

Cloud-connected video: The next evolution in video production.



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Consumption of video has been rising steadily for years, and that growth is accelerating. People in 2021 watched an average of 16 hours of online video per week —**a 52% increase in the last two years.**

Video is becoming a significant way for people to discover trends, learn new information, and communicate daily. That means video is more important for businesses than ever. In fact, 86% of consumers say they would like to see more video content from brands, and 83% of marketers who have used it say it generates leads. With the amount of video and the number of channels proliferating, brands need to start using more video in more ways.

Fortunately for video creators, at the same time that demand is rising, video production workflows are becoming more efficient. The evolution of smartphone technology has changed the video production paradigm to one where people can instantly share anything they record on a phone. This shoot-edit-share approach is now also possible for larger-scale projects through cloud-connected video production—the process of storing, managing, editing, rendering, and producing video content in the cloud.

One of the most advanced examples of cloud-connected video production technology is the Frame.io [Camera to Cloud workflow \(C2C\)](#). The first widely accessible cloud-acquisition tool, C2C creates high-quality, light-weight proxy files of video footage as soon as it's shot and automatically uploads the proxies to the cloud, making it possible for collaborators and stakeholders to see the footage within moments of capture—**from anywhere in the world**.

This kind of agility opens up production workflows in unprecedented ways, eliminating the gap between production and post and changing long-held assumptions about how video production works. New cloud workflows mean businesses can now create video content faster, better, and more efficiently than ever before.

We're at the start of a historic turning point in video production. The Hollywood studio think tank MovieLabs [estimates](#) that by 2030, video production and storage will take place entirely in the cloud, with cameras and microphones connected directly to it. With so much change and possibility, now's the time for video professionals to reevaluate their workflows and tools to take advantage of all the benefits the cloud provides.

This eBook explores the business and creative benefits of cloud-connected video production, from saving massive amounts of time and money to reimagining collaboration and creativity. Read on to learn how cloud-connected video production can transform your workflows and take your video production to the next level.



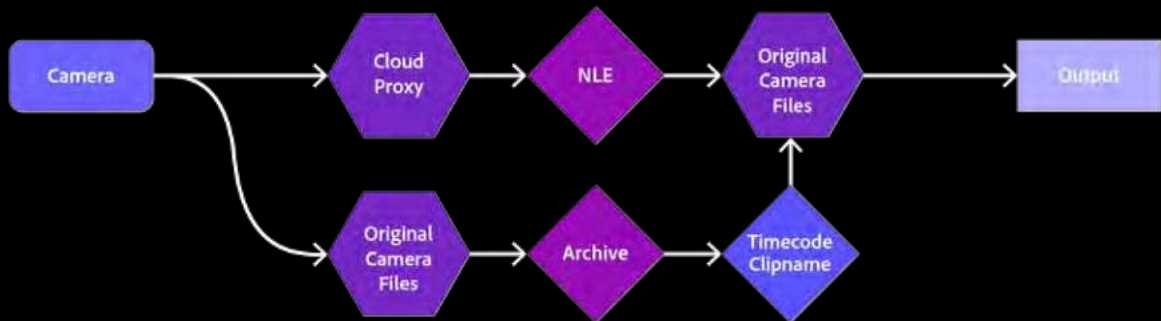
How cloud-connected video production works.

