ScreenSkills Assessment 2021

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Executive summary

The ScreenSkills Assessment 2021 gives a snapshot of skills issues affecting the UK screen industries during the period from January 2020 to January 2021 - a time of significant disruption caused by Covid-19. The resulting atypical assessment reflects the unusual conditions experienced by screen businesses as the national - and global - situation evolved. As such, it builds a picture of the unpredictable challenges our industry faced and how it responded with speed and flexibility. Perhaps most critically for workforce development, it offers insights into adaptations to working practices that could remain longer-term; indicates increasing convergence with overlapping practice and skills shortages between some subsectors; and highlights a window of opportunity within which action can be taken to help build a fairer working culture.

Our approach

In this assessment, 'screen' is defined as comprising: animation, children's TV, film, games, high-end TV, other scripted TV, post-production, unscripted TV and VFX. A mixed-methods strategy was adopted, commencing with in-depth interviews in autumn 2020 with 28 screen businesses that had been largely operational during the first wave of the pandemic. This offered insights into the challenges those businesses faced and highlighted key differences in impact between sectors. Interview responses helped shape an online survey that followed in January 2021 and garnered 1,181 respondents. The survey targeted two groups - employers and the workforce - with similar but tailored questions, to help uncover discrepancies or correspondence in perceptions.

Key findings

Impact of Covid-19

During the timeframe of this assessment, the screen industries adapted to working during Covid-19, with safety protocols adopted and business confidence regained. Nonetheless, reflecting on that period is key to understanding circumstances that, in some cases, reshaped practice and attitudes in the workplace. Some screen sectors experienced hiatus while others grew, but all saw changes. It was a period of disruption that resulted in some workers moving to another area of screen or leaving the industry. New entrants were particularly affected as tightening budgets and restrictions to ensure crew health reduced work experience and trainee opportunities. The pandemic forced many businesses to embrace technological solutions such as remote working and workflow.

- The vast majority of surveyed employers and workforce were negatively impacted by Covid-19 (82% and 73% respectively), with physical production hit most. Employer interviews also highlighted the plight of the film exhibition sector through government-enforced shutdowns.
- During the pandemic, 16% of the workforce sample moved to a different sector, outside of screen, while around 11% moved to another screen sector. Entrants were also affected, with 40% of employers reporting that it was harder to offer entry-level training and support.
- Working practices changed for three quarters of sampled employers, due to Covid-19 safety measures, while a similar number (74%) identified remote working as a key driver of change. Companies with established tech-enabled workflow, ie animation, games, post-production and VFX, reported least change and were well prepared - at least in terms of infrastructure and equipment - for remote working.
- Communication was challenged by remote working. Typical examples ranged from from general issues in maintaining day-to-day contact and engagement, to specific difficulties such as ensuring that creative briefs were communicated clearly.

- Most employers felt the pandemic did not impact the recruitment of a greater diversity of talent, but some expressed concern: factors such as fewer entry-level opportunities and the financial impact of the pandemic may have reduced some people's ability to enter or progress in screen.

Skills shortages

Compared to the 2019 ScreenSkills Assessment, twice as many employers responding in 2021 had not recruited over the previous 12-month period. For those who did recruit, the complex circumstances of 2020 - hiatus, changed working practices - influenced hiring decisions and patterns in physical production. Employers in games, VFX and animation (2D and 3D) competed for talent as some saw growth and high demand for content. The hot topic of virtual production suggested an emerging need for a greater range of skills from these digital sectors in film and high-end TV production. While it is too early to capture the impact this may have on the workforce, it warrants monitoring.

Greater skills convergence was not just suggested in the digital realm, but across some physical production sectors as well. Common shortage areas particularly persist in production management. While many of these roles share job titles (eg production manager), they vary in how they are executed within each subsector and therefore require knowledge of particular approaches and processes - though film and high-end TV are increasingly converging, with comparable budget levels, practices and crews. However, all share common skills, many of which are also transferable from non-screen sectors.

- A small majority of employers (37%) taking part in the survey did not recruit for any vacancies - double the figure reported in 2019 (18%). Post-production and unscripted TV were the two sectors with the highest percentages of employers that did not recruit.
- Just over a third (36%) did hire staff or crew up but experienced difficulties in doing so, with animation (45%) as the sector most challenged by hard-to-fill vacancies, followed by film (38%) and high-end TV (36%). Less than a third of employers surveyed overall (27%) recruited without encountering issues.
- Nearly half of surveyed employers (46%) rated recruitment difficulties as a moderate problem, with just over a third (36%) seeing it as a serious or very serious issue. Perhaps unsurprisingly, almost two-thirds felt that the pandemic exacerbated recruitment difficulties.
- Only one shortage area was reported as being new in direct response to the pandemic - the role of Covid supervisor and related Covid safety roles.
- The survey suggests ongoing shortages in production management roles across all physical production areas of film and TV (including accounts and, for most scripted production, locations crew). A shortage of editors also appears to persist in film and unscripted TV, with both sectors also now reporting difficulty in hiring edit assistants.
- Hair and make-up artists are mentioned among higher-ranking shortages for film and, to a lesser extent, by high-end and other scripted TV respondents.
- Continuing shortages of 3D and programming skills are suggested for games companies, while 2D and 3D animators, riggers and storyboard artists remain challenging for animation.
- Employer interviews indicate a shortage of producers in both post-production and VFX.
- In-depth interviews suggest that if an increased uptake in virtual production occurs, a shortage of real-time engine coders (affecting games as well as VFX) may emerge.

- The period within which the assessment took place saw cinemas largely shut down. Interviews indicated skills shortages may appear when the exhibition sector fully restarts if staff do not return after furlough.

Skills gaps

From an employer perspective, the survey was dominated by the need for staff/crew to improve their ability to organise and manage along with soft skills and Covid-19 safety awareness. While the latter is obviously new to 2020, the other perceived skills gaps were also identified in the 2019 assessment. Pandemic-related changes in working practice in 2020 may have further prioritised their importance, as increased remote-working and heightened safety control placed greater emphasis on the range of skills that contribute to effective team-working. However, gaps were perceived differently by the workforce, who placed importance on financial skills, as well as the need to improve outer-facing communication skills such as pitching and public speaking. This could indicate a difference in priorities between employers and the workforce, with staff/crew wanting to improve the skills needed to win, as well as do, their jobs.

- Over half of the employer sample wanted better organisational (53%) and team working (50%) skills among junior level staff, as well as resilience (47%), understanding of Covid-19 safety measures (45%) and interpersonal skills (53%).
- In the mid- and senior-level workforce, employers saw interpersonal skills as the main priority (49%), followed by the ability to manage and support teams/crew remotely or in person (43%), Covid-19 safety measures skills (42%) and mentoring skills (41%).
- Almost half of employers interviewed reported having an increased awareness of the importance of valuing, trusting and looking after people since the Covid-19 pandemic, further echoing the importance of so-called soft skills and possibly signposting a need for people skills and the greater application of HR structures in screen industries.
- In contrast, workforce respondents reported a wider range of skills needs, with financial and budgetary skills, and public speaking, ranking joint highest (35% each). This is followed by the ability to organise work (31%), resilience (28%) and ability to deliver presentations and pitches (28%).

Training and development

While the majority of employers surveyed (64%) planned to organise workforce training in the coming year, it was a considerable drop from 2019's assessment, in which almost 80% of employers reported an intention to train staff. This may be another reflection of the unusual recent circumstances, with businesses having other priorities during 2020. Remote learning was highly popular among the majority of employers: from e-learning to platforms such as LinkedIn Learning, they appreciated the accessibility of remote learning. However, a more blended approach was the preference for the future. This may also indicate that some sectors are catching up with their digital counterparts; as some employers from animation and games noted during interviews, online learning was already a common practice within their sectors prior to Covid-19.

- Training was sought to help mitigate the impact of the pandemic. Among employers interviewed, online Covid-19 safety training was used widely by screen sectors that had continued or were due to restart physical production during 2020. Most reported using ScreenSkills' free e-learning module, Coronavirus basic awareness on production. Those in physical production also noted the need to offer mental health awareness training to help crew manage additional stresses caused by working during the pandemic.

- Looking forward, nearly two thirds of the sample stated that they were planning to organise workforce training over the coming 12 months. Of those, the majority (60%) will target freelancers, followed by payroll employees (54%), trainees (41%), and interns (22%). Employers in post-production (83%), animation (80%) and children's TV (80%) were most likely to be planning training.
- 60% of employers hoped to see a mix of both remote and in-person training once the acute phase of the pandemic subsides. Employers interviewed gave some insight into this, choosing delivery method in accordance with the type of skill being developed, eg practical craft skills taught in-person, soft skills taught online.
- The vast majority of employers surveyed (71%) said they would rely on ScreenSkills to deliver their future training, while just under a third (29%) would look elsewhere.

Future of screen

In exploring what the screen industries will look like over the coming years, the ScreenSkills Assessment 2021 reflects a largely optimistic tone underpinned by a note of caution that opportunities to make lasting change should not be missed. The potential human and environmental benefits of remote working - better work-life balance, reduced travel, access to a more geographically dispersed talent pool - were seen as key incentives for the retention of changed working practices that were forced on many by the pandemic. Survey responses regarding future technologies reflect the shifts in working practices, highlighting tools that enable and/or support the increased use of remote working and workflows, including associated data transfer, storage and security needs.

- 69% of employers and 72% of the workforce surveyed believe remote working will be the most significant trend to endure beyond Covid-19 lockdown restrictions, followed by increased use of remote communication (59%). Remote-working tools and technologies have become prevalent but, as employer interviews acknowledged, the UK needs strong telecoms infrastructure and connectivity to make this an enduring change.
- Increased remote working is likely to enable hiring from a wider geographical pool, according to 54% of employers and workforce survey respondents. Animation, games and VFX employers interviewed talked of hiring internationally, though the need to meet regulatory requirements, particularly post-Brexit, may temper this.
- Half of employers interviewed thought that the pandemic helped to create or influence a fairer work culture for the future. Lessons learned include: embracing new technical solutions; avoiding business complacency; maintaining greater empathy with colleagues; and working more collaboratively as a sector to tackle common challenges.
- Significantly, almost half of the employer sample pointed to greater future emphasis on work-life balance. A recent study by the Work Foundation (2020) found that 78% of surveyed film and TV workers struggle to find a balance.
- Supporting the ethos of the Albert, BFI, and Arup report (2020) on sustainability in film production, nearly half of employers and just over half of the workforce surveyed thought that by 2026 the sector will be deploying more environmentally sustainable practices.
- The increased use of technology to enhance, speed up or replace existing practices was suggested across a breadth of screen sectors and departmental functions, including applications of technology in craft and technical roles that could drive future crossover skills.

- Various remote working tools, cloud-based workflows, and improved networks and streaming capacity dominated the list of significant technologies that survey respondents felt would affect the future of screen. VR, AR and machine learning (AI) also featured.

Conclusions

The ScreenSkills Assessment 2021 captures a snapshot of agile, evolving and, in some cases, converging screen industries across the whole of the UK. Since the study took place, screen sectors have taken further steps to recover from the impact of Covid-19. Despite ongoing and varied challenges that the industry continues to face, valuable lessons and opportunities have been highlighted that will be critical in developing our workforce as we move through and beyond the global pandemic. The key themes emerging from the research can be summarised as:

Persistent shortages and future warnings
Evidence from the fieldwork suggests that certain shortage areas are persistent eg production management crew, including accounts and locations. With demand remaining high and expected to grow, we need to better understand and address what lies behind this continuing and increasingly critical challenge. However, when looking at shortages, caution should be exercised, especially in sectors that rely on freelance crew. The hiatus/restart scenario during the period of this study may have skewed perceptions and ongoing monitoring is needed to distinguish between persistent, new and temporary shortages.

Recruiting editors, researchers and series producers remains a challenge for unscripted TV. Shortages of 3D and programming skills appear to continue in games, while animation still needs 2D and 3D animators, riggers, and storyboard artists. More complex are the newly-created Covid-19 safety roles, for which demand will be harder to predict. Their place will depend on the course of the virus, how many of the new safety practices are retained, and whether their function converges with other production roles. Emerging difficulties in recruiting producer roles in post-production and VFX, along with engine coding skills in VFX and high-end technical operators for post-production also deserve scrutiny: changes to working practices increased immediate demand for these roles that could remain beyond the short term.

Widely adopted working practices and their impact
Remote-working and Covid-safety measures dominated working practices through 2020 and continue to do so. The future may see more blended working, with the level and type of flexibility afforded varying according to roles, companies, and sectors. However, to fully realise the benefits, communication skills must be given equal weight with technical and creative ability. Newly created Covid-19 safety roles, along with improved hygiene measures in the workplace, may also have a long-term place, though to what degree is yet to be seen. As practices adapt, emphasis on finding ways to improve environmental sustainability has increased but achieving this meaningfully requires informed leadership and collaboration.

Finding strength through uncertainty
Dealing with uncertainty has been an indisputable challenge across the screen workforce. Leaders and managers who reported sharing experiences with colleagues and peers saw benefits. Encouraging decision-makers to support each other may help the sector unlock further benefits if embraced as a longer-term practice. The increased need for resilience in the wider workforce may indicate the level of challenge caused by uncertainty across the board. Whether it is needed to meet the new demands of the workplace, develop greater business agility, or future-proof a career, resilience is a much-needed quality as we navigate future growth.

Adapting new entrant training
As industry has taken steps to recovery, the experience of learning on-the-job has been returning for new entrants. It will be important to understand which changes to working practice - such as more remote working and enhanced safety measures – continue to affect entry-level training. Sharing valuable insights between businesses from all screen sectors that saw such changes in 2020 will help ensure new entrants remain fully supported and included in the workplace.

Understanding and valuing people
Recognition of mutual reliance and trust between employers and the workforce was a clear message in the 2021 assessment. To build on this, improved communication is key to unlocking a fairer work culture in screen and emphasising people-centred actions and attitudes, especially in those parts of the industry with high levels of freelancers. This could be a prompt for those screen businesses that have not historically had HR functions to explore what skills and support are needed and available to optimise workforce management.

Increased uptake in online learning
Online training has seen a surge in uptake from screen sectors. Some employers highlighted the benefits of short bursts of professional development provided by online offers, from focused e-learning modules to practitioner-led masterclasses. However, there is acknowledgment that no single delivery method can cover every circumstance; each has its own merits and a blended approach to training can sometimes be most effective.

Emerging practice with potential to disrupt
In-depth interviews uncovered that, like remote working and online training, there was increased interest in virtual production. Respondents to the survey perceived it as one of the technologies that could most affect the screen industries in the future. Notwithstanding this, the extent to which it will be adopted, and its impact on production schedules, budgets, and creative considerations, are still being explored. As with other technology-based changes to practice, ongoing monitoring is required to build a clearer picture of how and when virtual production will change workforce needs.

Broader influences on the uptake of technology
Technology came to the fore in this assessment. Adequate telecoms infrastructure is essential to ensuring the optimisation of remote working and workflow but is not wholly in the power of screen businesses. While companies may choose to invest in improved telecoms capability, the required bandwidth is not always available to their business premises or the homes of remote workers. Lobbying collectively on the business case for improved infrastructure, right across the UK, may be required.

