Eager to capitalize on burgeoning market opportunities, many companies are nonetheless struggling to get returns on investments in new digital products, services, and business models. It isn’t for a lack of spending. Businesses worldwide will plough an estimated $1.2 trillion this year into digital transformation initiatives, according to IDC, an 18% increase over the previous year.20 According to Gartner, 82% of companies globally are investing in digital initiatives—up 20% from 2018.21

But many firms are likely to be disappointed with the results because only 25% of them get the technology underpinnings of their digital transformations right, according to a World Economic Forum report.22

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TCS research this summer on digital initiatives uncovered similar trends. The TCS 2020 CIO Study, which asked CIOs at 1,010 global companies based in North America and Europe about their digitization efforts, found that more than a third (36%) have not made much progress; their initiatives are either in the pilot phase or limited to a few business units. And only 30% have scaled their digitization programs across the enterprise.

A few industries, such as industrial manufacturing and media, entertainment, and information services, are faring significantly worse than others. (See Figure 2: “Slow Progress on Digitization.”)

<table>
<thead>
<tr>
<th>Industry</th>
<th>% of Digitization</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Industries</td>
<td>30%</td>
</tr>
<tr>
<td>Automotive</td>
<td>51%</td>
</tr>
<tr>
<td>HiTech</td>
<td>49%</td>
</tr>
<tr>
<td>Healthcare and Life Sciences</td>
<td>42%</td>
</tr>
<tr>
<td>Telecommunications Services</td>
<td>40%</td>
</tr>
<tr>
<td>Retail</td>
<td>40%</td>
</tr>
<tr>
<td>Banking and Financial Services</td>
<td>27%</td>
</tr>
<tr>
<td>Consumer Packaged Goods</td>
<td>27%</td>
</tr>
<tr>
<td>Insurance</td>
<td>26%</td>
</tr>
<tr>
<td>Travel, Transportation, and Hospitality</td>
<td>23%</td>
</tr>
<tr>
<td>Industrial Manufacturing</td>
<td>19%</td>
</tr>
<tr>
<td>Media, Entertainment, and Information Services</td>
<td>15%</td>
</tr>
</tbody>
</table>

**Figure 2:** Slow Progress on Digitization

*Respondents in the TCS CIO study who say their companies have enterprise-wide digitization and strong leadership in place with initiatives across multiple functions and lines of business.*
Clearly, digitally transforming a large company is not at all straightforward. For many firms, adopting a lean agile approach to such transformation—to develop new digital products and services through a fast-feedback loop, inspecting and adapting them in an iterative fashion, and then delivering new offerings with speed—remains a vision. So does the desire to create a lucrative new digital business model like the one that Uber developed in going from a concept in 2009 to nearly $70 billion in value in only 10 years.\(^{23}\)

If digital natives like Uber illustrate what is possible, LEGO Group shows how challenging it can be for established firms to transform. Its initial attempts to create digital products—including an interactive division that developed online video games—nearly bankrupted the company in the mid-2000s.\(^{24}\) But this decade, LEGO has bounced back, with 2018 revenue of $5.4 billion and net profit margins of more than 22%.\(^{25}\)

Ultimately, the success or lack thereof of a company’s digital transformation falls on the shoulders of its leaders.

Why Some Companies Struggle

In our research we found that, at many companies, leaders lack: a holistic digital vision, alignment on digital strategy, and knowledge about how digital technologies change the game.

For example:

• More than a third (36%) of top management teams see only limited opportunities to further digitize their business. This is especially true in industrial manufacturing (56%), insurance (44%), and consumer packaged goods companies (43%).

• In about one-fourth of companies the board, CEO, line of business heads, and functional leaders are not aligned with the CIO’s vision of future opportunities.

• Many companies lack digital knowledge where it matters most: at the top. Senior leaders frequently only have a superficial understanding of the complexities around running digital businesses. Only about half (49%) of the board directors and top management team members at the companies we surveyed have deep digital expertise.

