# The Third Wave of Content Management

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**What is the third wave of digital content management?** Put simply, it is a new approach to building and managing websites and customer experiences. It centers on an agile method of web experience management that gives organizations the flexibility they need to thrive in an always-on digital business landscape.

The third wave gives us a way to deliver better customer experiences without using your web CMS as the only platform to design and deliver content. At a deeper level, it's a re-engineering of your core content paradigm to support better integration, reuse, discoverability, and multi-channel delivery. Ultimately, it's a new architecture for your content management system and sites. The result is a faster time to market for new projects, more flexibility, and lower cost.

Think of it this way: Web Experience Platforms are designed to deliver end-to-end customer experiences built, managed, and delivered on one common framework. This is a beautiful vision. But it does not mix well with reality.

Most businesses who can afford to invest in a Web Experience Platform already have large web and technology investments. And companies that deliver business online require more than one application to serve their customers.

Your customer tech "stack" may include a quoting system, commerce platform, ticketing application, or a custom business application like loan origination or travel booking. You may use a core system to manage your business like an insurance company does, or you may be a business or university with an ERP, or a trade association with an AMS for member management.

You may simply be looking for higher marketing performance using best of breed digital marketing tools. It may just come down to how you want to template your website, wanting the freedom to use modern web frameworks to craft your front-end experience without the limitations of a traditional module-based CMS platform.

If any of these scenarios sound familiar, you are probably frustrated with your Web Experience Platform. If you are looking for a digital platform that provides more flexibility in how you manage and deliver content, you need a new approach for evaluating your Web CMS or Web Experience Platform.

# ENTER THE THIRD WAVE

There have been three primary waves of Web Content Management...

**WEB CMS**

**WEB EXPERIENCE SUITES**

**DIGITAL CONTENT MANAGEMENT**

**Web CMS**

Brochureware websites

Static content

Ideal for corporate or institutional websites

**Web Experience Suites**

Module-based sites

Dynamic content

Ideal for single site customer experience

**Digital Content Management**

Composite websites

Agile content

Ideal for multi-channel and web applications

# THE EVOLUTION OF DIGITAL CONTENT MANAGEMENT

*"You may ask yourself, well, how did I get here?"*

– David Byrne, Talking Heads

The history of content management is a microcosm for the history of the Internet and digital content. The Internet slowly emerged out of the military and universities, then drifted into the garage, ultimately exploding into our social and business lives. Now we are always connected, tethered between our PCs and devices with Himalayan amounts of data and content vying for our attention every hour of the day.

**To understand where we are going, it's important to look back and see where we came from – what has driven us forward.**

# THE FIRST WAVE OF DIGITAL CONTENT MANAGEMENT

The first wave of digital content management (known simply as web content management) was built around managing static content – what most referred to as "brochure-ware." This was a straight shift from traditional print to digital content. The digital format was basic HTML with content and presentation tied together.

Brand websites were heavily product-focused, presenting content about products and services sold, along with contact information. During this phase, brands used the Internet to present information about themselves. They were talking at customers; there was no interaction or engagement.

Eventually, brands wanted their websites to do more. They were looking for ways to engage with customers rather than simply spelling out what was essentially print product information. Customers were starting to use social networks and create blogs – the Internet was evolving.

**This was the beginning of the second wave of digital content management.**

# THE SECOND WAVE OF DIGITAL CONTENT MANAGEMENT

The second wave of digital content management saw the shift from web content management to Web Experience Management or WEM. Many also refer to this second wave as Web 2.0.

In the second wave of digital content management, the website was still the primary channel. Content shifted from static HTML to dynamic, database-driven web pages, but the presentation tier was still tightly coupled with the backend management capabilities.

Website functionality came from a set of modules, or components, that shipped with the CMS, including capabilities for analytics, social media and the beginning stages of personalization. Everything was based on a single development framework (technology) such as ASP.NET, Java, or PHP.

Things quickly evolved during this phase, and additional publishing channels started to appear. Mobile grew in importance, as did email marketing and social media. Also, complex products and services, such as banking, insurance, travel, and healthcare were increasingly transacted online, and many included the need for managed content.

As things evolved, many organizations struggled with WEM. Implementations were too complex, the Internet was advancing faster than vendor roadmaps, upgrades were time- consuming and expensive, and because the Web CMS was the web presentation layer, it was hard to deliver unified customer experiences across all the new channels and applications.

Smart organizations are pushing forward. They need CMS technology to support the delivery of content to an ever-increasing number of channels and devices.