Workforce diversity remains critical
It is unclear what effect Covid-19 has had on diversity among the screen workforce. There is certainly no indication that sector-wide efforts to improve representation have eased up or can do so. However, evidence produced over the past 12 months has shown that the pandemic might have exacerbated inequalities (Banks, 2020). Research conducted by the Policy and Evidence Centre (Burger & Easton, 2020, p. 4), for example, suggests that, in the creative industries, 'particular groups that were already suffering prior to Covid-19 have seen their situation worsen during the pandemic'. Meanwhile, there is cause for concern as Covid-19 has disproportionately impacted under-represented groups – for example, Black, Asian and minority ethnic individuals seem to have been worst hit financially by Covid-19, due to a lack of financial resilience to weather a long period of joblessness (Film and TV Charity, 2020). Policies geared towards the support of under-represented groups are needed to prevent them leaving the sector as a result of the pandemic (Eikhof, 2020). There are, however, potential opportunities created by the pandemic, such as blended working and online learning, that may help to improve diversity, particularly for older and/or disabled workers, carers or those outside of London/urban centres. These should be encouraged and supported where possible.

Priority actions

Industry priorities that have been identified from the ScreenSkills Assessment 2021 may be summarised as:

- Continue developing targeted interventions to address persistent shortages
- Build on collaborative solutions for tackling barriers to new entrant training
- Improve communication skills, at all levels and across all sectors
- Support the integration of HR skills and functions in screen businesses
- Continue to embed workforce diversity and inclusion in all priority actions
- Support employers and training providers in optimising blended working and learning
- Monitor emerging practices, including Covid-19 safety and virtual production
- Support screen businesses in securing improved telecoms infrastructure
- Support the efforts to mobilise environmentally sustainable practice

Introduction

Two years after the publication of its first iteration, the ScreenSkills Assessment 2021 aims to provide a snapshot of skills issues affecting the UK screen industries and potential solutions. The purpose of this study, which looked at the period from January 2020 to January 2021, is to establish an accurate and granular picture of skills shortages and gaps, training and development, and future trends.

When considering this report, it should be noted that the period under investigation was dominated by disruption and change caused by the Covid-19 pandemic, which produced a two-fold outcome. On the one hand, it inevitably altered research participants' perceptions and opinions, making this an atypical assessment. On the other hand, it provided the unique opportunity to explore how the pandemic has changed the way we work and the extent to which these changes are likely to endure when lockdown restrictions are fully lifted. The pandemic has drastically affected working practices in the short-term and has the potential to substantially influence the future of work. Therefore, undertaking the fieldwork while this was all unfolding gave us a vantage point to observe, gather information and draw preliminary conclusions on what the future may look like.

Findings will be used to help inform and shape ScreenSkills' portfolio of support for the UK screen industries. It will help us to target activity in the areas of greatest need and help screen businesses to take advantage of opportunities as they bounce back from a year of significant challenge.

Definitions

In this research, the screen industries are defined as comprising nine distinct but interrelated sectors. These are:

- **Animation,** which devises and develops animated content for TV, film, commercials, websites, games and virtual and mixed and augmented reality.
- **Children's TV**, defined as live-action programmes across all genres for young people up to 15-years-old.
- **Film,** consisting of the supply chain of the film sector, from development to exhibitions
- **Games,** which comprises the development and publishing of video games.
- **High-end TV**, encompassing television programming with a budget of or greater than £1 million per hour.
- **Other scripted TV,** defined as drama and scripted comedy where the budget is below £1 million per hour. Examples include continuing drama, studio-based sitcoms and comedies, and daytime drama.
- **Post-production,** which deals with editing, grading, picture and audio finishing, deliverables and international versioning as well as visual effects (VFX).
- **Unscripted TV,** defined here as all non-fiction television from specialist and general factual, factual entertainment, sport (excluding rights), entertainment, current affairs, arts and classical music, religion and ethics, education.
- **Visual effects (VFX)** deals with the digital manipulation of images to enhance or augment live-action footage in film, TV and commercials.

Methodology

This study adopted a mixed-methods strategy, consisting of in-depth interviews followed by an online survey.

In-depth interviews

Due to the unprecedented nature of the past year, we deemed it essential to undertake some initial in-depth interviews, to take a snapshot of the operating environment and challenges experienced by screen businesses, including skills gaps and shortages and perceptions around changes that took place and may persist after the pandemic. This was intended to highlight key differences in terms of impact between sectors. To paint an accurate picture, we sought to interview businesses that had been in operation during the UK's first Covid-19 lockdown.

We approached 40 senior managers from businesses across a range of screen industries and UK nations and regions to take part in qualitative interviews. This resulted in a sample of 28 interviewees from businesses of varying sizes. Only two had been unable to operate during the first lockdown. Nearly a third (29%) were from large companies (250+ employees), 25% from small businesses (10 - 49 employees), 14% from micro businesses (up to nine employees) and 11% represented medium sized companies (50 - 249 employees). More than one fifth of interviewees were not certain of employee numbers. It is worth noting that all but one of the small businesses regularly scale up to the medium-size category by hiring freelancers. For the purposes of classification, the four film productions interviewed have been classed based on their full crew size.

Interviews took place during October and November 2020, lasted approximately one hour, and were conducted by phone or video call. Table 1 shows the representation of screen sectors within the sample. Most respondents worked in film, with representatives from across the whole supply chain. This was followed by unscripted TV and animation, for which we secured interviews with businesses operating in 2D, 3D and stop-motion forms. Overall, we made sure to consult with at least one representative per sector and although we recognise that additional interviews would have enriched the analysis, the fieldwork took place at a time when getting hold of interviewees proved very challenging. In September 2020, the potential for a second Covid-19 wave and the consequent imposition of more stringent lockdown restrictions meant that most of the industry was extremely busy, which had a detrimental effect on the research team's capacity to recruit participants for some sectors.

Table 1 Interview sample: which sector do you mostly work in?

Screen sector	No.	%
Film (inc. studios, independents, exhibition and sales)	7	25%
Unscripted TV (inc. live sports)	5	18%
Animation	4	14%
Children's TV	3	11%
Games	2	7%
High-end TV	2	7%
Post-production	2	7%
Other scripted TV	1	4%
Industry organisation[1]	1	4%
VFX	1	4%

Survey

The insights that emerged as part of the qualitative method were used to inform a survey that ran in January 2021. The survey was distributed via ScreenSkills' social media and newsletters as well as through the ScreenSkills' website. It was also circulated and promoted by partner bodies. The survey was completed by 1,181 respondents.

The questionnaire underpinning the survey was split into two sections. 1. Employers and hirers section, targeting company owners and freelancers involved in crewing up eg talent managers. 2. Workforce section, targeting payroll employees and freelancers working in the sector without crewing up responsibilities. To split the sample and reroute respondents to the right section, we used a question on employment status. The next section shows the breakdown of respondents. By

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[1] A business network and member organisation; not a trade body.

surveying both employers and the workforce, we aimed to uncover any discrepancies or correspondence between what employers perceive as gaps and shortages and what needs to be done to address training and workforce development as far as the workforce is concerned. The two sections are therefore similar in terms of topics investigated although appropriate adjustments were made to ensure the questions were suitable for the different categories of participants.

The reason for combining employers and freelancers involved in crewing up within the same group is down to how work is organised within film and TV production. These freelancers are at the coalface of the crewing up process and in charge of putting together the groups of workers taking part in the development of a film or TV project. They therefore have an extensive hands-on knowledge of skills gaps and shortages in the sector and are best placed to identify such needs.

Survey sample demographics

The sample consists of a total of 1,181 respondents, 51% of which operate in film, 36% in high-end TV, 25% in unscripted TV and 20% in other scripted TV. Film is the sector with the largest representation because it incorporates all components of the supply chain, from production to exhibition and sales. Smaller proportions of respondents work in post-production (13%), children's TV (11%), animation (11%) and VFX (5%). In addition, 23% of the sample said they worked or sometimes worked in other sectors, including games[2], training, online content production, branded content and advertising. This sectoral taxonomy is different from the Standard Industrial Classification system (SIC), adopted by the Office for National Statistics (ONS), which takes a supply chain approach to classifying these sectors[3]. It is, therefore, impossible to assess the sample representativeness.

Figure 1 Which sector/s do you work in? Please tick all that apply.
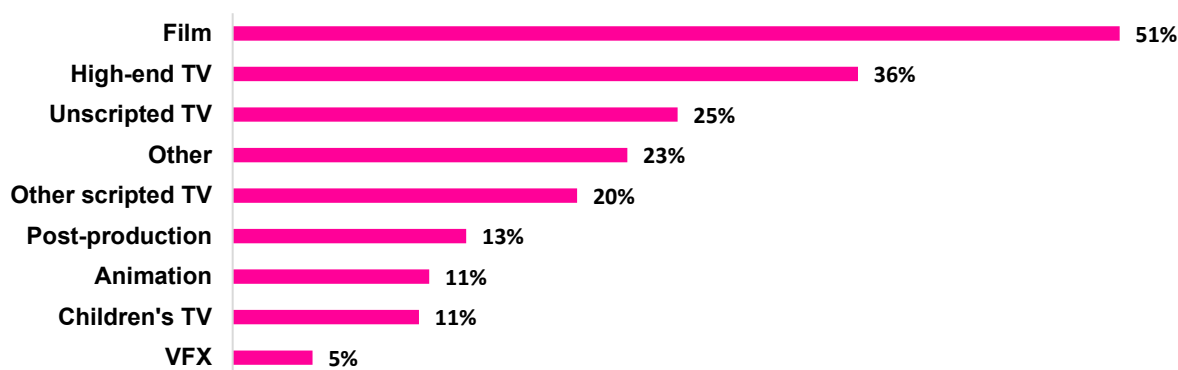
Sample: 1,181
Source: 2021 ScreenSkills Assessment Survey
Note: percentages do not add up to 100% as the question allows respondents to select multiple options

As mentioned above, we further split the sample by employment status, based on the variable presented in Figure 2. This question was used to sort respondents into two categories. The first consisted of company owners and freelancers involved in crewing up, who were deemed to be best placed to answer questions including their perception of workforce gaps and shortages, alongside training and development needs. The second was made up of freelancers not involved in crewing up and payroll employees, who were asked questions meant to self-assess their skills gaps and what they plan to do to tackle them in terms of training.

Within the workforce group, most respondents categorised themselves as self-employed freelancers not involved in crewing up activities (41%), highlighting the freelance nature of sectors

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[2] As we received a very limited number of responses for games, a decision was made to incorporate their responses within the "other" category.

[3] 59.11 Film and TV production 59.12 Film and TV post-production 59.13 Film and TV programme distribution 59.14 Film exhibition 60.20 TV programming and broadcasting 58.21 Publishing of games 62.01/1 Development of games

in screen including film and TV production (ScreenSkills and Work Foundation, 2019; BFI, 2020 - unpublished). A further 31% of the sample were employees, hired by the company with permanent, temporary or fixed contracts. Of the employer sample, 18% of respondents said they were self-employed freelancers with crewing up responsibilities and a further 10% categorised themselves as company owners.

Figure 2 Which of the following options best define your employment status?

Category	Percentage
I am a company owner	10%
I am a self-employed freelancer involved in crewing up	18%
I am a self-employed freelancer not involved in crewing up (including PAYE dailies)	40%
I am an employee/staff (including permanent, temporary, fixed contacts)	31%
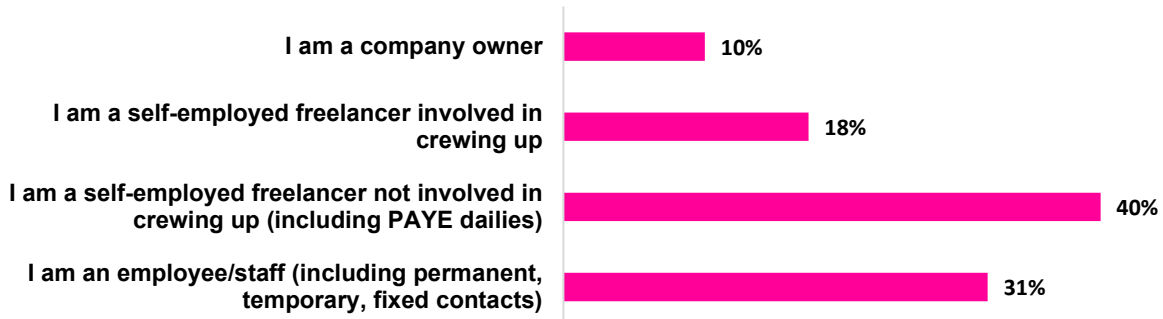
Sample: 1,181
Source: 2021 ScreenSkills Assessment Survey

Figure 3 shows the geographical distribution of the sample. The largest concentration of respondents was in London and South East, followed by the South West, Scotland, and North West. Percentages equal to or below 5% were registered for Yorkshire and Humber, Wales, East of England, Northern Ireland, West Midlands, East Midlands, and North East.

Figure 3 Geographical location of employers and workforce

Region	Percentage
London	36%
South East	12%
South West	9%
Scotland	9%
North West	7%
Yorkshire and the Humber	5%
Wales	4%
East of England	4%
Northern Ireland	3%
West Midlands	3%
East Midlands	3%
North East	2%
Outside the UK	4%
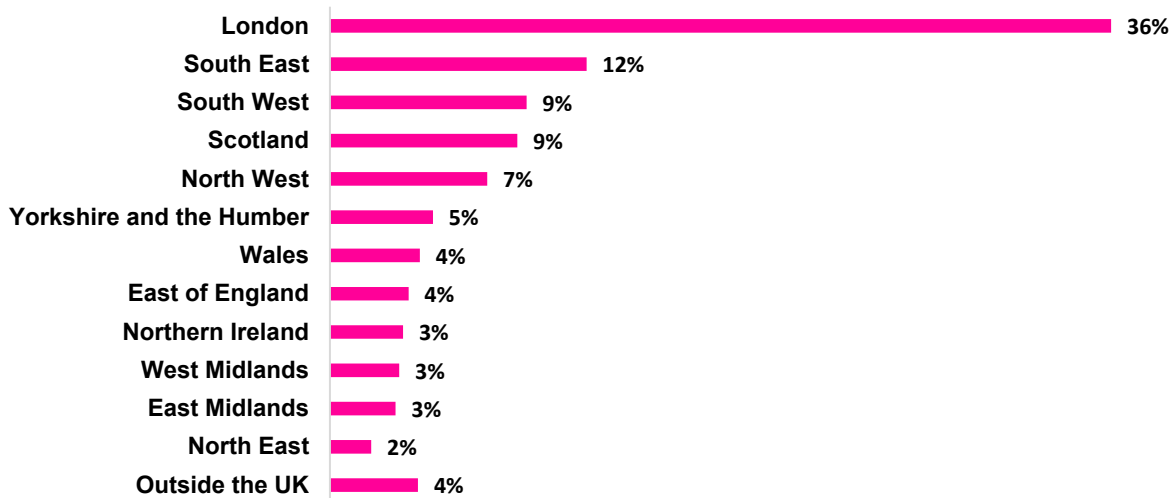
Sample: 1182
Source: 2021 ScreenSkills Assessment Survey

Key findings
Impact of Covid-19

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Summary points

- Data reflects the perceptions and experience of respondents between January 2020 and January 2021. The vast majority of sampled employers and workforce were impacted negatively by the first Covid-19 lockdown (82% for employers; 73% for the workforce), with physical production affected most.
- Some saw an upturn in business during the same period, with some animation and games employers noting that increased demand for content caused by Covid-19 lockdown may have helped to accelerate existing growth plans.
- As a result of the pandemic, 16% of the workforce sample transitioned to a different sector outside of the screen industries, while around 11% of the surveyed workforce moved to another sector within screen.
- 75% of sampled employers said new Covid-19 safety measures had an impact on how work is carried out, followed by 74% who pointed to remote working as a key driver of change.
- Companies that already relied on tech-enabled workflow, ie animation, games, post-production and VFX, reported least change in work processes.
- Increased remote working and the wearing of face coverings led to more formality in communication, with some respondents missing the spontaneous communication that would normally occur in the office, studio or on shoots.
- Nearly 40% of the employer sample felt that different working practices and the financial strain caused by Covid-19 made it more difficult to offer the crucial on-the-job training and support new entrants may need. This perception is likely to change and more optimism is expected as social distancing restrictions are eased.
- The majority of respondents felt the pandemic had no impact on the recruitment of a greater diversity of talent, but concern was expressed about the negative impact of the pandemic on some people's ability to enter or progress in screen.

