



The Connected Consumer: The Role of IT in the Digital Industrial Revolution



“The quality of the consumer experience is paramount.”

Today’s empowered consumers have high expectations for the companies they do business with. They expect real-time communication, instant information, and the ability to connect in multiple ways. And they want it to be simple. Welcome to the application economy.

The goal: Engage consumers through a variety of purchasing channels, such as brick-and-mortar stores, the web, and mobile devices, and make those experiences flawless. This digital transformation requires changes to a company’s marketing, IT infrastructure, development, and end-to-end processes.

An effective implementation provides a seamless consumer experience and supports all combinations of consumer/business interaction, summarized as brick-to-click, device-to-web, and device-to-brick relationships. This could involve in-store support for purchases made online, customizing the online experience for each digital medium used, and identifying consumers and providing a continuous experience regardless of purchase method.

To connect these various forms of customer engagement, and build loyalty to your brand, IT must be prepared with an application strategy that can keep pace with customer demands. “The application economy is driving the digital industrial revolution,” says Eric Grotefeld, Senior Vice President of Sales, Application Delivery, at CA. “We’re in a time of unprecedented change.”

The Challenges of a Digital Strategy

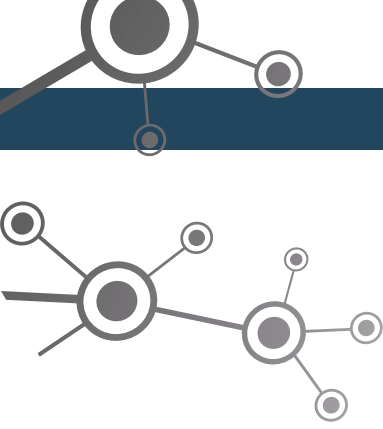
For this type of strategy, application quality is critical, especially in a mobile environment, as abandonment rates due to poor quality and lack of integration are high. Additionally, consumers abandon their online shopping carts at rates between 60% and 80%. As a result, the impetus for measuring app quality has become more closely aligned with improving sales figures than with calculating bug counts, and it certainly helps in determining how to improve consumer experience to build sales.

Reduced Time to Enhancements and Bug Fixes

When fixing bugs, it’s important to respond in days instead of weeks or even months, as has been the norm with traditional development. This drives the need for quicker app development, with ever increasing app release and update frequency. The requirements have expanded beyond the capacity of human manual labor. To support this increased frequency of fixes and enhancements, IT is increasingly turning to automation for software builds, testing, and deployment. The right tools can help turn tedious manual tasks into an efficient assembly line for release management.

Analytics Uncover the New Metric: Consumer Experience

Today, updated data analytics tools gather real-time application performance as experienced from the user’s perspective. It’s important to gather as much data as possible from all user touch points in both the digital and physical worlds. To ensure a seamless experience for customers, it’s imperative to capture and analyze real application



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usage statistics along with user identity, and then correlate those results with the same customer’s brick-and-mortar shopping experiences. Capture data from every user touch point – web, mobile, and in-store – and then feed this data back into the development process to proactively improve app performance and consumer experience.

Keep the Consumer in Focus

The agile methodology encourages rapid iteration with shorter release cycles -called sprints- and constant collaboration among all project stakeholders, including end-users. Agile techniques used in IT have potential benefits beyond software development. For instance, taking a more iterative approach to marketing can help companies become more nimble in their advertising and adjust almost immediately, based on consumer feedback and sales results.

The need for a strategic agile focus throughout an organization has helped spread agile practices to companies’ marketing and sales departments, and even up through the executive level. Through improved collaboration and analytics, organizations are improving their business processes in terms of speed, accuracy, and value. These processes help organizations gain a deeper understanding of the end-customer.

Applying agile practices at the consumer level helps connect the physical and digital realms in which the customer interacts with your company. This collaboration leads to enhanced data gathering that paints a more complete customer picture, helping you understand consumers’ preferences and details before they enter a store or shop online. Ultimately, you can customize and improve their experience with a continuous dedication to these processes.

