MIT Sloan MANAGEMENT
CISR Center for Information Systems Research
Research Briefing
Volume XIV, Number 10, October 2014

Demand Shaping: Changing the Conversation About IT[1]

Jeanne W. Ross, *Director & Principal Research Scientist*
MIT Center for Information Systems Research
Cynthia M. Beath, *Professor Emeritus*
University of Texas, Austin
Barbara H. Wixom, *Principal Research Scientist*
MIT Center for Information Systems Research

In the digital economy, the number of ideas about how to use IT is exploding, but there is a limit to how many ideas organizations can fund and consume. As a result, IT investment committees must focus more than ever on identifying their company's most important strategic initiatives, bypassing the "nice to have" in favor of the "absolutely must do." In addition, projects must be completed in a timely manner, and change management efforts must wring out all the potential benefits. Few leaders dispute these objectives, but rarely does a leadership team feel confident that the company's project portfolio will indeed optimize the opportunity to digitize the company for both near-term financial results and sustainable competitive advantage.

MIT CISR research has found that a growing number of companies are addressing the need for more valuable project portfolios through what we call "demand shaping." Demand shaping is a process of ongoing negotiation and learning about a company's most valuable and achievable business change opportunities through which leaders develop a prioritized list of IT-enabled business capabilities. In earlier research we identified six demand shaping tools.[2] More recently we conducted three case studies, a dozen CIO interviews, and a survey of IT leaders at 195 companies to explore further how demand shaping might help companies succeed in the digital economy. In this briefing we share our results.[3]

> Executive IT understanding, demand shaping practices, and IT governance processes create a virtuous learning cycle that leads to consistent improvements in the IT portfolio and improved financial performance.

The Myth of the IT Steering Committee

For many years, CIOs have been pressing senior leaders to participate on IT steering committees to enhance decision making on the IT portfolio. They assumed that engaging the right people in IT investment decision making would lead to better decisions. But our research found that any positive effect of a steering committee on IT portfolio quality is overwhelmed by two other factors: ***senior executive understanding*** of IT and maturity of ***demand shaping practices***.

We measured senior executive understanding as the percentage of senior executives who could describe (1) the IT investment process, (2) the key milestones in project methodology, (3) realistic expectations for their company's IT spend, (4) change management requirements of individual IT projects, and (5) what new technology can and cannot do. Demand shaping practices include (1) cost transparency, (2) roadmapping, (3) business relationship management, (4) agile methodologies, (5) post-implementation value assessments, and (6) strategic program management. These two factors, combined with a broad definition of IT governance that includes decisions about which data and processes will be standardized and how the company will fund IT infrastructure, account for two-thirds of the variance in the quality of companies' IT portfolios.

And IT portfolio quality matters! Our analysis found that IT portfolio quality is related to executive perceptions of financial performance. For the 106 companies in our sample with publicly available financial results, perceived performance was correlated with actual industry-adjusted profitability. As summarized in figure 1, our research suggests that executive IT understanding, demand shaping practices, and IT governance processes create a virtuous learning cycle that leads to

---

[1] Contributors to this research included Karthic Kosgi of the MIT School of Engineering and the Sloan School of Management and Rajiv Kohli of The College of William & Mary.

[2] See J.W. Ross and C.M. Beath, "Demand Shaping: The IT Unit's New Passion," MIT CISR Research Briefing, Vol. XIV, No. 1, January 2014.

[3] For complete results, see B.H. Wixom, K. Kosgi, J.W. Ross, and C.M. Beath, "The IT Unit of the Future: Novel Approaches to Delivering Value to the Enterprise," MIT Sloan CISR Working Paper No. 397, October 2014.

consistent improvements in the IT portfolio, and ultimately, improved financial performance.[4]

Changing the Conversation about IT

Governance and demand shaping contribute to executive IT understanding by fostering productive conversations about IT across the organization. Over the years, governance processes have increasingly engaged the right people (i.e., leaders who can fund projects and authorize change) in IT decision making. Discussions leading up to those decisions have increased executive understanding about IT. In turn, these better equipped leaders are designing better and more effective governance processes. But improvements to portfolio quality have been slow to materialize. This is why demand shaping is so important. Demand shaping practices force constant dialogue between IT and business leaders—about how the business will succeed, what capabilities are needed, what changes are possible, what can and should be shared—and in the process they accelerate organizational learning, which in turn improves the IT portfolio.