**This is the push into the third wave of digital content management.**

# THE THIRD WAVE OF DIGITAL CONTENT MANAGEMENT

Your content management needs have changed. You must deliver content to many channels: websites, secure applications, portals, mobile devices. But you are also dealing with the requirement to manage a broader set of content: web content, documents/DITA, data, application services data. Your CMS solution must support multi-channel, multi-content situations.

The third wave of digital content management is about building smarter content that can adapt to different channels and audiences and provide new ways to deliver content without the overhead of a traditional Web CMS.

You don't want to be locked into a Web Experience Platform. You want, and need, agile content solutions that enable you to deliver relevant content where the customer is, regardless of channel or device, exactly when they need it. You also need to shift from delivering basic personalization to offering relevant, contextual experiences across the entire customer lifecycle.

Maybe it's a third-party website or a customer support portal. Maybe it's an online credit card application or a banking app. It could even be the company website or email newsletter. The delivery options for your organization's content are wide, and it's only going to continue to grow.

In the third wave of digital content management, it's about agility – information agility, delivery agility. Content is mobile-first, intelligent and readily available for any website, portal, campaign, app or device.

# THIRD WAVE THINKING

When you approach your next digital project, look at it using this lens:

1. You can't deliver every experience the same way, using the same approach. You need a flexible CMS platform that can adjust how you deliver content, whether it's delivering secure content via an API to your custom-built websites and web applications, or it's dynamic content delivery to multiple front-end websites or communities. You need the ability to apply the right delivery approach for each project.

2. You need broader integration using agile methods. The experiences you create pull information from a variety of best of breed marketing and business applications. You need to be able to connect these disparate systems and integrate their information to create the right experiences. Look for solutions that are going to support connecting your key systems and data.

3. You want less complexity. Designing engaging experiences is hard enough; your CMS platform shouldn't add to that complexity. It must be easy to use, and not get in the way of delivering the user experience you are seeking.

**Designing engaging experiences is hard enough; your CMS should not add additional complexity.**

# GEARING UP FOR THE THIRD WAVE OF DIGITAL CONTENT MANAGEMENT

From responsive websites to digital publishing, to customer portals and communities, the modern content management system is all about agility. It's about flexible content delivery using secure APIs and dynamic delivery models. It's also about easier integration of marketing and business systems to enrich experiences. It's about delivering all this faster, cheaper and with less complexity.

To support the third wave of digital content management; the CMS must become the platform for content creation, governance, and orchestration, but not always the platform for presentation delivery.

**Your CMS is the platform for content creation, governance, and orchestration, but not always the platform for delivery of your experiences.**

# ALIGN YOUR CMS TECHNOLOGY TO SUPPORT THE THIRD WAVE

Anyone moving to a new CMS today should invest in a platform that affords the ability to meet future requirements. So what should you look for?

## SUPPORT FOR STRUCTURED CONTENT

Structured content is content stored in a format that both defines it using content types and relationships, and describes it using metadata. This makes content predictable - you describe how it is structured and organized using descriptive logical sections. In other words, you look at content and identify what it is, not what it looks like. This semantic definition enables the CMS to adapt the content for multiple outputs and formats and makes it easier to find by both machines and humans.

The creation and management of a structured content model means you can handle any channel or device, now and in the future. Technologies like NoSQL-based content databases, JSON, XML and other formats support this new approach to structured content management.

## SUPPORT FOR HEADLESS CONTENT DELIVERY

A headless CMS can deliver CMS-managed content to Web applications and other channels. It decouples the delivery of content from the backend management tier enabling you to manage you content in one place but publish it to multiple locations without the overhead of the CMS. You can build and deploy your web application using your technology frameworks and development operations programs. The CMS does not dictate your development stack or approach.

With headless, you manage any and all content for your website and business systems in your CMS. When the content is ready, push it as a resource file into an external application, or an application can request content using an API-based web service.

## ALL OF THE ABOVE (HYBRID) CONTENT DELIVERY CAPABILITIES

You may not want to build all your websites and applications as standalone front-ends. A CMS that provides both headless capability and a content delivery framework provides the best of both worlds. In this situation, the CMS is often referred to as "loosely coupled." Loosely coupled means that the CMS software is separate from content delivery but provides the option of a content delivery framework or application for rendering dynamic content and other services.

For example, you might want to build your company website on the CMS platform, making it easier for Marketing to make changes or add new landing pages and other content. You may also want to publish some of your marketing content to a mobile application built on a different technology. A CMS that offers both types of content delivery allows you manage your content in a single location and publish it to many locations.