• Industrial manufacturing, CPG, and health care/life sciences firms tend to have the lowest percentage of board and top management team members with deep digital expertise.

A deeply informed, highly flexible (that is, agile) digital strategy is essential to digital transformation. Companies need leaders who understand that—and who can execute it.
Our study compared what executives at the more digitally successful companies do differently than those at the least successful firms. We identified ‘digital leaders,’ the approximately 20% of companies with enterprise-wide digitization initiatives or new digital products, services, or business models, and which had increased revenue substantially from digital offerings between 2010 and 2018. At the other end of the spectrum, a similar percentage of ‘followers’ had limited digital offerings and far less revenue flowing from them.

The leaders share three characteristics: they create digital strategies that are informed by deep digital experience, top management is unified on a course of direction, and their CIO leads the way. (See Figure 3: “Leadership Drives Digital Innovation,” page 30.)

These leading companies are able to create deeply informed digital strategies because they have a much higher percentage of board members and top management teams with extensive experience in running digital operations or digital companies. We found that about 68% of the board members among the digital leaders had deep digital experience vs. 38% among followers. In addition, 65% of the leaders’ top management team members had deep digital experience compared with only 39% in followers’ companies.
Many times, that requires bringing in talent from outside. A case in point is Nestlé, which hired corporate social media guru Pete Blackshaw to be the company’s global head of digital and social from 2011 to 2018.

Companies also need consensus at the top. The TCS CIO study found that leader companies had a much higher likelihood that the board, CIO, line of business heads, and functional heads agree on their company’s future digital growth opportunities. Among the leaders, 85% of CEOs and 92% of line of business heads agree with the CIO’s digital growth vision, compared with only 65% of CEOs and 68% of line of business heads among follower companies.

Instead of having separate business and digital strategies (a common practice over the past two decades), leaders have only one strategy: a digital strategy that covers the markets they serve, the digitally-enabled products and services they offer, and the digital processes they build or improve to create demand and supply. At LEGO Group, for example, digitization eventually was given a central place in the company’s strategy rather than engaging in a hodge-podge of separate initiatives.26

Companies also need consensus at the top.

Once a company establishes its digital vision, it must communicate it clearly, concisely, and broadly to be executed effectively on its front lines and the middle ranks. Business strategies are built by the leaders and therefore, middle- and front-line ranks need clear direction to make the strategy work. If only five people at the top of a big company deeply understand the vision, decision-making further down the organizational ranks will be slow as middle managers struggle to figure out what should happen next, whereas operational teams run the risk of going off in different, often conflicting, directions.

It’s easy to view a large company as a large jumbo jet piloted by a CEO captain. But in the digital world, companies are not jumbo jets. They are composed of a swarm of smaller fighter jets that need to move quickly in the same direction. These fighter jets are the agile teams, each one trying to digitize a business activity. This provides the organizational agility that has enabled a company like Uber to evolve from a ride-hailing service to a transportation ecosystem player that also delivers meals and packages, in addition to rents bicycles and electric scooters. Some companies have 200-300 of these agile teams.

Accordingly, the company’s destination must be clear. A vision statement such as, “We’re building the best online-gaming company in the world,” or, “The bank that lets you do all your banking anywhere, anytime, better and faster, from your digital device” gives teams a clear, common direction.

Digital innovation requires consensus across the board and drive from the top. Leader CIOs are highly effective in driving consensus. CIOs in follower organizations are not as effective in driving across the board consensus, especially with CEOs

Do you believe other key stakeholders within your organization agree with your vision of future digital-related growth opportunities?

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Leaders</th>
<th>Followers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board</td>
<td>86%</td>
<td>75%</td>
</tr>
<tr>
<td>CEO</td>
<td>86%</td>
<td>65%</td>
</tr>
<tr>
<td>Heads of lines of business</td>
<td>92%</td>
<td>73%</td>
</tr>
<tr>
<td>Functional heads</td>
<td>86%</td>
<td>68%</td>
</tr>
</tbody>
</table>

Figure 3: Leadership Drives Digital Innovation
Communication, collaboration, and engagement mechanisms such as quarterly offsites that include all team leaders will help keep the swarm of fighter jets in synch.

