

Virtualizing the Content Supply Chain with Media ERP

An Agile enterprise solution to drive operating efficiencies and enhance monetization

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Summary

Catalyst

The global media market is undergoing unprecedented change as new entrants challenge traditional service providers, new technology allows new viewing (and revenue) opportunities, and new geographic markets get their first taste of OTT video, 4K, and virtual reality. To manage these changes successfully, firms need to reimagine the way they work. They need to adopt clever uses of technology to digitize their enterprise and build a connected ecosystem.

The digital content ecosystem is woven around three core principles (i.e., data, delivery, and monetization). Today's media enterprises are fast transforming into digital companies, managing customer, social, professional, and internal operational digital assets to improve consumer engagement. Although complex rights and contract administration are pain points, the real challenges are the silos in content enterprises. Be it broadcast or studio, investments are being made at a department level, leading to islands of automation with duplication of content, huge costs, and a lack of agility and collaboration. It is time for the media and entertainment industry to undergo a transformation like other sectors.

Ovum's thought leadership white paper addresses the following:

- What is the real driving force behind the changing technology landscape in broadcasting and film studios' value chain? The context of a need for a single enterprise solution across the content enterprise.
- What are the industry pain points relating to the content supply chain to be addressed by an end-to-end, enterprise-wide cloud solution such as Media ERP?
- What are some of the tangible returns delivered by a Media ERP solution?
- How have some broadcasters and film studios leveraged this solution to enhance operational efficiencies via collaborative workflows and scaled up new monetization avenues?

The context

The transforming media market – Digital Next realities

The global video market was worth \$509bn in 2015, with this figure set to rise to \$588bn by 2019 (according to the 2015 GEMO by PwC). By any standards, it is an industry in rude health. However, there is a lot of disruption hiding beneath the headline figures:

- **TV service providers are being challenged by OTT video providers.** Cable, satellite, and terrestrial TV service providers have long relied on their networks, superior buying power, and lack of competition to drive market share and direct consumer revenues. In many markets, this is now being challenged by new entrants providing OTT video services directly to consumers (Netflix, Amazon Prime), or even those program and channel owners the service providers relied on going directly to the public (HBO, Starz).
- **The way consumers watch changes as more options become available.** Again, traditional TV services were delivered to a set-top box, typically in the living room, or on physical media – now, we see streaming services delivering video to tablets,

smartphones, games consoles, older TVs with Chromecast dongles, or newer smart TVs. This means video can be consumed wherever and whenever an individual wants.

- **The type of content consumers watch changes too.** While cinema-length films and hour-long TV shows still dominate the top-10 viewing figures, the democratization of device access has opened up a host of other types of video, from short shows on YouTube channels, to hours of live eSports matches on services such as Twitch.
- **Technology does not stand still.** While we as consumers start getting used to streaming HD video to tablets via mobile networks, just around the corner there is 4K UHD TV, high dynamic range (HDR) video, and virtual reality video.
- **Viacom/Disney financial announcements/cord-cutting – and this digital era is real.** Content owners and service providers that successfully negotiate the challenges presented by the changing market will be able to secure some of that future revenue, but the only way to do so will be to take a more strategic approach to leveraging technology to manage the business of content production, management, and distribution.

Managing the increased complexity of the video value chain

More consumers are now watching more different types of video than ever, from more sources. In addition, new geographic markets are opening up in Asia, South America, and Europe as TV and OTT services openly compete – in some cases for the first time.

For instance, in the old days, a TV show would either be created in-house or by a contracted production firm, or bought from another media firm. This show would initially be for one local market and in a set definition (standard or high definition), and would be slotted into a linear broadcast schedule by programmers. Now, although that TV show is still likely to come from similar sources (though there are more of these now, because firms such as Amazon, Netflix, and PlayStation are making their own content), it could be broadcast, streamed on demand, put in a catch-up service, and viewed on a TV, tablet, or smartphone – potentially anywhere in the world. Add in potential multi-market languages or subtitles, multiple resolutions, live dynamic ad insertion, and tie in live consumer feedback from Twitter or Facebook, and even this simplest of formats – a single TV episode – becomes complex.

The same applies to film – with its multiple release windows, secure digital delivery to cinemas, and the move from physical media to digital distribution – and live broadcasts.

Factor in the massive increase in storage and distribution costs for UHD content, and any media firm will start to face challenges in managing its content assets.

As the majority of broadcasters and studios scale up their content repositories and digital outlets (second and third screens), the core challenge pertains to managing these complexities. The first wave of digital transformation, termed as "Digital Next realities," demands content enterprises to be hyper-digital. This eventually calls for an agile, modular, and unified ecosystem to enhance operational efficiencies. Therefore, as media enterprises step into the first wave of digital transformation, they need an end-to-end, integrated virtual content supply chain. The next section highlights the primary market drivers for Media ERP, a SaaS-based unified content supply chain workflow solution, in the rapidly evolving digital media landscape:

- The first wave of digital transformation is here
- A tsunami of multi-form content is driving demand for a unified workflow

- A single monetization engine accelerated through virtualization of the content supply chain

A push for Media ERP

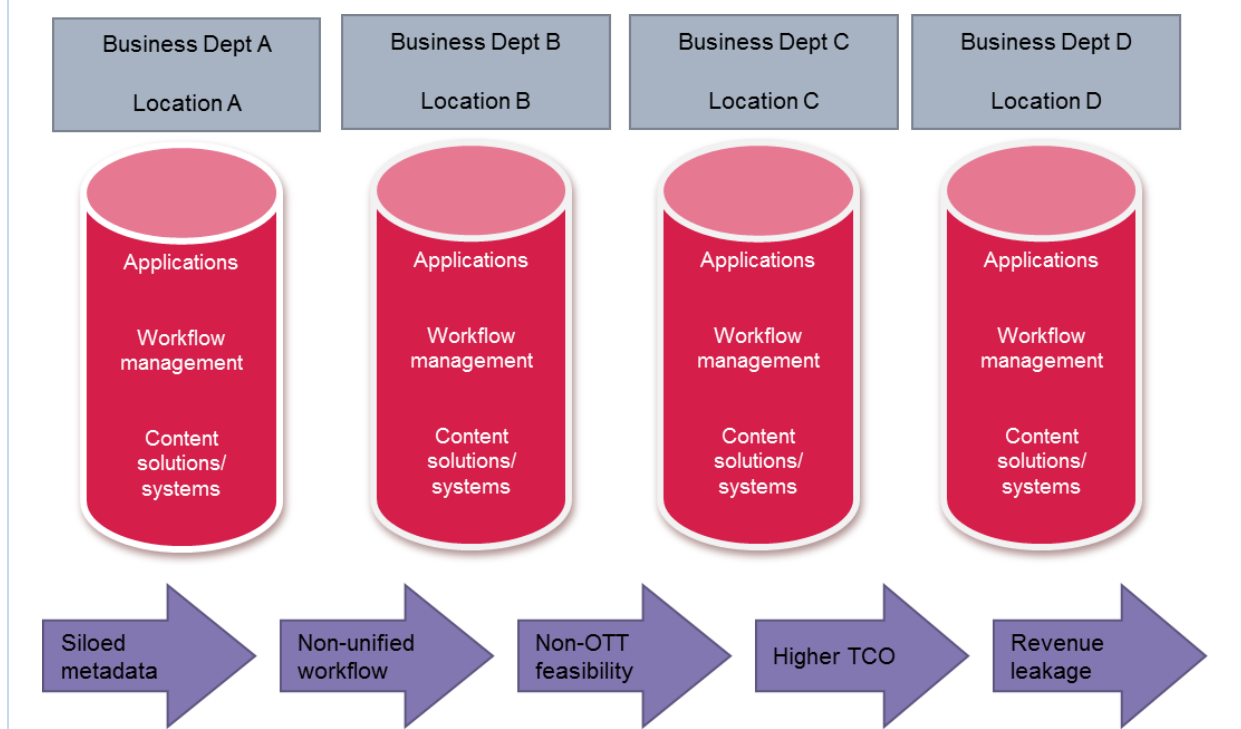
The first wave of digital transformation is here