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Having established the nature of the survey sample through demographic and firmographic questions, we asked respondents in what way their workload or business activity had been affected by the Covid-19 pandemic. It is worth remembering that the data in this section represents respondents' perception as of January 2021. Any variation or growth in business activity taking place over the past few months is not captured in this report.

Figure 4 shows that the vast majority of sampled employers and workforce reported having been negatively impacted by the hiatus caused by the lockdown (82% for employers and 73% for the workforce), with high-end TV, other scripted TV, film and unscripted TV, presenting the highest proportions of respondents stating to have been substantially negative affected (Figure 5).

These findings were largely corroborated by the qualitative interviews, with employers engaged in physical production activity most negatively affected; this includes stop-motion animation due to its use of physical sets, props and close-proximity working. All of these employers cited significant hiatus and subsequent delays to restarting production due to Covid-19 lockdowns and safety measures. Film exhibition[4] reported the most significant negative impact among those interviewed, with business activity effectively ceasing due to the enforced closure of cinemas in the UK during lockdown. Concern was also expressed by film exhibition respondents regarding the potential future impact of the production hiatus on their part of the value chain, epitomised by the following quote: "When this is over, we need films to screen."

Film sales, post-production and VFX respondents echoed concerns, reporting that at the time of interview they had not experienced, but were anticipating, significant slowdown. This was due to those parts of the value chain being reliant upon the content generated by physical production.

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[4] Exhibition-specific insight can be found in The impact of COVID-19 on the exhibition industry (Indendent Cinema Office, 2020)

While they had enough work to keep operating for the short-term, the hiatus in production was expected to cause a gap in workflow for them at a later date.

However, around 7% of the sampled workforce and 9% of surveyed employers were positively affected, which can be observed more granularly in Figure 5, where animation (13%), children's TV, VFX, and post-production (10%) had the highest percentages of respondents stating that the pandemic had a positive impact on their workload or business activity. A very small percentage of the sample, equal to 2% overall, experienced a substantially positive impact, with VFX making up the highest proportion. The qualitative interviews highlighted an increase in business for just four of the employers, representing one 3D animation, one games, and two unscripted TV. In this instance, the animation and games respondents noted that the Covid-19 pandemic coincided with planned growth, so the upturn cannot necessarily be attributed to Covid-19. However, the same respondents felt that the increased demand for content during this period had helped to support and fuel the expansion. Unscripted TV respondents reporting an increase attributed it to unexpected broadcast commissions replacing cancelled productions or filling gaps caused by delays to others. As such, it did not ease concerns over the uncertainty caused by Covid-19.

Figure 4 In what way has your workload/business activity been affected by the Covid-19 pandemic?
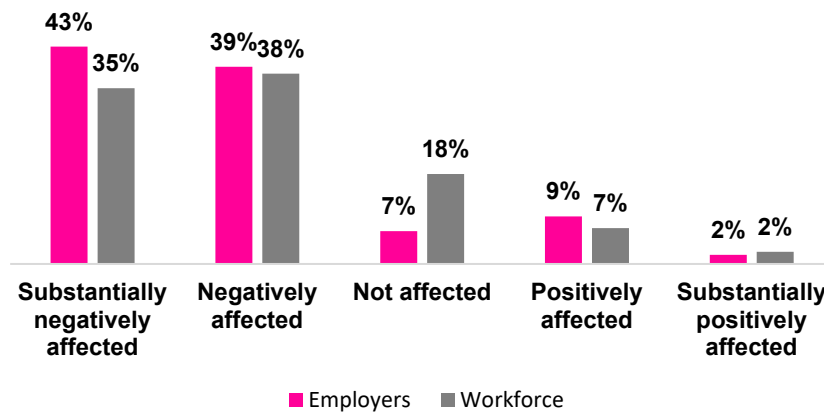
Sample: 1105
Source: 2021 ScreenSkills Assessment Survey

Figure 5 In what way has your workload/business activity been affected by the Covid-19 pandemic by sector? (employers and hirers)
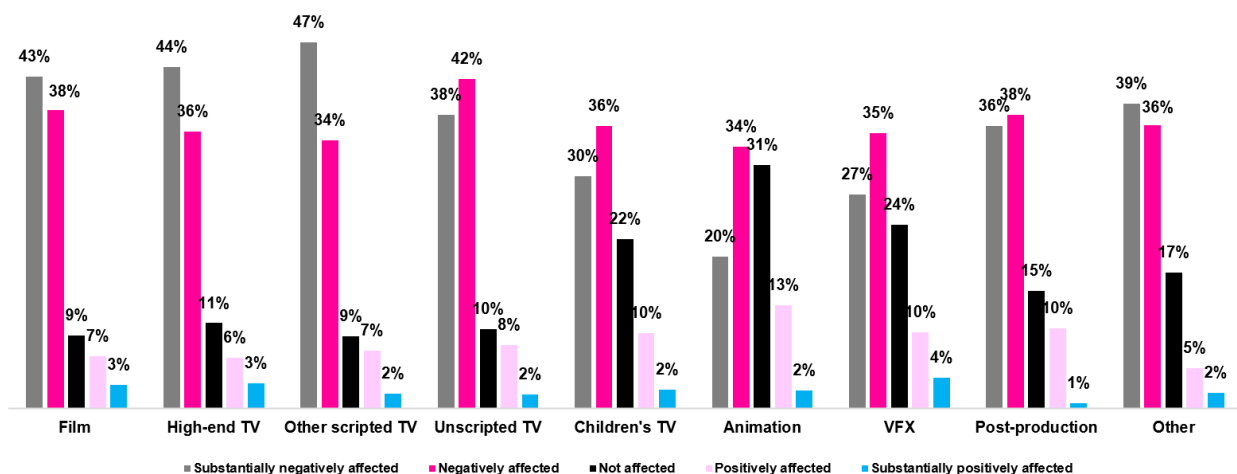

Sample: 1105
Source: 2021 ScreenSkills Assessment Survey

Interviewees identified three top challenges that they attributed to the direct impact of Covid-19. Firstly, uncertainty caused by the pandemic meant businesses were unable to plan and forecast in the usual way. When asked to expand on the nature of this uncertainty, almost a third of the

qualitative sample reported seeing increased peaks and troughs in business activity compared to 'normal' years, due to the stop-start impact of Covid-19 on their ability to operate. This was the most common response and bore no relation to whether they had otherwise been negatively or positively impacted. This is inherently linked to the second top challenge, namely the complexity of managing cash-flow during a time of uncertainty which requires continuity plans and brings business risk. Thirdly, businesses interviewed highlighted the challenge of adjusting to new communication practices caused by the adoption of remote working, which is further explored in the following sections. By way of example, post-production employers commented on an increased need for staff to be able to explain remote workflow processes to clients in a way that could be easily understood. Employers from animation, games, and VFX noted a need to better articulate creative and/or technical briefs to ensure that remote workers understood exactly what was required of them, with several reporting instances of lost time due to unclear or misinterpreted briefs. Despite a period of disruption and uncertainty, however, almost a third of employers interviewed observed that the Covid-19 pandemic had demonstrated the strength and agility that screen businesses possess, emphasising the ability to problem-solve, fire-fight, be fleet of foot and ready to react, while maintaining core values in the face of change.

Figure 6 presents some of the ways in which the workforce has been affected by the Covid-19 pandemic, according to survey responses. Sectors that rely heavily on a freelance workforce (eg film and TV production) tend to report high proportions of respondents who had not been able to work or whose workload had decreased. A different trend can be observed for VFX, which presents the highest proportions of respondents that had been furloughed (26%) or made redundant (21%). This is likely to reflect the nature of the employment status in the sector, which has more payroll staff than freelancers.

Figure 6 Please tell us how your job has been negatively affected? (workforce)
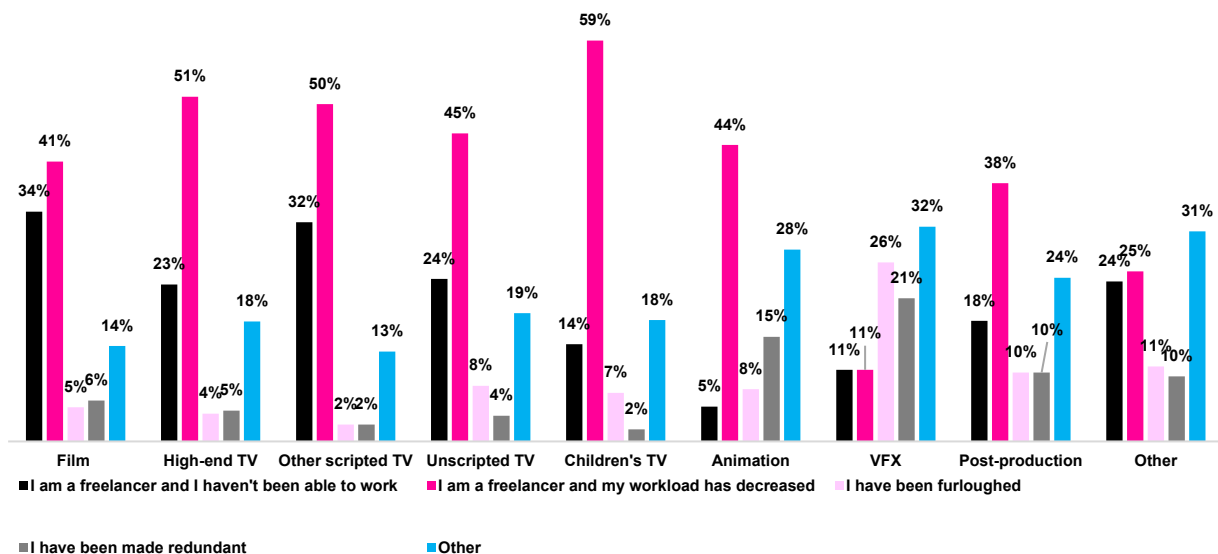
Sample: 471
Source: 2021 ScreenSkills Assessment Survey

Workforce respondents to the survey were also asked to indicate if they had taken any action to try to maintain, change or improve their careers as a result of the pandemic. Figure 7 shows that 16% of the sample had moved to a different sector, outside of the screen industries, suggesting the permanent or temporary loss of workforce. Around 11% of the surveyed workforce went to another sector within screen, hinting at the ever-expanding convergence and skills crossover across sectors in the screen industries, such as film and TV drama production. Further research is needed

to understand which sectors workers have moved to, both within and outside screen, and whether this is a short-term or irreversible transition.

The pandemic has also affected the nature of work and contractual relations between employers and their workers, with 5% of the sampled workforce going from payroll employment to being a freelancer. It is also worth noting that 5% of respondents said they had moved elsewhere in the country where there were more jobs. Although further research is required to investigate where the relocation took place and if jobs sought were within or outside the screen industries, this finding points to a potential trend of displacement.

Figure 7 Have you done any of the following as a result of the pandemic? (workforce)

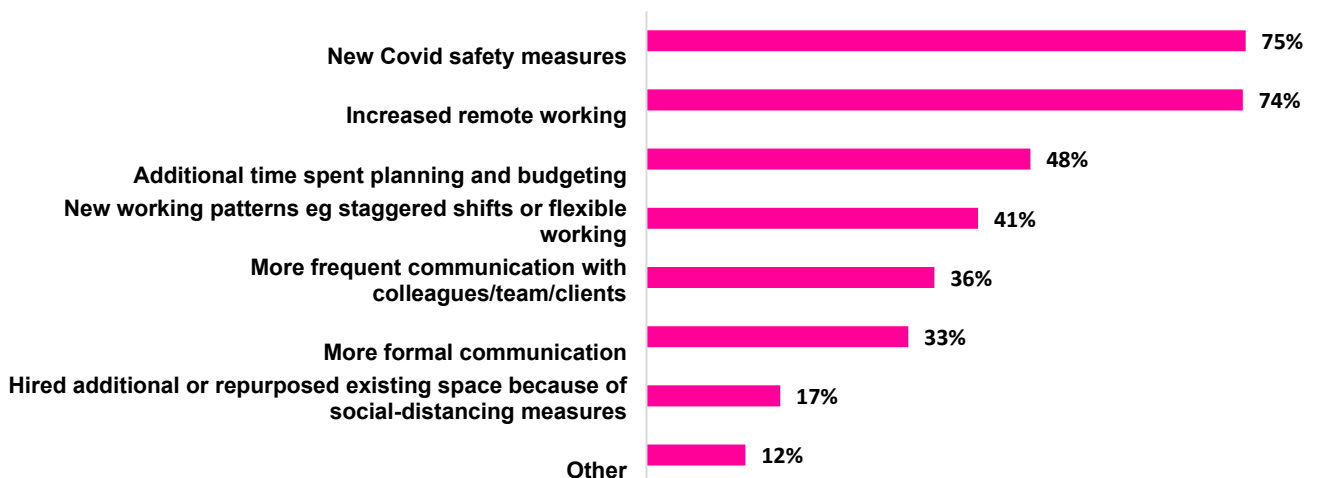| Category	%
Moved abroad	3%
Gone from freelancer to payroll employee	3%
Moved elsewhere in the country where there are more jobs	5%
Gone from payroll employee to freelancer	5%
Moved to another sector or genre within screen	11%
Moved to another sector outside the screen industries	16%
None of the above	66%
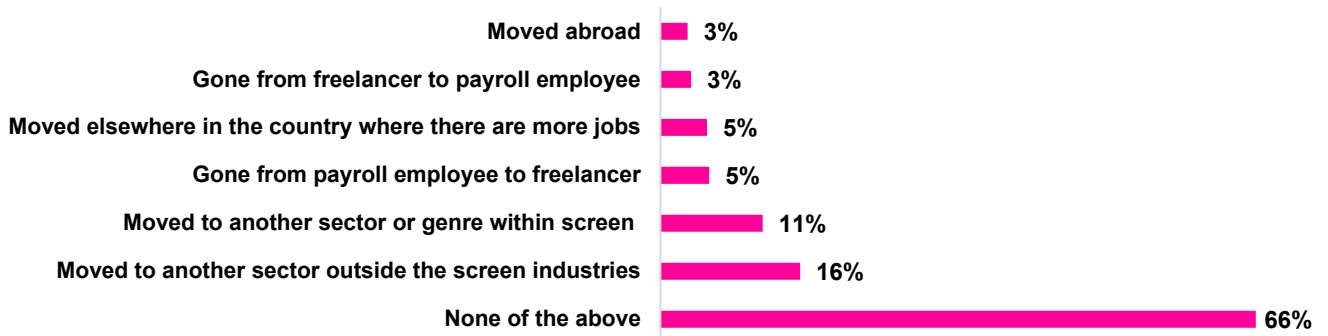
Sample: 793
Source: 2021 ScreenSkills Assessment Survey

Respondents were asked to indicate any changes they experienced during the pandemic that had affected processes and workflows. Additional data on changes that respondents feel will endure beyond the pandemic are analysed and further explored in the section, Future of Screen, below.

