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BUSINESS TECHNOLOGY OFFICE

Organizing for digital acceleration: Making a two-speed IT operating model work

By adopting a digital product management model, companies can get the most from their IT architectures and deliver innovative online customer experiences faster.

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Innovators that were “born digital” as Internet companies have set the standard for delivering optimal customer experiences—that is, providing the information and platforms customers need to find and acquire products or services quickly and reliably. Internally, they focus on agility and accelerated learning. To put this learning into action, they use organizational models empowering product managers to test and implement rapid changes that enhance engagement and increase the chances that customers will buy and come back for more.

Companies such as Amazon, Facebook, and Google actively control the tempo of their IT infrastructure and have aligned their technology and production

systems with their business goals. They think differently about how they are organized at all levels. They limit the size of their application-development teams. They encourage product managers to think about digital experiences rather than discrete applications or components—a product manager may be accountable for the entire checkout process, for instance, rather than for the payment application alone.¹ These companies engage in frequent testing and experimentation. They pursue hypertargeted marketing strategies. They collect and learn from consumer data. And they are not afraid to fail.

Traditional companies are challenged to achieve similar levels of alignment and

Takeaways

To compete with online companies and deliver optimal customer experiences, traditional organizations often need to deal with legacy technologies and operating models so those organizations can innovate more quickly.

These organizations can get up to speed by adopting a two-speed IT architecture and a digital product management approach.

A two-speed IT architecture allows companies to experiment with cutting-edge applications and features while still benefiting from the stability of older systems. A digital product management approach empowers managers to incorporate user feedback actively and systematically in product development.

Both shifts will require traditional companies to emulate online players' best practices in technology deployment, IT governance, and talent development.

internal accountability. They typically rely on legacy enterprise resource planning and other transaction-oriented IT systems for security and reliability. Major changes to these systems can often take months of development and testing. At the outset, many brick-and-mortar companies will probably lack the tools, governance models, and skill sets required to pursue the same agile approaches and test-and-learn strategies their digital competitors are using.

How can traditional consumer-facing organizations get up to speed? The first step, which addresses the need for alignment, is adopting a *two-speed IT architecture*—one that decouples the management of customer-centric front-end systems and applications from the management of existing transaction-oriented back-end systems.² The second step, which addresses the need for accountability, is adopting the same focus on *digital product management* that digital companies demonstrate—that is, empowering managers to incorporate users' feedback into product-development efforts actively and systematically and holding managers accountable for results. Traditional companies therefore need to emulate online companies' best practices in governance and talent development.

In this article, we consider ways companies can take these two mutually reinforcing steps. A two-speed IT architecture based on microservices that can be enhanced and updated independently enables agile product development and accelerated innovation.

And a focus on digital product management can help traditional companies improve their time to market with innovative IT offerings and provide satisfying customer interactions that result in lasting and profitable long-term relationships.

