2019

STATE OF DISRUPTION

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REPORT

The Greek philosopher, Heraclitus, famously said, “The only constant in life is change.” In 2017, noted futurist and entrepreneur Peter Diamandis amended that statement for our times: **“The only constant is change, and the rate of change is increasing.”**[1]

—

In an enterprise climate where disruption is the norm, businesses live or die by their ability to meet constantly evolving conditions. Those that stay ahead of change — that anticipate it, evolve with it, and even help facilitate it — experience lasting success. Those that fail to adapt don’t stay afloat. In recent years, we’ve seen longstanding retail chains crushed by ecommerce, traditional booksellers supplanted by Amazon, and successful entertainment companies sunk by streaming. In short: **Transform or die.**

But what does the imperative to transform mean for enterprise tech decision making? And what does the rate of technology change look like across industries and company sizes?

1 - https://twitter.com/peterdiamandis/status/833821676219412481

To answer these questions, AVANT conducted a cross-industry survey of 300 enterprise technology leaders at the manager level and above who lead tech purchasing decisions. The survey sought to reveal the state of digital transformation efforts, the roles trusted advisors and other third parties play in the process, and the rate at which disruptive technologies are replacing legacy tools.

Survey logistics

AVANT polled 300 U.S.-based enterprise decision makers at either the C-suite or Management/VP-level in IT, security or finance. To qualify for the survey, respondents had to be involved in choosing or helping their organization to implement new data network, voice or compute infrastructure technology including buying/selecting new tools and services. Respondents include statistically significant subsets from the following five industries: Manufacturing, Financial Services, Healthcare/Medical, Ecommerce and Consulting/Business Services. In addition, in order to ensure that the results of the survey are representative of the distribution of establishments in the U.S., a weighting scheme was applied based on number of employees in the respondent company. For a more detailed demographic breakdown and explanation of our weighting method, please reference “Respondent Demographics” section.

Our study revealed several key findings, including:

01

Trusted advisors — consultants, agents, and other third parties that guide customer technology decision making — help 82% of enterprise customers in IT decision making.

02

Innovation is directly correlated with the use of trusted advisors: Companies that work with trusted advisors are leading in innovation by more than a two-to-one margin.

03

The pace at which legacy technology will be supplanted by next-gen cloud solutions will significantly increase in 2019 compared to 2018 — in some cases, by double-digit percentages.

04

74% of decision makers fear a cyberattack could cost them their job. Yet most organizations are not prepared to handle a cyberattack and mitigate the fallout.

05

While the growth in cloud-based IT compute architectures remains the dominant trend, colocation is also robust, especially in larger-sized companies.

06

SD-WAN is the year's most disruptive technology. However, dependence on MPLS networks is also very strong: 40% of enterprises will continue to invest heavily in the use of MPLS.

Digital transformations

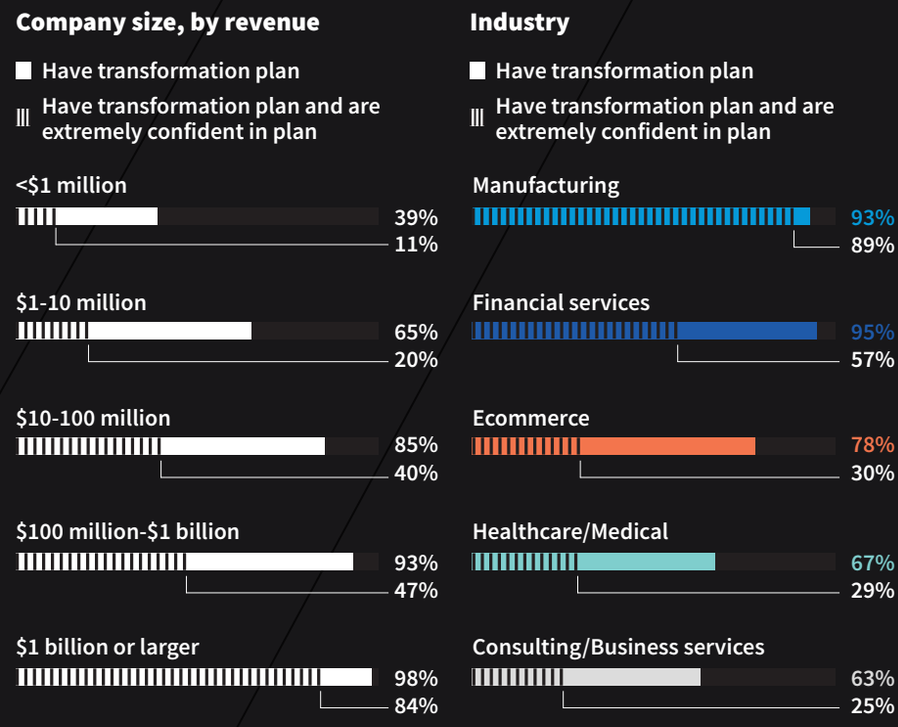
Evolved and mature, but industry and size-dependent

