

Gearing Up For Successful Digital Transformation¹

Digital technology platforms have become the foundation for an increasing share of economic activity resulting in a changing business environment. Digital transformation—the reinvention of a company’s vision and strategy, organizational structure, processes, capabilities, and culture to match the evolving digital business context—is not only changing companies but also redefining markets and industries. Executives require frameworks to guide their transformations and assess their digital journeys over time. Six dimensions of digital transformation at the enterprise level emerged from our research as those that position a company for a successful competitive stance due to digital transformation. They are: a company’s strategic vision, alignment of the vision and its investments in digital transformation, the suitability of the culture for innovation, possession of sufficient intellectual property assets and know-how, strength of its digital capabilities, and its use of digital technologies. The six-dimension framework facilitates benchmarking one’s company with others—either within a sector or against companies that are in the same state of progress towards digital transformation.

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Business success depends on understanding how external forces such as globalization, demographics, and sustainability impact a company’s competitive strategy and position.² Success also depends on exploiting powerful and reasonably priced digital infrastructures that include mobile technologies, especially smartphones; cloud computing, especially software-as-a-service for such applications as artificial intelligence and machine learning; wired and wireless networks; and the Internet of things. In fact, digital technology platforms have become the foundation for an increasing share of economic growth.

Digital technologies enable the development of new or enhanced products and services delivered to customers more efficiently. These technologies also enable fundamentally new ways to organize business.³ Digital transformation is the reinvention of the company—its vision and strategy, organizational structure, processes, capabilities, and culture. Such transformations not only change companies, but also markets and entire industries.

¹ Acknowledgement: The authors thank the Advanced Practices Council for support of this research. We also acknowledge the insights and feedback provided by the members of the advisory board of the Center for Digital Transformation on the design of our survey and interpretation of the results.

² Dobbs R., Manyika J., Woetzel J. “No Ordinary Disruption: The Four Global Forces Breaking All the Trends,” *Public Affairs*, May 12, 2015.

³ Johnson, M.W., Christensen, C.M., and Kagermann, H, “Reinventing Your Business Model,” *Harvard Business Review*, Reprint #R0812C, December 2008.



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Consider some examples drawn from different industries.

Today's cars are computers on wheels, with the average car incorporating 100 million lines of code. The software in cars powers safety systems, personalized entertainment, navigation, and autonomous capabilities. Moreover, by providing a substitute for car ownership, ridesharing companies such as Lyft reduce the value of the traditional (end-customer) ownership model. In light of these developments, digital transformation for traditional automakers involves digitizing their product (building software-intensive vehicles that will ultimately drive themselves), understanding and preparing for ownership models for cars in the future, ensuring that they have the appropriate technology capabilities and talent, and building a culture that enables change.⁴

Automakers have adopted different transformation strategies to adapt to these technology-driven shifts. For example, to acquire self-driving capabilities that it could incorporate into its cars, GM bought autonomous driving software startup Cruise Automation to give it a jumpstart on the development process.⁵ To understand new models of use, it invested \$500 million in ridesharing company Lyft and launched Maven (a Zipcar-like service where one can rent a car by the hour). It also brought software development capabilities back in-house. This is digital transformation in action: a redefined vision and strategy, including developing new digitally enabled products and services, experimenting with new sharing business models, investing in and building key digital capabilities both by acquisition and in-sourcing, and aligning its investments with the vision.

Disney Theme Parks has also adapted its business to the digital world. In order to enhance the guest experience, Disney invested \$1B in MyMagic+, a software platform that allows visitors to optimize their experience at DisneyWorld. MyMagic+ subsumes Disney's other

software initiatives (FastPass ride reservations, advance dining reservations, onsite photography services, and resort access) through a simple RFID-enabled wristband. The system gives Disney a far better understanding of its business, allowing it to dramatically improve the customer experience, raise the operating efficiency of its assets and people, improve throughput, and increase revenues. Counterintuitively, Disney improved customer experience while simultaneously increasing the number of daily guests at the parks.