The Business Value of an Agile Strategy

With a strategic agile process and consumer focus, your business will see benefits as well. This includes the ability to predict consumer behavior and, more importantly, the ability to predict the future needs of your customers and then proactively work to meet those needs. From an IT perspective, you can also predict and alleviate potential system failures and discover bottlenecks in both the digital and physical shopping experiences by analyzing brick-and-mortar shopping statistics, gathering user feedback in real-time, and correlating both sets of data. Overall, technology can be used to create a more intimate consumer relationship with your brand.

End-to-End Process Maturity

As previously mentioned, agile techniques can be used within other areas of the organization beyond development. Let’s look more closely at how agile processes can lead to end-to-end improvements within an organization.

Expanding Through DevOps

Extrapolating on the benefits derived from agile techniques employed in other areas of the business, DevOps enables a more agile IT operations team and higher profitability, says Aruna Ravichandran, Vice President of Product Marketing at CA. DevOps helps drive continuous collaboration with the end-customer, gaining further visibility into online and mobile application usage and its effect on the brick-and-mortar experience. The data your company can derive from this collaboration should be used to continuously validate assumptions made earlier in the development process.

“DevOps is a cultural transformation. For IT to be successful, there needs to be people, process, and technology that come together to power the application economy,” Ravichandran says.

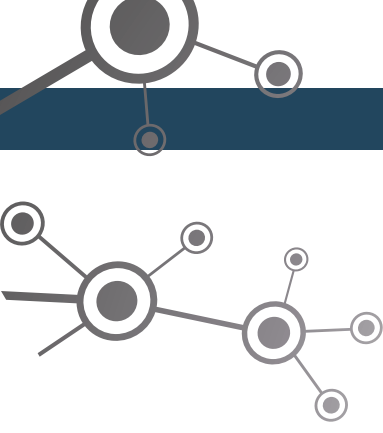
Agile Integration: API-Driven Design

Most early mobile application development followed a more traditional, monolithic approach. However, focusing more on developing APIs helps to break this down into a component-based approach. The benefit is that it allows for greater code reuse, where you can more easily integrate external third-party components and services and allow others to integrate with your systems and services. The interactivity among systems that this fosters helps to improve the consumer experience and enable greater continuity.

However, to ensure the safety of your data and to maintain a high-quality user experience, you need to build safeguards into your use of external software. The use of automated validation processes and tools in your software development and delivery processes is one way you can maintain quality.

Agile Marketing Meets Agile App Delivery

The development of marketing collateral can benefit from the same agile requirements as those used in code development. For instance, marketing collateral should be customized based on frequent user collaboration,



improved iteratively, and created continuously during product development, instead of waiting until the project is near completion to finalize materials.

Marketing agility is about faster response overall, both in terms of getting your message across and meeting customer needs sooner. It's also a two-way street. Applying what you learn when marketing will help you develop high-quality, almost addictive, consumer-facing applications and services more effectively than your competition can.

To achieve this, you need to create more individualized, consumer-focused marketing material, where your customers feel special more than they feel targeted. This requires you to reach them through non-traditional channels (e.g., social media platforms such as Twitter), as well as through unique, yet consistent, in-store messaging.

Shadow IT as a Model

To help transform IT, some companies rely on the use of shadow IT, where non-sanctioned development practices are used. These are often established outside the confines of the IT department, such as partnerships with out-sourcers or consultants. Although not necessarily encouraged and not for every company, the notion of shadow IT can be embraced, as it's really a matter of decentralizing IT and breaking down the silos that exist in many organizations. This approach can help introduce further use of agile and open-source software, as well as other creative development efforts. Safeguards are still needed, and it requires an increase in visibility and transparency, but creative new development efforts may be welcomed as a result.

Drive Value Through the Modernization of Tools

In an application economy, more than ever, the quality of the consumer experience is paramount. As a result, the old metrics for measuring application quality are quickly becoming obsolete, with the spotlight now on sales results.

The value of a digitally connected, multi-channel approach is most apparent in specific industries thus far, including retail, banking, and hospitality. However, since a delighted customer makes for improved margins, it's safe to conclude that all industries can benefit from this business and IT strategy.

Grotefeld sums it up this way: "The big change in IT now is that it's moving from 'service to the business' to 'software is the business.'"

Now is the time for IT to master a digital transformation.

To learn more about how CA can help you optimize your multi-channel digital strategy, visit www.ca.com/digitaltransformation.

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