IDC
ANALYZE THE FUTURE

Designing Tomorrow

An IDC White Paper Sponsored by Infor

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EXECUTIVE SUMMARY

IDC's *Designing Tomorrow Survey* of over 1,000 companies in the Americas, Asia/Pacific, and Europe identified top digital transformation (DX) considerations companies need to address as they plan, resource, and implement digital technologies for transformation. Key survey findings include the following:

- **Enterprise digitization and digital transformation are necessary.** 73% of companies will either be out of business or marginalized if they don't transform. Over 67% of companies believe a digitally enabled competitor will gain a competitive advantage within the next five years. Over 20% of companies said this is highly likely to happen in the next 12 months.
- **The journey must be optimized for both the near term and the long term.** Although disruption is a big part of what drives DX in the long term (31% of companies said it was critical to business success), in the short term, it's about efficiency and effectiveness, with 37% of companies reporting it as their top factor for undertaking transformation.
- **Success will start with strong executive leadership.** Our research shows top strengths are strategy (over 35%) and strong leadership (34%) since they will be led top down. The top three challenges organizations reported struggling with are existing business models (32%), culture (29%), and organizational structure (27%).
- **Cross-functional engagement is critical.** Almost half of the reporting organizations feel their digital transformation efforts are best led by both IT and LOB, at 48%, with IT leading another 34% of the time, while also influencing the extended enterprise. The implications are that digitization and technology are core tenets of transforming successfully.

- **How individuals are recruited, trained, retained, and managed will fundamentally change.** Organizations expect their workforces to be affected by technology replacing labor and increasing productivity, with an emphasis on more strategic, less transactional work. These changes will impact how the workforce is organized, recruited, trained, and managed, with over 70% of companies planning on investing in retraining their existing workforce.
- **Applying digital technologies in an optimal way for work to get done remains a challenge.** While technology is self-reported as a strength by over 40% of those surveyed, respondents also emphasized the need for increasing productivity and reducing transactional work. This would indicate that technology is still a big area of opportunity.

All this change is occurring at a scope, scale, and pace where entire notions of business models, management and organizational theory, and design are being reinvented by new technological realities. Learning to learn at the enterprise level with and through strategic partnerships is how IDC sees companies thriving during this potentially tumultuous period.

Digital Transformation Defined

IDC defines digital transformation as transforming your decision making with technology — utilizing new sources of innovation and creativity to enhance experiences and improve financial performance. This is not simply modernizing the technology underpinning existing systems. Relying on data and information to create an evidence-based culture, companies should plan on using information more effectively to drive results such as doubling the productivity of their knowledge workers.

Digital transformation is not to be confused with digital technologies; however, it does use 3rd Platform technologies, such as cloud, mobility, Big Data, and social, as well as innovation accelerators that include the Internet of Things (IoT), robotics, and 3D printing.

Related technologies include voice-activated technology, next-generation security (a security platform where there is visibility of all users and devices across the organization's network, endpoint, cloud, and SaaS applications that effectively reduces the network's attack surfaces, prevents all known threats fast, and detects and prevents new, unknown threats with automation), augmented and virtual reality, artificial intelligence/machine learning, ecommerce, and online customer engagement tools.

This IDC white paper, sponsored by Infor, looks at the state of transformation overall and is based on a December 2017 survey that comprised 1,048 companies across five main verticals: discrete manufacturing and wholesale (153), healthcare (265), process manufacturing (166), public sector (260), and retail (204) across the Americas, Europe, and Asia/Pacific regions. A little over 75% of respondents have revenue of $100–$999 million, with another 17% of respondents at $1–$4.9 billion and the remaining at $5 billion or more. All of our respondents cited the need for planning for (73% of responses), investing in (64% of responses), and implementing (31% of responses) digital transformation and related technologies over the next 12 months.