Shipping giant Maersk is reinventing itself as a logistics company by launching a blockchain platform company in partnership with IBM for tracking the provenance of goods shipped using its services. The tracking of goods—from producers to packers to freight forwarders to shipping companies and back to freight forwarders and delivery companies—is complex yet structured. In addition to all of the paperwork that must be exchanged between the various parties mentioned above and with the customs authorities, a well-designed and auditable system can improve the efficiency and timeliness of commercial shipping.⁶

These examples illustrate how the digital landscape is fundamentally changing the context in which businesses operate across diverse industries. Given the shift to a digital world, businesses can no longer rely on thinking and behavior suited only to the physical world. Managers in today's competitive landscape must recognize and anticipate technology-enabled change, estimate its potential impact, and understand how to leverage digital technology to create and capture value for their companies. Managing in a digital world requires rethinking the company's strategies, business models, and key business drivers for success. Although all companies must continually anticipate and react to changing business environments, the challenge is far greater for long-standing companies that enjoyed success in a primarily physical world.⁷

4 Mocker, M. and Fonstad, N.O., "How AUDI AG is Driving Toward the Sharing Economy," *MIS Quarterly Executive* (16:4), December 2017, pp. 279-293. See also Zhang, C., Kolt, P., Kettinger, W.J. and Yoo, S. "Established Companies' Strategic Responses to Sharing Economy Threats," *MIS Quarterly Executive* (17:1), March 2018, pp. 23-40.

5 "GM Buying Self-Driving Tech Startup for More Than 1 Billion," *Fortune.com*, March 11, 2016.

6 <http://fortune.com/2017/03/05/maersk-tests-blockchain-based-freight-tracking>. See also Lacity, M.C., "Addressing Key Challenges to Making Enterprise Blockchain Applications a Reality," *MIS Quarterly Executive* (17:3), September 2018, pp. 201-222 for several examples of industrial use of blockchain.

7 The challenges and strategies of legacy companies is described in Sebastian, I.M., Ross, J.W., Beath, C., Mocker, M., Moloney, K.G. and Fonstad, N.O., "How Big Old Companies Navigate Digital Transformation," *MIS Quarterly Executive* (16:3), September 2017.

Table 1: Strategic Vision**Dimension: Strategic Vision**

- A clearly defined strategic vision mapped to an understanding of digital needs
- Company has a strategy for digital transformation
- Senior executive team has a clear understanding of digital technology capabilities and how they will support business objectives
- No problem with lack of digital leadership to define strategy
- No difficulty developing company digital strategy

In the last five years, the conversation regarding digital transformation at many companies has shifted substantively. Initially, the challenge was to convince senior executives of the business imperative to change. Today, there is widespread recognition among executives of the need to transform their businesses for the digital world. These executives seek frameworks to guide their transformations.

Through research sponsored by the Society for Information Management's Advanced Practices Council, we developed such a framework. We designed it to be applicable across industries because industry boundaries are blurring. The framework consists of six dimensions that together comprise the factors for achieving successful digital transformation. These dimensions include a company's strategic vision, the alignment of the vision and its investments in digital transformation, the suitability of the culture for innovation, possession of sufficient intellectual property assets and know-how, the strength of its digital capabilities (talent), and its use of digital technologies.

Executives can either use the questions included for each dimension as a checklist for exploring readiness for digital transformation success or can complete an online survey that results in a report that not only presents the composite sense of company executives on these six dimensions but also benchmarks the company's scores against companies that consider themselves significantly ahead of their competitors in leveraging digital transformations. The benchmarks were created through a survey of senior executives at 129 U.S. public companies and 18 large private companies over the three-

month period December 2016 to February 2017. Database details can be found in the Appendix.

Dimensions of Digital Transformation

Since digital transformation requires broad reinvention, a useful framework must encompass strategic, technological, human capital, and organizational culture considerations.⁸

Competitive advantage frequently results from ideas that lead to new businesses and innovative business models, produce better products and services, and drive productivity and efficiency. Such ideas don't scale easily unless they are codified into software and leveraged with digital platforms. Simultaneously, physical assets, which once conferred competitive advantage on their owners, are increasingly commoditized. Global supply chains have amplified this trend. As a result, there has been a crucial shift in the source of competitive advantage to software. Value creation through software requires a redefined vision and strategy, alignment of business and digital strategies, identification and codification of valuable IP and know-how, a culture of innovation, technical talent, and digital technology capabilities.