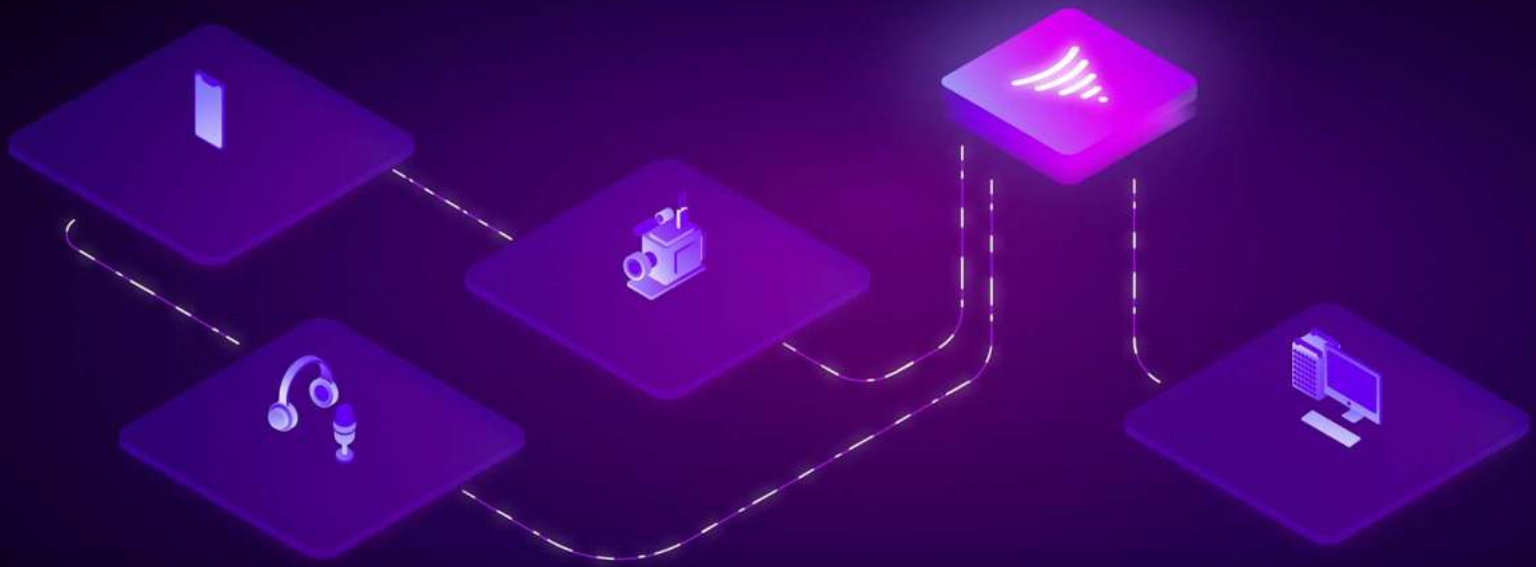
Over the past 100 years, two major transitions have changed how moving images are captured.

The first was the transition from film to tape, which enabled a non-linear, non-destructive editing process. The second was the transition from tape to digital files, which allowed smaller production crews to do what bigger Hollywood crews could do, only faster and cheaper. Workflows, however, have followed the same sequential steps from production to post-production that have existed for over a century. Cloud-connected video production is part of a third profound sea change that will influence production workflows in far-reaching ways.

Until now, transferring footage from a camera to post-production has been a time-consuming process that involves backing up large files and copying them to an external drive to be transported to a physical location. Cloud-connected production improves that workflow by automatically capturing and uploading proxies to the cloud as soon as the camera stops so footage is available for instant viewing and editing.

Proxy Workflow for Relinking





The implications of this change are vast, but the most basic is that where traditional workflows were sequential, cloud-based workflows can happen in parallel. For example, dailies have traditionally required overnight processing before they're delivered to the editorial team for review and shared with other stakeholders. But with cloud-connected video production, the editorial team no longer needs to wait until the next day to begin organizing footage and assembling scenes. Instead, editing can begin as soon as the first take is shot, and it can continue parallel to shooting throughout the day.

Shifting editorial tasks from the day after production to the day of removes bottlenecks and optimizes workflows in new ways, transforming how video production teams work and introducing new opportunities for innovation, efficiency, and creativity.

The benefits of cloud-connected video production.

While the potential long-term impacts of cloud video production technology on the industry are only starting to be understood, the immediate advantages are massive. Here are just a few of the ways cloud-connected video workflows can benefit your production process.

Save time and money.

Accelerate post-production timelines. When you don't have to wait for files to be downloaded, shipped, transcoded, and transferred, you can save a day or more in post-production time for each day of production.

Get every shot you need—and avoid unnecessary takes. Instant access to footage means you can assemble a rough cut by the end of a shooting day—so you can identify missing shots while the set and actors are still in place. On the flip side, it can also help you realize when you already have the footage you need and don't need to spend any more time on a particular scene.

