



# COMPANIES WITH A DIGITALLY SAVVY IT UNIT PERFORM BETTER

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In a digital world where everybody in the enterprise works and thinks digitally, the IT unit must be less important—right? Not so. In one of MIT CISR’s largest-ever studies, we joined with Harvey Nash to survey 4,258 companies and found that IT units are more important than ever to building the success of the company.<sup>1</sup> Companies with net margins in the top quartile relative to competitors had an IT unit that was significantly more digitally savvy. These digitally savvy IT units were different from the rest: their strength in four reinforcing actions helped the entire company outperform its competitors, demonstrated by 24% higher company profitability. In this briefing we share these results and illustrate the four actions with a case study of DBS Bank, the “world’s best digital bank.”<sup>2</sup>

## WHAT MAKES AN IT UNIT DIGITALLY SAVVY

IT units that are digitally savvy do more than focus on completing projects—they provide leadership for the entire enterprise. This leadership involves four reinforcing actions (see figure 1):

- The CIO working strategically with the company’s executive committee on the role of digital
- Building digital discipline across the enterprise
- Improving external customer engagement
- Relentlessly delivering operational efficiencies

We define IT unit digital savviness as the average of a company’s scores on these four reinforcing actions. Figure 2 illustrates the significant differences in how effectively IT

units in our research performed the actions individually and on average across the four. Overall, IT units in companies with profits in the top quartile scored 49 percent digitally savvy, versus IT units in companies with profits in the bottom quartile, which scored 39 percent. The most striking finding was the huge opportunity for IT units to lead more effectively: When we looked at the distribution of IT unit digital savviness scores, only 10% of companies scored over 64 percent, and these companies were the best performers.

## IT UNIT DIGITAL SAVVY: BEING GREAT AT THE FOUR ACTIONS

Let’s look at the four actions in more detail.

1. **Strategic CIO:** CIOs in top quartile performance companies act more strategically. These CIOs sit on (or regularly advise) the executive committee, providing insight on how digital is changing firm competitiveness. They help create a vision on how to use digital to transform the enterprise via both efficiencies and growth. But there is still room to improve on impacting strategy—even the CIOs in top quartile performance companies were only 47% effective on this action.
2. **Digital discipline:** IT units in top quartile performance companies build enterprise-wide digital discipline in three ways: by developing shared capabilities, integrating core processes, and facilitating experimentation. These IT units not only develop shared digital services—often sharing them via APIs—to enable faster time to market and reduce duplication, but also help ensure the services are used and reused. And finally, these units help their colleagues to be more effective at experimenting and at scaling successes, typically using test and learn methods (such as A/B testing) and analytics. Overall, top-performing IT units drive the transition to upskill employees on digital capabilities such as evidence-based decision making.
3. **Customer engagement:** IT units in top quartile performance companies focus on great external customer engagement. They work hard to create a single view of customer interactions across all channels and invest in digital technologies and methods that enhance the cus-

1 Harvey Nash/KPMG 2018 CIO Survey with MIT CISR questions (N=4258). In 2019, MIT CISR is continuing research on the future of the IT unit and how IT will be organized in the project “What’s Next for the IT Unit?”; a forthcoming MIT CISR research briefing will describe findings from the research. Earlier findings from the continuing research are described in Tom Relihan, “In the age of digital everything, is it time to eliminate IT?” *Ideas Made to Matter*, MIT Sloan School of Management, February 13, 2019, <https://mitsloan.mit.edu/ideas-made-to-matter/age-digital-everything-it-time-to-eliminate-it>; and J. Peppard and N. O. Fonstad, “Don’t Align—Coevolve!” MIT Sloan CISR Research Briefing, Vol. XVIII, No. 11, November 2018.

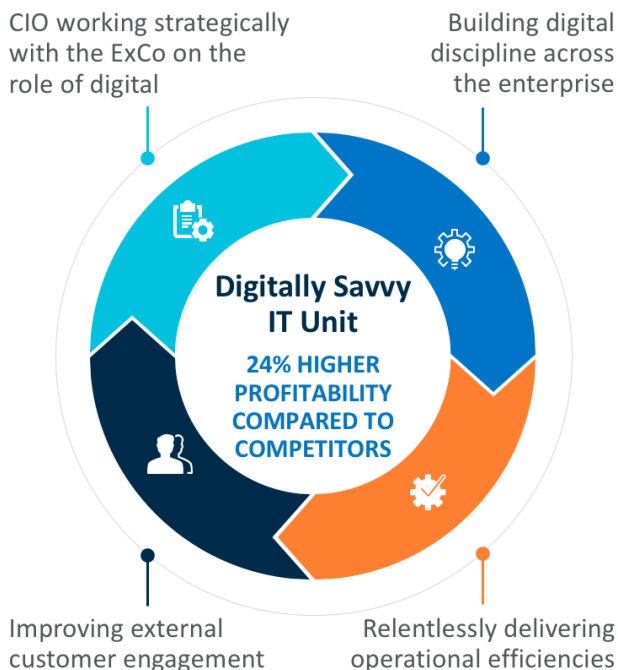
2 “World’s best digital bank 2018: DBS,” *Euromoney*, July 11, 2018, <https://www.euromoney.com/article/b18k8wtzv7v23d/world39s-best-digital-bank-2018-dbs>.

