DIGITAL VORTEX 2019

Continuous and Connected Change

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KEY INSIGHTS

- Digital disruption is in full swing, with over 88% of respondents reporting that digital disruption will have a major or transformative impact on their industries.

- There is a widespread belief that more than one-third of the top 10 incumbents in each industry will be displaced by digital disruption in the next five years.

- The five industries most vulnerable to digital disruption remain unchanged since 2015, although their relative positions have changed: Media & Entertainment, Technology Products & Services, Telecommunications, Retail, and Financial Services.

- The Transportation & Logistics industry has experienced the largest jump in vulnerability to digital disruption, moving from 11th to 7th place.

- While the number of companies claiming to have a digital strategy has jumped from 54% to 75%, the majority acknowledge that it is fragmented; only 22% of survey respondents claim to have a coordinated digital strategy.

- Just over one-third of respondents feel that their organization's leadership is actively responding to digital disruption.

- Most organizations have increased their efforts to actively respond to digital disruption, except for very large multinational companies.

- A stark perception gap exists between senior leadership and lower-level managers regarding digital transformation efforts – whereas 39% of C-level leaders believe they are actively responding to digital disruption, this perception decreases significantly among mid-management levels.

INTRODUCING THE DIGITAL VORTEX 2019

The Digital Vortex 2019 study reveals large differences among industries in vulnerability to digital disruption. Like a vortex in nature, the Digital Vortex illustrates the power, speed and unpredictability of change linked to digital disruption.

This study is the third in a series of biennial studies launched in 2015 by the Global Center for Digital Business Transformation (DBT Center), an IMD and Cisco initiative. The opinions of over 1,200 business leaders across the globe were collected from January 2017 to March 2019 to better understand attitudes and behaviors towards digital disruption. These opinions were supplemented with data from public sources.

The Digital Vortex 2019 study confirms that all 14 industries have moved closer to the center of the vortex, where the velocity and magnitude of change are highest. The positions of many industries have shifted between 2017 and 2019 (see Figure 1).[1]

FIGURE 1: DIGITAL VORTEX INDUSTRY RANKING

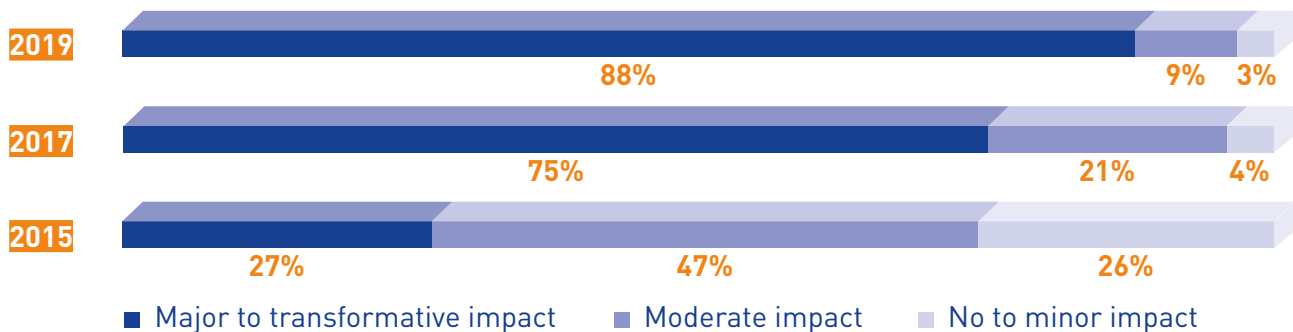| 2019		RANKING	2017
Media & Entertainment	←	1	Media & Entertainment
Technology Products & Services	←	2	Technology Products & Services
Telecommunications	↖ +2	3	Retail
Retail	↙ -1	4	Financial Services
Financial Services	↙ -1	5	Telecommunications
Hospitality & Tourism	↖ +3	6	Consumer Packaging Goods
Transportation & Logistics	↖ +4	7	Education
Education	↙ -1	8	Professional Services
Professional Services	↙ -1	9	Hospitality & Tourism
Consumer Packaging Goods	↙ -4	10	Manufacturing
Healthcare & Pharmaceuticals	↖ +2	11	Transportation & Logistics
Manufacturing	↙ -2	12	Real Estate
Energy & Utilities	↖ +1	13	Healthcare & Pharmaceuticals
Real Estate & Construction	↙ -2	14	Energy & Utilities

THE DIGITAL TRANSFORMATION GAP

Digital disruption has grown to become a major force across industries. Our data reveals that 88% of executives believe that digital disruption will have a major or transformative impact on their industries, compared with only 27% in 2015 (see Figure 2).

FIGURE 2: A SIGNIFICANT RISE IN THE IMPACT OF DIGITAL DISRUPTION

How significant will the impact of digital disruption be on your organization?

	Major to transformative impact	Moderate impact	No to minor impact
2019	88%	9%	3%
2017	75%	21%	4%
2015	27%	47%	26%

- ■ Major to transformative impact
- ■ Moderate impact
- ■ No to minor impact

In addition, digitally driven market change has captured the attention of C-level executives. In 2015, digital disruption was not deemed worthy of board-level attention in about 45% of companies. By 2019, only 12.4% felt that way.

Although the perceived urgency to transform has never been greater, the ability of companies to respond varies significantly. Only 34% of respondents claim their leaders are actively responding to digital disruption, a slight rise from 31% in 2017. Moreover, despite the fact that organizations will spend over $2 trillion on digital transformation by 2022,[2] most respondents believe that their leaders are not responding appropriately (38%) or are taking a "follower" approach (28%) to digital disruption (see Figure 3).