Compress transcription workflows from days to seconds. Share proxy files with transcription services immediately, even before an interview shoot is over, to enable faster transcription and translation.

Use case

Making production adjustments in real time.

In 2021, cinematographer Alissa Rooney traveled to the Cannes Film Festival, where she was tasked with capturing footage for a promotional video. C2C allowed her to share footage with a distributed production team working in several different locations.

"I had a RED Komodo and a Netgear Nighthawk in my backpack with an Orange SIM card, and I was basically walking around Cannes shooting all the clips to the cloud.

[My colleague] Michael was directing from Los Angeles, and he could see exactly what I was shooting at the same time, and he could be, like, "That's great" or "Can you reframe that?" And it was all happening while I was shooting! He was leaving me comments on the clips—in real time—so I could make any adjustments right there.

That just couldn't happen with cinema cameras before without handing a card to someone who's running to someplace with Wi-Fi, plugging it in, and uploading it to the cloud. And it just blew my mind.

One editor was in Italy, and our other editor was in Ireland, and they were all getting the clips as I was shooting them and cutting them together later that same day."

Alissa Rooney, Cinematographer, Adobe Frame.io

Reimagine video collaboration.

Get editors involved earlier in the creative process. Cloud-connected video workflows create a line of communication between directors and editors during shooting, giving editors more opportunity to collaborate on what footage is captured and resulting in smoother, more creative edits.

Capture instant, consolidated feedback from stakeholders. When producers, clients, and other stakeholders provide comments in real time, you can gauge earlier in the process whether you're on the right track or need to change course. And with a cloud-based video review platform, you can collect everyone's feedback in one place and compare different versions.

Collaborate efficiently with remote team members. Cloud-based workflows allow team members to work together from the next room or the next time zone so you can tap into top talent anywhere in the world.

Use case

Video collaboration—anywhere in the world.

Imagine a commercial shoot for a web company that's spread across the globe. They're shooting in Los Angeles, but the producer is in New York, the editor is in San Francisco, and the company headquarters are in London.

The camera rolls in LA and seconds after "cut" is called on set, the take is available in the cloud. The director on the shoot immediately plays the take back in on her phone and determines what she wants to change for take two.

The editor in San Francisco pulls the take into his timeline. He plays the take back in the cut and leaves a comment letting the director know that the talent's action doesn't match a previous take. So the director takes the note and talks to the talent about adjusting their performance.

Meanwhile, the producer in New York is also monitoring the project during the shoot and plays back the take. She notices that another company's logo appears in the background of the shot. She draws a circle around it and leaves a comment tagging the legal team in London, asking if they need to remove it.

The legal team in London receives the comment and reviews the same take. They reply to the producer's comment and let her and the director on set in LA know that the logo should be removed. The director in LA sees the feedback and removes the logo from the frame. She then replies to the same comment thread, letting the editor in San Francisco know not to use the take with the logo in it.

And all this happens before the next take rolls.

In this scenario, team members several time zones apart were able to collaborate and exercise a note on the set—in real time. The note was addressed and a major issue was avoided, saving everyone time, money, and effort.

