



FUTURUM RESEARCH

2018 DIGITAL TRANSFORMATION INDEX

MAY 2018

DANIEL NEWMAN
Principal Analyst

OLIVIER BLANCHARD
Senior Analyst

Published: H1 2018

www.futurumresearch.com

TABLE OF CONTENTS

- 3** About Futurum Research
- 3** Introduction
- 4** Executive Summary
- 5** Digital Leaders, Adopters, Followers, and Laggards: Using Attitudes towards Technology adoption to benchmark the Digital Transformation Journey.
- 6** Opportunity vs Threat: Connecting attitudes towards technology disruption to Digital Transformation performance.
- 8** Snapshot of the last three years: Technology disruption, Digital Transformation, and business performance.
- 10** Three Year Outlook: Patterns of behavior, and why it pays to be a winner.
- 12** Technology Disruption's impact on job creation: Digital Leaders vs. Digital Laggards.
- 14** Identifying Digital Transformation Leaders in the Organization.
- 15** Identifying primary contributing factors to Digital Transformation success within the organization.
- 16** Identifying human obstacles to Digital Transformation success across the organization.
- 17** Identifying institutional obstacles to Digital Transformation success across the organization.
- 19** Key operational steps that help drive Digital Transformation success among Digital Leaders.
- 21** Competent leadership, digital literacy, and laying the foundations of technology-driven competitiveness in the age of disruption.
- 22** Gauging an IT department's agility (or lack thereof): The value of identifying a key factor in Digital Transformation failure before it becomes permanent.
- 23** Ten Core Digital Transformation Technologies: Readiness, Focus, and Priorities for 2018 and beyond.
- 26** Conclusions and Key Findings
- 28** Appendix: Demographic Information

INTRODUCTION

About Futurum Research

Futurum Research provides research, insights and analysis to the market that help tie leading and emerging technology solutions to strategic business needs. The purpose behind each of our reports is to help business executives and decision-makers gain a better understanding of the tech-

nologies driving digital transformation, connect the dots between the practical business requirements of digital transformation and the forces that impact employees, customers, markets and experiences, and take appropriate action regarding critical digital transformation opportunities.

Welcome to Futurum's 2018 Digital Transformation Index.

In H2 2017, Futurum surveyed over 1,000 North American and Western European companies ranging from 50 to 50,000 employees, and asked them to share their thoughts about technology disruption and Digital Transformation. We were interested primarily in identifying attitudes towards the impact that technology disruption may have had on their ability to adapt to change and remain competitive. We were also interested in gauging the impact of technology disruption on job creation, business performance in the last three years, future competitive outlook (next 3 years), operational agility, and shifting attitudes towards technology and Digital Transformation. By conducting this study, We also sought to identify traits, factors and patterns

that would help us understand why some companies seem better equipped than others when it comes to adapting to change, establishing market leadership despite rapidly changing conditions, and achieving success through internal Digital Transformation programs.

Lastly, our study allowed us to gauge the relative importance of ten key technology categories currently driving both technology disruption and Digital Transformation initiatives, and establish an eighteen-month investment prioritization outlook for those categories.

For a detailed demographic breakdown of our respondents' professional roles, see Appendix.



Executive Summary

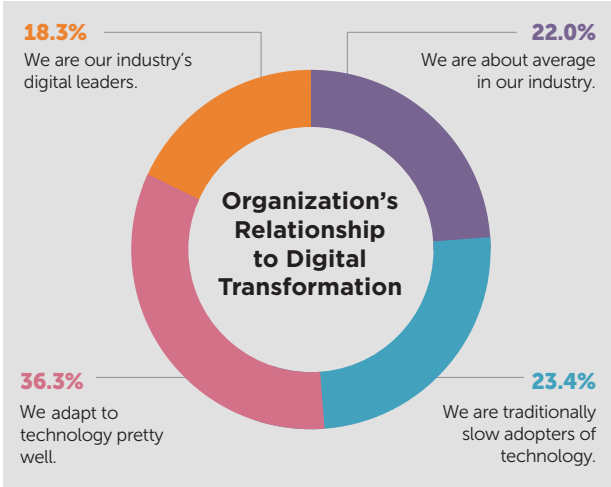
- 76.6% of companies describe their relationship with technology and digital transformation as generally average or above average. 23.4% of companies admit to being slow technology adopters and/or laggards.
- 70% of companies consider their CEOs' practical understanding of new technologies to be adequate or above average. Meanwhile, 30% of companies still express concern about their CEOs' practical understanding of new technologies.
- IT, Customer Care, and Marketing departments tend to score better than other departments when it comes to their ability to adapt to technological change.
- Conversely, HR, Legal, and Manufacturing are most likely to be considered slow to adapt to technological change.
- Only 50.4% of companies express a positive outlook when asked about technology disruption. 25.1% aren't sure yet, and 24.4% feel that it poses a serious threat to their survival.
- Looking back on the last 3 years, 50.4% of companies report that technology disruption has had a positive impact on their business, while 30.7% report that the impact of technology disruption had a negative impact on their business. 18.9% reported no noticeable change.
- 64.5% of companies feel positive about their ability to adapt to technological disruption in the next 3 years, while 35.4% of companies are worried about their ability to adapt to technology disruption for the same time period.
- 67.8% of companies report that technology disruption has had a neutral-to-positive impact on job creation, with 37.3% reporting a net increase in job creation because of it. 31.3% of companies report that technology disruption has had a negative impact on job creation. Among them, 15.7% report that technology disruption has been "a job killer."
- Only 34.4% of companies report that their CEO has appointed a Chief Digital Transformation Officer role to oversee their technology transition.
- 41.4% of companies report having a dedicated Digital Transformation team in place.
- Inadequate budgets and company culture are the two most common obstacles to effective digital transformation.
- As many as 20% of all departments are considered unable to adapt to technology disruption.
- Only 10.9% of Digital Transformation is currently driven by line employees, signaling a potential issue with employee engagement regarding digital transformation initiatives.

Digital Leaders, Adopters, Followers, and Laggards: Using Attitudes towards Technology Adoption to Benchmark the Digital Transformation Journey.

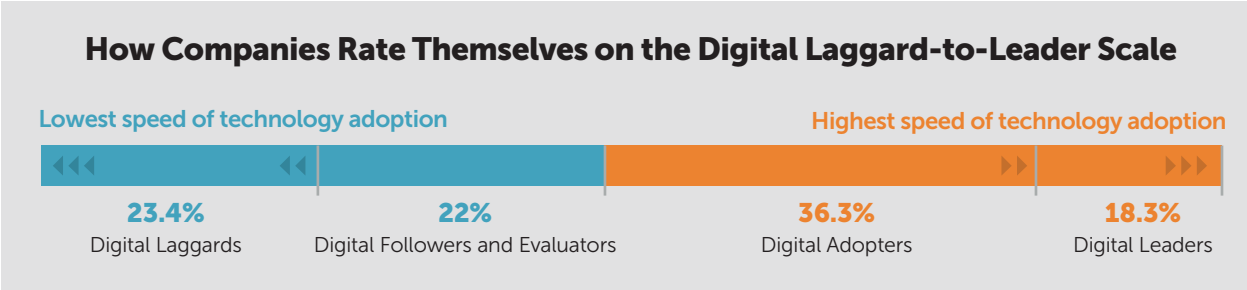
Data from our study signals a generally positive view of technology adoption in the business sector, but one in four businesses still struggles with technology adoption and digital transformation.

The breakdown: 18.3% of respondents feel that their companies qualify as digital leaders (the highest technology adoption quadrant, or top tier). 36.3% feel that their company adapts to technology pretty well. 22% feel that their company is about average for their industry. Lastly, 23.4% feel that their company is traditionally slow to adapt to new technologies.

Plotted along a spectrum, this data suggests that 18.3% of companies regard themselves as Digital Leaders, 36.3% regard themselves as Digital Adopters, 22% regard themselves as Digital Followers, and 23.4% regard themselves as Digital Laggards.



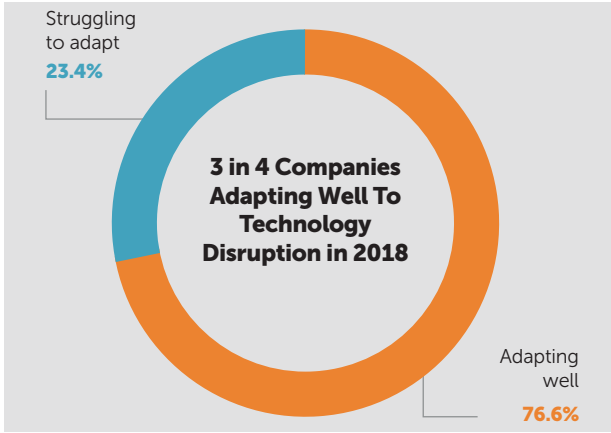
COPYRIGHT © 2018 FUTURUM RESEARCH



We note that in the aggregate, these numbers suggest that despite differences in pace of adoption and agility, 76.6% of companies feel that they are adapting well to technology disruption. Only 23.4% of companies are struggling to adapt to change.

While a 76.6% positive outlook regarding technological adaptation is encouraging, we are concerned that nearly 1 in 4 businesses still struggles with technology adoption in 2018.

Factors contributing to this challenge will be covered later in this report.



