Over the four years that we have been studying companies’ digital transformations, we have found that different people mean different things when they refer to a digital transformation. Currently, some big companies are attempting to digitize, while others are focused on becoming digital; some are even trying to do both simultaneously. To succeed in the digital economy, companies need to be both digitized and digital—and there is a big difference, despite the similarity of the words. To articulate and execute a digital strategy, it’s important to understand the requirements for becoming both digitized and digital. This briefing1 tries to clarify what is involved in each of these two essential transformations.

**DIGITIZATION IS AN OPERATIONAL NECESSITY**

Digitization involves standardizing business processes. It is associated with cost cutting and operational excellence. In essence, digitization imposes discipline on business processes that over the years were executed by individual heroes in a variety of creative (but not always optimal) ways. SAP, PeopleSoft, and other integrated software packages that burst onto the scene in the 1990s helped lead the way to more digitizing. Digitization was a painful process in the 1990s, and for companies that have not yet been able to standardize core processes, it is an ongoing struggle.

The benefits of digitization are significant: efficiency, reliability, predictability—in short, operational excellence. For all the pain that it entails, digitization is an essential undertaking in companies. Without digitization, companies cannot scale; they cannot absorb the complexity of expanded product portfolios; they cannot personalize services. Disciplined, standardized business processes, where appropriate, ensure the accuracy and security of transactions and back office processes. They make data accessible and reliable.

In the ’90s and even early 2000’s, business leaders tended to grossly underestimate the challenge of digitization. Shedding habits—imposing discipline—proved to be harder than they imagined. In many cases, leaders committed to digitization initiatives thinking they were funding new and better technology. Many didn’t recognize that digitization requires a commitment to fundamental changes in how people work. Consequently, most digitization efforts have cost more—and have generated fewer benefits—than anticipated.

Technology is an important tool for digitizing a company. As companies discipline business processes, they implement technologies that automate repetitive back office processes and ensure seamless transaction processing. They clean up master data and architect transaction data to provide transparency in support of operations, customer support, and analytics. These process and technology solutions comprise a platform we refer to as an operational backbone.2

Because they are still in the throes of building and learning to use their operational backbones, many business leaders are not distinguishing their transformation to become digitized from the present need to become digital. They are assuming that to become digital, they must simply use digital technologies to become more digitized. They might set out to improve operations by applying Internet of Things (IoT) capabilities or to enhance customer service with mobile technologies.

But “becoming digital” is a totally different exercise from digitizing. Although digitization is an important enabler of digital—and digital technologies can certainly support operational excellence—of digital—and digital technologies can certainly support oper-

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2 MIT CISR research has found that certain technology resources, including an operational backbone, are key to building organizational agility and innovativeness, as described in J.W. Ross et al, “Designing Digital Organizations—Summary of Survey Findings,” MIT Sloan CISR Working Paper No. 415, February 2017.
artional excellence—all the digitization in the world won’t on its own make a business a digital company. Becoming digital involves a very different kind of transformation.

**DIGITAL REFERENCES TO A CUSTOMER-CENTRIC VALUE PROPOSITION**

Today, companies are confronting new business opportunities presented by a host of powerful and potentially game-changing technologies like social, mobile, analytics, cloud, and the Internet of Things (SMACIT), as well as cognitive computing, biometrics, and various emerging technologies. The capabilities of these powerful, readily accessible technologies introduce so much speed and connectivity into businesses that they enable not just an opportunity to improve operations, but entirely new value propositions. A digital company innovates to deliver enhanced products, services, and customer engagement. Because digital emphasizes innovation and speed, it involves a different kind of transformation. Unlike the pain associated with digitization, a digital transformation is more often exciting, thrilling—and a bit unnerving!

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To become digital, leaders must articulate a visionary digital value proposition that conveys how digital technologies and information can enhance the company’s existing assets and capabilities to create new customer value.

The benefits of a successful digital transformation include growth in revenues and margins, undying customer loyalty, and the ability to attract top talent (and thus continue to grow). If they fail to become digital, companies risk their products becoming commoditized as their competitors offer information-enriched solutions.

To become digital, leaders must articulate a visionary digital value proposition. This value proposition conveys how digital technologies and information can enhance the company’s existing assets and capabilities to create new customer value. Being digital is not just introducing mobile apps for customers. It is taking advantage of the opportunity to redefine a business—and possibly even an industry.

Companies deliver their digital value propositions in the form of digital offerings. We define digital offerings as *information-enriched customer solutions delivered as seamless, personalized customer experiences*. Digital offerings are revenue generating. Companies can implement digital offerings by starting with a small, simple product or service—just like a digital start-up. Companies maintain a competitive edge by continuously introducing new features and services that enhance the value proposition of that offering, while also developing related offerings.

