



STOREXCEL

How to Deliver a Best-Fit Connected
Experience for Your Customer by Streamlining
the Digital Media Supply Chain

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Abstract:

Many people who earn a living in today's digital video and audio landscape, are left to wonder if much of their hard work has been cast into some unknown black hole - where it will remain, unobtainable, unusable, and void of any life. Managing and maintaining content has become a weak link in the data lifecycle management chain. With content management complexities on the rise, companies are having a hard time tracking the what, when, how and relevance of their content. Starting with a high-level identification of the digital media supply chain management challenge, this white paper will discuss how you can help your company respond to meet this challenge and be best-positioned for long-term content management success. Learn some trade secrets to avoid common pitfalls of digital media supply chain management. You will also see how best digital media supply chain management solution principles can be used over and over again, so that a single investment becomes a re-usable asset for your entire digital media supply chain lifecycle, and for your organization.

Introduction:

This whitepaper includes a full spectrum of best digital media supply chain management solution principles, which are based on the viewpoints from StorExcel's executive team members, each of whom has over 20 years of combined industry-specific experiences in the traditional IT space and the technology space, for: content creation, post production, distribution, and delivery, in the media and entertainment industry, which you can apply. Start applying these principles, and you'll soon love experiencing the benefits of using a best-fit digital asset management solution, as much as our customers do.

The Challenge:

As a customer of ours once put it, "If you can't find it, then you don't own it." If you think about that from a digital media search & retrieve, it's quite true. So, what is happening today, that people aren't already aware of? We already know that data growth has been expanding exponentially. Most IT departments already have the necessary backup archive solutions in place to manage their business's data lifecycle requirements. Or do they? Are IT departments dialed into their business and creative users' requirements, like they think they are?

The truth of the matter is that companies need help in adapting to the customer's connected experience of today, as the ability, and in some cases, the need to reach customers in new ways continues to evolve. Web-enabled touch points, such as interactive touch screens on a wide array of platforms, including digital signage, fall under the "New ability of reaching customers" category. The importance of social media in driving viewers to new content, in response to the search habits of today's unavoidable binge-watching viewer trend, falls under the "Necessary new way of reaching customers" category. Companies can no longer put all of their digital content eggs in any one digital content basket to increase their brand awareness, when customers are choosing: to have content streamed to them over being forced commercials, and to get cues from friends and family members, over having to manage multiple account log-ins to access pre-show and movie trailers, to decide if something is worth watching.



Personalizing the customer's connected experience requires an integrated solution platform which delivers seamless content to all "Internet of Things," made up of a wide array of constantly evolving digital and physical touch points, because reaching customers at the right place, at the right time, with the right brand message, in a manner that gets noticed and is retained by the customer, means that your company needs to address the many legs of managing the digital media supply chain.

The Solution:

The digital work that flows through the digital workplace will be created and distributed in response to the flux of digital assets that flow into the digital media supply chain, one way or another. It's the one way or another part you need to worry about. To use a sports analogy, the digital workplace needs to be orchestrated in order to minimize the digital media "Foul balls" which your organization experiences before it is able to respond to the incoming digital media "Pitches" with timely digital content "Hits," in order to deliver a best-fit connected experience for your customer. To visualize such orchestration, in a digital media supply chain context, consider the following diagram:



Such a visual provides a high-level perspective, from which your company's C-level executive management team can begin to plan for optimal digital media supply chain coordination. The next step towards delivering a best-fit connected experience for your customer, is determining how the complexities that are fed through the digital media supply chain - can be made simple, at your organization's business and creative user level. Your organization's business user and creative teams need best-fit digital media supply chain management resources, in order for that to happen. As we know with technology, many resource-enabling solutions are available to answer the majority of the common use-cases towards delivering a best-fit connected experience for your customer. The key is determining which digital media supply chain solution is right for your business user and creative teams, which is something StorExcel can help your organization with.