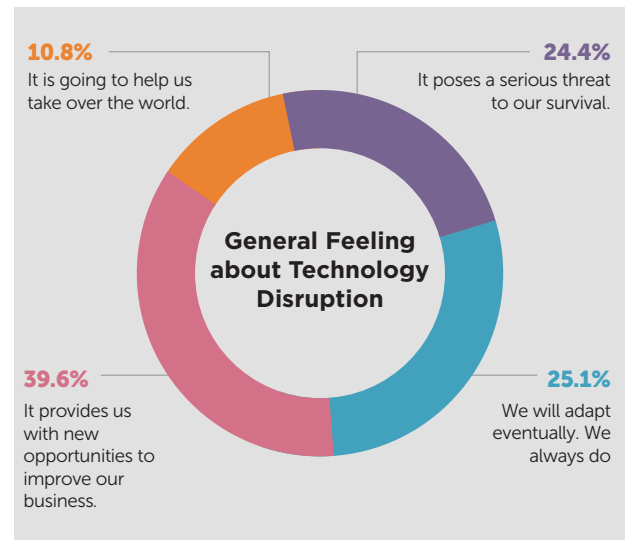
COPYRIGHT © 2018 FUTURUM RESEARCH

Opportunity vs Threat: Connecting attitudes towards Technology Disruption to Digital Transformation Performance.

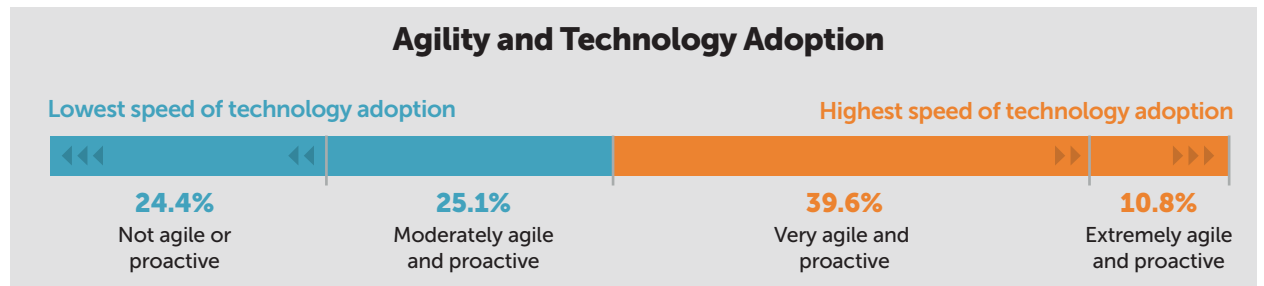
Data from our study also reveals a generally positive feeling towards technology disruption, but one in four businesses still struggles to adapt to and thrive from technology disruption.

The breakdown: 10.8% of respondents feel that technology disruption is a vehicle by which their companies will become industry leaders. 39.6% feel that digital disruption provides their organization with new opportunities to improve their business. 25.1% feel confident that their companies will eventually adapt to technology disruption. Lastly, 24.4% of companies feel that technology disruption poses a serious threat to their survival.

Plotted along the same spectrum as before, this data suggests that 10.8% of companies are extremely agile and highly proactive when it comes to technology adoption, 39.6% are very agile and proactive when it comes to technology adoption, 25.1% are moderately



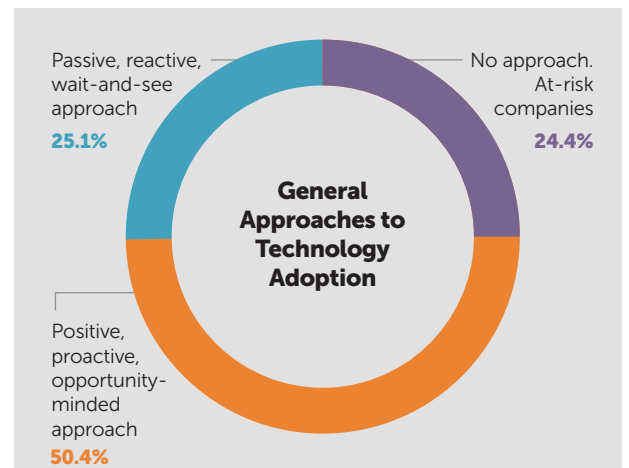
COPYRIGHT © 2018 FUTURUM RESEARCH



COPYRIGHT © 2018 FUTURUM RESEARCH

agile and reactive when it comes to technology adoption, and 24.4% of companies are neither agile nor reactive when it comes to technology adoption.

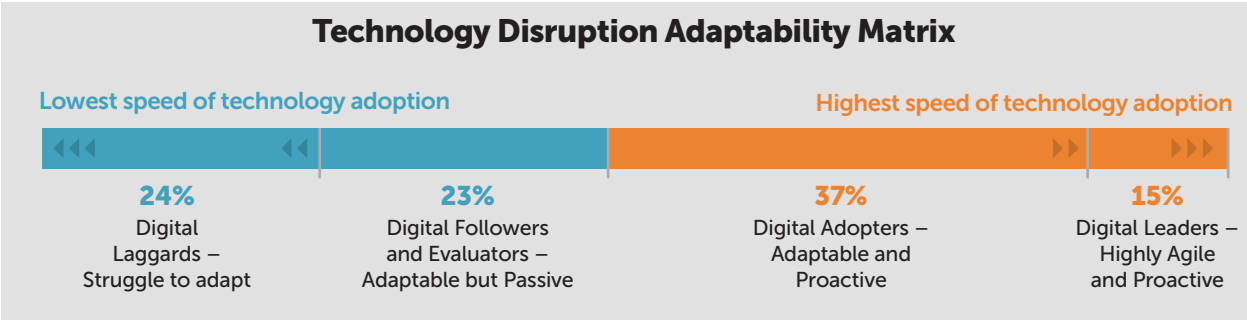
We note that, in the aggregate, 50.4% of companies have a positive, proactive, opportunity-minded perspective with regard to technology disruption. Conversely, 25.1% of companies take a mostly passive, reactive, wait-and-see approach to tackling digital disruption. Lastly, 24.4% of companies are at risk of not surviving successive waves of technology disruption.



COPYRIGHT © 2018 FUTURUM RESEARCH

When we overlay data from our first two questions, we arrive at a basic adaptability matrix in which roughly 15% of companies are highly agile, proactive digital leaders, roughly 37% of companies are adaptable, proactive digital

adopters, roughly 23% of companies are passive digital followers, and 24% of companies are digital laggards struggling to adapt to technology disruption or execute on critical Digital Transformation initiatives.

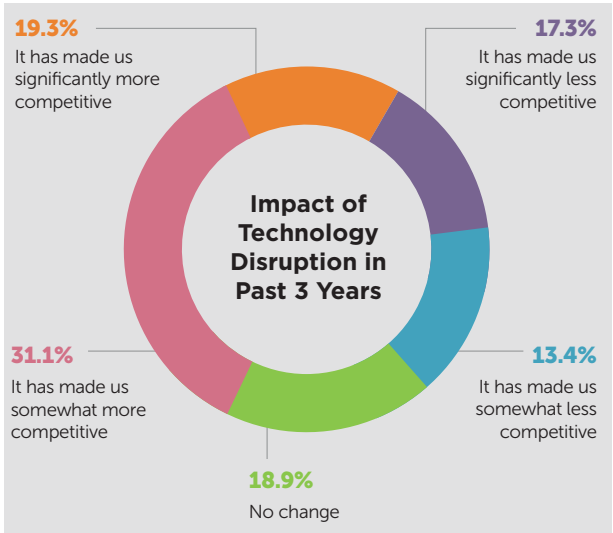


Snapshot of the last three years: Technology Disruption, Digital Transformation, and Business Performance.

When asked how the pace of technological change impacted their business in the last 3 years, 69.3% of companies signaled that the impact had been either neutral or positive. 30.7%, or nearly one in three companies, signaled that the impact had been negative.

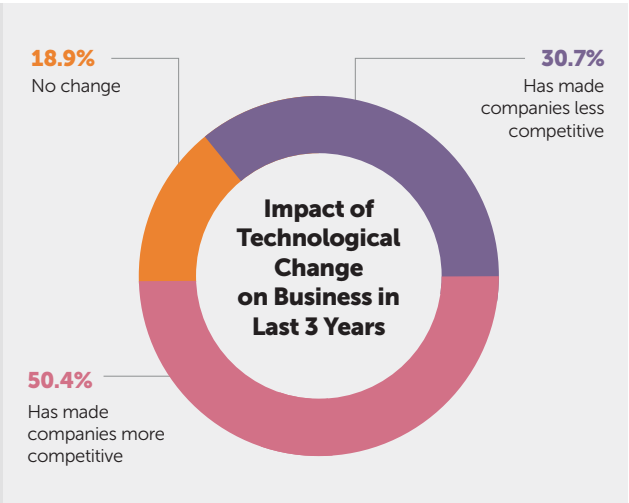
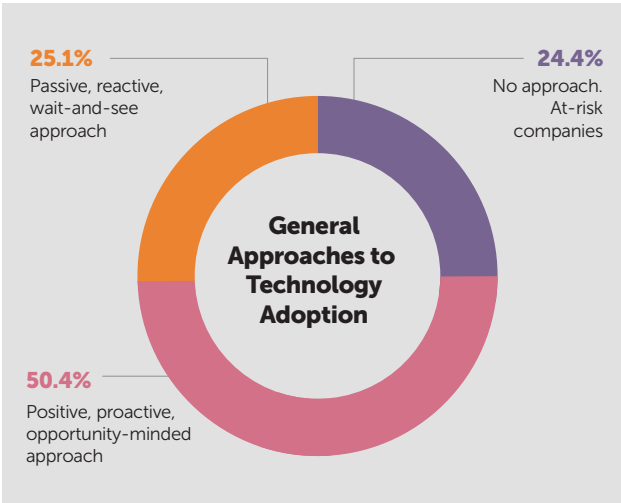
The breakdown: 19.3% of companies feel that the pace of technological change (and therefore, their ability to keep up with the pace of change) has made them significantly more competitive in the last three years. An impressive 31.1% responded that overall, it had made them somewhat or moderately more competitive. 18.9% of companies felt that the pace of technological change had no discernable impact on their competitiveness in the last three years. 13.4% of companies reported that the pace of technological change had made them somewhat less competitive in the last three years. Lastly, 17.3% of companies reported feeling significantly less competitive.