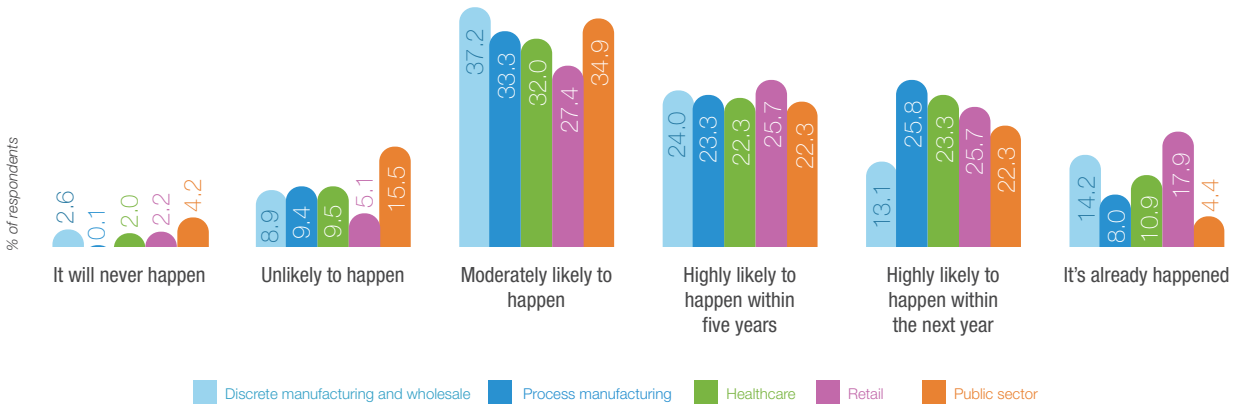
Current Situation

IDC predicts that by the end of 2018, fully one-third of companies will find themselves disrupted by digitally enabled competition, either an existing competitor or a digitally native new market entrant. While disruption is happening at different speeds across different industries, it is happening to one degree or another in all of them. Indeed, the survey that underpins this document shows that all respondents feel their competitors, whether existing companies or digital natives, will leverage digital transformation for competitive advantage and either drive them out of business or negatively affect their businesses' market share, competitiveness, and financial performance.

In fact, over 20% of companies expect to be digitally disrupted by a competitor within the next 12 months alone (see Figure 1). If one looks at the S&P 200, over half of the companies listed in 2000 no longer exist today. What percentage will disappear over the next 15 years, and how many will be disrupted into obscurity? The answer is unknowable, of course, but the imperative to be resilient to disruption is a top strategic priority for just about every business.

Figure 1. DX Competition

Q. *How likely is it that a current competitor could invest in digital transformation and gain a competitive advantage?*



n = 1,048
Base = all respondents
Notes:
Public sector includes K–12, higher education, other education, utilities, government, and transportation.
This survey is managed by IDC's Quantitative Research Group.
Data is weighted by country and by GDP.
Use caution when interpreting small sample sizes.
Source: IDC's Designing Tomorrow Survey, December 2017

Clearly, technology plays a key role in this broader transformation, but just digitizing the business does not ensure that it is also transformed. Technology must be harnessed in the context of strategy — not a new concept, certainly, but one that is well worth reinforcing in this age of technology hype.

Arie de Geus, the McKinsey Award–winning management thought leader, undertook research on 30 companies that had been in existence from 100 to 700 years. In his work, he identified four distinct traits that applied universally — conservatism in financing, sensitivity to the world around them, a clear sense of their own identity in that world, and a strong tolerance to new ideas in the world around them.[1]

As a result of this research, he came to the following conclusion:

"The ability to learn faster than competitors may be the only sustainable competitive advantage. A company's success no longer depends primarily on its ability to raise investment capital. Success depends on the ability of its people to learn together and produce new ideas."

In the digital era, this has never been a truer sentiment. How companies devise new data-centric business models, strategy, and technology-enabled process capabilities will differentiate between long-term success and becoming marginalized. And when digital transformation is viewed through the lens of Moore's law, speed becomes an absolute imperative, as companies are now experiencing life cycles in the span of years rather than centuries.

[1] *"The Living Company," Harvard Business Review, March–April 1997*

Digital Transformation by Industry

Transformation is a long-term strategic opportunity where winning companies need to take both near-term and long-term approaches across multiple horizons to implement the necessary change management processes, cultural pivots, measurement systems, and organizational and business models, all supported by enabling technologies in an agile way. While all industries will be impacted, retail and discrete manufacturing and wholesale are most likely to state that digital transformation has begun to occur already and expect significantly more disruption within the next five years. As our research shows, retail has the most experience dealing with disruption and market turmoil. What we did not expect was the large percentage of public sector respondents stating that it was not as likely to happen as the other commercial sectors.