## DIGITAL EXPERIENCE PORTALS

Portals are quickly becoming a popular approach for engaging with and supporting customers, employees, and partners. A portal is simply a secure website that delivers content, applications or online services, collaboration and engagement. Common use cases are customer service portals, company extranets, partner or distributor portals, membership portals and communities, purchasing portals, student or academic portals, or employee portals.

Today's portals differ from traditional portals because they connect key information and systems to provide content-driven experiences within the portal directly. They not only offer the ability to integrate information from other repositories and applications, but they include complete content management capabilities that support a wide variety of needs.

## WEB AND ENTERPRISE SEARCH

Research shows that most visitors to a website will search for the information they need using the search box. This makes it an integral part of your website or mobile experience. Customers have limited time to find the information they need; search expedites the findability of information. A native search-based architecture leverages the semantic XML structure of your content, taxonomy, and metadata improving the speed and the quality of search results using features like faceted or guided search.

A CMS that offers a native search-based architecture provides many benefits. It can drive navigation using the visitor profile or clickstream behavior with features such as recommendations and related content. It can also securely connect to external repositories enabling a single place to search for information across the company and offer proximity or location-based search.

Search also allows you to index content in different ways including the traditional information architecture, categories, taxonomies. Use these different indexes across your experiences to deliver content in different ways.

## INTEGRATION WITH THIRD-PARTY APPLICATIONS

Many of the digital customer experiences you deliver today require content and data from a variety of places. A modern CMS can connect to these diverse repositories and pull in the information they need to create an experience. For marketing, this would include connecting to the CRM or Marketing automation solution to offer targeted or personalized website experiences. For support, it would include connecting to support systems like a ticketing system to retrieve a customer's existing support tickets and their details.

When you think about the many different places you store customer information and how you could leverage that information to create better experiences across the website, mobile and other channels, it's easy to understand the need for integration capabilities in the CMS.

The key is to integrate information from these systems in a secure way, introducing as little risk to the company as possible.

## RESPONSIVE AND ADAPTIVE MOBILE DELIVERY

You deliver content to a wide range of mobile devices. The Web CMS should optimize content for delivery to those devices. To do this, the Web CMS must be able to detect which device is making a request and deliver the right amount of content in the right screen format. There are two ways to optimize content for mobile delivery: responsive and adaptive.

A popular approach, responsive design automatically resizes the web page based on the width of the browser used by a device. This minimizes the need for scrolling, panning or manually resizing the screen. However, it doesn't solve all mobile use cases.

Adaptive design is the process of designing the experience for mobile separate from the web experience by leveraging the device detection capabilities mentioned. With adaptive, you outline content priorities, the core areas of the web page and how your visitors will engage with the web page using a mobile device and build a unique mobile experience.

## SUPPORT FOR THE CLOUD AND SAAS SERVICES

Traditionally, buyers have thought of on-premises software as offering a richer set of features and functionality than software offered as a service. However, this is no longer the case. With the advent of virtualization, Web CMS buyers now have an option of using a Web CMS managed in the cloud with the same extensibility as an on-premise Web CMS application.

Depending on the cloud model your CMS provider supports, you can achieve a higher TCO with a cloud model while still having the freedom to manage the CMS based on your specific needs and requirements.

## ALIGN YOUR TECHNOLOGY TO SUPPORT CONTENT NEEDS

Anyone moving to a new CMS today should invest in a platform that affords the ability to meet future requirements. Don't lock your content into fixed structures and display. Don't tie content creation to any one channel. Don't invest in tightly coupled interactions. Look for a CMS that provides the agility to deliver content anywhere but ensures that content is well-governed and secure.

*"70% of marketers say that optimizing the customer journey across multiple touchpoints will be very important for their digital marketing over the next few years."*

econsultancy.com

# THE THIRD WAVE IN THE AGE OF INFORMATION SECURITY

Never has information security been more important. Every digital project must be architected with security in mind, from protecting PII (Personal Identifiable Information) to making sure your sites and application remain available when facing the threat of a virus of DoS (Denial of Service) attack.

The third wave of digital content management requires a new approach for your CMS. You need the agility to deliver the customer experience you want, without putting your data and business at risk.

