Three Pillars of Digital Experience:
How to Create the Ultimate Platform with CMS, Commerce and Data
Building your Unified Digital Experience Platform

It’s an exciting time in which we live, with an amazing array of interfaces and ecosystems offering up new ways to connect and converse with customers. In the world of digital marketing, frontiers are shifting as technology becomes more ubiquitous and our relationship with digital devices ever more personalized.

Behind every remarkable and successful connected experience – from mobile payments at Starbucks to prescription refills at Walgreens and movie viewing on Netflix – you will find a deep organizational commitment to building a secure, scalable, and unique digital experience platform that truly reflects the native capabilities, competencies, and assets, both online and offline, of each individual company.

This paper is to help you successfully architect your Digital Experience Platform, to develop creative and innovative business models, while maintaining strong brand awareness and user experience throughout every interaction of consumer engagement.

Beyond The Siloed Nature of Web Experience Management

Consumers now expect the same experience in-store, in-app and on the web. As you begin gathering requirements for your Digital Experience Platform, it is important to understand the increasing importance of interconnecting your backend systems and making data digestible for your frontend systems. Doing these things well will play a major role in allowing you to create new business models, campaigns, promotions, offers and products, and in creating a seamless customer journey across all touchpoints.

Historically, Content Management Systems and ecommerce acted as two separate but complementary systems which performed separate but complementary tasks for separate but complementary departments.

This separation was the result of the initial focus of the Web Experience. Content Management Systems were traditionally meant to facilitate marketing in the curation of visual assets, copy, and collateral. Hence, CMSs include user-friendly editorial interfaces that are based on flexible workflows and deployment scenarios.

Ecommerce systems, on the other hand, have always been shopper-focused, and feature a rich set of integration capabilities that combine functions from various commerce-related systems such as tax and profile information (from the same vendor or multiple).

As the systems evolved, Content Management Systems became heavily web facing, creating new acronyms like WEM, CXM, CEM and various other experience-centric variations. Ecommerce evolved to meet omni-channel needs, becoming less web experience-centric and more API-centric, placing more value on the connections between systems.
This traditionally lead to one of two styles of integration:

1. An ecommerce-driven experience where assets and copy are pulled from the CMS system and served via the ecommerce system
2. A CMS-driven experience where ecommerce is sub-optimally integrated via either a distinct functional hand-off or an embedded portlet experience.

The Rise of the Unified Digital Experience

The emergence of mobile, tablets, wearable sensors, and the API economy has ushered in the era of the Unified Digital Experience in which the web experience has been replaced with a seamless customer journey across all touchpoints. The paradigm of the traditional storefront has been replaced with embedded points of monetization.

In this new world, the integration styles of Web Experience Management no longer apply. Consider the following examples of Digital Experiences in action:

The Textbook of the Future

This iPad-based textbook app demonstrates how a combination of text, graphics, video, and interactive content, can allow publishers to monetize their content in the context of the student's learning experience.

In this example, the locked icon on the videos shows the user doesn’t have the entitlement access to these videos. However, the user can click on a video to get a preview before deciding to purchase the video. By clicking on the lock icon, the price is revealed (which could be in dollars, points, credit or any other type of virtual currency.) Rather than a traditional storefront checkout process, the user can quickly swipe to select an item, confirm billing address and credit card details, and the purchase is completed within the experience of the textbook.
Within Digital Magazine App

Targeted packages within digital content, such as this magazine app, can be created with your Digital Experience Platform. While enjoying an interesting article in their favorite ski magazine, data about this reader’s location, preference and local ski conditions is used to offer a spectacular weekend ski package. The user can select dates and book their trip right within the app itself. With a couple of clicks, the reader adjusts the offer to meet their needs, selects a preconfigured method of payment, and they’re done. The reader has just bought a relevant ski holiday without leaving the enjoyment of the magazine.

Targeted Mobile Offerings

For telecoms, mobile offerings can be targeted and delivered to customers travelling out of the country. With a few simple clicks telecoms can increase Average Revenue Per User (ARPU) and improve the overall customer experience.
Entitlements for Media

Media companies must manage not only the delivery of the media, but also customer entitlements such as rental viewing period and subscription rights. Getting a single view of the customer in your Unified Digital Experience Platform is paramount to deliver relevant product recommendations based on previous viewing history and customer demographics.

Loyalty App

Loyalty apps allow customers to redeem points from any purchase with any participating partner store. Opening the loyalty app, the user is able to redeem points by scanning the barcode. The system is able to look up the item in its database and displays how many points are required to purchase the product. Once purchase is completed, the user is presented with a barcode which is then brought to the cashier, and the shopper is given a store receipt.
The Three Pillars of the Unified Digital Experience Platform

Creating a seamless customer journey across digital experience touchpoints calls for a new approach to backend platform integrations, one which empowers the marketer and business user to effortlessly blend editorial and selling content and manipulate the storefront in ways that they have not previously been able to do so. These platform integrations cross the domains of Content Management Systems, ecommerce and data and data services.