In the aggregate, these numbers tell us that 50.4% of businesses are comfortable enough with the pace of technological change in the last three years that they have already leveraged it to become more competitive. Note that this number exactly matches the 50.4% of companies with a positive, proactive, opportunity-minded perspective with re-



COPYRIGHT © 2018 FUTURUM RESEARCH

gard to technology disruption, which we identified earlier in this report.



COPYRIGHT © 2018 FUTURUM RESEARCH

The 18.9% of companies reporting no change in competitiveness (attributable to the pace of technological change in the last three years) are consistent with the passive, reactive, slow-to-adapt group dubbed previously defined as Digital Followers. It stands to reason that because this group's technology adoption cycles are slower to mature and scale than those of the 50.4% group (Leaders and Adopters) changes in competitiveness would take longer to materialize. This suggests to us that slow and passive adoption of new technologies (and associated processes and methods) serve to equalize a company's technology ecosystem relative to its industry rather than differentiate that company from it.

Furthermore, this suggests that the window of opportunity (for companies with a proactive approach to digital and technology adoption) to gain a competitive advantage in their industry must generally fall well inside of three years.

This is a critical insight for business leaders and change management planners regarding the value of technologically proactive leadership and operational agility: The faster an organization is able to Digitally transform, and the greater its ability to match the pace of technology disruption, the more likely that organization is to surge ahead of its competitors. Based on our data, 50.4% of companies already do this well, and roughly 15-20% of companies do this extremely well.

Lastly, our data informs us that 30.7% of organizations have failed to keep up with the pace of technological change in the last three years. That is nearly one in three companies reporting that they are not equipped to change and adapt with sufficient speed (or at all) to remain competitive in their respective industries. While these businesses are in the minority, nearly one in three businesses reporting an inability to keep up with the pace of change is no small problem.

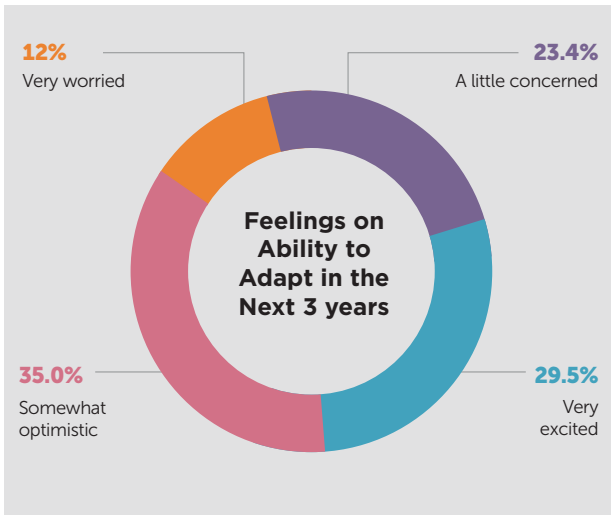


Three Year Outlook: Patterns of behavior, and why it pays to be a winner.

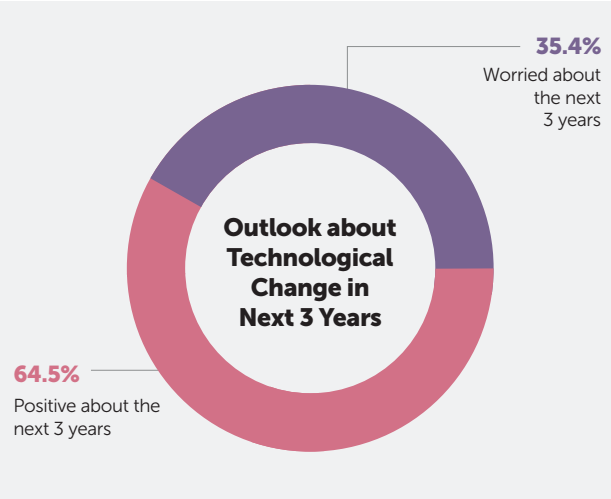
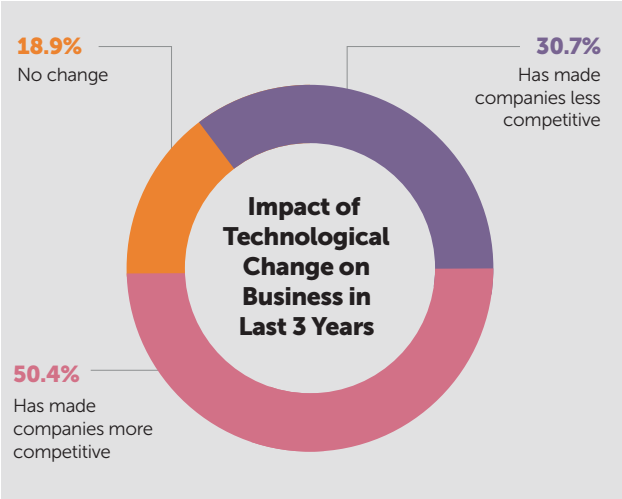
64.5% of companies report being optimistic about their ability to keep up with technological change over the course of the next three years. Conversely, 35.4% of companies admit to being concerned about their ability to keep up.

The breakdown: 29.5% of companies report being very excited about the next three years, while 35% report being somewhat or cautiously optimistic. On the other end of the outlook spectrum, 23.4% report being somewhat concerned about their ability to keep up with the pace of change for the next three years, and 12% report being very worried.

We immediately note a parallel 2:1 ratio of positive to negative previously seen in our question about the ability to keep up with the pace of change in the previous three years. We do, however, note a shift between attitudes towards adaptability in the previous three years versus adaptability in the next three years.



COPYRIGHT © 2018 FUTURUM RESEARCH



COPYRIGHT © 2018 FUTURUM RESEARCH

We can see, for instance, that the 50.4% proactive and adaptable group (companies that successfully leveraged technology disruption to improve their competitive outlook in the last 3 years) grows to 64.5% when companies are asked about how well they are likely to adapt to the same forces over the course of the next 3 years. That is a 14.1% gap, moving in the direction of improved adaptation.

Conversely, we see that that the 30.7% group (companies that failed to keep up with the pace of change in the last three years) grows to 35.4% when asked to consider the impact of the same forces over the course of the next three years. That is a gap of 4.7%, moving in the direction of failure to adapt quickly enough to keep pace. Note the absence of a “no change” option in the set of replies available to our study’s participants. We wanted them to commit to a positive or negative outlook rather than give them an opportunity to retreat to the safety of a neutral reply, which would have told us nothing.

What does this shift tell us about how organizations are tackling the dual challenges of reacting to technology disruption and executing on effective internal Digital Transformation initiatives?

First, it tells us that 3 out of 4 organizations currently falling in the Digital Follower group are moving towards the Digital Adopter group. Only 1 in 4 organizations currently falling in the Digital Follower group expect to slip into the Digital Laggard group.

Second, it tells us that unless something changes, companies currently falling in the Digital Laggard group feel that it is highly unlikely that they will be able to turn things around fast enough to move up to the Digital Adopter group in the next three years. That degree of pessimism from this group is understandable but concerns us all the same.

Third, the data suggests a significant expectation among Digital Adopters that they will evolve into Digital Leaders in the next three years. Case in point: When asked if the pace of change had made them more or less competitive in the last three years, 31.1% of companies reported that they felt



somewhat more competitive, and 19.3% reported that they felt significantly more competitive. When asked about the next three years, 35% of companies report that they expect to be somewhat more competitive (a modest 3.9% increase), but a whopping 29.5% expect to be significantly more competitive (an increase of 10.2% compared to their performance in the last 3 years). Whether or not the shift from Digital Adopter to Digital Leader over the course of the next three years follows that +10.2% expectation is unknown, but it does suggest that companies which have already enjoyed positive outcomes from their ability to adapt to technological change feel confident in their ability to accelerate and expand their Digital Transformation efforts.

