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Paradigm shift: top-performing companies spend more on IT

Not too long ago, many companies tried to minimize their information technology (IT) spending-to-revenue ratio. Well-known technology research firms still publish that metric as one of the ways companies can evaluate how well they're managing costs. As a result, some IT executives work to drive the ratio down by cutting back on spending in their department, including spending on investments in new technologies and systems.

The spending-to-revenue ratio metric can indeed still serve as a useful reference point. But it doesn't generate valuable insights unless IT executives put it in its proper context. What's more, obsessing about the ratio can distract from other, more-important goals such as increasing enterprise value and improving productivity by enhancing operating methods with digital technologies.

Thankfully, businesses have started defining more-useful IT investment metrics that reflect a new understanding: that digital transformation calls for a *more strategic* approach to IT spending decisions. In one such metric, companies compare run versus build spending—that is, how much a company is investing in keeping its IT infrastructure running versus expenses for new capabilities and services to expand and grow the company. The MIT Center for Information Systems Research (CISR)¹ has developed another, even more helpful approach. The center's approach groups IT investments into several different asset classes, each with its own objectives and risk-return profiles. We explore that approach later in this article.

¹ Peter Weill and Marianne Broadbent, *Leveraging the New Infrastructure: How Market Leaders Capitalize on Information Technology*, Harvard Business School Press, 1998. See also Peter Weill and Sinan Aral, "Managing the IT Portfolio" (update circa 2003), *MIT CISR Research Briefing*, Volume III, Number 1C, March 2003.



Future-ready organizations are the most digitally sophisticated—and the most profitable.

FIGURE 1: FUTURE-READY COMPANIES SPEND MORE ON IT AS A PERCENTAGE OF REVENUE—AND ARE MORE PROFITABLE

Digital transformation	Operational excellence	Customer experience	Percentage of total surveyed	Profits versus industry average	Digital spending as a percentage of revenue
Future ready	Transformed	Transformed	23%	16%	4.0%
Industrialized	Transformed	Traditional	11%	5%	3.9%
Integrated experience	Traditional	Transformed	15%	-4%	3.9%
Silos and spaghetti	Traditional	Traditional	51%	-5%	3.2%

Source: AlixPartners—MIT CISR

The rise of the newer metrics suggests that organizations are starting to view IT spending through a fresh lens. Indeed, AlixPartners’ joint research with MIT CISR reveals important findings about IT investing in the digital era as follows.

- Digitally transformed companies have higher IT spending-to-revenue ratios—and they’re more profitable than their industry peers.
- Businesses at different stages in the digital-transformation process differ in the ways they make IT investment decisions.
- Organizations that have made the right IT infrastructure investments and established strong digital platforms invest more strategically in the other asset classes.
- Many companies that don’t use digital to transform their operations have to spend heavily to keep legacy systems running.

Let’s take a closer look at those findings and consider their implications for companies seeking to digitally transform.

IT SPENDING ACROSS DIGITAL TRANSFORMATION CATEGORIES

In today’s economy, organizations should digitally transform to succeed—if not survive. Indeed, there’s a vast difference in the areas of capabilities and performance between companies that have achieved such transformation and those that haven’t,² yet transformation is a journey, not a one-time event. We drew on results of the MIT CISR 2015 Chief Information Officer (CIO) Digital Disruption Survey³ and identified four digital transformation categories (figure 1).

Organizations we call *future-ready companies* are ones that have used digital technologies to transform not only their operations but also their customers’ experiences in doing business with them (see section *A tale of two companies* below). This category represents full and successful digital transformation. The three other categories—industrialized, integrated experience, and silos and spaghetti—represent different degrees of digital transformation on the operations and customer-experience fronts. Companies in each digital transformation category differ in the amounts they spend on IT—and what they spend those amounts on.

² Meade Monger, Jill Nickerson, and Stephanie L. Woerner, “The Race to Become Future-Ready,” AlixPartners and MIT CISR Research Briefing, April 2017.

³ A total of 413 companies are categorized using values for metrics associated with operational excellence and customer experience.