Digital transformation is now a matter of business policy. Eighty-five percent of the technology leaders we polled told us their companies have a digital transformation plan in place. And most of these leaders are confident about their companies' ability to fulfill digital transformation initiatives, with 55 percent saying they're extremely confident.

Company size plays a key role in digital transformation plans: The larger the company, the more likely it is to have a plan in place and be extremely confident in that plan.

There's also a significant industry component when it comes to digital transformation plans, with manufacturing leading the pack and consulting/business services trailing behind.

"85 percent of technology leaders told us their companies have a digital transformation plan in place."



Trusted advisors are driving disruption response

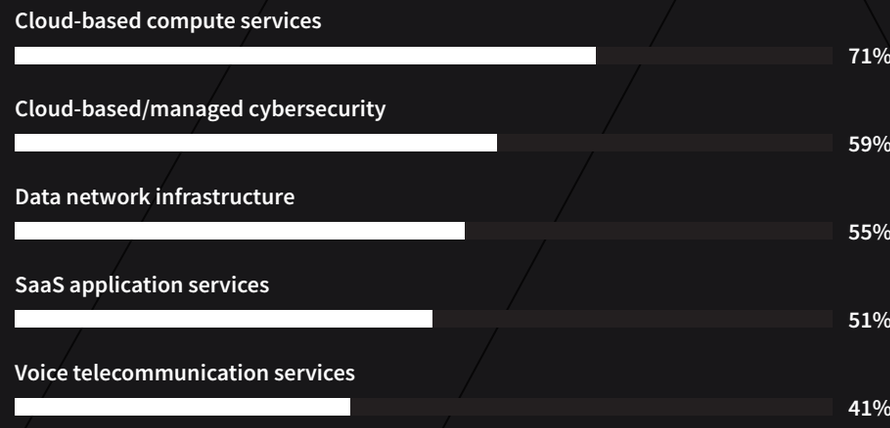
We found that the overwhelming majority of companies — 82 percent — work with trusted advisors to help make and execute tech purchasing decisions.

Across industries, enterprises rely on the advice of trusted advisors primarily for the consumption of cloud-based compute services. However, industry plays a role in determining the other areas in which trusted advisors are used. Manufacturers, financial services providers and retailers, for instance, are more likely to use trusted advisors for managed security services, whereas healthcare/ medical organizations prioritize trusted advisors for data network infrastructure and SaaS application services.

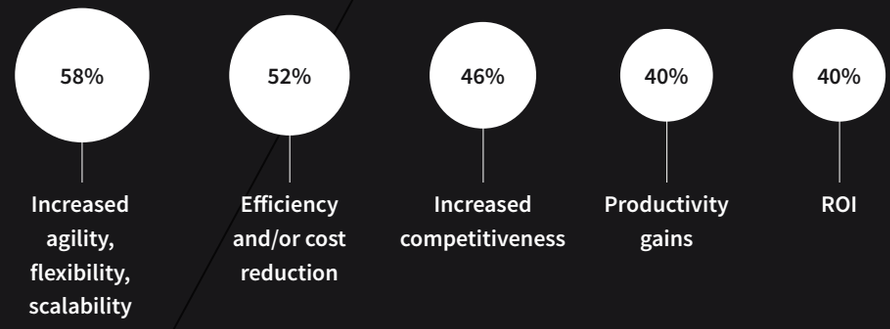
Of the many companies that use trusted advisors, there's no ambiguity about the efficacy of these external resources. Enterprises that work with trusted advisors report markedly higher levels of confidence in their companies' ability to innovate.

"82 percent of companies work with trusted advisors to help make and execute tech purchasing decisions."

