Screen Work 2020

Future skills and innovation for the Screen Sector in the Cardiff Capital Region

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for the Screen Sector in the Cardiff Capital Region -
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Executive Summary

The screen sector in Cardiff Capital Region is a major success story for Wales, demonstrating significant growth and increasing reputational gains as a place to make quality screen content. From a low base, the region has grown to become home to hugely popular, widely exported and award-winning productions including, Doctor Who Infinity, Casualty, Sherlock, His Dark Materials, Apostle, Craith/Hidden, I am not a Witch, Luo Bao Bei, Keeping Faith and Time Carnage. This is a priority sector for Welsh Government in terms of GVA with the Creative Industries Council (CIC) estimating that the UK creative industries are worth £111.7 billion a year to the UK economy (Creative Industries Council, 2018) and Creative Wales estimating that the creative sector as a whole has a turnover of more than £2.2 billion annually, an increase of 40% since 2010 (Creative Wales, 2020).

Screen Work 2020 shines a spotlight for the first time on workforce, training and education needs for Film, Television, Games, Animation and VFX for the Cardiff Capital Region. It is the largest, most representative piece of research focusing on specific sectoral needs. It draws on independent, empirical research to make tangible recommendations to drive forward a coherent, cohesive, and purposeful screen skills strategy.

Screen Work 2020 finds a screen industry, and education and training sector, that is not held back by a shortage of talent or a lack of initiatives. What it does lack, however, is a coherent, ambitious, and cohesive skills strategy to sustain the sector in the longer term.

The drive to leverage inward investment has not been aligned to a skills and workforce development strategy that works across both scripted and non-scripted content production.

Skills is the vital missing link.

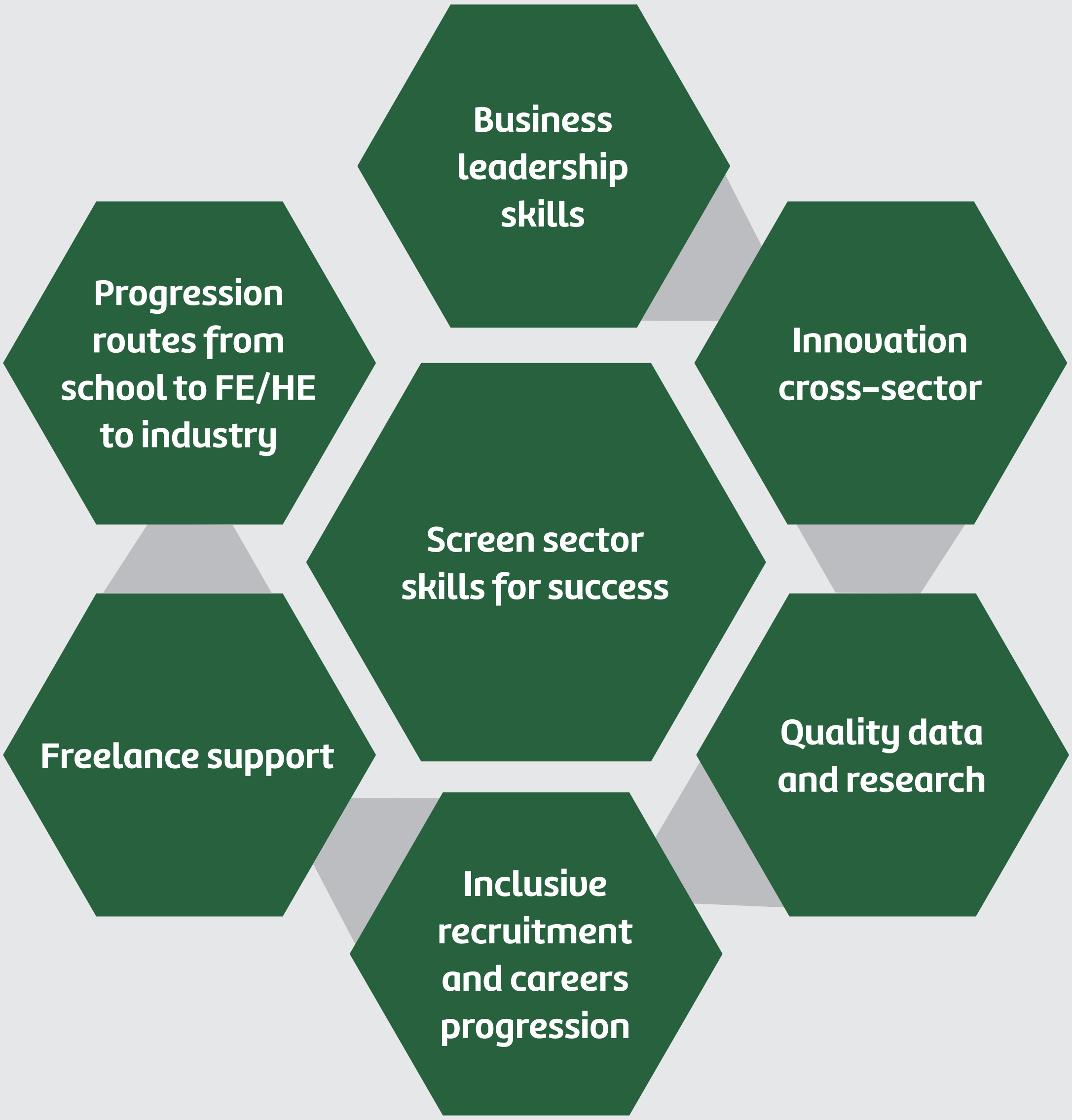
Without a long term vision of what the screen sector should look like, Wales risks frittering away its recent gains in the face of global competition from other territories in Europe and worldwide that couple fiscal incentives, such as tax relief, with coherent workforce development.

The screen industry is first and foremost a business. And a business without a strategy and direction for its people is destined to fail its people.

We should be in no doubt that an insecure talent pipeline will imperil the sector's future. This is not a distant future threat. It is a reality now. Securing coherent progression routes from schools through Further Education or Higher Education into the industry, is imperative. But it is also vital to start investing in our mid-career talent so that we enable them to become leaders in their fields, with ambitions to produce content that we have hardly yet dreamed of.

A small nation like Wales cannot afford to waste its people's talents and recruit only from communities of privilege. This makes no business sense, nor does it meet the aspirations of the Well-being of Future Generations (Wales) Act (2015).

The diagram below illustrates the different components that our research demonstrates are necessary to build a more inclusive and ambitious skills strategy:


Business leadership skills
Progression routes from school to FE/HE to industry
Innovation cross-sector
Screen sector skills for success
Freelance support
Quality data and research
Inclusive recruitment and careers progression

Key Findings

Finding 1

Our research found near universal agreement that the lack of a clear strategy for workforce and skills development operating across the entire screen sector is a major obstacle to progress in the Cardiff Capital Region. This point was made to us repeatedly through our screen census survey, through interviews with industry including business leaders, and through interviews with Further Education, Higher Education, and private training professionals. The lack of a cohesive skills strategy in Wales was frequently contrasted with better activity and strategy both in other UK nations such as Scotland but also activity in Europe and worldwide.

Finding 2

Our research revealed woeful under-investment in senior leaders that weakens the region's commercial capabilities to win new business in a global (not just UK) marketplace. We found that only 5.5% of all training organisations delivered training to senior level professionals. 0.6% of all training was focused on senior level coaching and sponsorship and only 1.1% of all training delivered was aimed at developing senior level business skills. The future of our screen sector is tied to the quality and ambition of its senior business leaders. Support for developing the skills of our senior business leaders is vital if they are to drive their own commercial strategies forward and help build a more innovative and inclusive screen sector for all.

Finding 3

The screen sector in Cardiff Capital Region (CCR) is heavily dependent on freelancers. 60% of all our census respondents were freelancers or Sole Directors of Limited companies. This makes up a significant percentage of industry representation in the region and national figures suggest this figure could be as high as 89% in a highly fluid sector such as film. The sector therefore has a proliferation of 'one-person operations' in the region.

Finding 4

The region's screen production sector is overwhelmingly made up of micro and small businesses. 73.3% of firms in region's screen sector are classified as SME's (fewer than 10 staff) and micro independents (fewer than 4 staff) with only 5.6% of organisations employing more than fifty staff. This - coupled with the short term 'project based' nature of production can hinder investment by the sector in continuous workforce development.

Finding 5

Our research found significant reliability issues with using existing data sets and Standard Industry Classification (SIC) and to a lesser degree, Standard Occupational Codes (SOC codes), to capture an accurate and meaningful picture of the region's businesses and workforce. SIC codes lack the granularity to be able to distinguish for example, between commercial video business service wedding and corporate industries on the one hand, and screen production companies making commissioned television content on the other. A skills strategy must be informed by iterative and up to date information. This is significantly lacking and need addressing

Finding 6

Research found that the region's screen sector is characterised by high levels of work precarity and inequality that have been magnified by the 2020 Covid-19 pandemic. The pandemic has revealed major flaws in how freelance labour is acknowledged and supported for the value it brings to the economy of the region. 58% of all organisations reported having to postpone scheduled activity with 26% of organisations highlighting that they had to cancel scheduled production activity in the CCR region The freelance community in the screen sector need support, training, and a voice to be heard in planning the future of the sector.

Finding 7

Informal, subjective forms of recruitment still dominate the sector's recruitment practices. 86.1% of all independent screen industries organisations in CCR reported recruiting for sectoral roles through word of mouth. Social Media (44.4%) was the second most utilised method to attract staff. Awareness of barriers to access to the industry was evident across many of our interviews. However, while we found evidence of some inclusive practices that focus on empowering those who are under-represented in the sector, we found little practice that sought to be genuinely transformative . The small size of organisations, limited time, and resources, and the 'project to project' nature of commissioned productions and training provision are all significant barriers to building a talent base that reflects the population of CCR.

Finding 8

Research revealed positive examples where public funders such as Ffilm Cymru Wales, BBC, Channel 4, and S4C were starting to help drive change by tying production and/or development funding to inclusive talent development in both scripted and non-scripted content. However, this is currently operating at too low a level, and only in some areas of the screen sector (notably film and television), to bring about the scale of change needed. Government and major anchor organisations such as broadcasters and screen agencies have a vital role to play in supporting micro and SMEs to become genuinely inclusive employers who recruit, invest in, and support a diverse workforce. This entails an increased focus on behind the camera roles and in diversifying the range of stories being told on screen.

Finding 9

Our research identified recognised areas of skills need including specific skills gaps to support Welsh-language production and in non-scripted or factual content. A focus on developing Welsh language talent at all levels is integral to maintaining a strong indigenous sector and achieving Welsh Government aims for 1million Welsh speakers by 2050

Finding 10

While Clwstwr has significantly improved awareness and engagement with Research and Development in the region's screen sector, our research demonstrates that innovation remains under-developed in the region's workforce strategy. Innovation is more prominent in the sub- sectors that are more focussed on adapting to new technologies such as Games and Post-Production. Frequently pointed to in interview was the necessity firstly, of growing capabilities in skilled multidisciplinary working and secondly the need to identify and nurture staff who can bridge technology-led and creative areas of work.

Finding 11

There is an enduring disconnect between the different sub-sectors of the screen industry with relatively little cross-sector partnership IP development revealed. This is a missed opportunity for the region. A priority for a Welsh screen skills strategy should therefore be joining up the different sub-sectors of Wales' screen industries to help drive innovation. Changing technologies, new audience appetites and behaviours, and transformations in storytelling across platforms means that innovation needs to be integral to how we equip our screen workforce with skills for the future. Innovation should not be positioned on the side lines. Instead, it should sit at the heart of a screen skills strategy. We live in an age of global media convergence with accelerated development of transmedia content especially in the burgeoning games industry. Silos in our small nations will deliver neither the sustainability nor the scale of industry we need and deserve.

If there is one lesson to take from Screen Work 2020 it is that policymakers, and the sector itself, must be as innovative with solutions to skills needs as they are creative with their production output. What is required is a clear, collaborative strategy working towards a common vision for a skilled inclusive workforce that can sustain livelihoods and produce compelling enriching content for audiences in Wales and internationally.

Recommendations

Skills Strategy for the Welsh Screen Industries

1) Development of a coherent and ambitious strategy for industry skills development and screen sector training provision is vital to secure the future of the Cardiff Capital Region's screen sector, and for Wales more broadly. At the heart of such a strategy should be a clear vision of what a successful, sustainable screen sector looks like and how it will enable Welsh talent to thrive on the global stage. Unless such a strategy is developed and implemented, it is likely that both quality jobs and opportunities for economic growth will be lost to the competitive global production economy.

