

Are Technology companies digital leaders?



Digital’s strong role in the Technology industry—software and services, computers, hardware, and semiconductors—remains a natural, as we’ve observed during the past nine years that we’ve researched how organizations are using technology to drive business value.

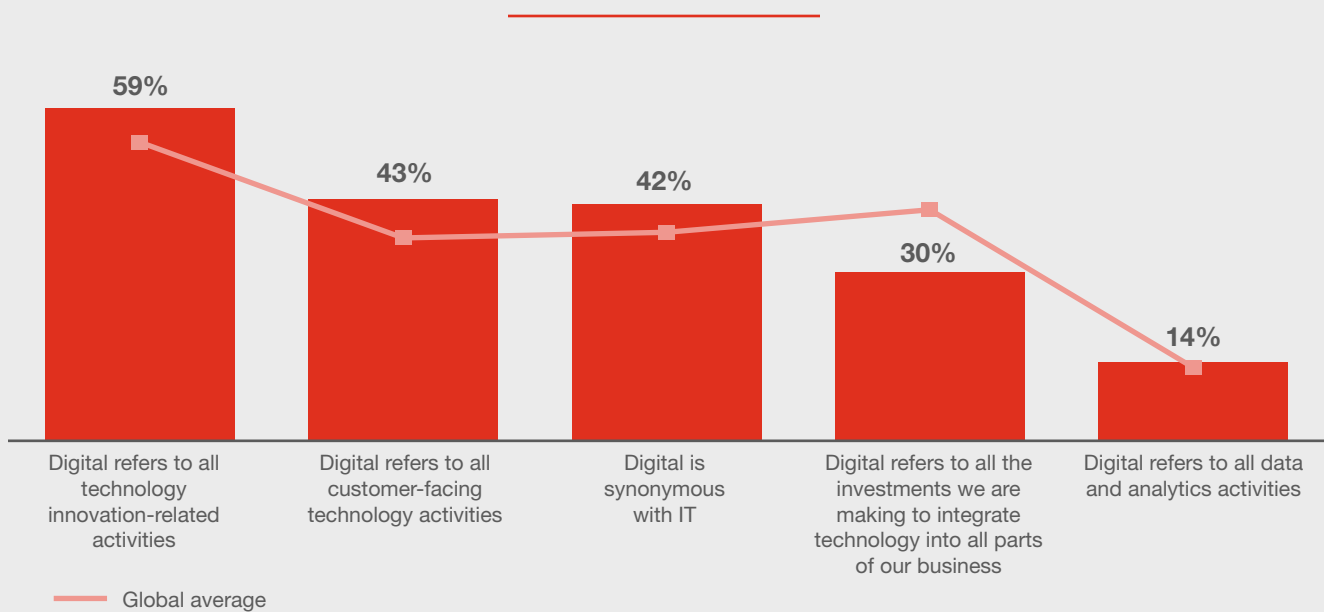
Digital continues to drive the Technology sector’s transformation from primarily product-centered business models to those built on or incorporating services and experiences. Technology companies’ customers invest significant time and money in using digital for work and pleasure. So, too, do companies in the sector, constantly developing new and innovative opportunities for business and revenue.

“Digital” is the term executives in the Technology industry often used to describe these customer-facing efforts.

When asked to choose the most relevant definitions of digital to their business, they see it as innovation and all customer-facing technology efforts. They are less inclined to think about digital technology’s potential to fully impact the rest of the organization: Less than one-third say digital refers to the investments they are making to integrate technology into all parts of the business, the lowest of all industries and significantly less than executives from Healthcare, Power and Utilities, and Retail and Consumer (45% each). This disconnect is more significant in the Technology sector than in other industries because Technology companies by definition are often seen as leaders when it comes to digital transformation.

Our research, in fact, confirms that Technology companies have a slight edge when it comes to digital practices, compared with other industries.

How Technology companies define digital



Source: PwC, 2015 Global Digital IQ® Survey; Base: 158; Q: How does your organization define digital?