Unsurprisingly, 75% of sampled employers agreed that new Covid-19 safety measures had an impact on how work is carried out, followed by 74% who pointed to remote working as a key driver of change. Around half of the sample said they spent additional time planning and budgeting and 41% experienced new working patterns, such as staggered shifts and flexible working. This might also reflect the need to juggle aspects of life that were a particular issue during the pandemic, such as full-time childcare and home-schooling.

Figure 8 During the pandemic, which of the following changes have you experienced in terms of processes and/or workflow? (employers and hirers)

Category	%
New Covid safety measures	75%
Increased remote working	74%
Additional time spent planning and budgeting	48%
New working patterns eg staggered shifts or flexible working	41%
More frequent communication with colleagues/team/clients	36%
More formal communication	33%
Hired additional or repurposed existing space because of social-distancing measures	17%
Other	12%

Sample: 282
Source: 2021 ScreenSkills Assessment Survey
Note: percentages do not add up to 100% as the question allows respondents to select multiple options

Employers in the qualitative sample reported a similar set and pattern of changes to those found among survey respondents. Those companies that already relied on tech-enabled workflow, ie 2D and 3D animation, games, post-production, and VFX, reported the least change in work processes, other than a higher proportion of staff working remotely and the consequent need to increase data storage and transfer (bandwidth) capacity. One employer in post-production explained:

> *"We've been using remote workflow for a while, but never to such an extent. We took a massive cap-ex hit to increase capacity – another gig of broadband, more switches, hundreds of terabytes more storage, more laptops and screens. Within a couple of weeks of lockdown, we had around 60 remote edits happening."*

Although these respondents were more likely to feel equipped to deal with the new working practices than their counterparts in physical production, this was not without challenges. For example, finding a reliable way to manage an edit, when the director and editor could not be in the same room, proved to be complex for some respondents from 3D animation and post-production, from both technical and communication perspectives. Indeed, ensuring that both parties were seeing exactly the same thing at the same time, in the same way, while being in different locations was a rather exceptional circumstance to deal with. Similarly, one 3D animation respondent noted challenges when calling retakes, as the director and production assistant were unable to be in the same room. The initial solution of having directors working alone, watching and then typing up proved time-consuming so a reliable remote video solution had to be found.
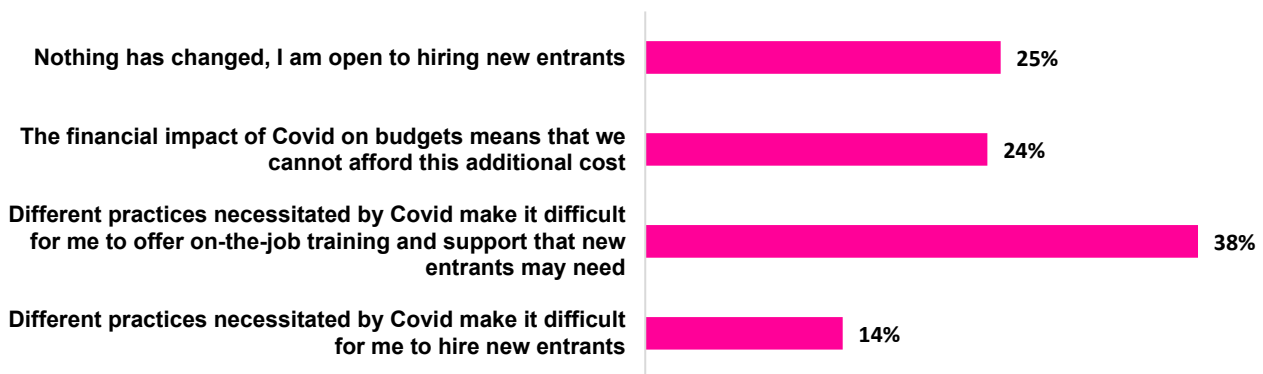
A third of survey respondents pointed to an increase in formal communication, which was echoed by interviewed employers from all screen sectors, who noted missing the spontaneous interaction that would normally occur in the office, studio or on set. Responses highlighted that, however good their technical set-up was, effective human interaction was still essential to ensuring a smooth process. A loss of, or reduction in, the social exchange between colleagues was also cited as a negative impact by all employers interviewed, with most reporting the need to try harder to keep the culture and camaraderie of the company or production going during a particularly challenging time for morale. These impacts on communication were not just reported by those who adopted remote working, but also by those who continued working in studios or on shoots, where face coverings were being worn by staff as part of their safety protocols.

The qualitative sample of employers - all leaders or managers - were also asked about the impact of the Covid-19 pandemic on their role. Questions looked at practical and stylistic changes to their approach, as well as the new challenges they had to overcome in carrying out their role. The vast majority stated that the way in which they communicate with their workforce and other leaders or managers had changed. The most common change, reported by almost half, was a significant increase in communication overall, including emails, team meetings, and one-to-ones. The second most frequent response was a move to more formalised communication, with common examples including an increased need to set and follow meeting agendas and to ensure regular daily or weekly meetings. Four also updated staff more regularly in terms of the overall business situation.

When asked about the biggest challenge they felt as a leader or manager during the period from March to September 2020, the two most common responses were the need to carry the weight of being responsible for other people and to manage an increased workload. Other common challenges reported included feeling disconnected from the workforce, organising and communicating with remote workers, and hiding one's pressures and frustrations from staff. Over half said that they dealt with the challenges without seeking support and instead drew on their own experience and gut instinct. Almost a third had shared their challenges with internal colleagues and peers in other organisations as a means of support.

Survey respondents were then asked to reflect on whether the pandemic had changed their attitude towards hiring or crewing up new entrants (Figure 9). Most of the surveyed employers (38%) felt that different practices necessitated by the pandemic made it more difficult to offer the crucial on-the-job training and support new entrants need. The second major reason for not hiring new entrants was the financial strain on budgets generated by Covid-19, which was highlighted by 24% of the sample. On the opposite side of the spectrum, 25% of respondents said that their attitude towards hiring new entrants had not changed. It is worth noting that, as a result of the easing of lockdown restrictions, perceptions around recruiting and crewing up new entrants might have shifted since the data was collected in January. Confidence around hiring new entrants is expected to increase even if, as highlighted in greater detail in the following section, some forms of remote working persist after the most acute phases of the pandemic.

Figure 9 When it comes to your attitude to recruiting/crewing up new entrants, please select the option that best represents what you think (employers and hirers)

Nothing has changed, I am open to hiring new entrants	25%
The financial impact of Covid on budgets means that we cannot afford this additional cost	24%
Different practices necessitated by Covid make it difficult for me to offer on-the-job training and support that new entrants may need	38%
Different practices necessitated by Covid make it difficult for me to hire new entrants	14%

Sample: 252
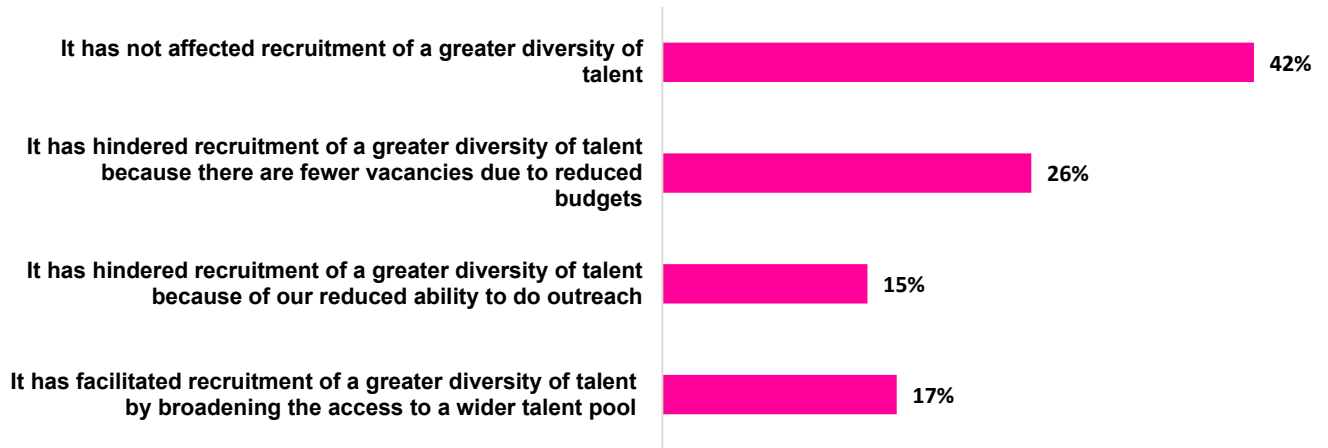Source: 2021 ScreenSkills Assessment Survey

The in-depth interviews largely corroborated the survey findings. In this context, employers identified the loss of a workplace-based training environment for new and recent entrants as likely to have a severe future impact, with fears there may be fewer suitably prepared new entrants in the pipeline at a time when the industry is recovering or growing. This response was given by employers from a breadth of sectors, including 3D animation, children's TV, film (sales), high-end TV, post-production, unscripted TV, and VFX.

For those who had taken on new entrants during the pandemic, onboarding was reported as a significant challenge to the process. Although challenges were felt across any level of recruit, new entrants were highlighted as being most likely affected. This because they were unable to experience a regular working environment in which to learn in a range of ways, such as by observing others at work, being supervised and guided in person, being able to easily ask questions, and seeing how teams or departments interact. The loss of spontaneous communication was identified as the biggest barrier to successful onboarding, whether working remotely or in person where Covid-19 safety measures of social distancing and the wearing of face coverings were in place.

Concern over loss of opportunities for new entrants was echoed in a recent study exploring teachers' perceptions around the impact of the pandemic on learners' entry jobs and employability. Almost half of the 5,000 teachers responding to a survey carried out early in the pandemic by a TeacherTapp poll for The Careers & Enterprise Company (The careers & enterprise company, 2020) feared a lack of jobs for young people and damage to their career prospects as a result of Covid-19. The poll had other useful findings that support the importance of maintaining volume and quality in entry-based opportunities. Nearly three-quarters of respondents identified employability skills as being most important in preparing young people for work, while almost two-thirds felt that opportunities to meet employers and engage with the world of work were vital.

Employers responding to our survey were then asked if and how the pandemic had affected their capacity to recruit a more diverse workforce. The majority stated that the pandemic had no impact on the recruitment of a greater diversity of talent. On the other hand, 26% felt that the pandemic had hampered the recruitment of diverse talent due to the lack of vacancies caused by reduced budget. A minority - 17% - of surveyed employers thought that the pandemic had generated positive outcomes thanks to remote working broadening access to a wider talent pool.

Figure 10 How has the pandemic affected your capacity to recruit/crew up a greater diversity of talent? (employers and hirers)

It has not affected recruitment of a greater diversity of talent	42%
It has hindered recruitment of a greater diversity of talent because there are fewer vacancies due to reduced budgets	26%
It has hindered recruitment of a greater diversity of talent because of our reduced ability to do outreach	15%
It has facilitated recruitment of a greater diversity of talent by broadening the access to a wider talent pool	17%

Sample: 244
Source: 2021 ScreenSkills Assessment Survey

Responses from the interview sample generally mirrored the survey findings, with a wide range of views and no consensus emerging. For example, while the majority reported that Covid-19 had no impact on their workforce diversity, reasons given for this ranged from "because we struggle with diversity full stop" to "we already had a diverse crew" and "it's about taking on the best people, regardless of diversity".

Of the employers interviewed who felt that the Covid-19 pandemic had hindered diversity, a wide range of reasons were again given, but one common theme was highlighted: concern about socio-economic factors and the impact that the pandemic may have in reducing some people's ability to enter or progress in screen. In a similar vein, a study by Banks (2020) highlighted the likely exacerbation of inequalities in the cultural and creative industries. Research commissioned on behalf the UK Film and TV Charity has, for example, found that "the Covid-19 crisis risks entrenching inequalities further and possibly in permanent ways" and that barriers to employment in the UK film and television industry are likely to be heightened by the pandemic (The Film and TV Charity, 2020, p. 4). The study also stresses that the health risks and financial challenges posed by the virus are more likely to affect already marginalised groups.

Among the employers interviewed from feature film and high-end TV production, concern was also noted that Covid-19 might hinder improved diversity by making those crewing up less likely to take perceived risks in hiring people outside of their network, as reflected in the statement: "It's easier for people to say they'll stick with who they know during Covid-19." While this may not be widespread, there is a danger that such approaches could perpetuate the long-acknowledged practice in some screen sectors of recruiting by word-of-mouth from within established networks.

Skills shortages

Summary points
• It may reflect the uncertainty that has characterised the past 12 months that 37% of employers taking part in the survey did not recruit for any vacancies; this is double the figure reported in 2019 (18%). [5] • 36% of employer survey respondents did hire staff or crew up but experienced difficulties in doing so, while 27% recruited without encountering issues. • Most of the surveyed employers (46%) rated recruitment difficulties as a moderate problem, whereas 36% saw it as serious or very serious problem, with around 60% feeling that the pandemic had exacerbated recruitment difficulties. • Only one shortage was reported among employers interviewed as being new in direct response to the pandemic - the role of Covid supervisor and related Covid safety roles for physical production. • Production management roles, such as production managers, line producers, first assistant directors, accountants and locations assistants, dominate the reports of common persistent shortages. • If an increased uptake in virtual production occurs, early signs suggest a shortage of real-time engine coders could emerge (which could affect games as well as VFX). • Film exhibition expressed concern that skills shortages may appear when the sector is allowed to restart if staff do not return after extended furlough or redundancy.

Respondents were asked whether they had experienced any difficulties recruiting for any jobs over the past 12 months. It is worth remembering the survey was run in January 2021. The data, therefore, reflects recruitment activities that took place mainly during the Covid-19 pandemic, providing insights as to how it affected skills shortages and the ability to find suitable candidates during an unprecedented time. It may reflect the uncertainty characterising the past 12 months that a slight majority of employers (37%) taking part in the survey did not recruit for any vacancies – this is double the proportion recorded in 2019 (ScreenSkills and Work Foundation, 2019), when 18% of employers said that they did not recruit. However, it is worth considering that some respondents from the qualitative sample who did not recruit had already hired who they needed prior to the Covid-19 pandemic hitting. Some of them had crewed up to meet planned spring/summer production schedules and kept crew on where possible, ready to restart. Of the survey findings, 36% of respondents experienced difficulties in recruiting or crewing up, with only 27% of the sample encountering no recruitment issues.

Figure 11 In the last 12 months, was it difficult to recruit/crew up for any job? (employers and hirers)

Sample: 281
Source: 2021 ScreenSkills Assessment Survey

As reported in Figure 12, post-production and unscripted TV were the two sectors with the highest percentages of employers that did not recruit, respectively 52% and 42%. The sector that was most challenged by hard-to-fill vacancies was animation, where 45% of surveyed employers had experienced recruitment difficulties, followed by 38% in film and 36% in high-end TV.

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[5] These figures exclude "Don't know" responses, and the question wording slightly differed between the two studies.

