

# BUILD EIGHT DYNAMIC CAPABILITIES FOR DIGITAL BUSINESS MODEL CHANGE

Stephanie L. Woerner, Research Scientist
Leslie Owens, Executive Director & MIT Sloan Senior Lecturer
MIT Sloan Center for Information Systems Research (CISR)
Cynthia M. Beath, Professor Emerita
University of Texas, Austin

The COVID-19 pandemic has exposed the opportunities open to those organizations that can change the way they operate, and the existential threat facing organizations that cannot break long-established routines. To create new types of value, organizations cannot just leverage existing strengths; they must also innovate to leverage powerful, readily accessible technologies. This briefing applies a theoretical perspective on why—despite overwhelming evidence that it is essential to do so—many organizations do not sense and respond to rapid changes in the business environment. These organizations have not invested the required time and attention in building the dynamic capabilities that underpin the ability to develop and sustain competitive advantage.<sup>1</sup>

**Dynamic capabilities** represent the "ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments." Companies with strong dynamic capabilities are able to pivot during a crisis, develop new digital offerings, and experiment with new digital business models.

## DIGITAL BUSINESS MODEL CAPABILITIES PROPEL CHANGE IN MULTIPLE WAYS

To put the concept of dynamic capabilities in context, in this briefing we revisit Peter Weill and Stephanie Woerner's seminal work on digital business models, *What's Your Digital Business Model?*.<sup>3</sup> That book outlined four viable digital business models and described eight capabilities that companies must have to support a digital business model launch, adaptation, or transformation. All eight capabilities are dynamic capabilities.

A company's dynamic capabilities facilitate change through three mechanisms: (1) the **sensing** and shaping of opportunities; (2) **seizing** opportunities by mobilizing and directing resources; and (3) **transforming** the company, both protecting the value it has created and redesigning to adapt as conditions change. To design for digital, organizations must engage in persistent sensing, seizing, and transforming. They need to develop ways to adapt their resources and capabilities as the environment changes—for example, innovating to accomplish a step-change in performance, or acting in response to the moves of competitors, customers, partners, and technologies. We think digital business transformation will be ongoing, as MIT CISR research indicates the bar to becoming future ready is rising in response to advancements in practice and technologies.

## THREE MECHANISMS ENABLE THE MOVE TO A DIGITAL BUSINESS MODEL

We have mapped the eight capabilities that we identified as key to digital business model development to the mechanisms of sensing, seizing and transforming. Three of the capabilities involve sensing the environment and learning more about your customers:

• Gathering and using great information about customers' life events. Companies with this capability use digital tools to obtain information about customers' goals and life events and then act on these objectives. Many companies that are adept at gathering information about customers use organizing frameworks such as customer journeys, jobs customers are trying to do,<sup>6</sup> and traditional customer segments. Companies that focus on customer understanding improve their data monetization efforts.<sup>7</sup>

<sup>7</sup> B. H. Wixom and L. Owens, "<u>Digital Data Monetization Capabilities</u>," MIT Sloan CISR Research Briefing, Vol. XIX, No. 4, April 2019; and B. H. Wixom and G. Piccoli, "Build Data Liquidity to Accelerate Data Monetization," MIT Sloan CISR Research Briefing, Vol. XXI, No. 5, May 2021.



<sup>1</sup> David J. Teece, "Explicating Dynamic Capabilities: The Nature and Microfoundations of (Sustainable) Enterprise Performance," Strategic Management Journal 28, no. 13 (2007): 1319–1350.

<sup>2</sup> David J. Teece, Gary Pisano, and Amy Shuen, "Dynamic Capabilities and Strate-gic Management," Strategic Management Journal 18, no. 7 (1997): 509–533.

<sup>3</sup> Peter Weill and Stephanie L. Woerner, What's Your Digital Business Model?: Six Questions to Help You Build the Next-Generation Enterprise, (Harvard Business Review Press, 2018).

<sup>4</sup> Teece, "Explicating Dynamic Capabilities: The Nature and Microfoundations of (Sustainable) Enterprise Performance."

<sup>5</sup> S. L. Woerner and P. Weill, "Update on the Four Pathways to Future Ready," MIT Sloan CISR Research Briefing, Vol. XXI, No. 2, February 2021.