Ecommerce, CMS, & Data
CMS & Ecommerce

To enable marketers to innovate and experiment, such as the ability to configure rules-based catalog management without worrying about the underlying complexities like tax calculations, discount stacking rules, fraud checks and other elements that are separate concerns, ecommerce and Content Management Systems must be seamlessly interwoven.

However, typical CMS and ecommerce systems provide overlapping ability to manage catalog content, product discovery and search, user profiles and passwords, release to production workflows as well as a multitude of other features.

The optimum integration approach is to assign a particular system to do a particular job so they aren’t vying for supremacy. For instance, the CMS is assigned to manage the product information and description, workflow, site search, and the ecommerce system is assigned to maintain all the transactional processes, pricing, promotions, cart management, order creation, status updates, and everything related to fulfillment.

The correct mix of responsibilities is ultimately going to depend on the capabilities of each system, and the appetite for your operational teams in utilizing such features. For example, integrating the workflow between the CMS and ecommerce system to facilitate the push of data from both systems to production will depend on how your organization controls any production changes. Are you dealing with separate teams for releasing pricing and promotional changes from the marketing content? Do the teams deal with different lead times? Are the teams requiring a unified preview environment to facilitate approvals?

Such variables will determine how to integrate complex concepts like workflow. Similarly, which system will provide search capabilities will depend on questions like how search will be offered in an omni-channel environment, how important is federated search and “searchandising”, and how rich are the underlying search systems to provide semantic search and other elements.

Ideally, advanced ecommerce/business capabilities such as pricing and promotions should be able to leverage the rich CMS workflow that surrounds it, allowing it to go through the approval process that a regular piece of content would take.
From an integration architecture perspective, we recommend a few ground rules:

- Avoid duplicating data where possible. Headaches in synchronizing data, de-duplicating entries, merging and overriding entries are operational pains that are best avoided.

- Ecommerce and CMS systems should be independently scalable. Such systems have different scaling characteristics and will not scale one-to-one. Monitoring and solving performance issues in a CMS will be very different than the ecommerce system. Avoid the temptation of embedding the ecommerce system in the CMS system directly.

- For functions performed in the CMS, consider if they need to be exposed out to other non-web touchpoints for a consistent experience.

- The CMS experience should degrade gracefully as the ecommerce system is made unavailable or restricted for certain users or scenarios.

Data

The third piece of the Unified Digital Experience Platform is data.

From geolocation sensors in our cell phones to social media to the Internet tracking our browsing and searching data, our daily life is being tracked in fine detail. The insights we can glean about behavior from the correlation and contextualization of massive data streams can be used to a marketer’s advantage.

Big Data, writes the industry website Business Insider, "is a new technology that can help us understand, and then predict, things like never before."

The Digital Experience Platform needs data to be available to perform two functions:

1. Analysis and correlation of data over specific lengths of time to give businesses and marketers the intelligence and insight to spot nascent trends - areas where new products, pricing or promotions can be tested and refined.

2. Real-time Complex Event Processing, in which a series of "if this then that" data calculations automatically return desired content, pricing or promotions based on particular actions or specific interests of the consumer.
Prior to the rise of omni-channel, ecommerce systems were by default silos of their own data. While many ecommerce implementations featured synchronization with other CRM and MDM systems, and fed into data warehousing and BI tools for a business-wide view, the new Digital Experience reality forces the need to embrace Master Data Management.

- No longer can CMS and ecommerce simply synchronize data periodically. They need a proper master of data that can be analyzed, leveraged and maintained in a single source of truth. As omni-channel systems are built-out, the same data available in ecommerce systems needs to be available on the web, in-store and in the call center. Solving master data management in context of CMS and ecommerce is a starting point that will enable the experience across non-web touchpoints.
- The flow of data from Master Data Management systems should be incorporated within the CMS and ecommerce workflow. For example, analytics gleaned from the MDM systems may suggest optimal pricing, product assortment or search configuration to the business team.
- In other situations, a Complex Event Processing engine may want to push through the workflow any changes that result in the monitoring of social trends in real-time. The goal is to provide a central interface for global inter-departmental teams to collaborate in pushing through new changes, even though the teams themselves may need to interact with several systems.
- With this integrated CMS, ecommerce, and Master Data Management capability, the Digital Experience platform provides a cohesive toolset for a cohesive vision. Brand is controlled, maintained and strengthened and innovation and creativity unfettered

The 4th Pillar: A Unified API Strategy

The final piece of the Digital Experience Platform is a unified API strategy. As new touchpoints arise and the API economy emerges, novel demands are being placed on back-end systems, many of which were built with only simple web pages and storefronts in mind.

As such, the core tenants of your platform – the CMS, ecommerce and MDM systems - will live in conjunction with an ever rising number of social marketing, business intelligence tools and back-end systems such as order management, ERP and customer record systems.

Success in this era relies on a resilient and extensible Digital Experience platform that is designed to cope with constant change. The optimum solution is to adopt a unified API strategy.