FIGURE 2: FUTURE-READY COMPANIES HAVE DISTINCT IT SPENDING PRACTICES⁴

	Future ready	Industrialized	Integrated experience	Silos and spaghetti
Infrastructure investment	46%	44%	40%	36%
Percentage new projects	44%	43%	36%	36%
Digital spend in IT budget	48%	43%	34%	37%
APIs (internal)	52%	50%	30%	25%
IP-addressable assets	49%	48%	26%	29%

Source: AlixPartners–MIT CISR

How much they spend on IT

As figure 1 shows, future-ready organizations are the most digitally sophisticated—and the most profitable. They also have the highest digital spending-to-revenue ratios. Those ratios are relatively high for industrialized and integrated-experience organizations as well. That’s because they’re investing their way toward total digital transformation. Those in the industrialized category tend to focus their investments on operating platforms. Meanwhile, integrated-experience companies channel their spending more toward enhancing their customers’ experience. Silos-and-spaghetti organizations find themselves in a tough position. They spend less on IT than do companies in the three other categories, and they allocate a significant portion of that spending to running the business. As a result, they have only limited

financial resources available for new technology investments. And they fall further and further behind the organizations that are advancing in the digital transformation journey.

What they spend it on

Organizations in different digital transformation categories also vary in the places they focus their IT investments (figure 2). Those in the future-ready camp spend the most on IT overall. They invest heavily in their IT infrastructure, including operating platforms. And they allocate more money to new IT-related projects than less digitally sophisticated companies do. They also commit larger portions of their overall IT budgets to digital technologies, which indicates that the top IT executive understands the organization’s business strategies and is investing to make sure that

FIGURE 3: TECHNOLOGY ASSET CLASSES HAVE DIFFERENT MANAGEMENT OBJECTIVES AND RETURNS⁵

	Infrastructure	Transactional	Informational	Strategic
Objectives	Establishes the foundation for shared applications	Automates repetitive transaction processes with cost-cutting efficiencies	Provides information for accounting, managing, controlling, reporting, analyzing, etc.	Gains competitive advantage or position in the marketplace
Key returns	<ul style="list-style-type: none"> • Business integration • Business flexibility • Standardization • Cost efficiencies 	<ul style="list-style-type: none"> • Better automation • Faster throughput • Continuing to lower throughput costs 	<ul style="list-style-type: none"> • Better information • Better integration • Improved quality • Increased control 	<ul style="list-style-type: none"> • Higher sales • Competitive initiatives • Market positioning
Examples	Servers, networks, laptops, and customer databases, but not applications	Trade processing system for a brokerage firm	Sales analysis system or reporting	Real-time, analytics-based, and operations driven top-line and bottom-line technology enablers

Source: MIT CISR

⁴ Infrastructure investment = % of annual digital spending on infrastructure; percentage new projects = % of digital spending allocated to new projects; Digital spend in IT budget = total % of digitization spend in the IT budget; APIs (internal) = % of core capabilities that are API enabled for internal use; IP-addressable assets = % of enterprise physical assets that are IP addressable.

⁵ Peter Weill and Jeanne W. Ross, *IT Savvy: What Top Executives Must Know to Go from Pain to Gain*, Harvard Business Press, 2009.

technology supports and enables strategic success. In addition, future-ready companies have the highest number of internal application programming interfaces (APIs). Meanwhile, their wealth of Internet-Protocol-addressable assets indicates strong Internet of Things capabilities. Such technically advanced capabilities in turn suggest that future-ready companies are more innovative than their peers. Industrialized companies follow closely behind future-ready companies in all five IT-spending categories as shown in figure 2.

IT INVESTMENTS AND PORTFOLIO ASSET CLASSES

In today's digital world, many top-performing companies see IT spending as comprising multiple categories rather than one simplified cost bucket. MIT CISR's categorization of IT investments into four asset classes—infrastructure, transactional, informational, and strategic—is a prime example of that perspective (figure 3). Each of the four classes has unique investment objectives, and companies thus should take different approaches to evaluation of these investments' performance and to making changes if needed.

A new role for IT?