<sup>6</sup> Clayton M. Christensen, Taddy Hall, Karen Dillon, and David S. Duncan, "Know Your Customers' Jobs to Be Done," Harvard Business Review 94, no. 9 (2016): 54–62.

- Amplifying the customer voice inside the company. Companies with this capability use the information they have gathered to shape offerings around the customer. Amplifying the customer voice goes beyond simply measuring customer experience and satisfaction; it means focusing the efforts of the organization on the customer and using digitization to make customers' presence felt in every meeting and decision. These companies democratize their data, providing empowered teams access to, and an understanding of, all data they need to make decisions.8
- Creating a culture of evidence-based decision making. Companies with this capability use real-time dashboards, social-sentiment analysis, and other sources of hard evidence rather than gut instinct and management experience to make crucial decisions about customer needs. They foster an evidence-based culture where employees feel comfortable using data and techniques such as test-andlearn<sup>9</sup> to generate insights about customers and competitors. 10 They empower employees to work proactively by identifying decision-making boundaries, providing the knowledge or required resources to solve problems, and holding people accountable for their results.11

Once a company has sensed an opportunity, it has to figure out how to seize it and convert it to value. To develop such opportunities, the company must use capabilities that allow

Dynamic capabilities enable companies to redirect resources and adapt to changes in their environment through three main mechanisms (Teece 2007):

- Sensing: scanning and interpreting technological possibilities, customer needs, market structures, and responses to identify opportunities
- Seizing: allocating and mobilizing resources to address needs and opportunities, and to capture value from doing so
- Transforming: reconfiguring organizational resources and structures to respond to threats and to continuously renew the firm

it to offer great products and services and enhance customers' experience. Seizing capabilities include:

- · Identifying and developing great partnerships and acquisitions. Most companies can't provide all the pieces of a solution themselves, so must work with other companies to create the products and offerings their customers want and need. Being accustomed to partnering will help a company reach new customers and offer complementary products and services. 12 Efficient acquisitions is another way to permanently add new company resources and capabilities.
- · Being the first place your best customers go when a need arises. This capability is at the core of how a company will differentiate itself in a digital economy. Companies with this capability think more about fulfilling customers' needs than focusing on competitors in any particular industry. The company concentrates on removing friction from customer interactions and enabling customization and curation of its own products and services (along with those of complementors) to solve customer problems.<sup>13</sup>
- Providing an integrated multiproduct, multichannel customer experience. This capability places actual customer needs and goals at the center of the business model. Companies that can do this meet customer needs in the customer's context, often co-creating innovations with customers and then scaling them. These companies develop integrated products across multiple channels simultaneously. Product integration is hard, but those that are consistently successful in the digital economy are able to do this.14

Transforming capabilities allow you to manage threats to your existing business, protecting the value your company has created through sensing and seizing, and scaling new offerings into new digital business models.

 Developing deep competencies in efficiency, security, and compliance. As leaders of top-performing companies digitize their operations, they recognize responsibilities and threats. Their organizations become effective at dealing with cyber threats, potential service disruptions, and risks to data privacy, incorporating acceptable data use into protocols. 15 Being compliant with governments and other regulators worldwide is a competence, not a chore. And

<sup>8</sup> N. van der Meulen, "Decision Rights Guardrails to Empower Teams and Drive Company Performance," MIT Sloan CISR Research Briefing, August 2020, Vol. XX, No. 8.

<sup>9</sup> N. O. Fonstad and J. W. Ross, "Learning How to Test and Learn," MIT Sloan CISR Research Briefing, Vol. XVIII, No. 2, February 2018.

<sup>10</sup> I. A. Someh and B. H. Wixom, "Data-Driven Transformation at Microsoft," MIT Sloan CISR Research Briefing, Vol. XVII, No. 8, August 2017.

<sup>11</sup> K. Dery, S. L. Woerner, and C. M. Beath, "Equipping and Empowering the Future-Ready Workforce," MIT Sloan CISR Research Briefing, Vol. XX, No. 12, December 2020.