FIGURE 3: A SMALL CHANGE IN ATTITUDES TOWARDS DIGITAL DISRUPTION

The majority of my company's leaders...

Do not recognize or are not responding appropriately
- 2019: 38%
- 2017: 41%

Are taking a "follower" approach
- 2019: 28%
- 2017: 29%

Are actively responding to digital disruption
- 2019: 34%
- 2017: 31%
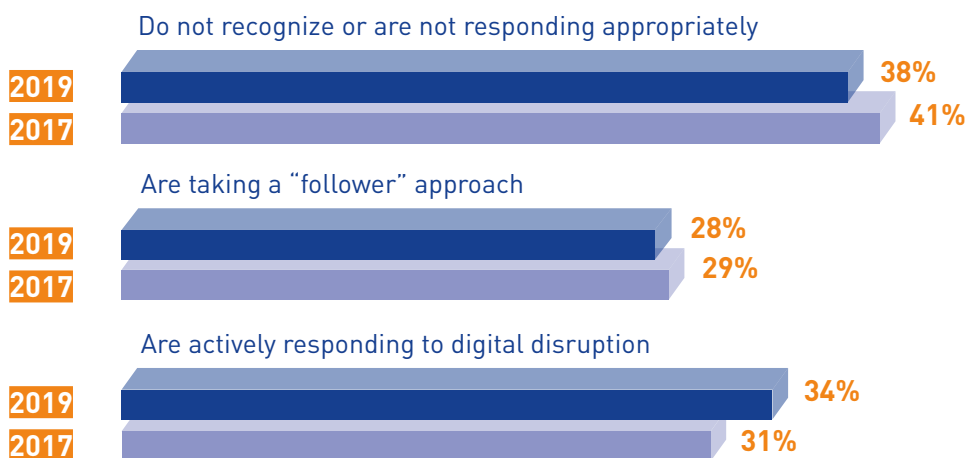
This should not come as a surprise. When it comes to digital transformation, the gap between aspiration and reality is stark. Recent research suggests that a mere 5% of digital transformation efforts meet or exceed expectations.[3] What is going wrong? Our data suggests that digital transformation programs are floundering largely because they fail to take into account the continuous and connected nature of change.
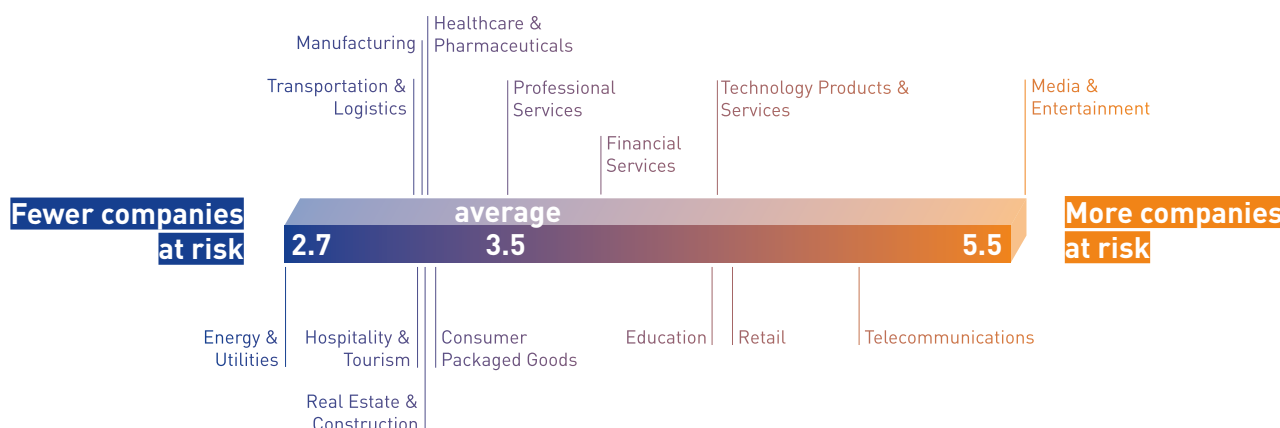
CONTINUOUS CHANGE IS ACCELERATING

All too often, executives see transformation in terms of a momentary revolution or as a challenge to be overcome. Like a caterpillar, the organization undergoes a metamorphosis and, after a good deal of effort, emerges as a butterfly. The reality, however, is that digital disruption and transformation are not singular events. They are perpetual and continuous cycles, which are accelerating in speed and complexity.

The Digital Vortex 2019 study reveals that executives recognize the disruptive nature of change. As Figure 4 illustrates, executives believe that more than one-third of the top 10 incumbents in their industry will be displaced by digital disruption in the next five years. In the past five years alone, iconic incumbents such as Dell Computer, Safeway and DuPont are no longer part of the S&P 500 and have been replaced by Facebook, Under Armor and Gartner, Inc. Companies drop off the S&P 500 for a variety of reasons. They can be overtaken by a faster-growing company, fall below the market cap size threshold or enter into a merger or acquisition. In the current environment, it is estimated that nearly 50% of the S&P 500 will be replaced over the next 10 years.[4]

FIGURE 4: A LARGE VARIANCE IN FUTURE DISRUPTION BY INDUSTRY

In your industry, how many companies will lose their place in the top 10 due to digital disruption over the next five years?