The media sector has been at the forefront of the digital revolution, with most enterprises leveraging online platforms to distribute their premium media assets. This early adoption has resulted in digital newspapers, periodicals, music, and film entertainment generating a considerable portion of the segmental revenue mix in the past 18–24 months (2014–15). The first wave of digital transformation is under way (i.e., the personalization of content on multiple devices), bringing greater opportunities for media enterprises. The increased investment in creation, conversion, and repurposing of digital content is changing the competitive dynamics, creating new converged markets, and placing greater emphasis on technologies. Today's integrated digital media enterprises are facing the following core business challenges:

- Managing huge volumes of data to increase customer engagement rates
- A lack of adequate automation within the enterprise
- Reducing content distribution costs and increasing single media asset ROI
- Faster time to market
- Synthesis of the right signals from large data sets (advertising, promos, content, and social media)
- A seamless viewership experience irrespective of device and platform
- Optimizing total cost of viewer acquisition.

In the initial phase of the first wave of digital transformation, media enterprises followed a "unicast" content distribution model (i.e., delivery of similar data across multiple platforms). This created islands of automation across the media value chain, as depicted in Figure 1.

Figure 1: Islands of automation – the core pain point in the first wave of digital transformation



*Business departments here refers to production, marketing, finance, editorial, and monetization (ads)

Source: Ovum

However, rapidly changing media consumption patterns and the fragmentation of the viewership base is steadily pushing enterprises to adopt a "multicast" distribution model. Time to market is one of the key performance indicators for media enterprises in a competitive digital content landscape. Faster content monetization is essential to reduce customer churn rates and maintain a competitive edge. The multicast distribution model encompasses the delivery of personalized content and advertising to contextual audiences on multiple devices. The current end-to-end content distribution infrastructure built by media enterprises on poorly integrated technology stacks is insufficient to meet the needs of the multicast delivery model.

The multicast content distribution model requires the following:

- A centralized media asset repository
- Real-time access to media assets for different workgroups across multiple geographies and business units
- Optimization of the content production value chain, with access to multiple forms of metadata for diverse stakeholders
- Expansion of device reach, authentication, and security for the delivery of contextual content for hyper-local, targeted audiences
- Tight third-party integration across legacy and new-age content monetization workflows (includes promos, advertising, and social metadata)
- Fully integrated rights and royalties management across linear and nonlinear platforms
- Seamless integration with existing back-office (internal systems) and shared platforms (CRM, billing, and payment)

- Analytics and monetization plug-ins embedded across multiple digital assets
- A work order management system connecting the various business systems with human interfaces

Furthermore, to deliver an effective multicast content distribution model, media enterprises should embrace technologies that offer seamless third-party integration and a unified workflow. Prime Focus Technologies' CLEAR Media ERP, hosted on a hybrid cloud infrastructure, encompasses the following end-to-end digital content distribution value propositions:

- **Agile media asset management (MAM) module:** Centralized digital asset repository (videos, images, graphics, long- and short-form text, and audio files) with scalable asset discovery plug-in. Pre-integrated with scheduling and rights management applications.
- **Collaborative production asset management (PAM) module:** Simplification of workgroup collaboration and tight integration with editorial suites.
- **Multifaceted broadcast module:** Streamline content distribution workflow across multiple networks (i.e., linear, mobile, and online).
- **Efficient operations module:** Converging shared and internal applications with the content lifecycle workflow.
- **Digital screeners:** Reduction of IP rights revenue leakage and dependency on physical format-based content stakeholder engagement rates.

Finally, the changing multi-form content needed to improve digital engagement rates is the driving force behind the need for an industry-specific single solution to enhance operational efficiencies and new revenue streams.

Managing the multi-form content tsunami is key: pressing for a highly integrated and unified workflow

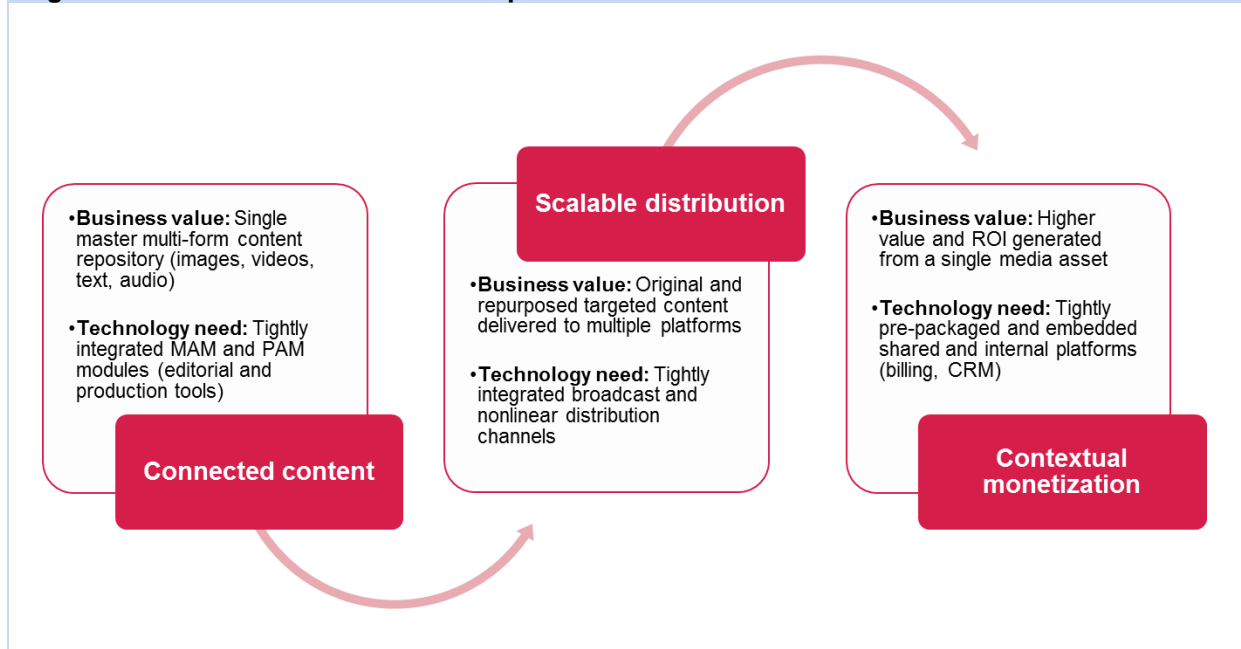
In today's multiscreen era, media enterprises are faced with the grave challenge of managing, producing, repurposing, distributing, and finally monetizing a large volume of data. Furthermore, multiscreen viewers are more focused on interactive content dynamics than the traditional passive viewer on linear platforms. In addition, these next-generation multiscreen viewers have lower switching costs due to constantly emerging new platforms and services, resulting in a negative outlook for traditional content aggregators and TV networks. Thus, creating a profitable interactive multiscreen ecosystem is a must for today's enterprises to improve sustainability. Multi-form content is synonymous with higher interactivity and digital customer engagement rates. Although there is unprecedented business value in bringing together multi-form content (audio, video, text, images), traditional media enterprises still have multiple digital asset management repositories hampering collaboration and scalability. This paves the way for solutions offering tightly embedded media asset management (MAM) and production asset management (PAM) modules to streamline the connected content production workflow.