Adopting a two-speed IT mind-set

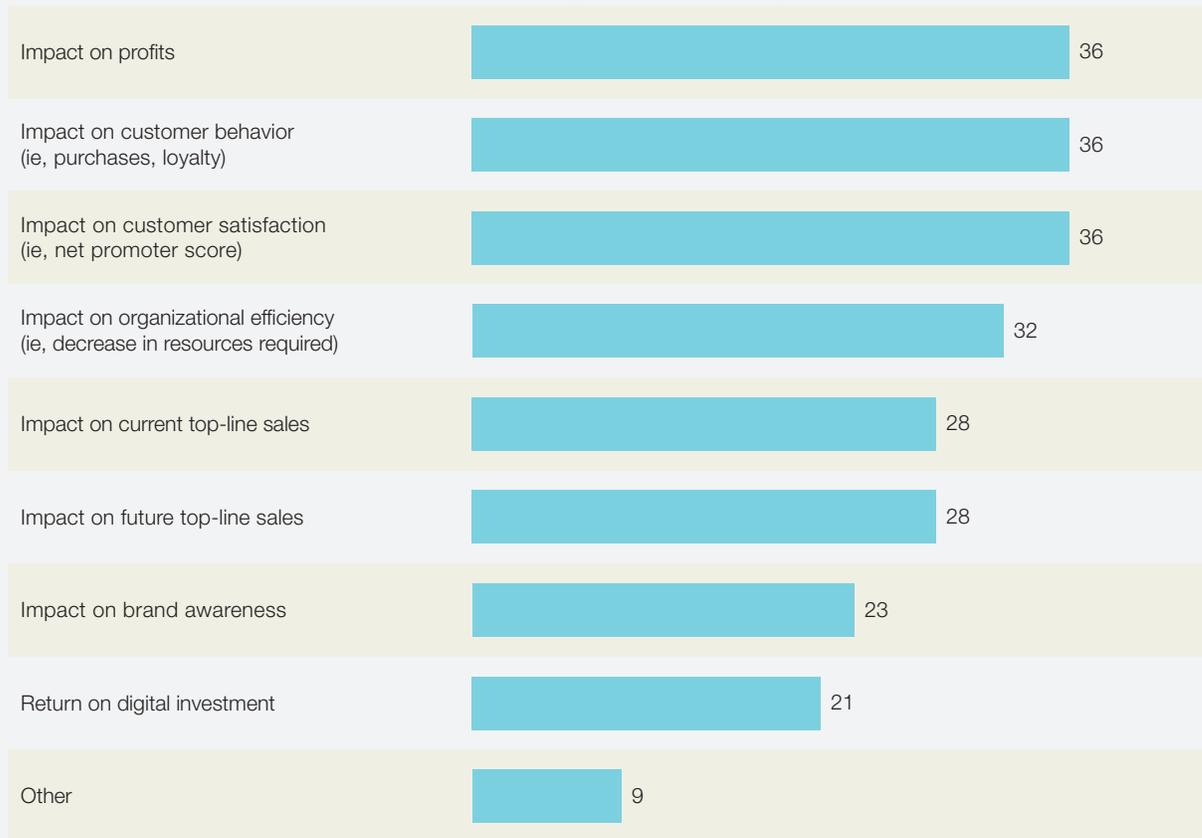
The benefits of adopting a two-speed IT architecture have been widely discussed. Not the least of these is that such an architecture allows companies to preserve the transactional technologies, processes, and activities they have come to rely on while also exploring innovative consumer-facing technologies and models. In relatively fast fashion, companies may be able to roll out improved website offerings that could greatly enhance customers' experiences with the company (exhibit).³

The two-speed approach can offer the best of both worlds, but it requires real commitment to implement. A central impediment is getting all stakeholders aligned on just *how* to synchronize front- and back-end systems and processes and *where* to decouple them in the interest of speed. Consider the experiences of one large retail company. Out of habit, it supported a new digital offering by applying an IT-governance model it had been using in certain parts of the organization. Under the existing governance model, the IT organization was split into two groups: one side focused on supplying the software required to launch the digital feature (for instance, developing applications and maintaining infrastructure) and

Exhibit

Executives use several measures to gauge the impact of digitization.

Most important measures used to assess effects of digital efforts, % of respondents¹



¹The online survey was in the field from April 21 to May 1, 2015, and garnered responses from 987 C-level executives representing the full range of regions, industries, and company sizes; 13.5% of these executives have a technology focus. Multiple responses were allowed. Source: See the McKinsey survey on digitization, “Cracking the digital code: McKinsey Global Survey results,” September 2015, mckinsey.com

the other focused on supporting user demand for the software (for instance, managing suggested changes and new requirements from the business side). This model had been effective in the traditional business because there had always been plenty of time between quarterly internal software upgrades for operations, logistics, finance, and other departments to meet and determine how to adjust to any changes. It has been less effective in the digital context, where new customer-facing features and functionality—

for instance, upgrades to the shopping cart and payment applications—are rolled out in weeks rather than months. The endless meetings required to gain alignment under the existing model constituted an unwanted time sink, and ultimately the organization had to step back and reset its operating model to compete digitally.

As companies seek quick fixes for this sort of alignment problem, they often encounter a wide range of pitfalls.

They look outside to gain speed. Some companies will hire an external development company to build applications for new online offerings. In turn, the outside developer often will deliver a concept and prototype quickly but may need several turns with the app before the prototype can move into production. The outside developer's delivery on the request tends to be fast, but in the long term it can be challenging for companies to integrate discrete applications, built independently from other elements of its technology infrastructure, with complex existing back ends.

