

BEST PRACTICES

The Future of Enterprise Content Management

An Unexpectedly Vibrant and Strategic Evolution



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EXECUTIVE SUMMARY

The content management industry is in the midst of a renaissance born of major new advances in strategic content technologies, the growing importance of digital experience in all aspects of content, and the proliferation of digital channels and enabling IT systems.

This report examines the state of the art in enterprise content management, including what a contemporary platform now consists of. It explores the dramatic improvements in areas such as time to value that organizations can now achieve if they wield the substantially up-leveled and transformed new model of content management that is now the benchmark in the industry.

Business Themes



Future of Work



Digital Marketing &
Sales Effectiveness



Next-Generation
Customer Experience



Technology
Optimization

OVERVIEW OF ENTERPRISE CONTENT MANAGEMENT IN THE 2020S

How Content Management Has Evolved Since the 1990s

With the historic arrival of the consumer internet in the 1990s, managing digital media suddenly became a top priority as organizations increasingly sought to operate online. Simply put, businesses quickly found they could no longer keep up with the surging volume and variety of content being created daily. Furthermore, managing content by writing code required expensive professionals and was time-consuming. A better way to grapple with online content was urgently needed.

The situation called for a new approach to managing information in a systematic and straightforward way. This led directly to the creation of the digital content management industry, which defined the technologies, tools, processes, and best practices needed for creating, capturing, analyzing, publishing, and preserving information both online and in private networks in the dawn of widespread online media.

Self-contained content management systems arrived that were self-service and became extremely popular because they were easy to use. Today most digital content is hosted and managed by content management systems, both inside organizations and across the internet. However, the situation with content has continued to become more challenging.

Proliferation of Content Types Created Mass Confusion

Quite suddenly as businesses digitized all their content, they found they were now handling multiple information silos across the various systems that handled their digital assets, ranging from documents and records to pieces of content such as text and images. Updates between the primary content management systems and other systems that also held content were needed. Worse, collaboration efforts among them were impeded by integration costs and the effort to maintain the systems. Integration issues were common, including version mismatches and confusion in general regarding how best to organize and govern content management as a whole across multiple systems.

At the same time, operational tensions between document sharing, digital collaboration, and content management further divided the focus. These three types of solutions created duplicate infrastructures and teams, thus creating a fragmented morass of systems, skills, and content that often was spread haphazardly across the digital landscape within most organizations.

The industry soon led a major effort to fight this status quo with a wave of new and updated content management tools. Notably, along with these new tools came an entirely new form of enterprise content management. It was no longer acceptable to merely handle, organize, and distribute documents or content. Organizations also needed a robust underlying architecture that could assemble all of their data sources and document silos. These systems then helped stakeholders distribute this far-flung content more easily to multiple customer and business channels as needed, with as little overhead as possible. Content management systems became more syndicated and began to play well with other systems.

The Cloud Shift Drove a Historic Change

Around a decade ago, content management systems began another historic shift—one that would greatly accelerate innovation and improve agility. The epochal move from on-premises content management systems to hosting of both the system itself and its content in the cloud was one of the most significant shifts in the narrative of the industry. The rationale for cloud-based content management was obvious to most at the time and included the benefits listed below.

Cost Efficiency

Organizations can move to a subscription model based on actual needs and usage (features, storage, number of users, and so on). Subscribers to a cloud-based content management system can avoid paying large one-time up-front fees for software, hardware, licenses, integration, customization, installation, and maintenance. Organizations also get the benefits of allocating costs over time and having operating expenses that better match their business cycle.

Seamless and Automatic Upgrades

Updates and upgrades of on-premises systems usually require system downtime, which often renders critical capabilities temporarily unavailable. In contrast, cloud-based content management systems usually take care of such maintenance and updates, including integrations and other associated components, under the covers. This means that systems are in a constant but largely seamless state of evolution: When a change or an upgrade is necessary, it is usually deployed from the vendor automatically and transparently.

Improved Levels of Service

When it comes to availability, the cloud helps protect organizations from unforeseen traffic spikes or loss of data. Cybersecurity is higher with cloud-based solutions, and so is operational reliability. Rather than consuming valuable time and resources on the kinds of individual issues that might befall a locally installed content management system, the cloud gives its stakeholders a highly controlled and secure environment to rely on. Service-level agreements (SLAs) guarantee help when it's needed, and the robust monitoring tools that come with cloud services ensure reliability, reduce downtime, and help eliminate single points of failure.

Improved Collaboration

With cloud-based content management, organizations have access to the latest tools for collaboration. Users can easily work on the same content, share data, and contribute to projects from different locations, reducing redundancy and time spent on repetitive tasks such as data reentry. In addition, cloud content management platforms usually come protected with automatic change versioning. This gives editors the ability to compare versions or restore older versions of content when necessary, helping maintain version control.

Easier Integrations

Cloud-based content management enables organizations to add or integrate new features and manage multiple apps and platforms with the content management system with greater speed and agility than

with on-premises systems—often from a single dashboard or management console. From e-commerce systems to CRM systems, many cloud-based content management platforms offer a range of prebuilt third-party integration options for other commonly used products and services. This can save the usually considerable cost and effort of undertaking many individual custom integrations and results in a more usable, centralized, and smoother-operating content management system.

Experience Management Drives Market Maturity

The migration to the cloud was a seminal moment in the content management industry. The move gave rise to many new advances that were either difficult or outright impossible before. Then another major new trend arrived that brought content management into the very forefront of how companies did business.

The arrival of digital experience, or the orchestration of a digital content journey to achieve the goals of a stakeholder, began to move to the center of how organizations thought about creating value online. The notion of digital experience represented a seminal evolution of content management toward a more omnichannel digital world that supports the strategic needs of organizations better than the isolated functional systems that came before. Instead of looking only at the content itself, the experience model focuses on the actual outcome of a structured narrative—experiences created from content assets that delight or provide something useful to those who interact with them.