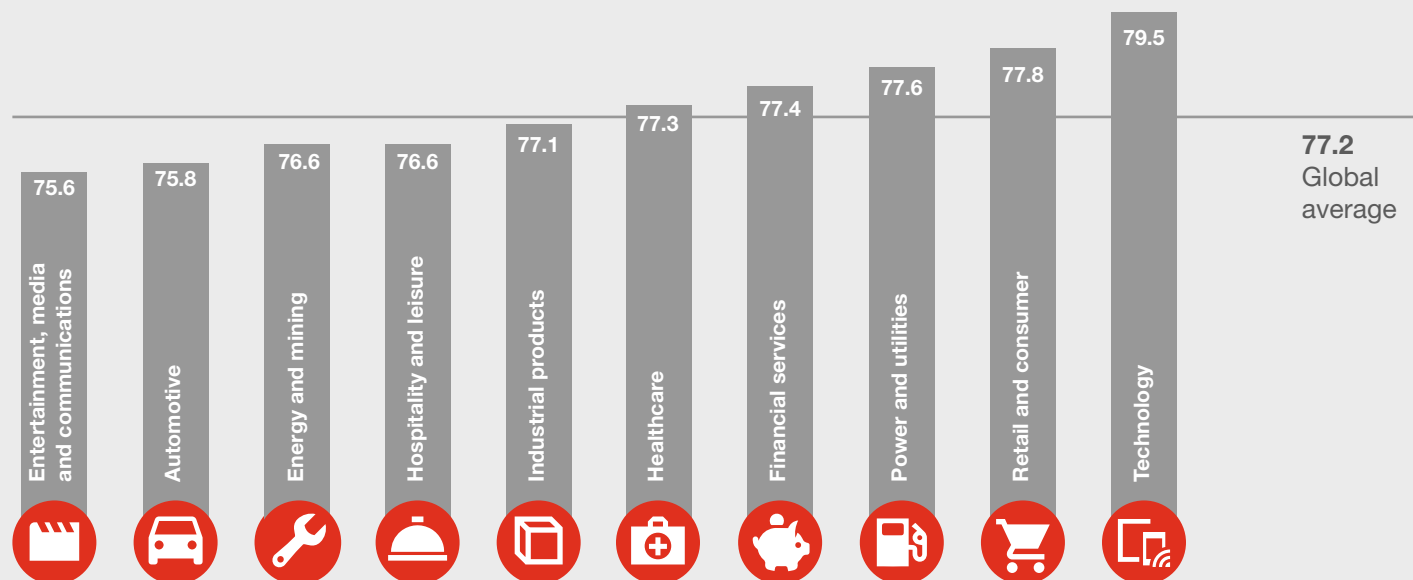
The Technology industry ranked first in Digital IQ, which is scored based on 10 crucial attributes that are most highly correlated to stronger financial performance. We found that top-performing companies are more deliberate in their digital strategy, innovation, and execution. They are more likely to have CEO commitment, strategic clarity, and shared understanding. They are also more apt to take a broad view when applying technology and identifying sources of innovation. And they are more prone to being skilled at turning their data into insight, proactive in cybersecurity, and consistent in measuring outcomes from digital investments. Those organizations that displayed these attributes—our Digital IQ leaders—were twice as likely to achieve more rapid revenue

and profit growth as the laggards in our study. (To see how Technology companies perform on each attribute, see the box, “10 Digital IQ attributes,” on page 13.)

Despite the increasing awareness of digital’s power to transform organizations and drive revenue, our analysis reveals that companies across sectors are not doing enough to disrupt their own or other industries. Disruption, however, is taking place within organizations, as demonstrated by evolutions in spending patterns, new digital roles, and working relationships that have yet to be defined. Additionally, a slow-tech approach¹—as opposed to behaving as agilely as a startup—is holding companies back that could best be served by accelerating cross-functional relationships, and skills development.