Specifically, six enterprise-level dimensions of digital transformation emerged from our research as those that can position a company

⁸ For other enterprise-level frameworks, see Wulf, J., Mettler, T. and Brenner, W. "Using a Digital Services Capability Model to Assess Readiness for the Digital Consumer," *MIS Quarterly Executive* (16:3), September 2017, pp. 171-195; Gill, M. and VanBoskirk, S., *Digital Maturity Model 4.0* Forrester Research, 2016; and Bonnet, D., Puram, A.D., Buvat, J., Subrahmanyam, K.V.J. and Khadikar, A., *Organizing for Digital: Why Digital Dexterity Matters*, Capgemini Consulting, 2015.

Table 2: Culture of Innovation

Dimension: Culture of Innovation

- There is a culture of innovation and risk-taking
- New ways of thinking and solutions from diverse perspectives are encouraged
- Failure while taking a calculated risk is to be learned from; it is not a black mark on one's career.
- Innovators are rewarded
- No problem with cultural resistance

Table 3: Know-how and Intellectual Property

Dimension: Know-how and Intellectual Property

- Increasingly using software to improve operations performance
- Increasingly using software to improve customer understanding
- Increasingly using software to improve product know-how
- Sufficient intellectual property assets to implement strategic vision
- Increasingly using software to improve supplier interactions

Table 4: Digital Capability

Dimension: Digital Capability

- Availability of digital expertise
- Overall, there are necessary visionary/innovative skills within the company to define the right digital strategy
- Grades are assigned to individuals based on their level of digital transformation knowledge
- Technical talent for innovation is already available in the company
- No problem with lack of digital skills to execute strategy

for a successful competitive stance due to digital transformation.⁹ They are:

- Strategic vision (for a digital world)
- Culture of innovation
- Know-how and intellectual property (IP) assets
- Digital capabilities (talent)
- Strategic alignment
- Technology assets

⁹ Unlike maturity models for software development such as the Capability Maturity Model, which measures a company's software development practices and processes against a defined set of practices and grades the company on a five-point scale in a technical domain, digital transformation encompasses a far more comprehensive set of dimensions with no clear definitions of best practices, in which performance is relative to competition rather than absolute.

Of course, these dimensions are comprised of multiple elements. We identified those items that best captured the underlying aspects of each of the dimensions using the statistical technique of factor analysis.¹⁰

Strategic Vision

The items that comprise strategic vision, presented in Table 1, represent two categories of measures. The first captures the existence of a strategic vision for the company in an ever more digital world and a strategy for executing

¹⁰ To identify the items in each of the six categories, we first drew up a list of potential characteristics for each dimension and generated a potential survey question. We then drafted the entire survey and met with more than a dozen business and IT executives to obtain their feedback. Through an iterative process, resulting in the addition and deletion of many questions, we arrived at the final version of the survey.

Table 5: Strategic Alignment**Dimension: Strategic Alignment**

- Company willing to fund strategic digital initiatives with uncertain returns
- Willingness in the short run to cannibalize existing revenue streams and business models to gain profit in the long run
- Collaboration and alignment between M&A, digital and business unit teams
- No problem with lack of budget/resources assigned to digital transformation
- Investment increase in new forms of software over past three years

Table 6: Technology Assets**Dimension: Technology Assets**

- Technology in use: Big Data
- Technology in use: Data Mining and Analysis/Data Analytics
- Technology in use: Mobile Technologies
- Technology in use: Cloud Computing
- Internet and wireless communications
- Sufficient technology assets to implement strategic vision

on the vision. The second captures whether the executive team has the capabilities to define and lead a digital transformation strategy.

Culture of Innovation

The items that comprise a culture of innovation, presented in Table 2, attempt to capture the presence of management practices that encourage innovation, including compensation metrics and a view of failure, along with the respondent's assessment of the culture.

Know-how and Intellectual Property

These items, presented in Table 3, are aimed at understanding whether a company has sufficient know-how and intellectual property assets to compete and how well it leverages its know-how. Know-how doesn't scale easily unless it is codified in software and run on digital platforms. The items in this category include questions on the various dimensions of value: operations, customer understanding, and product development. The measure also considers whether the company possesses sufficient IP assets to implement the strategic vision

Digital Capabilities

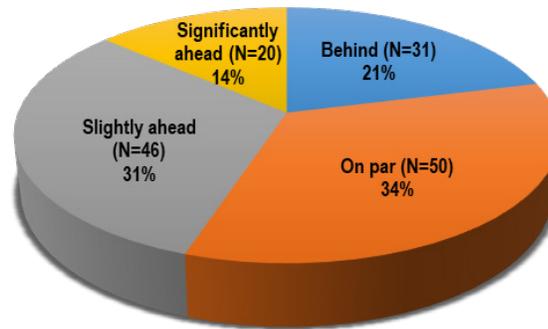
The items that comprise digital capabilities, presented in Table 4, include the talent available in the company to support digital transformation. These items include the availability of expertise at both the strategic and technical levels, and the level of skills possessed to define and execute its digital strategy.¹¹