1.2 A skills strategy for the Welsh screen industries should be owned by a body such as Creative Wales with suitable independence, resource, and Government support to enable it to be delivered over the medium to long term. A skills strategy must be genuinely responsive to the needs and insights of industry, education and training providers, and other stakeholder organisations such as broadcasters, Ffilm Cymru Wales, BFI, UKIE, BGI and other trade representatives.

1.3 Clear communication of the overall vision for the region's screen sector is urgently required. Key strategic priorities and interventions offered to deliver that vision must be shared with partners so that there is a common goal. A strategy is only as good as the culture it produces. Strategic engagement with new entrants including global subscription video on demand (SVODs) firms like Netflix and Amazon Prime, as well as with increasingly prominent players such as international distributors, should also feature.

1.4 Further data needs to be gathered beyond the Cardiff Capital Region to ensure that all of Wales is represented in the evidence base. This data should be gathered as soon as possible to help drive development of the strategy.

1.5 An annual screen sector census is required to map the screen workforce and its current skills and training needs to ensure that evidence underpinning the strategy remains current and reflects changing market conditions. A Skills Observatory, housing independent research capabilities with secure knowledge of the region's screen sector, could be responsible for this research. It could also provide independent research to support good governance and analysis of whether the strategy is making a tangible difference. The screen sector continues to experience rapid evolution driven by new technologies, global competition, and changing demands for content production and distribution. Periodic ad hoc data collection is not adequate to capture this reality.

1.6 Support services (e.g. catering, logistics, wider facilities companies) are a vital part of the region's success in screen industries. This needs to be recognised, mapped, and integrated into the screen strategy for Wales. Capturing the economic value of the supply chain is a major task that needs to be addressed in future if the full economic value of the screen sector is to be appreciated and developed.

1.7 Clear investment priorities for skills and training across all screen sub-sectors including games and virtual production, should be identified to ensure maximum focus and efficacy. These priorities should be ambitious, directly responsive to industry's short and long-term needs and based on those key strategic areas that are most likely to deliver innovation, inclusion, and sustainable economic growth, including quality careers for the long term. This requires paying serious attention to games as one of the fastest-growing areas of the global entertainment industry.

1.8 If the region is to nurture a thriving screen sector, it must identify and support the skills requirements of both individuals and firms working across the whole range of the screen industries. A coherent and inclusive freelance talent development thread must run through this work. Funding provision needs to be made available to encourage and support firms to invest in training and development of their staff at all career stages from entry-level to heads of department and CEOs. Public funding bodies can play a lead role by requiring recipients of public money to develop inclusive recruitment and talent development practices and actively support them in doing so. Strategic interventions should include targeted support for talent management at mid-career and business leadership stages of peoples' careers not only entry-level provision. It also means identifying specific workforce attrition rates mid-career which are often tied to wider issues of equality and inclusion in the screen sector.

1.9 Improved mechanisms should be developed to ensure that Welsh business policy is informed by a more accurate picture of the scale and nature of the freelance workforce in the screen sector. The COVID 19 pandemic has made evident the gaps in policymakers' understanding of freelancers' needs and their vital role in the screen industries. We should learn from this and support the freelance community more effectively from a workforce development perspective. All initiatives aimed at securing the future workforce and securing economic growth should be sense checked against the industry's freelance working practices to assess in advance their efficacy and chances of delivering positive economic outcomes. A skills and training strategy for the screen sector must support freelancers as vital contributors to the sector rather than continue to make them responsible for their own training and career development.

1.10 Building leadership and commercialisation capabilities is a priority if we want to grow thriving indigenous companies. Established professional development tools (e.g. mentoring, business coaching, leadership labs, external residencies, national/international networks for development) should be supported and implemented strategically to ensure that leadership of firms across all sectors of the screen industry are confident, better informed and networked for market opportunities in a converged media economy.

1.11 Major stakeholders need to work intensively with production companies to support development of their human resource and skills strategy capabilities which are currently limited. Most screen production firms are SMEs that lack either Human Resource departments or dedicated staff with training responsibilities. Consequently, they tend to lack the resource necessary to report accurately their own workforce data or to develop robust and inclusive recruitment strategies. Additionally, they are unlikely to have the skills, knowledge, or confidence to develop medium-term skills and training policies within their firms.

Screen business

2.1. Anchor organisations, most notably public service broadcasters, have a vital role to play in raising the ambitions and skills levels of the SMEs who supply them with content. While levers such as quotas have helped increase PSBs' commissioning outside the M25, investment in levelling up the skills and business leadership capabilities of firms outside London has been limited. This needs to change rapidly if PSBs are to deliver against their promise to support the creative economy across all the UK. Multi-partner initiatives like Fast Track Factual are welcome but need to be further embedded and expanded to other genres.

2.2 Cardiff Capital Region's screen sector continues to be lacking in diversity meaning that careers in screen remain beyond many Welsh citizens' grasp. Support needs to be given to firms and to training providers to enable them to deliver an Equality, Diversity and Inclusion strategy that delivers measurable improvements in the region's screen workforce over a specific time period. Vital here is development of transparent recruitment policies that not only comply with equality legislation, but also embody the social and economic value of an inclusive screen sector into companies' working culture. This should hold true for engagement of both freelancers and employees. Standardisation of EDI data collection remains a necessity in the different sub-sectors of the region's screen industry. Only if we are consistent and methodical in our data collection will we be able to ensure robust evaluation. Further research should be undertaken to map what effective good practice in EDI looks like for the screen sector in Wales

2.3 Screen companies need to develop further their understanding of the business value of investing in people through a coherent, planned strategy rather than relying on ad hoc, late stage actions. Creative Wales should take a lead role in advocating for the value of investing in screen workers, supporting firms to develop more innovative human resource management skills, including talent development for a converged, content-hungry international marketplace. Resources will need to match ambition.

2.4 The small size of most screen firms in the region makes them especially fragile when their founders decide to move on. Greater investment in the skills needed for good succession planning is required. Individual firms, Government and other key stakeholder organisations should work together to deliver targeted support to firms for advanced succession planning across all sub-sectors of the region's screen industry.

Training and education

3.1 Screen industry training providers need to work collaboratively and strategically when developing and delivering training. This needs to be responsive to industry skills shortages over both the short and medium term and across different genres including factual content.

3.2 An independent screen training and education provider network should be supported by Creative Wales. This network should have a clear mission and purpose tied to delivery of the overall skills strategy. It should have significant independent, freelance and broadcaster representation and be representative of the diversity of the sector as well as representatives from all organisations featured in our map of CCR training and education provision

3.3 Targeted support is needed to enable Further Education, Higher Education, and industry to build accessible progression routes into sustainable careers in the screen sector. Currently there is a marked tendency to rely on just a handful of individual experienced teaching staff to act as brokers maintaining these pipelines.

3.4 A 'good practice' guide to recruitment for training courses and provision in screen industries is urgently required. It should be developed by a cross section of screen organisations representing the breadth of sub-sectors in the screen industry and with a focus on supporting more effective and equitable recruitment.

3.5 Improved careers information and guidance (IAG) is needed that links the creative arts curriculum to the range of screen industry careers. We must ensure school children, parents and teachers have improved understanding of the different types of careers and pathways into the screen sector and ensure that this IAG is extended to a broad range of schools and communities who are representative across CCR.

4.0 Innovation

4.1. An innovation strategy for screen is needed in the region based on a commitment from Welsh Government to the screen industries as a long-term economic driver of the Welsh economy. Innovation is only possible if the sector possesses a skilled workforce that is supported to compete in the global screen economy. SMEs and freelancers should be enabled to “look up” and aspire to develop their own skills to support broader innovation. The skills to deliver innovation within both individual firms and across the cluster’s screen sector have only just started to be identified and nurtured.

4.2 Innovation is needed in both skills provision and skills policy. A research and development (R&D) approach could drive this forward. It should be based on current research evidence about skills needs in the sector and should adopt a user-centred design approach to developing a skills policy that works for all.

4.3 A priority for a Welsh screen strategy should be joining up the different sub-sectors of Wales’ screen industries to help drive innovation. Diversification across platforms requires business leadership that is confident and able to reach beyond existing silos. The region must facilitate more strategic innovation partnerships across different sub-sectors of the screen industry. We live in an age of global media convergence with accelerated development of transmedia innovation especially in the burgeoning games industry. Silos in our small nations will not deliver sustainability or scale of industry we need.

4.4 If screen companies are going to move beyond being service providers to thrive in this era of converged digital content, they need to invest in innovation to enable development and exploitation of Intellectual Property over the medium and long term. Public funding will play a vital part in driving such innovation. This in turn requires public funders of innovation to work with the grain of the screen industry not against it. For example, funding requirements for innovation awards should reflect the resource and capabilities of micro and SMEs that characterize the sector. Definitions of R&D used by public funders to support innovation in the screen industry should reflect the workflows of short-term, commissioned projects. This may mean being more interventionist and strategic by drawing firms together into consortia to collaborate as it seems unlikely that R&D capabilities of micro and small firms will grow substantially in the short term.

About this Report

At the heart of this report is a commitment to understanding the lived experience of the skilled workers and businesses that comprise the Cardiff Capital Region's (CCR) screen sector. Their labour, including the training and education of the next generation of screen entrepreneurs and workers, is the foundation on which ambitions for the sector's economic growth rest. We acknowledge the urgent necessity of making this a more inclusive sector that puts up fewer barriers to access and which offers sustainable long-term career and business development opportunities for all.

This report represents the first substantive mapping of the screen sector in the Cardiff Capital Region. It identifies the range and scope of the sector's firms, the skills required to deliver screen content in the region from entry level to senior leadership, and the types of screen education and training provided in the region. The impetus to undertake this research stems from our experience of hearing repeated public statements from the industry itself lamenting the lack of data detailing the screen sector's scale, its skills, and training needs given that it is one of Welsh Government's designated priority industrial sectors. We hope this report goes some way to plugging that gap but recognise that more granular pan-Wales research is needed.

We purposefully use 'screen sector' in this report to reflect the converged reality of contemporary digital media production. We include in the screen sector animation, film, television, games, VFX, and post-production. Because we were funded through the AHRC's creative cluster fund, we based our research on Clwstwr's geographic footprint which is the Cardiff Capital Region. It comprises 10 local authorities in South East Wales: Blaenau Gwent; Bridgend; Caerphilly; Cardiff; Merthyr Tydfil; Monmouthshire; Newport; Rhondda Cynon Taf; Torfaen; and Vale of Glamorgan.

This research was funded by the Arts and Humanities Research Council (AHRC) and was led by Professor Ruth McElroy and Faye Hannah at University of South Wales. An Advisory Group of Higher Education (HE) and industry members including representatives from the Clwstwr steering board provided advice on the research design, acted as industry ambassadors for our screen and training census, and reviewed our final recommendations.

The data collection was undertaken between late February 2020 and October 2020 meaning that all elements of quantitative and qualitative data collection occurred during the Covid19 pandemic. While this research was not intended as an analysis of the impact of Covid19 on the screen sector, we have asked questions that directly address how the pandemic has revealed major stresses, fragilities and capacity for creativity in the region's screen sector.

About the authors

Faye Hannah is a doctoral candidate at University of South Wales where her research examines workforce access and creative industries policy in the screen industries in Wales. Her role as Research Fellow on this research project provided her with an important opportunity to marry her practical sector experience with her knowledge of current academic theory to research how those working in the screen sector in Wales can better thrive. Faye has a fifteen- year career working across the creative, and related education sectors in the UK. She has worked for Creative Skillset, BAFTA, RWCMD, NextGen Skills Academy and Ffilm Cymru Wales to deliver training, projects, and qualifications. Faye is founder of creative consultancy firm 'Our Colab'. Since completing this research, Faye has taken up the role of Research Associate at the University of Glasgow working on the AHRC Fellowship project 'Everyday Diversity'.