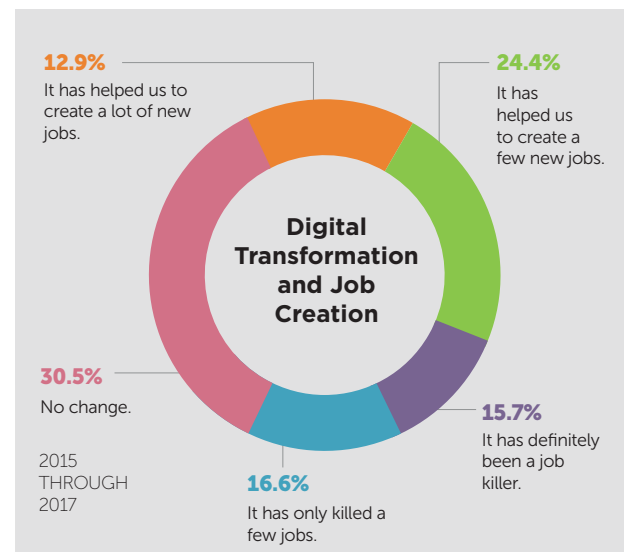
In other words, companies that are already in the process of learning how to leverage Digital Transformation to score wins are learning how to win better and faster. Conversely, companies that are still struggling to adapt to change and cannot seem to deploy effective Digital Transformation initiatives quickly enough, are falling further and further behind.

Technology Disruption's impact on job creation: Digital Leaders vs. Digital Laggards.

When asked if technology disruption has been directly responsible for creating or killing jobs in their organization, 67.8% reported that its impact had been either neutral or positive, while 32.3% reported that they had experienced net negative job growth as a result of technology disruption.

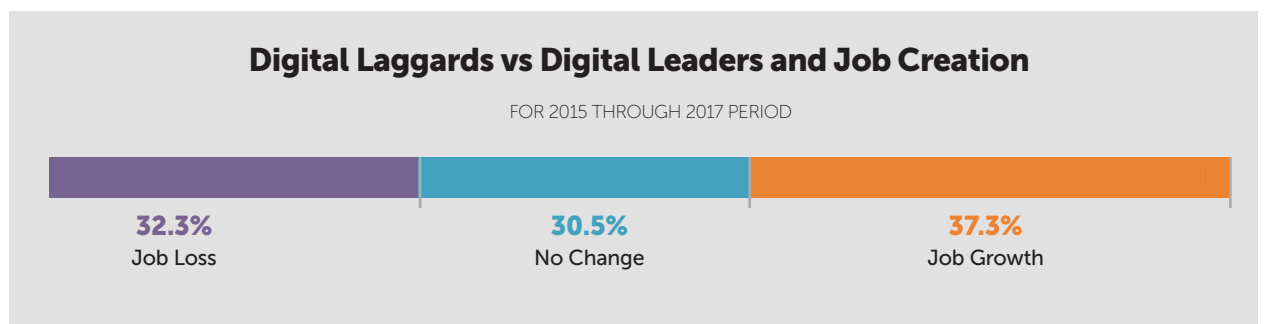
The breakdown: 12.9% of organizations reported a significant increase of new jobs due to technology disruption. 24.4% reported a moderate increase in net new jobs. 30.5% reported no impact. 16.6% reported moderate job loss. 15.7% reported that technology disruption had been a significant job killer.

Looking at the impact of technology disruption from a job creation vs. job loss perspective adds an interesting dimension to the subject of Digital Transformation and technology adoption. We find, however, that the 2:1 ratio already observed in previous answers turns up here as well. Note the parallel between the 69.3% of businesses reporting a neutral or net positive impact from technology disruption over the course of the last three years with the 67.8% found here. Likewise, compare the 30.7% of companies reporting a net negative impact from technology disruption over the course of the last three years to the 32.3% of companies reporting job erosion because of technology disruption. The pattern holds.

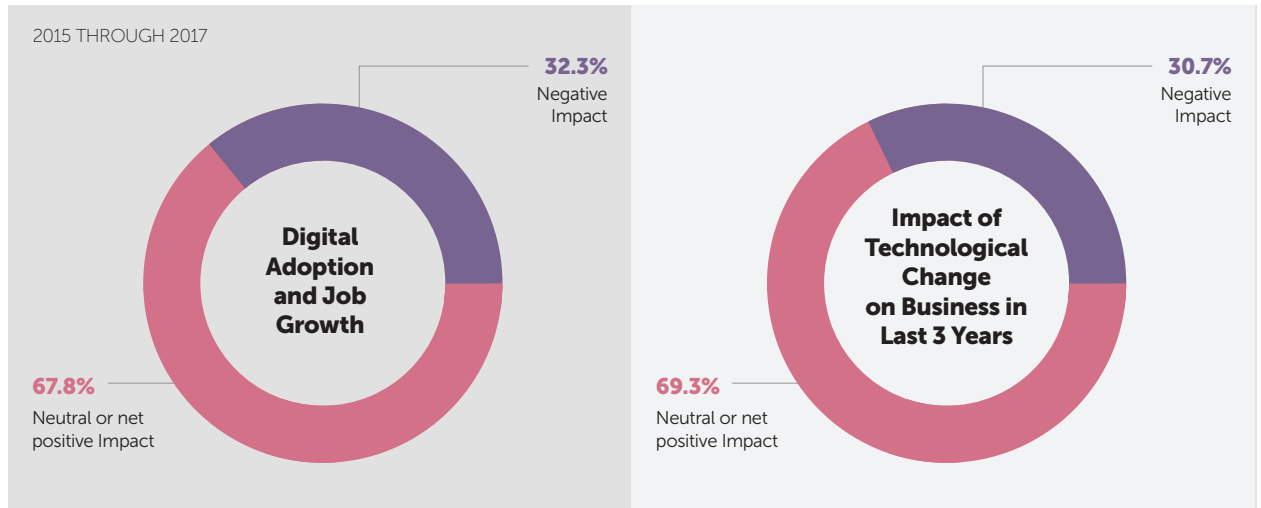


COPYRIGHT © 2018 FUTURUM RESEARCH

What this tells us is that one can draw a nearly straight line between an organization's inability to adapt to change (and turn technology disruption into new business opportunities) and job erosion at that company.



COPYRIGHT © 2018 FUTURUM RESEARCH



COPYRIGHT © 2018 FUTURUM RESEARCH

We do note a far less linear relationship between effective Digital Transformation and net new job creation, however. You will recall that 19.3% of companies reported that technology disruption had made them significantly more competitive over the course of the last three years. And yet, only 12.9% of companies report that technology disruption has helped them create a significant amount of new jobs. That's a gap of 6.4 points. While not massive in scope, that gap caught our eye all the same.

31.1% of companies reported that they had become somewhat more competitive because of technology disruption over the course of the last three years, but only 24.4% of companies report technology disruption creating of a moderate number of jobs. That is a gap of 6.7%.

The sorts of operational efficiencies that typically result from effective Digital Transformation initiatives help account for this asymmetry: Smart

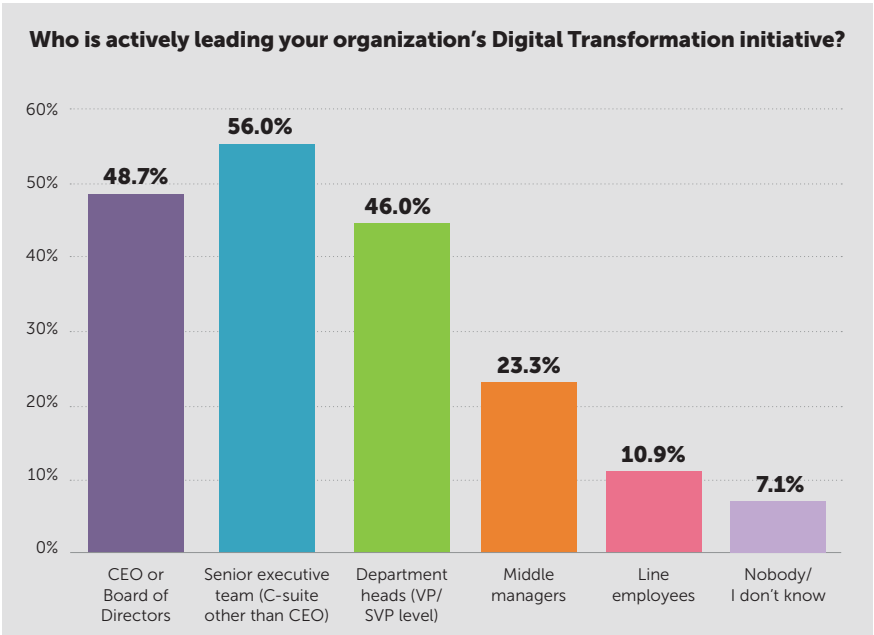
automation, powerful analytics tools, and more intuitive collaboration software generally streamline processes, eliminate unwanted redundancies, and increase productivity without necessarily requiring a hiring increase. While some companies may see their business grow in such a way that more hires become necessary, other companies may be able to increase their revenues (or simply become more profitable) through Digital Transformation while remaining hire-neutral.

The data suggests that while companies becoming less competitive because of digital disruption may suffer a consistent pattern of job erosion due to their inability to compete, companies that become more competitive because of digital disruption may not experience an increase in net new jobs. This suggests that while job creation is a significant economic indicator in general, it may not be well suited to gauge the effectiveness of Digital Transformation programs.

Identifying Digital Transformation Leaders in the Organization.

56% of respondents report that Senior executives are leading their organization's Digital Transformation initiative. Only 48.7% report that their CEO or Board of Directors are leading it, and only 46% report that their department heads are actively leading Digital Transformation programs in their departments.