Strategic Alignment

The items that comprise strategic alignment, presented in Table 5, capture a company's ability to make financial investments in digital transformation that correspond to its strategic vision. These items include whether the company makes the necessary financial commitments, supports funding strategic digital initiatives with uncertain returns, and is willing in the short run to cannibalize existing revenue streams and business.

11 Herterich, M.M., Uebernickel, F. and Brenner, W. "Stepwise Evolution of Capabilities for Harnessing Digital Data Streams in Data-Driven Industrial Services," *MIS Quarterly Executive* (15:4), December 2016, pp. 299-320. See also Dery, K., Sebastian, I.M. and van der Meulen, N., "The Digital Workplace is Key to Digital Innovation," *MIS Quarterly Executive*, (16:2) June 2017, pp. 135-152.

Figure 1: Company Comparison with Competitors



Technology Assets

The items that comprise technology assets, presented in Table 6, capture the level of the company’s use of newer digital technologies. The set of items included in this dimension are the level of Big Data use, data mining and analytics, mobile technologies, cloud computing, and Internet and wireless communications.^{12, 13}

¹² We included other emerging technologies like 3D printing. However, these additional technologies were rejected by our statistics analysis.

¹³ Dremel, C., Herterich M.M., Wulf, J., Waizmann, J., and Brenner, W. “How AUDI AG Established Big Data Analytics in Its Digital Transformation, *MIS Quarterly Executive*, (16:2), June 2017, pp. 81-100.

Assessing Progress in Digital Transformation

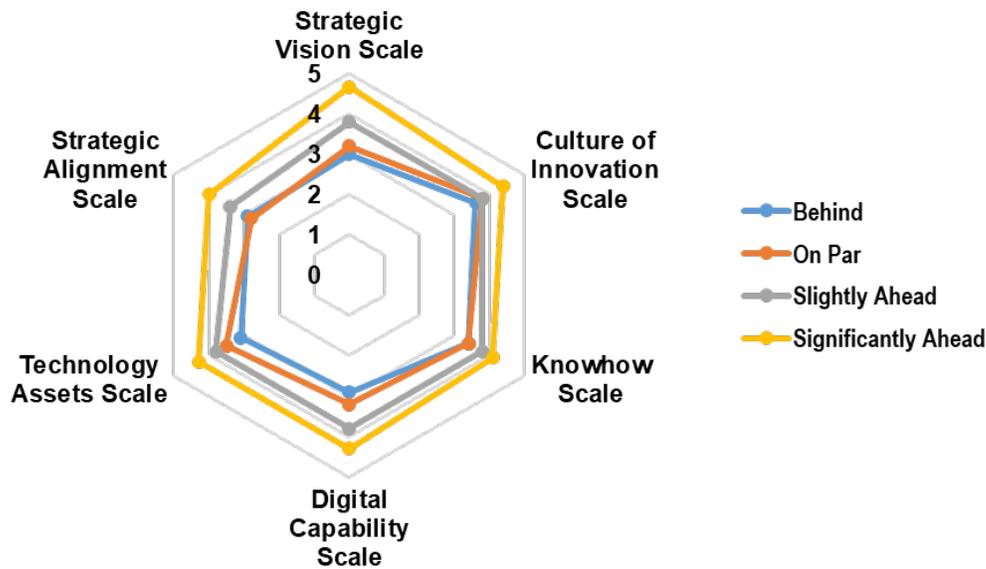
How well do the six dimensions necessary for digital transformation reflect advancement in a company’s journey? One test is the extent to which the elements discriminate among companies according to how far along they are in their journey.