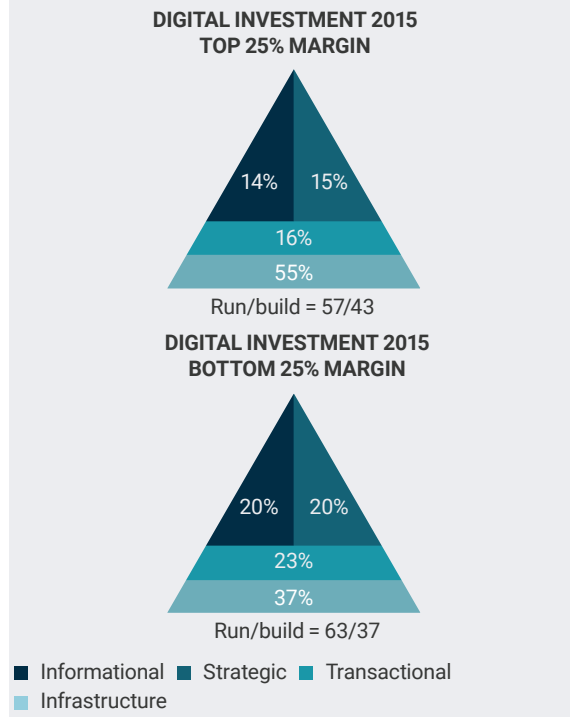
The introduction of new approaches to the evaluation of IT spending suggests that IT's role is shifting. Historically, IT departments developed customized software for the automation of processes and business functions. And they still perform that work. But they're also increasingly leading the way in transforming their organizations' business models, rebuilding IT infrastructure, facilitating corporate decision making, and improving how their companies understand and interact with customers. The upshot? IT groups are helping their organizations deliver better business performance. Companies can therefore benefit by viewing IT as an investment, not merely as a cost of doing business. A recent quote in *CIO Journal* effectively summarizes this point:

Global information technology spending is getting a boost, as companies shift from seeking IT tools that support existing business processes or simply cut costs, to investing in digital capabilities that create entirely new revenue streams, according to Gartner Inc.⁶

Spotlight on operating platforms

It's clear that in today's digital world, managing IT strategically is more crucial than ever. And that means putting more thought into how an organization prioritizes its technology investments. Infrastructure investments—namely, platforms—play an especially

FIGURE 4: IT INVESTMENT PORTFOLIOS DIFFER FOR TOP VERSUS BOTTOM PERFORMERS



Source: MIT CISR

vital role in an organization's technology portfolio. Why? Because all organizations need scalable and reliable operating platforms for automating business processes, maintaining daily operations, ensuring good data management, and enabling reuse across business units and departments. To build such platforms, organizations have to make initial infrastructure investments. And if a company makes those investments wisely, the amount of money it will have to spend to sustain the platform will decrease over time. That frees up cash for investing in new technologies. Plus, armed with more effective and efficient operations, a company is in a much stronger position to transform its customers' experiences, which in turn generates deeper customer loyalty. And that translates into increased profitability.

Differences in IT investment portfolios

With those benefits in mind, it's not surprising that top and bottom performers differ in their IT investment portfolios (figure 4). For instance, top performers⁷ (companies demonstrating higher profitability than their industry peers) invest more in infrastructure than bottom performers do (55% compared with 37%). They also tend to spend less on run investments (57% versus 63%). That's because they invest heavily in back-office platforms that streamline, standardize, and automate operations such as large-scale process

⁶ Angus Loten, "Tech Spending Goals Shift from Cost Cutting to Making Money," *CIO Journal*, July 13, 2017.

⁷ MIT CISR 2015 CIO Digital Disruption Survey (N=413). Performance = % net margin, adjusted for industry.

automation for billing and customer requests. They build an IT infrastructure that makes transactional processes and data generation superefficient. And those improvements deliver savings they can then use to fund new strategic IT projects.

