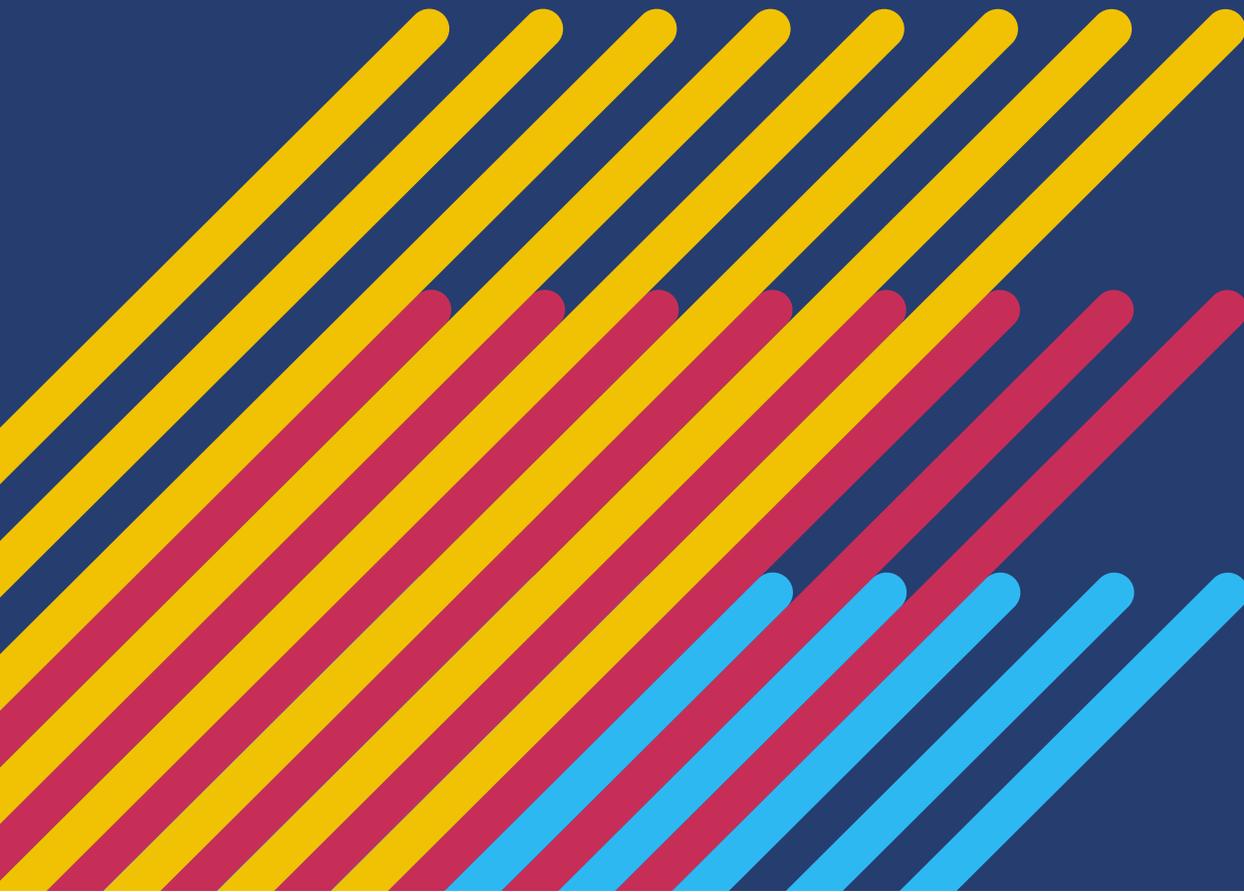




SURVEY REPORT:
**CONNECTIVITY
AND PRODUCTION**



Enabled by



Video everywhere

Cass Business School and Imagen predict that by 2019 80-90% of all consumer Internet traffic will be video: one million minutes of video a second.

The Internet is growing; and that growth is being powered by video. The creation and exchange of audio-visual content has become a human obsession. Increasingly sophisticated and affordable technology enables the creation; and increasingly pervasive and fast connectivity enables the exchange. These enablers mean the environment in which content is made, consumed and shared is being transformed. And all the signs are that this is just the beginning.

Organisations and individuals that have adapted to the changes – either by good planning or good luck – are thriving.

But good luck is not a viable strategy. The media landscape is more competitive than ever. Planning is required to ensure you have the creative and commercial edge. And that in turn requires an understanding of the role key enablers will play in the relentless growth in video.

No enabler is more key than connectivity.

The DPP connectivity survey

When we refer to connectivity we mean a service provided by a telecommunications company or an Internet service provider to allow you to connect devices to each other. Once connected you normally want to exchange something – be it a voice call, a file for transfer, a video to watch, or a web page to browse.

One definition of connectivity is therefore the ability to connect and exchange information.