They build it and move on. Some companies will isolate their software engineers and experts in customer-experience design in an incubator to focus on developing and launching a customer-facing system or software upgrade quickly, hoping to get traction on some digital improvement. A few initiatives will flourish under this quick-hit approach, but many more will wither on the vine as the team moves on to the next digital priority. (And there is always another one.) The result is serial innovation with no sustained support for each round of website or mobile-application enhancements.

They set up a separate and independent digital organization. To ramp up digital offerings, some companies create a separate organization and system for implementing their digital strategy, or they acquire a pure-play digital company to speed up the initiative. In and of itself, this can be a good strategy—but only if the digital lab is in step with the rest of the business. Leaders in both traditional and digital camps must designate clear roles and responsibilities, and they must build mutual trust among team members. In practice, having separate digital and traditional organizations can make it difficult to develop standard systems and practices that account for the complexities built into transaction-based legacy IT systems. When legacy systems and new front-end innovations are aligned, staff members in traditional and digital groups can better coordinate their efforts and effectively pursue

multichannel marketing strategies. Each side has a role to play in getting things right.

Perhaps the biggest pitfall, however, occurs when companies try to adopt the same technology platforms that online companies are using and assume this alone will solve their alignment problems. It is not enough just to reorganize around platforms. Companies must reorient themselves and their product-development processes around customer experiences and insights. To enable fast front ends that will complement their transaction-oriented legacy back ends, they can adopt a digital product management model.

Shifting to a digital product management model

A digital product management approach requires that companies systematically incorporate customers' needs and insights into their products and services. Teams are held accountable for implementing specific improvements to digital products or digital experiences. Other groups, such as marketing, logistics, and customer service, may be collaborators, but ultimately digital product managers are measured on outcomes associated with the revised product or experience. Additionally, product-development teams are focused on delivering a minimally viable product that can be launched quickly to elicit useful feedback from customers. Indeed, rather than conducting focus groups and conjoint analyses at the end of product development, the digital product managers pull customers in during the creation process—canvassing them frequently and acting on their responses.

The digital product management approach can help companies streamline their development processes, reveal breakthrough product innovations, and engender customer loyalty. But it requires that companies ask themselves two critical questions relating to accountability:

- Who is responsible for steering the different parts of the digital product portfolio?

- How do we organize our development teams to ensure that we have the right mix of talent and an environment that is conducive to innovation?

Getting the answers right for your company—and altering the profiles of both product managers and the development environment—can mean the difference between having a slow-moving IT shop that looks for the lowest common denominator and being able to release breakthrough product innovations that meet customers’ most pressing needs.

Who is responsible?

Traditional companies that want to adopt a digital product management approach will need to acknowledge the difference between developing empowered IT product managers, who are accountable for improving the customer experience, and maintaining a group of IT staffers who are there simply to gather requirements and execute requests from the business side.

One retailer, for instance, wanted to own its online-checkout experience rather than outsource this capability to a third-party provider. Under the old operating model, the retailer’s IT organization included a number of product managers, each of whom was responsible for a particular application. Requests from the business side were funneled to the application owner through a member of the IT group, and the application owner would interpret the instructions and implement the changes—on time but not necessarily meeting customers’ needs.

When the company implemented a digital product management approach, it assigned each stage of the overall customer experience to a product manager. The product manager assigned to oversee the checkout stage had a background in business, as well as expertise in core technologies, and he was able to help create a detailed set of metrics by which his performance would be measured. The measures included sales outcomes, such as the drop-off rate at checkout.

With the right technology architecture and product managers in place, the company was able to act nimbly on its digital initiatives. Whereas it might take many months to develop customer-facing system changes before they were deemed ready for customers, the company’s new checkout experience was launched relatively quickly. Digital product managers created a viable “lite” version of the system, ran 10 percent of the company’s traffic through the new experience, adjusted the system through feedback and observations, expanded the rollout to a wider audience, and continued revising features.

How do we organize?

Decisions about how to indoctrinate your organization in digital product management should be guided by six critical imperatives.