The lower switching cost for multiscreen viewers further emphasizes the need for a scalable distribution workflow. The efficient distribution of personalized content to individual users on multiple devices is essential to reduce churn rates. These new media challenges are pushing enterprises to integrate their dual (i.e., broadcast and nonlinear) delivery networks with production and archiving systems to improve time to market. Finally, as content acquisition costs rise, media enterprises are moving toward generating higher value and ROI from a single multi-form media asset to enhance

operating margins. A single media asset's value can be increased through the tight integration of shared and internal platforms with the content value chain.

With the increase in multi-form content, enterprises are likely to shift IT investment toward solutions that offer enterprise-wide integration of the content lifecycle with back-office applications to provide a unified monetization workflow.

Figure 2: Multi-form content is at the epicenter of monetization workflow



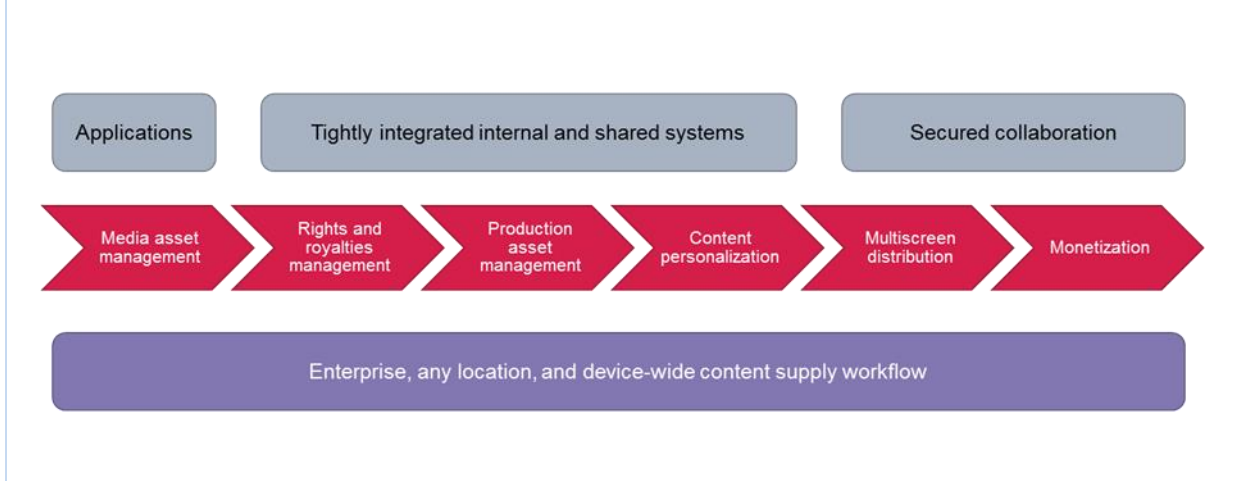
Source: Ovum

In the multi-form content monetization era, premium media asset owners such as pay-TV operators, content aggregators, and nonlinear broadcast TV operators should have a robust interconnected ecosystem, such as:

- MAM systems integrated with broadcast management
- Seamlessly integrated content preparation and production workflows (i.e., from work in progress to digital, publishing-ready content)
- Promo optimization and distribution with third-party traffic and scheduling (linear) and media logistics, including online video delivery, content delivery networks, and OTT (nonlinear)

With the emergence of a nonlinear content value chain, the complexities have increased for premium media asset owners to converge these two workflows in order to lower total cost of ownership (TCO). Furthermore, global TV broadcasting networks with multiple siloed systems for media asset ingestion, preparation, and distribution face technology stack redundancy risks and issues. Finally, Figure 3 reveals the demand for virtualized content supply chain management to enhance multiscreen monetization and customer engagement.

Figure 3: Multi-form content transformation ecosystem: moving from islands of automation