Rather than each front-end experience directly connecting to other point systems, a unified touchpoint broker, or mediation layer, becomes a central point of contact.
Unified API architecture has several benefits:

- Data flows into one central location - both from backend systems and external, customer-facing touchpoints. This has ramifications for processing data in real time.
- Promotes ease of replacing, enhancing and testing backend systems
- Fast creation of new products/campaigns/offers/programs. Systems don’t have to be pre-wired together.
- Provides data digestible to new touchpoints such as tablets and mobile
- Decoupling of front-end and back-end development, allowing teams and systems to evolve and innovate at their own pace

Whereas before teams could have built out new features and integrations directly in the front-end system, the need to project such features beyond the web experience requires a diligent API practice.
Requirements for Your Platform

Architecting your Digital Experience platform will place particular demands on your CMS and ecommerce system depending on your business model, vision and priorities. Detailed feature and functional requirements gathering, identification of business processes, integration points with ancillary systems and third party solutions may involve nearly every department of your organization to solidify your end vision.

Success depends on not solely your technological stack but how well and how consistently involved your entire organization is throughout the development of the platform.

Publishers

For publishers it might mean dealing with royalties, rights, modularizing content into finer detail: by chapter, by location, by royalties and rights, plus serving multiple businesses that are independent yet interconnected. Product information is also a challenge because there’s product information that plays in the ecommerce transaction and there’s product information that has nothing to do with ecommerce but is very important to the purchaser decision.

- How will your ecommerce and CMS work together to deal with thousands of SKUs across geolocations that have to be taxed at different rates?
- Entitlements also need to be considered: Does buying the hardcover of Chemistry 100 textbook entitle the customer to the ebook and the epub version? Or limited access to the epub version? Can they share it with their roommates at college?
- That fact that JK Rowling has authored 20 books is meaningful for the shopping experience but not for the transaction. The fact that a book has 3 different prints in 2 different countries at different prices – that’s salient for ecommerce but not for the discovery process.
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Retail

For retail the Digital Experience Platform may encompass the omni-channel journey across both offline and online worlds and the challenge of maintaining a cohesive customer across touchpoints. Your business may have thousands of products but these products are easy to describe: There’s the name of the product and a few specifications such as product description but management of that description is pretty simple. Or you may really only sell a dozen different items but sell them in thousands of ways so the management aspect of that is complex in the ecommerce part.

Telecoms

For telecoms, delivering complex subscriptions or product and service bundles in an easy-to-understand fashion is a key ecommerce requirement. Maximizing ARPU and stabilizing churn, customer acquisition and retention are all key concerns in this fast-moving industry, where data and data services are the new norm. Telecom CEOs must also contend with expanding services to new geographies, which means dealing with customers in different locations, time zones, and languages. Only telecoms with a modern ecommerce infrastructure will realize the benefits of this new data-driven economy, which include increased revenue and market share.
Apps

For those interested in building apps, think of how different an app experience is from a web page. Apps can be both very functional and transactional. An app is an experience in which you have to take into consideration user interaction, user experience, design, architecture, monetization, branding and gamification – even if its primary purpose it just to pay for coffee. As such, rewards, loyalty points, customer profile and purchase history need to be specified in the ecommerce requirements.

Software/Media

For software companies and media firms, such as Netflix and HBO, the industry is shifting to a subscription model where these businesses can create and grow predictable revenue streams. Because of the nature of their products, ecommerce capability must be embedded in a myriad of ways, including desktop software applications, set-top boxes, game consoles, and smart mobile devices. But if you’re reselling your product through a network of channel partners, like most software companies do, you must deal with a tangled web of pricing and billing scenarios, requiring a unique pricing plan for each partner/plan combination. These important sales channels require a unified channel billing process to cascade changes through all channels, increasing revenue and slashing maintenance costs.
Conclusion

Creating a successful Unified Digital Experience Platform is within your reach. With the approach outlined in this white paper, you can craft a seamless customer journey across Digital Experience touchpoints, while empowering marketers and business users with an expanded toolset. Seamlessly weaving together Content Management Systems and ecommerce is key, as is leveraging data and ensuring that you have a unified API strategy.

It’s is indeed an exciting time in which we live, and smart businesses are already drafting their digital experience strategies to gain market share and grow revenue.

To further gain a competitive advantage, follow up this white paper by joining our on-demand webinar “Building Tomorrow’s Digital Experience” with Forrester Analyst Peter Sheldon as he maps out a strategy for tying together the worlds of content and ecommerce.

During this webinar, you will learn:

- What defines a best-in-class digital experience?
- How past siloed experiences have present-day implications
- Why commerce and content systems are on a path of convergence?
- What options exist for tying together commerce and content systems?

Watch the webinar at:
www.elasticpath.com/resources/webinar/building-tomorrows-digital-experience
Questions?

Elastic Path builds ecommerce software that powers the next generation of digital experience. We help businesses maximize revenue from their goods, services, and content with solutions that empower companies to create outstanding customer experiences that drive engagement and conversion. Elastic Path technology brings this functionality to multiple touchpoints – websites, apps, APIs, and more – while generating a single view of the customer. Market leaders, including Google, Pearson, Symantec, Time Inc., and Virgin use Elastic Path to drive billions of dollars in digital commerce annually.

Please contact us for more information:

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Read the technical documentation for Commerce Engine: www.elasticpath.com/docs

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