



CASE STUDY

Building a Unified, Customer-Centric Shopping Experience for Lowe's Canada

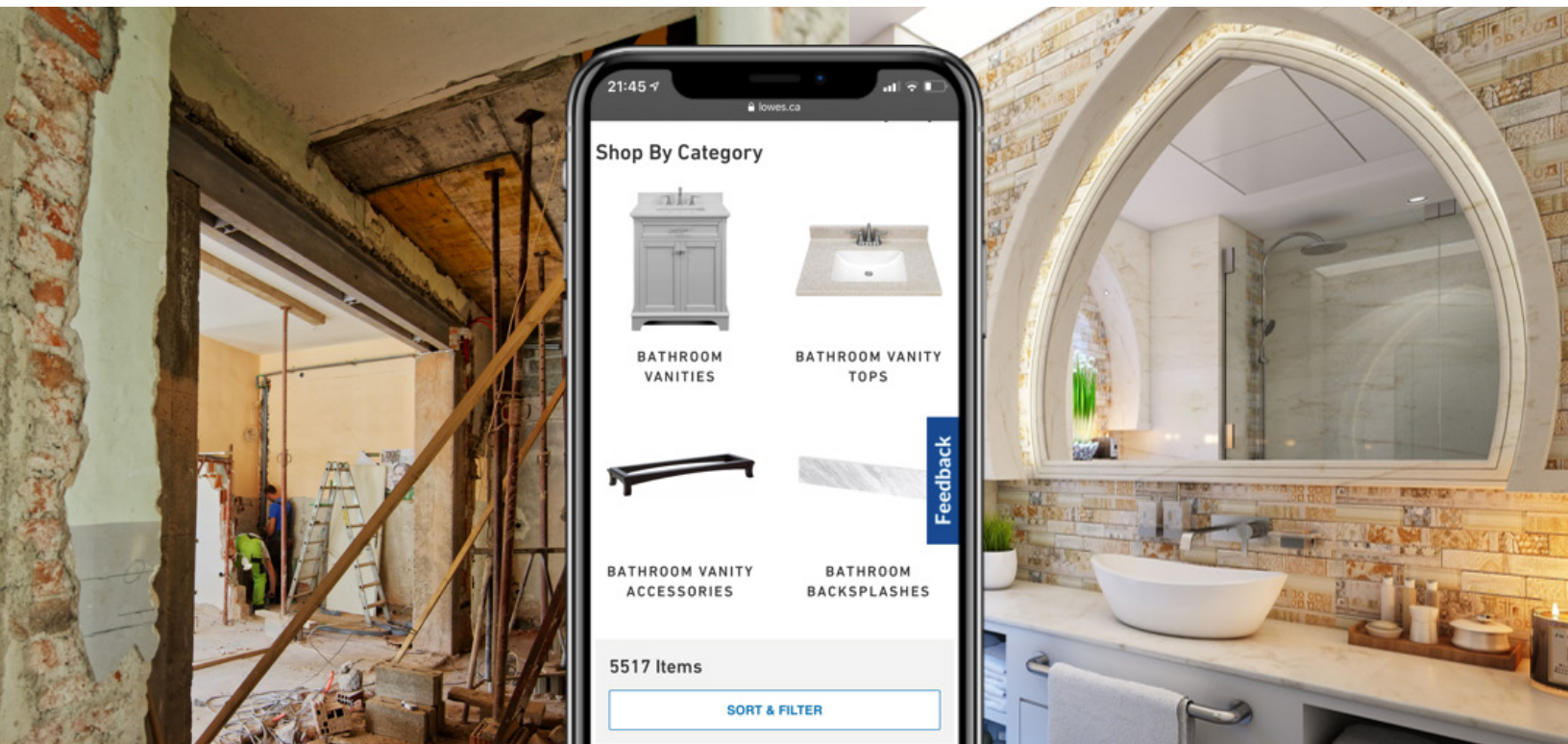
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As one of Canada's largest home improvement retailers, Lowe's Canada has put its customers at the heart of its business since it opened its first store in 2007. And when consumer expectations began to evolve, Lowe's Canada recognized the need to create a superior omnichannel experience for the loyal customer base of its Lowe's banner.