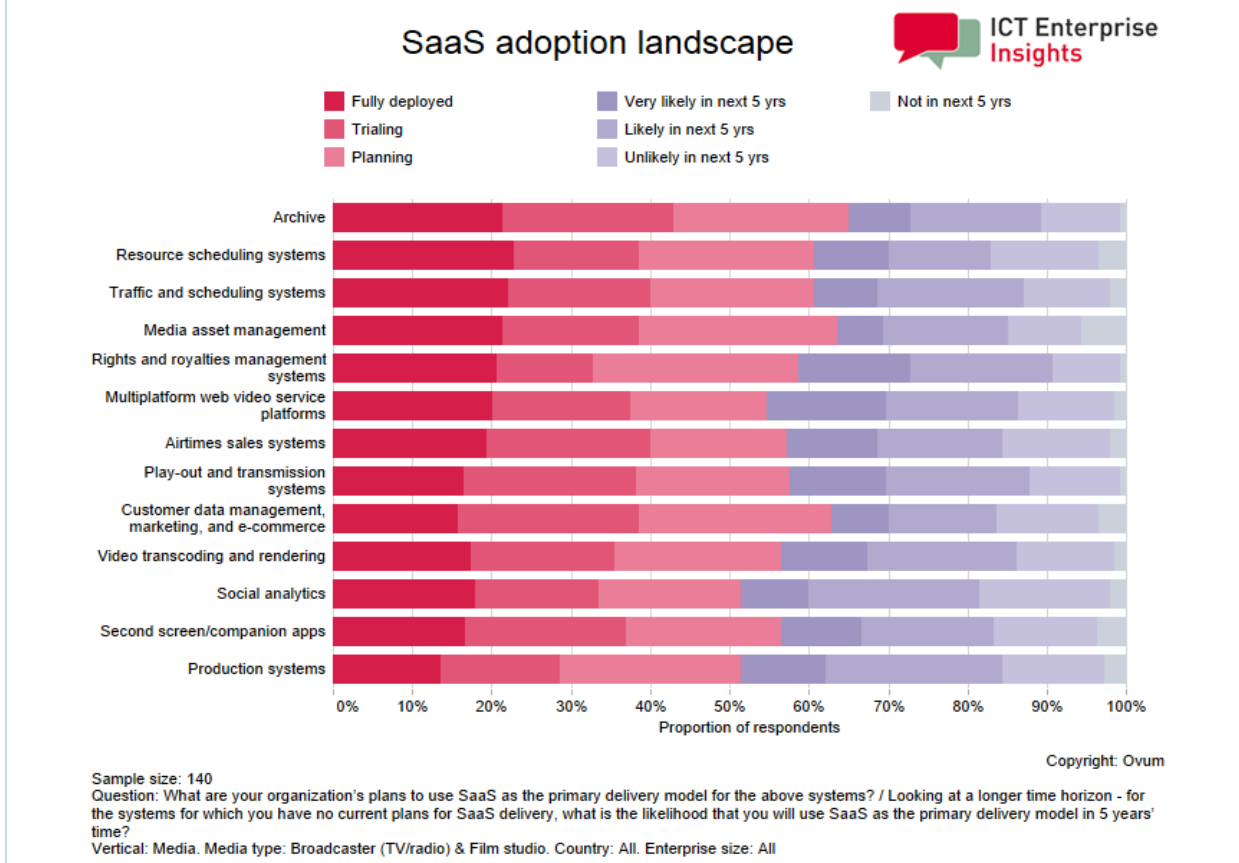
Source: Ovum

The move to cloud: modernization and auto-scalability are key to accelerate the media asset monetization cycle

The delivery of personalized real-time content and contextual advertising across diverse local markets on multiple devices is a core challenge faced by film studios and broadcasters worldwide. As the cost of acquisition of premium, time-bound media assets increases, especially sports and reality videos, tomorrow's digital media enterprises should have auto-scalable infrastructure with tightly integrated workgroup collaboration, along with virtualized production and distribution workflows to enable a faster go-to-market strategy. Cloud infrastructure has been instrumental in offering cost savings (by converting capex to opex), auto-scalable storage, and end-to-end automation of media asset monetization workflows.

Cloud computing adoption is still at a nascent stage across the broadcasting and film entertainment segments: less than a quarter of broadcasters and film studios have a fully deployed MAM solution. As content aggregators and owners such as new broadcasters and film studios (known as integrated digital enterprises) focus on automating their traditional linear and premium nonlinear logistics workflows to improve workgroup collaboration, operational efficiencies, and real-time monetization, these enterprises will be leveraging cloud infrastructure and solutions in the next 12–15 months. As depicted in Figure 4, almost a quarter of the integrated digital enterprises surveyed plan to migrate enterprise-wide content-centric systems to the cloud (i.e., media asset management, archive, production systems, and resource scheduling). However, because premium content aggregators and owners fear losing control over premium media assets, hybrid cloud architecture might offer a win-win proposition for integrated digital enterprises, with enterprise applications (apps) running on the cloud and their core content being kept on-premise. The core advantage of hybrid cloud architecture is that the content is on-premise, while the applications run on the cloud. The application software (MAM, database, BPM, and integration middleware such as enterprise bus) and metadata are on the cloud, while content storage, streaming, transcoding, auto QC, and accelerated file delivery applications are on-premise.

Figure 4: Rise in cloud adoption for digital content lifecycle systems in the next 12–18 months

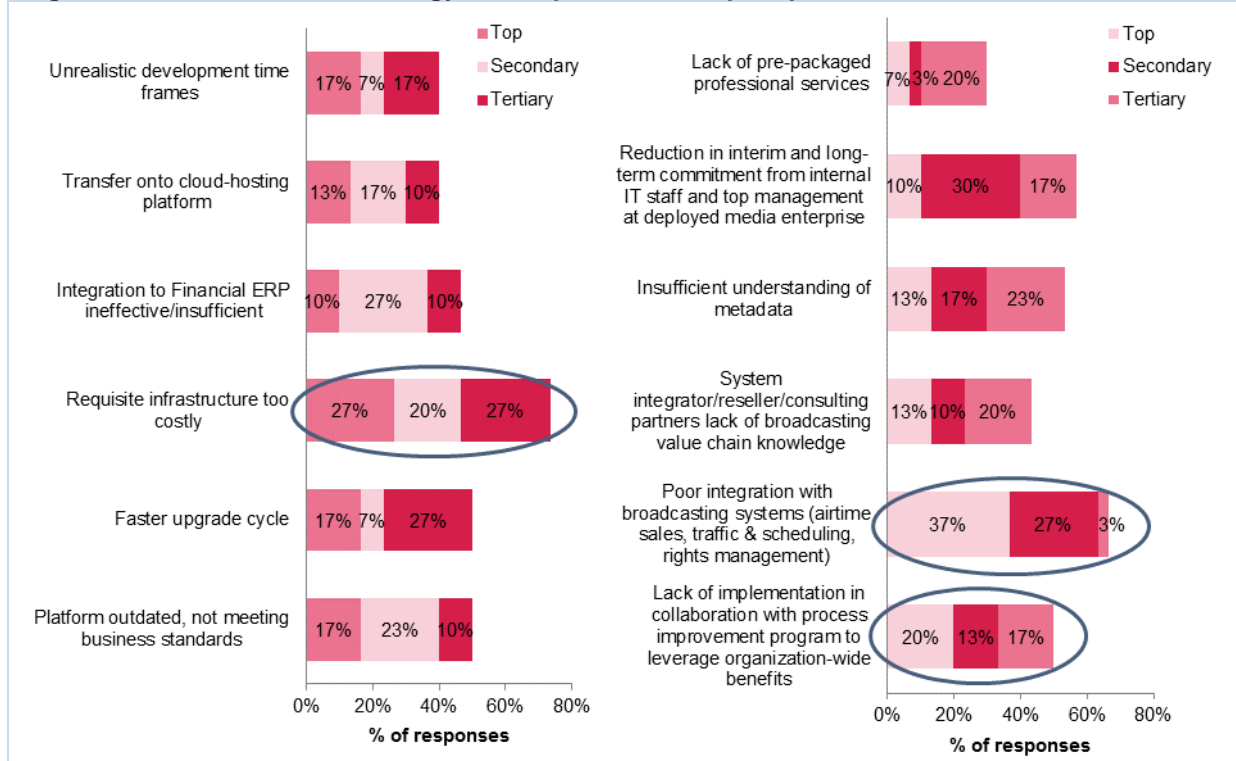


Source: Ovum (September 2014) n=140

Major industry pain points relating to the content supply chain

Traditional media asset management systems are associated with costly infrastructure and a lack of third-party integration capabilities

Figure 5: Current MAM technology and implementation pain points



Source: Ovum (March 2015) n=30

Traditionally, media enterprises have followed a "local content management implementation" roadmap. This has resulted in the building of localized, non-scalable digital asset management systems across diverse departments and locations, with a lack of strong upstream and downstream collaboration across the content value chain. These loosely coupled technology stacks have hampered real-time content production and resulted in revenue leakages.