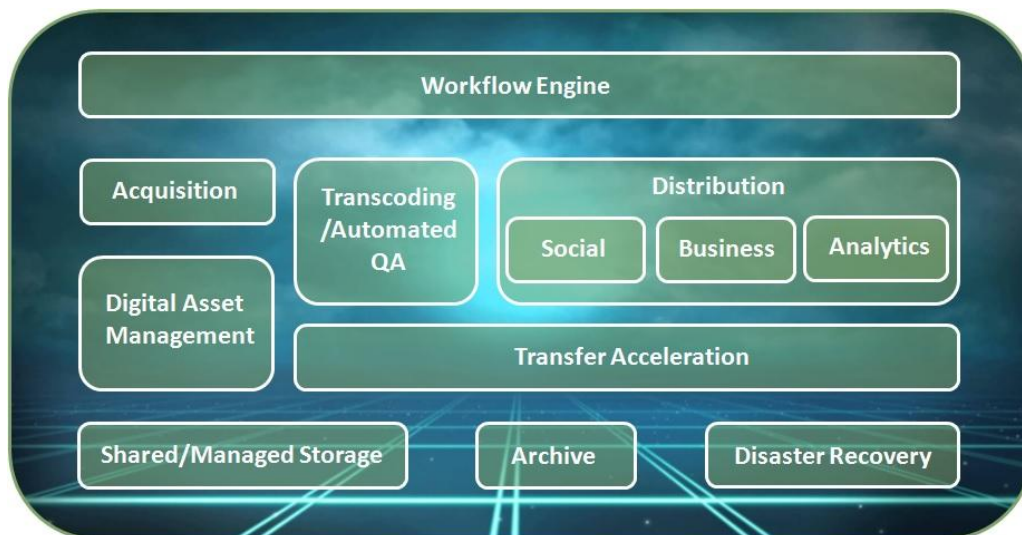
In this effort, let's consider the following diagram, which illustrates the digital media supply chain, at the business user and creative team level:



Such a visual provides a Data Lifecycle perspective, which your company's business user and creative teams typically use to manage their digital media content. In order for this diagram to bear any intellectual fruit towards your organization delivering a best-fit connected experience for your customer, it is important to have an understanding of the nature of the complexities that are fed through the digital media supply chain.

The following diagram illustrates the Digital Media Supply Chain Solution outline to follow, intended to help you: better understand your company's specific challenges, uncover your individual benefit-driven needs, and put you on the right path to evaluate and choose the best digital media supply chain solution for your company:

Digital Media Supply Chain Solution Element Diagram:





Digital Media Supply Chain Solution Element Outline:

1. Workflow Engine

Workflow Engines can be applied to fulfill any business process, for any line of business, such that the respective activities are performed in a streamlined manner. When applied within a Business Process scope, workflow engines can be used to automate the orchestration of multiple business' activities, in order to help drive the entire organization towards meeting and exceeding customer expectations. When applied within a Digital Asset Management (DAM) scope, workflow engines can be used to automate the orchestration of broadcast distribution for a content production studio, as well as project management and channel distribution for a creative team working in a post-production environment. Workflow Engines, such as those which we can provide via custom application plug-ins (API's), have the ability to automate digital media supply chain processes, which are designed to fill as well as close the gaps that exist between human and automated tasks.

Benefits:

- Improved Business Agility
- Reduced Costs and Higher Revenues
- Higher Efficiency
- Better Visibility
- Compliance, Safety and Security

2. Acquisition

We refer to the acquisition component block of the overall solution architecture, as a combination of methods to capture media into your content production environment. These methods can be as simple as editors, artists and users creating rich media and putting it into a structured file system, registering it into a DAM and/or outside sources delivering to a watch folder, and using automation to store it in a lights-out manner.

What you want in a solutions provider, is one that can help you register your digital media assets into your DAM system, assisting with the necessary metadata assignments set by your content management users, via a user-friendly interface in an automated manner. Our customizable workflow API's are designed to connect to other corporate systems to obtain the required metadata values, that our customers intend to use to register their media.

Benefits:

- Automated media capture
- Control of metadata
- Automatic key word association
- Notification of ingestion



3. Digital Asset Management

This is usually the starting component and heart of any large content management system. The best practice for a DAM system, is for it to be able to connect with the content repository that is under the hood (transparent connection to virtual machine(s), which the end-user of a DAM application should never have to worry about), for the purpose of leveraging an organization's rich media assets. By leveraging, we mean making proper use of an asset by: ingesting, tagging, storing, distributing, editing, versioning, transcoding, re-purposing, and monetizing rich media assets, such that optimal customer experience is achieved. We consider a DAM system to be "Connected" when the DAM system is able to manage the metadata of an organization's rich media assets, in a manner that allows the digital assets to be located immediately upon a user's search, easily manipulated (versioned) per each user's requirements, and distributed / QA'd, in an efficient manner using customizable workflow automations. We consider the DAM system to be best-fit, when it is able to so, in a cost-effective manner.