**Your CMS should provide the agility needed to deliver the right customer experiences without putting your data and business at risk.**

# THE AGE OF INFORMATION SECURITY

With an agile approach to content management, both these goals are attainable. Here are some of the benefits:

1. Your secure pages and data can remain in their existing systems. You can use an API to display information to the customer while encrypting that transmission. Because you don't store secure customer data in the CMS or the presentation layer of the web experience, it is more secure and easier to manage.

2. One of the biggest vulnerabilities to any website is the database for the CMS. Databases are easy targets for web hackers and attacks. SQL injection and other approaches make your website unresponsive and ultimately open vulnerabilities. Removing the Web CMS content repository and database from your content delivery tier is a major security and performance win.

3. Cloud architecture is driving modern digital experiences. As organizations move more of their content and applications to the cloud, they need better tools for delivering that content, integrating applications, and managing identity and other services. An agile content management architecture with a file or API-based delivery approach fits the cloud paradigm and results in better customer experiences with less risk and overhead.

4. Web CMS vendors are no longer in the software industry; they are in the service industry. Most projects involve Software-as-a-Service applications. You need to make sure the security and service your CMS or Web Experience vendor delivers matches what you need, including threat detection, firewalls, disaster recovery, and other services.

# HOW INGENIUX SUPPORTS THE THIRD WAVE

A move to the third wave creates new challenges and new opportunities for organizations to succeed.

The Ingeniux approach is to provide a CMS with the capabilities to easily deliver engaging web experiences but also to reorient the CMS application to support more open, rapid and lighter weight development, and help organizations create smarter content that supports all their channels and audiences.

Ingeniux CMS enables this agile approach by delivering content-driven experiences for all channels and devices. The web presentation layer supports web applications and CMS content without complex integration, in addition to full platform web experience management. Agile content management ensures a complete content governance process and consistent customer experience across the entire customer lifecycle.

In addition, Ingeniux supports an intelligent (structured) content model that enables organizations to create content once and use it anywhere, as well as display it in different formats based on channel or device.

For Ingeniux, agile content means re-thinking what a CMS is and how it's designed. The following table compares traditional web experience suites to an agile content platform like Ingeniux CMS and offers a good contrast to technical approaches.

# CMS COMPARISON CHART

| ITEM | TRADITIONAL CMS | INGENIUX CMS |
|------|-----------------|--------------|
| Architecture | Tightly Coupled. | Loosely or de-coupled. |
| Integration | Redevelopment of application front-end or code. | Content delivered as a service via web services or file-based deployment. |
| In-Context Editing | Edits made in CMS application environment. | Edits made via web services to site sandboxes with CMS and external code. In-context delivered using remote preview capabilities. |
| Database Model | Relational database storing content blobs. Expensive scaling costs and performance. | NoSQL database storing content as JSON. Designed for massive scale at low costs. |
| Server Technology | CMS built for a single technology framework (Java, .NET) | Content available for any server technology or framework. |
| Deployment Model | Full application installed on each tier or environment (Staging, Development, Production). Heavy application footprint. | Agile content deployment using publishing targets and REST API. Bi-directional syncing. Light application footprint. |

# FINAL THOUGHTS

Delivering great customer experiences requires an agility most organizations don't have with their current CMS. With so many channels and high customer expectations, organizations are increasingly looking for better ways to create, integrate, reuse and manage content across channels.

The Third Wave of Digital Content Management is a new approach to building and managing websites and customer experiences. It's about the websites, the portal, the mobile app. It's about integrating with other customer systems to provide improved experiences. It's about security of personal information. But it's also about reducing complexity. Designing great experiences is hard; your CMS should not add to that complexity.

If your CMS isn't enabling these things, you aren't ready for the third wave.

**Now is the time to get started.**

## ABOUT INGENIUX

Ingeniux is the leading provider of web content management and digital experience software. We enable organizations to orchestrate the entire customer experience from acquisition through to sales to support and service, across any device, application, or website.

We build content management software with an unparalleled focus on the content itself. The Ingeniux CMS is designed to manage and deliver modern websites, customer support portals, online communities, and other customer touchpoints.

We believe in intelligent "structured" content. We design our software to enable content reuse, enable true mobile and multi-channel content delivery, and insightful content discovery. Our unique content-as-a-service capabilities deliver content into web and mobile applications, and other key channels.

Ingeniux software is available as a fully managed software service or an on-premise application. Ingeniux delivers unparalleled service and support to customers worldwide.

To learn more, visit us at http://www.ingeniux.com.

**INGENIUX**

PO Box 21466
Seattle, WA 98111

info@ingeniux.com
877 445 8228