Manufacturing
Healthcare & Pharmaceuticals
Transportation & Logistics
Professional Services
Technology Products & Services
Media & Entertainment
Financial Services

Fewer companies at risk — average — More companies at risk
2.7   3.5   5.5

Energy & Utilities
Hospitality & Tourism
Consumer Packaged Goods
Education
Retail
Telecommunications
Real Estate & Construction

While corporate turnover serves as one barometer for industry change, the increasing emergence of highly valued disruptive startups and intense merger and acquisition activity will accelerate industry turbulence. The recent and predicted displacement of incumbents serves as a reminder that companies cannot endure in the long term without reinventing themselves.

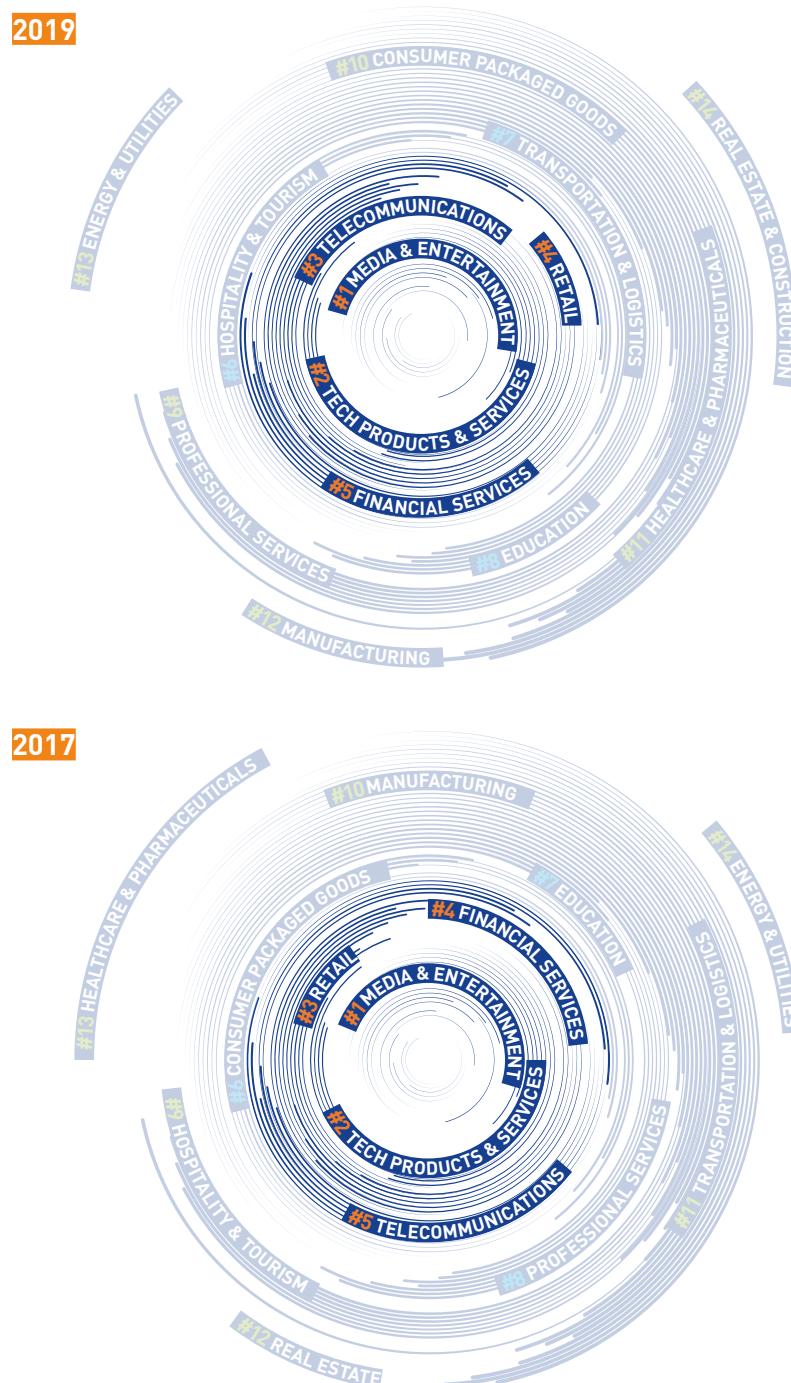# Business reinvention in the center of the vortex

As companies move closer to the center of the Digital Vortex, the need for business reinvention will accelerate. Indeed, 41% of executives acknowledge that their organizations will be forced to reinvent themselves every 1-3 years due to competitive pressures, and 23% are prepared to do it every year.[5]

The pressure to reinvent is particularly acute for companies operating in the five industries closest to the center of the Digital Vortex: Media & Entertainment, Technology Products & Services, Telecommuni-

cations, Retail, and Financial Services (see Figure 5). Not only are their core products and services being digitized but they are also facing increasing pressure from new entrants.

The two industries in which incumbent churn is predicted to be the highest are Media & Entertainment, and Telecommunications. How can companies operating in these industries respond effectively?