IDC Defines the DX Journey Across Three Horizons

Horizon 1

For those who are still in the initial phase of DX (horizon 1), the focus of transformation trends more toward the practical — improving operational efficiency, increasing productivity, and driving digital engagement.

Horizon 2

Organizations in horizon 2 have developed the resiliency and agility to make DX an opportunity, rather than a potential threat. When this occurs, the focus of DX efforts begins to shift toward customer experience.

Enterprises with advanced horizon 1 and 2 capabilities are well positioned to realize the network effects and become disruptors in the markets and segments in which they wish to compete.

Horizon 3

In horizon 3, companies transition from developing the ability to fend off disruption to becoming disruptors themselves. These companies have aligned leadership, strategy, and technology across all three horizons.

Top Transformation Drivers

While all industries cited improving productivity as one of their top two transformation factors, both discrete manufacturing and wholesale trade and retailers said most often that it is critical to ongoing business success. For healthcare, it's about better patient service experiences. Process manufacturers cited competitive pressures where their competition is three to five years ahead in transformation efforts. Public sector called out the need to attract and retain skilled people, particularly younger generations of employees (see Figure 2 and Table 1).

Figure 2. Top Factors Driving Transformation

n = 1,048
Base = all respondents
Note: This survey is managed by IDC's Quantitative Research Group.
Data is weighted by country and by GDP.
Multiple responses were allowed.
Use caution when interpreting small sample sizes.
Source: IDC's Designing Tomorrow Survey, December 2017

Table 1. Top Factors Driving Transformation by Industry and Region

	Total	Discrete Manufacturing and Wholesale	Process Manufacturing	Healthcare	Retail	Public Sector	Americas	Europe	Asia/Pacific
Improve productivity	37.1	35.8	37.4	30.2	40.8	41.3	40.9	31.9	35.3
Critical to business success	31.0	35.1	24.2	29.2	41.9	25.2	25.6	31.1	37.9
Improve security	28.4	27.6	26.6	23.8	34.1	29.6	32.6	23.6	25.8
The flexibility of our products and services to incorporate digital transformation	26.2	25.7	24.3	30.2	27.9	22.3	27.1	24.7	25.8
Competitive pressures	23.9	17.1	26.9	26.0	24.2	24.0	23.0	23.2	25.3
Customers and consumers demanding better, cheaper, smarter, and more innovative products	23.7	25.3	26.8	25.9	22.2	20.0	19.3	23.3	29.5
Need to attract and retain skillled people	23.0	22.9	14.2	24.0	19.6	30.2	21.6	26.0	23.2
Improve speed	22.5	21.9	24.8	22.3	20.5	23.4	25.0	27.5	17.6
Introduce new business models with revenue streams	22.1	26.0	25.3	24.4	19.7	17.8	21.6	20.1	24.0
The need to redefine our business proactively	20.1	18.7	14.6	22.7	18.5	23.0	22.7	20.7	16.4
Fail to address good sustainability and customer service practices, which will have a negative reputational impact on our business	16.8	16.6	16.2	19.6	15.3	16.0	14.6	14.7	20.9
n =	1048	153	166	265	204	260	429	311	308

Top factor selected | Second-highest factor selected | Third-highest factor selected

Base = all respondents
Note: This survey is managed by IDC's Quantitative Research Group.
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Source: IDC's Designing Tomorrow Survey, December 2017

Barriers and Competitive Threats

Retailers, discrete manufacturing and wholesale, and healthcare are most likely to say that a competitor has already invested in digital transformation and gained a competitive advantage (either as a traditional competitor or as a digitally native entrant relatively new to their markets). Retailers are typically engaging digital initiatives with clear alignment between their transformation and the overall business. This is likely due to the speed of the business cycle where getting it right — and fast — is mission critical to seasonal success. By contrast, public sector and discrete manufacturing and wholesale are much more likely to be approaching transformation in a tactical and disconnected manner. Again, this may be representative of the pace of their respective sectors, with much more legacy infrastructure and relatively slower cultural change rates in line with the pace of the markets and customers served.

Digital Transformation by Region

Regional likelihood of disruption was clear across all parts of the world, with the timing of the disruption being the only clear contrast point among the regions. Europe is, surprisingly, the most likely to state that disruption either will not happen or is not likely to happen versus other parts of the world. One might speculate the reasons for this contrast to include various trade policies or other regional attitudes on technology when compared with Asia/Pacific or the Americas.