We asked respondents to report how their company compared with its closest competitors in terms of leveraging digital technologies. Companies could report being significantly or slightly behind, on par with, or slightly or

Table 7: Median Score for Dimensions by Level of Advancement

Scale	Behind	On Par	Slightly Ahead	Significantly Ahead
Strategic Vision	3.00	3.20	3.80	4.67
Culture of Innovation	3.60	3.80	3.80	4.40
Know-How and IP	3.40	3.40	3.80	4.10
Digital Capabilities	2.90	3.20	3.80	4.30
Strategic Alignment	2.90	2.80	3.40	4.00
Technology Assets	3.10	3.50	3.80	4.30

Figure 2: Dimensions of Enterprise Digital Transformation by Level of Advancement



significantly ahead of their competitors. We grouped the companies in our sample into four categories: *behind*, *on par*, *slightly ahead*, and *significantly ahead*.¹⁴

Next, we computed a category score for each of the six dimensions. Specifically, we defined the category score as the median score of all the companies in the category. For example, there are 20 companies that rate themselves as significantly ahead of their competitors. Let's consider how they perform on the dimension of strategic vision. The median score for strategic vision among the companies in this category is 4.67, which means that half the companies score above 4.67 and half score below. Similarly, we computed the distribution of the companies arranged by their scores for all six dimensions.

Table 7 displays the score for all dimensions for the companies in each category: behind, on par, slightly ahead, and significantly ahead of their competitors. The numbers in each column are higher as we move from left to right, which is consistent with the category score

increasing with the state of advancement. That is, the category scores for all six dimensions for companies that are significantly ahead are higher than the corresponding score in any of the other (less accomplished) categories. Similarly, companies that are slightly ahead of their competitors score higher than companies that are on par with or behind them. For example, companies that are significantly ahead have a median score of 4.67 on strategic vision, compared to 3.8 at companies that are slightly ahead and 3.2 at companies that are on par with their competitors, and so on. In essence, in any category, companies score higher on all six dimensions than companies that are less advanced and lower than companies that are ahead of them, giving us the confidence to say that our measures are consistent with digital progress.

Figure 2 provides an alternative representation of the relative positioning of the six dimensions for each level of advancement in a spider chart, which makes a compelling case for the appropriateness of our assessment methodology. The line representing companies that are significantly ahead is yellow, slightly ahead is gray, on par is orange, and behind in blue. What jumps out from the picture is that each

14 We originally asked companies to categorize themselves into five categories, including significantly behind their competitors. However, the number of companies that identified themselves as significantly behind was very small (3%), so we combined these companies with those that said they were slightly behind their competitors and labeled this group as behind their competitors.

Figure 3: Media Company

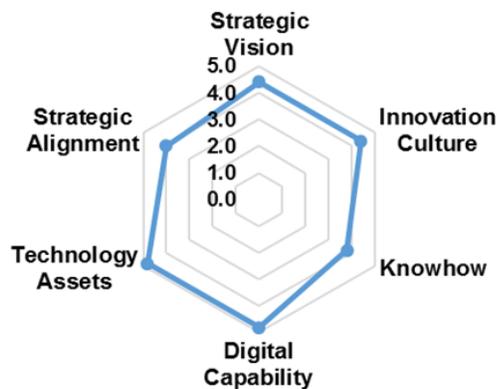


Figure 4: Lodging Company



category’s representation is completely outside of a less advanced category.

The spread between the categories is particularly illustrative. The largest difference in the category scores between companies that are behind and companies that are significantly ahead is in strategic vision (1.6) and the lowest is in know-how and IP (0.7). In the latter case, the smaller difference is explained by the fact that the category score for know-how for firms that are significantly ahead is 4.1, which indicates that even these firms have more to do on this dimension. In the case of culture of innovation, only firms that are significantly ahead are doing

substantially better than the others, which are tightly clustered.

Those companies that are significantly ahead of their competitors score the highest on each of the six dimensions while those companies behind their competitors score much lower on each of the scales.¹⁵ If we look at each dimension individually, we can derive additional insights. For example, those companies significantly ahead of their competitors achieved their highest scores on the dimensions of strategic vision (4.67) and culture of innovation (4.4), and the lowest (of the six) scores for strategic alignment (4.0). All

¹⁵ We also do want to emphasize that the scores reported above are for a category; there is variation within each category as well.

Figure 5: Retail Company



Figure 6: Pharmaceutical Company



scores are 4.0 or greater. Companies that are on par with their competitors score highest on culture of innovation (3.8) and lowest on strategic alignment (2.8) with the other dimensions ranging between 3.2 and 3.5. Companies that are behind their competitors score highest on culture of innovation (3.6) and lowest on strategic alignment (2.9) and digital capabilities (2.9).