Ruth McElroy is Professor of Creative and Head of Research in the Faculty of Creative Industries, University South Wales. She is Co-Director of Clwstwr and leads a team of twelve Co-Investigators from Cardiff Metropolitan University, Cardiff University and University of South Wales. Ruth's recent publications include an edited collection, Contemporary British Crime Drama: Cops on the Box (Routledge, 2017) and a co-authored book with Dr Caitriona Noonan Producing British Television Drama: Local Production in a Global Era (Palgrave Macmillan, 2019). Ruth is Chair of Ffilm Cymru Wales, and a member of Ofcom's Advisory Committee Wales.

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Introduction

The screen sector in Cardiff Capital Region is a major success story for Wales demonstrating significant growth and increasing reputational gains as a place to make quality screen content. From a low base, over the past decade or more the region has grown to become home to hugely popular, widely-exported and award-winning productions.

This success story is only possible because of the work of the many talented people who work in the region's screen industry and who have nurtured its development over several years. It is surprising therefore that the specific training needs and experience of the skilled screen workforce in the Cardiff Capital Region has largely been neglected in the mapping of the screen industry.

Screen Work 2020 shines a spotlight for the first time on workforce, training and education needs for Film, Television, Games, Animation and VFX for the Cardiff Capital Region. It is the largest, most representative piece of research focusing on specific sectoral needs. It draws on independent, empirical research to make important recommendations to drive forward a coherent, cohesive, and purposeful screen skills strategy.

In a sector proliferated by micro and SME companies and characterised by short-term projects, growth will only be maintained if the region builds an infrastructure around those companies to support and accelerate skills, training, and workforce development. There is urgency to this task because while there is an enormous appetite for content from high-end TV drama to games, the global competition is fierce. New technologies are transforming virtual production, re-shaping workflows and offering new routes for audiences to engage with content across platforms. A skilled workforce that draws on the talents of all people is the bedrock of a sustainable screen industry in the region and across Wales more broadly.

This report demonstrates that the region's screen sector is characterised by high levels of precarity, inequality, and reliance on personal networks which are the mainstay of recruitment methods. These inequalities have been further magnified by the Covid-19 pandemic across 2020. The screen workforce has been profoundly impacted by the pandemic which has revealed major flaws in how freelance labour is acknowledged for the value it brings to the economy. This is a matter of business policy but also of social justice. The levels of inequality uncovered by this research, including unequal access and representation in the sector, cast a long shadow over the success story of growing screen production the Cardiff Capital Region.

The Animation, Films, Games, post-production, television and VFX sectors, and the education and training sectors that support them, are in essence, focused on people and their opportunities. Screen Work 2020 amplifies the voices of this sector. It tells some of their stories and lived experiences. These voices demonstrate how screen workers in the Cardiff Capital Region can play an active role in shaping and delivering a more empowering story for the screen sector over the next decade.

Methodology

The objective of this research was to conduct a 'deep dive' into practice and areas of skills, workforce training and innovation for the screen sector. Our aim was to produce the first significant mapping of the screen sector in Cardiff Capital Region given that initial desk research had revealed a stark absence of representative data for the region.

Training providers were classified as any constituted organisation or company who delivered training at any level post-16 training for the screen sector in CCR, including vocational delivery such as screen sector apprenticeships. We recognise that apprenticeships encompass learning outcomes and are accredited provision. However, 80% of any apprenticeship is industry employment and as such, this is included in vocational training. Higher Education and Further Education provision within CCR (accredited provision) were mapped from rigorous desk research, data, and interviews.

The research team agreed with the Advisory Group a series of research questions.

Research Questions

1.What types of data, mapping and research currently exist that are relevant to CCR screen sector workforce?

2. Which organisations (e.g. agencies, broadcasters, firms) operate within the screen sector within CCR?

3. What type of training, vocational and educational provision post-16 exists for the screen sector in CCR?

4. What are the skills gaps that hinder the sector's ability to operate and grow?

5. What barriers exist to inhibit training and education providers in delivering:
a) a skilled workforce who are work-ready
b) who can progress to senior levels?

6. What specific skills does the screen sector require to innovate and grow? What skills barriers are inhibiting innovation and growth?

7. What, if anything, does the Covid19 pandemic reveal about the fragility of the CRR screen sector and its reliance on freelance labour?

Defining Screen Industries

For the purposes of this research, we use 'Screen Industry' to describe companies and organisations that contribute to producing screen content in CCR within the creative industries sub- sectors of Animation, Film, Games, Television and High End Television, Post-Production and VFX. We focused on mapping professional content providers or those who work within or to support that eco-system within these sub-sectors. The audience for the content produced may be digital, broadcast, online, or through any type of VOD platform or public cinematic distribution.

Data collection during a pandemic

Data collection took place between March 2020 and October 2020. Because all our data collection occurred during the COVID-19 global pandemic, we had to pivot our original plan of focus groups, workshops, and events to bring the entire study online. All interviews were conducted via Zoom or Teams. Participants consented to be recorded and all interviews were transcribed professionally.

Methods

To answer our research questions, we employed a mixed methods approach to gather workforce data from industry and training providers working in the screen sector in the Cardiff Capital Region.

All data collection was subject to approval by a Research Ethics and Consent panel at the University of South Wales. Our training and industry screen census surveys took place online between June and July 2020. Surveys went through a rigorous pilot stage and all materials, including social media communications, were published bilingually in Welsh and English.

Survey

We designed three different screen census surveys to capture data from distinct groups. One census survey was aimed at post-16 training providers in CCR; another was targeted at industry organisations including businesses across the screen industries. A final survey was subsequently developed aimed specifically at those public service broadcasters with major offices or headquarters in the region. The research team delivered a public webinar in early June to support recruitment and awareness of both the training and industry screen census. A total of 112 survey responses were completed which we believe makes this the largest most representative skills survey of the screen sector in the region ever conducted.

Interviews

We conducted twenty-three in-depth semi-structured interviews across the sector. This included two broadcasters, three Higher Education HE providers, two Further Education providers, CCR Regional Skills Partnership, four training providers including industry organisations BECTU and TAC. We also interviewed the skills team at Creative Wales.

We used interviews to build on the information gathered from the screen census surveys. We interviewed ten representatives from across the different sub-sectors of the screen industry including animation, film, games, television, and VFX. Within our interview sample, we ensured there was representation from Welsh-language content providers and commissioners. We also sought to be broadly representative in terms of geography (where possible we interviewed a representative sample from across CCR); age of respondents (to try and capture different career stages), and size of organisation.

Desk Research

This research project began with a focussed literature review aimed at identifying existing data and major data gaps. This included reviewing academic research on screen labour and education, together with grey literature emanating from policy and industry sources. An unexpected challenge for us was the highly dynamic nature of research emerging from bodies such as the Creative Industries Federation and Work Foundation that were trying to capture the immediate impact of Covid19 on the screen industry and its workforce.

Company research

To map the screen industry companies in the Cardiff City Region, we used the FAME Database through Bureau Van Dijk. FAME offers comprehensive information on public and private companies in the UK and Ireland. It enables researchers to research individual companies, search for companies in terms of how their economic activity is classified and the type of economic activity by which their business is engaged.

Company data from FAME was utilised focussing on primary and secondary SIC codes, covering a range of areas where organisations self-classify as a business that produces professional screen content as a core business activity.

All data gathered from FAME was downloaded in July 2020.

We initially identified fifteen SIC codes that directly relate to what is classified broadly as 'Audio Visual sectors'. This identification process ensured that:

1. A company or organisation was active

2. A company or organisation had an up to date website in CCR

3. Sense checking with industry organisations and affiliates with current sectoral knowledge regarding 'live' organisations operating in CCR.

4. Cross checking with submissions to the industry census survey – a question was asked as to how organisations classified themselves

5. Companies were sorted by geographic area across CCR 10 county areas

6. Companies that were purely special purpose vehicles (SPV's) were filtered out

For this research 'client led' screen production for the purpose of PR, Communications, marketing and brand promotion of a product or service are not included in our definition of the screen industries. Therefore, we removed PR, marketing and advertising agency SIC codes from the data set. Further research could be undertaken to examine the impact of these agencies and influencer type online content development in Wales.

Problems with screen industry coding through SIC

- Lack of clarity around how screen industry organisations self-classify their business and as such their economic activity
- Outdated classifications – data categorisation is unable to keep apace with industry convergence often driven by technological evolution
- Many businesses have varied and multi-purpose, so definitions are broad and do not allow for specific classification as maybe industry would self-define their economic activity

- The screen sector figures drawn from the raw data are wildly inflated. From 4541 companies in the CCR region across all associated areas of classified screen production. We identified that there were 230 organisations that are active and contribute to producing professional screen content in CCR.
- Within the data, there is inflation of statistics due to the inclusion of 'SPV's' (Specialist purpose vehicles) used frequently in screen and largely in TV and Film as a function to minimise risk. Our research found that the numbers of SPV's in terms of being included in these sector statistics. An example of this would be Bad Wolf Ltd, within Wolf studios have SPV's registered as companies for each production and series; Industry, His Dark Materials, Discovery of Witches, so when aiming to accurately account for numbers of companies in the sector, this data is misleading.
- A vast eco-system of companies supports the 'micro worlds' or 'mini cities' of production in the screen sector. They include on-set caterers, facilities companies, electricians, scaffolders, paramedics and so on. Many of these organisations have multiple professional focuses both inside and outside the screen sector. As such, many are not classified under an 'Audio-visual' SIC. This is an area of economic activity that is under-researched and requires attention in the future as discussed later in this report.
- There are a significant number of individuals who are freelance or sole traders that may employ others from time to time but who may not operate as a Limited Company.
- The lines of 'audio visual' as a sector are increasingly merging with marketing, advertising, communications' and PR as well as increasing cross-over with content produced by those broadcasting online and through social media. Multi-media agencies as their name suggests, have multiple 'organisational classifications' as determined by SIC codes.

1. A skills strategy for the screen industries in the Cardiff capital region

His Dark Materials, Bad Wolf

1.1 Our research reveals widespread concern among industry and training providers about the lack of a coherent skills strategy for the region's screen sector, or for Wales more broadly. It is not a lack of activity in CCR that has been revealed in our research but a failure to cohere into a clear strategic vision for what a sustainable skilled screen sector would look like and what is required to achieve it. As one company director put it to us bluntly,

> ***'there isn't a strategy. If somebody said to me 'what is the strategy?' I would say I don't know. I went looking for a strategy document and I can't find it'.***

Those who have received funding or support are conscious that due to the omission of a publicised strategy, parity of understanding is hard to achieve, with a senior independent producer concurring "I think generally speaking, lots of companies out there, unless they've had direct involvement with Welsh Government are under the impression that there isn't a strategy or any joined up thinking in terms of skill development"

1.2 Our research revealed that individuals and firms operating in screen production and the training sector did not understand that Welsh Government invested in productions and training. They were also unaware of the strategic decision-making processes or criteria used for such investment. As one independent production company shared;

> ***"Generally speaking, anything that can be done when it comes to finance, to make it transparent and clear is always helpful. I think for them moving forward, they just have to ensure a level playing field that's utterly transparent at every stage".***

Those who had received funding stated that the link between skills and talent development and production funding would benefit from being stronger, with greater monitoring and evaluation to direct training to meet sector specific needs.

1.3 Several organisations noted how recent Creative Wales investments have stipulated traineeships and this was welcomed but was also seen as a first step. A clear link between production funding and skills and workforce on production would be beneficial to all. Our research also revealed that other funders in the region such as Ffilm Cymru Wales had made funding awards conditional to the offer of traineeships of different kinds. However, there was a perception that other nations in the UK through bodies such as Creative Scotland were more mature in their strategic development and that consequently there was a risk of Wales losing out in a competitive landscape.

1.4 There is broad support for Government, through a body like Creative Wales, taking a lead role in developing a skill strategy, setting direction and priorities for investment in the screen sector's skills, with organisations calling for a 'One-stop shop' for skills and workforce development. Industry respondents welcomed Creative Wales' approach to engaging with them during the pandemic through initiatives such as development funding and in bringing a broad skills group together. But this was also seen as early-stage and overdue development. Moreover, screen organisations working across development, production and education reported that there is a significant need to 'know what the gaps are' in order to 'help training providers and anyone who's funding training to 'think smartly about where investment is needed.'