At the request of its members, the DPP has recently begun to look into the role of connectivity in the media industry. There is a general perception that many who work in media – and particularly those in production – have a poor understanding of connectivity and what it can offer them. But is this true?

The DPP began its work on connectivity in 2015 with the publication of an introductory guide, *10 Things You Need To Know About Connectivity*.

“Connectivity is integral to our lives and businesses, acting like the blood supply to the vital organs that enable us to do what we do. Without it the broadcast industry couldn’t function.”

10 Things You Need To Know About Connectivity

The guide provided the information anyone in our industry would need to navigate their way through connectivity-related matters. You can read the guide [here](#).

But meanwhile we wanted to explore further the perception that production companies have a particularly rudimentary understanding of connectivity and the services it can enable. We wanted to ask: just how are production companies using connectivity in practice?

To find out, the DPP conducted a survey of production company Members.

The survey was launched at the end of January 2016, and concluded in early March. It was an in-depth questionnaire, consisting of 40 questions – with a mix of single choice and multi-select responses.

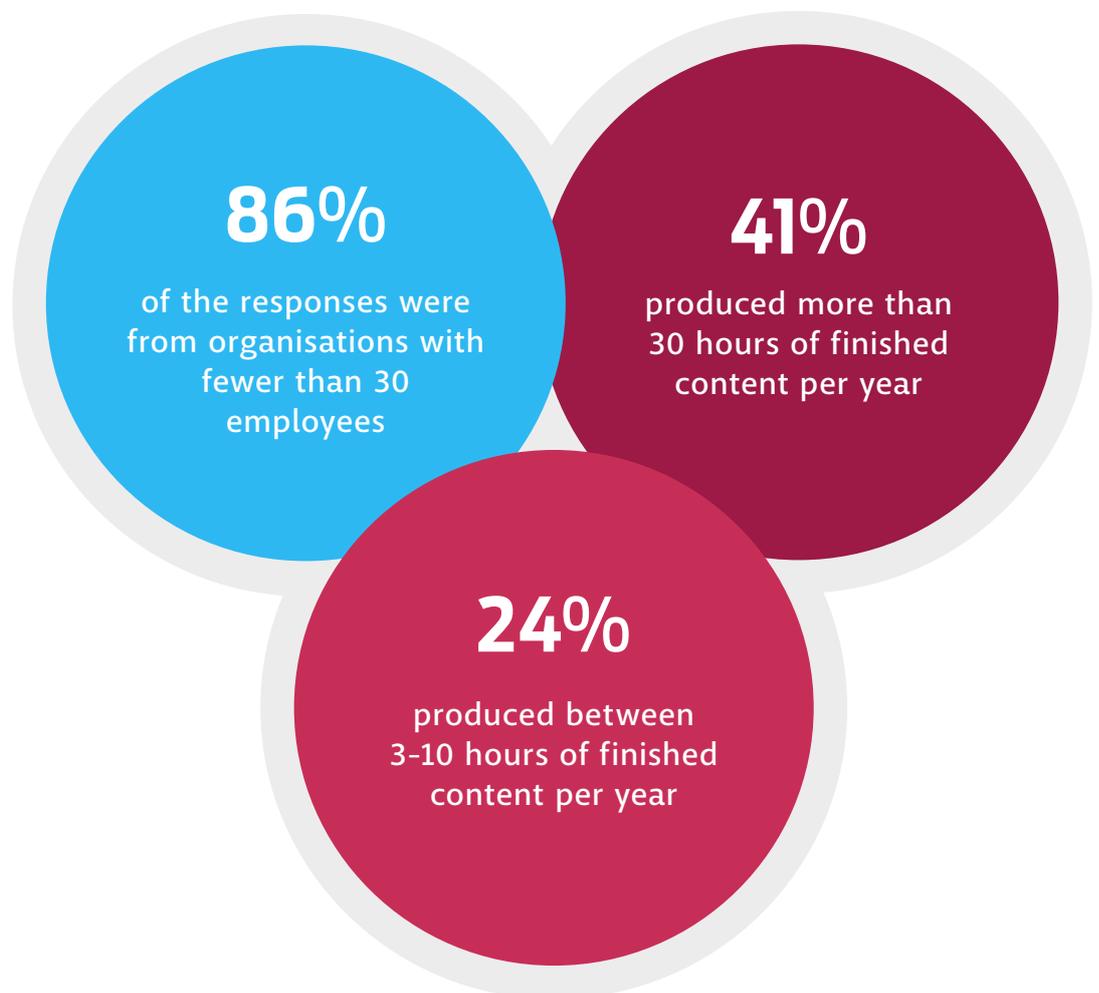
61 companies were approached and 29 (48%) completed the survey.

As far as the DPP is aware this response represents the most comprehensive such survey ever conducted with those working in television production.

The profile of respondents

The production company personnel that responded to the survey were equally split between users and managers of technology. Nearly 80% of respondents considered themselves well informed when it comes to connectivity. This high knowledge base of respondents is significant since it suggests the survey had successfully targeted an individual in the company with a good understanding of the questions being asked.