The Breakdown: 56% report that senior executives (C-level other than the CEO) are actively leading their company's Digital Transformation programs. 48.7% assign that active leadership role to the CEO and/or Board of Directors. 46% assign it to their department heads (SVP and VP levels). Only 23.3 name their Middle Managers as active leaders in those programs, and only 10.9% point to line employees. 7.1% either don't know, or report that no one seems to be in charge of Digital Transformation.



COPYRIGHT © 2018 FUTURUM RESEARCH

Our first observation is that leadership with regard to Digital Transformation programs seems to be evenly split between the CEO, Senior Executives, and department heads. That's a good sign. Taking into account differences in culture, structure, and management styles between one organization and the next, we aren't surprised to see a healthy mix of change management leadership with regard to Digital Transformation. It also isn't surprising to see that senior executives appear to be leading Digital Transformation programs at a higher rate than CEOs. (CEOs tend to delegate, and as we will discuss later in this report, a significant percentage of organizations have dedicated Digital Transformation czars and teams in place, freeing CEOs to focus on running their companies.) This data doesn't surprise us. We also aren't surprised to see that middle managers and line employees are

not driving Digital Transformation at as high a rate as senior management. This is a sign of operational maturity we find generally healthy.

Contrast this data with the early days of Social Media programs, for instance, when line employees, middle managers, and department heads drove a disproportionate percentage of those programs' implementation (and senior management tended to be skeptical and even actively hostile to Social Media initiatives).

While we are concerned that as many as 7.1% of respondents were not able to identify anyone in their organization actively leading a Digital Transformation initiative, we are encouraged by the fact that 92.9% could point to a specific individual or group.

Identifying primary contributing factors to Digital Transformation success within the organization.

The three factors currently most helpful in helping organizations effectively drive Digital Transformation are: access to great technology partners, company culture, and support from managers.

Breakdown: When asked which factors contributed the most to their organization's effective execution of a Digital Transformation strategy, 51.6% of respondents pointed to their access to great technology partners. 49.8% pointed to company culture. 49.5% pointed to support from managers. 48.2% nodded to knowledgeable employees. Surprisingly, only 39.7% pointed to adequate budget allocation, and 39.5% pointed to senior leadership's vision.

In other words, what this data suggests is that the right partnerships, combined with change-friendly company cultures and supportive management, are far more important to the successful deployment and implementation of Digital Transformation and technology adoption initiatives than budgets and strategic vision. This is interesting for two reasons:

The first is that, contrary to conventional thinking, Digital Transformation doesn't have to be expensive. Cloud-based solutions with intuitive, device-agnostic interfaces are far less expensive to implement and deploy than the types of enterprise-class business and technology solutions that were the norm in the 3G era. While many companies may elect to invest in hybrid IT models that still require some front-heavy in-house hardware (from servers to enterprise telco systems), most of the digital business tools available to them today are accessible through the cloud, and by way of devices their employees may already own themselves. In other words, financial and technical obstacles that would have, just a decade ago, been regarded as prohibitive for most small to medium-sized companies, have now been commoditized and democratized through the Cloud and ubiquitous fast-speed wireless technologies.



COPYRIGHT © 2018 FUTURUM RESEARCH

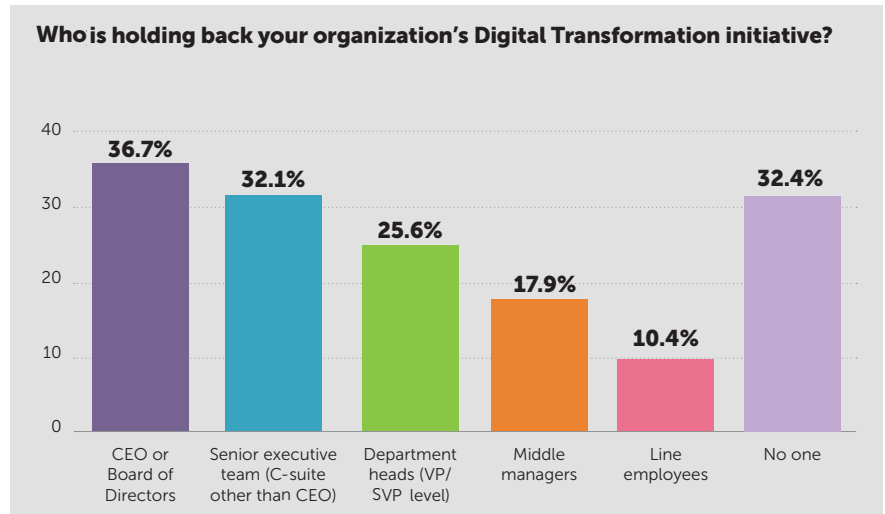
The second reason we find this data is interesting is that it points to organizational traits that companies looking to improve their ability to adapt to change (and consequently evolve into Digital Adopters and Digital Leaders):

- 1) The ability to develop partnerships with companies that can provide much-needed resources, expertise, and solutions to their otherwise limited ecosystem.
- 2) The willingness to collaborate with a network of partners to complement their in-house capabilities and grow their business.
- 3) The ability to develop and nurture a culture of collaboration, innovation, and continuous improvement.
- 4) An emphasis on prioritizing operational agility and change management.
- 5) The ability to develop and nurture a culture of collaborative management, in which managers listen to their staff, work to support them, and give them the resources they need to help them drive the right kinds of outcomes.

Identifying human obstacles to Digital Transformation success across the organization.

When asked who is responsible for holding back their organization's Digital Transformation, over one in three respondent indicated that no one in their organization was getting in the way of their Digital Transformation. A nearly-equal amount of respondents, however, pointed to their own CEO.

The Breakdown: 36.7% of respondents report that the person most responsible for holding back their organization's Digital Transformation initiatives is their own CEO and/or Board. 32.1% point to their senior executives. 25.6% put the blame squarely on department heads (SVP and VP level roles). 17.9% point to middle managers. 10.4% blame line employees. Conversely, 34.2% report that no one at their organization is holding back the successful implementation of their Digital Transformation initiatives.



COPYRIGHT © 2018 FUTURUM RESEARCH

Few data sets help explain what separates Digital Leaders from Digital Laggards better than this one. On one end of the spectrum, we have the 34.2% of companies reporting that no one in their organization is interfering with their Digital Transformation initiative, and that everyone is onboard. On the other end of the spectrum, 36.7% of companies report that their own CEO is standing in the way of their survival. One doesn't need to look much further than that to understand why some companies can't seem to embrace technological change while other companies do. Change-averse and technology-averse CEOs may be responsible for as many as 36.7% of companies currently struggling to adapt to technology disruption.

You will recall that 30.7% of companies report having become less competitive in the last three years because of their inability to adapt to technology disruption. 32.3% report having suffered some degree of job erosion as a result of their inability to keep up with the pace of technological change. 35.4% report being concerned about their ability to remain competitive in the next three years because of the rapid pace of change. These numbers aren't all that surprising when data shows that 36.7% of people signal that their own CEO is standing in the way of their organization's Digital Transformation, and

32.1% of people signal that their company's senior executives are also standing in the way. There is a clear pattern here, which points to failures of leadership when it comes to technology adoption, change management, and Digital Transformation.

I don't think we would be wrong to suggest that perhaps these same failures of leadership may be at the heart of the difference between companies that exhibit the five traits common among Digital Adopters and Digital Leaders, and the absence of those traits in companies that tend to fall into the Digital Laggard group, and the lowest performing quadrant of the Digital Follower group. If culture matters, leadership matters. Experience tells us that failures of culture are first and foremost failures of leadership. This data seems to support that hypothesis.

One last point of note: The 34.2% of organizations reporting that no one at their organization is holding them back when it comes to Digital Transformation correlates relatively well with the nearly 30% of businesses reporting being very excited about their ability to benefit from technology disruption in the next three years, and the 37.3% of companies reporting that technology disruption has, at least so far, been a catalyst for job creation.

Identifying institutional obstacles to Digital Transformation success across the organization.

The biggest obstacles keeping organizations from executing on their Digital Transformation initiatives are inadequate budgets, company culture, and resistance from managers.

The breakdown: When asked what factors most negatively impact an organization's ability to deliver on its Digital Transformation initiatives, 39.3% of respondents point to inadequate budgets. 32.9% blame company culture. 29.1% point to resistance from managers. 28.8% blame inadequate training and/or skills among employees. 24.9% indicate that the lack of technology partners is a key factor in their failure. A whopping 17.8% report that the company's leadership is confused about what to do. Only 23.1% of respondents indicate that no institutional hurdles stand in the way of the successful implementation of their Digital Transformation initiatives.

The 23.1% of respondents who report no hurdles are Digital Leaders and the upper quadrant of Digital Adopters.

Once we remove Digital Leaders and top tier Digital Adopters from our data, what we are left with are companies struggling to fully realize their Digital Transformation potential: Mid-to-low-tier Digital Adopters, Digital Followers, and Digital Laggards. Only they would have institutional obstacles to report, regarding their ability to adapt to Technology Disruption.

It is interesting to note that top among their answers is the lack of adequate budgets. When companies were polled about the primary contributors to Digital Transformation success, budgets came in fifth on the list, or second-to-last. Having established, using data provided by Digital Leaders, that adequate budgets are minimally important (relative to partnerships, cul-



COPYRIGHT © 2018 FUTURUM RESEARCH

ture, and effective management) to successful Digital Transformation implementations, we must conclude that companies struggling to find success with Digital Transformation may suffer from a fundamental misunderstanding regarding what success factors they should prioritize. The fact that organizations that struggle with technology adoption incorrectly consider inadequate funding to be a primary cause of their failure, when technology adoption leaders clearly indicate that budgets are minimally important to their success, represents a significant insight into how flawed assumptions can result in flawed action plans.