FIGURE 5: SMALL CHANGES AT THE CENTER OF THE DIGITAL VORTEX

2019

#10 CONSUMER PACKAGED GOODS
#14 REAL ESTATE & CONSTRUCTION
#13 ENERGY & UTILITIES
#7 TRANSPORTATION & LOGISTICS
#6 HOSPITALITY & TOURISM
#3 TELECOMMUNICATIONS
#1 MEDIA & ENTERTAINMENT
#4 RETAIL
HEALTHCARE & PHARMACEUTICALS
#2 TECH PRODUCTS & SERVICES
#5 FINANCIAL SERVICES
#9 PROFESSIONAL SERVICES
#8 EDUCATION
#11 HEALTHCARE & PHARMACEUTICALS
#12 MANUFACTURING

2017

#10 MANUFACTURING
#14 ENERGY & UTILITIES
#13 HEALTHCARE & PHARMACEUTICALS
#4 FINANCIAL SERVICES
#8 EDUCATION
#3 RETAIL
#1 MEDIA & ENTERTAINMENT
CONSUMER PACKAGED GOODS
#2 TECH PRODUCTS & SERVICES
#5 TELECOMMUNICATIONS
#9 HOSPITALITY & TOURISM
PROFESSIONAL SERVICES
#11 TRANSPORTATION & LOGISTICS
#12 REAL ESTATE

Appetite for Media & Entertainment

The Media & Entertainment industry continues to be the most vulnerable to digital disruption, given fast-evolving consumer behaviors and attitudes. Today's audiences have drastically changed how they consume content. They are abandoning so-called legacy media for digital, streaming and mobile content. And a number of digital media players, such as Amazon, Netflix, Apple, Google and Hulu, are rising to meet the challenge.

Disney's recent announcement of a new streaming service, Disney+, reveals how legacy incumbents are responding. Although Disney is a relative latecomer to the direct-to-consumer video streaming market, the company could be well positioned to succeed given its rich catalogue of diverse content, strong brand and global customer base. However, the battle to dominate the streaming space is likely to be fierce.

Meanwhile, the growing adoption of new technologies, such as artificial intelligence (AI), enables new entrants to build innovative products. TikTok, the China-based media app for creating and sharing short videos, has snowballed in popularity over the world in just two and a half years. Its parent company, ByteDance, which operates several AI-enabled content platforms has become one of today's most valuable startups.[6]

Convergence in Telecommunications

The Telecommunications industry continues to face challenges, moving two places closer to the vortex center. Although the industry plays a crucial role in enabling the digital revolution by providing essential infrastructure, operators have struggled to launch and scale new business models to compete with new entrants with strong digital capabilities such as Apple, Google and a variety of over-the-top (OTT) voice calling and messaging providers such as WhatsApp and Skype.

Digital transformation is breaking down silos within the Telecommunications industry, giving rise to an integrated digital communications ecosystem. It is not yet clear how telecommunications operators can capture revenue opportunities "beyond the pipe" through the Internet of Things (IoT), digital services and new business models. Many telecommunications providers are starting to experiment with new cross-industry service creation and delivery models. For example, Orange, the largest telecom operator in France, acquired a 65% stake in French insurer Groupama's banking unit in 2016 and launched a 100% mobile-only bank in 2017. Deutsche Telekom collaborated with vertical industry partners to build its Qivicom smart home platform as an open ecosystem for living-service offerings.

The deployment of fifth-generation wireless technology (5G) in the next two years is likely to unleash a new wave of innovation and disruption fueled by advances in smart devices, augmented reality and real-time monitoring.

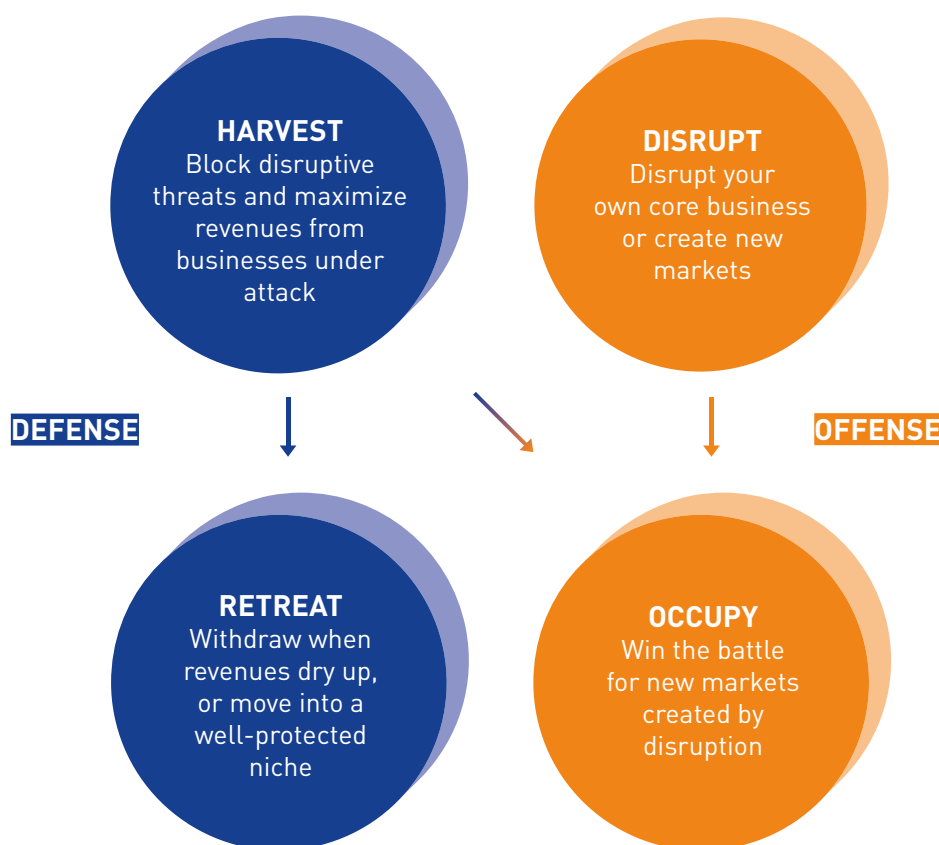# Competitive strategies at the outer vortex

Industries on the outer bands of the Digital Vortex have a different set of issues to tackle (see Figure 7). As they move towards the vortex center, they need to develop new competitive strategies. Many incumbents are saddled with cost structures and value chains inherited from an earlier era, leaving them with an outdated arsenal to compete against today's digital disruptors.