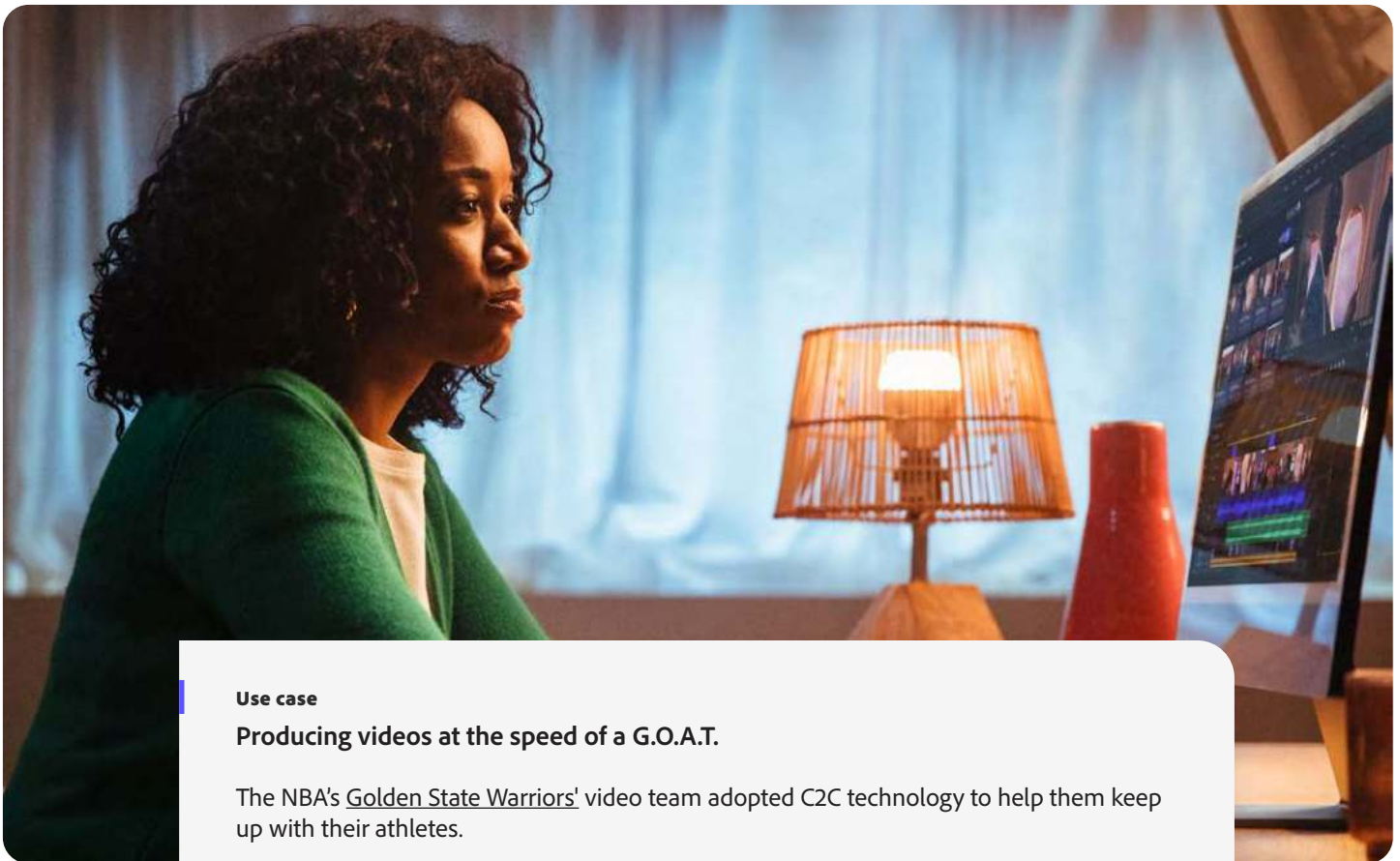
Robert Loughlin, Manager, Innovation Technology, Adobe Frame.io

Unlock creativity.

Increase opportunities for creative experimentation on set. Iteration is part of the creative process, and cloud-connected video production workflows allow you to iterate faster. Assemblies and rough cuts created in real time can spark new ideas you can test while the cameras are still rolling.

Catch things sooner that aren't working creatively. Determine whether your original storytelling approach is hitting the mark while you still have options for getting back on track or changing course.

Generate more creative ideas. Collaboration fosters creativity. Shifting from sequential to parallel production and post-production processes removes technical barriers, creating new opportunities for team members to work together and discover more creative ideas.



Use case

Producing videos at the speed of a G.O.A.T.

The NBA's Golden State Warriors' video team adopted C2C technology to help them keep up with their athletes.

"With [cloud-connected video production] technology, the Golden State Warriors are now able to almost instantly share newsworthy clips with their fans—like when Stephen Curry broke the all-time 3-point record and the Warriors had it ready for social media in three minutes.