Figure 12 In the last 12 months, was it difficult to recruit/crew up for any job? (by sectors)

■ I didn't recruit ■ No ■ Yes
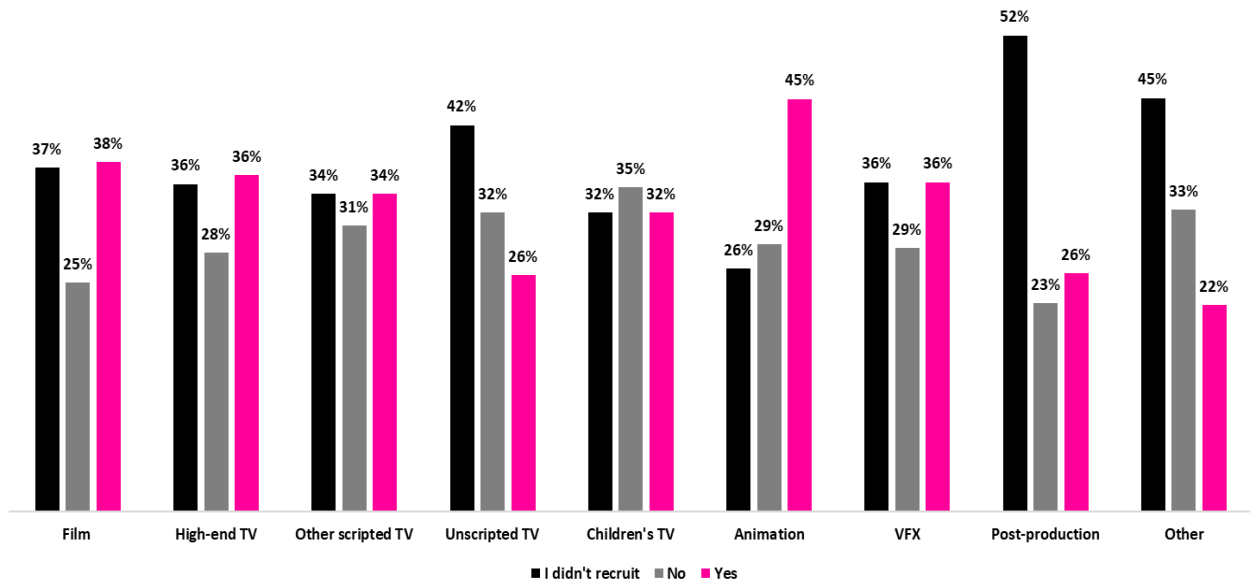
Sample: 281
Source: 2021 ScreenSkills Assessment Survey

Most of the surveyed employers (46%) rated recruitment difficulties as a moderate problem that sometimes limits their activities, whereas around 36% saw it as a serious or very serious problem. Around 8% felt it was either a minor problem or not a problem affecting daily operations. These figures have remained relatively stable since the 2019 survey – skills gaps are still, for the vast majority of hirers, a problem which limits their activities.

Figure 13 How serious are recruitment/crewing up difficulties due to a lack of relevant skills? (employers and hirers)
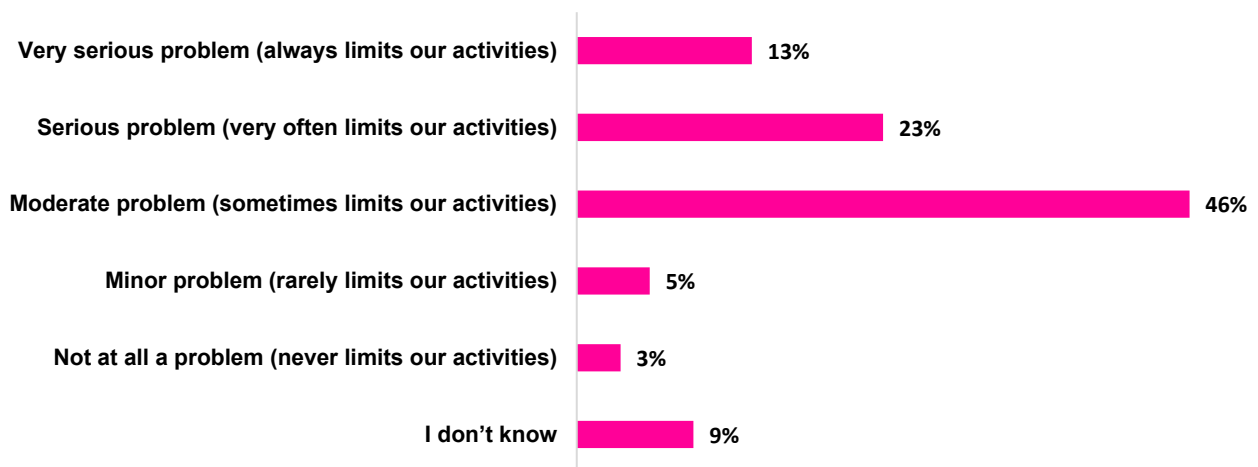
Sample: 83
Source: 2021 ScreenSkills Assessment Survey

Against this backdrop, we asked respondents whether the pandemic had had an impact on their capacity to recruit and crew up a skilled workforce. Figure 14 shows that just under 61% of employers felt that the pandemic had exacerbated recruitment difficulties, 20% stated that it did not have any impact and around 7% that recruiting workforce had become somewhat or much easier since March 2020.

Figure 14 How has your capacity to recruit/crew up skilled workers changed during the pandemic? (employers and hirers)

Got much worse	23%
Got somewhat worse	38%
About the same	20%
Got somewhat better	5%
Got much better	2%
I don't know	11%
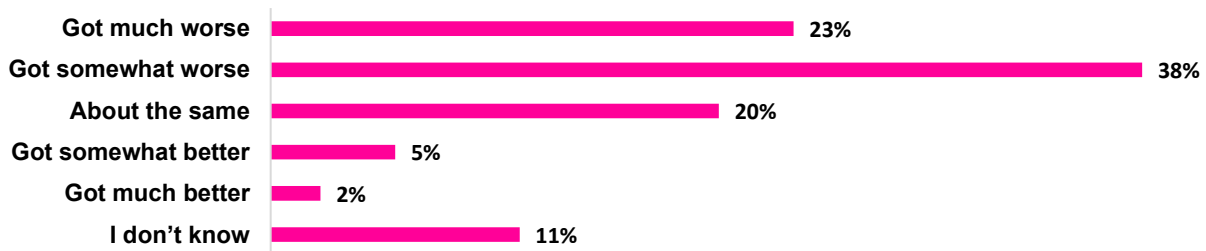
Sample: 81
Source: 2021 ScreenSkills Assessment Survey

Responses from interviewed employers, which were broadly corroborated by the survey responses, offer some insight into likely links between the timing of recruitment and the level of difficulty experienced by some screen sectors. For example, those representing physical production noted that the sooner a production restarted after the hiatus, the less likely those employers were to have difficulty recruiting as more crew were available. Productions starting or restarting later faced greater competition in crewing up. As one unscripted TV employer commented:

> *"Not only were new productions coming down the line for people, but productions that had been postponed were also kicking back up again. So, the usual shortages became absolutely enormous again. We had to cast the net wider, we looked to Manchester, Leeds, Bristol and Cardiff, London."*

Continued demand and growth in 2D and 3D animation and games during this period also fuelled a higher need for crew, generating greater competition for recruits as the period went on. One 3D animation employer explained:

> *"We're finding that as the weeks go by, it's harder and harder, which is partly because the animation industry in general in the UK is booming from all the streamers in a kind of arms race for content. That means that everyone's snapped up all the talent."*

It is also worth mentioning that the increased move to remote working and workflow affected the skills base required by some post-production respondents, with one of them reporting: "We've needed more tech people to manage the increase in demand we had on the MCR[6] pipeline."

Table 1 shows the range and breadth of skills shortages reported by employers in both the interview and survey samples. It is worth noting that this was an open-ended question, where respondents could enter what they thought were the most severe shortages. The table below reports the job roles identified as shortages and how many times they were mentioned. However, because the subsector samples differ, we cannot confidently rank these shortages in terms of severity. For example, some shortages in film could present higher counts because the sample they are based on is bigger. As such, data in the table needs to be treated as a qualitative assessment rather than a quantitative ranking of shortages based on how many times they have been mentioned.

Looking across sectors, responses suggest that production management roles are a continuing area of shortage, a finding which is in line with the 2019 ScreenSkills Assessment (ScreenSkills and Work Foundation, 2019). Production managers were among the most common shortages reported by respondents in animation, children's TV, film and unscripted TV, with further mentions

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[6] Master Control Room

in high-end TV and other scripted TV. Similarly, production coordinators were identified as a problem for film and high-end TV, with further mentions in other scripted and unscripted TV. Although these two job roles vary in how they are executed within each subsector, they are based on common principles and skills such as scheduling, budgeting, procurement, administration and people management. This raises two considerations: firstly, whether the roles are misunderstood or not appealing to new entrants, and, if so, why; secondly, whether such skills are transferable from non-screen sectors, and how.

At the higher end of the production management career path, line producers were identified as hard-to-fill vacancies from film respondents, with further mentions from children's TV and high-end TV; moreover, first assistant directors were highlighted as a shortage in other scripted TV. Roles focused on accounting - production accountants and accounts assistants - were also mentioned by film, high-end TV and other scripted TV respondents.

Locations is another area of production management with persistent shortages, having been previously identified in the 2019 Assessment, and may require further targeted interventions to resolve. Examples of in-demand roles are location assistants in film and high-end TV and location managers in film and other scripted TV. Editors were identified as shortage areas for respondents working in film and unscripted TV, echoing the 2019 assessment. Edit assistants were also mentioned for film and unscripted TV in 2021. Hair and make-up artists were mentioned as shortages for film, and also mentioned within high-end TV and other scripted TV. It is worth noting that recently published ScreenSkills research (ScreenSkills, 2021) investigating the high-end TV workforce identified major shortages for that subsector that were not captured here, including a wider range of craft and technical roles. Conversely, that research did not find shortages in assistant producer, camera trainee, hair and make-up artists or hair and make-up trainee, which did show up in the 2021 assessment. These variances could be due to factors such as the regional base of respondents or the time at which each study took place, eg unusually competitive crewing periods due to production restart following the Covid-19 hiatus.

Other shortage areas identified in the 2021 assessment include 2D animators in animation and producers in film. Respondents operating in games flagged programming roles, including 3D programmers, back-end programmers and network programmers, alongside artist and technical artists functions.

A newly emerged shortage area driven by the need to deal with shooting during a global pandemic was the role of Covid supervisor and related Covid safety roles. This was highlighted by respondents from film and high-end TV, although was also mentioned within other scripted. Future monitoring is needed to establish whether these roles will disappear or evolve as the critical phase of the pandemic passes. Another shortage which could have been accelerated by the pandemic was highlighted by an interviewee in VFX, who reported the challenge of recruiting workforce with the necessary real-time engine skills for virtual production:

> *"We're trying to get them from the games sector, but games has continued to be really busy so they need all the people they can get and they're able to offer longer-term contracts than we [in VFX] can, often with amazing benefit packages."*

This not only suggests the continuing convergence of technologies and related skills across different screen sectors but also the potential pinch-point this crossover could create in future if that particular shortage is not addressed.

Respondents representing film exhibition within the qualitative sample highlighted the concern that skills shortages may appear when the sector is allowed to restart, if staff do not return to the sector after extended furlough or following redundancy. There was particular concern over a possible shortage of experienced cinema managers who would be important in the reopening of cinemas.

Table 1 For which job roles was it particularly difficult to recruit/crew-up? (employers and hirers)

Animation	Children's TV	Film	Games	High-end TV
2D animator (4) Production manager (4) 2D designer (2) Background designer (2) Storyboard artist (2) 2D and 3D rigger (1) 3D animator (1) Animation editor (1) Art director (1) Colour concept artist (1) Director (1) FX supervisor (1) Key animator (1) Lead FX artist (1) Line producer (1) Producer (1) Real-time developer (1) Technical artist (1) Toon boom animator (1)	Production manager (3) First assistant director (2) Art director (1) Camera op (1) Line producer (1) Production coordinator (1)	Production coordinator (5) Covid safety roles* (4) Production manager (4) Hair and make-up artist (3) Producer (3) Editor (3) Line producer (3) Location assistant (3) Runner (3) Costume designer (2) Storyboard artist (2) Edit assistant (2) Accounts assistant (2) Assistant location manager (2) Location manager (2) Production assistant (2) First and second assistant camera (2) Camera operator (2) Art department coordinator (1) Art director (1) Assistant art director (1) Costume assistant/standby (1) Costume supervisor (1) Hair and makeup trainee (1) Production designer (1) Accommodation coordinator (1) Assistant stunt coordinator (1) First assistant director (1) Assistant production coordinator (1) Location facilities assistant (1) Production accountant (1) Production trainee (1) Unit production manager (1) Sales director (1) Data wrangler (1) Camera trainee (1) Digital imaging technician assistant (1) DoP (1) Electrician (1) Grip (1) Sound assistants/cable runner (1) Sound recordist (1)	3D programmer (1) Animator (1) Artist (1) Back-end programmer (1) Game designer (1) Network programmer (1) Technical artist directors (1) Technical artist (1) UI designer (1)	Production coordinator (4) Covid safety roles* (3) Costume designer (2) First assistant director (1) Assistant production coordinator (1) Location manager (1) Art department coordinator (1) Costume supervisor (1) Hair and make-up trainee (1) Hair and make-up artist (1) Standby props (1) Director (1) Assistant producer (1) Account assistant (1) Line producer (1) Location assistant (1) Production accountant (1) Production manager (1) Production secretary (1) Unit production manager (1) Camera trainee (1) Electrician (1)

Post-production	Other scripted TV	Unscripted TV	VFX	
Colourist (1) Dubbing mixer (1) High-end tech ops (MCR pipeline) (1) Post-production producer (1)	First assistant director (4) Covid safety roles (2) Director (2) Hair and make-up artist (2) Location manager (2) Unit manager (2) Art department coordinator (1) Buyer (1) Camera trainee (1) Costume designer (1) Edit assistant (1) Location assistant (1) Make-up assistant (1) Production accountant (1) Production coordinator (1) Production manager (1) Script supervisor (1)	Editor (4) Production coordinator (4) Production manager (3) Development AP (2) Series producer (2) Shooting PD (2) Development producer (1) Edit producer (1) Executive producer (1) Researcher (1) Shooting AP (1)	Facial modeller (1) Real-time engine coder (for virtual production) (1) VFX producer (1)	

Includes Covid supervisor, coordinator and marshal. Note: the numbers in brackets indicate how many times a job has been mentioned
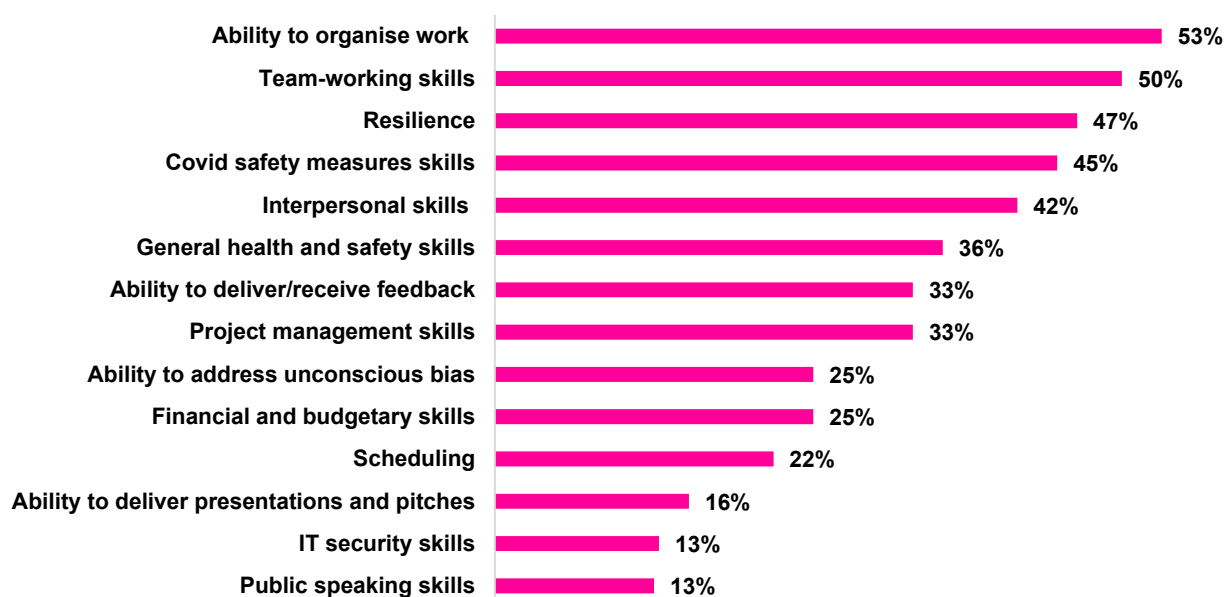
Skills gaps

Summary points
- More than half of the employer sample wanted better organisational (53%) and team working (50%) skills among junior level staff, as well as resilience (47%), understanding of Covid-19 safety measures (45%) and interpersonal skills (53%).   - In mid- and senior-level workforce/crew, employers saw interpersonal skills as the main priority (49%), followed by the ability to manage and support teams/crew remotely or in person (43%), Covid-19 safety measures skills (42%) and mentoring skills (41%).   - Employers interviewed noted high levels of adaptability and flexibility among their staff (PAYE and freelance) in responding to changes in working practices or environment caused by the pandemic.   - Almost half of employers interviewed reported having an increased awareness of the importance of valuing, trusting and looking after people since the Covid-19 pandemic, further echoing the importance of so-called soft skills.   - Workforce respondents noted joint top skills needs (35% each) as financial and budgetary, and public speaking, followed by ability to organise work (31%), resilience (28%) and ability to deliver presentations and pitches (28%).