All business strategies must be flexible as the winds of the market inevitably change direction. Top management must be agile and able to reorient their teams in a new direction rapidly when necessary. In a digital world, conditions change far faster than they did in the last century.

Consider the $6 billion financial software company Intuit. The company, which has changed its business model over the last decade, calls these adjustments ‘strategy refreshes.’ “We think of ourselves as a 34-year-old startup,” says Intuit’s chief innovation officer, Bharath Kadaba. That’s why, he says, Intuit, unlike the other eight major software firms launched in the early 1980s, is still around today.27

CIOs Lead the Way

It was once popular to say that the CIO role was becoming less important as IT moved to the cloud, and applications and computing power became commoditized. On the contrary, the role is gaining significant value. CIOs who think as strategic business leaders can, and should, take responsibility for defining and articulating the company’s digital vision. And, at leading companies, they are more likely to do so.

In our CIO study, we found that such strategically minded CIOs spend more time on digital business transformation and innovation than on running the IT shop. In the leader companies, CIOs spent 63% of their time on digital business model innovation and only 37% on managing the IT infrastructure. In follower companies, the CIO’s focus is reversed. Follower CIOs spent only 43% of their time on digital business model innovation and 57% on managing existing IT.

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Furthermore, in 73% of the digital leaders, the CIO was the driver of digital transformation. But CIOs led the way in only half of the follower companies.

**Striking difference in what leader CIOs do vs. follower CIOs**

CIOs in leader organizations mostly spend their time on digital business model innovation and focus on emerging and disruptive technologies. Whereas CIOs in follower organizations are still spending most of their time in managing IT infrastructure. More than 50% of follower CIOs' time is spent on traditional IT infrastructure management.

### Where do CIOs spend their time?

- **Leaders**
  - 62.75% on digital business model innovation
  - 42.56% on managing present IT infrastructure
- **Followers**
  - 57.44% on digital business model innovation
  - 37.25% on managing present IT infrastructure

*Summary of Mean

- Leaders
- Followers

### Role of CIO

<table>
<thead>
<tr>
<th>Leaders</th>
<th>Followers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of embedded systems in our company's products and our places of doing business</td>
<td>Existing IT infrastructure/legacy information systems</td>
</tr>
<tr>
<td>Research on emerging technologies and their potential value to our company</td>
<td>Development of new information systems to support our existing business processes</td>
</tr>
<tr>
<td>Data security</td>
<td>Development of embedded systems in our company’s products and our places of doing business</td>
</tr>
<tr>
<td>Digital data and analytics</td>
<td>Research on emerging technologies and their potential value to our company</td>
</tr>
<tr>
<td>Existing IT infrastructure/legacy information systems</td>
<td>Digital data and analytics</td>
</tr>
</tbody>
</table>

**Which of the following activities do you oversee? (Multiple choice response question.)**

**Roughly what % of your time do you personally spend on digital business model innovation vs. managing the company’s present IT infrastructure?**

**Figure 4:** Leader vs. Follower CIOs
The Characteristics of Effective Digital Executives

From our observations of leadership behavior, we also see that the executives of successful digital companies have an innovation-focused mindset. It is one with characteristics, including extreme customer orientation, curiosity, tolerance for risk, an unwavering belief in the impact of digital technology, and a collaborative approach to decision making.

These executives are more focused on customers than their competitors, because in a world of digital ecosystems they must often partner with competitors. When they think about customers, the digital leaders consider not only how and what they buy, but the emotional aspects of why and when they make their purchases.