Despite the increasing number of super-indies in the UK, the typical independent production company continues to be relatively small. This is reflected by the survey:



How do production companies share content?

Early on in the survey we asked how companies share content. As the chart below shows, connectivity is now being widely – but by no means exclusively – used in the sharing of content.

FIGURE 1:

How do production companies share content?

ANSWERED: 29

Use connectivity (i.e. internet or a network)

97%

Hard Disk Drives (such as Lacie)

86%

Memory Cards

34%

LTO Tapes

24%

Video Tapes (e.g. HDCAM-SR)

24%

Don't transfer or share content

0%

Other

10%

As the table above illustrates, videotape is dying fast: it is now no more used than LTO data tape. But easy-to-use physical media, such as hard disk drives and memory cards remain popular. Our production members tell us this diversity of devices reflects the pragmatism required to overcome issues with connectivity. Disk, card and tape remain tried and trusted when connectivity is not available or reliable – especially on location.

So while the use of connectivity is almost universal, it's not the only means of sharing content. As we dig deeper in the next section we'll find that while connectivity is mostly employed to support the post-production process, disk is still preferred for content movement.

Is pragmatism creating inertia, and slowing down change?

The production community is clearly in transition, utilising connectivity where it can, but also heavily reliant on hard disks. It's a pragmatic response. But to what degree is that pragmatism creating inertia – and perhaps holding the industry back from accessing tools and services that could revolutionise the way it works? Connectivity is so much more than just a delivery method to move content from A to B. Connectivity empowers storage, archive, interconnection with numerous providers of creative services, as well as delivery to consumers. In short, connectivity opens up the media marketplace. But currently that marketplace is out of the reach of many of the production companies in this survey.

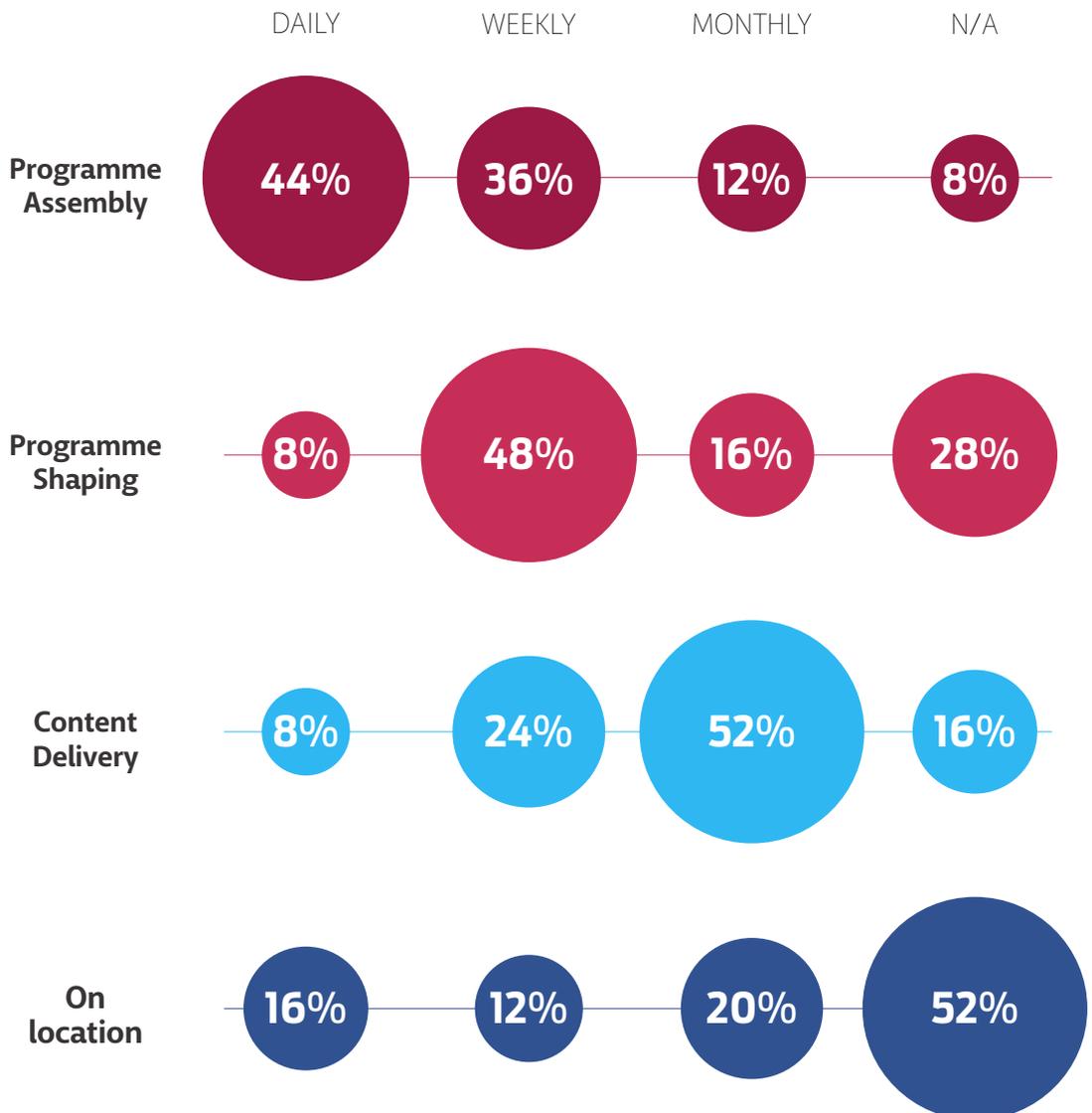
How do production companies use connectivity?