Employers and hirers were asked to identify which skills they would like to see boosted in their junior workforce or crew. More than half of the employer sample identified organisational (53%) and team working (50%) as areas of improvement, followed by resilience (eg perseverance and flexibility in solving problems) (47%), understanding of Covid-19 safety measures (45%), and interpersonal skills (53%). This may point to an increased need to deploy innovative organisational- and problem-solving skills to tackle challenges such as remote working and Covid safety that the pandemic has generated.

Figure 15 Which of the following skills would you like to see improved in the junior-level workforce/crew you work with? (employers and hirers)

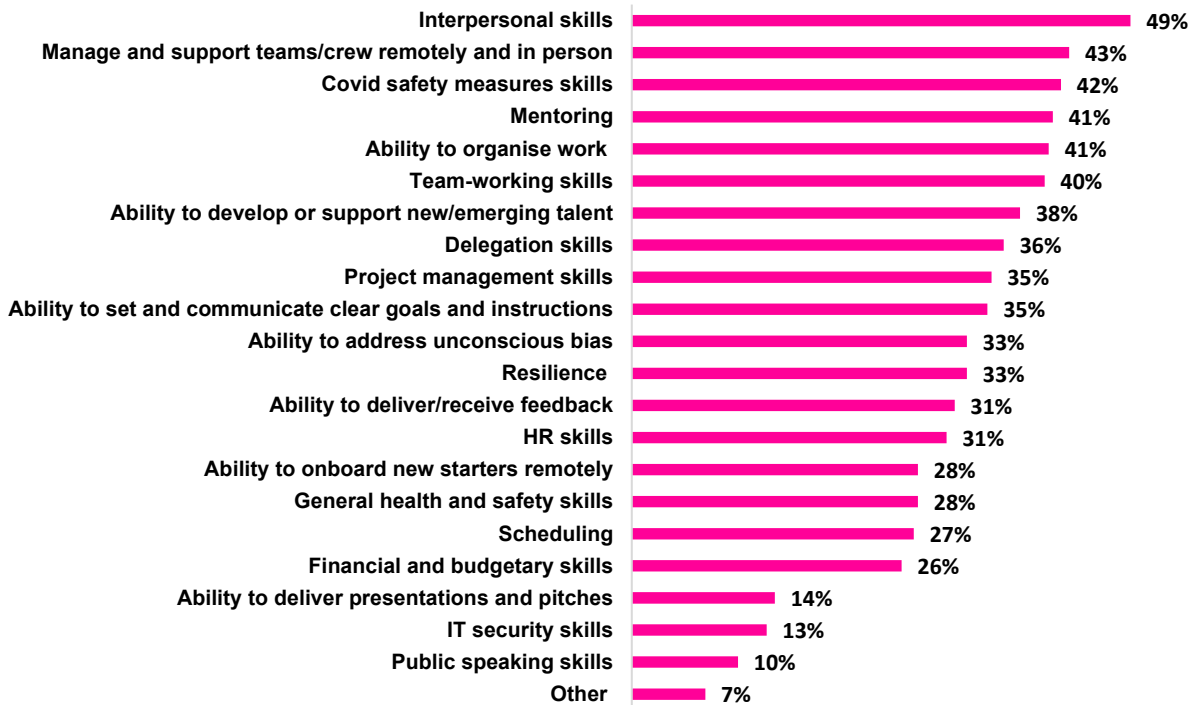| Skill	%
Ability to organise work	53%
Team-working skills	50%
Resilience	47%
Covid safety measures skills	45%
Interpersonal skills	42%
General health and safety skills	36%
Ability to deliver/receive feedback	33%
Project management skills	33%
Ability to address unconscious bias	25%
Financial and budgetary skills	25%
Scheduling	22%
Ability to deliver presentations and pitches	16%
IT security skills	13%
Public speaking skills	13%

Sample: 251
Source: 2021 ScreenSkills Assessment Survey
Note: percentages do not add up to 100% as the question allows respondents to select multiple options

Respondents were also asked to identify the skills they would like to see improved in the mid-and senior-level workforce/crew they work with. Interpersonal skills were identified as the main priority within the sector by just under 50% of the employer sample, which was echoed by employers interviewed as part of the qualitative fieldwork. Surveyed employers also stressed the importance of improving the ability to manage and support teams and the crew either remotely or in person (43%), Covid-19 safety measures skills (42%), and mentoring skills (41%). The ability to organise

work and teamwork skills were identified as a priority by 41% and 40% of the survey sample. Indeed, the disruptive effect of the pandemic on working practices has been a stress test for many companies. Organisational and team-working skills are seen as key ingredients to the effective delivery of complex projects.

Figure 16 Which of the following skills would you like to see improved in the mid- and senior-level workforce/crew you work with? (employers and hirers)

Sample: 251
Source: 2021 ScreenSkills Assessment Survey
Note: percentages do not add up to 100% as the question allows respondents to select multiple options

Finally, 38% of the sample felt that mid- and senior-level workforce and crew should improve their ability to develop and support new and early career talent. This was reiterated by interviewed employers, with almost half of them reporting increased awareness of the importance of valuing, trusting, and looking after people. This requires good 'people skills' and could account for some of the skills gaps employers surveyed are seeking to fill, such as interpersonal skills, mentoring, developing talent and HR skills. Examples given included: recognising the capability of and showing trust in your team; staying mindful of people's home situations and giving the support they need; sharing knowledge and information (within and between companies); and working to retain good people.

Figure 17 presents skills gaps that need improvement as perceived by the workforce. The top two skills are financial and budgetary, and public speaking, both considered as priorities by 35% of the surveyed workforce. These are followed by the ability to organise work (31%), resilience (28%), and ability to deliver presentations and pitches (28%).

The difference between the skills priorities as identified by employers compared with those among the workforce are difficult to explain. According to McGuinness & Ortiz (2016), many variables could play a part. There could be a mismatch between workforce competencies and employers' awareness, whereby employers may be underestimating existing skills and the workforce may overestimate their abilities or fail to recognise skills gaps that are essential to the company; or companies may lack the necessary processes or the people to deal with workers' skills needs. It could also be due to employees' propensity to identify skills gaps that reflect their future aspirations rather than what is needed to perform their current job role. In sectors that rely heavily on self-employed labour, the type of training needed very much depends on freelancers' individual

perceptions. Conflicting opinions on what skills should be improved and what training should be prioritised may hinder effective workforce development. The views of both employers and the workforce may need to be taken into account to develop skills initiatives that meet all demands.

Figure 17 Which of the following skills do you think you should improve? (workforce)

Skill	%
Financial and budgetary skills	35%
Public speaking skills	35%
Ability to organise work	31%
Resilience	29%
Ability to deliver presentations and pitches	28%
Covid safety measures skills	27%
Project management skills	24%
Ability to manage and support teams/crew	24%
Interpersonal skills	22%
Ability to address unconscious bias	22%
Ability to deliver/receive feedback	20%
Mentoring	19%
Team-working skills	18%
IT security skills	18%
Delegation skills	17%
Ability to set and communicate clear goals and instructions	16%
General health and safety skills	16%
Ability to develop or support new/emerging talent	15%
HR skills	12%
Ability to onboard new starters remotely	9%

Sample: 774
Source: 2021 ScreenSkills Assessment Survey
Note: percentages do not add up to 100% as the question allows respondents to select multiple options

Training and development

Summary points

- **64% of the employers surveyed said they were planning to organise future workforce training and the remaining 36% were not.**
- **Of those planning training, the majority (60%) will target freelancers, followed by payroll employees (54%), trainees (41%), and interns (22%).**
- **Use of online Covid-19 safety awareness training was widely reported by interviewed employers representing screen sectors that had continued or were due to restart an element of physical production, with most using ScreenSkills' free e-learning module, Coronavirus basic awareness on production.**
- **Remote and online training delivered by a third party was favoured by the majority (60%) of employers at the time of survey. 60% would like to see a mix of both remote and in-person training once the acute phase of the pandemic subsides.**
- **Among employers interviewed, the type of training preferred depended on the type of skill being developed, eg practical craft and technical skills being taught in-person, but theoretical and soft skills being taught online.**
- **The majority of employers surveyed (71%) would rely on ScreenSkills to deliver training.**

As part of the qualitative interviews, participants were asked whether they had taken any steps to help keep skills in their workforce up-to-date during the Covid-19 pandemic. While there was no clear consensus, the most commonly reported action was requiring PAYE and freelance staff to undertake online Covid-19 safety awareness training, with ScreenSkills' Coronavirus basic awareness on production e-learning module most commonly cited. Perhaps unsurprisingly, this response was given by those employers representing screen sectors that had continued or were due to restart some element of physical production - children's TV, film, games, high-end TV, other scripted TV, and unscripted TV. Also of note among respondents from sectors working in physical production was the need to offer mental health awareness training for staff to help them manage the additional stresses and challenges caused by the pandemic.

Looking ahead, our survey asked employers if they were considering arranging any training or development over the next 12 months. As shown in Figure 18, 64% of the sample said they were planning some form of workforce training, whereas the remaining 36% said not. This remains similar to 2019 (ScreenSkills and Work Foundation, 2019).
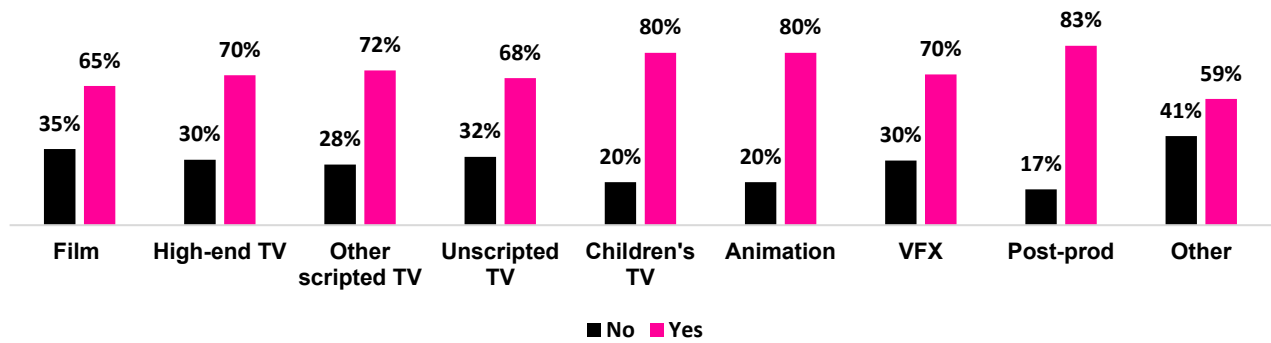
Figure 18 Are you planning to arrange any training or development, over the next 12 months? (employers and hirers)

Sample: 143
Source: 2021 ScreenSkills Assessment Survey

If we disaggregate data for each sector, post-production (83%), animation (80%) and children's TV (80%) are the sectors with the highest percentages of employers with plans to arrange training over the next 12 months. The sectors whose employers are less likely to develop workforce training are film (35%), unscripted TV (32%), VFX (30%), and high-end TV (30%).

Figure 19 Are you planning to arrange any training or development, over the next 12 months? (by sectors)

Sample: 143
Source: 2021 ScreenSkills Assessment Survey

Respondents were asked which groups they were planning to arrange training or development for, over the next 12 months, with the majority (60%) targeting freelancers, followed by payroll employees (54%), trainees (41%), and interns 22%.

Figure 20 For which of the following groups are you planning to arrange training or development, over the next 12 months? (employers and hirers)
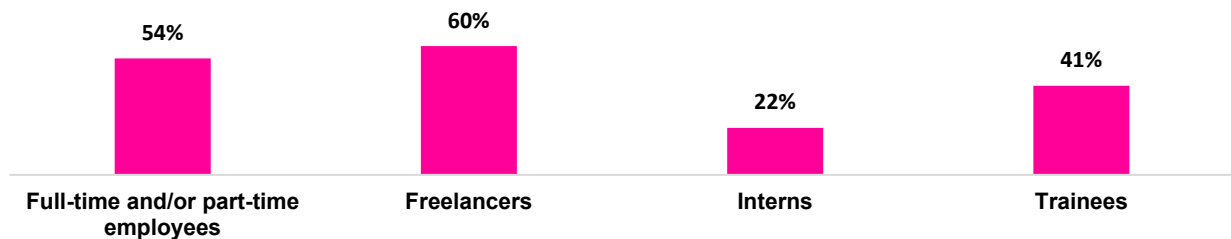
Sample: 87
Source: 2021 ScreenSkills Assessment Survey
Note: percentages do not add up to 100% as the question allows respondents to select multiple options

We then asked respondents what type of training would have been most suitable to tackle shortages and gaps within the workforce at the time the survey was run. As shown in Figure 21, 60% of employers favoured remote and online training delivered by a third party. Around 47% of the sample opted for informal on-the-job training such as job shadowing, with 38% preferring quick forms of development such as LinkedIn or e-learning and 32% selecting more traditional in-person training.

