

# Quantum®

## SIX KEY ELEMENTS TO IMPROVE MEDIA PRODUCTION THROUGH BETTER ARCHIVING

CAPACITY (TB)

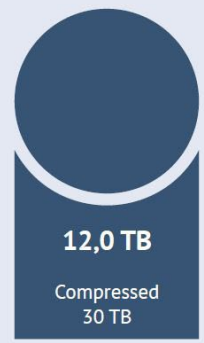
LTO-6



LTO-7



LTO-8



As cameras and other media devices steadily rise in number and improve in capability, sports broadcasters, production companies, and movie studios all face a mutually critical challenge: What to do with these expanding libraries of valuable content?

Thankfully, most organizations facing this challenge are now well aware that creating a digital archive is a powerful solution to this challenge. But simply moving data into a lower-cost tier of storage is only part of the answer. And having an incomplete archiving strategy can actually create challenges of its own. Therefore, it is paramount that IT professionals understand how to properly architect a best-in-class archive solution.

This document will discuss six key elements that should be part of any successful archiving strategy, as well as demonstrate important benefits that go beyond just providing an element of cost reduction to the overall storage infrastructure. A best-in-class archiving strategy will not only offer this financial benefit, but can also greatly streamline production operations, help maximize the value of historic assets, and ultimately make staff more productive.

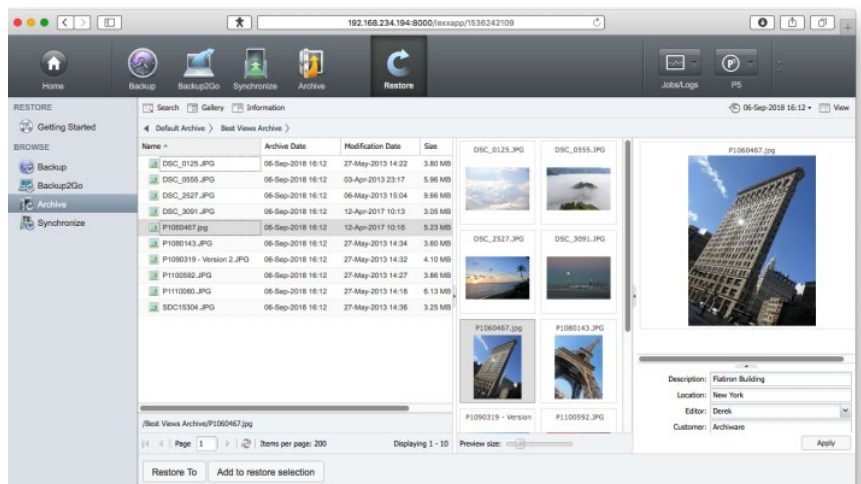
### 1. A CENTRALIZED AND SHARED DIGITAL REPOSITORY

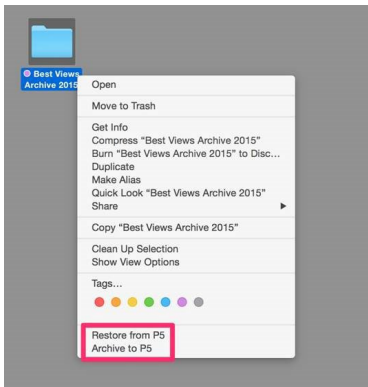
Everything that is completed, delivered, or aired goes into the archive. This way, the archive serves as a central repository and file memory of the company. As a result, there is only one place to search for files, making finding files easier than ever. Shelved disks are time consuming to search, and with the risk of data loss, are become a thing of the past. P5 Archive, which is media archiving software from Archiware, has a web interface that offers visual browsing with thumbnails and proxies as well as searching for metadata. And when combined with the ability of Quantum StorNext® to place all assets in a single global namespace, no matter what tier of storage the data resides on, users will have access to their data.

### 2. CAPACITY-OPTIMIZED STORAGE INFRASTRUCTURE

Since archiving is a migration of data from higher-cost performance-optimized storage to lower-cost capacity-optimized storage, you can reuse and reclaim expensive production storage as well as local editing storage as soon as files are archived. Archiving moves files out from block storage that need to be kept for an extended period of time. An added bonus when archiving to tape is the historical low price point of LTO tape, with the latest generation—LTO-8—coming in at about \$16 per TB. Combined with the extraordinary density that can be achieved with 12 TB media cartridges, the benefits of archiving using this storage medium are immense. Supported by Archiware P5 Archive, Quantum Scalar® tape libraries deliver the highest storage density in LTO automation, scaling up to 24 PB in a standard 19-inch rack, while at the same time providing the lowest cost per GB.