A similar conclusion can be drawn from the fact that only 24.9% of companies struggling with Digital Transformation seem aware of the importance of developing strong technology partnerships. (Compared to 51.6%.) The 26.7 point gap between how Digital Leaders and Digital Laggards gauge the importance of strategic partnerships may hold one of the keys to the difference between them.

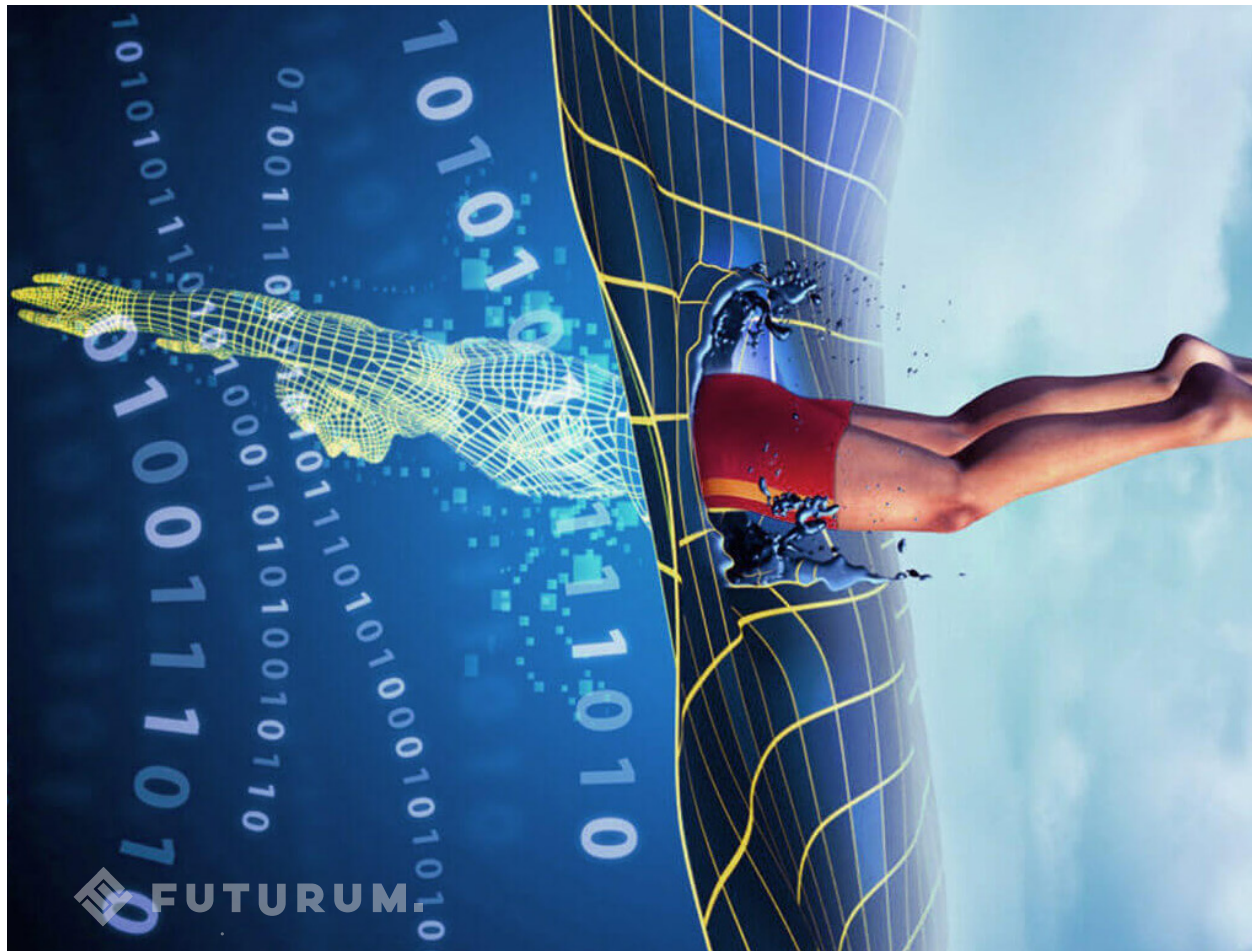
Conversely, the high percentage of respondents pointing to company culture and resistance from managers as key culprits in their inability to execute on Digital Transformation initiatives is consistent with data collected from Digital Leaders: Culture and management participation combined can make or break an organization's ability to adapt to technology disruption.

The fact that 17.8% of organizations report that their leaders are too confused about technology disruption to know what to do about it may help explain why 17.3% of businesses report having become significantly less competitive because of technology transformation in the last 3 years.

Fact: An organization whose leadership has no idea

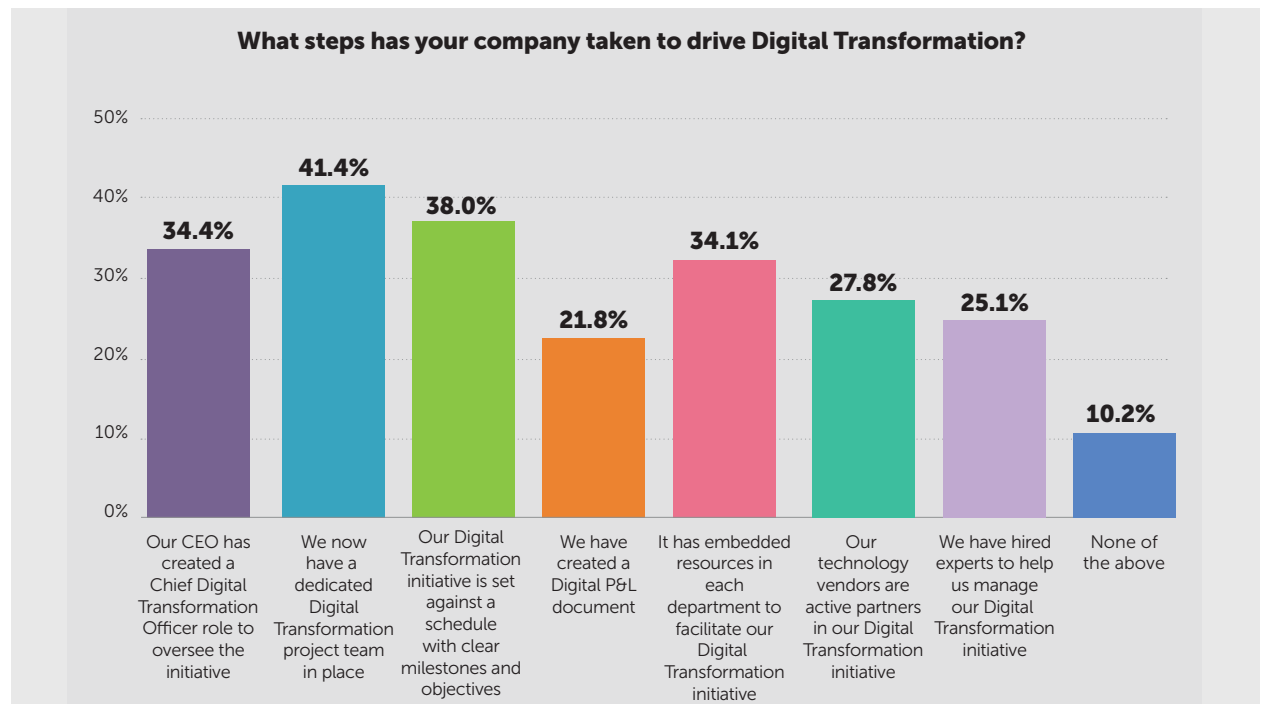
how to tackle technology disruption is unlikely to be capable of reacting adequately to it.

What troubles us most, looking at this data, is that as many as 17.8% of companies whose leaders were already confused about technology disruption three years ago are no less confused about it today. Held up against the 35.4% of companies expressing concern about their ability to adapt to technological change over the course of the next three years, this suggests that as many as half of them may not survive the next 36 months of technology disruption. ed from Digital Leaders: Culture and management participation combined can make or break an organization's ability to adapt to technology disruption.



Key operational steps that help drive Digital Transformation success among Digital Leaders.

Fewer than 50% of organizations have a dedicated Digital Transformation project team in place today. Fewer than 40% of organizations have set their Digital Transformation initiatives against any kind of schedule, with clear milestones and objectives, or have a Chief Digital Transformation Officer role in place.



COPYRIGHT © 2018 FUTURUM RESEARCH

Here is a sobering statistic: Only 41.4% of companies we surveyed currently have a dedicated Digital Transformation project team in place. That's nearly nine points shy of half of all companies. If you want to understand why only 50.4% of companies were able to leverage technology disruption to become more competitive in the last three years, look no further than how few companies have assigned dedicated staff to drive and manage their Digital Transformation programs.

To make matters worse, only 34.4% have a Digital Transformation czar, or dedicated senior executive level overseer for their Digital Transformation program. The absence of such a position is likely to affect a company's ability to develop and maintain crucial high level partnerships with technology vendors, assign appropriate resources and funds to Digital Transformation initiatives, hold departments and business division accountable, and properly coordinate the organization's efforts.