IT leaders at Fidelity Investments Asset Management applied demand shaping practices to develop shared capabilities and a more strategic IT portfolio.

Demand shaping practices fundamentally change the things executives discuss among themselves and with IT staff. Each practice impacts the conversation in its own unique way:

- Cost transparency enlarges discussions from "How much does a project cost?" to "What is the lifetime cost of developing and leveraging a new capability?"
- On the flip side of the cost question, post-implementation value assessments encourage executives to ask, "Did this project achieve its business case and can we generate more value from the new applications?" instead of the more typical question, "Why was this project late and over budget?"
- Business relationship managers (BRMs) stop asking, "What projects do you want?" and instead ask, "What capabilities does our enterprise need to meet the customer's desires?"
- Roadmapping helps communicate beyond "What capabilities do we need?" to help executives grasp, "What business changes are we ready to absorb?" and "How do we most effectively sequence adoption of those changes?"
- Strategic program management packages projects into strategic initiatives, thereby shifting discussions from "When will this project be delivered?" to "Should this project be accelerated or cancelled?"
- For each strategic initiative, agile development elevates the discussion from "What are the requirements of our business change project?" to "Will this solution meet our requirements?" and "What requirements can be surrendered to accelerate delivery?"

Fidelity Investments' Asset Management business offers a good example of how demand shaping can change the conversation about IT.

[4] The survey research confirms relationships among the three factors listed here and between those factors and IT portfolio quality. The survey research cannot confirm causality as proposed in this briefing. However, MIT CISR has conducted five case studies and interviews with twenty-six IT leaders that support the causal relationships discussed here.

Changing the Conversation at Fidelity Investments Asset Management[5]

By the time the financial crisis hit in 2008, Fidelity was already attempting to address both a firm-wide mandate to reduce IT costs by $1 billion and the need for greater integration across product lines to meet changing customer demands.[6] Management was particularly concerned about how long it took to deliver on those demands:

> *We need to continually improve our time to market. Is it bad compared to others? Probably not, but that shouldn't matter. It needs to get better for us to remain competitive in the marketplace.* —*Howard Galligan, Chief Administrative Officer*

Against this backdrop, business leaders were asking questions like, "Why does it take so long to introduce new capabilities?" and "Why are 'baseline costs' (mostly maintenance and operations costs) overtaking 'discretionary costs' (new projects)?"

Despite these concerns, LOBs were submitting long wish lists of local projects. So IT leaders in Asset Management started applying demand shaping practices to change the conversation. First, the architecture team designed a high-level blueprint for shared capabilities within Asset Management—most notably a common data environment and shared development platform. An accompanying **roadmap** sequenced the introduction of shared infrastructure capabilities and the elimination of redundant systems (and non-value adding costs). Executive management quickly bought into the value proposition that the roadmap offered.

IT then appointed **strategic program managers**, called product leaders, to take responsibility for horizontal functions like research, trading, and portfolio management. Product leaders worked with LOB leaders to identify and roadmap common requirements for these functions (products) across Asset Management's six lines of

[5] In a video interview, "Demand Shaping at Fidelity Investments Asset Management," chief technology officer Mihir Shah details the application of demand shaping practices at his organization.

[6] See A. Quaadgras, J.W. Ross, and C.M. Beath, "Fidelity Investments: Investing in IT for Greater Strategic Impact," MIT Sloan CISR Working Paper No. 395, March 2001.

business, which include Equity, Institutional Money Management, and Money Markets. This was not an easy conversation for business leaders who were accustomed to specifying and funding their individual preferences for such activities.

IT also initiated a **value tracking** process—to help business leaders learn where adoption of new systems was lagging and thus where value was not meeting targets—and automated the collection of adoption and usage metrics for all new applications. Value tracking data raised helpful questions about proposed new systems:

> *Should we be building that next thing, or should we be educating both the technology staff and the business staff around "that's actually a capability we already have, how about we use this?" In some cases they say, "I didn't even know that existed."*
>
> *—Jon Jamen, Head of Money Market Investment*

IT also appointed **business advisor leads** (i.e., BRMs), high-level IT executives who worked all year long to make sure that business leaders understood the impact of their IT investment decisions in a holistic, integrated way and that they were engaged in development of their roadmaps. Meanwhile, adoption of **agile methodologies** enhanced learning about essential requirements for individual projects as systems were developed.