1. Curran, Chris, “Slow-Tech Companies Navigating in a Fast-Tech World,” October 7, 2015, <http://a16z.com/2015/10/07/a16z-podcast-slow-tech-companies-navigating-in-a-fast-tech-world/>, accessed November 2015

Technology leads in Digital IQ



Source: PwC, 2015 Global Digital IQ® Survey; Base: 1,988

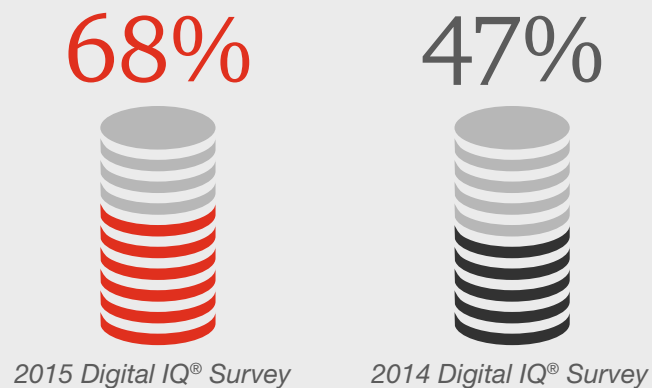


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Increasing investment outside of IT

The trend of distributed technology spending has accelerated for the majority of companies, with the bulk of spending now coming from budgets outside of IT, a significant increase from the prior year for Technology companies. In line with global spending, they're allocating non-IT spend to marketing, sales, customer service, operations, and enterprise functions like finance and human resources.

Tech investment increasing outside of IT



Source: PwC, 2015 Global Digital IQ® Survey, 2014 Digital IQ® Survey;
Bases: 1,988, 1,494
2015: Q: In the last 12 months, what percentage of your organization's digital enterprise budget was spent in the following areas?; 2014: In the last 12 months, of all the spending in your organization on technology, what approximate percentage of it was spent in the following functions?

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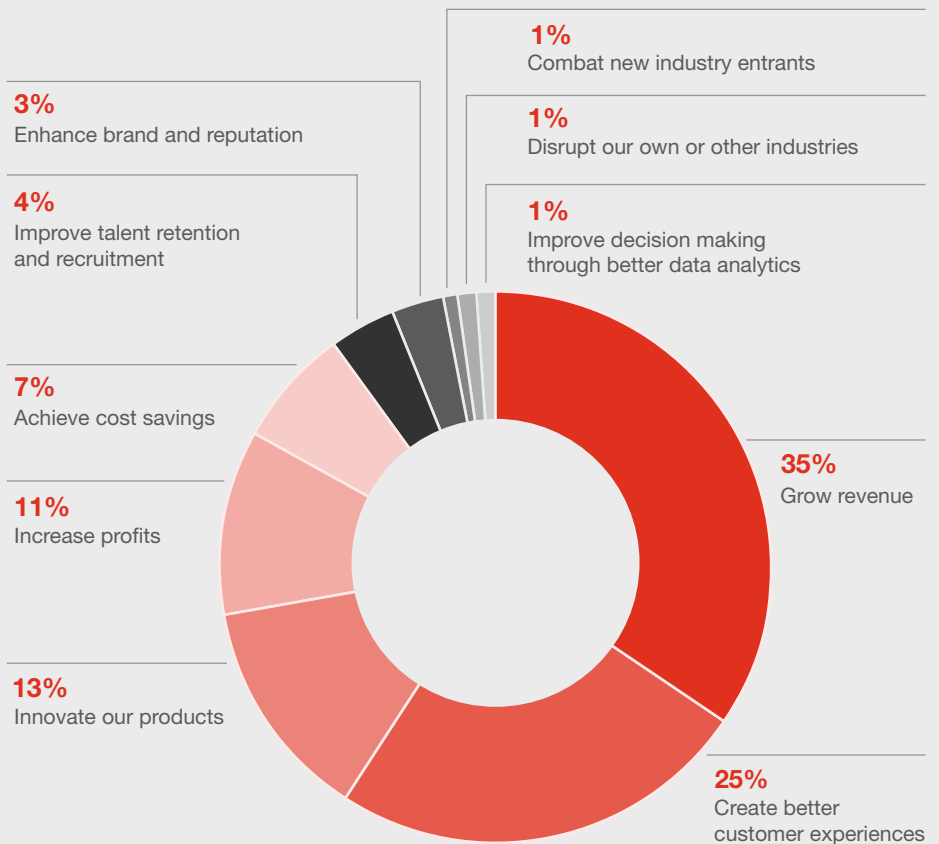
How digital is expected to drive the growth agenda