Figure 21 What types of training or development would best help you cope with current gaps and shortages? (employers and hirers)
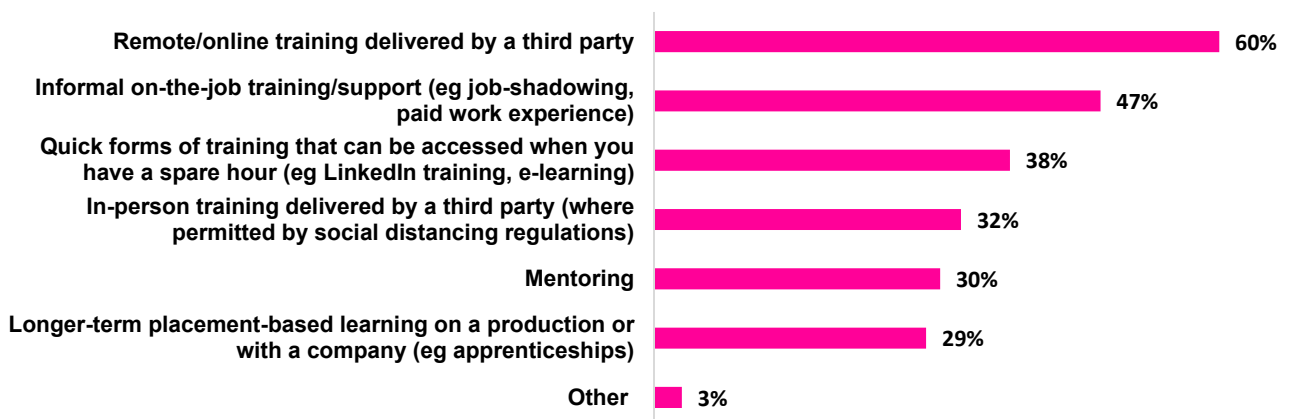
Sample: 136
Source: 2021 ScreenSkills Assessment Survey
Note: percentages do not add up to 100% as the question allows respondents to select multiple options

Furthermore, we asked respondents what kind of training they would prefer once the more acute phase of the pandemic subsides. In this context, 60% of the sample would like to see a mix of both remote and in-person training, followed by 27% of sampled employers who expressed their preference for online training and a small 13% who opted for in-person.

Figure 22 Once the more acute pressures of the pandemic subside, and we adapt to the 'new normal', how would you like training to be delivered? (employers and hirers)
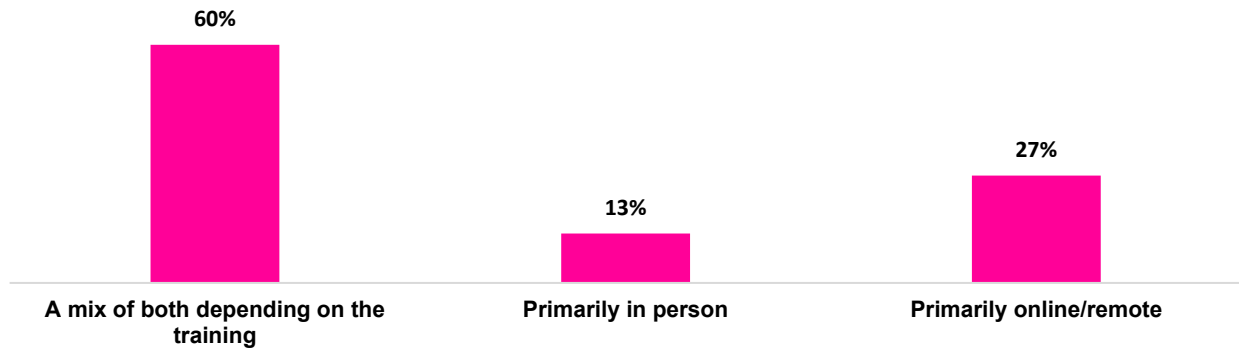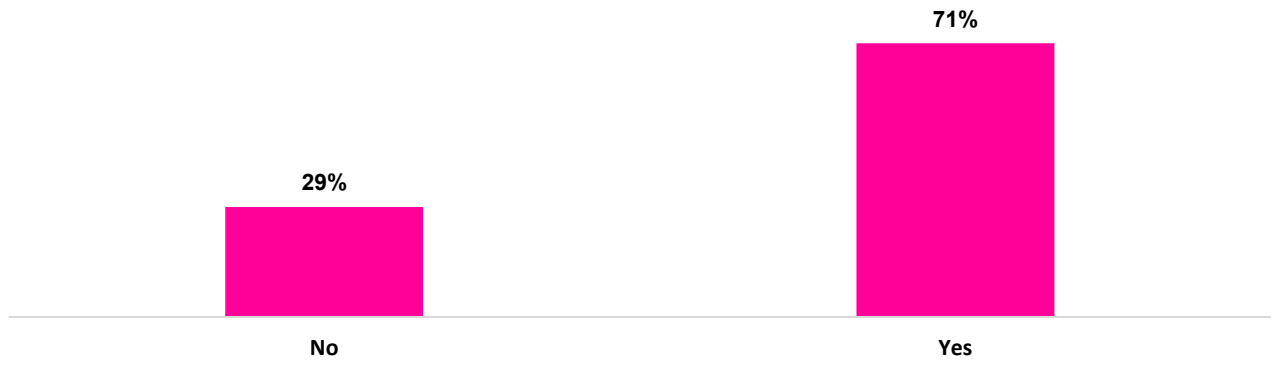

Sample: 136
Source: 2021 ScreenSkills Assessment Survey

Responses from the qualitative sample largely corroborate the survey findings and give some depth to the preferences expressed in the survey, suggesting that the type of skill that needs developing determines the kind of training preferred. For example, several employers reported having moved leadership and management training online with no detrimental effect and, as a result, were planning to maintain this approach. Those seeking craft and technical skills courses, such as lighting or camera, were keen for in-person training, feeling that hands-on learning with an instructor present was key to successful skills development. Some interviewees said that while they did not generally mind where in-person training took place, ie they were willing to travel, they had also come to value the accessibility and often' short bursts' nature of online training, enabling staff to fit discrete modules or masterclasses more easily into their schedules. Employers from 2D and 3D animation and games said online learning was already common among their creative and technical teams and therefore their training preferences or ability had not been changed by Covid-19. Interviewees also noted that offering online training in short modules or as masterclasses (either live or recorded) had increased the level of engagement with learning and development among the workforce across sectors including 3D animation, children's TV, film (exhibition) and unscripted TV. However, caution was also expressed that online training should not be seen as a catch-all solution for the long-term.

Interviewees emphasised the need to break soft skills training down into specific relatable scenarios to achieve more effective learning. For example, instead of generic communication skills training, particular topics such as how to communicate a creative brief or how to give and receive feedback should be targeted. Moreover, tailoring the training to different career stages would help employers and staff identify the training to best meet their need. For example, leaders and managers might need to improve aspects of communication such as delegating, whereas members of their team might need to focus more on developing effective peer-to-peer communication.

Finally, Figure 23 indicates that the majority of employers (71%) would rely on ScreenSkills to deliver the training while 29% would look elsewhere.

Figure 23 Would you rely on ScreenSkills to deliver the training? (employers and hirers)

71%

29%

No

Yes

Sample: 136
Source: 2021 ScreenSkills Assessment Survey

Future of screen

Summary points

- **69% of employers surveyed believe remote working will be the most significant trend to endure beyond Covid-19 lockdown restrictions, followed by increased use of remote communication (59%).**
- **Increased remote working is likely to enable hiring from a wider geographical pool, according to 54% of employers.**
- **Almost half (47%) of the employer sample pointed to greater emphasis on work-life balance, one of the main challenges of working in film and TV.**
- **46% of the employer sample thought that by 2026 the sector will be deploying more environmentally sustainable practices, possibly linked to reduced travel for work, which was identified by 45% of the sample.**
- **39% of employers and 40% of workforce in the sample cited increased use of virtual production as a likely change.**
- **Use of remote-working tools and technologies have become prevalent, but interviewees argued the UK needs strong telecoms infrastructure and connectivity to make this an enduring change.**
- **Lessons learned for the future include embracing new technical solutions, avoiding business complacency, maintaining greater empathy, and working more collaboratively as a sector to tackle common challenges.**
- **Half of employers interviewed thought that, overall, the Covid-19 pandemic has helped to create or influence a fairer work culture for the future.**

The final section of this study explores what the screen industries will look like over the next five years, from the perspective of employers and their workforce. It considers shifts in general working practices, as well as the technologies that may drive or facilitate change.

Changes to the working practices

According to employers who responded to our survey (Figure 24), the most significant trend likely to endure when lockdown restrictions are lifted is increased remote working, followed by increased use of remote communication. The in-depth interviews corroborated these findings, with employers proactively exploring ways of facilitating this change. One employer said:

> *"We've now hired an internal communications manager. We were considering it prior to the lockdown, but this reinforced the need and actually it's been a great time to have somebody to look purely at how we can improve internal communication and work with our managers to help them better communicate with remote teams."*

Following these trends, 54% of employers thought that remote working will allow them to hire from a wider geographical pool. This was confirmed by three employers (animation, games, and VFX) consulted as part of the qualitative interviews, who noted that the increased uptake in remote working had made them more open to hiring talent from a wider geographical area, including overseas. While looking further afield for talent was not unusual for them, hiring talent from afar without requiring them to relocate was a shift. As noted by one 3D animation employer:
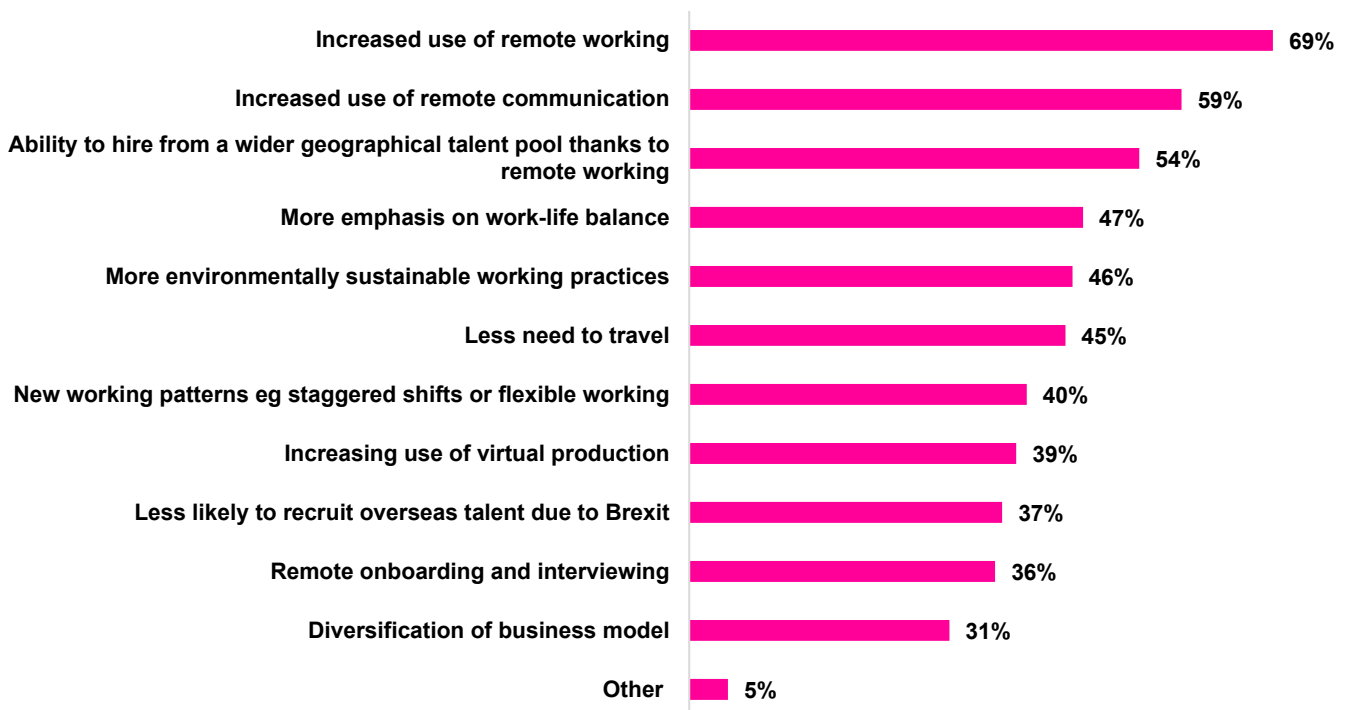
> *"Now everyone's remote working, it doesn't really make that much of a difference where people are based, if they're based in London or in Barcelona."*

Although this may indicate that employers are open to hiring internationally, the need to meet regulatory requirements for employing staff based overseas may temper international recruitment, especially considering Brexit.

The next important factor, cited by 47% of the sample, was a greater emphasis on work-life balance, which is considered one of the main challenges of working in film and TV. A recent study by the Work Foundation (2020) found that 78% of surveyed film and TV workers struggle to strike a balance with commitments outside of work, compared to 27% in other industries. Combined with long hours, this may contribute to the mental health issues in the sector. However, interviewees conducted as part of our research stressed that the pandemic had facilitated more empathetic relationships and increased tolerance among colleagues as well as a more people-focused environment. Many emphasised the need to maintain this attitude going forward.

Around 46% of the sample thought that by 2026 the sector would be deploying more environmentally sustainable practices. A reduction in the need to travel for work, identified as a potential shift by 45% of the sample, may contribute to making the industry more sustainable.
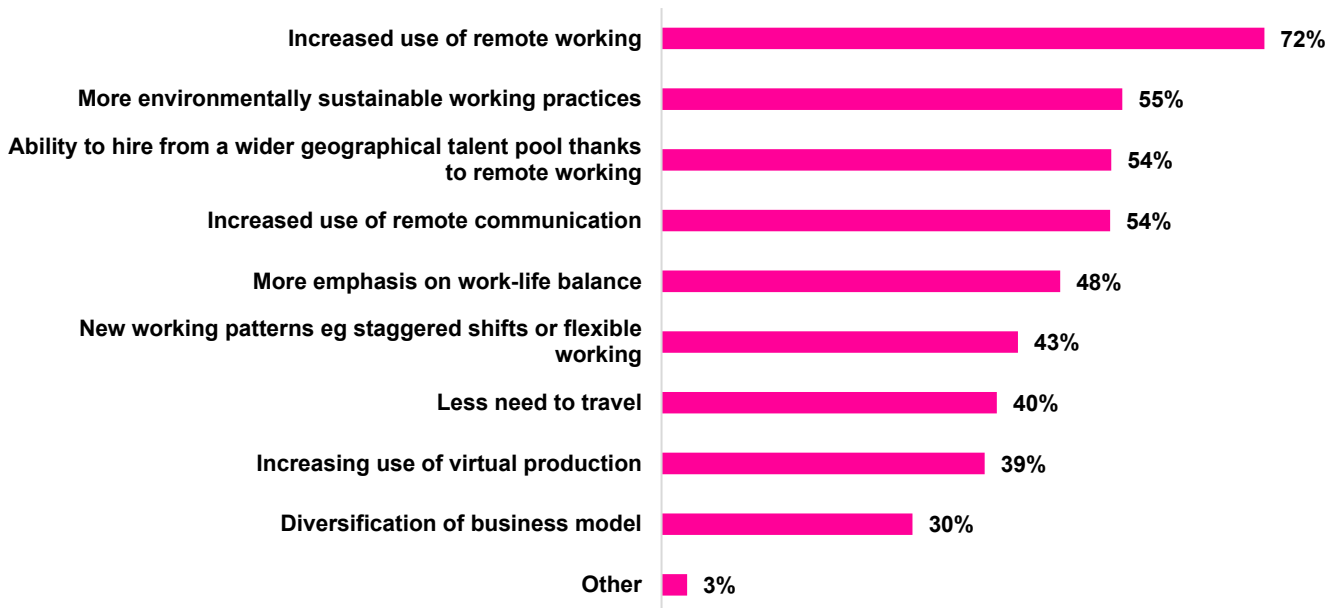
Figure 24 Over the next five years, what are the most significant changes that you think will affect the screen industries? (employers and hirers)

Change	Percentage
Increased use of remote working	69%
Increased use of remote communication	59%
Ability to hire from a wider geographical talent pool thanks to remote working	54%
More emphasis on work-life balance	47%
More environmentally sustainable working practices	46%
Less need to travel	45%
New working patterns eg staggered shifts or flexible working	40%
Increasing use of virtual production	39%
Less likely to recruit overseas talent due to Brexit	37%
Remote onboarding and interviewing	36%
Diversification of business model	31%
Other	5%

Sample: 239
Source: 2021 ScreenSkills Assessment Survey
Note: percentages do not add up to 100% as the question allows respondents to select multiple options

Figure 25, which presents the perspective of the workforce on the same matter, paints a very similar picture, although the workforce expects an even bigger shift towards environmentally sustainable working practices. The Albert, BFI, and Arup (2020, p.4) report on sustainability in film production published last year sets out a proposed sector-specific approach, stressing the need for collective action, saying: "Ultimately none of this will be achieved without leadership or a shared sense of responsibility." This was echoed by interview participants who stressed the need to work more collaboratively as a sector to tackle common challenges, from environmental sustainability to increasing diversity and entry-level recruitment.