Top 5 areas in which trusted advisors are used (overall)



The top 5 criteria for IT decision making



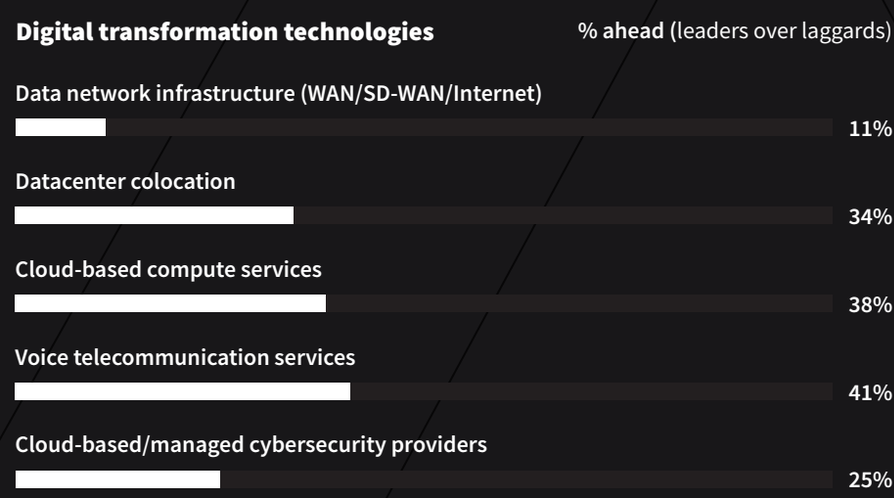
Leaders vs laggards

Among those surveyed, two groups emerged: **Leaders** (those who see themselves as ahead of their competitors in innovation) and **laggards** (those who feel they are behind). Seventy-four percent of companies that see themselves as leaders in innovation rely upon trusted advisors for assistance in IT technology decision making. Only 33 percent of laggards can say the same.

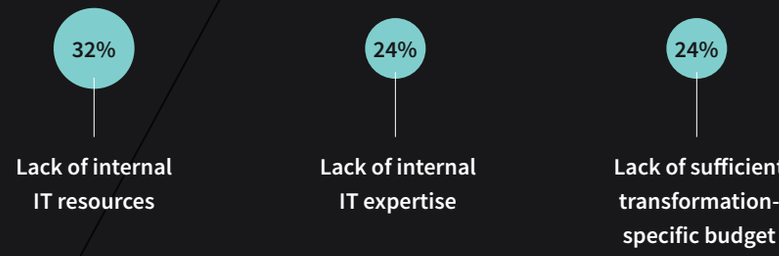
Not surprisingly, the leaders that felt they were significantly ahead of their competition in innovation also rated themselves significantly ahead in the transformation of their IT infrastructure as compared to the laggards, who felt they were significantly behind their competition in innovation.

> **"74 percent of companies that see themselves as leaders in innovation rely upon trusted advisors for assistance in IT technology decision making."**

The following graph measures how far ahead leaders were, as compared to laggards, in their assessment of their company's digital transformation, across five key areas of technology adoption:



Top 3 reasons why technology leaders are not confident in their companies' ability to fulfill digital transformation initiatives



Disruption within the enterprise technology stack

AVANT examined four key components of enterprise tech stacks — compute IT infrastructure, voice infrastructure, network infrastructure and cybersecurity — with an eye on how companies are shifting from physical and/or in-house solutions to third-party and/or cloud-based tools.

Methodology

We asked questions across a variety of different categories to measure the year-over-year change of a company's dependence on traditional, in-house or physical IT infrastructure compared to third-party, cloud-based solutions. Total dependence on legacy technology was assigned a "1" rating; on emerging technology, a "10." **The result is the Rate of Disruption Index (RDI), which expresses the percentage shift from where companies stood on the scale at the end of 2018 to where they will be at the end of 2019.**

The stakes of a single percentage point

Gartner estimates that global IT spend will reach **$3.8 trillion in 2019**[2]. Therefore, even a one percent shift in IT technology spend from legacy infrastructure to disruptive technologies can represent tens of billions of dollars.

2 - https://www.gartner.com/en/newsroom/press-releases/2019-01-28-gartner-says-global-it-spending-to-reach--3-8-trillio

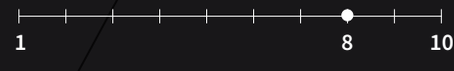
Calculating the Rate of Disruption Index (RDI)

Throughout this report, we present a series of RDI percentages representing the year-over-year shift across a number of different categories.

Here's how we calculated the RDI in every instance. We'll use the example of Security to illustrate the calculation.

First, we asked respondents to position, on a 1-10 scale, where their security infrastructure fell at the end of **2018**, with "1" being 100% in-house resources, "10" being 100% cloud-based, and "5" being a mix
Respondent selects 7

Second, we asked respondents to again position, on the same 1-10 scale, where their security infrastructure will fall at the end of **2019**.
Respondent selects 8



Third, we measured the rate of change from the second number over the first, which in this case is [(8-7)/7]. The result is the rate at which respondent will shift away from in-house security solutions and toward cloud-based resources by the end of 2019.