1.5 In interview, many industry respondents pointed to the importance of having leadership that understands the structure and complexities of the screen sector especially in co-ordinating identification of skills needs across sub-sectors such as games, film and animation, and across the region's micro and SMEs production companies. A global view is required because, as one organisation reflected,

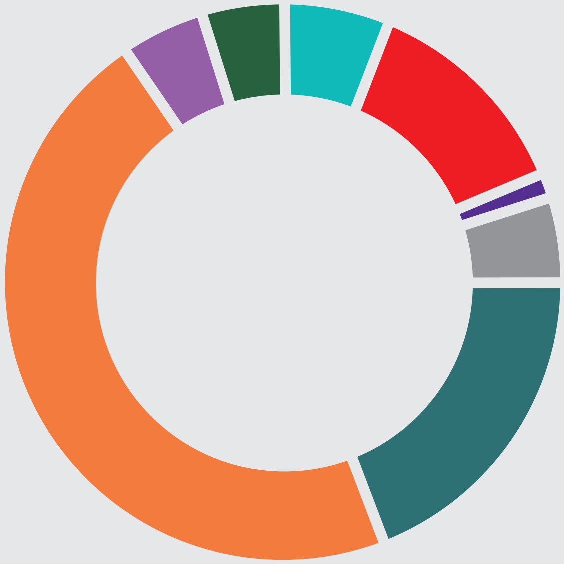
> ***'you can't rely on one production to tell you because their skills gaps could be totally different to our skills gaps'.***

2. Cardiff Capital Region's screen industry: characteristics of the sector

Craith, S4C

Independent Sector & Freelance workforce

2.1 Television production companies and in particular drama production, make up a significant percentage of the organisations who responded to the 2020 census in CCR.



- Film 19.8%
- Television 45.3%
- Games 4.7%
- Animation 4.7%
- VFX 7%
- Post-production 11.6%
- VR/AR 1.2%
- Other 5.8%

2.2 Our SIC code data research reveals that there are 230 organisations operating in the screen sector across CCR. Our Census 2020 respondents company structure detail is outlined below;

- Freelancer / Self Employed 41.1%
- Private and Public 54.4%
- Other 4.5% (Trusts and Charitable sectors)

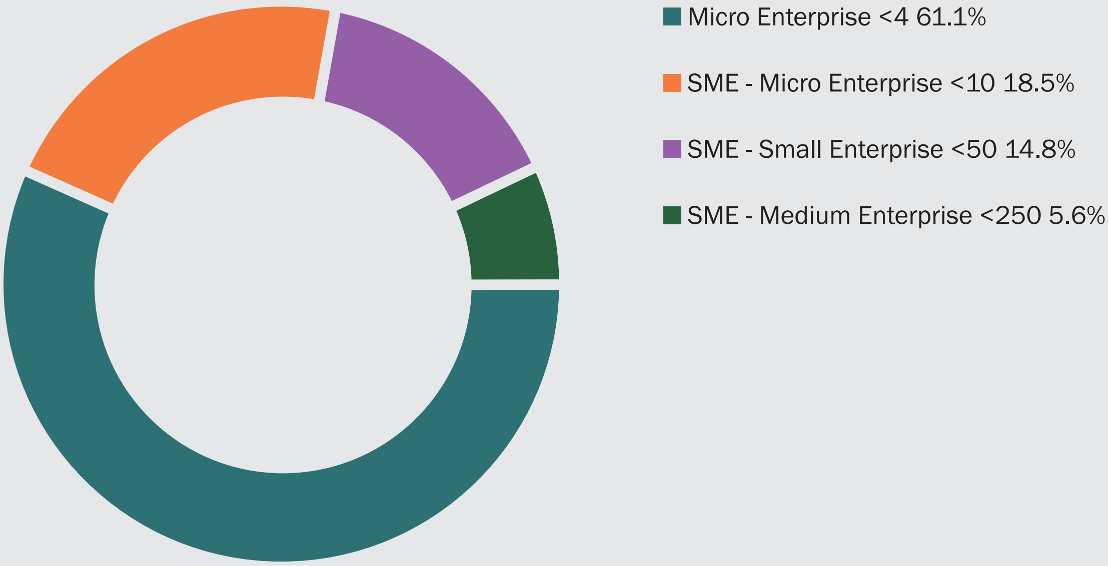
Note: 18.9% of all census respondents were Ltd. Company (Sole Director).

2.3 60% of all our census respondents were freelancers or Sole Directors of Limited companies in CCR making up a significant percentage of industry representation in the region and national figures suggest this figure could be as high as 89% in a highly fluid sector such as film (Creative Skillset 2015)

2.4 There is evidently a significant lack of mapping, data, support, and infrastructure in CCR for freelancers. Freelancers are characterised by fragility and precarity and this has been greatly exacerbated by the Covid-19 pandemic. However, they are consistently highlighted in our research as essential to the continued operation and growth of the screen sector in CCR.

2.5 73.3% of organisations in the CCR Screen Sector are classified as SME's (fewer than 10 staff) and micro independents (fewer than 4 staff) with only 5.6% of organisations employ more than fifty staff, determining a proliferation of 'one-person operations' in the region. This coupled with the short term 'project based' nature of production, can be viewed as hindering investment by the sector in sustained and continuous workforce development.

2.6 Almost 60% of all freelancers in our survey reported being paid for working in more than one role within the sector during 2019. This reveals how freelancers find themselves needing to undertake more than one job to secure continued income, while also suggesting that freelance screen labour's capabilities lie in being deeply skilled in more than one area.



2.7 41.5% of all freelancers engaged in the regions' screen sector reported being a parent of carer. As we explore later in this report, this characteristic of the freelance workforce became an acute pressure point during the Covid19 pandemic. There was also an awareness and an acceptance from some respondents who were parents that there are currently not the industry support systems in place that were evident when the sector was structured less significantly around freelance, micro and SME's and more so around broadcasters with greater resource and infrastructure to support them.

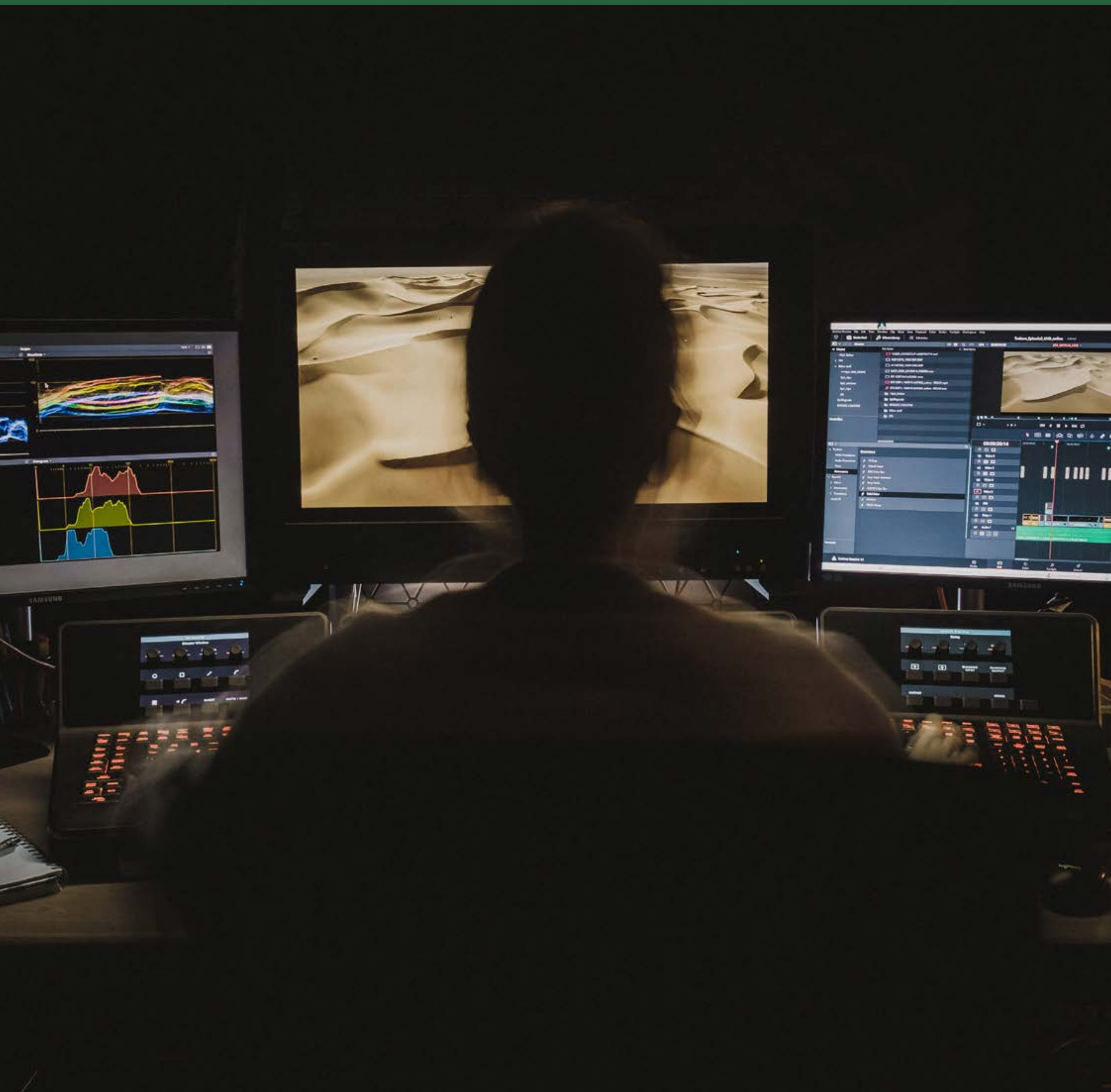
> ***"I was quite young when I had my first child and I was in the BBC and they were brilliant in enabling me to come back to work, in keeping my job open, in making sure I had maternity leave. At the time, they had a subsidised creche. So, all these things enabled my career to take a path that I don't know whether women would have that option available for them as much now" Senior TV & Film Producer, Cardiff***

2.8 35% of all respondents (freelance and sole Directors) were female and 65% were Male.

2.9 13.2% of all respondents working in CCR cited having a disability.

3. Skills needs and shortages in the CCR screen sector – Independent Screen Production Census 2020

Gorilla



3.1 Our data revealed a wide array of named skills shortages across all career stages. Skills gaps varied by sub-sector such as games and animation where technical skill needs were especially prominent. However, across the board, it is evident that sector skills shortages are not collated or tracked systematically to feed into industry training and development strategy in any cohesive way. TAC, in partnership with S4C, are the only organisation who evidenced undertaking this research around skills shortages in any structured, regular way with their members.

3.2 Diversity was widely acknowledged as important to the sector, but also difficult to deliver in practice. A number of organisations highlighted not being able to find ‘diverse individuals’ as itself a form of ‘skills shortage’

3.3 The most significant skills gaps identified by organisations across the sector at both mid-senior and senior leadership levels. These included key production roles (e.g. showrunner, top-tier writers, senior production executives), as well as broader business skills development, ‘business winners’ and higher-levels skills and knowledge of specialist areas such as film finance and new models of distribution. There was consensus across sub-sectors that there is a challenge in attracting and developing ‘experienced’ senior individuals and as such, this research showed that skills gaps are not confined to entry-level roles.

3.4 Our screen census 2020 data revealed that only 5.5% of all training organisations delivered training to senior level professionals. 0.6% of all training was focused on senior level coaching and sponsorship and only 1.1% of all training delivered was aimed at developing senior level business skills. As one senior business leader told us, ‘There’s a massive hole in terms of skill set development of people at the more senior levels.’

3.5 Taken together the data suggests the sector lacks investment in well-developed career progression routes based on purposeful forward planning. Without strategic succession planning, the region’s screen workforce risks increasing levels of attrition and declining numbers of experienced business leaders able to meet the challenge of growing in a competitive but lucrative global screen economy.

3.6 Research also revealed that genre plays an important role in shaping specific skills needs and labour shortages in film and TV production, ranging from high-end drama, Welsh-language scripted content or factual. We found some innovative initiatives launched during the pandemic such Fast-Track Factual that evidence the strategic investment that public service broadcasters can make in supporting skills development in the region

While welcomed, respondents raised concerns about the scheme’s success in attracting applications from Black, Asian and minority ethnic backgrounds. It is too early to evaluate the efficacy of such initiatives however it is evident that increased commissions, especially returning commissions, from Wales would allow greater opportunity for upskilling at a mid-career level.