The survey asked a number of questions that probed whether and how connectivity is used in the day-to-day production environment.

FIGURE 2:

On average how often does your company share content for the following use cases?

ANSWERED: 25



In addition to the user cases above, respondents were also asked: 'If you are close to a deadline do you use your connectivity to transfer content to third parties?' Out of those who answered the question almost three quarters said they did use connectivity. But over half of companies who answered also used hard disk drives in these circumstances.

A picture is beginning to emerge of connectivity as an almost universally used office and facility-based tool that cannot be relied upon when on location. This is reaffirmed in *Figure 3* above, which shows that, for those who responded, connectivity is relied upon for standard production activities far more in the production office than when on location.

A picture emerges of connectivity as an almost universally used office and facility-based tool, but one that cannot be relied upon when on location.

On the face of it this finding merely reflects the real world: unless a team is working on location-based live output, which tends to bring with it facilities such as Outside Broadcast vehicles and satellite links, it is difficult for them to access adequate connectivity.

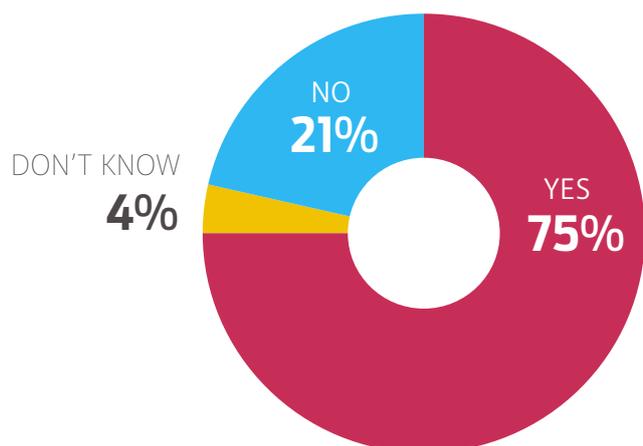
Some might say this just means productions are poorly informed, since there are field-based solutions such as bonded-cellular connectivity. But it would probably be more accurate to say that there are not well-understood and commonly agreed solutions to one of the most common production problems: field based connectivity.

The survey also confirmed that the content production business has become a global one, with 75% of those who responded reporting they transfer content internationally. When one considers that most of the companies profiled here are relatively small, this is a very striking illustration of how essential international production has become to running a business in the television industry.

FIGURE 4:

Does your company have to transfer content internationally?

ANSWERED: 28



The survey went on to ask how delivery to new content platforms such as YouTube, Netflix or Amazon has impacted connectivity usage. A third of our members reported that they don't deliver to these platforms. But – more significantly – nearly half responded that it had made connectivity more important for them.

It seems likely that in the next three years the growth in video on these and other platforms will drive major change in the production business model. The production community can expect increasingly to be tasked with balancing 'traditional' commissions for linear channels with commissions designed for Internet-only services. They will also be asked to make a greater diversity of content – from short form to long form to social media.

Half of respondents reported that supply to new content platforms such as YouTube, Netflix and Amazon had made connectivity more important for their business.

The greater speed of turnaround generally associated with Internet-based delivery may also prove to be a driver for the adoption of new tools and services for connected delivery and collaboration in the field.

What type of connectivity is being used?

When asked in detail what type of connectivity is used, both in the office and on location, it becomes clear that although production companies are increasingly using connectivity services, the adoption of professional sources of supply is slow.

FIGURE 5:

Do you regularly use any of the following types of connectivity?

ANSWERED: 29

● In main production office ● On location

Standard Broadband connection like you would get at home



Public access broadband - hotel wifi or similar



3G/4G Mobile connectivity



Satellite link



Dedicated managed service (e.g. private bespoke connection to a post production house or to a broadcaster)



Superfast Fibre Business Broadband - where download speed is greater than upload speed



Superfast Fibre Business Broadband - where both download and upload speed is the same



Don't rely on connectivity



Don't know...