All of these developments led to a major discussion in the industry: Did content management still matter, or was experience management actually the real future of content? The discussion in some circles moved to something referred to as content services. The term is relatively nondescriptive, and in the process, it lost the meaning of what organizations actually wanted to focus on—namely, managing content to create value for stakeholders in an ever-more-complex and -sophisticated online landscape. Companies increasingly needed to position their content within experiences, on a large variety of touchpoints, and with full insight into and oversight of what was happening within those experiences. Content management had to expand to encompass this vital requirement.

In this dual world, sometimes content management was the focus and sometimes digital experiences were, depending on the stakeholder and the business requirement. The industry soon realized

that they are two sides of the same coin but sometimes serve separate purposes: Content is not just embedded in experiences but is also created, stored, managed, and discovered separately on its own until it is needed. But content also must be easy to retrieve and use to produce high-value experiences. This led to an important insight about the entwined nature of content and experiences. The industry now realizes that these areas are often inseparable in practice. Thus, today's advanced content management systems often are equally capable of managing content and experiences together.

New Use Cases Drive Content Sophistication

Along with the big-picture changes in the content management landscape came other practical improvements. As organizations grew their digital footprints into other parts of the globe, content needed to be localized into regional languages. Translating content has long been a laborious operation involving manual processes and various third-party bureaus. Then came digital translation management capabilities, which arrived for enterprise content management systems as well as popular consumer-grade content management tools for small businesses, with features relevant to each audience.

A translation management capability within a content management system automates the repetitive, tedious translation process, which can now be more easily carried out in software. This leaves only the creative work of translation and final reviews to be carried out by people. Because the localization workflow is automated right within the content management system, it reduces management overhead and translation costs as well as turnaround time. Translation quality typically improves significantly over the old manual processes. Because the work is done right where the content is managed and overseen, the content management systems can be used to realize end-to-end translation for complex, distributed publishing and distribution scenarios.

But this was not the only sophisticated business function that helped content management stay relevant to organizations in the 2010s. There also was a growing realization that content could and should be more easily monetized as digital business matured and became a much more important part of what most organizations had to deliver to succeed online.

In years past, the argument was that e-commerce systems and content management systems should be separate specialties. But as content became the core that drove digital experiences and much of online commerce, the industry realized that commerce needed to be enabled wherever content was, on whatever touchpoints it was delivered on. Content management systems began to integrate with e-commerce systems, so such systems began to become the key capability of a robust and functional digital business.

Connected Content Ecosystems Take Center Stage

Finally, as organizations aggregated channels, websites, and digital assets, they created sophisticated publishing and distribution ecosystems that went far beyond a single point of presence. In years past, content management tended to be focused on a main website or intranet, with other content management instances created for additional needs and touchpoints as they arose.

As these additional needs sprouted into major use cases and ancillary side businesses in their own right, managing content directly at each of these separate touchpoints didn't make sense any longer. So point content management systems increasingly became content hubs for an organization's collective digital touchpoints, enabling the content to once again be centralized, along with the requisite IT integrations and key supporting business processes such as translation and e-commerce.

That was roughly where content management stayed for several years in the early 2010s, without a great deal of change. The notion that content management was essentially mature was floated in the industry, and even the idea that it was no longer an important product category became a topic of industry debate.

But content management was just in a momentary lull before the next major set of advances. These advances were to prove so profound that they would drive the industry into its richest cycle of innovation yet—one that would propel content management not just into the center of IT or marketing but also into the center of business itself.

EXPLORING NEXT-GEN CONTENT MANAGEMENT

Content Management Accelerates Evolution in the 2020s

As the 2020s arrived, content management already had begun to undergo a major new evolution. Many of the trends that had been building up to this point were about to be accelerated and significantly improved upon from the lessons learned over the previous years. This included a much higher operations tempo and more nuanced scenarios, such as making capabilities such as content ecosystems work more seamlessly or using role-based user experiences to drive productivity. This also included enabling far more complex editorial workflows, supporting high-velocity content production processes, achieving deeper integrations with many more supporting IT systems, and realizing sophisticated role-based mixed-content production environments. And there was more.

The shift to the cloud made all of these advances in content management much easier, nimbler, and more adaptive to use and wield as a strategic capability within the business. Consequently, vendors seized on what was now possible to push the boundaries and create more mature content management platforms. They began to develop what this report refers to as *advanced content management systems*. The result was, as is explored in detail below, that the velocity and agility in content management continued to go up and up, even as content management became much more complex. Hard-won lessons learned in this rich new landscape of connected content touchpoints led to breakthroughs in each part of the content lifecycle that now enable organizations to deliver content and experiences on a substantially higher plane of operations.

What was about to result was a much more mature and capable architecture for content management and experience as a true end-state business capability. The following section details what advanced content management systems now generally consist of.

Contextual Support with Role-Based Collaboration

As content management became a larger and more sophisticated activity involving larger teams with more specialized roles, advanced content management systems began adding role-based collaboration that would facilitate the ever-more-intricate ballet of activities required to support the operational

needs and rapidly changing tempo of the content management lifecycle. The best new content management systems now connect all these roles in a cohesive set of operating lanes that enable the entire organization to more effectively work together as a diverse team on content strategies and objectives.

The roles that coexist today in modern content management processes and are getting more specific use-case-based features include communications and marketing professionals, editors and publishers, digital executives, and developers.

Communications and Marketing

Professionals in communications and marketing now have specialized features within advanced content management systems that enable how they most commonly work, such as centrally managing multiple online properties across their brand portfolios. Specific capabilities have been added that help ensure brand consistency while reducing the burden for site administrators to carry out tedious and time-consuming activities common in communications and marketing.