Improving productivity is the top digital transformation driver for the Americas, followed by using transformation to improve business security and then being able to flexibly incorporate digital into products and services.

For Europe, top digital transformation drivers are productivity, criticality to ongoing business success, and attracting and retaining skilled talent.

Respondents from Asia/Pacific also cited criticality to ongoing success and productivity as the top two drivers for DX; however, in contrast to the other regions, customers and consumers demanding better, cheaper, smarter, and more innovative products was also a top-cited reason.

For the Americas, customers and consumers demanding better, cheaper, smarter, and more innovative products ranked near the bottom of the drivers (number 10 out of 11). Europe scored this driver slightly higher at number 7 of 11, yet still in the bottom half.

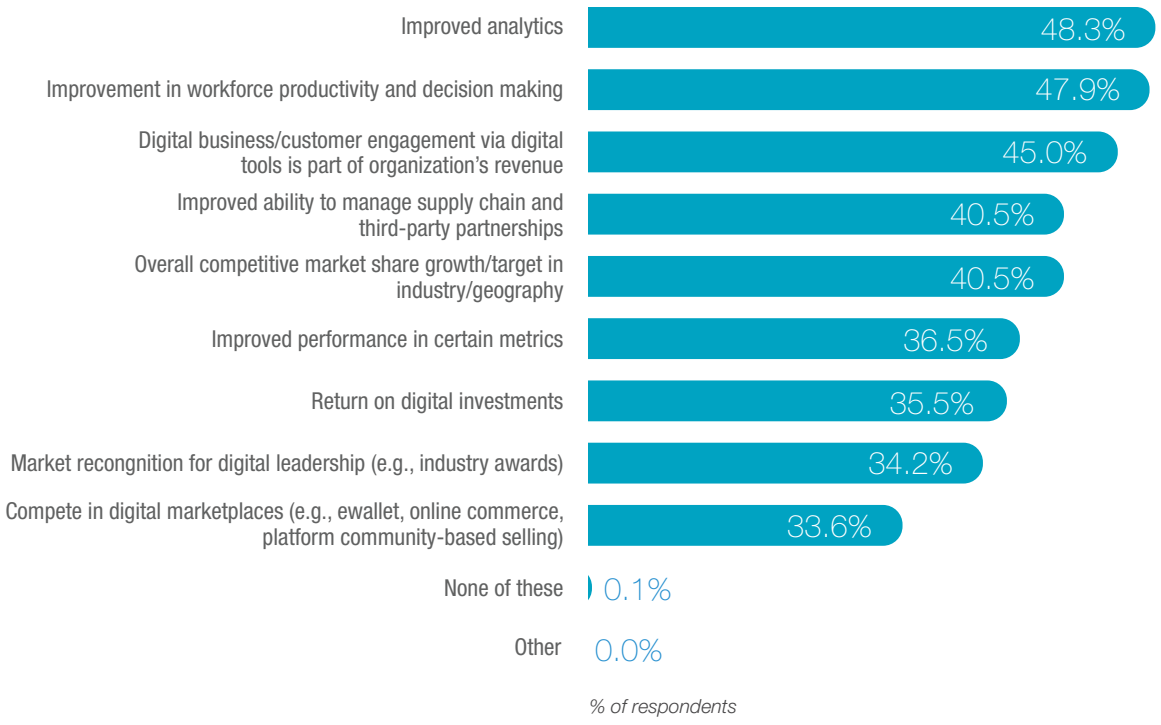
Approaching Digitization and Transformation

For companies to digitally transform, they first must modernize their technology and related architecture road map, leveraging current IT capabilities and creating a digital ecosystem. In addition, they must learn faster than competitors at scale. How companies devise new data-centric business models, strategies, and technology-enabled process capabilities will differentiate between long-term success and becoming marginalized. Enterprise leadership must address the following areas to mature their digital capabilities across the three digital transformation maturity horizons (see Figure 3):