Businesses have raised the stakes when it comes to digital. Some have talked about strategizing for disruption, and making gains by challenging the status quo. Most however, seek more immediate returns. The majority in Technology point to revenue growth as the highest priority. Tech subsectors nevertheless vary in their goals for the type of value they hope to gain from digital investments.

Nearly six out of 10 respondents in Computers and Networking said they expect to leverage digital investments to grow revenue, a view shared by fewer in Semiconductors, and in Software and Internet.

Less than one-third of Technology respondents—overall and in the subsectors—expect digital investments to create better customer experiences, drive product innovation, increase profits, or achieve cost saving.

What Technology companies expect from digital investments



Source: PwC, 2015 Global Digital IQ® Survey; Base: 158
Q: What value do you expect from your digital enterprise investments?
Select the top three in ranked order. First-ranked.



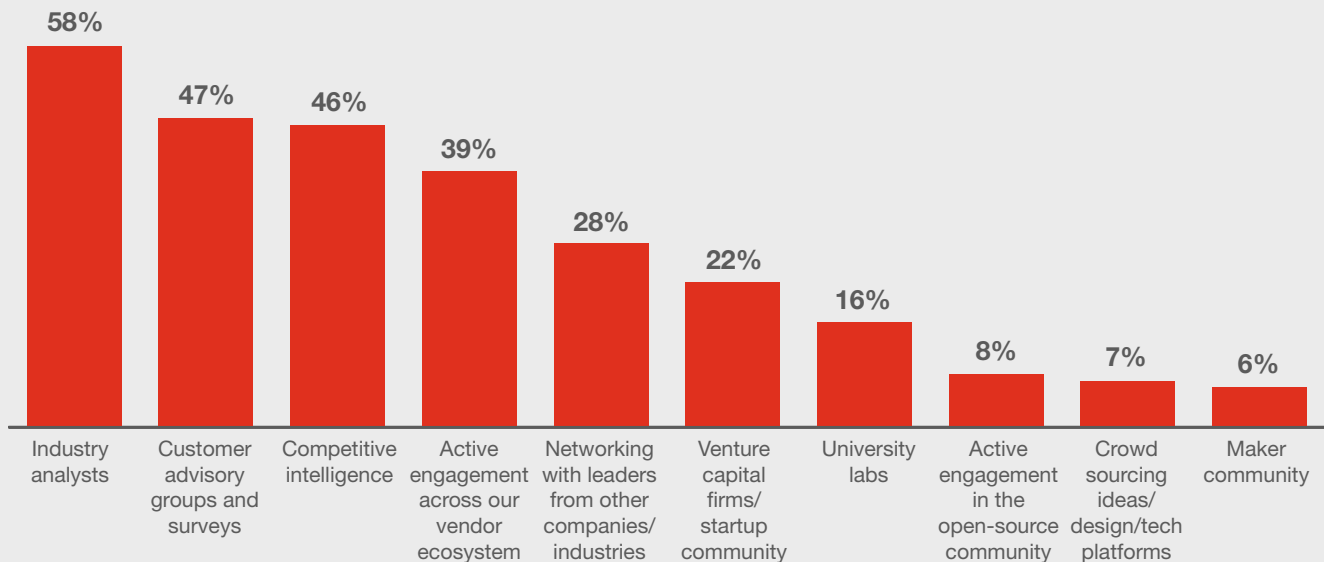
Most Technology executives point to **revenue growth** as the highest priority.