Clearly define your digital products. Companies need to classify the elements of their digital initiatives. They can start by defining the user or business problems they are attempting to solve through digitization, identifying which digital activities have been designed to address the problems, and prioritizing those activities according to the amount of development resources required for each. Does the company want to improve its checkout experience dramatically (as the retailer mentioned earlier did), the entire customer experience from first click, or the entire website? During this process, companies will need to consider a number of factors, including which new metrics might be required to determine the success or failure of a digital product.

Assign discrete parts of the customer experience to product managers. Once digital products have been identified and classified, companies need to assign product managers to specific stages of the digital experience. As in the retail example, digital-product managers can no longer be considered as simply request takers—they should be charged with assessing the value, utility, and feasibility of new



and existing website features. They should be given freedom not only to refine existing digital products but also to redefine them in ways that create better customer experiences—for instance, by devising a new one-click-checkout option rather than simply upgrading an existing multistep process.

Test prototypes with customers. Digital product managers must be given the leeway to get in front of customers with minimally viable products—such as the lite version of the checkout system that the retailer tested (and retested) with customers. Such products will allow product-development teams to collect valuable insights and ultimately bring website improvements to customers sooner. Ideas must be tested early and often with actual target users, whose views on the utility and viability of the proposed digital experience are likely to be more accurate than those of internal stakeholders. Inevitably, not everyone in the organization will be on board with a test-and-learn approach; to demonstrate its power,

IT executives can start with pilot projects, using any successes as proof of concept.

Recruit differently. Digital product managers must interact with professionals from across the product-development spectrum. So they must be well versed not just in technology concepts but also in engineering, user-experience design, agile product development, finance, marketing, and many of the other professional domains that enable the rapid creation of an online product or service. As the retail example described earlier suggests, the best candidates will have a business and an IT background. IT organizations may need to hire from different pools of talent than they typically have—looking outside the company, certainly, but perhaps also reaching into different internal groups, such as marketing—and they might need to focus on “softer” skills than they are used to. Critical soft success factors might include a capacity for customer empathy, problem-solving skills, and creativity.

Strengthen relationships between product managers and product engineers. A digital product management approach and two-speed architecture both must be supported by a product-management organization that interacts seamlessly with the members of the IT group who are designing and delivering digital products and experiences. Such interactions can be thwarted, however, when traditional organizations try to impose formal communication systems and processes on teams—systems and processes typically used in a context that is not focused on digital delivery. Instead, these companies should seek to develop agile ways for these groups to work together. One way to facilitate informal collaboration, for instance, is to have product managers sit in the same room as product developers to create new offerings or update existing ones jointly. This codevelopment model increases the need for product managers to demonstrate a certain level of technology IQ as well as business savvy; for instance, they must understand how to judge the technology requirements associated with a development effort or how to manage the IT architecture when slight changes in product specifications occur.

Create appropriate incentives. Software engineers' performance has traditionally been measured according to the speed with which they respond to the business's request for software upgrades and not the result of those changes. Under a digital product management approach, performance must be measured according to product managers' ability to support a successful customer experience—appropriate metrics might include increases in sales or customer-satisfaction scores as a result of new

or improved digital offerings. Product managers' performance should be evaluated using business metrics that they can influence directly. Conversion rates, for example, may be a fair measure for a product manager who owns the “front page” of a commercial website.



Having both a flexible IT architecture and a digital product management capability is a prerequisite for competing in today's fast-moving markets. By aligning the processes that manage back-end and front-end IT systems and by holding all staffers and stakeholders accountable for adopting new mind-sets and processes, organizations can create compelling customer experiences online and compete more effectively with digital rivals. ■

¹ Martin Hirt and Paul Willmott, “Strategic principles for competing in the digital age,” *McKinsey Quarterly*, May 2014, mckinsey.com; and Henrik Andersson and Philip Tuddenham, “Reinventing IT to support digitization,” May 2014, mckinsey.com.
² Oliver Bossert, Chris Ip, and Jürgen Laartz, “A two-speed IT architecture for the digital enterprise,” *McKinsey on Business Technology*, December 2014, mckinsey.com.
³ Andersson and Tuddenham, “Reinventing IT to support digitization”; and Oliver Bossert, Jürgen Laartz, and Tor Jakob Ramsøy, “Running your company at two speeds,” *McKinsey Quarterly*, December 2014, mckinsey.com.

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