3.7 Broadcasters and the independent sector cited recruitment of suitably skilled individuals to the sector who speak and write Welsh as a significant challenge. This is evident from our Census results with 29.6% of freelance respondents surveyed stating they were Welsh speakers and 66.7% of all screen organisations produced Welsh-language content. S4C specifically, have a renewed focus on EDI and as such are actively looking to develop a more diverse pool of Welsh speakers to produce and deliver on that priority. As one independent production company put it “to be black or Asian and Welsh language speaking, and want to work in television, is an ever-declining set of circles”

3.8 Our research found that S4C is seeking to address the language used in recruitment advertisements that stress fluency in light of research that reveals this can itself be a barrier to speakers of the language who do not comfortably identify themselves as fluent or first-language speakers. This is a complex area of law, culture and self-identification that is not always well-understood or captured in debates around equality, diversity, and inclusion. Moreover, intersections between language, geography, race, and ethnicity shape how S4C in particular is responding calls to make the screen an industry that is genuinely open to all.

3.9 Research reveals significant skills shortages across technical roles in VFX, Games and Animation, some relating to organisations who found it challenging to source CCR based individuals with knowledge and experience in relevant specific software programs. These included Unity developers and individuals with experience of Houdini.

3.10 Only 3.7% of training delivered in 2019 reported through our training provider survey was delivered for the games sector in the CCR. This, along with the challenge to recruit individuals with the converged technical and creative skills required to sustain VFX, Games and Animation within the sector requires urgent attention. Much of the specialist training and knowledge, particularly relating to software expertise, exists outside Wales. A further 'deep dive' into the specific challenges of these sub-sectors in Wales and how they can develop their workforce and grow is needed.

3.11 The core specific skills shortages can be grouped into 5 areas:

- Technical (including post-production)
- Senior & Business
- Craft Skills
- Mid-tier production researchers, co-ordinators, and manager skills (including production finance)
- Writing

Ffilm	Teledu	Gemau	Animeiddio	VFX	Ôl-gynhyrchu
Development Producers / Senior Producers	Development Producers & Development Executives	Unity Developers	Technical Animation	Technical Directors	Colour Grading
Business, legal & finance skills (including production finance and accounts)	Series Producers + exec producers specialist producers	Technical Artists	CG Lighting CG Animation	CG Generalists	Broadcast Technical Training and operations
Researchers / Development Researchers	Show Runners	Blender Animators	Production Management	Compositors (experienced) + with Houdini	Dubbing mixers
Writers /Top Tier Writers	Production Co-ordinators		Writing	Real time rendering knowledge	Production-Co-ordinator
Craft Skills at all levels: Art department, Gaffers, Continuity & Designers	Script writing and editing		Children's Directors	Business Development lead and generation	Post-production shortages generally cited across TV & Film

Other specific skills highlighted within the sector were SFX technical, model making and prosthetics as well as make-up and costume trainees

4. Broadcasters in CCR 2020: A shifted landscape

BBC Cymru Wales

The marketisation and deregulation of broadcasting began in the 1990's and since then, there has been a significant shift in how screen production in TV and film is structured on both a national and global level. What was once the reserve of broadcasters to train, support and develop their employees, has shifted to the individual, as we have seen a dramatic rise in a neoliberal ad-hoc system of self-employment, where the majority of the workforce and micro entities are responsible for their own training and career development and are expected to invest in themselves (see Lee, 2018; McElroy and Noonan, 2019).

4.1 The screen sector in Cardiff Capital Region has evolved considerably in the past decade. Regulatory drivers towards out of London production quotas have seen public service broadcasters such as BBC increasingly invest in creative hubs in the regions and nations. This has impacted directly on opportunities for work both in the Cardiff Capital Region but also across into the Bristol Cluster with high levels of mobility across these regions. However, it is also commonly cited as a driver of increased tariff rates and fuelling demand for skilled labour which is in short supply especially when seen alongside increased demand from others such as Wolf Studios. In Cardiff, the BBC Roath Lock Drama Studios opened officially in 2012 becoming one of the main sources of BBC network drama productions. BBC Studios, a commercial subsidiary, launched in 2017 and is now responsible for most drama productions in Roath Lock. An Ofcom consultation on the impact of BBC Studios is live at the point of writing this report.

4.2 While Cardiff was unsuccessful in Channel 4's '4All the Uk' competition for new headquarters and creative hubs, there is evidence of tangible action by the broadcaster to realise its promise to work with the sector in Wales. In 2020, Channel 4 invested in Welsh independent production company, Yeti Media. Channel 4 is also a partner with BBC and S4C in delivering Fast-Tract Factual, a training and development programme working with individual producers to accelerate factual content production. In May 2020, six Welsh producers were selected for the programme which moved online due to the Covid19 pandemic. At the core of the programme is a recognition that factual production in Wales needs greater support and must have better access to commissioners to win future work.

4.3 All three public service broadcasters based in the Cardiff Capital Region have undergone headquarter relocations in recent years. ITV Wales moved from Culverhouse Cross to Cardiff Bay while S4C opened its new headquarters in Yr Egin, Carmarthen, with a significant impact on the workforce many of whom either left, relocated, or began commuting along the M4 corridor. Remote and mobile working had, in other words, already started to be a feature of working life at S4C before the pandemic. BBC Wales completed its move out of Llandaff to its new Central Square headquarters during the pandemic. The move necessitated one of BBC Wales' most comprehensive staff training programmes.

4.4 Increased public attention on inequalities in the screen industry coupled with greater reporting on equality and diversity means that all public service broadcasters are now more attuned to the need to reflect on barriers to opportunities in the sector. While on-screen talent is often cited as potentially transformative – 'if you can see it you can be it' – there are many in the industry who regard changes behind the camera being a much more considerable challenge. Broadcasters have launched specific programmes geared towards delivering sectoral change. For example, in summer 2020 Channel 4 launched a BAME-led indie accelerator where the main shareholders, leading decision makers or creative leaders comprise those from a Black, Asian, or ethnic minority background.

4.5 PSB's have a vital role to play in delivering more innovative skills programmes for the independent production sector and the freelance workers who rely on them. Evident in both Fast-Track Factual and BAME-led Accelerator, is provision of support from commissioners. This is vital given that commissioners are the source of work for independent production companies. Commissioners are one of the most powerful but most under-researched actors in the screen sector.

5. Cardiff Capital Region Screen workforce: Recruitment, workforce development and inclusion

Ffilm Cymru Wales, Foot in the Door

5.1

> ***86 % of all independent screen industries organisations in CCR reported recruiting for sectoral roles through word of mouth.***

This is significantly higher than a 2010 statistic that uncovered '78% of creative media workers in the UK were recruited into their current job informally, most contacted directly by their employer or by someone with whom they had previously worked' Creative Media Workforce Survey, Skillset (2010).

In CCR, Social Media was the second most utilised method to attract staff at 44.4%. Informal, subjective forms of recruitment dominate the sector's recruitment practices. As several other studies have shown (e.g. CAMEo 2018; Nwonka 2020; O'Brien et al 2018), this subjective, personal network approach functions as a normative exclusionary practice in the screen industry. It is a major impediment to the screen industry becoming genuinely accessible to those who do not come from privileged backgrounds and who do not possess the social capital to create and exploit networks effectively. Moreover, it exemplifies how freelance workers, including those in key recruiting roles such as 'Heads of Departments', are required to self-operate their own labour markets (Ursell 2000) meaning that they are vitally important actors in any interventions aimed at making the screen workforce more reflective of Wales' population as a whole. One TV production company owner in Cardiff highlighted this as 'I think the 'who you know' thing means you don't do formal interviews because, you know, your uncle's friend's a line producer ...'

5.2 Meaningful change will only happen if micro and SME businesses are supported to develop, implement, and sustain inclusive recruitment practices. Our interviews revealed the need for greater support and guidance across screen sub-sectors. Only if targeted support is offered and actively taken up by companies will the screen workforce start to reflect the region's diverse population.

5.3 Project based work, time constraints, lack of resource and knowledge of inclusive recruitment practice leads to a lack of value being placed on this important area by some smaller independents. One TV Production company owner said to us

> ***'I mean there's that 'you need to see it to be it' and there's not that many visible examples in Wales' (of BAME individuals in TV).***

Creative Wales evidently have an overview of the picture more broadly with organisations

> ***"They (screen sector) wish to recruit in a diverse and inclusive manner but they don't know how to and so what we're trying to look at is how can we support that pipeline so that we do have access to trainees and we do have access to trainees from diverse and inclusive backgrounds".***

5.4 The size of screen companies largely determines their ability to invest in training opportunities. One of the main barriers to good screen sector workforce development is the extent that size and resource of an organisation impacts how they can fund, deliver and sustain a robust and coherent workforce development strategy. Best practice examples were evident with TAC and S4C providing free places for freelancers on their courses, Channel 4's Nations and Regions training focus and the broadcast and independent partnerships that drive' Fast Track Factual'. However, as exemplified, this is unevenly spread and often spearheaded by broadcasters, large independents or significant industry brokers who deliver training programmes such as Ffilm Cymru Wales, Sgil Cymru, TAC and Screen Alliance Wales.

5.5 While SME's reported seeing the value of undertaking this type of activity, they often lack the practical support, time, or resource to sustain investment in training staff (and themselves) particularly working on a 'project to project' basis. Moreover, it is only made possible at scale when supported by a larger commission delivered over a longer timeframe. PSBs can make a tangible difference to skills if they are prepared to commission across genres and with more than one series from a company in the region. It also demonstrates how business critical it is for production companies to win returning series commissions.

5.6 Research revealed how challenges that exist in the supply and demand of workforce for production companies reflect historic patterns of growth and investment in the region and Wales more generally. Notable here has been the significant investment over the past decade in studios in the Cardiff Capital Region (including BBC Roath Lock, Pinewood Studios, and Wolf Studios) which has accelerated increased investment in film and high-end television production. Investment in factual content production has been more limited.

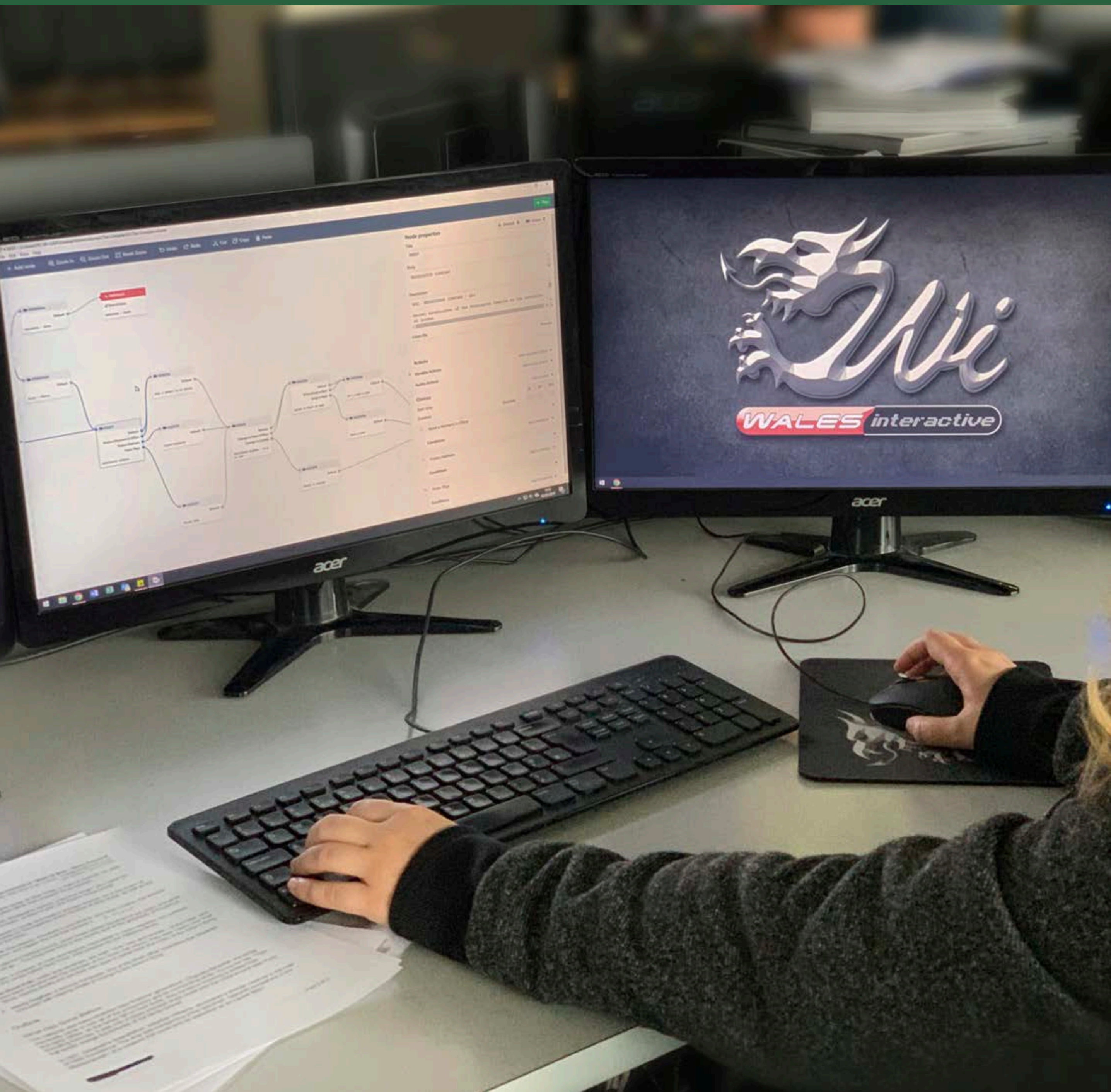
5.7 This has provided opportunities to enhance significantly the region's reputation across the UK and internationally as a place to make quality screen content that has global appeal. It has also provided valuable career opportunities for individuals to work on larger-scale, more ambitious productions and to enhance their own skills and reputation as a result. In a labour market where reputation matters enormously, this is a genuine boon (see McElroy and Noonan 2016).