Where they look for innovation

When it comes to applying emerging technologies in new ways to solve business problems, a majority of respondents in Technology and across all industry sectors say they actively engage with external sources. But many tend to rely on just a few sources and ignore many of the other sources available, such as university labs, the open source community, and even networking with executives in other companies and industries.

This is especially surprising given their unique vantage point of having direct access to many of these sources, compared with companies outside of Technology. Surprisingly, Semiconductor companies are the most active with those in the open source community and their own vendor ecosystem—twice as likely as Software and Internet or Computers and Networking companies.

Where Technology companies look for innovation



Source: PwC, 2015 Global Digital IQ® Survey; Base: 158

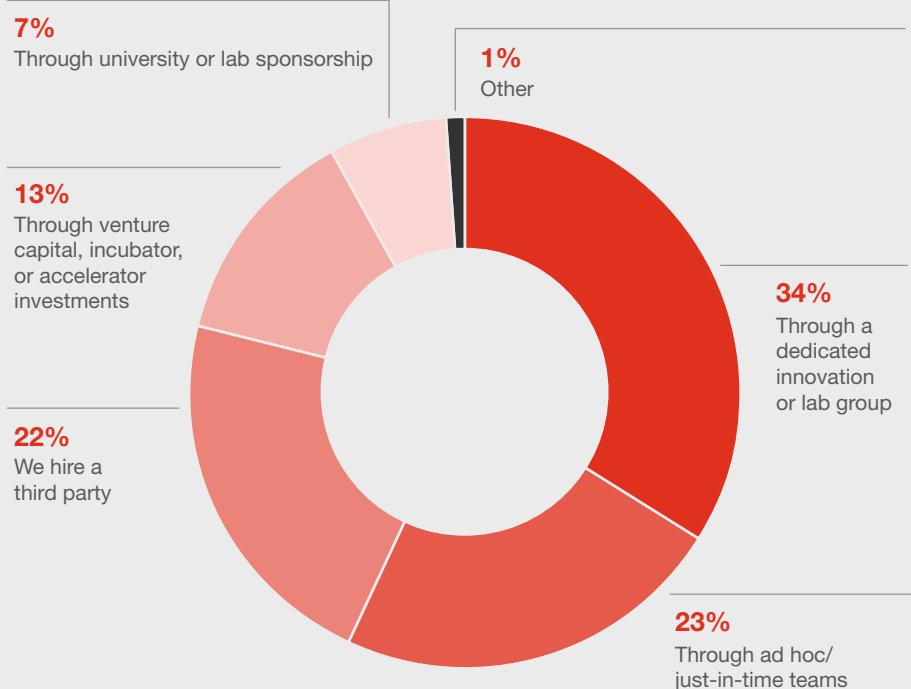
Q: How does your organization gather ideas from external sources for applying emerging technologies in new ways to solve business problems?

Digital disruption

Disruption is top of mind for leaders in many industries, and many make major investments in time and spending in their quest to embrace strategies and approaches that will help them disrupt the status quo. Leadership's desire to capitalize on digital technology is so strong that it's disrupting the enterprise operating model, as demonstrated by shifting spending patterns, new digital roles, and undefined working relationships.

How do Tech companies explore and act on high-priority and disruptive technology innovations within their organizations? More than one-third across the sector, and nearly half in Software and Internet, look to a dedicated innovation or lab group to drive disruption, while nearly a quarter of Technology respondents hire a third party. About the same number look to ad hoc/just-in-time teams to drive disruption. As with innovation, they may not be taking advantage of underutilized sources like venture capital, incubator, or accelerator investments, or seek university or lab sponsorships.

How Technology companies explore disruptive innovation



Source: PwC, 2015 Global Digital IQ® Survey; Base: 158

Q: What is the primary way you explore and act on high-priority emerging and disruptive technology innovations in your organization?