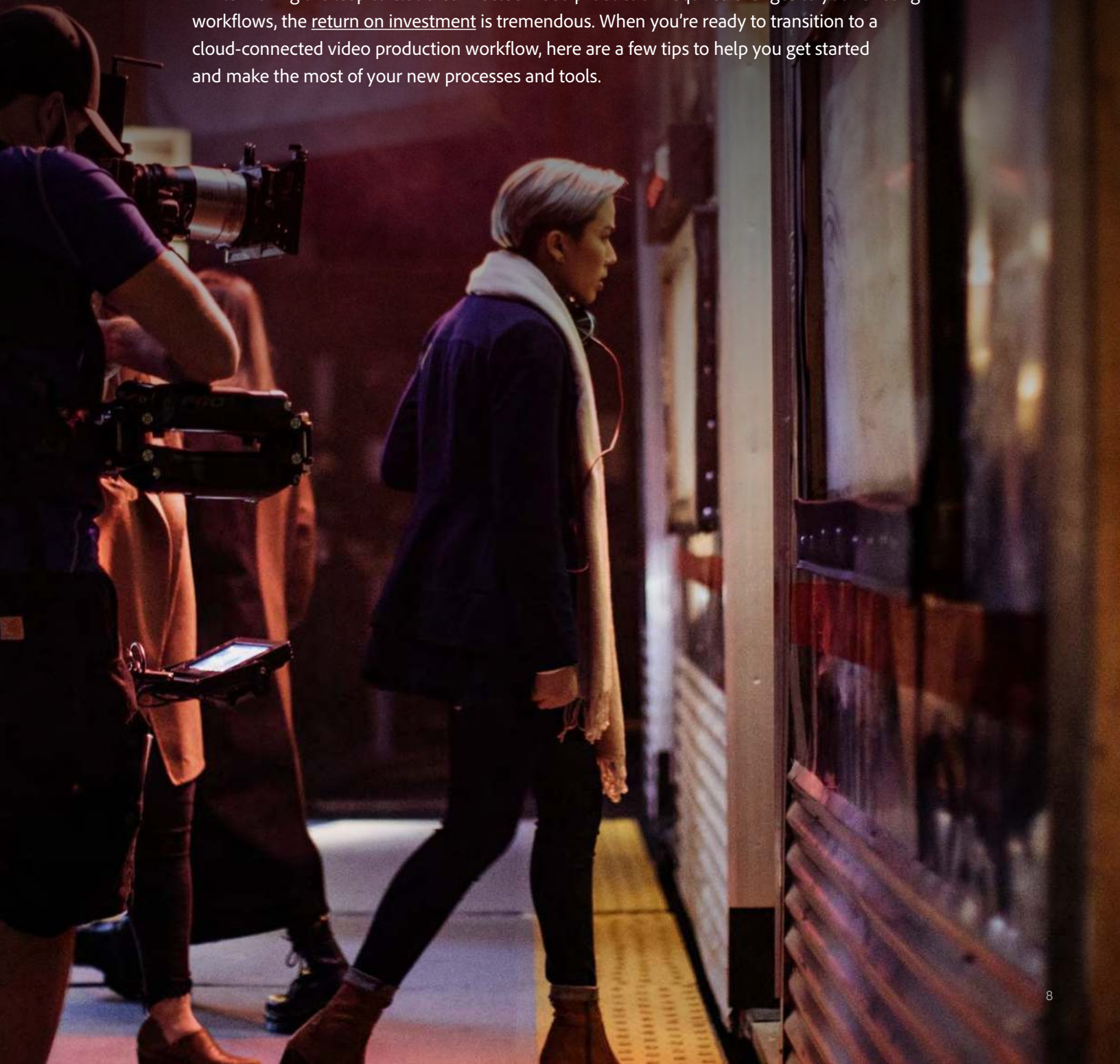
What's noteworthy about this is that no one had to sacrifice anything in order to achieve that kind of speed. The ease of use of the workflow meant that the Warriors were able to control their own presentation about Curry's achievement with footage they captured and edited exactly the way they wanted, beating every other media outlet to the punch."