5.8 However, the drive to leverage inward investment has not been aligned to a skills and workforce development strategy. This is a vital missing link. It reveals the urgent need to approach the screen sector holistically as the product of both indigenous and inward investment. As one respondent put it to us, 'Without the right skilled workforce, the sector can't grow.' This was also key for inward investment " If you don't want international productions to come in and just bring everybody with them, then you have to have an accurate picture of what you can offer them" with one organisation starkly highlighting the reality; '"If we've got Universal going back into Los Angeles which again is a village saying 'Wales, yes love Wales but couldn't get any crew so it's not worth going there".

5.9 A consequence of this missing link is that there is pressure on micro and SMEs to compete with larger high-end productions that are able to offer significantly higher wages and more lucrative contracts often tied to long running and returning series in both drama and factual. This results in some labour shortages and means that indigenous and smaller screen productions struggle to fill roles and retain staff during productions (cf. Work Foundation, 2017). A particular challenge exists at junior to mid-level with production staff 'jumping ship' mid production for offers of greater security and remuneration. As one training organisation summarised; "Each production will be different and depending on what's shooting here at the time, you could have, His Dark Materials, Sex Education, Brave New World, we had obviously all the BBC stuff going on, Doctor Who etcetera...so your skills pool will contract massively...So people were walking off maybe Doctor Who and going to work on Brave New World because they were going to get paid more, so we have to, we have to be very careful"

6. Skills in Screen and the Data Deficit

Wales Interactive



6.1 Desk research revealed that there is no significant representative data that accurately maps the current screen sector either in the Cardiff Capital Region or on a Wales-wide basis. What is missing is a full cohesive mapping of the screen sector in Wales more broadly.

6.2 Measuring the screen sector through existing standard industrial classifications (SIC) risks painting a very misleading picture. The sector is characterised by a high proliferation of micro and SME's, Ltd. Company (Sole Director) who are not clearly represented within this data. There are several issues with this data:

6.3 Increasingly, organisations have more than one primary focus or business purpose within screen. The rapid pace of technological development within the sector has seen organisations rapidly evolve and converge. As a result, screen sector organisations can have multiple arms across Games, Animation, Film, TV, VFX and post-production. Whilst historically there have been refinements to SIC and SOC classifications, categorisation of the sector as 'Audio-visual' when the sector is highly convergent is problematic. It fails to sufficiently account for the nuances of the varying sub sectors that operate within screen.

6.4 This data is utilised widely including DCMS sector estimates for Wales. Our research has demonstrated that in its base extracted form, it should not be used as a reliable barometer for sector workforce, without significant time investment in data cleaning, utilising up to date industry and research intelligence.

6.5 Our research identified a lack of data mapping of the 'vital' facilities, technical and production support companies that the screen sector informed us was vital to sustaining an eco-system and that screen 'mini-cities' could not operate without. Consideration should be given as to how these organisations and the workforce operating within them are mapped in the future.

6.6 No joined up strategy exists in the region to set the standard or benchmark for best practice in building an inclusive screen workforce, our research revealed, despite significant screen industry initiatives such as BFI Diversity Standards and Project Diamond. Organisations within the CCR screen production and training sector have significantly different ways of measuring representative diversity data that are relatively incomparable. Despite this, throughout our data gathering, 'Equality, Diversity and Inclusion' proved to be an integral topic raised by all of the sector as important in our interview discussions. Whilst this is encouraging, there is still a significant distance to travel to address the evidenced long-standing sectoral inequalities. There is equally a risk that continued 'inequality talk' and less action focused on addressing the structural and systemic barriers could serve to reinforce sectoral exclusions (O'Brien, Brook, Taylor 2019). Without any cohesive way of the sector collectively capturing data as part of an overarching strategy, there is a risk of there being an over-reliance on 'representation' within the sector that acts to prevent meaningful change that is driven from the top of the chain.

6.7 Our research found no clear barometer for measuring the efficacy of sectoral practice in providing inclusive and accessible opportunities for production careers in the medium and longer-term.

6.8 Evidence from our research situates many screen sector training programmes and organisations in CCR as primarily seeking to improve inclusion by means of increasing representation. There is significantly less activity within the sector that seeks to be transformative for those who are underrepresented or that further seeks to have impact by dismantling the underlying systemic or structural barriers that exist within the sector (Workforce Diversity in the UK Screen Sector BFI CAMEo 2018).

7. Training and Education for Screen Industries in CCR

University of South Wales

7.1 Within FE, HE, and screen industries training provision more broadly, this research identified several individuals who act as brokers and facilitators in terms of connecting industry and education. Their formal and informal roles work to support individuals to move into early career roles in industry, building relationships with industry and developing networks that bridge both industry and education. This was not something that was evidenced consistently across the screen sector in CCR and evidently relies on existing relationships and networks. It was often evidenced where large organisations exist and work together with significant financial support and backing.

7.2 Regional Skills Partnerships through their survey of employers, have recently identified the creative industries as an emerging sector in the region based on employment and GVA. As an organisation without personal or direct experience of the creative industries, they stressed the necessity of working 'collaboratively with other bodies' to produce more robust data that would reveal 'skills gaps and skills shortages.' They have to date held one meeting of their creative cluster board with industry membership.

7.3 Research revealed a tacit acceptance that investment in structured training and progression for mid and senior level screen sector workforce is a thing of the past. This narrative of a history now lost was repeated in interviews with the production sector. The types of investment and support mechanisms and opportunities that were a valued benefit for in-house employees within broadcasters and essential to senior level progression. Whilst this does not apply to all independent companies, several independent TV production companies and senior executives highlighted the investment made in them through Business MA's, senior mentoring and development and knowledge exchange. The phrase 'When I was at the BBC, they used to ...' was a regular feature within interviews acting almost as an elegiac refrain of a golden age.

7.4 As the sector has evolved, skills and workforce development has seen a reduced focus and investment, something that is mirrored across the UK screen sector (Work Foundation 2019). There is an unanswered question as to who is developing the next generation within the screen sector in CCR and Wales more widely. As one independent TV Production Company Director stated,

> ***'Over the last 25 years, I've seen career progression routes dry up'.***

Investment in structured career progression is widely acknowledged by the independent sector as something of the past. Limited career progression and succession planning for the CCR independent sector would appear to conflict with the ability to develop a highly skilled workforce who can meet the increasing demand for quality content.

7.5 Whilst it is recognised that a HETV levy at a UK wide level exists, many organisations including Bad Wolf Studios, have found it lacking in terms of it representing talent and training in Wales more broadly and as such has not provided them with a viable talent pipeline. As a result, they made the decision not to pay into the levy, instead investing in a home-grown training provider solution in Screen Alliance Wales to support their needs.

7.6 This research found extensive training provision for new entrants and a very extensive range of 'types' of training, careers and development for the sector across the Cardiff Capital Region. There were approximately 815 instances of screen production training by independent providers and industry organisations during 2019 in CCR. However, the formats of delivery ranged significantly from 1-hour masterclass events to 5-day production workshops and year-long Apprenticeships placements and it was unclear how they all linked into industry priorities, skills shortage, or sector needs. Good practice examples included TAC's regular skills survey of its members to feed into informing their programme of training, Cardiff and Vale College developing an industry led board for their creative courses and partnerships between Bad Wolf and USW students to deliver placements and mentoring on live High End TV productions.

7.7 Our research found that 25 training providers operate in the Cardiff capital region, providing a wide range of training and development for the screen sector in CCR.

TRAINING PROVIDER

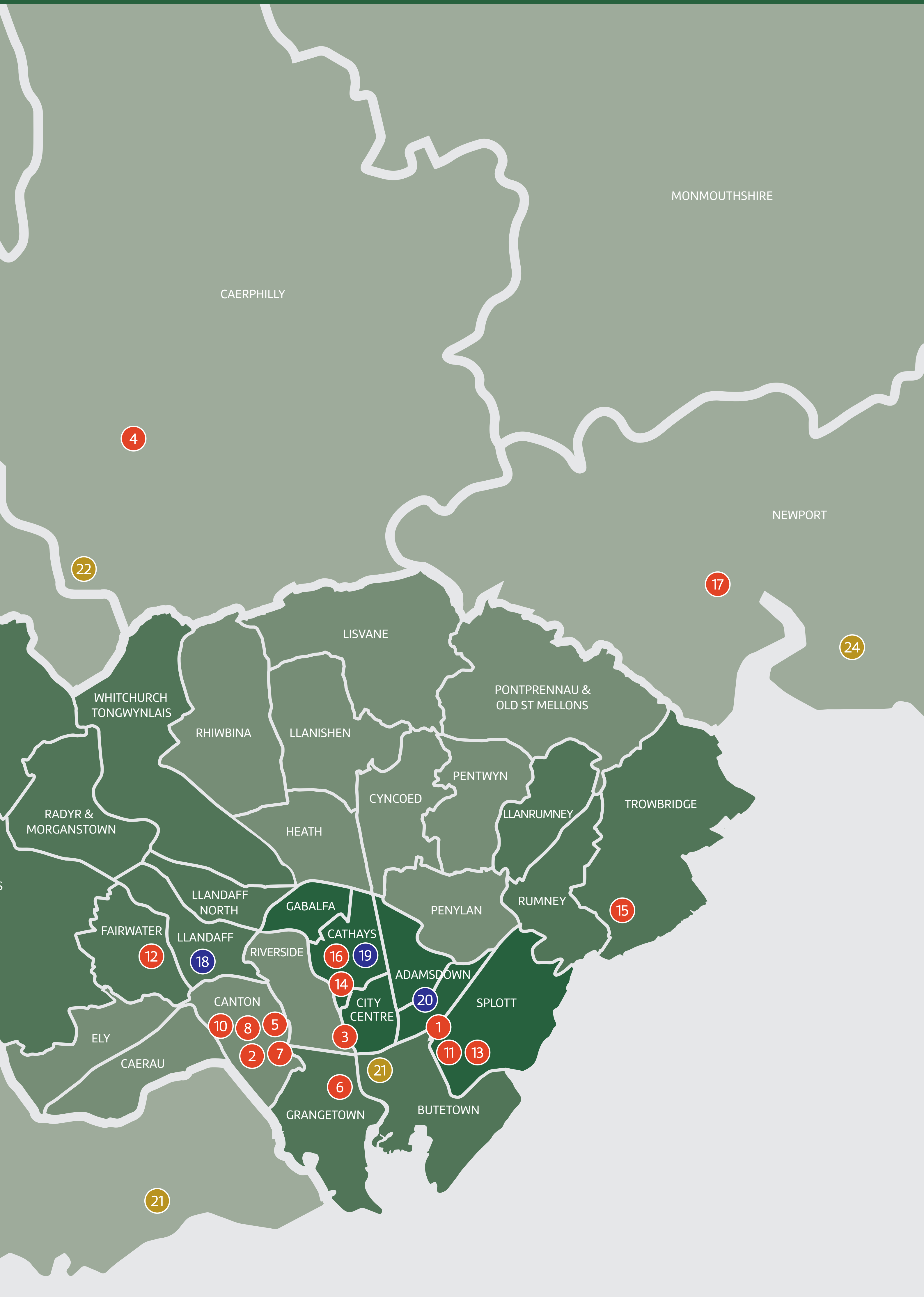
1. ACT Ltd
2. BAFTA Cymru
3. BECTU Cymru
4. Blue Monkey
5. Bulldozer Films Ltd/BFI Academy
6. Ffilm Cymru Wales
7. Into Film
8. Iris Prize
9. It's My Shout Community Interest Company
10. Our Colab
11. Painting Practice Ltd.
12. Royal Television Society (RTS)
13. Screen Alliance Wales
14. Set Etiquette Ltd
15. Sgil Cymru
16. TAC (Welsh Independent Producers)
17. Winding Snake Productions

