures Academy

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## Selected Accelerator Companies

### Sugar Creative (mentored by StoryFutures Academy)

**Company Bio:** Sugar Creative are an award-winning multi-skilled innovation studio. Previous projects include the cutting-edge AR experience 'Dr.Seuss' ABC' and 'Wallace and Gromit: The Big Fix Up'. In the past year, Sugar Creative have received a number of accolades including being awarded a BIMA10, being shortlisted for two Cannes Lions, and being selected as one of the Createch 100 Ones to Watch.

**The Project:** Sugar Creative are developing a visual language integration toolkit and BSL content for XR which will be demonstrated in their soon-to-be-released VR story experience. This toolkit will enable BSL content capture and implementation into their latest project, the storytelling engine Project V, set to launch in 2022 with its first immersive story; 'Monsters Brawl VR'. They will be using the latest in motion capture technology to achieve this and will be working closely with co-designers from the visual language communities at the heart of the project. This tool will become both a catalyst and gateway for other organisations to apply this learning to their work and take further steps in making the immersive world equitable for all.

### Hyper Luminal Games (mentored by InGAME)

**Company Bio:** Hyper Luminal is an indie games studio based in Dundee, Scotland. Hyper Luminal create 'games for good'; a belief that games as a medium can be used to have a positive impact on the world, providing meaningful, lasting experiences that enrich the lives of their players. In their seven-year history Hyper Luminal Games has grown from four former Hons graduate students from Abertay University, to over forty full-time staff.

**The Project:** Searra Dodds, Senior UX/UI Designer, explains their project's approach to accessibility: "Our aspiration is to create a Hyper Luminal 'Standard of Excellence' for inclusive and accessible games for all. With this fantastic opportunity we will be able to build better pipelines and processes, which include vital user testing and feedback with inclusive communities, and invest time in including more diverse characters, stories and customisation options into *Pine Hearts*. All of this will be supported with an innovative inhouse accessibility toolkit which we hope to improve sustainably from project to project."

### StoryTrails: End to End Inclusion

StoryTrails set out to deliver end-to-end diversity and inclusion. Each aspect of the project was designed with StoryFutures' partners along the principles of inclusive innovation. A diversity and inclusion (D&I) action plan was applied to each phase of the production process from the R&D through to training, creative execution and legacy. Our inclusion strategy considered the end-to-end experience of creatives, communities and audiences, volunteers and staff as co-creators who brought their diversity to every stage of realising the concept.

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One of the primary drivers of the project was the recruitment, training and support of fifty Creative Practitioners from diverse backgrounds from across the UK who would be upskilled in immersive storytelling. Creative Practitioners were divided into three cohorts; augmented reality trail-makers, community mappers (responsible for 3D scanning and finding/recording audio stories from people in the community), and a third cohort embedded with partner organisations and VR companies. Those creative practitioners representing one of the fifteen locations had to demonstrate a strong connection to place. Local creative networks and national disability groups, neurodiverse groups and national diversity networks in the screen-based industries were also targeted to ensure a diverse application pool with a basic level of production skills necessary to use the experience as a springboard into immersive.

To support the regional development of diverse creatives in immersive storytelling, the assessment process was weighted towards passion for storytelling and ideas over experience. Whilst diverse characteristics were not a prerequisite for creatives on StoryTrails, the application asked them to tell us about the stories of under-represented communities they wished to tell and why. This successfully attracted

applicants across a range of protected characteristics and socio-economic backgrounds with high intersectional diversity. Over 644 applications, our final cohort over-indexed on female representation, Asian, Black and minority ethnic population and disabled applicants compared to the UK population and over-represented working class applicants compared to the wider UK creative industries.

Principles of inclusive design were embedded from the R&D phase through to delivery as we developed StoryTrails visual and narrative concepts and planned for the live events. Each partner developed relevant frameworks, led by StoryFutures research teams, to ensure digital accessibility and to remove barriers to inclusion raised by the technology, the production processes and for audiences at the final live events on the nationwide tour.

As part of this we explored the optimum technical specification for accessibility, and best practice for AR and immersive screen-based experiences in this context. This involved developing design standards with XR access specialists Open Inclusion and testing with diverse user-groups at libraries across the UK prior to launch.

## CASE STUDY | EMMA OSMAN, STORYTRAILS CREATIVE PRACTITIONER, LINCOLN

Emma Osman was one of StoryTrails creative practitioners. Having grown up in Lincolnshire she returned to her hometown of Lincoln to map the locale through 3D lidar scans and an array of interviews with diverse characters. Emma had previously worked as an actor and teaching assistant but had no previous production experience. She rose to the challenge producing stories from over fifty Lincoln residents and working with StoryTrails team and local library to create an emotional map of the city. Since finishing StoryTrails she has secured a part-time role with Arcade spatial agency as social media executive and brand ambassador for this fast growing augmented reality company.



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## SECTION 8

### THE FUTURE

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The final year of the StoryFutures Academy extension will be focussed on concluding our active programmes, disseminating the insight generated from our initiatives, and looking to the future sustainability of StoryFutures Academy through additional funding streams. Although this is an uncertain period for StoryFutures Academy there are exciting programmes to deliver and unknown challenges ahead. The future is unwritten.

#### Active Programmes and Dissemination Activities

##### BFI Short Form Animation Fund

StoryFutures Academy is collaborating with the BFI, who has invested £1.1 million in 15 new, bold and ambitious animation projects as part of the latest round of the BFI Short Form Animation Fund. For the second iteration of the Fund, StoryFutures Academy partnered with the BFI to invest a further £100k to support two immersive virtual or augmented reality projects from the slate of 15. The two immersive projects selected for funding are 'Beachcomber' from Second Home Studios, Birmingham, and 'There Exists' from Studio ANRK, London. Production on these projects began in Summer 2022 and will conclude in Spring 2023.

##### Experimental Labs

The final raft of Experimental Labs will focus on disseminating insight developed as part of our more recent work, and will include Labs on Inclusive Design

practices and Augmented Reality Storytelling. We will also look ahead to the future of the Metaverse and what this means for content makers, as well as delivering a new Virtual Production training lab focussed on the key filmmaking disciplines of Directing, Production Design, and Cinematography.

##### VP Futures

This programme will conclude in Autumn 2022, and a number of dissemination activities are planned, including presenting the work at the UKRI Beyond conference 2022, profiling each team's skills development journey in an updated StoryFutures Academy Skills Report, and creating a behind the scenes video showcasing the projects and sharing findings from the programme.

##### Inclusive Design Accelerator

This programme will also conclude in Autumn 2022, with the work presented at the UKRI Beyond conference 2022. We also plan to work with Open Inclusion on a further Lab that will broaden the reach of their Open Innovation Canvas, which was at the heart of the IDA programme and was refined as part of the process.

##### StoryTrails

StoryTrails continues to excite interest in venues to host the programme of work and funders to support a future iteration. It will have a run at the BFI SouthBank in late 2022/early 2023.



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