<sup>12</sup> I. M. Sebastian, P. Weill, and S. L. Woerner, "Three Strategies to Grow via Digital Partnering," MIT Sloan CISR Research Briefing, Vol. XX, No. 5, May 2020.

<sup>13</sup> P. Weill, S. L. Woerner, and A. P. Diaz Baquero, "Hello Domains, Goodbye Industries," MIT Sloan CISR Research Briefing, Vol. XXI, No. 1, January 2021.

<sup>14</sup> J. W. Ross, C. M. Beath, and R. R. Nelson, "Redesigning CarMax to Deliver an Omni-Channel Experience," MIT Sloan CISR Working Paper, No. 442, June 2020.

<sup>15</sup> B. H. Wixom and M. L. Markus, "To Develop Acceptable Data Use, Build Company Norms," MIT Sloan CISR Research Briefing, Vol. XVII, No. 4, April 2017.

companies with transforming capabilities bake efficiencies into new business models.

· Service-enabling what makes your company great—with exposed APIs. Digital is a lot about connecting organizational products and silos to improve the customer experience. It's also about linking the organization to a digital ecosystem to be able to offer the customer the best options at all times. This requires first that a company identifies its crown jewels—the core business capabilities that make the company great, like producing a product or processing a loan application—and turns them into digitized services. Then the company makes these services easily and securely available business-wide—and to its partners and customers. The digitized services become the basis for reconfiguration of resources and capabilities.16

### **TOP PERFORMERS ARE MORE EFFECTIVE** AT DIGITAL BUSINESS MODEL CAPABILITIES

Consider how top performers are doing at building these dynamic capabilities (see figure 1)—on average, top performers

16 J. W. Ross, I. M. Sebastian, and C. M. Beath, "The Next IT Transformation: From Delivering Projects to Managing Living Assets," MIT Sloan CISR Research Briefing, Vol. XVII, No. 5, May 2017; and P. Weill, S. L. Woerner, and M. Harte, "Replatforming the Enterprise," MIT Sloan CISR Research Briefing, Vol. XX, No. 7, July 2020.

are 70 percent effective, while the average company is only 51 percent effective.

How does your company stack up? Get together with your colleagues and individually rate your organization's effectiveness on these dynamic capabilities. And then look at where you align on high or low effectiveness and where there are differences across raters, and calculate for each capability how your company rates on average. Then get to work building those capabilities up.

#### THE TIME TO LEVERAGE DYNAMIC **CAPABILITIES IS NOW**

To effectively compete in the digital economy, your eight dynamic capabilities for sensing, seizing, and transforming will have to be in top form. It is generally costly and risky to change and/or add business models, and companies that have developed these dynamic capabilities well will be better prepared for continued success. You must ensure that your company is able to sense new opportunities, then translate the opportunities into attractive offerings and scale them, to transform and thrive in the current fast, volatile, and uncertain digital environment.

Figure 1: Dynamic Capabilities That Enable Companies to Develop and Implement New Digital Business Models

How effective is your company at each of the following capabilities? Rate your company on a scale from 0% (not at all effective) to 100% (extremely effective). Review a capabilities checklist to prepare for rating your company.

DIGITAL BUSINESS MODEL DYNAMIC CAPABILITIES	YOUR COMPANY	TOP PERFORMERS*
Sensing and shaping opportunities and threats		
Gathering and using great information about customers' life events		73%
Amplifying the customer voice inside the company		70%
Creating a culture of evidence-based decision making		73%
Seizing opportunities		
Identifying and developing great partnerships and acquisitions		73%
Being the first place your best customers go when a need arises		68%
Providing an integrated multiproduct, multichannel customer experience		70%
Transforming (managing threats and reconfiguring to adapt)		
Developing deep competencies in efficiency, security, and compliance		75%
Service-enabling what makes your company great—with exposed APIs		57%
AVERAGE		70%

<sup>\*</sup> MIT CISR 2019 TMT and Transformation Survey (N=1311). 917 firms self-reported a net profit margin. Self-reported net profit margin correlates significantly with actual profit margin at the p<.01 level. Financial measures are then adjusted so they are relative to industry. Both the top 5 percent and bottom 5 percent of the sample were trimmed to remove outliers. Top Performers are in the top quartile of net margin, compared to industry.