This includes supporting multiregion brand activities that require seamless inclusion of now out-of-the-box language translation services. Perhaps most importantly, advanced content management systems have added customizable workflows and preconfigured role-based permissions specifically for communications and marketing teams that help them collaborate and work faster, smarter, and more safely, no matter the location.

Editors and Publishers

Those who lead content management capabilities need specialized administration features that help them declaratively control and adjust the content management lifecycle. This includes a highly capable set of integrated tools for collectively managing online properties, editorial roles, content, digital assets, users, permissions, workflows, languages, analytics, and supporting business models.

Today's content leadership teams face enormous scale and complexity in their content ecosystems and require sophisticated processes to cope with them, processes that are now templated for

them right out of the box. By removing the burden of having to fit all the pieces of their content management architecture together manually and enabling them to focus on the big picture, today's advanced content management systems free teams to spend more time on vital strategic planning as well as on more effective overall governance of their content management operations.

Digital Executives

Digital leaders are getting their needs met with advanced content management systems that provide data-driven insights, dashboards that show the business state of their content ecosystem, and capabilities that directly support their digital strategy roadmaps. An overarching need includes connecting to and cultivating content partners, ecosystems, distribution channels, publishing outlets, digital touchpoints, suppliers, and new business models.

Advanced content management systems don't just handle the routine activities of today's rich content management lifecycle; they also provide the necessary high-level controls and levers to enable easier business evolution, large-scale operational change, and overall digital transformation of the organization. In fact, it's vital that digital executives understand the power of the capabilities they now have in these systems to enable high-scale, high-growth content-based businesses and supply chains.

Developers

It's a common saying in the tech industry that developers are the kingmakers. Their core job function is to build new technology-based solutions out of existing services and platforms. The faster and more easily they can do that, the more value they can deliver to the business. As a result, advanced content management systems aim at this audience by giving them the tools they need to succeed with less code and less effort.

These capabilities include basing all the features of the content management system on an API-first model—ideally based on modern microservices—to provide a framework-agnostic development platform. This enables developers to take advantage of cloud-native development models to rapidly create more situated content-based applications and solutions by using business logic, workflows,

and integrations to build bespoke solutions with higher velocity, more reliability, and maximum achievement of requirements.

Modular Content: Maximum Target-Channel Flexibility

As content came to be used in more ways, in different digital channels, and repurposed in previously unplanned-for situations, the industry began to search for flexible ways to cope with the variety of situations in which content would find itself. The leading approach that has emerged is the modular design of content that creates a new composite content model based on individual parts—or modules—that are created individually as part of a larger design. Then some or all of these parts can be called upon as needed to help assemble a content-based outcome. The result is a complete content experience made from lots of distinct and separate content modules.

This was the revolution the industry had been waiting for. Content creators now had a truly flexible approach that was easy to use for decomposing content into smaller, more reusable, adaptable pieces that could be applied more easily in far more scenarios.

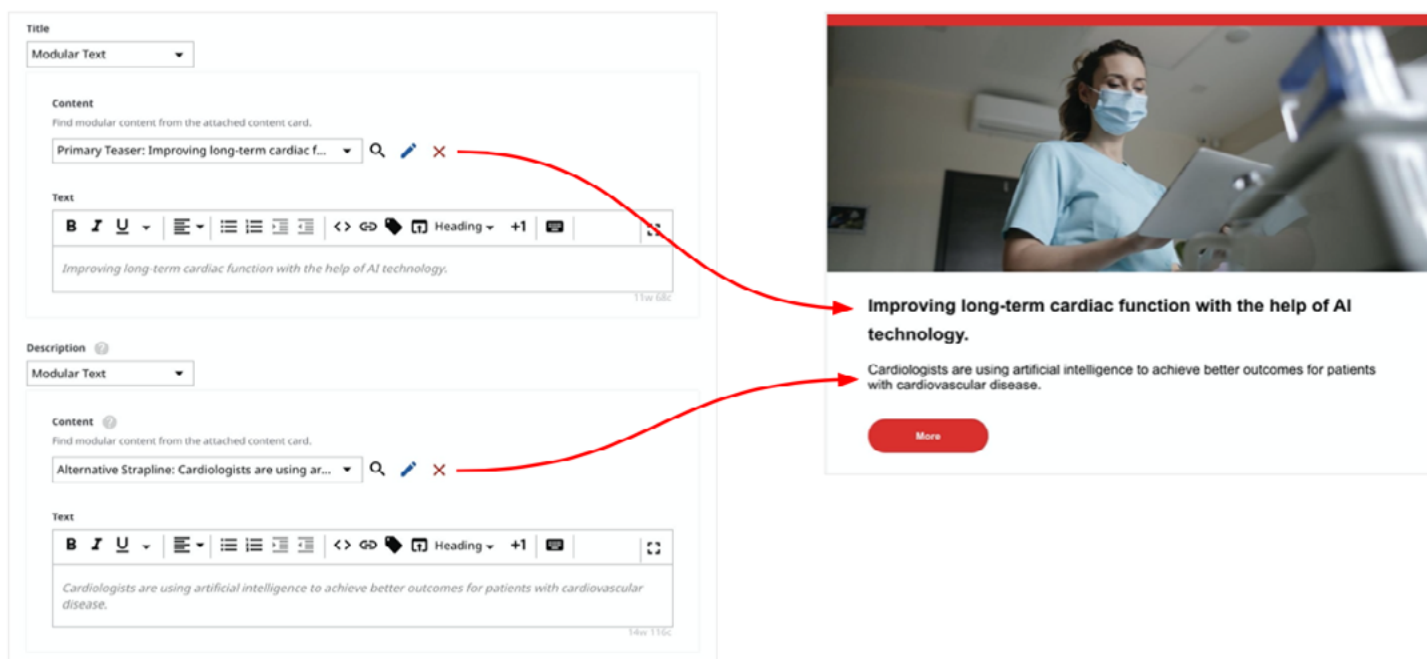
How modular content works is straightforward: Most modular content is made up of distinct, separate pieces of text. Much as in constructing a building, these pieces can be assembled to make a longer piece of content or left alone as shorter pieces by themselves, depending on what is needed in the current situation. Content creators can combine various pieces of content in different ways, resulting in new composite pieces of content from the modules. The key concept is that a vast amount of situated content can be created from these source modules, making one set of information stretch as far as possible into many different scenarios.