customer experience. Facilitating great customer engagement requires both consolidation and better use of customer data; it is the function of the IT unit to execute on these expectations. The IT unit must also be part of the teams that have the goal of delighting the customer. This requires that all employees be fluent in a new set of business and collaboration skills (such as agile methods), and results in it being hard to tell who works in IT and who does not.

4. **Operational efficiencies:** IT units in top quartile performance companies are the leaders in using digital to make companies more efficient. They take on the responsibility of systematically reducing operational costs. They achieve these lower costs by methods such as simplification, migrating to the cloud, automation, and helping to consolidate products and business processes. For many IT units, after continuity and cyber protection, the next most important capability is relentlessly reducing costs by becoming “digitized.”<sup>3</sup>

3 J. W. Ross, C. M. Beath, and I. M. Sebastian, “Digitized ≠ Digital,” MIT Sloan CISR Research Briefing, Vol. XVII, No. 10, October 2017.

**Figure 1: Four Reinforcing Actions Build IT Unit Digital Savvy and Company Profitability**



Source: Harvey Nash/KPMG 2018 CIO Survey with MIT CISR questions (N=4258). All four actions are statistically significant in a regression with profitability compared to competitors. The 24% higher profitability is a significant difference ( $p < .001$ ) between the top quartile and the bottom quartile of profitability compared to competitors (perceptual).

## DBS BUILDS ITS IT UNIT DIGITAL SAVVY

DBS, headquartered in Singapore and Southeast Asia’s largest bank by assets, provides a full range of banking services to consumers, small-to-medium enterprises (SMEs), and corporations.<sup>4</sup> From 2016 to 2018, DBS’s share price doubled. The market’s optimism about DBS was partially attributed to the bank’s digital prowess. *Euromoney* awarded DBS the World’s Best Digital Bank in 2016 and 2018, saying “an institution in which every part of the business—from cash management to private banking, from SMEs to retail—is being enriched by a challenging process of willful digital disruption.”

Let’s look at how DBS has created value in part through leadership from its digitally savvy IT unit.

### Strategic CIO

In 2009, under then-new CEO Piyush Gupta, the bank initiated its digital strategy to find opportunities to grow and combat the threat of digital competitors such as Alibaba. Between 2009 and 2014, led by CIO David Gledhill, DBS invested heavily in technology to “rewire” the entire enterprise for digital innovation. This involved revamping its Technology and Operations organization, developing scalable digital platforms, leveraging technology to redesign its customer experience, and fostering internal incubation as well as external partnerships for digital innovation. Gledhill noted that these foundational years set the stage for growth. During this transformation, DBS achieved a 9 percent compound annual growth rate (CAGR) in income and 13 percent CAGR in net profit.

To help manage and communicate this transformation, DBS developed a method for measuring the financial value created by digitization. Digital customers made up 42 percent of DBS’s total customer base in 2017, but contributed 63 percent of income and 72 percent of profit. Between 2015 and 2017, income from digital customers grew at a compounded annual growth rate of 27 percent, compared to a 4 percent decline for traditional customers; with a return on equity (ROE) for digital customers of 27 percent in 2017, compared to 19 percent ROE for the traditional segment.<sup>5</sup>

### Digital Discipline

To compete effectively, DBS had to overhaul its existing complex technology to become digital to the core. The goal of the transformation was to make the entire bank digitally savvy so it could operate more like the tech giants, such as Google,

4 This case derives from S.K. Sia, P. Weill, and M. Xu, “DBS: From the ‘World’s Best Bank’ to Building the Future-Ready Enterprise,” MIT Sloan CISR Working Paper No. 436, March 2019.

5 “DBS Group Holdings Ltd Annual Report 2017,” DBS, March 28, 2018, p. 22, <https://www.dbs.com/annualreports/2017/index.html>.

Amazon, and Netflix, and compete against the disruptive companies in its industry. CIO Gledhill explained, “We started to learn how the best technology organizations operate, how they engineer systems, how they think about customer experience, how they think about experimentation, how they move quickly...” DBS has invested considerable resources to upskill its people, particularly in (re)learning how to learn. Each year DBS Academy, the bank’s innovative learning center, conducts more than 10,000 training sessions to help its people embrace start-up qualities of being customer obsessed, data driven, risk taking, agile, and continually learning.