By contrast, bottom performers invest less in their IT architectures, and they wrestle with underlying system challenges such as software failure and system robustness and security. Consequently, they're forced to keep spending heavily on IT to process otherwise relatively simple transactions, to generate information needed for making business decisions, and to execute their business strategies. As a result, they have only meager financial resources left over for investment in new and better technologies.

To avoid that trap, organizations can instead make the infrastructure investments necessary to develop reliable and scalable platforms that support automation and reuse. Their required run investment will shrink over time, and they could then channel funds toward technologies essential for their digital transformation.

LOOKING AHEAD: UNDERSTANDING RETURNS ON SMART IT INVESTMENTS

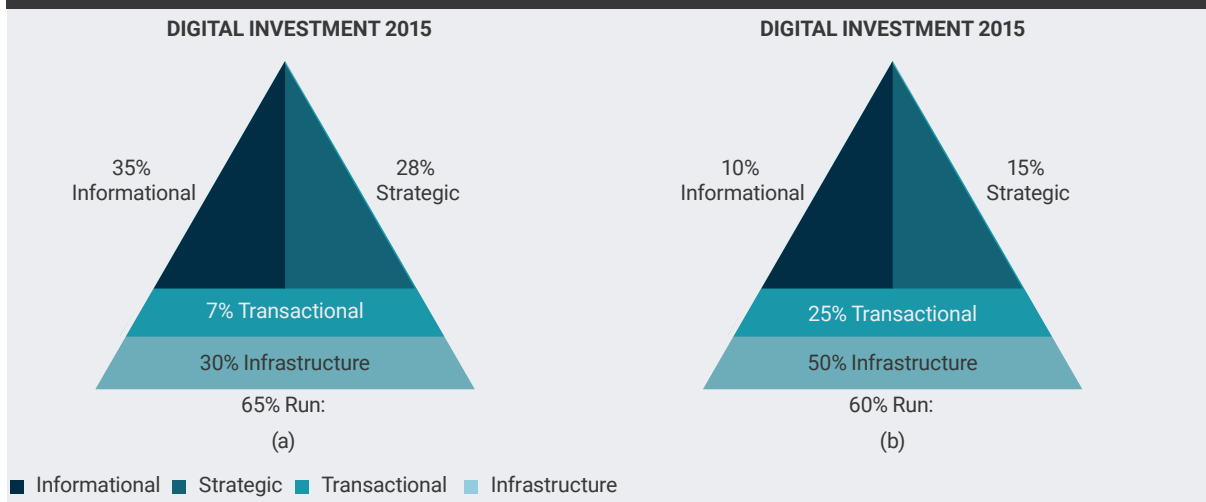
In this article—the second in our series with MIT CISR on digital transformation—we've examined patterns in IT investment strategies across companies in different digital transformation categories. In a future article in this series, we'll take a closer look at the returns on IT investments that companies can get by managing their IT portfolios more effectively. **A**

A tale of two companies

A luxury retailer is in the integrated-experience digital transformation category, and its infrastructure investments make up only 30% of its digital investment portfolio (figure 5a). Moreover, the company spends as much as 65% of its total IT budget on run investments to operate its older IT systems. The situation has put customer service quality in jeopardy. As the CIO put it: "Up to 50% of visits to our different brand sites now come from the mobile channel. Obviously, it is a very different experience for customers—because of the limited footprint... So, there are lots of friction points that need to be removed from the digital experience to cater to and accommodate customers..."⁸ To improve the customer experience, the company should first make the investments required to standardize and automate its operations.

Contrast the luxury retailer's IT investment portfolio with a manufacturing company's portfolio (figure 5b). Like many of its peers, this manufacturer is in the industrialized category. It's developing an operating platform to efficiently run the business by allocating 50% of its IT investment budget to infrastructure. Its efforts to automate and standardize common functions like developing an e-commerce platform for placing orders have already started paying off. Its run investments are just 60% of digital investments the company has made. As it continues to digitally transform its operations, it could expect to funnel money previously used for run projects into new digital technologies.

FIGURE 5: TWO IT INVESTMENT PORTFOLIOS SHOW IMPORTANT DIFFERENCES



Source: MIT CISR

⁸ Corporate interview with luxury retailer CIO.



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