Obstacles impeding digital initiatives

Business leaders operate on the principle that their digital investments will pay off by delivering and sustaining value. Our research shows, however, that even the most well organized and thoughtfully calibrated digital strategies can be stymied by obstacles.

What are the barriers to achieving the desired results from digital enterprise initiatives?

Some tech subsectors report obstacles that vary significantly from other subsectors.

Nearly all respondents in Computers and Networking point to lack of properly skilled teams as do more than three-quarters in the overall Technology sector. A significant majority of respondents in Computers and Networking view lack of organizational support as a barrier, as compared to a little more than half in the sector as a whole.

Less than half of respondents in Semiconductors point to talent recruitment and retention as a barrier—as

opposed to well over half of all Technology respondents. More than three-quarters in Computers and Networking see ineffective third-party partners as a barrier, a little more than in the Technology sector as a whole.

Three-quarters of leaders in Semiconductors see collaboration between IT and business as an obstacle, as opposed to a little more than half the respondents in the overall Technology sector.

Sixty-five percent of companies in Computers and Networking view ineffective project management as a barrier, as opposed to less than half of all Technology respondents. And more than three-quarters of respondents in Computers and Networking see outdated technologies as an obstacle, compared with sixty percent of the sector on the whole. Nearly two-thirds of those in Software and Internet view lack of alignment and clarity on roles/responsibilities relating to digital ownership as a barrier, a little more than the percentage in the overall Technology sector.



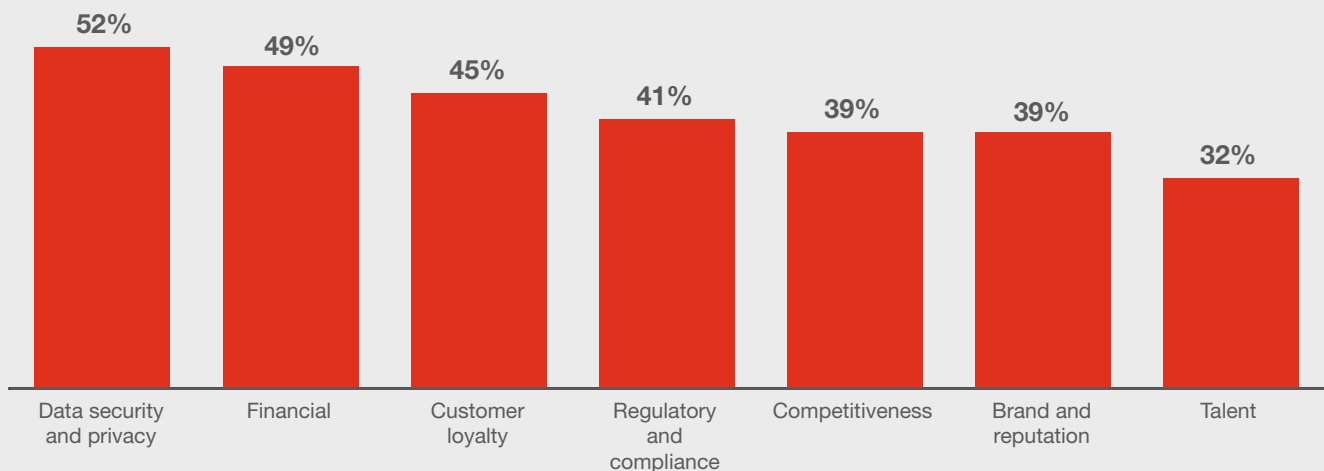
Digital risks

New technology inherently brings new risks, some of which might be expected and others which can't be predicted. Technology companies especially feel this pressure, given they must think about risks in the new products and services they create, as well as in their own enterprises as they become more digital.

In which areas are digital enterprise initiatives creating risk, and how prepared are Technology companies to deal with these challenges?

More than half of Technology respondents say their digital enterprise strategy has created risks for their business in the area of data security and privacy, cited as an area of vulnerability for less than half of industries overall. More than two-thirds in the Technology sector say they are prepared or highly prepared for this type of risk, in line with all industries.