### Customer Experience

In 2015, DBS embarked on the second phase of its digital transformation, with a mission to leverage technology to “make banking joyful.” Using its customer journey expertise, DBS IT worked to make banking invisible for its customers, cutting tedious tasks and keeping score on the number of customer hours saved each year. Support from the bank’s board was strong, resulting in an annual technology budget commitment of US\$600 million.

In new markets, DBS has reinvented customer experience. For example, in April 2016 DBS launched digibank, a mobile-only bank in India that is paperless, signature-less, and branchless. The identity of a customer is verified using their national biometric ID card. Customer service is delivered by an AI-driven virtual assistant that handles over 80 percent of all customer requests without human intervention. Digibank requires just a fifth of the resources of a traditional bank, and is thereby able to compete aggressively by offering consumers higher interest rates and lower banking fees. In 2017, the bank had grown to 1.8 million customers.<sup>6</sup>

<sup>6</sup> Ibid, p. 8.

### Operational Efficiencies

DBS has followed five principles in transforming:

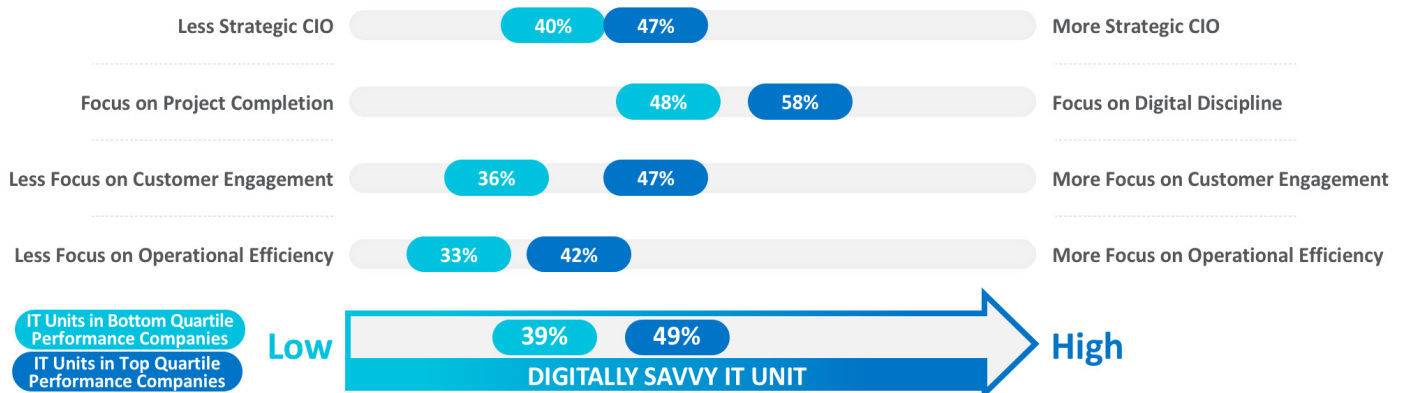
- **Design for Modern Systems** is a call to engineer technologies and build systems that are scalable, elastic, and ready for experimentation.
- **Automate Everything** is a drive to simplify and automate the entire business and reduce cost and risk.
- **Shift from “Project” to “Platform”** moves from funding projects to managing key technology platforms to speed time to market and encourage reuse.
- **Develop High Performing Agile Teams** defines the new ways of working.
- **Organize for Success** focuses on strengthening the alignment of business and technology units.

By the end of 2017, 100 percent of DBS’s applications used DevOps, 95 percent of the bank’s systems were virtualized, 80 percent of applications had been moved to the cloud, and application costs had been cut by over 80 percent. Pipeline automation for application development had increased the release cadence of new applications by close to ten times. To achieve these principles, DBS invested in internal capabilities, moving from 85 percent outsourcing to 85 percent insourcing, to seal technology into DBS’s DNA. Gledhill instituted architectural screening checks to ensure that DBS will not invest in technologies that would “get DBS stuck in the future.”

### THE IT UNIT’S NEW RESPONSIBILITY: CHANGE THE COMPANY

To help your company thrive in the digital era requires leadership in many areas. In top-performing companies, the IT unit provides a critical part of this leadership. Given the upside and the low average scores on digital savviness of IT units in our research, there is a huge opportunity ahead. How can your IT unit provide more of this digital leadership?

Figure 2: IT Units in the Most Profitable Companies Are More Digitally Savvy



Source: Harvey Nash/KPMG 2018 CIO Survey with MIT CISR questions (N=4258).

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