Advanced content management systems have this modular approach to content built into the very core of their design. This supports a truly comprehensive approach to modular content and an architecture that creates a much more efficient way of generating a larger volume of relevant content, which then can be tailored for individual use cases, audiences, or channels. With the increasing demand for content teams to prove ROI while producing personalized content under tight time constraints, modular content creation is a step function directly into high-leverage reductions in time and effort.

Content assets developed and managed in a modular form can then be ordered and curated according to audience, channel, and use case to satisfy a great many more consumption scenarios. Modular content has proved to be a genuine revolution among the many recent improvements in content management systems. But the key is to identify the product whose modular design is most aligned with an organization's current and likely future content needs.

Modular content can support today's very complex content processes in unique ways. One way is with the model of the content card—a visual model used to assemble and deliver channel-agnostic messages, charts, graphs, and so on with archetypes and other strategic variations in a single place. This is the approach that Brightspot, a leading example of advanced content management systems, uses to support modular content, as seen in Figure 1. These cards are then combined with channel frames, which are ready-to-use channel-specific design templates. Brightspot's approach to combining content cards, channel frames, workflow, translation, and integrations enables the company to deliver a seamlessly integrated solution that enables content teams to work efficiently and adaptively without having to change major infrastructure.

Figure 1. Content Cards Are an Effective Model for Defining Highly Adaptive Modular Content



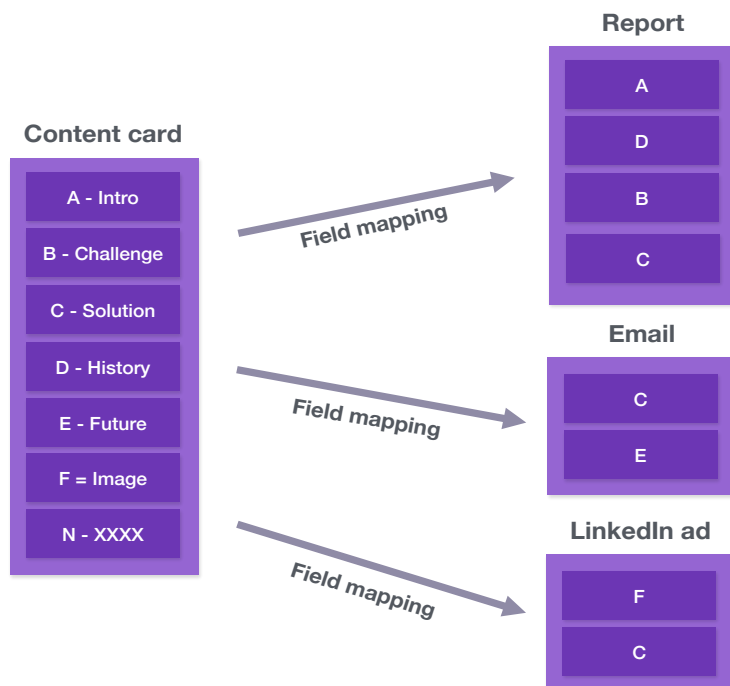
Source: Brightspot

Content cards can be created directly within Brightspot or imported via an integration. They are modeled as a unique content type that stores primary and alternative product data fields such as teasers, copy, charts, and so on. The data entered into each of these fields follows unique workflows to obtain copy approvals from different content process collaborators. Translations also can be initiated from the content card via translation integrations. The upshot is that modular content and design can interact with all the powerful downstream capabilities contextually, and with maximum automatic fit to purpose. Figure 2 shows an actual example of all of this being brought together.

Headless and Federated Content Architectures

The arrival of so-called headless content management, in the mid-2010s, heralded a new and more holistic and inclusive way of thinking beyond individual content management and delivery silos. Now a content management system could be used remotely in a standardized way without its local user interface. The seminal moment was the release of the public GraphQL content management

Figure 2. How a Single Content Card Can Be Reused to Accelerate Content Outcomes



Source: Constellation Research

specification. This was groundbreaking, because it opened up headless content architectures across the industry in a systematic way that would enable different content management systems to readily use each other's services.

Standardization on headless interfaces has since been commonly adopted across the vendor landscape, to the extent that it has become a critical must-have for content management teams. Part of what makes standardization on headless capability the preferred approach for content management systems and their resulting ecosystems is the overall centralization it affords. This breakthrough was critical, because no content management system is an island any longer. Most organizations have a complex landscape of digital presence and online properties that operates by using a wide variety of underlying products and content technologies.

From a broader industry standpoint, headless content management systems also started to gain traction as businesses needed a better solution to engage people in personalized ways. To that end, organizations and publishers sought the ability to reach these existing and prospective customers on multiple channels across the entire buyer journey—and they required the flexibility to do it across any of the target systems they needed to fill with content and experiences.

From traditional web-based applications to emerging technologies such as virtual reality (VR) or smart-home devices, headless content management offers an adaptable solution for future-proofing a business's ability to deliver the best-possible experience regardless of the content management systems involved over time.