Furthermore, media enterprises have invested heavily in on-premise media asset management solutions to manage their content. This has primarily been due to a lack of high-speed IP networks, integration with existing legacy on-premise production and broadcast systems, and localization of premium media assets to improve scalability. However, on-premise deployments adhere to data storage restrictions, have a secured production environment due to a slow software upgrade cycle, and reduce the dependency on Internet performance and local area connections. In a digital era, where speed and agility are key, margin-pressed film studios and broadcasters are shifting their focus onto flexible, modular, cost-effective, and collaborative enterprise solutions to improve operational efficiencies. On-premise is associated with high infrastructure costs, with hardware accounting for almost 25% of total deployment expenses (the initial solution purchase accounts for almost 40%). Furthermore, content owners primarily outsourced their MAM deployment projects to system

integrators and IT consulting partners, hampering the enterprise integration strategy framework (low involvement of the internal IT department).

Ovum's MAM survey found that almost 30% of senior management executives at media enterprises perceive costlier infrastructure to be the primary and tertiary technology-centric pain point (April 2015). The outsourcing model eventually results in poor legacy broadcasting systems integration and lower internal IT department commitment to change management programs; these are highlighted as the primary and secondary deployment pain points across the global MAM industry. Almost one-third of respondents reported a lack of internal IT department commitment as a secondary challenge in the deployment process.

The three primary fundamental issues with traditional MAM solutions – costly infrastructure, poor integration with broadcasting systems, and lack of enterprise-wide adoption – are fueling demand for ONE software, a Media ERP suite to reduce these pain points.

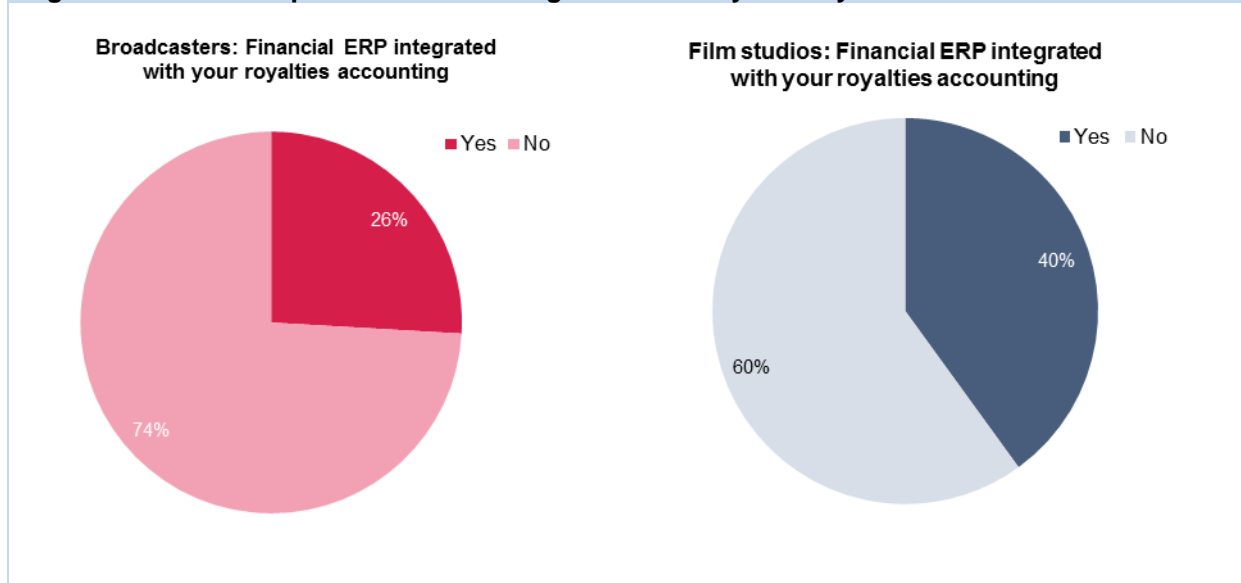
Figure 6: Media ERP value proposition

Media ERP value proposition	Tightly integrated MAM and PAM modules
	Prerequisite solution not costly due to conversion of capex into opex
	Seamless integration with broadcasting systems includes traffic and scheduling, playout services
	Faster upgrade cycle
	Pre-packaged managed services include project management, in-depth data configuration
	Efficient change management and higher enterprise-wide adoption rates

Source: Ovum

Legacy content systems with siloed design and no third-party integration hamper collaboration and new revenue streams

Figure 7: Media enterprises lack ERP integration with royalties system



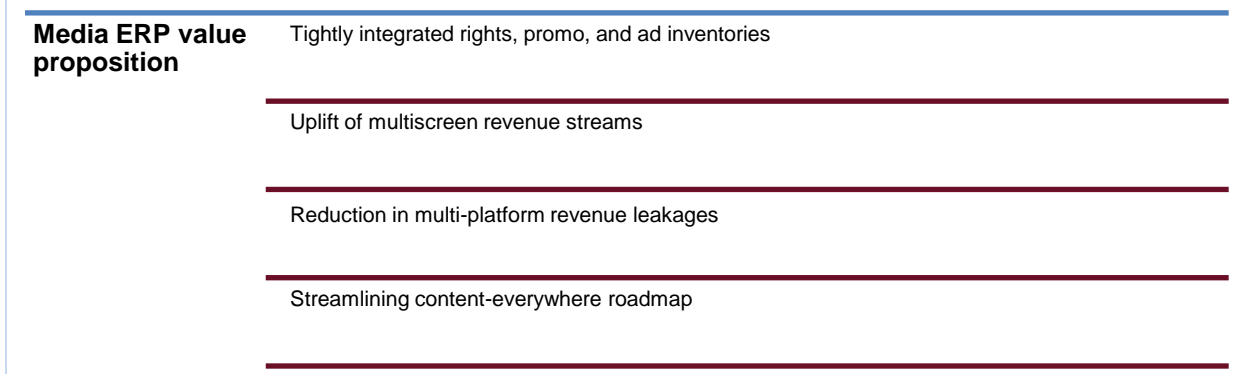
Source: Ovum (January 2015) n=31 & n=10

Changing viewer preferences have increased content value chain complexities and content distribution challenges. Film studios and broadcasters, in partnership with independent producers, are stepping up the content production and acquisition process to reduce nonlinear churn rates. With the increased involvement of third-party content production houses, media enterprises need tightly embedded content logistics workflows with seamless integration across archiving, rights and royalties (R&R), production systems, and multi-platform distribution. The majority of traditional digital asset management systems lack enterprise-wide third-party integration due to their siloed design and deployments.