Complementing demand shaping efforts, senior managers created two new **governance bodies**. The Executive Committee (EC) took on responsibility for approving IT projects, authorizing key cross-business initiatives, and setting total IT funding levels—previously set within each business unit—across Asset Management. The Operating Committee (OC), which consisted of the EC plus the functional heads, provided oversight for major IT initiatives. Members of the committee appreciated how better understanding of IT contributed to a more strategic IT portfolio:

> *By providing the business better, more complete information, they can make the proper tradeoffs with their technology spend.*
>
> *—Howard Galligan, Chief Administrative Officer*

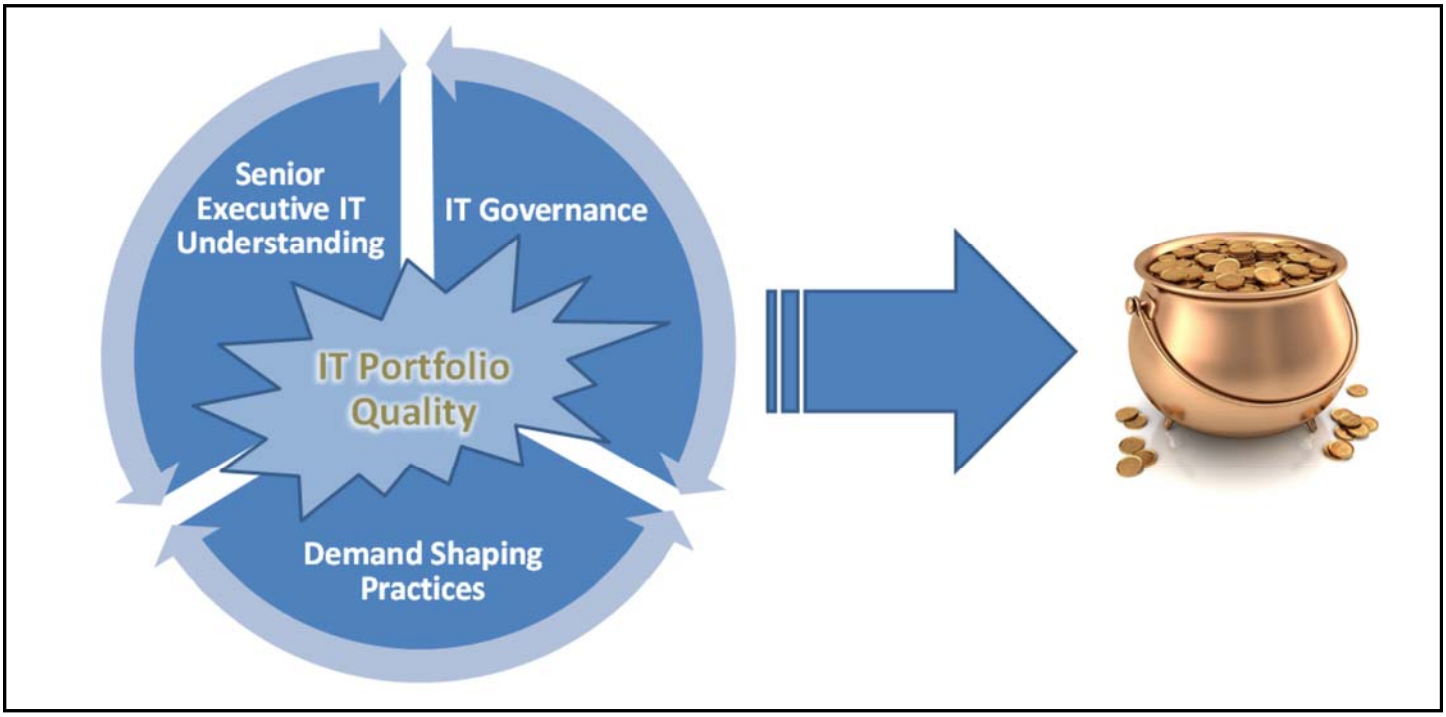
Both business and IT leaders are proud of their new, shared capabilities and the higher quality of the IT portfolio. Like other companies we've studied, however, Asset Management leaders recognize that they still have much to learn:

> *I can see the number of applications that are out of compliance going down. I can see middleware being reused. I can see fewer databases. I can believe we are provisioning things faster. I've got to believe that eventually translates into better time to market, lower cost. But I can't quantify it.*
>
> *—Bill Dailey, Chief Financial Officer*

Persistent Conversations are Essential

Ultimately, the virtuous cycle of executive understanding, IT governance, and demand shaping processes depends on very different conversations than executives once had about IT. These conversations are moving from discussions to negotiations, with fewer complaints and more inquiries, less focused on short-term solutions than long-term capabilities. Most importantly, they are more persistent. The IT portfolio decision-making process is a perpetual, not an annual, affair.