This ultimately brought headless architectures to the wider content management audience. GraphQL has since become an open standard and is an important part of what makes headless content management so approachable and standardized today.

Mixed-Content Ecosystems: Bringing All Content Systems Together

As content management evolved as a practice and a business, many organizations found themselves managing an ever-expanding portfolio of sites, soon to discover that they had a highly varied publishing environment as a result of individual groups' selecting different specialized solutions

that met their needs, as well as a flotilla of new systems that arrived due to events such as acquisitions or mergers.

The outcome usually was a cumbersome and fragmented publishing process as well as a large investment in custom integration and automation. The collective result often was the inability to leverage skill efficiencies at scale. There was also lack of access to and control of the underlying sites, device touchpoints, brand standards, content sources, and digital assets from a central location.

This is where today's advanced content management systems currently shine, by establishing a standardized headless approach across vendors. Headless enables those in various content roles to easily reach through to different underlying content management systems. This powerful capability directly leads to the next level of content management, which is rich, in-depth support of every digital property a company manages, all from a single master system. Done well, today's new master content management systems can rapidly consolidate and enable streamlined operation of very large multiregion, multisystem site portfolios that support many languages and roles, numerous sources of digital assets, and complex workflows. Changes at the edge of the ecosystem flow easily back to the master, and the master content management systems at the center of the ecosystem can flow changes and oversee global operations from a single system. It's a publisher's dream and an enabler of digital businesses that are far more effective and efficient.

Content and Editorial Workflow

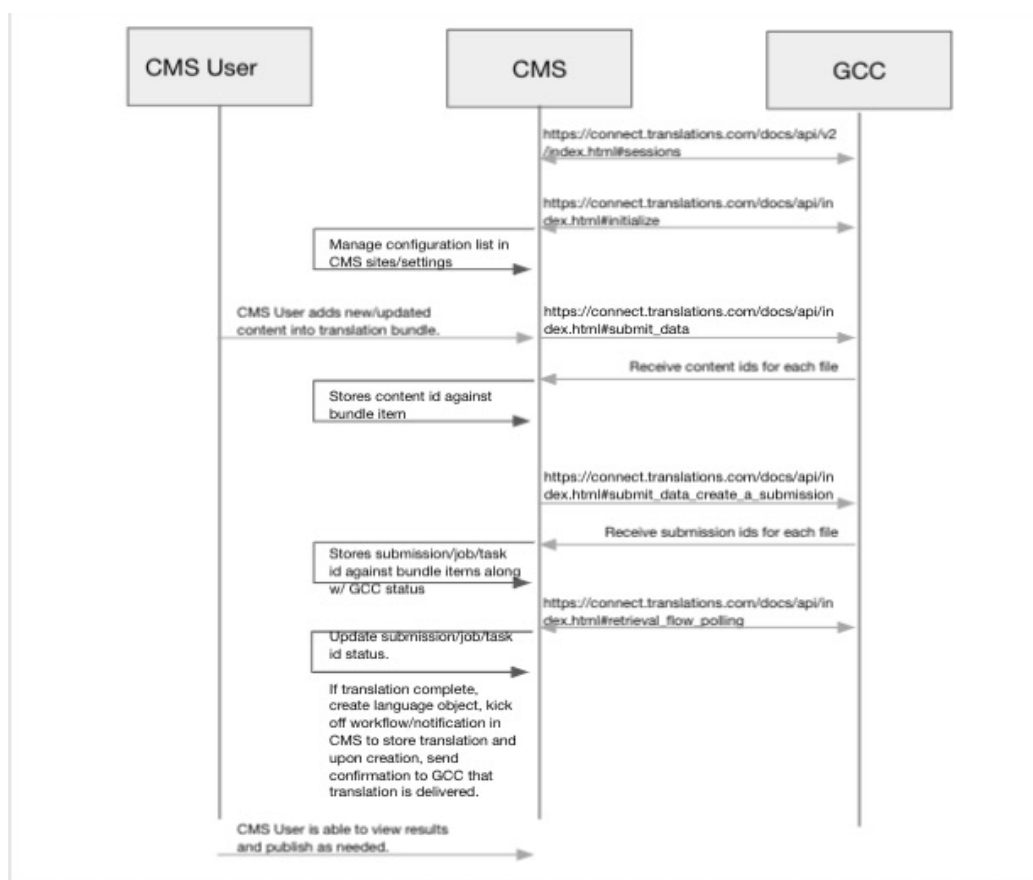
Because digital content must be produced via increasingly complex processes and distributed across sophisticated global ecosystems, organizations need to ensure that the processes that manage these activities happen consistently, can be tracked, and can be strategically directed as needed. This has brought workflow capabilities within content management systems to the forefront to ensure that the vital flow of content production takes place as planned.

Today's advanced content management systems enable editors and administrators to create business-specific workflows for content creation and publishing processes without the help of a technical expert or developer. The most advanced production workflow systems are integrated deeply into content management systems, making it straightforward for users in any role to establish easy-to-follow workflows.

With workflows defined to run the entire content production process from end to end, editors can take greater control of the editorial process, publishers can ensure that their business is running correctly, and digital executives can ensure that they have positive oversight and consistent process quality and can achieve the highest potential effectiveness of their digital business operations.

The most advanced content management systems today make it easy for anyone to create and edit workflows and even adjust them on the fly. A strong example of this is from the previously cited advanced content management vendor Brightspot, whose product has been used to establish advanced language translation workflows. In Figure 3, you can see an actual screenshot of the workflow definition, showing the principal systems in the workflow and what happens each step of the way. Content management users can very quickly develop and mature the process themselves until it meets their needs, by using the visual user interface.