Incumbents can respond to digital disruption using a "strategic response playbook" consisting of offensive and defensive strategies (see Figure 6). Defensive strategies are used to maximize gains from declining businesses. A higher weighting on these strategies – harvest and retreat – is appropriate for industries on the outer edges of the Digital Vortex. These industries must protect their existing sources of revenue and profit. They may experiment with transformation, but too much focus on disruptive change may mean they risk neglecting the core.

Offensive strategies are used to create new value for customers using digital technologies and business models.[7] These strategies – disrupt and occupy – should be high on the agendas of industries close to the center of the Digital Vortex. They will need to quickly reinvent themselves to compete in a rapidly changing environment. All industries, however, will need to find the correct balance between defensive and offensive strategies.

FIGURE 6: STRATEGIC RESPONSE PLAYBOOK

HARVEST
Block disruptive threats and maximize revenues from businesses under attack

DISRUPT
Disrupt your own core business or create new markets

DEFENSE

OFFENSE

RETREAT
Withdraw when revenues dry up, or move into a well-protected niche

OCCUPY
Win the battle for new markets created by disruption

Two industries made the largest jump towards the vortex center between 2017 and 2019. Transportation & Logistics moved from 11th to 7th place, and Hospitality & Tourism jumped from 9th to 6th. (See Figure 7).

FIGURE 7: **LARGE CHANGES OUTSIDE THE CENTER OF THE DIGITAL VORTEX**
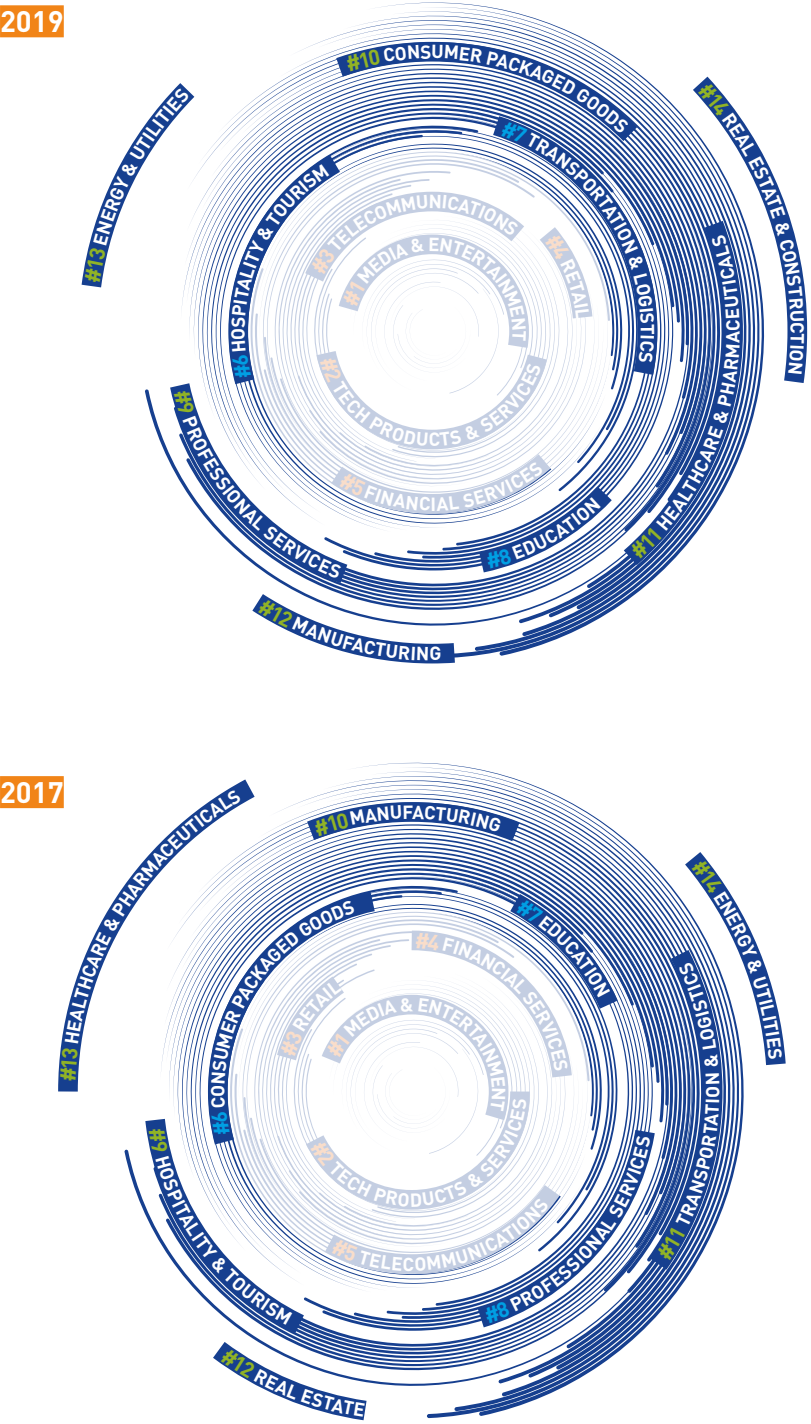
2019

2017

2017 #11
2019 #7 ↗ **+4**

The "Amazon effect" in Transport & Logistics

Technology and digitization are disrupting many processes across the transportation and logistics ecosystem, including shipment methods, supporting services and cargo management. This is driven, in part, by the "Amazon effect," or the promise of low-cost, two-day or same-day shipping.