We see the biggest differences between high performing and low performing companies in the dimensions of strategic vision, digital capabilities, and technology assets. This suggests that companies that would like to progress with transformation should begin at the top. Companies that have a well-articulated strategic

vision are more likely to make the required investments in technology assets and talent.

Measuring Your Company on the Dimension Scales

The scales associated with each dimension provide a useful way for a company to identify the strengths and weaknesses for achieving change in the organization. They can also be used to identify, over time, whether the processes and procedures they initiate are achieving the intended goals.

To illustrate how the scales for each dimension can be applied, we display individual plots for

four companies, one from each category of progress in achieving digital transformation. We selected these companies because their plots depict representative patterns while highlighting different strengths and weaknesses.

Media Company

Respondents from the media company assessed it as significantly ahead of its competitors that offer similar services. This company has relatively high scores on all six elements, with technology assets and digital capabilities achieving the highest scores. Relatively speaking, it doesn't rate itself as highly on its know-how and strategic alignment. It should develop differentiated know-how to distinguish itself from its competitors and invest in aligning its investments with its strategic vision.

Lodging Company

The lodging company, which assessed itself as slightly ahead of its competitors, is well established. It scores high on strategic vision, and on technology assets, digital capabilities,

and know-how, but is challenged by its culture and ability to make investments aligned with the vision. This company should explore ways to change its culture through new management and organizational practices as well as through investment processes.

Retail Company

The retail company, which assessed itself as being on par with its competitors, is relatively balanced across all but one of the dimensions, though its absolute scores are not particularly high. It does well at technology assets and digital capabilities, which isn't surprising for a retailer, but performs poorly on strategic alignment. This is a company that struggles with aligning its business strategy with a digital world.

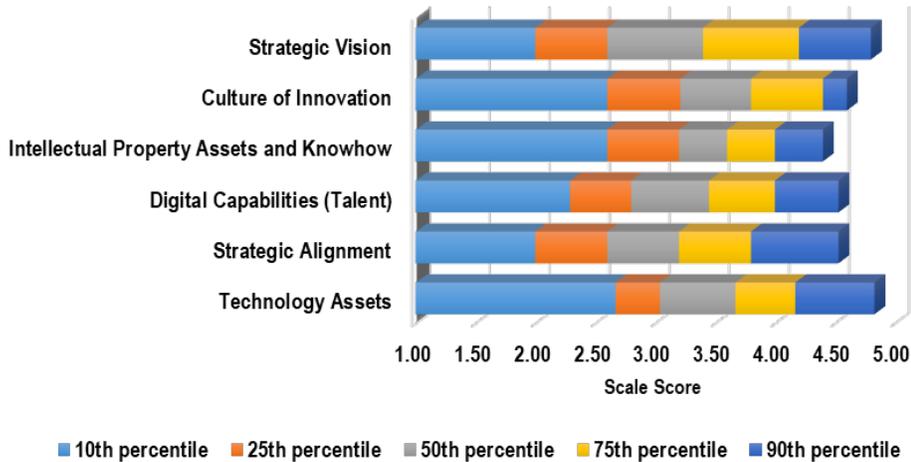
Pharmaceutical Company

The pharmaceutical company has an atypical profile. Respondents assessed the company as behind its competitors. Not surprisingly, it performs poorly on most dimensions. It is short on digital capabilities and struggles to align its business for the digital world. It does score very

Table 8: Sample Characteristics

Industrial Sector	%	Date of Incorporation	%
Manufacturing	37.4	Before 1950	16.9
Wholesale/Retail Trade	10.2	1950-1980	15.5
Finance/Insurance	13.6	1980-1994	19.6
Services	32.7	1995-2005	35.8
Transportation/Utilities	6.1	2006 and over	12.2
Revenue	%	Title of Respondent	%
Under \$50 million	10.1	Board Member	1.4
\$50 million - \$1 billion	39.1	CEO/President	19.7
Over \$1 billion	50.7	CFO	28.6
		CIO/CTO	23.8
Employees	%	CDO	2.0
Under 1,000	39.0	CMO	6.8
1,000-9,999	32.2	COO	14.3
10,000 and over	28.8	Other (SVP, VP, Director)	3.4

Figure 7: Percentile Distributions of Dimensions



highly on culture of innovation. At first glance, this may seem odd, but on reflection, this is consistent with its industry, which by the very nature of its products and research, has a strong emphasis on innovation.