Not surprisingly, only 38% of organizations have set their Digital Transformation initiatives against any kind of schedule, with clear milestones and objectives, which translates into little to no accountability and no momentum behind the program for 62% of organizations.

Moreover, only 21.8% of organizations currently have a Digital Transformation P&L document in place.

These numbers help explain why only 29.5% of companies report being very confident about their ability to benefit from the pace of change over the course of the next three years, and why fewer than 20% of companies overall currently qualify as Digital leaders.

Only 34.1% of IT departments have embedded resources in various other departments to facilitate the implementation of Digital Transformation initiatives.

The fact that nearly two thirds of companies have not yet tasked their IT departments with deploying assets into key adjacent departments (Engineering, Marketing, Product Development, Sales, HR, Manufacturing, etc.) reflects a widespread lack of operational maturity with regard to Digital Transformation.

As a rule of thumb, unless an organization is too small to have a true departmental structure, Digital Transformation cannot be achieved if the IT department behaves as a silo. The digitization of business demands that organizations either embed or develop IT resources and capabilities in every department and business function. Therefore, organizations whose IT departments have not embedded or deployed technical resources to adjacent departments are unlikely to be able to properly roll out cohesive Digital Transformation initiatives.

This data point suggests that currently, regardless of any other factors, only 34.1% of businesses have an adequate structure in place to properly execute a company-wide Digital Transformation initiative.

Fewer than 30% of organizations' technology vendors are currently active partners in their Digital Transformation initiatives.

Earlier in this report, we established the importance to companies looking to effectively tackle technology disruption of developing strong operational ties with their technology partners. Only 27.8% of companies we surveyed are developing their technology vendors into technology partners. This percentage is, once again, consistent with the 29.5% of companies (Digital Leaders and top performers in the Digital Adopter group) expressing a high degree of confidence in their ability to become much more competitive over the course of the next three years.

As many as 10% of organizations have no Digital Transformation initiatives to speak of.

All we can say about this statistic is that if a business has failed to act in spite of years of successive waves of technology disruption, either that business is immune to technology disruption, which can happen in a few niche markets, or it will likely not survive much longer.



Competent leadership, digital literacy, and laying the foundations of technology-driven competitiveness in the age of disruption.

Based on our research, a whopping 69.9% of CEOs are rated “comfortably to extremely knowledgeable” when it comes to their practical (applied) understanding of new technologies.

Seeing that over two thirds of CEOs are considered to be highly knowledgeable with regard to new technologies is extremely encouraging. It leaves only 22.8% of CEOs with only a basic understanding of new technologies, and 7.2% of CEOs with no understanding of new technologies at all. Again, these numbers line up with the 2:1 ratio of organizations demonstrating an ability to adapt to technological disruption (including those slow to do so) to organizations suffering from a dangerous inability to adapt to change.

How would you rate the following leaders in your organization’s practical understanding of new digital technologies?				
	Not knowledgeable at all	Some basic knowledge	Comfortably knowledgeable	Extremely knowledgeable
CEO	7.2%	22.8%	34.2%	35.7%
COO	5.5%	23.8%	40.3%	30.4%
Chief Marketing Officer (CMO)	5.9%	23.8%	38.3%	32.0%
Chief Technology Officer (CTO)	4.2%	12.2%	35.0%	48.6%
Chief Customer Care Officer	6.7%	24.0%	40.3%	29.1%
Head of Sales	8.1%	26.4%	37.9%	27.7%
Head of HR	10.9%	27.7%	31.8%	29.5%

COPYRIGHT © 2018 FUTURUM RESEARCH

These recurring patterns in our data seem to support the hypothesis that a company’s ability to tackle technology disruption is intimately connected to its leadership’s practical understanding of new and emerging digital technologies. The more technologically literate or savvy the CEO, the more likely it is that the company will fall in the Digital Leader group. Conversely, the less technology literate the CEO, the more likely it is that the company will fall in the Digital laggard group. Consequently, a company’s ability to adapt to technological change may possibly be inferred from its CEO’s fluency (or lack thereof) with regard to digital technologies.

As a point of note, we want to highlight the fact that 16.4% of companies in our study reported that their own Chief Technical Officers have only ba-

sic to no knowledge of digital technologies at all. This data point is consistent with the 15-20% of businesses identified as Digital Laggards, and particularly with regard to the 17.3% of companies reporting that technology disruption has made them significantly less competitive in the last three years. It isn’t surprising to observe that organizations that hold on to their CTOs in spite of their inability to function as CTOs find themselves entirely unable to adapt to technology disruption. As obvious as this may seem to us, it would appear that as many as 17.3% of businesses, all Digital Laggards, have not yet connected the dots between their CTO’s questionable level of competence and their organization’s inability to remain competitive in the face of technology disruption. This is as inexplicable as it is unfortunate (and avoidable).

Gauging an IT department's agility (or lack thereof): The value of identifying a key factor in Digital Transformation failure before it become permanent.

Here again, we see where key departments' ability to adapt to technology disruption help drive some organizations towards digital leadership and others towards failure.

81.5% of IT departments, for instance, rate as somewhat-to-extremely agile. 14% of IT departments, however, rate as not very agile to not agile at all. Again, it isn't difficult to see how organizations whose IT departments rate as not agile are doomed to struggle with technology disruption and Digital Transformation.

Interestingly, this 14% figure being several points lower than most other data points attributed to Digital Laggards suggests that an IT department's agility may not be a primary factor in an organization's ability to adapt to change. Other factors, such as a technology-averse, change-averse, and even risk-averse leadership may play a far more significant role in an organization's inability to adapt to technology disruption. It is therefore possible that the impact

of a less-than-agile IT department may be felt more in its inability to successfully drive and execute a Digital Transformation program than in the organization's overall ability to adapt to change.

How would you rate your organization's various departments based on their ability to adapt to technological change?					
	Not agile at all	Not very agile	Somewhat agile	Extremely agile	Not applicable
IT	6.1%	7.9%	31%	50.5%	4.5%
Marketing	6.6%	10.6%	37.5%	40.8%	4.5%
Sales / Business Development	6.0%	12.3%	38.5%	38.0%	5.2%
Manufacturing / Logistics	7.3%	12.1%	32.5%	35.7%	12.3%
Customer Care	6.6%	11.7%	36.0%	43.4%	2.4%
Product Mgmt	6.3%	11.2%	36.5%	38.8%	7.2%
HR	9.2%	13.5%	38.9%	35.2%	3.2%
Legal	8.0%	14.6%	36.8%	35.5%	5.1%
Retail	8.6%	9.5%	32.5%	33.1%	16.3%

COPYRIGHT © 2018 FUTURUM RESEARCH

Ten Core Digital Transformation Technologies: Readiness, Focus, and Priorities for 2018 and beyond.

At last, we come to the technologies, or areas of technical focus, that companies pursuing Digital Transformation initiatives are incorporating into their evolving business ecosystems. First, we asked

the companies taking part in our study to gauge their organizations' readiness with regard to ten key technology categories, from mobile commerce to Artificial Intelligence. Here are the results:

Please rate your organization's current readiness relative to the following technology categories						
	We are not ready at all	We have long way to go	I feel pretty good about it	We are ahead of our competitors	We are masters of this tech	This tech does not apply to my industry
Mobile Commerce	7.2%	13.7%	24.1%	22.0%	19.4%	13.5%
Cloud Solutions	5.8%	14.4%	24.8%	25.3%	20.9%	8.8%
Bid Data /Big Compute	5.8%	14.0%	24.8%	26.4%	20.8%	8.2%
Cognitive Computing	8.3%	15.2%	25.6%	22.5%	17.4%	11.1%
IOT/IIOT/ Sensor Technology	9.5%	13.7%	22.8%	18.3%	19.9%	15.8%
3D Printing	14.4%	13.2%	19.4%	17.7%	16.3%	19.0%
VR/AR/ Virtual Tech	14.8%	15.1%	17.8%	18.3%	17.5%	16.5%
Robotics/ Automation	13.8%	15.2%	17.7%	17.4%	17.3%	18.6%
Agile Collaboration Tools	9.3%	13.8%	21.3%	23.1%	18.9%	13.6%
AI/Bots/Digital Assistants	12.8%	16.3%	18.8%	19.1%	16.8%	16.2%

COPYRIGHT © 2018 FUTURUM RESEARCH

At first glance, what this data reveals is the degree to which a technology's maturity and established value in an industry contributes to the overall level of readiness that organizations feel with regard to that technology. For instance, 72% of companies in our study report feeling generally positive or better with regard to Big Data. Similarly, 71% of companies feel the same about Cloud Solutions. Both of these technologies have been around, at scale, for many years now.

Conversely, we find that more nascent and emerging technologies, like Virtual Reality, Artificial Intelligence, and 3D Printing, score significantly fewer votes of confidence than their more mature brethren (53.7%, 54.7%, and 53.4% respectively).

Sandwiched between mature technologies that have

already achieved scale and emerging technologies that haven't quite yet matured is a set of intermediate technologies that seem to be fostering an increasing degree of confidence from the businesses that participated in our study. Mobile Commerce, for instance, scored an encouraging 65.5% confidence score, as did Cognitive Computing. Agile Collaboration software (products like Slack, Cisco Spark, and Microsoft Teams) scored a respectable 63.3%. These numbers will have to be weighed against next year's to be sure, but our expectation is that it won't be long before they close the gap with the kinds of scores obtained by Big Data and Cloud Solutions. Nothing we have seen indicates that any of these numbers will have any reason to fall lower than they are. The more viable the technology, the faster confidence scores in them are likely to rise.