According to recent studies, transport and logistics companies that have been able to flexibly allocate resources are more successful in generating a higher total return to shareholders.[8] For example, in a largely asset intensive business environment, Singapore Post has been undertaking a restructuring program, cutting costs in its high-margin domestic mail business

while making investments in the fast growing e-commerce logistics business.

These strategies are particularly far-sighted for Singapore Post, which is heavily impacted by demographic shifts of urban dwellers. By 2030, the United Nations predicts that there will be 41 megacities with populations of more than 10 million people, of which Singapore is one.[9]

Technological innovation in the last-mile delivery market of megacities using drones and the acceleration of robotic process automation are likely to gain ground.

2017 #9
2019 #6 ↗ **+3**

Customer focus in Hospitality & Tourism

The Hospitality & Tourism industry accounts for 10% of employment worldwide and is a fast-growing industry tied directly to the growth of consumption globally. New business models such as alternative accommodation (Airbnb, HouseTrip and HotelTonight) are challenging the conventional hospitality approach and forcing incumbents to look for innovative ways to increase revenue, lower costs and raise customer loyalty.

AccorHotels is an example of an incumbent undertaking an offensive strategy by launching Jo&Joe, a lifestyle brand blending the best of private rental, hostel and hotel formats. The concept grew out of an ambitious digital transformation strategy to revamp IT,

develop a strong focus on the customer, and innovate ways to streamline the customer experience. As part of its digital plan, flexible new internal working structures were created to foster innovation, flexibility and speed. "Accor is in the middle of a revolution [...]," acknowledges Sébastien Bazin, the CEO. "For 50 years, we have been doing things very well, but from now onwards, we are going to do things differently."[10]

As the Hospitality & Tourism industry continues its trajectory towards the center of the Digital Vortex, building and deploying digital capabilities will be critical to its success.


CONNECTED NATURE OF CHANGE

Are companies feeling positive about their future in the Digital Vortex?

While the majority of executives feel confident in their company's ability to leverage digital disruption in their favour, there are three industries that stand out as being more concerned about disruption: Hospitality & Tourism, Media & Entertainment, and Financial Services. Executives working in the Hospitality & Tourism industry, in particular, lack confidence in their ability to respond effectively to digital disruption. This concern corresponds with their industry's increased acceleration towards the vortex center (see Figure 8). The Media & Entertainment and Financial Services industries – both already close to the center of the vortex – express a high level of concern but also feel confident that they can respond effectively. Notably, the highest degree of confidence is observed in the Telecommunications and Energy & Utilities industries.

FIGURE 8: MOST INDUSTRIES ARE MORE CONFIDENT THAN CONCERNED
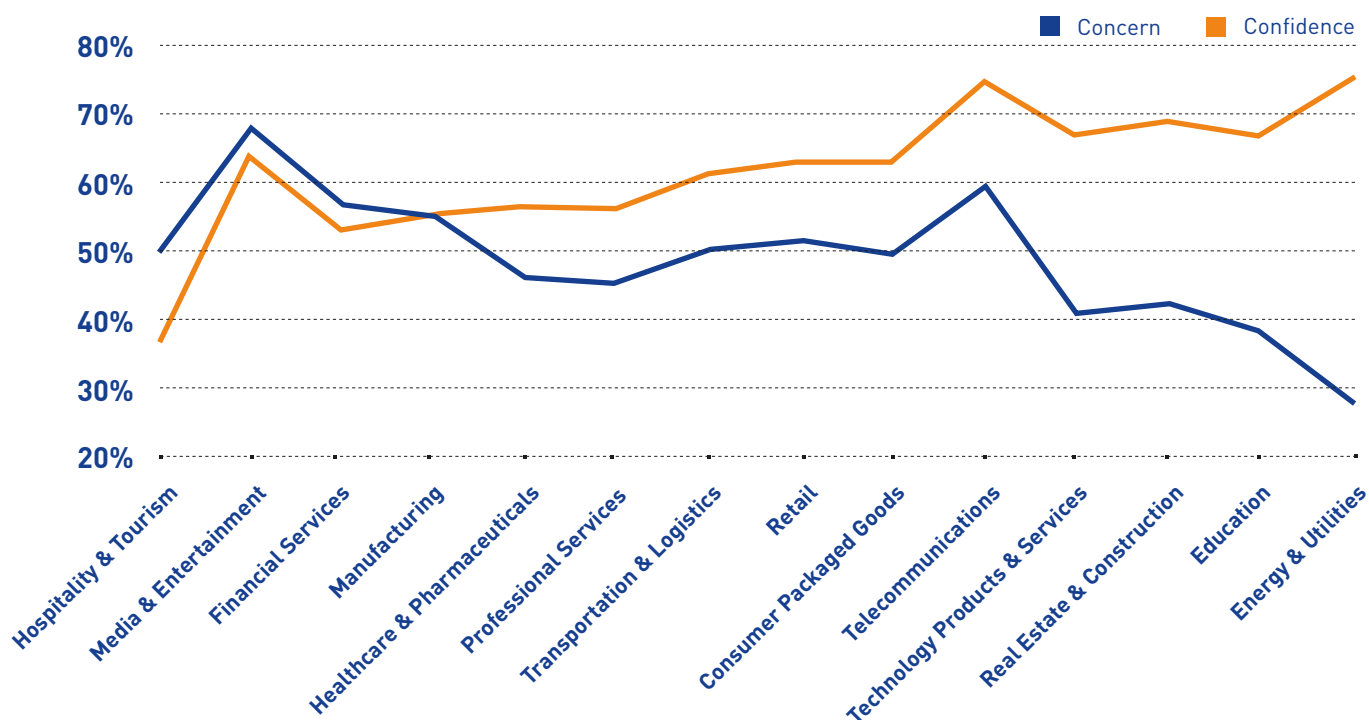
Overall, despite the majority of executives' confidence in responding effectively to digital disruption, there are some blind spots surrounding current transformation activities that could undermine an organization's ability to transform effectively.