As per Ovum's rights and royalties survey, almost three-quarters of European broadcasters still lack tight integration of a royalties accounting module with their financial ERP system. This is slightly higher than the two-fifths of regional film studios that have a tightly integrated royalties accounting with ERP to improve enterprise-wide operational efficiencies. Almost half of the media enterprises surveyed reported that a collaborative content workflow would result in additional revenues of 1–3%.

The fundamental issue of siloed systems is third-party integration, as highlighted in this pain point. A rights and royalties solution is one of the primary technology stacks in the content supply chain, and a lack of integration with financial ERP results in massive revenue leakages for premium media asset owners such as broadcasters and film studios. PFT, with a third-party rights and royalties solution partnership, will help reduce rights and royalties losses and simplify the monetization workflow.

Figure 8: Media ERP value proposition



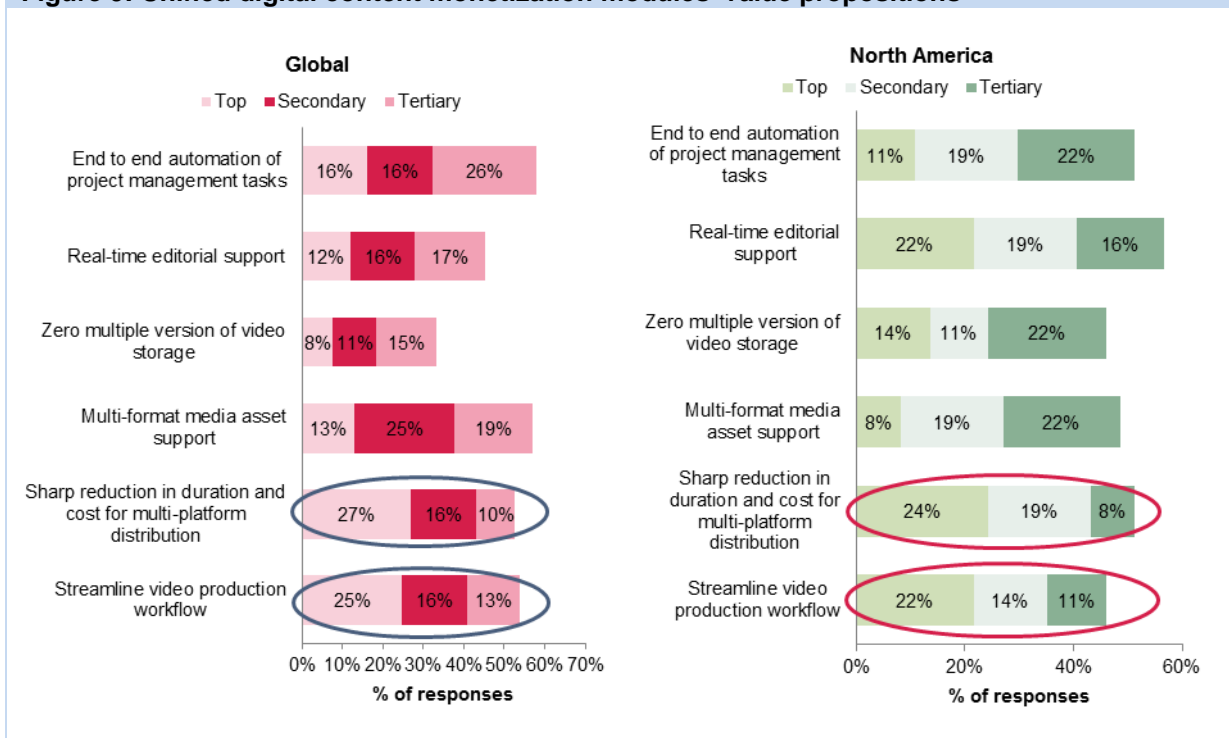
Source: Ovum

Thus, a centralized MAM system forms the epicenter and a vital technology stack in the content value chain as media enterprises transform their strategies to be "audience-first" to adapt to changing viewership patterns. The increase in third-party content production houses means that media enterprises need tightly embedded content logistics workflows, with seamless integration across departments within the enterprise (across and within production, marketing, technical operations, and multi-platform distribution). Therefore, Ovum believes that effective MAM and fully integrated rights and royalties systems with broadcasting, financial ERP, and other shared platforms are crucial in reducing the total cost of ownership. This is because MAM, PAM, and R&R systems form the backbone of the content supply chain (i.e., preserving and repurposing media asset value and managing rights). Although Media ERP's core value goes beyond these backbone offerings, its in-house cloud MAM and pre-packaged third-party rights and royalties solution (i.e., managing content, merchandising, and sponsorship rights) can provide a cost-effective multi-platform content monetization workflow.

Digital transformation ROI with Media ERP

Virtualized content workflow reduces distribution costs and speeds up content production

Figure 9: Unified digital content monetization modules' value propositions



Source: Ovum (March 2015) n=93 & n=37

The most common questions associated with large-scale digital transformation projects are "why do most of them fail?" and "what's the ROI generated from these deployments?" The majority of these deployments fail because of a lack of synchronization with legacy and new systems. The emergence of catch-up TV (via Internet), VoD, IP video, and smartphones has pushed broadcasters and film studios to repurpose content in near real-time to meet changing consumer demands on these platforms. Thus, forming truly integrated digital media enterprises with a connected and converged ecosystem is pivotal to manage businesses efficiently in the M&E segment.