Improving the omnichannel experience meant modernizing and integrating an online experience with Lowe's physical stores, and creating an optimized lowes.ca mobile-first solution, full of accessible product information, educational content and services. To accommodate increases in online traffic and inventory, the organization also needed a platform that could scale easily and flexibly. And to meet the diverse needs of Lowe's Canada's customers, the platform needed to empower content authors to make content changes and promote products without relying on IT personnel.

To accomplish this, Lowe's Canada partnered with EPAM to transform its eCommerce website. EPAM's digital expertise and long-standing partnerships with Sitecore and Microsoft played a pivotal role in the success of the transformation, as this was the first time that Sitecore, Microsoft Azure and Microsoft Dynamics would be implemented together at this scale.



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CREATING AN INTEGRATED COMMERCE EXPERIENCE

To successfully orchestrate the integrated commerce experience that Lowe's Canada was looking for, the company needed technology platforms capable of scale, flexibility and interoperability.

Microsoft Dynamics 365 (D365) was selected for its ability to map complex catalog, fulfillment and transaction requirements to a centralized ERP system. Sitecore Experience Platform™ (XP) was then selected as the content management system (CMS) and Sitecore Experience Commerce™ (XC) as the commerce platform, enabling content authors to perform the many actions that were previously either impossible or required assistance from IT.

The new Lowe's Canada website needed to be modernized while maintaining features from the existing site. However, under the new technology stack, some of the existing features of the Lowe's Canada website operated differently or were no longer supported. To ensure a seamless transition for customers, EPAM needed to implement the following high-priority features and requirements that would:

- Enhance the mobile-friendly experience
- Support web-exclusive promotions and sales, and online pricing reflecting local in-store prices
- Provide details about the fulfillment options early in the customer journey
- Deliver a scalable platform to support the number and variety of products sold across a diverse range of product categories
- Improve day-to-day limitations for the marketing team, including time-consuming editorial updates, reliance on IT teams for content changes, and inability to schedule, personalize or apply workflow to content
- Combine product search functionality with other content such as how-to guides and support pages

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LEVERAGING SITECORE & MICROSOFT SOLUTIONS TO MODERNIZE THE OMNICHANNEL CUSTOMER JOURNEY

The Lowe's Canada solution, comprised of Sitecore, Microsoft Azure and D365, was the first time where all three technologies were used for a cloud-based commerce solution at this scale. The combination of these best-of-breed technologies offered a solution with many benefits.

MOBILE-FRIENDLY SHOPPING

With increasing demands for mobile-friendly shopping, the site now provides the same first-class website experience on mobile devices. The solution utilized Sitecore's Device Detection, allowing the website to distinguish between desktop and mobile visitors and offered:

- A hybrid presentation approach that leveraged Sitecore's adaptive device management feature along with responsive components
- Components built using responsive design patterns, which ensured an optimal customer journey for users of all devices and resolutions
- Pages such as checkout and account registration were optimized independently for desktop and mobile devices

ACTIVATED OMNICHANNEL PRICING & PROMOTIONS

While D365 accurately reported prices for a given moment in time, it did not provide information about why an item had the price it did or when a sale might end. These were key elements of Lowe's Canada's marketing strategy and what Lowe's Canada's loyal customers are familiar with. The team enhanced D365 to extract this detailed pricing information to make it visible throughout the website. The solution addressed these challenges and provided Lowe's Canada with:

- An online counterpart for every offline store within D365
- A promotional pricing model within the D365 trade journal mechanism
- A pre-calculated pricing system within the search index for each individual store
- A customized front-end UI to hide complexity from users that presented one unified shopping experience rather than a website built across two platforms: Sitecore XC and D365

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ENABLED CUSTOMER CONVENIENCE & VALUE