HIGHER EDUCATION

18. Cardiff Metropolitan University
19. Cardiff University
20. University of South Wales

FURTHER EDUCATION

21. CAVC
22. Coleg y Cymoedd
23. Coleg Gwent
24. Merthyr College
25. Bridgend College


MONMOUTHSHIRE
CAERPHILLY
4
NEWPORT
22
17
24
LISVANE
PONTPRENNAU &
OLD ST MELLONS
WHITCHURCH
TONGWYNLAIS
RHIWBINA
LLANISHEN
PENTWYN
CYNCOED
TROWBRIDGE
RADYR &
MORGANSTOWN
LLANRUMNEY
HEATH
LLANDAFF
NORTH
GABALFA
PENYLAN
RUMNEY
15
FAIRWATER
LLANDAFF
CATHAYS
12
18
RIVERSIDE
16
19
ADAMSDOWN
14
CANTON
CITY
CENTRE
20
SPLOTT
10
8
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7.8 Our research found that similarly to small independent production companies, these small screen industries training organisations are, in the majority 1-3 person operations. The fragility and precarity of these organisations, largely mirrors that of the screen sector that they supply training for with

> ***38.1% of training providers highlighting that securing funding to deliver screen industries training was 'very challenging'.***

All interviewees cited how a lack of continued funding and a lack of strategy for screen training and provision does not allow them to be able to plan beyond a 'course to course' basis. As one provider suggested in terms of making their practice more effective;

> ***"A contract to deliver training over a period of three years, where we could work with employers to fulfil their training requirements would help. Everything is done at the moment in a hand-to-mouth manner, and we can only be reactive rather than proactive"***

7.9 Other areas cited by training providers that would allow them to be more effective, are regular data on skills shortages and a more uniformed way to connect into FE and HE. There is evidence of pockets of best practice in terms of join up with HE and FE, but on the whole, this relies on brokers and existing networks. 45.7% of the screen sector in CCR reported collaborating with either Higher Education or Further Education.

7.10 To further reinforce this point, FE providers strongly concur that a need to have greater 'join up' with industry and opportunities for their students was vital. One of their biggest challenges being practical work experience with industry as well as opportunities for development, talks and live briefs. One Head of FE course highlighted;

> ***"That's the one thing that I would like to change is for industry to come to us and say, we are prepared to offer you this for your students, would they benefit from it?" With other providers concurring that there is often a lack of understanding of what FE can offer to industry as well as the strength of their students and facilities.***

7.11 At a time when the sector is looking to diversify its workforce in CCR, not having a structured process to engage with the five FE colleges in CCR, would appear to be counter-productive in this area for industry, freelancers and training provision alike. This is particularly relevant when many FE students come from areas with high levels of working-class backgrounds and as such are under-represented in the screen sector. As one FE provider told us

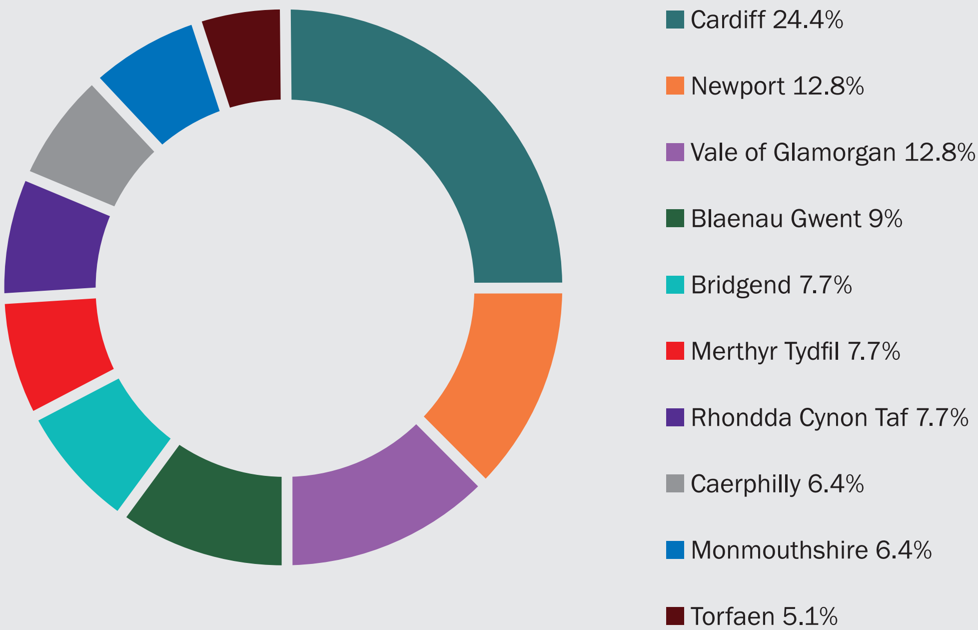
> ***"This is one of my things that I was so passionate about working in the Rhondda, that working in television is accessible to everybody and I said, well, you know, my students are more talented, why shouldn't they have the opportunity, you know, and, and raise their aspirations?"***

Another FE provider was keen to demonstrate their diverse mix of students;

> ***"I think our (creative industries) students are probably the most diverse in the college, whether it be from socio-economic background, a lot of our students have free meals, or whether it be diversity with ethnicity and also the LGBTQ community. We are lucky that those students are coming to us and they can see a world in the creative industries where they are accepted and they see people like them and that's why it's really important to have employers come in and speak to these learners and say, "Yes, there is a place for you."***

7.12 A quarter of all non- FE & HE CCR screen industries training is delivered in Cardiff County. A further quarter each delivered in Vale of Glamorgan and Newport . This is undoubtedly due to the proximity of these areas to the centre of production. Torfaen, Caerphilly, and Monmouthshire were the counties within CCR that evidenced the least screen industries training. This is significant due to the high percentage of industry that is centralised around the main production cluster in the Cardiff Central area. This would also suggest that opportunities to connect with practical screen industries training is greater the closer you are to the centre of this industry defined cluster.

7.13 There are 85 individual courses being delivered in Further Education in CCR through accredited provision at Level 1 and above where the learning outcomes map to screen sector roles. These are delivered by five Further education providers.



7.14 There are three Higher Education (HE) institutions operating in the Cardiff Capital Region, with all three being centralised in Cardiff. There are 66 undergraduate and post-graduate courses relating to the screen sector more broadly with 60% of those delivered by USW at their ATRiuM campus in Cardiff where over a quarter of all students are from socio-economically deprived backgrounds and a high percentage of students are from the South Wales Valleys areas.

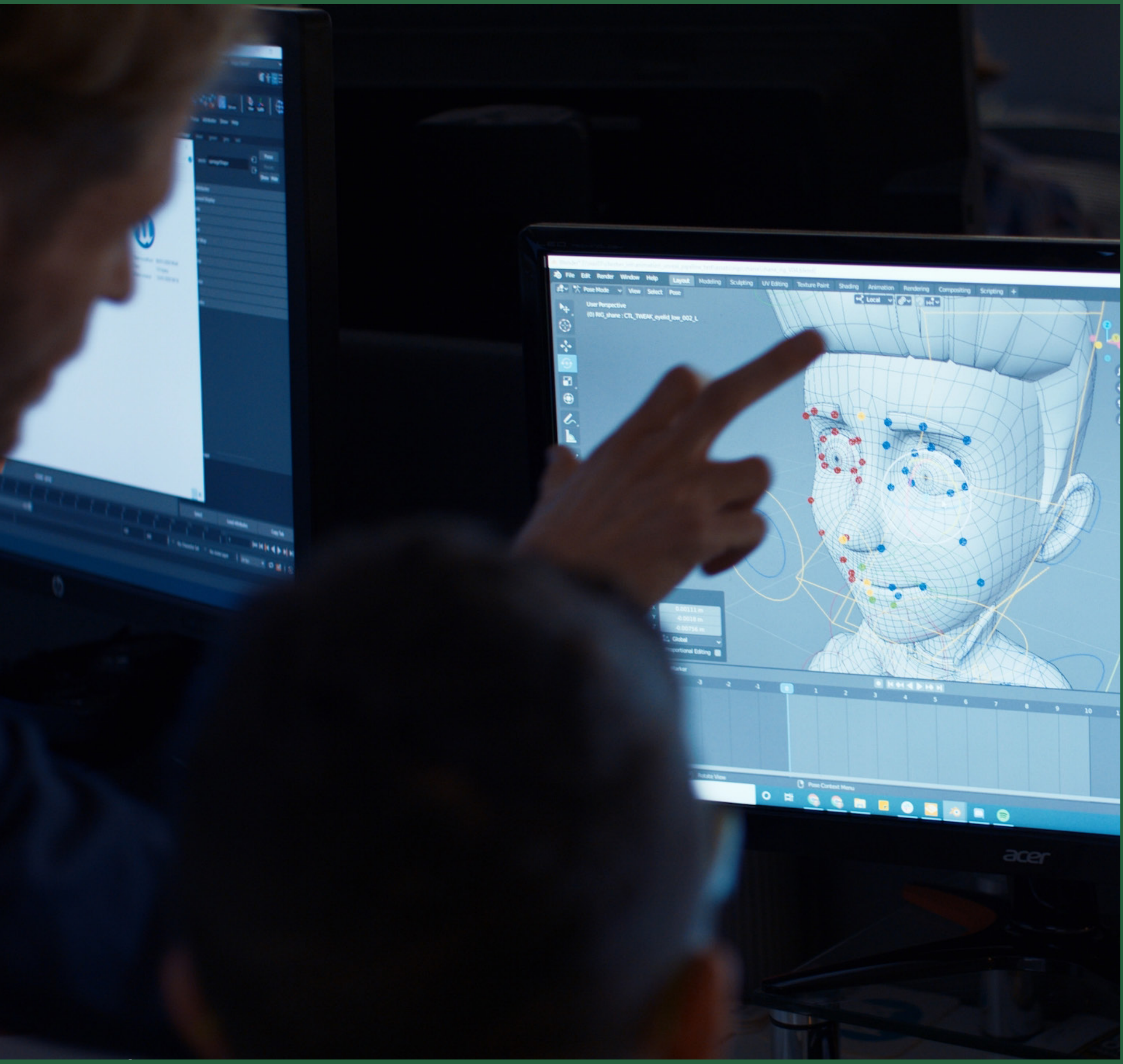
7.15 There are a number of important foundation and top up courses from HE that are delivered by FE and often serve as a route to screen industries HE, an example of this is Coleg y Cymoedd's BA TV and film special effects, and the two year HND creative production arts; a feeder course into the third year top up- a three year course but with one and two year top ups, demonstrating some clear progression routes between FE and HE in CCR for the screen sector.

7.16 Apprenticeships for the screen sector are delivered by Sgil Cymru at Level 3 and above since 2014. BBC Journalism Apprenticeships are delivered by Cardiff and Vale College since 2019. Prior to the COVID-19 pandemic, Sgil Cymru were in the process of setting up a shared apprenticeship through an ATA (Apprenticeship Training Association) with Cardiff & Vale College. This was a progression broadly welcomed by the sector, citing that the possibility of shared apprenticeships would support smaller and larger companies in overcoming the barriers of not being able to forward plan with commissions or when relying on short term projects. There is significant research and practice around the impact of ATA's, for the creative sector and more broadly. Any development would benefit from a review of this existing practice and research relating to how shared apprenticeships have been delivered elsewhere for the UK and internationally to understand the nuance, benefit, and challenge of this delivery model.