As *Figure 5*, above, illustrates, just four respondents reported that they used a dedicated managed service provider for their connectivity needs in the office – and just one on location. We had expected to find far greater use of specialist managed service providers to support the media movement activities of a modern production company. (It's worth noting however that elsewhere in the survey we did find that over 80% of respondents use file transfer optimisation tools such as Signiant and Aspera. So we may be seeing a creeping adoption of specialist services.)

Just four respondents reported that they used a dedicated managed service provider for their connectivity needs.

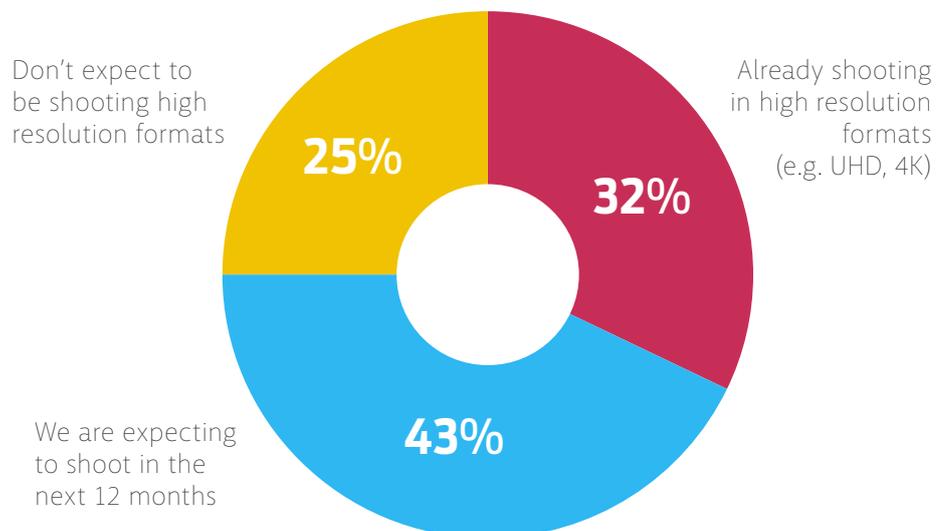
As the table on the previous page illustrates, a startling 50% of companies still rely upon consumer broadband for their offices. Not only does the use of consumer broadband (or of business broadband that is not tailored to media users) raise questions of quality of supply and service, but such services also tend to provide much faster download speeds than upload. This differential is unsurprising since consumers tend to do far more downloading than uploading. In a TV production office it becomes a problem however if one is trying to send A/V content, as well as receive it.

Once on location, the public Internet and mobile connectivity are the services of choice for the vast majority. Perhaps surprisingly satellite services were hardly used by these companies – although that may reflect the genres in which they specialise.

FIGURE 6:

Does your company expect to shoot content in high-resolution formats?

SHOWING PERCENTAGE OF ALL RESPONDENTS



The quality of consumer broadband is increasing all the time of course. However the requirements of content makers are also becoming more and more exacting. When we asked the production companies we surveyed if they intended to shoot ultra high definition (UHD) content, only a quarter said they *did not*. The vast majority are either already shooting UHD or intend to do so in the next 12 months.

75% of respondents reported they are already shooting in UHD or will do so in the next twelve months. But how will their consumer broadband connections cope?

Just as the growing need to supply content to new, web-based distributors, may drive the need for more specialist connectivity supply among production companies, so might the creation of ever-higher resolution video. Although companies might manage to 'make do' with consumer broadband at the moment, they will not be able to do so if they wish to exchange Ultra High Definition content.

Connectivity supply

The survey makes it clear that when it comes to connectivity for content production, relationships between customer and supplier have not yet been well established.



Meanwhile from the supplier point of view, it seems production companies have such paradoxical expectations that it might feel hard to see where a dialogue would begin. *Figure 7*, below, suggests many companies find their office connectivity too slow and unreliable; yet *Figure 8* suggests most companies feel their connectivity provision meets their needs quite well!

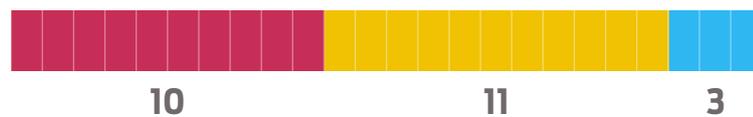
FIGURE 7:

What are the problem areas with your connectivity?

SHOWING NUMBERS OF RESPONSES

■ IN MAIN OFFICE ■ ON LOCATION ■ OTHER PARTNER SITES

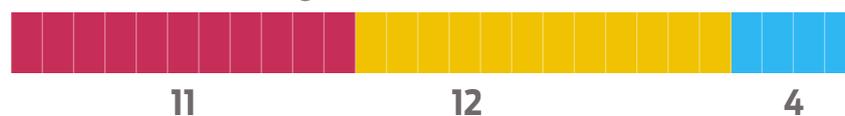
Reliability of the network



Speed of the network



Volume of content being sent



Cost of the network

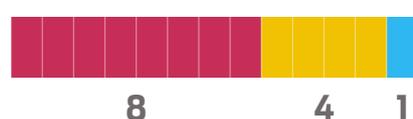


FIGURE 8:

Does the connectivity that you have in your office meet all of your needs?