An easy way to get a glimpse into how these ten technology categories are likely to scale over the next 12-18 months is to ask companies to rate their importance to their Digital Transformation initiatives (in other words, to ask companies to prioritize them against their limited resources in that timeframe). Here is what we learned:

75.2% of organizations rated Big Data as their technology investment priority. Second place fell to Cloud Solutions, with 72.9%. Third was mobile commerce, with 71.9%.

Note that in the previous section, Mobile Commerce was still an intermediate technology as it pertains to those same companies' degree of technology readiness. The emphasis being placed on Mobile Commerce going into the next 12 to 18 months signals that this technology category is approaching maturity

for the majority of businesses, much like Big Data and Cloud.

61.8% of companies rated Agile Collaboration as their fourth highest priority, followed by Cognitive Computing with 60.8%, the IoT with 57.4%, and Robotics and automation with 56.9%. Rounding out our ten technology categories, the lowest priority ratings fell to AI and Bots with 55.5%, VR/AR with 51.3%, and 3D Printing with 47.5%.

As a point of note, nine out of those ten technology categories are considered to be strong-to-high priorities for over 50% of the companies we surveyed. Only one fell below the 50% threshold: 3D Printing. And for a technology still considered somewhat niche outside of on-demand-printing applications, that it came close to being a strong priority for nearly half of the businesses we surveyed is a good sign.

Looking to the next 12-18 months, how would you rate the focus of your organization's Digital Transformation efforts relative to each of the following technology categories?

	No focus at all	Low priority	Strong priority	Highest priority
Mobility	7.3%	20.8%	44.4%	27.5%
Cloud-based Solutions	8.2%	19.0%	43.4%	29.5%
Big Data / Big Computing	7.0%	17.7%	44.7%	30.5%
Cognitive Computing	14.3%	24.9%	36.2%	24.6%
IOT / IIOT Sensor Technology	18.8%	23.8%	33.9%	23.5%
3D Printing	30.9%	21.5%	27.3%	20.2%
VR/AR/ Virtual Technologies	25.4%	23.3%	29.5%	21.8%
Robotics Automation	24.4%	18.7%	32.8%	24.1%
Agile Collaboration Tools	15.9%	22.2%	39.9%	21.9%
AI/Bots/Digital Assistants	23.0%	21.5%	31.6%	23.9%

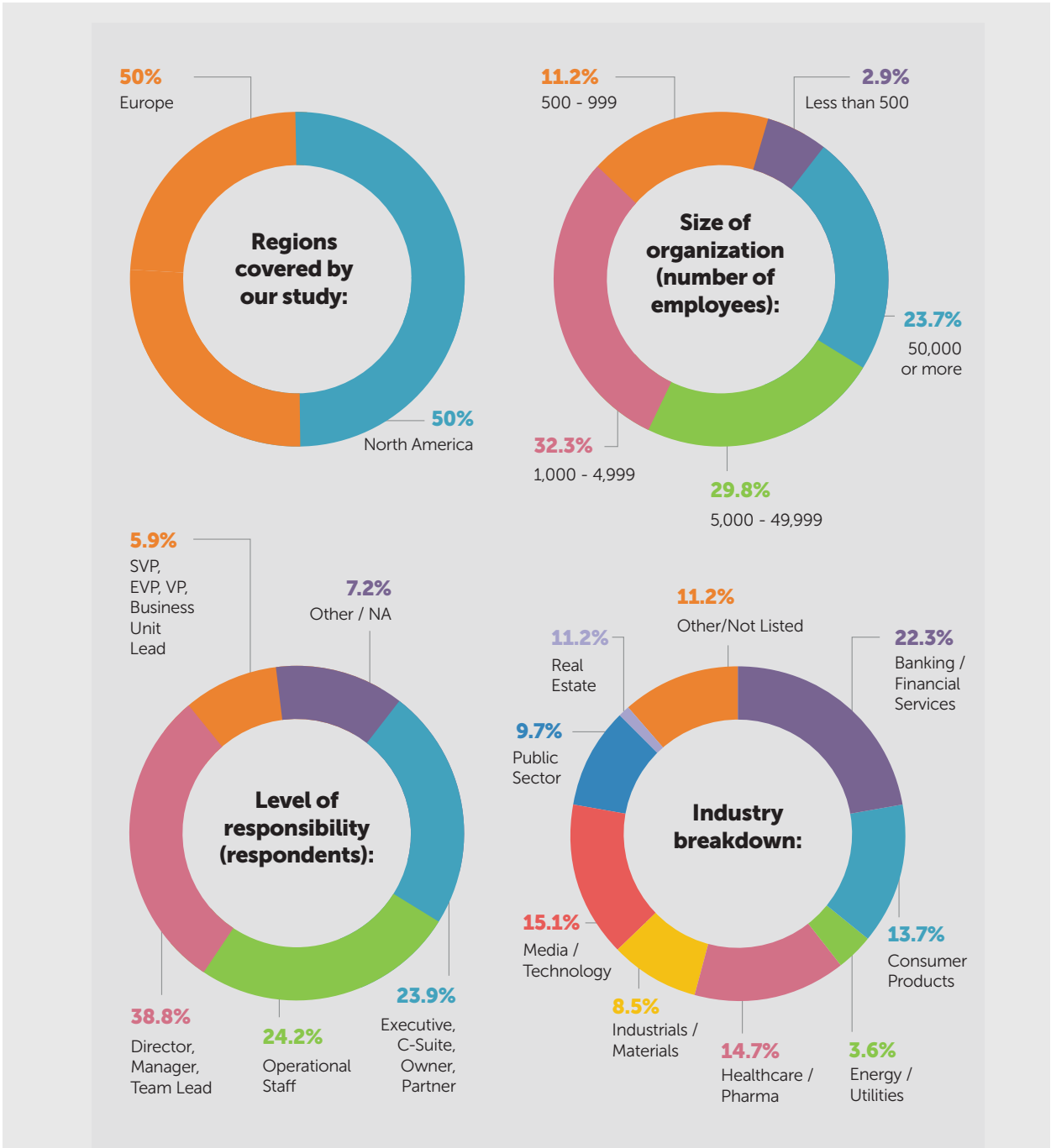
COPYRIGHT © 2018 FUTURUM RESEARCH

Conclusions and key findings:

- 2 out of every 3 companies appear to be generally capable of adapting to technology disruption inside of three years.
- Conversely, 1 out of every 3 companies is currently incapable of keeping up with the pace of technological change.
- Roughly 1 out of every 5 companies currently qualifies as a Digital Leader: a highly agile, technology-savvy company for whom technology disruption is a catalyst for growth.
- 64.5% of companies feel positive about their ability to adapt to technological disruption in the next 3 years, while 35.4% of companies are worried about their ability to adapt to technology disruption for the same time period.
- 67.8% of companies report that technology disruption has had a neutral-to-positive impact on job creation, with 37.3% reporting an increase in net new jobs. 31.3% of companies report that technology disruption has had a negative impact on job creation. Among them, 15.7% report that technology disruption has been “a job killer.”
- Roughly 1 out of every 5 companies currently qualifies as a Digital Laggard: an at-risk, change-averse, technology-challenged company unable to cope with technology disruption or the pace of change.
- Digital laggards appear to be characterized by the following cultural and operational traits:
 - Technologically-challenged CEOs and CTOs
 - An absence of planning, organization, and focus regarding Digital Transformation initiatives
 - An absence of goals, resources, and accountability regarding Digital Transformation initiatives
 - Siloed IT departments
 - Weak or ineffective technology partnerships
 - A management culture ill-suited to change
 - A senior leadership hostile to Digital Transformation and/or confused about technology disruption
 - An inability to understand the importance of agility and digital adaptation
 - Digital Leaders appear to be characterized by the following cultural and operational traits:
 - Technology-savvy CEOs and CTOs
 - A high degree of planning, organization, focus, and prioritization for Digital Transformation initiatives
 - Dedicated teams, senior executive leadership, and resources assigned to Digital Transformation Initiatives
 - Agile IT departments heavily embedded in adjacent departments
 - A strong ecosystem of technology partners
 - An employee-empowering management culture comfortable with change

- A senior leadership driven by technology though-leadership that actively drives and encourages Digital Transformation
- A proactive approach to technology adoption and digital leadership
- 70% of companies consider their current CEOs' practical understanding of new technologies to be adequate or above average.
- 30% of companies currently express serious concern about their CEOs' practical understanding of new technologies.
- Roughly 10% of companies currently have no Digital Transformation program of any kind.
- The relative market maturity of a technology category is the strongest indicator of a company's comfort level with that technology. Big Data, Cloud Solutions, and Mobile Commerce are the three technology categories that companies currently express the most confidence in.
- Technology investments most likely to be prioritized in the next 12 to 18 months by Digital Transformation programs are: Big Data, Cloud Solutions, Mobile Commerce, Cognitive Computing, Agile Collaboration, and the IoT.
- Technology investments least likely to be prioritized in the next 12 to 18 months by Digital Transformation programs are: 3D Printing, VR/AR, AI and Bots, and Smart Automation.

Appendix: Demographic Information



COPYRIGHT © 2018 FUTURUM RESEARCH