7.17 There is an impetus for HE, FE provision and the screen sector in CCR to work more effectively together. All partnerships need to be built on cultural values, business priorities and ways of working. Better partnerships will only be delivered if there are common areas of interest and value that enable education and industry to deliver together.

8. Innovation

Cloth Cat Animation



8.1 Understanding of innovation as a product of formal Research and Development (R&D) processes is patchy within the region's screen sector. Nonetheless, innovation in process is highly evident in the sector's response to new ways of working emerging from the Covid19 pandemic.

8.2 Data revealed that sub-sectors such as games and post-production that are relatively more focussed on adapting new technologies to screen content creation are more likely to engage in formal R&D as part of their regular work processes. This may also reflect the relatively higher proportion of staff working in technology-based specialist roles in such companies and a tacit cultural understanding of R&D. Indicative examples from Clwstwr's R&D programme include Painting Practice's Plan V which uses virtual reality to create worlds and pre-visualise sets, to Gorilla's remote creative editing, or Cloth Cat's R&D integrating real-time game engine rendering into animation workflows.

8.3 There was no agreement from participants as to the exact skillset needed to undertake R&D in the screen sector. However, two features did recur in interview. Firstly, the necessity of growing capabilities in skilled multidisciplinary working. Identifying and nurturing 'people who can jump between the technical and the creative and the user design thing'. Secondly, a disposition towards openness and risk-taking was regarded as an important component of success in innovation. However, this cuts against the pre-existing culture of secrecy and risk-aversion that characterises screen production (see also Nesta 2018). As put to us,

> ***'if we want everyone to come together and be stronger, trying to create a culture of open IP, of open innovation where we all recognise that ideas aren't protectable… the IP is going to be in the solution that delivers the idea, not the idea, and that's the problem. It's a big problem with coming from a programme maker point of view because they're all about the idea and they're all about a business advantage, not IP.'***

8.4 A major obstacle to R&D in the screen production sector (especially television) is the fact that time constraints are a direct product of short-term commissioned projects delivered to a commissioner. In contrast to animation, games and post-production firms, film and television production companies reported that R&D was not integrated into their work plans (see DCMS 2020). Revealingly, this is the case even in the region's largest screen organisations, public service broadcasters, that have designated R&D departments,

> ***'I would say in the BBC, generally, people are very positive about the potential of R&D. The challenge they have is that gap between the horizon scanning being exciting and wanting something that's going to deliver in eighteen months'***

8.5 There is a perception problem for R&D in the screen sector because it is a largely unknown, mis-understood process surrounded in mystery. As one production company founder reported, 'I think if we'd have realised that we were applying to engage in R&D, we might have been too frightened to apply….It's not a thing that's done in screen, it's not built into the infrastructure of your company'.

8.6 However, innovation was valued highly by firms who understood it as a necessary attribute of success in a rapidly changing and competitive screen economy. In such cases, however, innovation was most frequently framed as the outcome of creative content creation, for example through development of new ways of filming, new formal innovations in telling stories or creating new formats that could be exploited internationally as IP.

8.7 Most of the region's production firms are micro or small enterprises that are simply too lean to support separate R&D departments or designated innovation roles in their permanent workforce. Revenue streams tied to project-based commissions mean there is little capacity for horizon scanning or medium to long term investment in R&D among staff many of whom are the firm's founders and/or company directors. Lack of investment in innovation is indicative of a wider lack of resource in upskilling and upscaling small businesses rather than being a cultural rejection of its business value or significance. As one TV production company put it

> ***"We'd love to have another producer... we'd also love a secretary. You know in our day to day lives and getting the job done, having an R&D person would feel like a luxury, that we'd love to afford but it's quite a way away, whereas if you asked me that question last year, I wouldn't have even know why I'd needed an R&D person"***

8.8 Because production firms focus on delivering commissioned content to deadline, little time or space is given to exploring new challenges, developing prototypes, undertaking purposeful user testing, or horizon scanning. Business imperatives to deliver on time mitigate against these activities resulting in slow progress in adapting to changing technologies, emerging markets and trends, and new audience appetites. Moreover, much R&D activity where financed by a firm's own cashflow emerge directly from the delivery of commissioned content. It therefore tends to reflect the client's needs rather than either the firm's own strategic priorities, or the sector's state of the art. As one R&D specialist in the sector put it to us, firms are still asking 'What does the client want?', rather than 'what does the client need really?'. You know, 'what does the client audience want to do in five years' time?' That longer term R&D is a just whole other thing.'

8.9 Several firms reported that Clwstwr had enabled them to resource R&D activity which would not otherwise have been possible, demonstrating the importance of public funding and cluster-based interventions in developing innovation capabilities in the region.

8.10 Qualitative data revealed that the opportunity to undertake small scale R&D is important to demystify R&D as a process that can seem alien and highly formal to some screen firms. Hands on collaborative working with university researchers help counter prior expectations of a highly structured academic process to which experienced screen producers would be subjected. Nonetheless, the exploratory and risky nature of R&D remains a challenge for producers focussed on immediate outcome delivery. Education providers also reported that R&D is 'a term that I do not recognise in the circles that I occupy [..] it is not a language that I hear.'

8.11 While the regions' production firms benefit from retaining IP rights to their content, they are broadly unable to escape the short-termism of service delivery models of project commissions. Changes further up the chain together with public investment in R&D are needed to drive the region's investment in screen innovation. In particular, the power of broadcast commissioners to drive behaviour needs to be acknowledged as a major determinant of the sector's workflows and business planning.

9. Initial impact of COVID-19

Sgil Cymru

9.1 As a result of the COVID-19 pandemic and subsequent lockdown ion 2020, 58% of all organisations reported having to postpone scheduled activity with 26% of organisations highlighting that they had to cancel scheduled production activity in the CCR region

9.2 22% of all independent industry organisations in screen sector in CCR had to reduce their work due to parent/carer responsibilities during the pandemic period.

9.3 Unsurprisingly, trade union membership increased during the pandemic. BECTU UK reported a 7% increase in membership resulting in an additional 2,856 members during the COVID-19 period.

9.4 41.5% of all freelancers engaged in the regions' screen sector reported being a parent of carer. 22% of all organisations and individuals surveyed had to reduce or cancel work due specifically to parental or carer responsibilities during the Covid-19 pandemic. 'Women have been hit particularly hard by COVID 19. In particular, those with parental or carer responsibilities, having to balance looking after their children and trying to get work, trying to survive' Respondent, Cardiff.

9.5 Our training provision survey found that 40.6% of all training providers swiftly pivoted their activity during the COVID-19 first 6 months. Research demonstrates that the region's training providers were better able to pivot their core business activity online, whereas TV & Film production, due to the nature of their business and production were less able to do this.

9.6 Pivoting to online provision benefitted some training providers in terms of reach and meeting targets of engaging with those they are training across the sector more broadly. One Wales-wide training provider noted they had met their annual targets for participation within the first 6 months of COVID-19 alone due to delivering online and reaching others more widely. Another highlighted that they see their trainees more now online than they did face to face implying greater connectivity as a result to moving online.

9.7 The Covid19 pandemic has been a double-edged sword for Research and Development in the region's screen sector. On the one hand, the sudden loss of scheduled production work has given both firms and individual workers time to pursue R&D inquiry not directly tied to delivering commissioned content. It also allowed for rapid change to work processes from technology-based solutions to remote working through to new health and safety protocols driving changes in filming on set. These forms of innovation in process demonstrate that agility and creative problem-solving is a significant attribute of the region's screen labour force. On the other hand, however, the immediate pressure on firms' finances has made it harder to justify allocating human resource to open ended R&D that 'does not have an invoice at the end of it', as one company tole us. There is an immediate risk that for firms without specific R&D funding, a competitive edge has already been lost to larger firms across the UK that enjoy the scale and financial resources to support innovation during the pandemic.

9.8 Creative Wales inform us that they were in the early stages of embarking on development of a Skills Fund, however they informed us as part of this research 'As a direct result of COVID-19, that all our funding then got swallowed up into the Economic Resilience Fund." Creative Wales supported 21 TV Companies during the 2020 COVID-19 Period through the Emergency TV Development Fund, one of which has already as a result of that funding has leveraged in extra funding and is on the cusp of an international commission.

9.9 In line with other research (Creative Industries Federation (2020) Work Foundation (2020), we found that the COVID-19 pandemic has magnified existing inequalities and laid bare the impact of having a largely freelance sector characterised by high levels of precarity. Those with the least in terms of resource and support, were impacted more significantly (Banks, O'Connor 2020)

9.10 Qualitative interviews with Television and Film Production companies in CCR as well as training organisations raised the problematic nature of providing practical vocational experience on set in a time of COVID at entry level. Barriers to providing this experience were cited as rising insurance costs, smaller crew size and significantly increased Health & Safety requirements on set. A reduction in staff and jobs can lead to a reduction in opportunity, as one provider highlighted; “the BBC have decided that this year they’re not going to be delivering apprenticeships like they normally do. So, they’re not going to be recruiting for September 2020”

9.11 During the COVID-19 pandemic, 13.2% of freelancers considered themselves to have a disability. BECTU Cymru cited significant concern for initial indications that there was a higher risk for productions when recruiting those who have underlying health conditions on their productions.

9.12 The COVID 19 pandemic impacted the region’s companies in strikingly differing ways. For sub-sectors such as animation, games, and VFX, the pandemic lead to the acceleration of some workflow processes through technology. For instance, some studios moved completely online to operate virtually. As one games company director outlined.

> ***‘We actually sold more games; we’ve released two games in lockdown. It hasn’t affected us. The beauty of video games [is that] ... essentially the way we are setup is to work remotely even though we work in a studio. Servers, the way that we communicate, everything is online anyway. So, us migrating to home was very easy because we already had the structure in place, that’s the nature of the video games business, working in the Cloud.’***

9.13 However, for film and TV production companies the level of impact depended on the stage they were at when the March 2020 lockdown was introduced. Those who were in or about to enter into a cycle of development viewed the initial impact of COVID as substantially less of a threat to their business and longer-term viability than those who were in production at the time the pandemic struck and who consequently had to postpone costly filming without notice. This arbitrary fact again speaks to how greatly the production cycle impacts film and TV companies’ work and cashflows.

“In some respects, we were really lucky because we finished shooting [TV Production] a week before lockdown...and then we were always going to be in development in this period of time. So, I mean we have been incredibly fortunate. I know companies who were in the middle of production or about to ramp up to production who have got very different stories” Senior TV Drama Producer, Cardiff

9.14 When considering future challenges for the sector, production companies and studios expressed concerns about how challenging Summer 2021 might be from a recruitment and workforce perspective with a high volume of productions and facilities in operation simultaneously. Managing labour shortages, when productions are ‘up and running’, is likely to continue to be a challenge in any recovery period. This adds strain to a labour market that is already under pressure.

Conclusion – A screen sector for the future

Screen production in the Cardiff Capital Region has increased exponentially across the last twenty years. This report found a screen industry, education and training sector that is not held back by a shortage of talent. However, it is at risk of being unsustainable based upon the absence of clear transparent strategy informed by data and continued investment in training and development in the sector of the future.

The report has revealed several cross-cutting themes in terms of the barriers to sectoral growth and to building an innovative, inclusive, and sustainable screen sector.

Precarity is evidenced throughout the chain of production, particularly in film and television. The impact of this precarity for small and micro production companies is that due to their size and lack of continued secure investment, they are not always well-positioned to innovate, invest in their workforce, develop inclusive recruitment practice or partnerships with Further and Higher Education in a meaningful way.

For the army of screen freelancers in CCR, the COVID-19 pandemic has had arguably the most significant impact. They have been cruelly exposed as lacking a safety net. Any future skills strategy must engage with freelancers and ensure their voice is heard.

The COVID-19 pandemic instigated increased audience demand for broadcast, SVOD and gaming content as more people consumed content at home. As a major producer of this content globally, CCR looks to have a busy 2021 as a significant increase in production output across the region is slated.

Continued growth of the region's screen sector is threatened by the lack of strategy, investment, and long-term development of workforce skills. This is urgently required to build an inclusive, vibrant workforce and a sustainable sector that can yield cultural and economic benefit to citizens. Connecting the entire eco-system with a CCR screen workforce strategy is essential to the success of Screen Work for the Cardiff Capital Region.

The challenges of 2020 present an opportunity to build a robust and skilled sector that is inclusive, resilient, innovative, and ready for the challenges of the next decade and beyond.

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