Furthermore, the special case of ingest archive takes all files captured and keeps them on low-cost tape. Editing with proxies saves bandwidth, time, and storage. For the final conform process, only the hi-res files that are part of the final product are restored—this way, production storage can be kept at a reasonable size and expansions saved.





### 3. USER-EMPOWERED DATA MOVEMENT

Even with so many production processes heavily reliant on technology to operate efficiently and effectively, IT departments continue to be squeezed in budget from an operational standpoint. Therefore, any technology that can alleviate some of this burden from IT provides a sizable benefit. It is in this sense that Archiware P5 Archive provides the capability to empower users with simple tools that facilitate data movement. With its optional Finder and Final Cut Pro X integration called P5 Archive App, it only takes a right-click to send files to the archive from the desktop of an editing workstation. Now the editor can archive as soon as a production is completed and reclaim local storage while doing so. Within FCP X, a complete library can be archived (including external media) and restored using the P5 Archive App. And with the Quantum StorNext file system, all of this can be done no matter what storage media the assets reside on—be it disk, tape, cloud, or any combination of them.

### 4. LONG-TERM DATA PRESERVATION

Whether it is storing critical financial information, sports footage, or a Hollywood blockbuster, archiving often needs to protect data for years or even decades. Given this kind of requirement and with a shelf life in excess of 30 years, LTO tape is the most dependable media choice. Additionally, it is one of the most economic storage alternatives from the perspective of operational costs given its extremely low-energy footprint and minimal cooling requirements.

Beyond preserving assets, storing them securely is also of high importance. From this perspective, tape cloning provides maximum security and offsite storage for a secondary tape set. The air gap that tape offers creates a strong protection against malware, ransomware, and any form of intrusion. Tape parallelization in P5 offers maximum throughput using multiple drives to write in parallel, and supports automatic migration to future tape generations. Quantum Scalar tape libraries can be upgraded either by adding or replacing tape drives, all of which is orchestrated by P5. Moving from one server platform to another is also easy. This makes the archive future proof, optimizes performance, and reduces footprint.

### 5. FINDING DIGITAL ASSETS IN LARGE-SCALE ARCHIVES

The longer data is kept, the more likely it is to become of relevance for repurposing, returning customers, or historical context—but to do this, the data needs to be accessible. Finding files needs to be easy now and for future employees that were not involved in creating the material they need to find and restore. Therefore, metadata describing the content and production conditions becomes extremely important. P5 Archive offers customizable metadata fields and menus so that an individual metadata schema can easily be built. Combined searching offers the option of filtering for very specific clips and files.

### 6. MAXIMIZING THE VALUE OF YOUR ARCHIVE

The combined pool of an organization's clips, images, and files can be of massive value and in many cases, a source for added income. New revenue streams can open up when reusing, repurposing, licensing, and referencing content. For returning or new customers, previous productions are an important reference point. New production can build on these assets or reuse parts of them. Furthermore, unique footage might be an opportunity to license clips internationally. Depending on the industry and relationship to the client, restoring previous productions might also be chargeable as a service.

This is just a short glimpse of the potential of a properly architected digital archive, and having an archive strategy in place is just the starting point. There is much more to gain and effort to be saved by building a cohesive archive tailored to the specific needs of the business. Media organizations can take their operations to the next level once they have a better understanding of the workflows driving their storage requirements and by properly aligning the needs of their customers and production processes to how media is archived.

While M&E enterprises beginning the journey towards an archive solution may at first be uncertain about their final destination, two things are certain. Not only will storage requirements of their business continue to grow, but also the data they are storing will become more valuable over time. Archiware P5 Archive is the mini-MAM archive that makes it as easy as possible to archive, browse, search, retrieve, and reuse files and media. Its simplicity empowers users of all backgrounds and gives companies maximum flexibility. In many ways, it has become a standard in data management with more than 15,000 licenses sold.

Tightly integrated with Quantum storage platforms that are optimized for every stage of the data lifecycle, it is possible for organizations to architect a best-in-class archive solution for the most demanding production environments.

#### ABOUT QUANTUM

Quantum technology and services help customers capture, create, and share digital content—and preserve and protect it for decades at the lowest cost. Quantum's platforms provide the fastest performance for high-resolution video, images, and industrial IoT, with solutions built for every stage of the data lifecycle, from high-performance ingest to real-time collaboration and analysis and low-cost archiving. Every day the world's leading entertainment companies, sports franchises, research scientists, government agencies, enterprises, and cloud providers are making the world happier, safer, and smarter on Quantum. See how at [www.quantum.com](http://www.quantum.com).