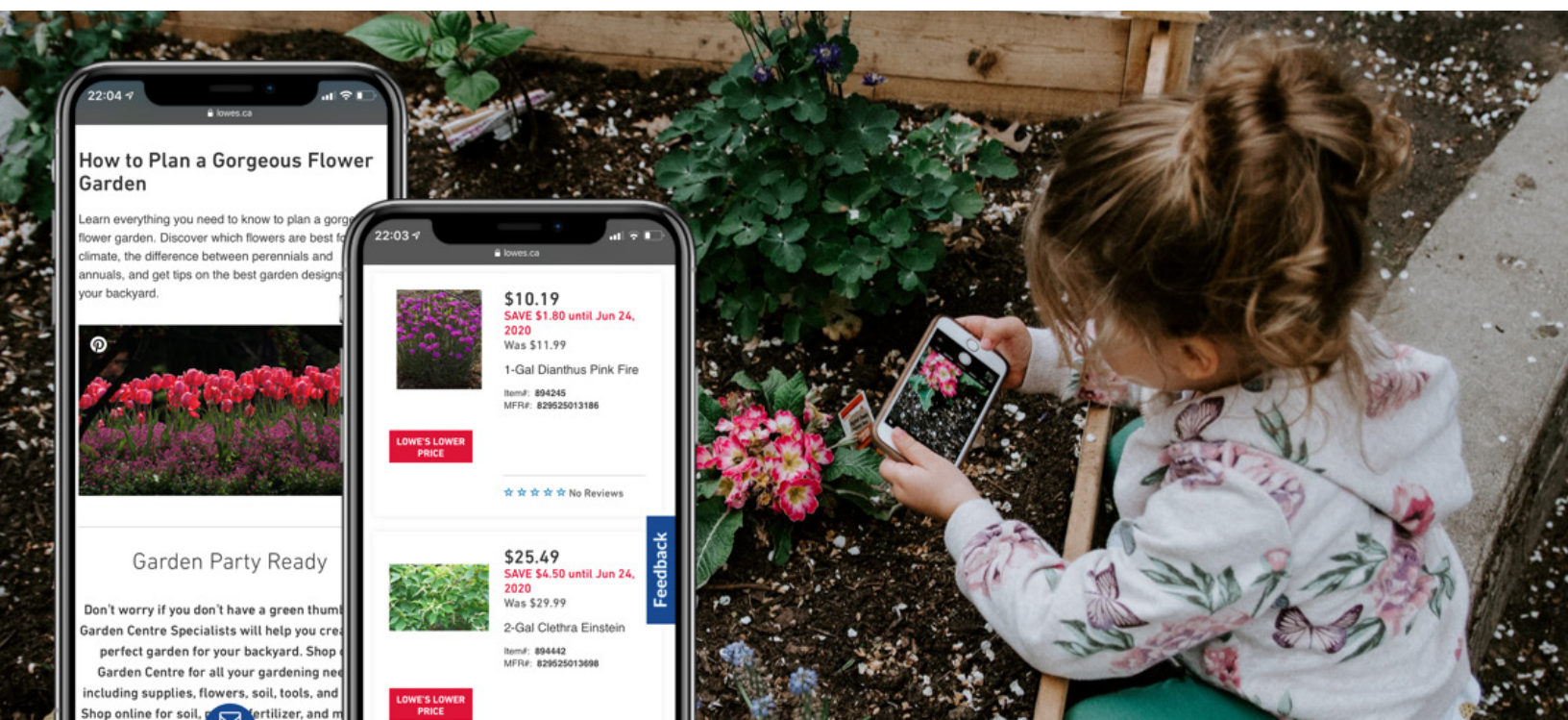
Detailed inventory and fulfillment information was captured early in the buying journey. With the D365 Distributed Order Management fulfillment data extracted, EPAM provided a solution that:

- Calculated inventory buffers on a per-product basis, which ensured physical stores never ran out of items
- Included virtual inventories of suppliers and vendors with product availability information
- Determined fulfillment options on a per-product basis, including support for extended aisle products that ship directly to stores and customers
- Designed the UX and APIs to share delivery information as early as possible to improve conversion

GUARANTEED HIGH SCALABILITY & MAXIMUM PERFORMANCE

Sitecore's scalability provided a means to ramp up infrastructure on-demand or in anticipation of peaks in traffic. The solution was comprised of the following technologies and services:

- SolrCloud, courtesy of LucidWorks Fusion, which provided quick search results to users
- Azure Application Gateway to load-balance traffic across up to 12 content delivery servers, which ensured consistent performance during peaks in traffic
- Azure Cache for Redis for cloud-based session storage, which provided near real-time lookups for user session data
- Cloud-based Azure SQL Database for database scalability



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EMPOWERED CONTENT AUTHORS

The new back-end of the website allowed content authors to schedule content for sales, personalize content and fully customize the display of content. By decreasing IT support for updates, EPAM provided Lowe's Canada with an easier and faster way to publish changes and reach their customers. This solution was comprised of:

- Sitecore's Active Directory module for centralized management of users connected to Azure AD
- A hierarchical suite of Sitecore roles for access administration
- Custom workflows that prevented drafted content from accidentally being published
- Nightly publishing, which allowed time-sensitive content to be published prior to scheduled sales
- Support for custom promotions for collections of products
- 100+ custom renderings that provided maximum flexibility for authoring content, all supported with mobile/responsive design
- Desktop and mobile layouts

OPTIMIZED SEARCH FUNCTIONALITY

The customer-facing search features of Lowe's Canada's product catalog relied on Lucidworks Fusion. Inspirational content and buying guides were key elements of Lowe's Canada's marketing strategy, so a key search feature would allow a combined search across products and other content. The EPAM team integrated Lucidworks Fusion and:

- Worked with Lowe's Canada and Lucidworks Fusion teams to develop a system for merchants to select key attributes used for filtering products within each category
- Expanded a search interface that surfaced all content including how-to guides, buying guides and service pages in addition to products for all phases of the customer journey
- Designed the search technology to drive many dynamic elements on the site, like featured products and recommended accessories, which ensured the site was fresh and engaging for repeat shoppers

TECH STACK AT A GLANCE

SITECORE EXPERIENCE COMMERCE

MICROSOFT DYNAMICS 365

SITECORE EXPERIENCE PLATFORM

MICROSOFT AZURE

LUCIDWORKS FUSION

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NEW COMMERCE SITE YIELDS BIG RESULTS FOR LOWE'S CANADA

In August 2019, Lowes.ca launched nationwide in Canada and became the largest Sitecore Commerce and Microsoft D365 implementation of this scale in the world. Since the implementation, Lowe's Canada reported the following results:



SIGNIFICANT INCREASE IN MOBILE REVENUE



SIGNIFICANT INCREASE IN SALES OF INVENTORY IN PHYSICAL STORES



SIGNIFICANT INCREASE IN AVERAGE ONLINE ORDER VALUE



INCREASED WEBSITE CONVERSION



IMPROVED BUSINESS AGILITY

For the first time, EPAM successfully bridged Microsoft D365 and Sitecore Commerce. And with the knowledge gained from the Lowe's Canada project, EPAM helped Sitecore create the Sitecore Connect for Microsoft Dynamics 365 for Retail, compatible with Sitecore 9.

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SCALING TO NEW HEIGHTS

COVID-19 fundamentally shifted the way Lowe's Canada customers were able to shop and receive their purchases. Customers who once prioritized the brick-and-mortar experience more frequently relied on the Sitecore-supported web and mobile sites amid the pandemic. Despite the corresponding surges across page views, orders and users, the platform performed optimally and allowed Lowe's Canada to serve a robust clientele online during a critical time for commerce.

EPAM continues to partner with Lowe's Canada to evolve and enhance the platform, offering its customers a superior omnichannel experience.

EPAM was instrumental in solving the challenges related to our specific business complexities and needs. They sought to fully understand the problem and would come to the table with viable solutions that could be implemented, always keeping in mind UX, design and performance goals. Always very detailed and documented, EPAM was fully engaged with making sure the relaunch of Lowes.ca was a success and that the eventual hand off back to the business was smooth and seamless.

JOHN TERRENCE

SENIOR DIRECTOR, SOFTWARE ENGINEERING,
LOWE'S CANADA

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ABOUT LOWE'S CANADA

Based in Boucherville, Quebec, Lowe's Canada operates or services more than 470 corporate and independent affiliate dealer stores in a number of complementary formats under different banners. These include Lowe's, RONA, Réno-Dépôt and Dick's Lumber. Lowe's Canada employs more than 26,000 associates, in addition to approximately 5,000 employees in the stores of independent affiliate dealers operating under the RONA banner. For more information, visit lowescanada.ca.

ABOUT EPAM SYSTEMS

Since 1993, EPAM Systems, Inc. (NYSE: EPAM) has leveraged its software engineering expertise to become a leading global product development, digital platform engineering, and top digital and product design agency. From online retail brands to consumer goods manufacturers and distributors, EPAM turns its passion for understanding people into inspired strategy, breakthrough products, and compelling brand and employee experiences that help retailers outpace competitors. EPAM's global teams serve customers in over 25 countries across North America, Europe, Asia and Australia.

QUESTIONS?

Contact us at Sales@EPAM.com
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