- **Overall strategy:** Organizations need to own their own strategy and planning around digital goals, organizational structures, talent, and change management, whether they are developed internally or with outside partners. Other parts of the transformation, including the digital platform and solution design, development, and implementation, should leverage the deep expertise of strategic partners. Developing the best solutions and implementing best practice process competencies — and doing so within an optimal time frame — will be essential to realizing return on time and on the investments in people, process, and technology.
- **Technology:** Technology plays an enormously important role in transformation. This IDC custom survey research reveals that most companies identify technology as a primary strength in supporting transformation, yet these same companies identify the need to have their personnel do less transactional work, improve productivity, and engage in more strategic analysis and activities. This would most likely suggest that while there are enabling technologies deployed, they are not optimized at scale and lack a robust and intuitive user interface, preventing achievement of workforce goals identified as being important to operational transformation.
- **Workforce productivity:** Notably, productivity enhancements are most often predicted to occur in the three- to five-year time horizon; and within that same period, predications are that technology will start replacing labor. Organizational structures and functional roles are, therefore, starting to be reimagined so they will optimally align. Most predict that employee turnover will be reduced in the next one to two years, as engagement is improved and transactional workloads are reduced through analytics, robotic process automation, and cognitive technologies. The ability of employees to focus on more analytical, strategically focused work should also positively impact retention. In the very near term, training and preparing for these new work dynamics is expected to be a significant area of focus.

- **New business models — new data-centric business models and/or dramatically reimagined ones:** Our research shows that revenue growth and competitive market success are important success metrics for digital transformation. Appropriately, the top two measures of success center around data-driven analytics and employee productivity, which serve as key performance indicators on a company's ability to become a continuous learning organization.

Figure 3. Overall Digital Transformation Success: Top Performance Indicators/Metrics (KPIs) Being Used



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Barriers

It's fair to say that most, if not all, companies are aware that digital transformation is happening and that they need to understand and respond to this new set of realities; however, the majority are challenged in their own digitization and digital transformation efforts for a number of well-understood reasons, as described in Table 2.

Table 2. Main Barriers Related to Digital Transformation

	Total	Discrete Manufacturing and Wholesale	Process Manufacturing	Healthcare	Retail	Public Sector	Americas	Europe	Asia/Pacific
Existing business model	31.8	36.4	35.2	31.8	24.1	33.3	28.8	27.5	38.0
Culture	28.6	26.7	30.9	27.1	28.7	29.9	32.5	28.8	23.7
Organizational structure	26.8	34.2	21.6	27.4	22.4	28.5	27.1	24.3	27.9
People	25.1	11.3	29.3	25.7	26.6	29.4	25.1	25.5	24.9
Knowlege	24.8	29.2	18.2	24.5	28.8	22.8	24.0	27.6	24.1
Financial incentives	23.2	21.2	24.6	20.7	20.1	28.7	24.8	27.6	18.8
Leadership	22.8	22.0	21.6	24.0	21.6	23.9	21.2	24.5	23.9
Processes	22.0	21.8	20.5	23.7	25.3	18.7	25.6	19.3	18.9
Technology	19.6	21.9	19.1	19.2	20.0	18.6	20.5	16.6	20.2
Strategy	19.5	17.4	14.1	23.6	20.6	19.2	20.5	16.9	19.8
Other	0.2	0.0	0.7	0.0	0.0	0.3	0.1	0.7	0.0
n =	1048	153	166	265	204	260	429	311	308