ANSWERED: 29

Doesn't meet any of our needs

0

Barely meets our needs

2

Only meets part of our needs

8

Meets most of our needs

10

Fully meets all of our needs

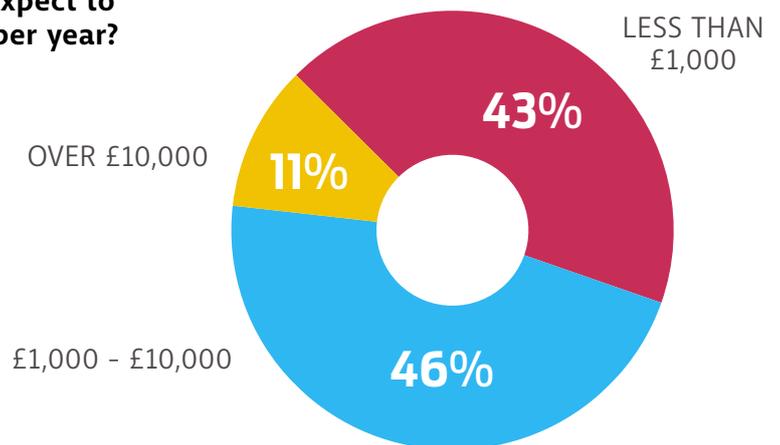
9

When it comes to how much companies are prepared to spend on connectivity, nearly half of respondents aim to spend less than £1,000 per year on connectivity; a similar number expect to spend between £1,000 and £10,000; and three companies expect to spend more than £10,000. Elsewhere in the survey, 54% of respondents reported they don't factor connectivity costs into their production budgets.

FIGURE 9:

How much would you expect to spend on connectivity per year?

ANSWERED: 28



The conflicting messages offered by these findings suggest a community struggling to come to terms with the reality of the changing needs of their business: they know they need better connectivity; they know it will cost them more; but they don't want to pay – most probably because they live from project to project, and connectivity has no budget line.

The last couple of years have seen significant developments in the connectivity-related tools and services available for production companies. But with nearly two fifths of respondents having had the same provider for the last five years, and a similar proportion still hoping to spend no more than £1,000 a year on their service, those innovations remain inaccessible.

The conflicting messages offered by these findings suggest a community struggling to come to terms with the changing needs of their business.

It is as if many production companies are operating in a connectivity time-warp: a connectivity solution fit for 2011 is unlikely to be suitable for the demands of 2016.

It is evident that – for whatever reason – the engagement between suppliers and the production community is not well developed. As the table below illustrates, an effective discussion between supplier and customer had only taken place on around a quarter of occasions when production companies chose their connectivity options. But on the other hand, around a third of production companies did not even seek such a discussion.

Clearly there are challenges for providers in establishing a common dialogue with prospective production companies; so it is possible that some production companies are unaware of the services they could now be receiving.

However it is hard to start a conversation with someone who has the expectation it will be difficult.

FIGURE 10:

How easy was it to choose the right connectivity option from your suppliers?

ANSWERED: 26

Supplier understood the needs for production office and/or for the location and tailored the connectivity offer

24%

Supplier understood the needs but offered a standard option

28%

Supplier didn't understand needs

3%

Ordered without any supplier discussions

34%

FIGURE 11:

How easy is it to make changes to your connectivity service?

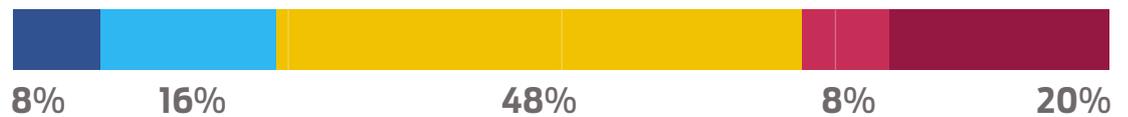
ANSWERED: 27

■ EASY ■ VERY EASY ■ SOMEWHAT DIFFICULT ■ DIFFICULT ■ VERY DIFFICULT

Ease of changing tariff/service options



Termination of contract



Migration to another service provider



As *Figure 11*, above, shows, almost 80% of respondents considered it difficult to switch suppliers, while the termination of a contract is viewed as almost as hard. Once again, such concerns may be creating inertia that is preventing production companies from enjoying the benefits of new services from new providers.

The perceived difficulty of changing suppliers may be preventing companies from enjoying the benefits of new services from new providers

In response to another question, 10 out of 29 respondents stated that flexible bandwidth was the key feature they are waiting for – but few knew that suppliers already offer this feature now. There is also a demand for contract flexibility – yet, once more, there are far more options in this area than would have been the case a few years ago.