Figure 3. User-Shapable Workflows in Advanced Content Management Systems



Source: Brightspot

Robust Integrations

Perhaps one of the most underappreciated yet powerful aspects of advanced content management systems is their usually extensive list of off-the-shelf integrations. Integrations are real-time bridges to other key supporting systems in a content management lifecycle. Instead of working in multiple systems and manually importing or exporting digital assets, for example, those assets can be accessed on the fly from an underlying digital asset management system, right from within the content management systems at the point of need.

Given the numerous supporting systems organizations have to wield together as a unit to manage content, integration can greatly reduce tedium, improve the user experience, raise the quality of content operations, and accelerate the entire process, all at the same time. Integration extends and enhances the core value of a content management system, often by a considerable margin, creating a much more functionally useful system.

However, integrations used to be expensive to custom-develop and/or rare for content management vendors to have for many common business systems. With today's modern application integration technologies, neither situation is the case any longer.

For the full set of operational capabilities most organizations would need to have integrated with their content management systems out of the box, Constellation Research finds there are six core types of systems that provide considerable return on investment (ROI) as integrated functions, as described below.

Digital Asset Management (DAM)

Managing, locating, and using/reusing digital assets is one of the biggest challenges facing organizations as new digital assets are created, modified, and stored during normal content management activities. Organizations require a way to find and reuse these assets—including text, images, videos, and documents—to create fresh content and digital experiences that help them engage with their internal or external audiences. The sheer volume of these accumulating digital assets can be overwhelming even to extremely well-organized content teams.

The digital asset landscape is further complicated by the likelihood that most organizations have their digital assets in many different locations—typically a variety of DAM systems, file systems, cloud storage, commercial libraries, and other sources. With the heightened velocity of content production these days, quickly finding the right asset across all of these sources can be daunting.

This is where robust DAM integration can really help by managing multiple digital asset sources as a single consolidated unit—enabling federated search across all of them as well as views of relevant assets based on role—and by providing analytics to help organizations understand how assets in inventory are being reused in created content and ensure more optimal use of preexisting assets.

The most advanced content management systems can bring together all DAM sources into a virtualized media desk dedicated to helping sophisticated teams better visualize, structure, organize, and optimize digital assets for maximum effect in production and editorial processes.

Analytics

Today's more-data-driven businesses now expect that stakeholder interactions with content will provide tracking data that can then be used to make decisions and improve the resulting digital experiences. Understanding how content is being produced, managed, consumed, and experienced across an ecosystem is vital for ensuring that the right outcomes are being generated. Integrating industry-standard analytics solutions such as Google Analytics or Comscore is practically expected, even in less advanced content management systems. But this is no longer sufficient.

The key today is to have analytics integration for the analytics platforms currently used that will support the fullest-possible range of content touchpoints, on both the production side and the experience side. Note: This is in addition to native analytics capabilities the content management system already has internally.

Marketing

An advanced content management system today is often the linchpin system in an organization's marketing tech stack. So too are marketing-specific capabilities such as user information capture to a

customer relationship management (CRM) system or A/B-style testing that might be desirable within the marketing functions of a content distribution ecosystem.

Although content is itself often much of the marketing experience, there are key ancillary functions that content management systems either don't specialize in or for which there are other standard systems within the organization. Such functions include handing off leads to sales teams, emailing recent visitors to bring them back to the site, or maintaining newsletter subscriptions.

Search

Given the mountains of content, documents, and digital assets that content managers have to wade through to get their work done, search is one of the single most powerful tools at the disposal of content teams to accelerate their work. However, most search engines within content management systems work only within the platform itself. Content outside is not brought in as appropriate.

Consequently, search integration is key to enabling all the possible search options needed for an editorial or content production process. This includes integrations for local enterprise search engines; popular file-sharing systems such as Google Drive, Box, and Dropbox; and content libraries such as YouTube, Vimeo, Getty Images, and AP Images.

Language Translation

Multiregion content management scenarios typically require publishing content quickly and easily in native languages around the world without ever leaving the content management system. This means that both the workflow for the translation process and the actual language translation system itself—such as Lingotek, Google Translate, or IBM Watson Language Translator—work directly and seamlessly together right within the content management systems to enable sophisticated translation and verification processes.

Advertising, Payments, and E-Commerce

Increasingly, the business of content requires access to technologies that enable digital business models. These can be online advertising; payment systems that support purchases and subscriptions; and e-commerce capabilities that include ordering, fulfillment, and customer support.

As advanced content management systems take on the role of being the foundation for digital experience, there's an increasing demand for high-quality integrations with these vital revenue-generating capabilities right within the content and digital experiences being provided to stakeholders.

Off-the-shelf integrations with Magento, Shopify, Stripe, and Zuora on the commerce and payments side and declarative control of ad placement with Google AdSense and Amazon Advertising increasingly are expected from the outset.

Use Case Libraries

Content management systems used to be fairly generic tools for publishing content on websites. Now the industry has a much greater sense of the various ways content management is handled in specific business scenarios. As a result, content management systems have an increasingly specific set of use cases they are designed to explicitly handle, with additional features that support different business scenarios.

Generally, in more advanced content management systems, Constellation Research has found that the following use case support is highly desirable for additional specialized feature sets, workflow templates, predefined roles, and preconfigured reporting/analytics views:

- Brand storytelling
- Digital asset management
- Digital media conglomeration
- E-commerce
- Enterprise content management

- Global multisite, multivendor content management
- Intranets
- Marketing
- Media newsrooms
- Microsites
- Publishing networks

Today's advanced content management solutions ensure that those engaged in the above pursuits have readily identifiable and accessible activation mechanisms for the key content management activities in each use case.