1st 2nd 3rd

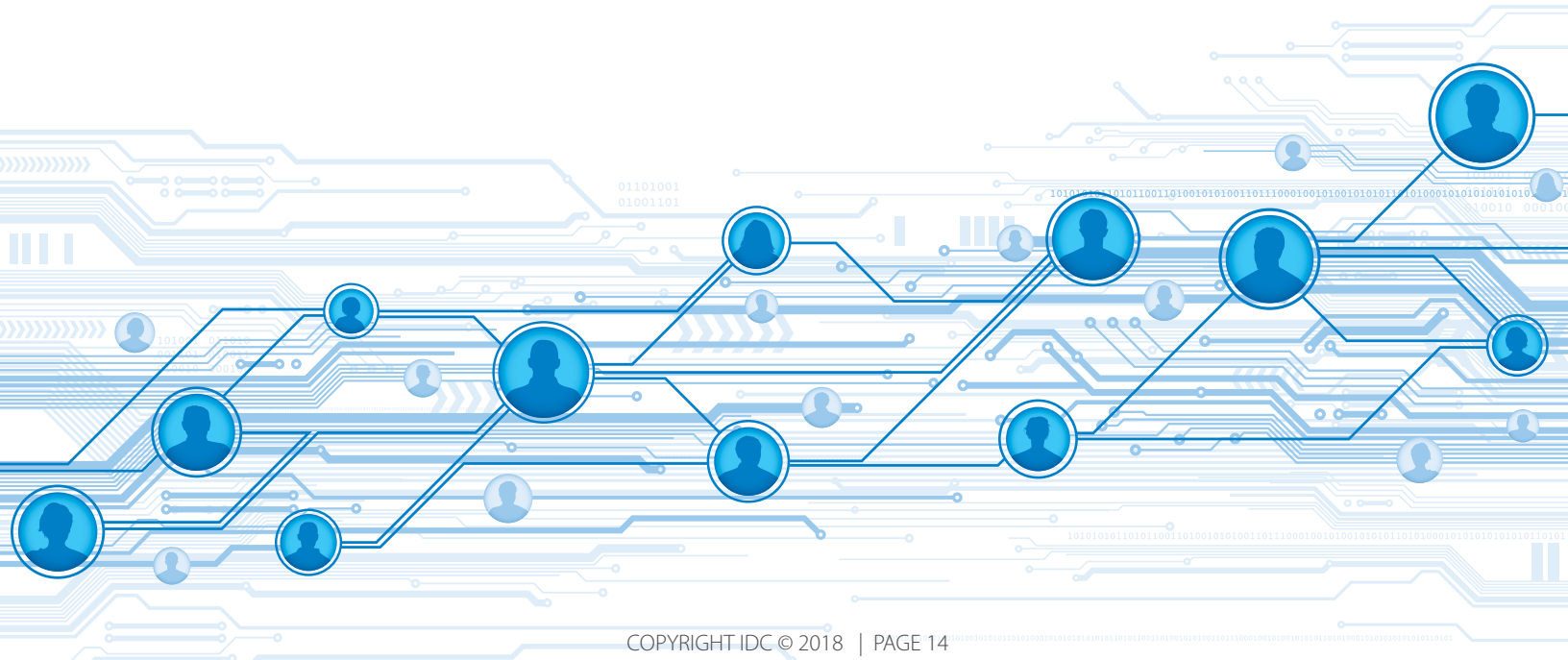
Source: IDC's Designing Tomorrow Survey, December 2017

The top five barriers to transformation are the existing business model is not right, culture, organizational structure, people, and knowledge. Unfortunately, these cannot be adequately addressed until the underlying factors creating these barriers are properly resolved. These underlying factors include:

- **Strategic alignment:** While 86% of organizations have a formal team, with another 14% using individual contributors, only 43% of organizations have fully developed transformation strategies and operational alignment. 40% of companies are taking a "bottom-up" approach with no alignment to the organization's overall strategy.

These findings are understandable when the maturity of DX initiatives is factored in. Our research reveals that 57% of organizations have had a digital transformation organization for less than three years, with another 28% of companies formally addressing it for less than five years. Only 10% of companies have been organizing around transformation for more than five years. Regardless, operational planning and development of action plans that drive outcomes cannot be effectively undertaken without a clear set of strategic goals.

- **Tunnel vision:** There may be too much thinking "inside the box" across the organization, with DX efforts narrowly focused on and concentrated in IT. 88% of all digital transformation leaders are internal recruits, with CIOs and CTOs leading 80% of efforts and IT being the biggest functional area undergoing transformation at 64%. Digitization and transformation are still largely viewed as the domain of IT, suggesting most businesses see transformation as only a technology initiative, which could not be further from the truth.
- **Talent:** The war for talent and skills is just heating up. While approximately 68% of those we asked said they have the right talent, they are looking at significant investments in retraining their existing workforce (at about 71%). 41% are looking to third-party outsourcing. Correspondingly, new ways of recruiting, training, organizing, and managing are long-term challenges preventing substantial progress for many organizations today.