Benefits:

- A central location to store and protect digital assets, one that enables consistent branding
- The ability to dynamically distribute assets to internal and external teams
- A place to quickly find and retrieve assets
- Better visibility into existing digital content, and an improved ability to leverage that content

All of which helps businesses and organizations because it:

- Improves collaboration and communication
- Enhances workflow efficiency
- Reduces time and cost of content production
- Lowers operating costs
- Provides the ability to bring new products and services to market faster

4. Transcoding and Automated Q/A

Changing an asset from one format to another is key to keeping pace with the external demands, as an industry evolves and improves quality to the consumer. In the Broadcast Industry, the recent transition from Standard Definition to High Definition went through a number of changes, that caused content owners to keep pace by being agile enough to deliver content as new standards were adopted. This transition was addressed by specialized hardware and software to meet the need to respond accordingly. Today, there are a wide array of system options available, which vary from open source systems to commercial products and cloud services, which remove the maintenance burden associated with retrofitting a singular solution to fit the needs of content management environments which continue to evolve for creative teams, and business users.

As an additional component, automated verification can validate media as it either enters or exits a content owner's DAM system. This added Q/A measure has proven



to be one of the most critical components in larger DAM environments, and is one way to ensure a high quality of service with your customers is maintained.

5. Distribution

As detailed earlier, the need to publish/deliver rich media through content distribution channels is an evolving one, and includes the need to reach your customer touch points, via: posting content to a single company website catalog, sending content out to print, posting content to social media networks, and re-purposing your content for proper display on all web-enabled "Internet of Things," such that your content is delivered directly to customers, when they want it, and how they want it. We aim to simplify the content distribution process by offering as close to a one-click capability as possible for our customers.

a. Social Distribution

More and more we are seeing companies who work in media distribution, through normal means (via out-of-the-box software configurations), requesting a special method to publish to their social channels. This is why we created *SocialExcel* ©, our solution that allows us to add the ability to post to social channels, from any one of our DAM products.

b. Business Distribution

Most businesses continue to distribute their digital media through their original or legacy channels. Up-to-date DAM products have the capability to integrate legacy distribution from within the system's standard menu navigation panel, which allows customers to simplify their current distribution processes and provide tighter integration into the production workflow and adds tighter controls over multi-channel media distribution.

6. Transfer Acceleration

File Transfer Accelerators can speed up single and multiple file transfers allowing you to control the amount of bandwidth based upon your business needs. This is an important consideration in your system design, since users can be burdened with waiting for media to move either internally or over wide area network when standard protocols are used, such as FTP or a simple file copy.

It is not always easy for customers to forecast when all of their available media file-transfer bandwidth will be used up, for all of their media file distribution channels, even with today's out-of-the-box DAM applications. In these situations, it is critical that the DAM solution includes a high-speed transfer software element which helps customers improve productivity and minimize the wait for media to be moved around. The bottleneck described includes internal media file transfer to: the workgroup, company, and to business partners.

Benefits:

- Reduce project time by a factor of four.
- Realize a tenfold increase in data-transfer rates.
- Boost editing efficiency by at least 2x.

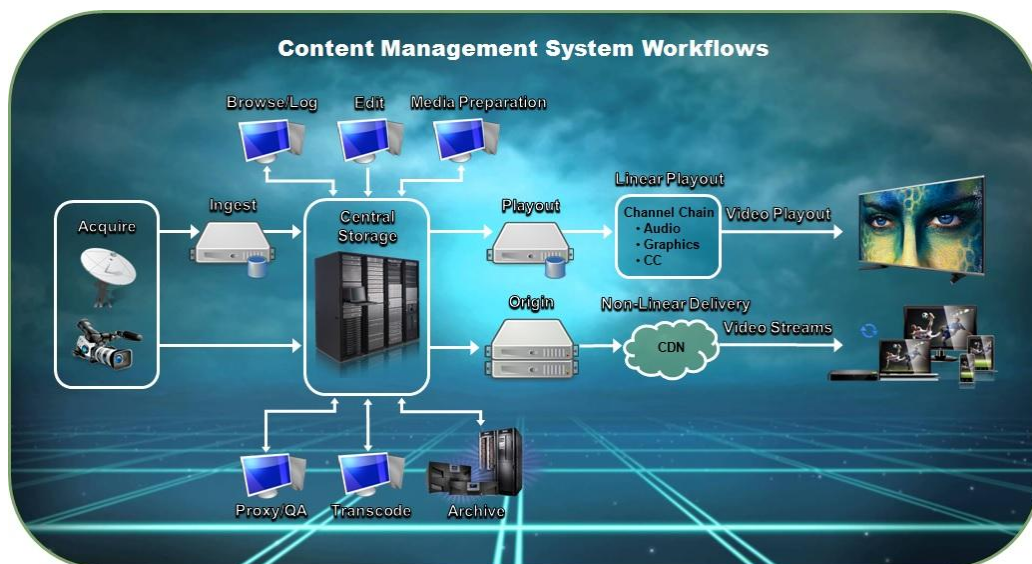




- Enable all-HD video operations.
- Enhanced data protection.