Conclusion

Based on our research, we created a framework for executives to assess their company’s progress on six dimensions critical to successful digital transformation. The framework facilitates benchmarking one’s company with others in our database—either within a sector or against companies that are in the same state of progress towards digital transformation. In addition, executives can measure their company’s progress over time. Perhaps most importantly, the framework helps diagnose gaps in a company’s capabilities by identifying how it performs across each of the six dimensions relative to any comparison group.

Since the imperative to exploit digital technologies will continue for the foreseeable future, the end goal isn’t fixed. Rather, the state of the possible will keep advancing and the finish line will keep moving outwards. Although no approach to assess progress in digital transformation can ever be perfect, given the scope of the effort, we believe our framework provides a useful means to measure a company’s progress.

Recommendations

Engage with Your Peers

Digital transformation is a company-wide effort. The CIO is the ideal executive to take a leading role in transformation given her/his expertise in many of its underlying dimensions. Of course, other domain leaders must be actively engaged.

Use the Dimensions as a Checklist for Engagement

The six dimensions and the questions that comprise each dimension can serve as a checklist for a comprehensive conversation among company executives about what is going well and what must improve to better position the company for digital transformation.

Assess Your Progress

Complete the survey so that you can compare your business to companies that are ahead of their competitors. Use the results to examine your competitive situation and plan your next steps to move forward.

Appendix: The Benchmark Database

We collected data from one senior executive in each company surveyed. The survey questions covered general enterprise characteristics, a company's competitive context and strategy, the use of digital technologies, and the effects on performance. In addition, we asked for demographic information about each company.

A total of 147 executives responded, of which 129 were with public companies and 18 were with private companies. The demographic characteristics of the survey respondents are reported in Table 8.

About one third of the companies were in manufacturing sectors and another one third in services sectors. Forty percent of the companies had 1,000 or fewer employees while one quarter were very large companies with more than 10,000 employees. Nearly half of the companies were incorporated in 1995 or later. In comparison with the distribution of U.S. companies, our set of respondent companies is skewed towards larger public companies in the U.S.¹⁶

We examined how the companies in our database performed across six dimensions. Broadly speaking, across our database, the most common shortfalls were in a company's strategic vision and in the strategic alignment of its investments with the vision. In Figure 7, we show the scores for the dimensions at five representative percentiles: 10th, 25th, 50th, 75th, 90th. Technology assets and culture of innovation appear to be a challenge at a smaller number of companies. The best companies (top 10% in each dimension, or the 90th percentile) achieved the highest scores in technology assets (4.83) and strategic vision (4.8). In contrast, the 90th percentile for know-how and IP was much lower at 4.4, which indicates that even the best companies have more to do in this dimension. At the other end, companies in the bottom 10th percentile achieved the lowest performance in strategic vision (2.0) and strategic alignment

(2.0). It is also illustrative to examine the median level, which is in the tight range of 3.2-3.67 across all dimensions, with culture of innovation (3.8) and technology assets (3.67) scoring the highest, while strategic alignment (3.2) and strategic vision (3.4) scored the lowest.

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Vijay is the founding director of the Center for Digital Transformation and Taco Bell Professor of Business and Computer Science at the Paul Merage School of Business, University of California, Irvine. His research, teaching and consulting interests are at the intersection of business strategy and information technology (IT). Vijay has extensive experience in management education and advisory services, having lectured worldwide, taught extensively in degree and executive programs, and consulted for and provided research expertise to Fortune 500 companies, technology service providers, and consulting firms. He has authored the book, *Managing Information Systems Costs*, and published numerous articles in premier academic journals. He has served as senior associate dean for academic affairs and as associate dean of MBA programs. He led the development of a new strategic focus on the transformative role of IT in business, which led to widespread recognition of the UC Irvine business school as a center of excellence in IT. Dr. Gurbaxani received a master's degree in mathematics and computer science from the Indian Institute of Technology, Bombay. He received his PhD from the Simon School of Business, University of Rochester. His thesis won the best dissertation prize in a worldwide competition.

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¹⁶ The latest U.S. Census Bureau statistics on enterprise size (2012) report that in the U.S. there are 941 firms with 10,000 or more employees, which is less than 1% of all companies. Source: U.S. Census Bureau, Department of Commerce, Table 2, Selected Enterprise Statistics by Employment Size by Sector in the U.S.: 2012. <https://www.census.gov/econ/2012/esp2012.html>.