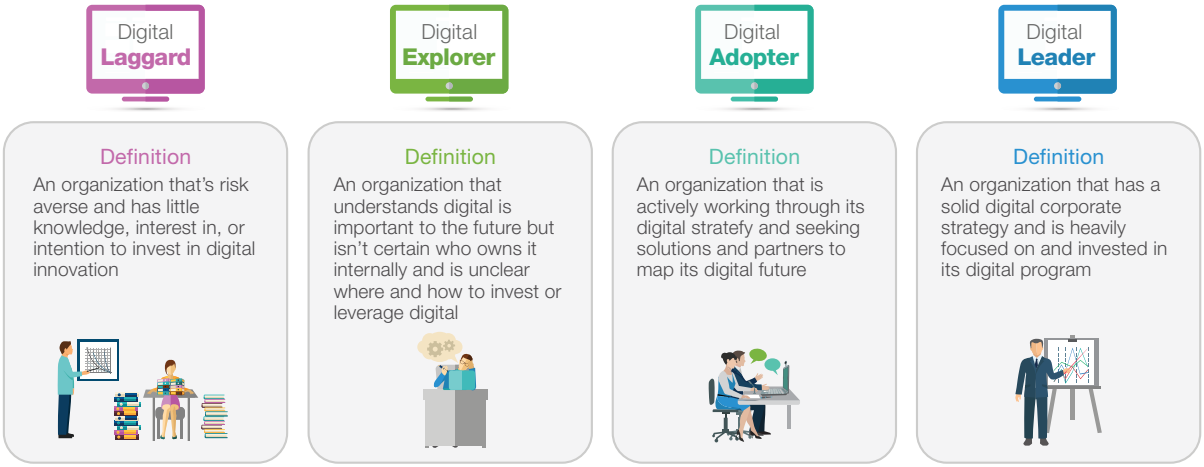


Observations and Implications

The survey's findings indicate that to succeed at addressing internal obstacles to DX, companies must find a way to push forward with DX efforts while also continually working to optimize day-to-day business operations. Partnering with DX technology and service providers is a viable strategy for achieving that goal.

What, where, and how DX efforts get prioritized requires organizations to first assess their levels of digital transformation understanding and relative maturity (see Figure 4).

Figure 4. | Infor's Digital Maturity Spectrum



Source: Infor, 2018

Once you've established a clear understanding of your digital maturity at the department, business unit, and enterprise levels, which can each be at varying states of maturity, it will be easier to know how to prioritize around the following:

- **Digitization versus digital transformation:** Companies are still struggling with digitization ahead of digital transformation. With a full 57% of reporting organizations stating that they have no link between DX efforts and enterprise strategy or that there's linkage with only a short-term set of goals, companies are prioritizing upgrades and modernization over addressing the people and process requirements

for transformation. The implications are that if there is no overarching digital strategy, business model, or related goal set, the digitization strategy (technology strategy and road map) needed to enable requisite business processes for DX will be either missing, incomplete, or misaligned.

- **Operations versus customer experience:** Companies are not focusing on the areas that would have the greatest positive impact for transformation. The low response rates for priorities around creating digital experiences for either customers or employees (19.0%), sourcing digital technologies and services (19.3%), creating digital knowledge or literacy across the organization (22.4%), and breaking functional or departmental silos (23.5%) were all surprising results. Given that building strategies around customers, employee engagement, and organizational empowerment is a compelling way to foster a unifying purpose and shared sense of urgency for transformation, we would have expected these to be areas of greater need and priority.
- **Perception versus reality:** Most companies state that they need to both retrain most of their personnel and hire digital talent from the market. Despite this, the vast majority of companies believe they will own and drive digital efforts directly, only utilizing external parties a small percentage of the time. We believe the reality to be one of forging effective long-term partnerships, as making wholesale changes to talent acquisition and access models must become the new norm to create successful digital transformations. While most companies plan to replace and/or augment people with technology, getting there will not be done with internal resources carrying the bulk of the load.

ESSENTIAL GUIDANCE

Borrowing from de Geus' four findings for long-term success, organizations must leverage technologies, strategic partners, their own management systems, and people to fully address the requirements of becoming digitally transformed by and through the following:

Have a clear sense of your own digital identity and develop a complete digital vision and strategy, including the business model, goals, measures, and underlying core competencies required. Determine which elements of your strategy will be managed internally and which will be better achieved by working with partners.

Align to the rapidly changing world around you by understanding how digital is transforming markets and where you need and want to compete.

Have a strong tolerance for new ideas and be open to new ways of thinking, while also cultivating (through either internal or external resources) the ability to execute those ideas at the speed and scale demanded by today's markets. Developing change management competencies and organizing yourself for learning and collaboration across employee teams, functions, and external partners will also be essential.

Measure the journey and outcomes, including process cycle times, degree of automation, and the desired outcomes, while also being mindful of time to value and getting there in a sustainable fashion.

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