Figure 1: The Virtuous Cycle of IT Governance, Demand Shaping, and Senior Executive IT Understanding



MIT Sloan CISR Mission

MIT CISR, founded in 1974, delivers practical, research-based insights on how digitization enables enterprises to thrive in a fast-changing global economy. MIT CISR engages its community through research, electronic research briefings, working papers, meetings, and executive education. Our research portfolio includes the following topics:

- Big Data and Data Analytics
- Complexity
- Digital Business Models
- Digitized Platforms and Business Agility
- Enterprise Architecture and Working Smarter
- Global Governance
- IT-Enabled Business Innovation
- IT Portfolios and IT Savvy
- IT Unit Design and Leadership
- Impacts of trends such as Cloud, Mobile Apps, and Social Computing

The MIT CISR research staff consists of Chairman Peter Weill, Director Jeanne Ross, Research Scientists Kristine Dery, Nils Fonstad, Barb Wixom, and Stephanie Woerner, and Research Associate Ina Sebastian.

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

For details on sponsorship and its benefits, please visit http://cisr.mit.edu/community/sponsor-and-patron-benefits/.

Contact Information
Center for Information Systems Research
MIT Sloan School of Management
355 Main Street, NE25–7th Floor
Cambridge, MA 02142
Telephone: 617-253-2348
Facsimile: 617-253-4424
Email: cisr@mit.edu
http://cisr.mit.edu

Follow the MIT Sloan CISR LinkedIn Page

Follow @MIT_CISR on Twitter

Mission and Contact Information as of October 2014

CISR Research Patrons

The Boston Consulting Group, Inc.
Gartner
Microsoft Corporation
Oliver Wyman, Inc.
SAS Institute Inc.
Tata Consultancy Services Limited

CISR Sponsors

Aetna Inc.
AGL Energy Limited (Australia)
Akamai Technologies
Allianz Global Corporate & Specialty
Allstate Insurance Co.
AMP Services Ltd. (Australia)
ANZ Banking Group (Australia)
APM Terminals
Australia Post
Australian Taxation Office
Banco Bradesco S.A. (Brazil)
Banco do Brasil S.A.
Banco Santander (Spain)
BB&T
BBVA (Spain)
Bemis Company, Inc.
Biogen Idec
BNP Paribas (France)
BNY Mellon
BP (U.K.)
BT Group (U.K.)
Canada Pension Plan Investment Board
Canadian Imperial Bank of Commerce
Capital One Services, LLC
Caterpillar, Inc.
CEMEX (Mexico)
Chevron Corp.
CHRISTUS Health
Chubb & Son
Cielo
Coles (Australia)
Commonwealth Bank of Australia
DBS Bank Ltd. (Singapore)
Dunkin' Brands
DWS (Australia)
Eaton Vance Management
EMC Corp.
Equinox Ltd.
ExxonMobil Global Services Co.
Ferrovial Corporación, S.A.
Fidelity Investments
FOXTEL (Australia)
Hitachi, Ltd. (Japan)
Holcim Brasil S.A.
HSBC Bank plc (U.K.)
IBM Corporation
Informatica
ING Direct Spain
Insurance Australia Group
Itaú – Unibanco S.A. (Brazil)
Johnson & Johnson
Leighton Holdings Ltd. (Australia)
Level 3 Communications
LKK Health Products Group Ltd. (HK, China)
MAPFRE (Spain)
New Zealand Government—GCIO office
Nomura Research Institute, Ltd. (Japan)
Northwestern Mutual
Orange S.A.
Origin Energy (Australia)
Parsons Brinckerhoff
PepsiCo Inc.
Principal Financial Group, Inc.
Raytheon Company
Reserve Bank of Australia
Royal Bank of Canada
Royal Philips (Netherlands)
Sabadell Bank
Schneider Electric Industries SAS
Standard & Poor's
Standard Bank Group (South Africa)
State Street Corp.
Teck Resources Ltd. (Canada)
Telstra Corp. (Australia)
Tenet Health
Tetra Pak (Sweden)
TransUnion LLC
Trinity Health
United States Dept. of HHS
Unum Group
USAA
VF Corporation
Westpac Banking Corp. (Australia)
World Bank