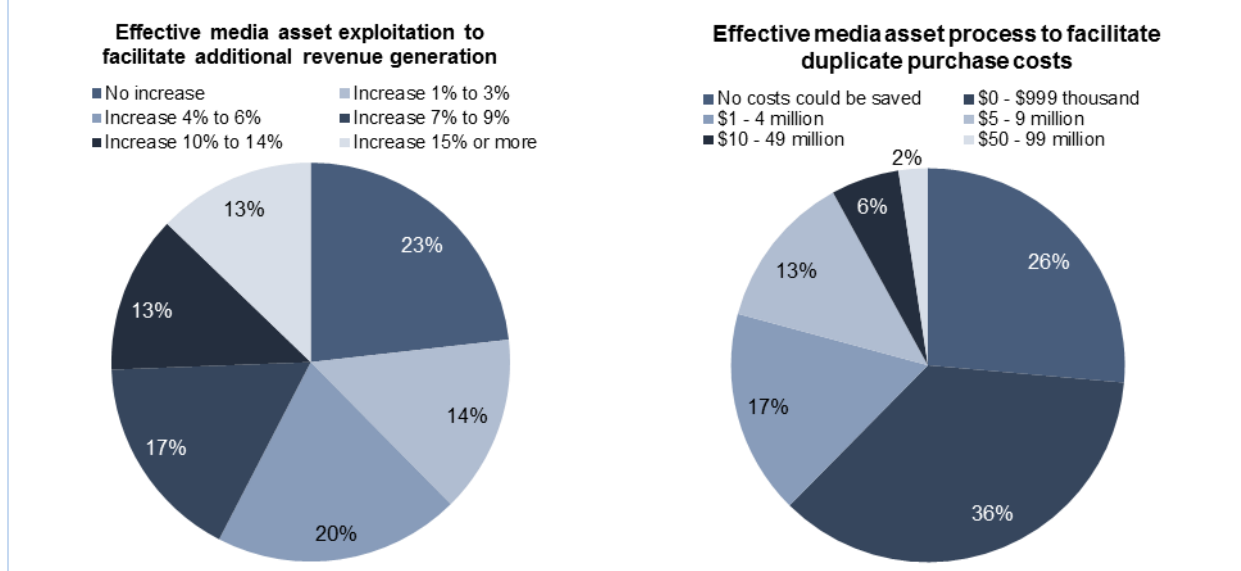
There are no standard industry-specific key performance indicators (KPIs) for calculating the positive benefits of a virtualized workflow. Ovum's survey revealed that unified media asset management (MAM), production asset management (PAM), and third-party distribution modules facilitate a reduction of multi-platform distribution costs and streamline the content production workflow. A streamlined production workflow has further reduced time to market for these media enterprises by an average of 18% (especially on time-bound projects such as sporting events or Miss Arizona USA 2015).

Thus, as media enterprises slowly combine their linear broadcast and digital ambitions to generate economies of scale, they will likely invest in solutions that provide seamless integration across multiple departments, business units, and geographies (i.e., industry-specific, enterprise-wide software). This also includes the centralization of premium media assets to store, retrieve, reproduce,

and distribute across multiple devices and platforms at an optimal cost (27% respondents stated this as a leading benefit).

Centralized data repositories are likely to yield 4% additional revenues and reduce media asset duplication

Figure 10: Centralized media asset repositories – value propositions



Source: Ovum (March 2015) n=125

Media enterprises are fast transforming into data companies. Historically, huge volumes of data were stored in multiple content management systems at different locations. As content acquisition costs increase, duplication and unused media assets at diverse business units slow down time to market and cost revenue. Furthermore, today's integrated digital enterprises need to distribute personalized content in multiple formats (videos, images, and long- and short-form text) across IP-enabled devices to improve viewer engagement. This eventually leads to the archiving and storage of multiple forms of media asset metadata in a central repository to create new revenue streams via the utilization of multiple forms of content.

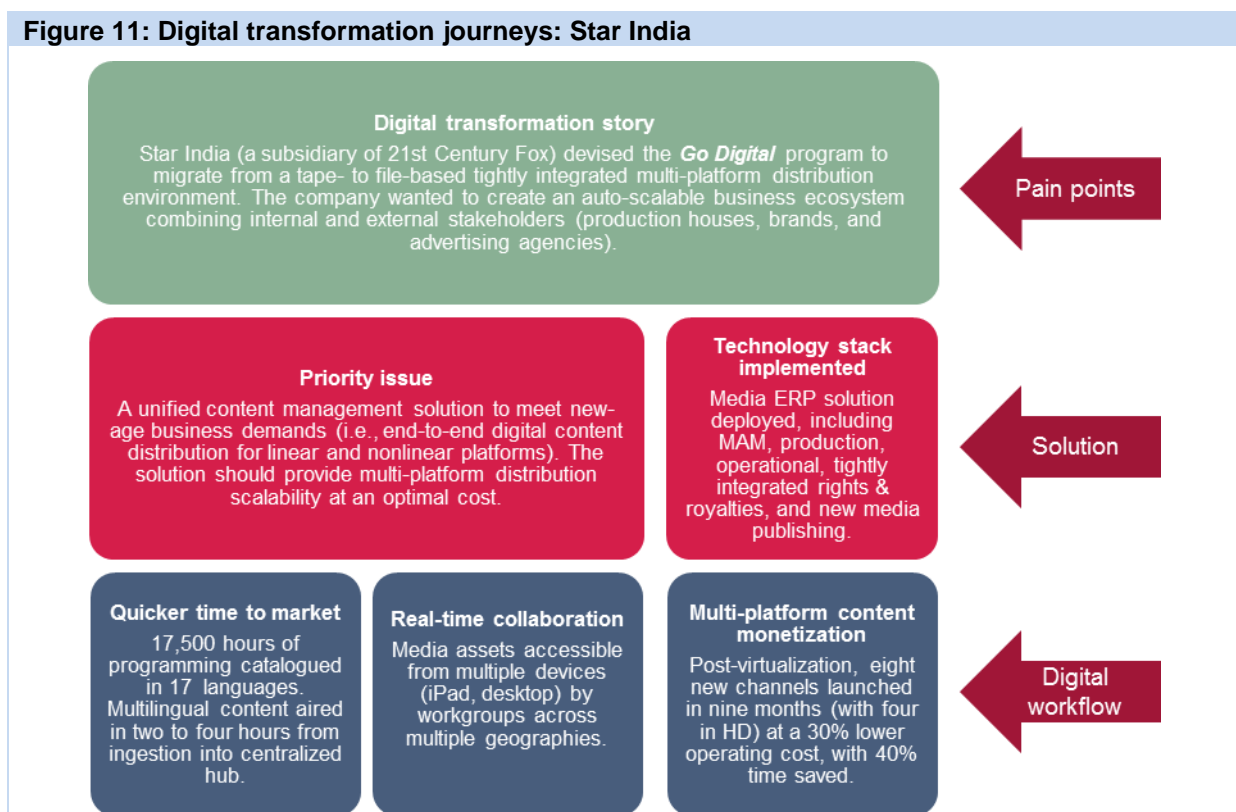
In a connected world, as file-based content management becomes the de facto industry norm, an end-to-end digital content solution will not only reduce unused and duplicate media asset costs, but will also assist in generating additional revenues via lead-time reduction for new service offerings. Ovum's survey reasserts that a unified MAM solution with a tightly embedded PAM and third-party content distribution platform offers duplicate asset cost reduction of up to \$4m (50% of respondents). Additionally, a centralized media asset repository provides an additional increase in average revenue of up to 4% (63% of respondents).