For example, a newsroom will be able to quickly find and configure an end-to-end editorial process it can rapidly tweak and then make it live. An intranet will have the various roles, content templates, and review processes ready out of the box, with just some final configuration to do. In this way, common business activities that are carried out by content management systems can be much more quickly set up, supported, and enabled with leading industry best practices already built in.

Contextual Asset Acquisition and Management

One of the single most important aspects of managing content is getting the most out of existing digital assets. Although features such as federated search across integrated DAMs go a long way toward streamlining the location of assets and as such are now table stakes, the industry has learned that the day-to-day process of asset management creates invaluable context in its own right.

Advanced content management systems can watch how users identify or add new digital assets and learn about how they're used, where they're used, and how they're identified and tagged and then use that additional context to improve the use of that asset not just for next time but also right within an ongoing process.

Adding a new image asset with a title of "Our CEO," for example, and then using it in pages titled "Leadership" or "Business Strategy" will enable the content management system to make sure all of this digital context is used to find the image again when other digital assets or searches using similar terms are conducted.

The goal is to make sure that context about recently used digital assets makes them more readily accessible at the right moment, reducing the need to repeat lengthy searching, browsing, and session-selecting tasks, while saving considerable time and effort along the way.

Adaptive Experience Creation and Preview

To understand how content is actually going to look and be presented no matter the channel—be it a desktop browser, a tablet, a smartphone, a virtual content model (AR/VR), or a third-party app or wearable—it's vital that content publishers have rapid 100% clarity on how content will appear in any given situation.

Despite the proliferation of channels, growing modularity of content, and disintermediation of front ends from back ends, the reality is that an accurate preview of an asset actually has become more important to have now that so many delivery channels are in play. Adapting content dynamically and previewing the result, whether in authoring a digital experience or distributing content to far-flung content networks and displaying it for complete confidence and verification by content publishers, have become time sinks in traditional content management systems.

This has led to the rise of different types of previews tied to specific types of devices—previews that can be quickly shared with anyone outside the content team—and finally contextual previews. Contextual previews are perhaps the most strategic advance in adaptive experience creation. In addition to previewing how an asset can be transformed when experienced on different devices, editors can verify with contextual preview how an asset will appear in vastly different contexts. For instance, an article summary might also be displayed either in a sidebar or used as the lede on a landing page. Using the contextual preview, content publishers can quickly see and share how the asset will actually render in all those other usages as well and then make adjustments and changes as necessary to ensure the right outcome, all in a very short time.

Easy Extension to New Channels

With digital channels proliferating by the day, it's critical that content publishers can reach any device, any screen, any experience, and any virtual environment, from mobile devices and wearables to digital TVs—and soon to AR/VR and beyond.

Today's advanced content management systems use the latest in development frameworks to make adding new channels as easy as possible, often within just hours. This enables content publishers to greatly extend the reach of their content management ecosystems at a velocity that can match that of today's exponential growth in new digital channels.

Massive Template Libraries

The world of content today has countless options for layouts, designs, and motifs for just about any purpose, whether it is a type of industry, site type (store, media site, company website, and so forth), or other function.

It goes without saying that consistency and quality in availability of themes are critical. So is the ability to universally offer a fully responsive design as well as modern content management capabilities such as modular content formats. It's also important to be able to switch theme templates easily, even after the site design and information architecture have been developed. The ability to do all of this well across every type of theme not only provides a large boost in flexibility and power to move quickly but also ensures that content creators and publishers can move with great confidence into new designs and templates without worrying about losing or breaking anything in the process.

The latest content management tools offer hundreds to thousands of universally interchangeable content templates at the same level of capability, accelerating content management processes and maximizing flexibility.

Hypervelocity Delivery Models

Content today moves faster than ever. Not only do content creation, workflows, and publishing have to happen more quickly but the business models of content management and experience production now also put much more at stake. As a result, the latest content management systems offer the shortest-possible time to value for content owners, enabling them to almost instantly turn a content asset into one that provides maximum stakeholder value.

These new hypervelocity delivery models are literally that: working content management solutions built around industries or use cases that require the absolute least amount of preparation, analysis, design, development, architecture, installation, and/or provisioning time. An organization, as long as it is willing to adopt the model of the working solution, could theoretically connect its content via headless APIs and begin operation immediately, with full role-based workflows and collaboration already set up and ready to go.

Constellation Research analysis has found that hypervelocity delivery models, when realized by an advanced content management system, represent the single shortest time to value available to content management professionals. The savings is aimed mostly at the period from solution selection to first production operations, but if an advanced content management system is used, the rest of the benefits described above also come along, ensuring dramatic reductions in effort and increases in the speed of content processes.

10-to-1 Reduction in Development Costs/Time

All of these advances, present in combined form in the most-advanced content management systems, collectively represent a breakthrough in content management speed and effort. As much as a 10-to-1 increase is possible via automation, convenience features (such as contextual asset management and adaptive preview), numerous deep integrations with supporting systems, industry use case libraries, massive content templates, and hypervelocity delivery models.

This creates a performance chasm between legacy content management systems, many of which have done a limited job of capitalizing on the last decade of lessons learned, and today's advanced systems. Legacy content management systems also have been hampered by a cottage industry of less capable plug-ins, often supported by an extensive cottage industry of consultants and developers who cobble together bespoke content management systems that do not benefit from the industrial-scale packaging and customer validation/maturity that the next generation of content management systems has achieved.

Organizations looking for a breakthrough in time to value and a significant competitive advantage are well advised to migrate to these advanced content management capabilities.