Michael Cioni, Senior Director of Global Innovation, Adobe Frame.io

Take full advantage of **cloud-connected** video production.

Today, businesses across industries are investing in video content for entertainment, education, training, marketing, and more. Whatever kinds of video projects your organization creates, implementing a cloud-connected video production process can help you be more efficient and innovative.

While making the leap to cloud-connected video production requires changes to your existing workflows, the return on investment is tremendous. When you're ready to transition to a cloud-connected video production workflow, here are a few tips to help you get started and make the most of your new processes and tools.



Assess your technology needs.

The first step is to catalog the equipment you're already using, including cameras, audio recorders, editing software, and other hardware and software so you can identify compatible cloud-based technology. Most of the popular file-based video cameras used in productions today will work, but you may need to add a specific ancillary C2C-enabled device to connect your camera of choice to the cloud.

You'll also need to figure out what connectivity on set looks like for your team and who's going to own this aspect of your productions. Reliable internet is becoming non-negotiable for video production teams, and it isn't just for cloud-connected video production—it's also for things like communication, controlling lights, and syncing with off-set crew members and stakeholders.

Putting a dedicated crew member in charge of internet connections ensures someone is always paying attention to what you need, whether it's troubleshooting or helping scout locations with the right connectivity speed and other features. That person can change from crew to crew, depending on how big a project is and what other responsibilities they have, but giving ownership to one person is crucial.

Keep in mind that there's more than one way to connect to the internet. In some locations, you might be better off going completely cellular—for example, if you're at a venue with spotty or unreliable WiFi. Once you know what your setup will be, you can identify additional equipment you might need, such as bringing dedicated or large-scale networking equipment on set.

Everything you need to connect your set.

Getting adequate internet coverage on set isn't always straightforward, and there are many solutions to choose from. Learn how you can deploy fast, reliable, and resilient internet coverage for your next production.

Read [The Essential Guide to Connecting Your Set to the Internet](#).

Rethink your workflows.

Once your new technology is in place, you can start thinking about what instant access to video assets could mean for the way you work. In particular, pay attention to processes that may have been sequential up to now, but could happen in parallel in the future.

For example, you might be able to bring an editor in to start on assembly cuts while filming is still happening, or you could send interview clips to be transcribed even before post-production begins. You could even build in extra days for travel so you can get a producer and an editor on set, and then make up those days with the time saved in post-production.

Even if you have a full production calendar, it's essential to run a test project to identify opportunities for workflow efficiencies. Sometimes the only way to see the possibilities is in the thick of production. Ask everyone on your crew to notice where the process opens up and suggest ways to optimize your standard operating procedure.

Everyone on your team will have to adjust to a new cloud-connected video production workflow in some way—and change can make people uncomfortable initially. For example, bringing in stakeholders to give feedback earlier in the process might make some crew members nervous. But most teams find that once they go through the new process a few times, stakeholder feedback is more actionable and useful, and it raises the bar on quality and creativity.



The future of cloud-connected video production.

The cloud-based video production evolution is just beginning, and its long-term ripple effects are still taking shape. Some of the biggest impacts are likely to be on collaboration—especially remote collaboration with stakeholders participating in video projects from all over the world.

And as video production hardware becomes increasingly cheaper and more accessible, more organizations will be able to create high-quality video, democratizing professional workflows for companies of all sizes. Transformation is happening at an incredible pace, and it's critical for video professionals to start preparing for the future now.

[Learn more](#)



Use Frame.io to take your video production into the cloud.

Frame.io is a scalable video collaboration platform that can cut video turnaround times by 31% and improve client satisfaction by 36%. Accelerate your production workflows by sending media right from your camera to stakeholders anywhere with Camera to Cloud.

Streamline your creative process with centralized asset storage, seamless integrations with Adobe Premiere Pro and After Effects, and frame-accurate video reviews so you can collaborate in real time with distributed team members. Protect your creative assets with enterprise-level security and access controls. With a modern video workflow, your team can work at the speed of creativity.

[Explore Frame.io Enterprise](#)



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