A fragmented approach

While the number of companies claiming to have a digital strategy jumped from 54% in 2017 to 75% in 2019, most respondents acknowledge that their digital strategy is fragmented. In fact, only 22% of executives claim that they have a coordinated digital strategy (see Figure 9).

FIGURE 9: MOST DIGITAL STRATEGIES ARE FRAGMENTED

Do you have a digital strategy?

2019

22%

25%

53%

- Yes, coordinated
- Yes, but fragmented
- No
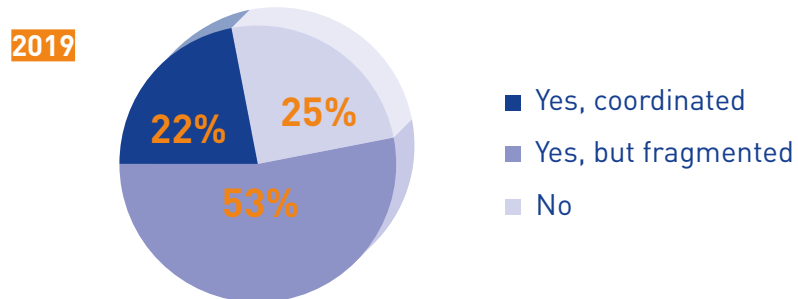
Most organizations are pursuing digital initiatives across multiple areas at the same time. Unfortunately, few of them are taking a portfolio approach linked to clear business outcomes. Most digital initiatives are incremental in scope, linked to process improvements in specific departments and functions.

Ibrahim Gokcen, former CDO of Danish industrial conglomerate A.P. Moller-Maersk described it this way, "A lot of companies think they are doing digital transformation, but they are actually only doing basic digitization or digital 'optimization' without addressing fundamental problems."[11]
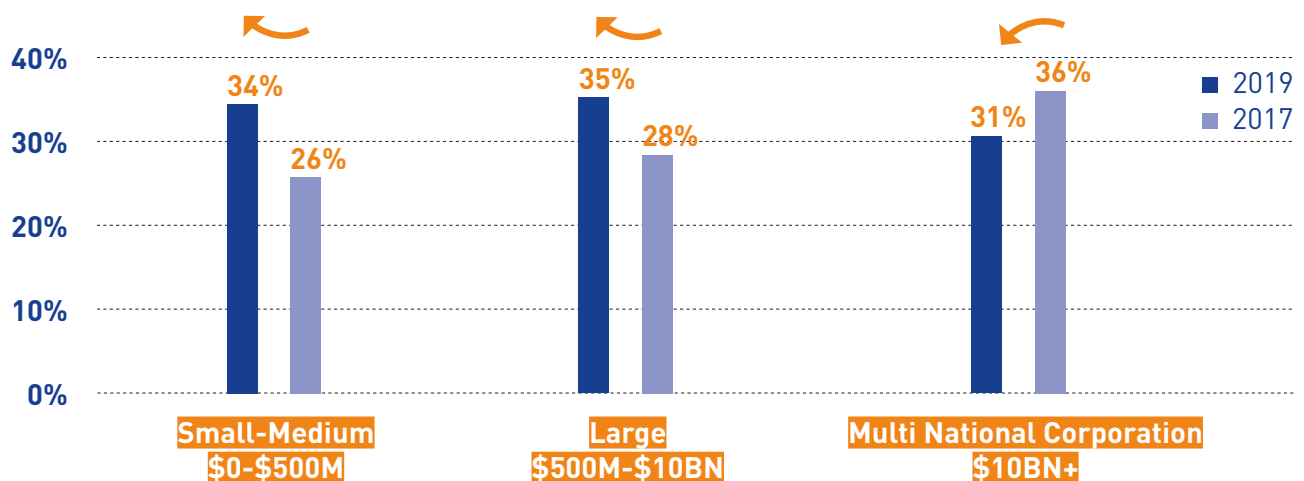
Entangled structures

A major challenge that large incumbents face is that initiatives, processes and structures are highly interdependent, constantly moving and optimized for an earlier era. This complex entanglement often leads to unintended consequences that can derail transformation programs. As one executive put it, "You wouldn't think that making a simple change, pulling this lever here, would make ten other things explode."

These challenges tend to increase with organizational size, as do the risks of failure. While most respondents observe an increase in active response to digital disruption, very large organizations – those with over $10 billion in annual worldwide revenues – observe a decline (see Figure 10).