Digital companies rely on their operational backbone to ensure security reliability and scale of their basic transaction processing, the efficiency of back office processes, and access to master data. But an operational backbone will not support the requirements for speed and innovation associated with digital offerings. Thus, companies embarking on a digital transformation need to architect a second platform—a digital offerings platform—to provide access to reusable digital business components. These components will include both technical capabilities (e.g., authentication, connectivity) and business capabilities (e.g., customer onboarding, performance dashboarding) that the company will require when it creates a new offering.

Successful companies in the digital economy will be both digital—to provide customer value—and digitized—to provide scale and efficiency. Although companies still struggle to digitize, what that means and how to do it are now well established; it’s just hard to do it well. How to be digital, in contrast, is less well established. We have highlighted the contrasts between the two types of transformations in figure 1.

Defining a digital value proposition that offers solutions customers are willing to pay for is more art than science. Schneider Electric offers an example of how a company progresses from digitized to digital.

**SCHNEIDER ELECTRIC4 TRANSFORMS FOR DIGITAL SUCCESS**

Schneider Electric SE is a 181-year-old €25 billion global specialist in energy management and automation. A series of more than two hundred acquisitions between 1999 and 2008 expanded Schneider Electric’s portfolio from traditional electric distribution and industrial control products to incorporate its new focus on high-tech intelligent energy management and automation solutions.

**Digitization**

Although these acquisitions positioned Schneider Electric to offer new, digitally enabled value propositions, they also

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3 MIT CISR research has found that only 28% of established companies have a value-adding operational backbone. Ibid., 15.

introduced a great deal of business complexity. Management felt that the variability and fragmentation of existing enterprise processes resulted in operational inefficiencies and missed revenue opportunities.

To address these concerns, around 2009 Schneider Electric began to introduce transformations intended to digitize the company. In particular, the company installed a customer relationship management (CRM) system to facilitate cross-selling and provide transparency into customer data. Also, management led the consolidation of the hundreds of ERPs absorbed in the company’s many acquisitions to just twelve. The CRM and ERPs together formed the core of the company’s operational backbone. To facilitate adoption and use of this evolving backbone, Schneider Electric instituted significant organizational changes, such as a new Information, Process, and Organization function that centralized responsibility for IT and enterprise processes.

Digital Transformation

By 2016, Schneider Electric had defined a digital vision—“Life Is On”—that reflects the company’s commitment to its customers’ needs. The company had assigned P&L responsibilities to forty-eight lines of business, organized into three Businesses reflecting its major customer segments: Buildings and IT (residential and nonresidential building managers, including data centers), Infrastructure (energy utilities), and Industry (industrial firms and original equipment manufacturers).

Schneider Electric’s digital value proposition leverages IoT to provide enhanced energy management and automation across all customers’ equipment and sites. Schneider Electric analyzes sensor data to provide information that customers can use to manage their own facilities, or that Schneider Electric can use to support customers from one of its locations.

To provide these solutions, Schneider Electric is building out a new platform it calls EcoStruxure™. This platform includes core technical services such as cybersecurity, complex event processing, identity, and subscription billing; and business services like apps and analytics and other requirements for asset performance management. As the company creates new offerings, it will be able to reuse these services.

As of late 2016, Schneider Electric was piloting asset performance management services with fifty of its most strategic customers. But in order to succeed with these new digital offerings, management realized that the company must again transform and so set changes in motion: Responsibility for Schneider Electric’s emerging EcoStruxure™ platform was transferred to the CIO, who also has responsibility for the company’s operational backbone. The company created six business clusters where leaders can debate the relative importance and potential value of innovative ideas. To help customers adopt new digital offerings, Schneider Electric is forming a centralized sales and services organization. And the company has started engaging customers in co-creation processes to identify how digital offerings can best meet customer needs.

BECOME DIGITIZED AND DIGITAL

As established companies position themselves for success in the digital economy, they will find it essential to be both digitized (i.e., operationally excellent) and digital (i.e., offering innovative customer services). If a company has a strong operational backbone, the company’s IT unit can help with development of the digital offerings platform and ensure that this new platform integrates as needed with the operational backbone. If the company is still learning to digitize, though, the IT unit may be consumed with digitization initiatives. In this case, a separate business unit can oversee initial experiments around digital offerings to identify what services might be of interest to customers.

Like digital start-ups, companies with a weak operational backbone can offer new digital services. But if their new offerings find a market, these companies will need to quickly implement key elements of an operational backbone to enable scaling up the new business. They will also need to architect a platform for their new digital offerings, or they will find that the early burst of innovation will stall when they attempt to integrate services in ways their customers have come to expect.

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<thead>
<tr>
<th>Figure 1: A Comparison of Digital and Digitized</th>
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<tbody>
<tr>
<td><strong>Digitized</strong></td>
</tr>
<tr>
<td><strong>Benefits</strong></td>
</tr>
<tr>
<td><strong>Technology Requirement</strong></td>
</tr>
<tr>
<td><strong>Transformation Focus</strong></td>
</tr>
</tbody>
</table>
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