How good is the current quality of provision?

Many companies are experiencing problems as a result of their current connectivity provision.

FIGURE 12:

Have you experienced any of the following?

SHOWING PERCENTAGE OF ALL RESPONDENTS

Lost content

14%

Stolen content

7%

Corrupt content

46%

Inaccessible content

29%

We've never had any of these issues

46%

Other

4%

While a significant proportion of companies had not encountered issues that related directly to the quality and availability of their content, more than half had: corrupt, stolen, lost or inaccessible content would appear, on the face of it, to add up to connectivity provision that is not fit for purpose.

More than half of production companies had experienced corrupt, stolen, lost or inaccessible content as a result of issues with their connectivity.

In practice of course further investigation would be required to determine the exact reasons for these issues – some of which may not relate to connectivity provision at all. But nevertheless it is clear that many companies experience challenges with exchange of digital content. Even two years ago production companies did not need to consider storing content. But now such activity is commonplace, and the potential for significant issues is much greater. The most effective mitigation would appear to be more professional provision.

When asked if security was a concern, we found that out of those that answered, 84% of responses ranged between 'no concern' and 'some concern' – with only 16% having serious or growing concerns. This may be one of the most surprising findings from the survey, and may indicate that many companies feel they literally cannot afford to think too hard about security when they have so many other day-to-day pressures around connectivity. However this may also be the strongest evidence of all that those companies are living in denial about what is required to work effectively in a connected age.

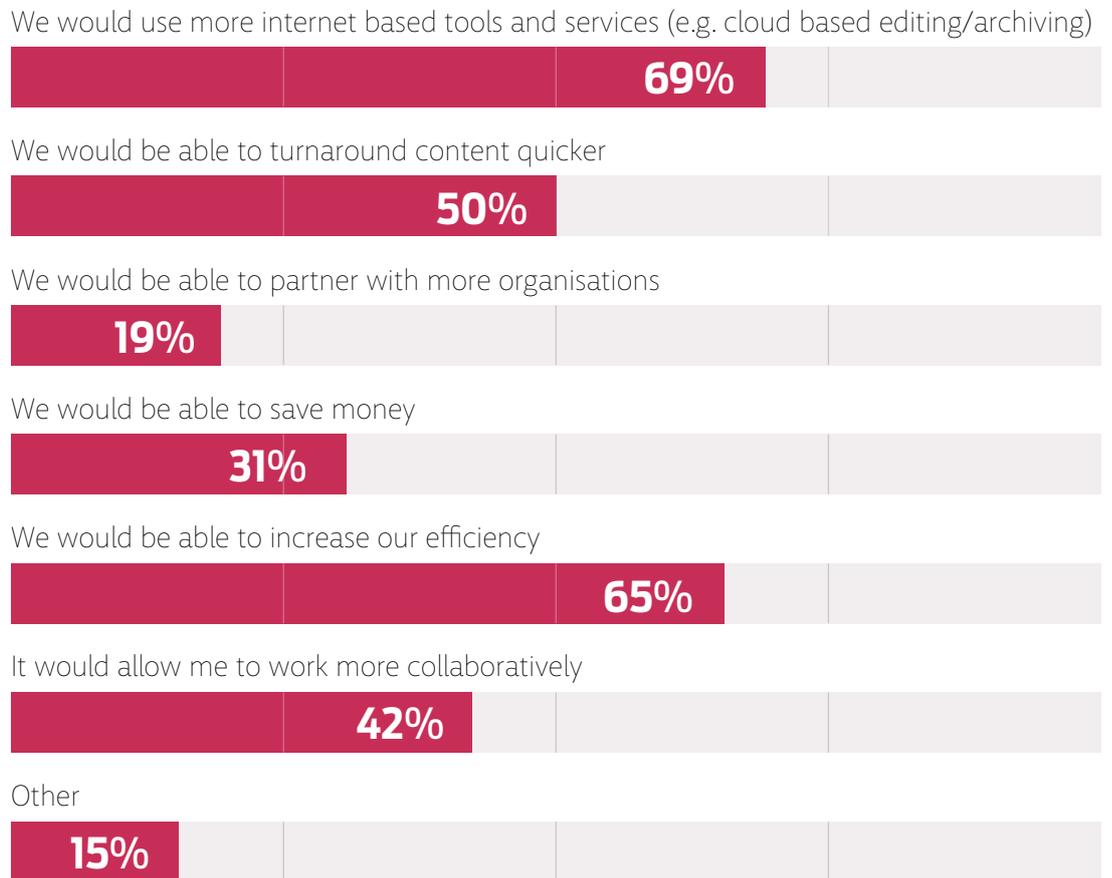
Opportunity

Having invited respondents to consider problems and issues, the survey then turned to the positives: what impact would faster, cheaper and more reliable connectivity have? 'Cheaper' is a tricky term of course. The cost of connectivity, and of associated services, is constantly falling: customers can get more for less. However cash-strapped indies may understandably interpret 'cheaper' as simply meaning 'costing me even less than my current provision'!