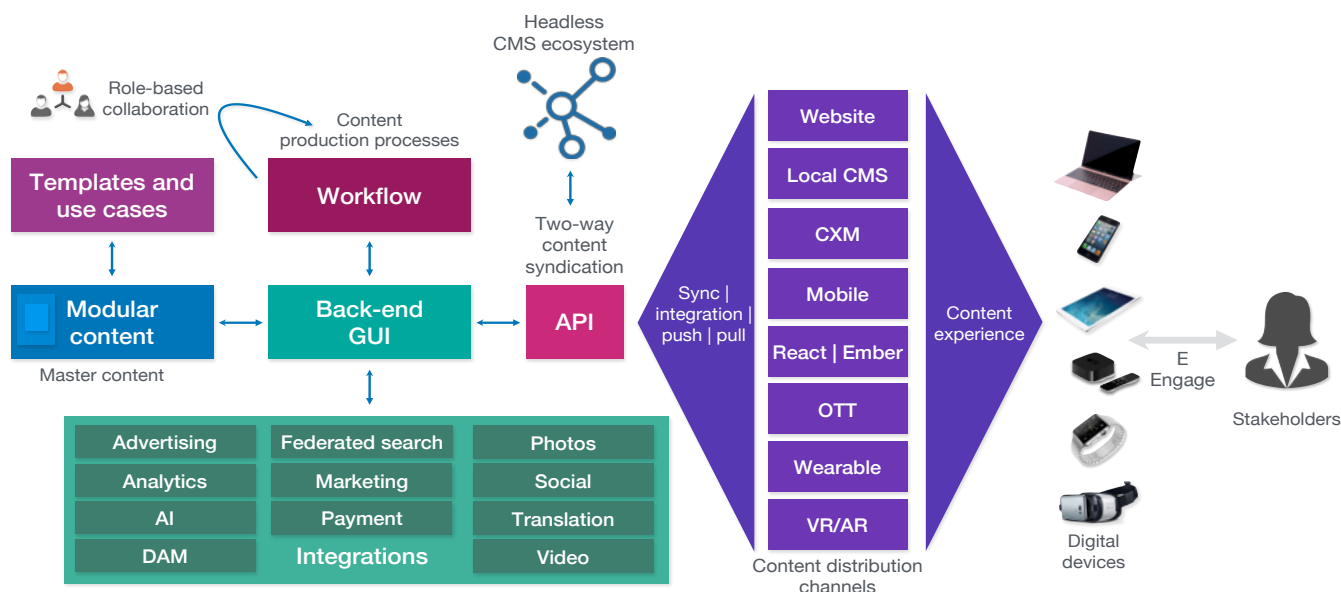
PUTTING IT ALL TOGETHER: A VISION FOR MODERN DISTRIBUTED ENTERPRISE CONTENT MANAGEMENT

It should be clear from a survey of the many advancements in content management that a new vision and operating model for content management have arrived. Content management is no longer regarded as a self-contained activity conducted in isolation. A deep, inclusive, and federated approach is now considered core to the very activity itself.

A modern ecosystem view of content is now the norm, with hub-and-spoke models and other syndication models requiring that a central operating entity coordinate, manage, and govern the larger ecosystem. The core advanced content management system keeps the ecosystem functioning, flowing with content, and delivering value through multiple layers of business models that form a digital business (see Figure 4).

Even content is transformed into much more flexible and reusable forms in modern content management, with individual channels becoming less important overall. The overall system can now be wielded en masse with maximum effort and ease. Workflow and automation infuse

Figure 4. A View of the Advanced Content Management Systems of the 2020s



Source: Constellation Research

content management processes and propel them toward outcomes while ensuring quality; creating accountability; and providing levels of insight, oversight, and control that were not readily available before.

Enormous lessons learned over the last decade have rolled into countless usage accelerators, productivity aids, and other conveniences, creating a more holistic and integrated view of content management that connects all the supporting systems.

Today content teams can spin up their content ecosystem with an ease that was not possible even a few years ago. They can assemble, wield, and manage content empires of a complexity not imaginable half a decade ago with teams much smaller than they've been in the past.

CONCLUSION AND KEY FINDINGS

Content management in the 2020s is fluid, fast, and dynamic in a way that creates real business value that simply wasn't possible before. The ability to focus at the strategic level, automate the rote tasks, and actually grab control of previously very hard-to-manage global-scale content flows and syndicated environments is a singular breakthrough. When combined with productivity advances that dramatically drop the cost and level of effort and create orders-of-magnitude speed improvements, advanced content management is a dramatic break from the past that provides a way to direct and wield a content universe of a size and complexity that could not be imagined just five years ago.

Organizations wishing to capitalize on all these advances in content management have a few difficult but important choices to make:

- **Rearchitect as organizations migrate for the best ROI:** Most organizations will find very substantial ROI by moving from a legacy content management system to an advanced content management system. The majority of organizations are behind the curve and should make the sufficient investment not just in migration but also in skills building to take advantage of the most powerful new capabilities. However, the highest value in migrating will be when making the architectural decision to have the advanced content management system be the core of the entire ecosystem.

- **Plan well beyond short-term implementation gain.** Too many organizations focus most on the near-term ROI with advanced content management, such as achieving a 10-month project in two months. Instead, organizations should understand that they can now plan for up to 10 times as much output *per year* in their roadmaps. The risk of not doing so is to squander much of the huge speed and cost dividends advanced content management systems offer.
- **Think bigger, and transform the business.** Prepare for the real outcomes of having a far more capable, integrated, productive, and automated content management system. For example, content teams will need wider skills to handle several different jobs, even if they handle just one today. Some old activities (content librarian or quality control specialist) will be eliminated and new ones (channel creator, app developer, revenue assurance) created.
- **Don't bring along technical debt as you evolve.** Make as clean a break as possible from older legacy technologies that will dilute the many benefits of today's advanced content management technologies. Some will be more difficult to let go of, but the rest should be retired to the greatest extent possible.

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- Founders of Constellation Executive Network, a membership organization for digital leaders seeking to learn from market leaders and fast followers.



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