Figure 25 Over the next five years, what are the most significant changes that you think will affect the screen industries (workforce)?

Category	Percentage
Increased use of remote working	72%
More environmentally sustainable working practices	55%
Ability to hire from a wider geographical talent pool thanks to remote working	54%
Increased use of remote communication	54%
More emphasis on work-life balance	48%
New working patterns eg staggered shifts or flexible working	43%
Less need to travel	40%
Increasing use of virtual production	39%
Diversification of business model	30%
Other	3%

Sample: 729
Source: 2021 ScreenSkills Assessment Survey
Note: percentages do not add up to 100% as the question allows respondents to select multiple options

Future technologies

More broadly, interview participants emphasised the need to be more proactive in embracing new technical solutions and innovations. To further expand on this, survey respondents were asked what they considered to be the most significant technologies that will affect their sector in the coming five years. Unsurprisingly, responses reflect the shifts in working practices identified, highlighting tools that enable and/or support the increased use of remote working and workflows, including the associated data transfer, storage, and security needs.

The increased use of technology to enhance, speed up or replace existing practices was suggested across a breadth of screen sectors and departmental functions, including applications of technology in craft and technical roles in physical production. As shown in Figure 26 and Figure 27, the increasing use of virtual production was identified as a driver of future disruption by 39% of employers and 40% of workforce that took part in the survey and was highlighted as one of the emerging technologies reported below. The crossover of skills between games, VFX and physical production (eg real-time engine skills) will need to be considered when planning future initiatives aimed at workforce development.

Figure 27 Over the next five years, what you think will be the most significant technologies affecting your sector? (employer and workforce)

Significant technologies affecting the future of screen
3D modelling software, scanning and printing (eg for costume, props and SFX make-up)
8k camera technology
Automated script animation
Cloud-based or other remote workflows (eg for editing, reviewing, directing and rendering)
Cloud-based storage and security
Digital sales and pitching tools and platforms
Drones
Fully remote-control lighting
Improved broadband and mobile networks, including 5G
Improved machine sewing technology
LED lighting panels
Machine learning/AI (for data-driven content)

Project and production management software
Real-time audio
Real-time render engines (eg for virtual production)
Remote working tools (eg for general working and specific processes such as online auditions and casting)
Remote communication tools
Streaming technology
VR and AR technology

Source: 2021 ScreenSkills Assessment Survey

There was consensus among survey participants regarding the extensive use of remote communications technology over the next five years. This was echoed by interviewed employers who gave examples of the tools they had adopted to help support remote working and which they felt would continue in use beyond the Covid-19 pandemic as they had shown it was possible to work effectively that way. The most common examples of systems used were Zoom, Microsoft Teams, and WhatsApp groups, with a minority mentioning Slack. Most said such collaborative tools were already in use in their company to some degree prior to Covid-19, but the pandemic had accelerated more extensive use as well as changing perceptions as to their value and effectiveness.

> *"There was always a question mark that at some point we may need to consider more remote working and embrace the tools to do it. Our exec team were resistant and felt everyone needed to be in the office. Even trying to get flexible working time was hard, we were very nine to five. What this has shown is that remote working can work and it's opened the execs' eyes to it."*

However, several employers interviewed also said the wider technological infrastructure in the UK needed to improve for remote working to be effective for the long-term. In the words of one respondent:

> *"It will take more than the actions of any single screen company. There's a question of infrastructure and connectivity and how much home internet connections can be relied on - it can sometimes simply be easier to go and work from a studio, office, or an authorised and equipped hub."*

Participants identified the use of 5G and the need to improve connectivity across the country as one of the key future technologies.

Conclusions

This assessment was shaped by Covid-19. It captures a snapshot of how the screen industries responded, evolved, and, in some cases, converged during this period in a way that provides useful signposts for supporting the screen workforce in the future. Even while this study was taking place, most areas of screen were taking steps to recover from the impact of Covid-19, supported by initiatives generated by the sector through the BFI's Screen Sector Task Force and UK government, including setting out codes of practice for working safely, establishing a production restart scheme to address insurance barriers and exploring the impact of Covid-19 safety measures on the cost of production. Such collaboration will continue to be important in developing the workforce as we move through and beyond the global pandemic. To contribute to that recovery and future growth, the following conclusions summarise our interpretation of the key themes that emerged from this atypical assessment:

Persistent shortages and future warnings

Industry continues to report skills gaps and shortages across a wide range of jobs and grades where there have been recruitment pressures for some time. With the 2019 ScreenSkills Assessment, we created the first baseline data on hard-to-fill vacancies in the sector, enabling us to gauge any progress made in tackling shortages. Caution needs to be exercised when comparing the two accounts, due to the unprecedented nature of the past 12 months. However, evidence from the 2021 iteration suggests that industry is facing new shortages, reflecting the fast pace at which industry is changing to adapt to new working practices and technologies, as well as historic ones that were identified in 2019 as well. Many factors are playing a role but the pace at which industry is growing is perhaps the one that contributes most significantly. In the first quarter of 2021, the combined total spend on film and high-end TV production was £878 million, the highest official Q1 figures on record (BFI, 2021). This level of growth drives an ever-increasing need for additional workers, which, when not satisfied, results in a rising competition to attract and retain workforce. Productions are increasingly scaling up in size and the need for larger teams is worsening labour shortages. This, combined with workers leaving the sector on a temporary or permanent basis, or entrants not pursuing a career in shortage areas, exacerbates shortages and could inhibit growth further down the line.

When exploring hard-to-fill vacancies, caution should be exercised in those sectors relying on largely freelance crew as the hiatus/restart scenario of the pandemic may have created shortages which would not have existed in a 'normal' year. It is important to try to distinguish between those shortages which are persistent and those that are new or temporary so that skills and training is targeted where it is genuinely most needed.

Among shortages reported in this study, production management dominates: first assistant directors, accountants and assistant accountants, production secretaries, coordinators and managers, line producers and location managers continue to be in demand across scripted production. Recruiting editors, researchers and series producers remains a challenge for unscripted TV, along with some of the production management roles.

Shortages of 3D and programming skills continue for games companies (though games are a very small sample in this study), while 2D and 3D animators, riggers and storyboard artists remain challenging for animation.

It is worth noting the emergence of difficulties in recruiting producer roles in post-production and VFX, along with engine coding skills in VFX and high-end technical operators for post-production. None of these are new roles, but they are likely to have been more in demand as a result of changes to working practices. If the shift in practices remains, then the shortages could move from short-term need to critical.

The newly created role of Covid-19 supervisor has been reported as a shortage area among film and high-end TV, but the role's place and function will evolve in line with the course of the

pandemic so ongoing need is harder to predict. The impact of Covid-safety roles on other shortage areas will require scrutiny as productions and workflow settle. For example, are Covid roles taking people away from other shortage areas such as locations and production office crew, thereby exacerbating those recruitment difficulties? Some interviewees also gave anecdotal evidence that new or recent entrants may have been seeking Covid safety roles as a means to gain experience and raised the question whether this was good for career and workforce development.

Further scrutiny should also be given to the impact of increased remote working on skills shortages. The ability for good communication between remote workers will be a key factor in determining whether this shift remains permanent.

Widely adopted working practices and their impact
Remote working and Covid-safety measures dominated working practices in screen during the period of the study and continue to do so.

Remote working was identified as the practice most likely to stay and the study highlighted the positive potential of this change including the possibility of increased workforce diversity and access to opportunities. However, it also indicated potentially limiting factors, such as the types of role for which it is viable, the impact it has on the creative environment and learning opportunities therein, and the collective response to its use. Onboarding remote workers has also presented challenges. The reality may be more blended working, with the level and type of flexibility afforded varying greatly according to different roles, companies, and sectors.

While there is little doubt that the use of - and confidence in - remote-working tools and processes has increased, respondents highlighted that effective communication skills are key to making them work. Gaps in communication and interpersonal skills are not new to studies of the screen workforce, but the pandemic has highlighted their importance at all levels, from entrants to executives. To realise the benefits of remote working may require giving these skills as much weight as technical and creative skills.

The newly formed job of the Covid supervisor and related Covid-19 safety roles, along with improved hygiene measures in the workplace, could have a place post-Covid in supporting more general virus and infection control among crews. The course of the coronavirus will dictate whether such health, hygiene, and well-being monitoring will require a dedicated role or whether Covid duties will merge with health and safety, production management and/or locations.

The desire to improve environmental sustainability remains strong among respondents and the innovation and flexibility demonstrated in the response to Covid-19 have indicated that new ways of working are possible. However, making the right choice is not always clear or easy. Budgets are stretched as many screen sectors recover from the impact of the pandemic. Covid hygiene measures remain for the time being, sometimes at the expense of sustainability, with chemical sanitisers and disposable face coverings at odds with green practice. Remote working can remove some harmful emissions by reducing travel, for example, while contributing to others, such as the energy demand of the industry, as noted in the Albert, BFI, and Arup (2020) report. Achieving sustainability meaningfully and successfully requires informed leadership and collaboration, to ensure that any changes adopted are genuinely the most effective.

Finding strength through uncertainty
Dealing with uncertainty proved a major challenge across the screen workforce. Some leaders and managers continued their roles without seeking additional support, but others reported the benefit of reaching out to share experiences and compare solutions, including talking with peers in otherwise competing businesses.

Interviewees indicated an increased need for – and, in some cases, recognition of - greater resilience in the workforce, but presented different definitions of what this meant, from meeting the

new demands of the workplace to future-proofing their career. Both may be needed to support industry recovery and continued growth.

Adapting new entrant training
Employers were very concerned about the hard-hitting impact of Covid-19 on new entrant opportunities, with warnings of short to mid-term repercussions.

As physical production returns to pre-Covid levels, the rich experience of learning on-the-job is also returning for new and recent entrants. However, more needs to be done to understand the lasting impact of changes to working practice - such as increased remote working and enhanced safety measures - on work-based induction and training to ensure that the volume and quality of opportunities can meet industry demand.

With respondents across screen sectors reporting similar concerns, the industry may benefit from taking more collaborative responsibility for developing new entrants, sharing practice and experiences. Whether lessons are captured from animation and games studios onboarding new entrants remotely, or film and TV productions bringing trainees on set, they are likely to offer valuable insights for all to learn from. As some interviewees commented, a way to consistently capture and share such insights would be valuable.

Understanding and valuing people
The study revealed differences in perceptions of skills gaps between employers and the workforce which will need resolving if priorities are to be identified and addressed. The freelance nature of much of the screen workforce may be a factor in these different perspectives. Improved communication on a company, production, and sector level may be needed to capture a more accurate picture of skills needs.

Also related to employer-workforce communication, the employers interviewed showed a strong sense of valuing people more as a result of the pressures of the last year. They recognised the importance of mutual reliance and trust with the workforce and a need for more effective HR skills. This encompassed compassion and empathy as well as competence in managing furlough, redundancy, and the impact of changed working practices on contracts and conditions. Respondents acknowledged that employers and the workforce need - and are entitled to - dedicated procedures and support to help manage the impact of change and challenge on people's work and home lives.

The adoption of new working practices may increase the need for stronger HR skills in a sector which, historically, has often operated without them.

Increased uptake in online learning
Online training has seen a surge in uptake from screen sectors but respondents reported that - like remote-working - it was not always the best solution, with in-person training still addressing some learning needs more effectively. It is recognised that no single delivery method is necessarily best for every situation; each has its own merits and a blended approach to training can sometimes be most effective.

Employer interviews highlighted the value and popularity among staff of short bursts of professional development provided online, from interactive e-learning modules to practitioner-led masterclasses and case studies. These also helped people feel connected over the last year, going some way to replacing the valuable networking elements of attending courses in person.

The Covid-19 pandemic presented training providers with a valuable opportunity to review delivery methods and explore a wider range of accessible solutions.

Emerging practice with potential to disrupt

As with remote working and online training, in-depth interviews uncovered that there was increased interest in virtual production. Respondents to the survey perceived it as one of the technologies that could most affect the screen industries in the future. Notwithstanding this, the extent to which it will be adopted, and its impact on production schedules, budgets, and creative considerations, are still being explored. Findings suggest that it has already triggered related skills shortages in VFX and is likely to influence future skills needs. As with other technology-based changes to practice, ongoing monitoring is required to build a clearer picture of how and when virtual production will change workforce needs.

Broader influences on the uptake of technology

Technology has come to the fore as a skills and workforce issue in this study, driven by changes due to Covid-19. The sector can address the new skills and improved communication required to make use of new technological solutions and choose to invest in the equipment and data bandwidth to support them. But this also relies on robust telecoms infrastructure, both at business premises and workers' homes, to achieve optimal remote working and workflow and this is not in the control of screen businesses. Investment in technology will have an impact on budgets for those adopting these practices, with the need for cost-benefit analysis more critical than ever if changes are to stay for the long-term. As some interviewees suggested, the sector may need to consider lobbying collectively for improved infrastructure right across the UK.

Workforce diversity remains critical

Most employers responding to this study considered that there had been no impact from Covid on diversity among the screen workforce, but there is no robust evidence to confirm that view as yet. There is no indication that sector-wide efforts to improve representation have eased, but there are concerns that the less advantaged may have found it harder to withstand the financial impact of the disruption to production.

Exploring how opportunities created by the pandemic - such as blended working and industry-led online learning - can also help tackle diversity should be encouraged and supported.

Priority actions

Having listened to the respondents who contributed to this study, we consider the most important priorities to support the screen workforce as industry adapts, recovers and continues to grow are to:

- Make targeted interventions to better understand and address persistent shortages, increase career progression and retention for those already working in shortage areas, and help skilled transferers from other sectors move into those roles.
- Work more collaboratively as a sector to tackle barriers to new entrant training and workforce retention, enabling clear ladders of progression.
- Improve communication skills, at all levels and across all sectors, to help facilitate more effective remote working and workflow practices.
- Support the integration of, or access to, HR skills and functions in screen businesses, particularly those that make extensive use of freelance workers and operate on a production-to-production or SPV[7] basis.
- Continue to embed workforce diversity and inclusion in all priority actions.
- Support employers and training providers in optimising the use of blended working and learning to help address persistent and emerging skills shortages.

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[7] Special purpose vehicle, also called a special purpose entity.

- Further scrutinise and monitor new and emerging practices, including Covid-19 safety roles/functions and virtual production, to better understand and address needs as they appear and evolve.
- Support screen businesses in identifying, planning and - where appropriate - lobbying for the required infrastructure to enable the full potential of remote working and workflows.
- Support the efforts to adopt environmentally sustainable practice through informed, collaborative approaches.

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