How Technology companies see digital risk



Source: PwC, 2015 Global Digital IQ® Survey; Base: 158

Q: To what extent has your digital enterprise strategy created risks for your business in the following areas?



More than half of Technology respondents say their digital enterprise strategy has created risks for their business in the area of **data security and privacy...**



10 Digital IQ Attributes

Our analysis sought to answer the question: What actions can leaders take to more likely ensure their digital investments deliver and sustain value? Today's digital enterprise spans many dimensions, and we analyzed more than two dozen factors, covering strategy, innovation, and execution. Ultimately, we isolated the 10 attributes that correlate with stronger financial performance; this comprises our Digital IQ score. Here's how the Technology sector and subsectors perform on each of the 10 crucial attributes.

01. Our CEO is a champion for digital.

Across industry sectors, 73% view their respective CEOs as champions for digital. Technology sector: 82%. Only 66% in Computers and Networking hold to this view, as opposed to 84% in Semiconductors and 85% in Software and Internet.

02. The executives responsible for digital are involved in setting high-level business strategy.

Across industry sectors, 78% say that executives responsible for digital are involved in setting high-level business strategy. Technology sector: 85%. Nearly all—94%—in Semiconductors agree, followed by 97% in Software and Internet, and 72% in Computers and Networking.

03. Business-aligned digital strategy is agreed upon and shared at the C-level.

Across industry sectors, 80% say their digital strategy is agreed upon and shared with the executive team. Technology sector: 82%. An overwhelming majority—91% in Computers and Networking hold to this view, as opposed to 81% in Software and Internet, and 75% in Semiconductors.

04. Business and digital strategy are well communicated enterprise-wide.

Across industry sectors, 70% say that their business-aligned digital strategy is agreed upon and shared enterprise wide. Technology sector: 71%. Software and Internet, 74%; Semiconductors, 68%; Computers and Networking, 65%.

05. We actively engage with external sources to gather new ideas for applying emerging technologies.

Across industry sectors, 64% actively engage with external sources to gather new ideas for applying emerging technologies. Technology sector: 67%. Three quarters in Software and Internet agree, as opposed to 66% in Semiconductors, and 56% in Computers and Networking.



06. Digital enterprise investments are made primarily for competitive advantage.

Across industry sectors, 76% make enterprise investments primarily for competitive advantage. Technology sector: 85%. An overwhelming majority—90%—agree in Software and Internet; as compared with 88% in Semiconductors and 69% in Computers and Networking.

07. We effectively utilize all the data we capture to drive business value.

Across industry sectors, 58% say they effectively utilize all the data they capture to drive business value. Technology sector: 60%. Computers and Networking, 66%; Software and Internet, 62%; Semiconductors, 51%.

08. We proactively evaluate and plan for security and privacy risks in digital enterprise projects.

Across industry sectors, 76% say they proactively evaluate and plan for security and privacy risks in digital enterprise projects. Technology sector: 81%. Semiconductors, 85%; Computers and Networking, 81%; Software and Internet, 79%.

09. We have a single, multi-year digital enterprise roadmap that includes business capabilities and processes as well as digital and IT components.

Across industry sectors, 53% say they have a single, multi-year digital enterprise roadmap that includes business capabilities and processes as well as digital and IT components. Technology sector: 56%. Considerably more than half—69%—agree in Semiconductors, followed by 54% in Software and Internet, and 51% in Computers and Networking.

10. We consistently measure outcomes from our digital technology investments.

Across industry sectors, 72% say they consistently measure outcomes from digital investments. Technology sector: 70%. More than three quarters—82%—agree in Semiconductors, followed by 69% in Computers and Networking, and 67% in Software and Internet.