7. Shared/Managed Storage

If the DAM application is the heart and starting point of the content management system, then the shared file system is the backbone and cornerstone for having a complete digital media supply chain management solution, which allows the application to continue to do its job as the total volume of your media files continues to grow, now and into the future. Special attention should be made to moving your media files around, since file movement is the most expensive process in a media supply chain. In that regard, let's take a look at what a simple content management system workflow framework would look like, in the following diagram:



Media file transfer consumes both time and resources, which can be better utilized in other operations. Having the right digital media file storage architecture in place is critically important in: minimizing the burden of moving media, reducing storage costs, and reducing risk of media loss, which enables your digital media supply chain to produce the results you need it to.

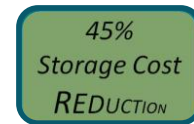
While it is intuitive to believe that Business Process and DAM Systems, which are efficiently designed and configured to manage the digital asset life cycle in a cost-effective manner, can dramatically reduce a customer's total cost of ownership (TCO), many customers continue to have an anchoring bias keeping them from reaping the long-term benefits (mentioned below), as they continue to expand upon their existing expensive storage just to hold older material.

We consider a digital media file storage architecture to be "The right one," when it provides the ability to manage the life cycle of digital media files in the storage environment, automatically and transparently to the user, removing the burden of having administrative personnel make decisions as to where to move files, when projects age in your system.



Benefits:

- Agile and flexible storage solution.
- Simplify the backup and restore process.
- Increase system reliability.
- Save up to 45% in storage management costs.
- Increased accessibility.
- Enterprise wide management.
- Efficient storage utilization.



8. Archive

Having the objective of achieving "Speed-to-market," with your aging assets, sounds like a bit of a conundrum, doesn't it? By its very nature, physical media is meant to be kept long-term. Therefore, it makes sense to have a long-term approach to managing it, in order to avoid lagging behind with critical speed to market delivery of your time-sensitive content, and falling short of the quality needed to maximize the customer's connected experience across all of your customer touch points. To do this, you will need to have a good archive strategy.

For the purposes of this paper, we define archive as a second copy of your working content, available for reuse, and as the primary copy of your aging content or assets. Your primary data is highly available on tier one disk storage, reserved for all of your work in progress. Migrating older media off to lower cost storage will become an issue that you will have to deal with, as the total capacity of a primary storage system is eventually exceeded by the amount of space needed by an organization's media assets. Simply putting data on physical media and storing it on a shelf or a storage array that isn't scalable, may seem like an easy solution at first, but this short-term approach will soon become unmanageable when it comes down to your content management operations needing to work like clockwork in crunch time.

Benefits:

- Decrease TCO on your storage infrastructure.
- Easy and quick access to data in the event of a minor disruption in work.
- Historical preservation.
- Ability to reuse or repurpose for monetary opportunities.

9. Disaster Recovery

There are many reasons to back up your data, including adhering to public regulations and company policies, as well as applying best practices and common sense. Within the data storage industry, two use-cases are brought up the most frequently, and they are: business continuity and disaster recovery.

Business continuity can be defined as being the ability to continue working and deliver products and services, in spite of minor disruptive incidences. For example, if a correctly deployed system experiences a component failure, the editor can continue working while the system self-heals, without losing access to any data in the process.



Disaster Recovery typically refers to a much bigger holistic outage that causes the entire system and or facility to be completely out of commission. Natural disasters such as earthquakes, fires, floods, etc are becoming more common occurrences affecting a company's ability to recover at all. In our experience, the companies who plan ahead for these events, are the most successful in retaining their assets and business operations. Putting the necessary Business Continuity and Disaster Recovery plans into action, in a proactive manner, is critically important for any business.

Benefits:

- Maintain employee productivity and the ability to generate revenue.
- Easy and fast restores of lost files for users.
- Preserve your reputation with customers and partners.
- Prevent the loss of business to your competition.
- More nimble response by IT to insure compliance with industry regulations.

Conclusion:

The Digital Media Supply Chain Solution elements described in this document are the building blocks of a great infrastructure, and are essential ingredients for a company being able to respond to business decisions quickly. Starting with a sound storage system then adding the right business process and/or digital asset management application layers which best suit your business needs, helps to ensure that your company is in the best possible position for: maximizing market share, decreasing your total cost of ownership of your digital media supply chain solution, and maximizing the customer's connected experience across all customer touch points for your company's brand. Digital Asset Management and workflow processes aid in the efficiency of increasing a company's productivity, while maintaining quality and reliability in the companies' products and services. We can help you determine your system needs and guide you with the right vendor choices for your business.



Questions?

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