#### MIT SLOAN CENTER FOR INFORMATION SYSTEMS RESEARCH

Founded in 1974 and grounded in the MIT tradition of rigorous field-based research, MIT CISR helps executives meet the challenge of leading dynamic, global, and information-intensive organizations. We provide the CIO and other digital leaders with insights on topics such as business complexity, data monetization, and the digital workplace. Through research, teaching, and events, the center stimulates interaction among scholars, students, and practitioners. More than ninety firms sponsor our work and participate in our consortium.

#### **CISR RESEARCH PATRONS**

AlixPartners LLP

**Avanade** 

Axway

Cognizant

Microsoft Corp.

The Ogilvy Group, LLC

Pegasystems Inc.

PricewaterhouseCoopers

Standard Bank Group (South Africa)

### **CISR SPONSORS**

Allstate Insurance Company

Amcor

ANZ Banking Group Ltd.

(Australia)

**Australian Taxation Office** 

AustralianSuper

Banco Azteca (Mexico)

Banco Bradesco S.A. (Brazil)

Banco do Brasil S.A.

Bank of Queensland

(Australia)

BNP Paribas (France)

**Bristol-Myers Squibb** 

**Cabot Corporation** 

Canadian Imperial Bank of

Commerce

CarMax

Caterpillar, Inc.

CEMEX (Mexico)

Charles River Laboratories,

Inc.

CIBC (Canada)

Cochlear Limited (Australia)

Commonwealth Superannuation Corp.

Credit Suisse (Switzerland)

Cuscal Limited (Australia)

**CVS Health** 

DBS Bank Ltd. (Singapore)

Doosan Corporation (Korea)

ExxonMobil Global Services

Company

Ferrovial Corporacion, S.A.

(Spain)

Fidelity Investments

Fomento Economico

Mexicano, S.A.B., de C.V.

(Mexico)

Fortum (Finland)

General Mills, Inc.

**General Motors Corporation** 

Henkel AG & Co. KGaA

(Germany)

Hitachi, Ltd.

**HSBC Technology & Services** 

(USA) Inc.

Insurance Australia Group

Johnson & Johnson

Kaiser Permanente

King & Wood Mallesons

Koç Holdings (Turkey)

Markel Corporation

Mercer

National Australia Bank Ltd.

Nomura Holdings, Inc. (Japan)

Nomura Research Institute,

Ltd. (Japan)

OCP North America Inc.

Org. for Economic

Co-operation and Development (OECD)

Pacific Life Insurance

Company

**Pioneer Natural Resources** 

USA Inc.

Posten Norge AS

Principal Financial Group

Procter & Gamble

QBE

Raytheon Technologies

Reserve Bank of Australia

**Royal Philips** (The Netherlands)

Santander UK/Grupo

Santander

SC Global Tubular Solutions Scentre Group (Australia)

Schneider Electric Industries

SAS (France)

SIGMAXYZ Inc.

State Street Corp. Stockland

(Australia) Suncorp Group

(Australia) Teck Resources

Ltd. (Canada) Tetra Pak

(Sweden)

Trinity Health

**Truist Financial Corporation** 

**UniSuper Management Pty** 

Ltd

**USAA** 

Webster Bank, N.A.

Westpac Banking Corp.

(Australia)

WestRock Company Wolters

Kluwer

**Zoetis Services LLC** 

MIT CISR is funded by Research Patrons and Sponsors, and we gratefully acknowledge their financial support and their many contributions to our work.

Sponsorship and benefits: cisr.mit.edu/community/sponsor-and-patron-benefits

MIT CISR research publications: cisr.mit.edu/research-library



#### **MIT Sloan School of Management**

Center for Information Systems Research

245 First Street, E94-15th Floor Cambridge, MA 02142 t 617-253-2348 | e cisr@mit.edu

Team | Kristine Dery, Christine G. Foglia Associate Director, Nils O. Fonstad, Amber Franey, Dorothea Gray-Papastathis, Cheryl A. Miller, Leslie Owens Executive Director, Ina M. Sebastian, Nick van der Meulen, Peter Weill Chairman, Barbara H. Wixom, Stephanie L. Woerner