How Tech companies can raise their Digital IQ

Businesses across many industries are fully embracing digital, and Technology businesses largely are taking the lead. Technology companies fully expect their significant investments to drive growth and create competitive advantage, ideally positioning themselves as Technology leaders. Our Digital IQ analysis of nearly 2,000 executives demonstrates that the goal is attainable—if business leaders take a systematic approach to their efforts. Start by using our [Digital IQ assessment](#) to get a personal baseline of where you think your organization stands. Then, consider taking these steps:



1. Dig in to your Digital IQ.

Take the assessment with your business and IT leadership team. We recently conducted a customized Digital IQ benchmark of 125 global leaders of a large industrial company. While their Digital IQ score was quite strong, exploring each of the 10 attributes revealed they were significantly behind in the way they communicate and develop a shared digital vision.



2. Conduct a digital strategy workshop.

Use the session to evaluate the areas for improvement revealed by your survey of company leaders. Also discuss and develop a shared perspective on the role of digital investments; the leadership and organizational roles required to drive digital, including responsibilities of the CDO, CIO, CMO, and other key executives; and the other internal disruptions that occur but aren't being directly addressed, such as the organization's increasingly distributed but uncoordinated technology spending.



3. Start a digital dialogue.

Use the enterprise-wide Digital IQ benchmark as a vehicle for engaging around digital strategy with the full organization. Also think about how to use technology—video, internal social media, and mobile—to continue the digital conversation.



4. Develop a disruption strategy.

Create an explicit strategy and approach regarding disruption. We are working with an energy company with a strong desire to apply digital technologies to reinvent their business years into the future. However, when asked to define the attributes of such a future business, they reverted to more incremental goals, such as getting value from all of the data they collect and improved operational efficiencies, which are important but not disruptive.



5. Expand your ecosystems.

Tech talent alone won't enable you to excel at digital growth and disrupt markets, or stay ahead of the competition. Digital innovation is emerging from places your organization doesn't likely frequent, such as startup incubators, university labs, open source projects, and maker communities. Now is the time to seek out and experiment with an expanded set of the right relationships to keep your ideas and skills fresh and flowing.

About PwC's Digital IQ® research

We've been conducting our Digital IQ research since 2007, and this year marks our seventh annual survey of business and IT executives globally. This year's survey was conducted July through September 2015 and included 1,988 respondents from 51 countries. Responses were aggregated into 7 regions and 10 industries. In the Technology sector, we surveyed 158 IT and business leaders.

Our Digital IQ score is a tool for quantifying and benchmarking the Digital IQ of firms in a consistent way. The score is built on the ten attributes of the survey that proved to be most closely correlated with company performance. The overall Digital IQ score is a weighted and normalized sum of the attribute scores. Our analysis shows that those firms with a higher Digital IQ score are more likely to enjoy faster revenue growth and wider profit margins.

For a deeper discussion about Digital IQ and implications for the Technology industry, please contact one of our leaders:

Authors

Pierre-Alain Sur
US Technology Industry Leader
Tel: +1 646 471 6973
pierre-alain.sur@pwc.com

Joseph Lamano
Principal, Digital Commerce Leader
Tel: +1 408 817 4427
joseph.lamano@pwc.com

Chris Curran
Chief Technologist
Tel: +1 214 754 5055
chris.curran@pwc.com

Let's talk

Please reach out to any of our Technology leaders to discuss this or other challenges. We're here to help:

Pierre-Alain Sur
US Technology Industry Leader
Tel: +1 646 471 6973
pierre-alain.sur@pwc.com

Kayvan Shahabi
US Technology Advisory Leader
Tel: +1 408 817 5724
kayvan.shahabi@pwc.com

Kevin Healy
US Technology Assurance Leader
Tel: +1 408 817 3834
kevin.healy@pwc.com

Diane Baylor
US Technology Tax Leader
Tel: +1 408 817 5005
diane.baylor@pwc.com

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The Technology Institute is PwC's global research network that studies the business of technology and the technology of business with the purpose of creating thought leadership that offers both fact-based analysis and experience-based perspectives. Technology Institute insights and viewpoints originate from active collaboration between our professionals across the globe and their first-hand experiences working in and with the Technology industry.