Embrace digital: adapt to new workflows or die

Star India and Disney's Indian operations embark on a digital transformation journey with Media ERP

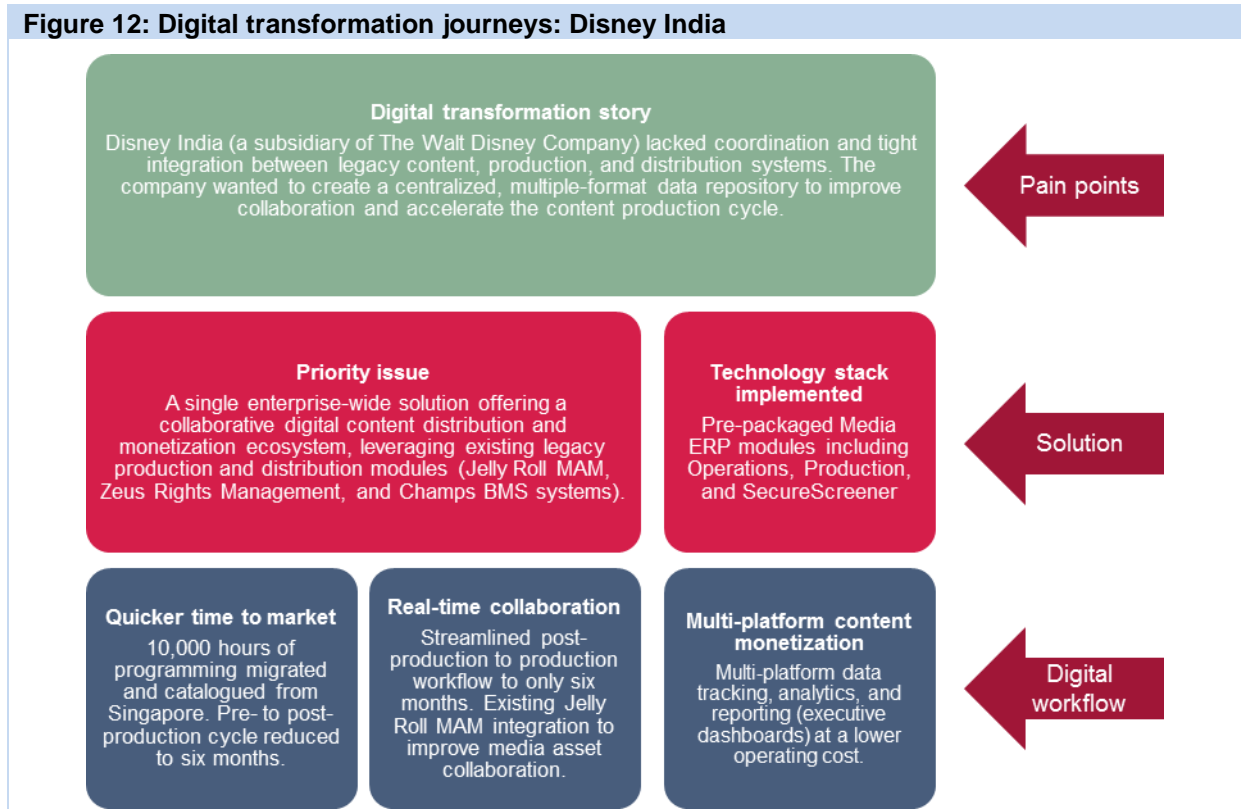
In today's digital economy, senior management executives at media enterprises need to create an uninterrupted and virtualized content ecosystem along with clever utilization of legacy systems. They also ought to look at ways of cutting costs and driving additional revenue streams. The enterprise solution should provide strong integration with legacy systems and enable workflow orchestration across enterprise, supply chain, and partner ecosystems. As part of the digital transformation programs of 21st Century Fox's and The Walt Disney Company's Indian operations (Star India and Disney India), both enterprises deployed the Media ERP solution to transform the way they work by virtualizing the content supply chain, enhancing operational efficiencies, and realizing new monetization opportunities.

Figure 11: Digital transformation journeys: Star India



Source: Ovum and PFT Technologies (June 2015)

Figure 12: Digital transformation journeys: Disney India



Source: Ovum and PFT Technologies (June 2015)

Conclusions

Enterprise software to virtualize the content supply chain

The Star India and Disney cases show that tomorrow's integrated digital enterprises are re-energizing their digital content value chains to support both linear and nonlinear platforms. These enterprises need to not only manage digital assets for a long time but also increase their value (i.e., the re-use of individual media assets in multiple markets on connected devices). As IT budgets are squeezed, senior management executives will move toward a unified solution across the enterprise to reduce total cost of ownership.

The fear of losing control of premium content accelerates hybrid cloud-based digital content workflows

Even as media enterprises move into the connected devices era and invest in cloud-based solutions and platforms to improve agility and cost synergies, they are still concerned with security. Today, broadcasters, music labels, and film studios are building premium content repositories to improve their penetration and presence across the multiscreen video services segment. The traditional concerns of loss of control and lack of security presented by the cloud computing environment are reduced with a hybrid model, which provides localized content repositories on the media companies' side, with enterprise applications migrated to the cloud.

The move toward ONE software pre-integrated with third-party legacy systems will drive real-time content monetization

Traditional content management systems deployed in silos lack scalability, flexibility, and modularity, resulting in catastrophic failures. A single technology partner offering a single piece of software tightly integrated with third-party legacy systems along with add-on professional services (data services, content localization, and transformation services) will sharply reduce content production and distribution uncertainties.

It is not just about cost savings and operational efficiencies anymore, but a faster go-to-market strategy

In a highly fragmented and competitive digital era, senior management executives face major challenges in effectively monetizing media assets. Tomorrow's integrated digital enterprises need agile and modular IT systems to reduce lead times for new service offerings and create new revenue streams. The increased flexibility of these service offerings will eventually enhance operational efficiencies and cost synergies across the enterprise.

Appendix

Methodology

Prime Focus Technologies commissioned Ovum to develop a white paper in January 2016 focused on its flagship "Media ERP" solution. The research piece was developed in collaboration with top management executives from Prime Focus Technologies, utilizing Ovum's internal resources including global media asset management, ICT Enterprise Insights, and European rights and royalties system surveys conducted in 2015. The research paper primarily aims to assess the core developments and pain points addressed by a single media asset solution such as Media ERP in the rapidly changing media sector. It also highlights the most commonly cited questions pertaining to core value and ROI of Media ERP for media enterprises in the emerging content-anywhere era.

The research incorporated four broader categories, evaluating the need for unified, enterprise-wide software; pain points addressed by this solution for tomorrow's integrated digital enterprises; return on investment for margin-pressed content owners and aggregators; and a summation of the value derived by Star India and Disney's Indian operations via deployment of Media ERP.

PFT's CLEAR offers five seamlessly integrated modules (cloud-based MAM, PAM, Broadcast, Operations, and Distribution) to accelerate digital transformation and customer engagement for premium content owners.

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