For companies today, knowing as much as they can about their customers is “the key asset,” “not the product and services” they offer, says Harvard Business School professor Sunil Gupta.28 “The No. 1 thing that has made us successful by far is obsessive, compulsive focus on the customer as opposed to the competitor,” Amazon CEO Jeff Bezos has said.29

Intuit is a prime example of a company with an ‘obsessive compulsive’ customer focus. One of the keys to its turnaround earlier this decade was recognizing its popular tax preparation software product (TurboTax) had to address the emotional problems of its customers. “Consumers spend 6 billion hours each year using software to prepare their income taxes; anything we can do to reduce that time will be a gift,” said founder Scott Cook.30 “At the end of the process, most taxpayers are owed a refund—and for 70% of them, that refund is the single largest check they’ll receive during the year. In this context we began to think less about the pure

functionality of our software and more about the emotional payoff of reducing drudgery and speeding the way toward a big windfall.”

Executives of successful digital companies also learn to love risk while working to reduce it. At Intuit, Kadaba, the chief innovation officer, has 70 technologists dedicated to experimenting with ways to solve problems. Kadaba says the work of these people requires a “fearless mindset and an environment that’s not about success or failure, but rather learning.” It’s fine with him if only 30% of the ideas his group explores end up in Intuit products.

These executives won’t back down from their belief that digital technology will change their businesses dramatically, even in the face of short-term financial pressures. Bank of America, for example, faced disaster in 2009. A decade later, it posted a record profit of $7.3 billion.31 At the same time, it continued to pursue innovation, and has obtained more patents (45) related to blockchain technology than any company—even more than IBM.32 “While we’ve not found large-scale opportunities, we want to be ahead of it. We want to be prepared,” Catherine Bessant, the bank’s chief technology officer, explained.

Digital leading companies also won’t rest on their laurels. In 2012, then-Intuit CEO Brad Smith concluded the company had grown complacent with its products and needed new ideas. He told his top management team to follow the CEOs of other product companies that Intuit admired. “Each of us followed a CEO and watched how


they made their decisions, how they engaged their teams, how much time they spent in products,” Smith said. “And we changed the way we lead inside the company.”

As a result, the company revamped its flagship products, QuickBooks Online and TurboTax, as well as laid plans for mobile apps and other new products. Under Smith’s leadership from 2008-2018, Intuit’s stock value grew 588%.

Lastly, successful digital companies favor a collaborative approach to decision making. Every member of the top management team has an important role to play in developing and leading a digital strategy. If the rest of the C-suite has to defer to the CEO on all issues, large and small, digital failure is nearly guaranteed. In the digital world, the leader is not a troop commander; she is a conductor who listens to the orchestra. That’s how beautiful digital music is made.

Active, engaged listening allows leaders to find the signals in the noise, the solid trends amid transitory market fluctuations. To improve their listening abilities, executives may need a little introspection to identify and develop the core skills they may lack.

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The Way Forward

There are companies that we have worked with that embrace enterprise-wide agility. An organization that empowers individuals and teams, that enables collaboration to deliver ever-improving customer experiences, and creates value at scale. These are the behaviors of an agile enterprise. But it’s still rare. In a 2019 TCS survey of 1,231 senior executives, only 9% of the respondents had adopted all of these behaviors.35

Companies that want to join these leaders, that want to accelerate their digital business efforts should focus on three areas:

1. Make sure you have enough digital expertise on your board and top management team. If not, get them up to speed fast.

2. Assess whether the members of your board, top management team, line of business heads, and functional leaders are aligned on the company’s digital strategy for the next decade on issues such as the proper allocation of talent and resources, the interests of your customers and other stakeholders, and the new alliances and partnerships the business wishes to pursue.

3. Develop the right mindset. For a digital business to succeed, it must root out any sign of complacency, create an environment that’s obsessively customer-focused, and become more risk tolerant.

Executives have to understand and accept their limitations. They need to figure out what they need and bring in expertise they don’t have or can’t build in house. Finally, not only must they understand that digital technology is changing their business, they have to internalize the concept that it is their mission—their primary mission—to drive that change.

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