FIGURE 10: ACTIVE RESPONSES TO DIGITAL DISRUPTION ARE INCREASING, EXCEPT IN VERY LARGE ORGANIZATIONS

Proportion of executives claiming that their organizations are actively responding to digital disruption

- 2019
- 2017

|	Small-Medium $0-$500M	Large $500M-$10BN	Multi National Corporation $10BN+
2019	34%	35%	31%
2017	26%	28%	36%

Mind the gap

Digital transformation programs can lead to high levels of confusion and uncertainty. The lack of both a clear vision and a shared narrative to describe a company's transformation hinders execution efforts. Having all stakeholders, from executive leadership to business partners and employees, on the same page is crucial to develop a foundation on which change can occur.

The Digital Vortex 2019 data reveals a stark perception gap between senior leaders and the managers who report to them in terms of their company's current digital transformation efforts. Whereas 39% of C-level leaders believe they are actively responding to digital disruption, this perception is not shared among lower levels of the organization. Only 30% of managers and senior managers feel the same way. The percentage of employees who claim they do not even know about their company's digital response grew progressively further down the organization (see Figure 11).

FIGURE 11: LOWER LEVEL EXECUTIVES ARE LESS CONFIDENT THAN SENIOR EXECUTIVES

Proportion of executives claiming that their organizations are actively responding to digital disruption

CXO	SVP/VP	Director	Manager
39%	37%	33%	30%
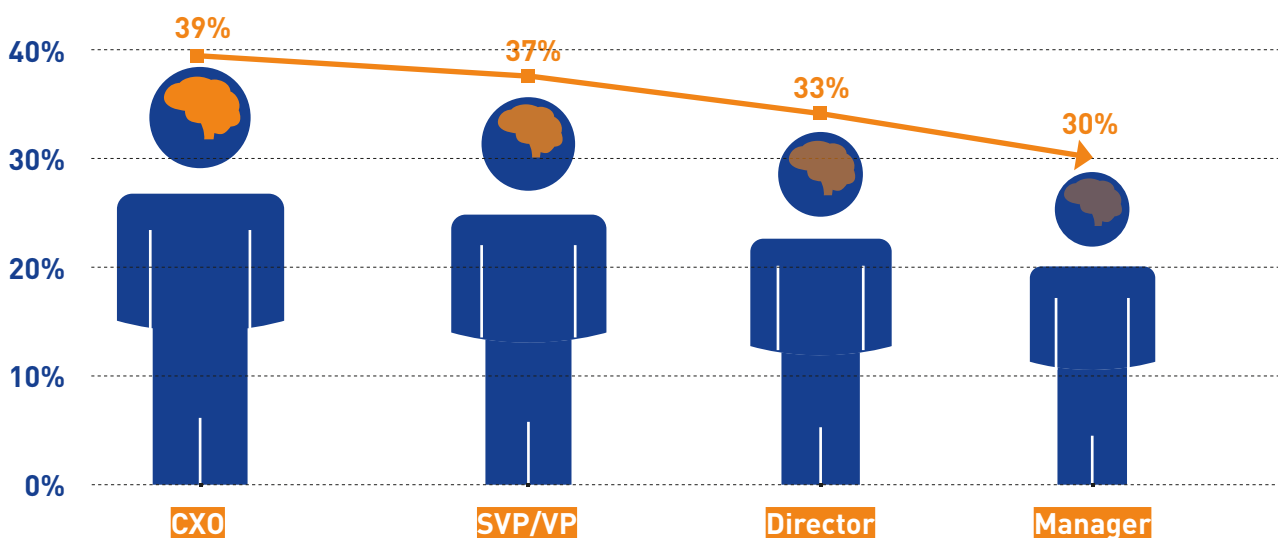
THE ROAD AHEAD

As the level of digitization increases in the Digital Vortex, industry boundaries are blurring and companies are being forced to reinvent themselves. Few remain on the sidelines today, and *digital* transformation is being mirrored by *organizational* transformation. Recent research on US companies with over $1 billion in revenues showed that those with digitally savvy boards outperformed their peers on key metrics such as revenue growth, return on assets and market cap growth.[12]

The Digital Vortex 2019 study also reveals a gap between aspiration and reality that could derail companies' digital transformation efforts.

Companies are under tremendous pressure to pursue organizational change. Even though change is implemented for positive reasons, employees often respond negatively and resist change efforts. The study uncovers a stark perception gap between senior leaders and managers regarding their company's current digital transformation efforts. This perception gap could signify a lack of trust, discrepancy in engagement and/or differing perceptions of organizational readiness for change.

Few companies have succeeded in transforming themselves to lead their industries in the digital age. But those that have done so understand that a successful digital transformation is a continuous journey focused on a connected approach to change.

ABOUT THIS STUDY

The Global Center for Digital Business Transformation, an IMD and Cisco initiative, surveyed 1,200 business leaders in 58 countries across 14 industries to understand attitudes and behaviors towards digital disruption. 63% of respondents are company directors and above. Half of all respondents work in the B2B sector. This data was supplemented by third-party data sources from CB Insights and Bloomberg.

The ranking is based on a composite of four measures, by industry:

1. Investment: Where venture capitalists and others are putting their money;

2. Timing: When, and at what rate, digital disruption is likely to occur;

3. Means: The strength of barriers to entry for digital disruptors;

4. Impact: The potential magnitude of disruption.

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