FIGURE 13:

What would the impact be for you if you had access to faster, cheaper, more reliable connectivity?

SHOWING PERCENTAGE OF ALL RESPONDENTS



This caveat about 'cheaper' notwithstanding, it is clear from the table above that respondents can see the potential for faster turnaround, greater efficiency, and the use of new creative tools via improved connectivity. In short, they fully understand that the use of new Internet and cloud enabled tools and services is dependent on having the right connectivity in place.

But even if a company recognises that appropriate connectivity is essential, and that it can provide a competitive advantage, it's not always easy to put that connectivity in place. The barrier may be cost, or a lack of expertise. But more often than not, it's simply down to location. Even the best suppliers can't provide good connectivity to offices that are in areas of poor network provision.

Most production companies see better connectivity as a route to the use of more Internet-based tools and services.

One answer to this problem would be for production companies to locate themselves in areas of fibre provision – and better still in buildings that already have high-speed connectivity. It could suit the business model of an independent production company far better to buy connectivity from their landlord, as part of their service fee, than to buy from a supplier. And equally it could suit the supplier better to provide for a building rather than a tenant.

But when the survey asked if companies would consider changing offices for better connectivity, nearly 80% replied that they wouldn't. In many ways this finding is unsurprising: there is plenty of other evidence from the survey to suggest that although connectivity is gradually moving up the agenda as a business priority for production companies, it is not yet at the top of the list. And the choice of location of an office is generally the product of a complex array of factors – not all of which are entirely objective. Having said this, the decision by a production company to locate itself first and foremost to achieve a high quality, good value connectivity service might now be the smartest business decision it ever made.

Disconnection

When we asked if connectivity was meeting our respondents' needs, the answer appeared loud and clear: 65% said their provision met most if not all of their needs. Satisfaction, it seems, is high.

The paradoxes in this survey represent a perfect picture of an industry in transition – and a market with great opportunity

But then contrast this statement with many of the other findings in this survey, and a paradox emerges. The same respondents that claim satisfaction with their provision also report problems with the speed and reliability of their supply, issues of content loss and corruption, and an awareness that they could be more efficient and effective if their connectivity was better.

So how can satisfaction be high, when there is so much frustration with connectivity, and engagement with providers is so low? The answer is almost certainly that while production companies regard their ability to gain control over their connectivity as very low, the need nonetheless to use connectivity has led them to develop pragmatic and largely effective compromises.

In other words, while production companies can see the potential for change, they do not have the confidence in – or knowledge of – the market required for them to update their provision. They may also currently lack the motivation: they can still get by with what they have.

This love-hate relationship with connectivity offers a perfect picture of an industry in transition – and a market with great opportunity.

The ability to 'get by' is unlikely to last much longer. Just as consumers are rapidly converting to higher speed broadband to meet the reality of their media consumption needs, so it seems inevitable that professional content creators will convert to specialist providers to meet their media production needs.

And herein lies the market opportunity. To date, production companies have probably been looking at connectivity in isolation. In reality, connectivity can now be seen as part of a whole – a bundle of services enabled by being connected. In the consumer world connectivity is now bundled with TV subscriptions, mobile and landline phones, and data packages. Yet in the business world many continue to look at connectivity in isolation.

What is becoming apparent is that a more mature relationship is required between provider and supplier.

Providers of technology are partnering increasingly with service providers such as post production facilities, to offer a bundle of tools and services. When considered together, the budget for connectivity and the budget for tools and services become significant. On the one hand this new way of thinking may make it easier for indies to think differently about how much they spend; and on the other it provides an opportunity for service providers to offer fresh, alternative approaches to meeting their customers' media management needs.

It's becoming apparent that a more mature relationship is required between provider and supplier.

As the demand to consume content increases, content supply will need to change rapidly to match that demand. If that change does not come quickly enough, it is possible that the established production model will be disrupted by the arrival of new entrants who build their businesses from the outset on connected production.

In an industry with small margins, preparedness to choose a production office based upon network availability may make all the difference.

This DPP production was brought to you by **Ali Shah, Abdul Hakim** and **Mark Harrison**, with many thanks to our designer **Vlad Cohen** for making it look good. We'd like to give our special thanks to all the DPP production company Members who responded to our connectivity survey. The information they have generously provided will prove hugely valuable to the wider media community.

About the DPP

The DPP is the media industry's fastest growing business change network. Originally founded by UK Broadcasters the BBC, ITV and Channel 4, it is now a not-for-profit company with an international membership base drawn from the whole media supply chain – broadcasters and distributors to manufacturers and service providers, production to post production, trade bodies to educational institutions. The DPP harnesses the collective intelligence of that membership to generate insight, enable change and create market opportunity. For more information, or to enquire about membership, visit www.digitalproductionpartnership.co.uk.

About Zayo

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