(8 - 7)/7 = 0.1429 **14%** RDI

Network infrastructure

Does the rapid emergence of SD-WAN — and the scalability, centralized management and network visibility it offers — signal the approaching end of MPLS for corporate networks? **And will 2019 be the year this happens?**

While some industry commentators have framed SD-WAN as the technology that will kill MPLS, our data shows MPLS still has some life in it. While most technology leaders are planning to use SD-WAN in their corporate networks by the end of 2019, the use of MPLS is far from over, with the vast majority of current MPLS users planning to increase their MPLS infrastructure this year.

NETWORK INFRASTRUCTURE

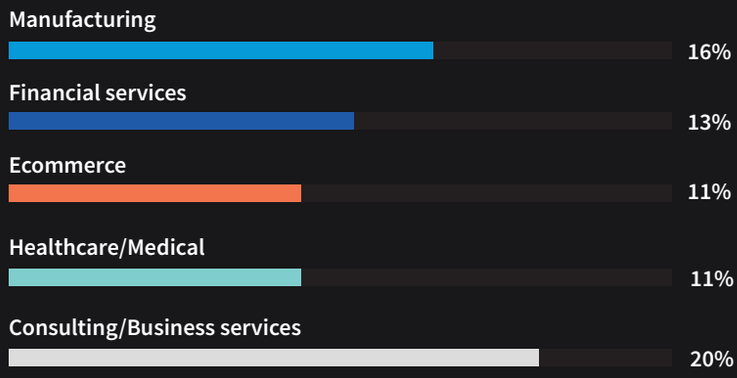
SD-WAN adoption

To: SD-WAN implemented company-wide

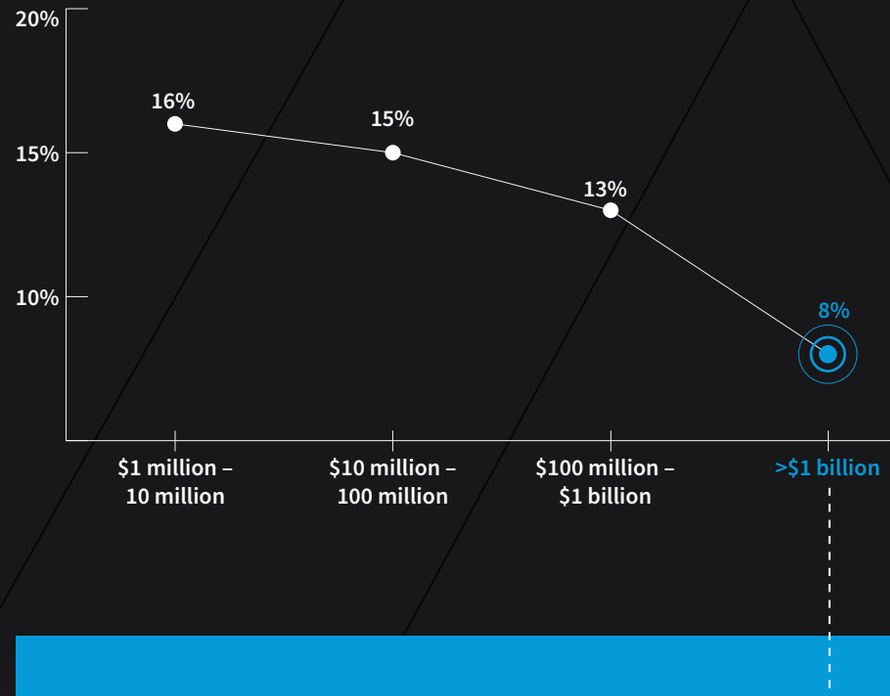
13% RDI

From: No SD-WAN deployed – all WAN networks utilize pre-SD-WAN technology

RDI of SD-WAN adoption, by industry **RDI**



RDI of SD-WAN adoption, by company size (revenue)



AVANT Insight: SD-WAN is the most disruptive technology in our study. It's not surprising that adoption of new technologies is slowest among the largest companies. The wave of SD-WAN disruption has not fully hit larger companies yet, but our belief is that it is moving quickly upmarket.

SD-WAN adoption, Top 3 disruption hotspots

1 Financial services, $1 – 10 million in revenue

2 Manufacturers, $10 – $100 million in revenue

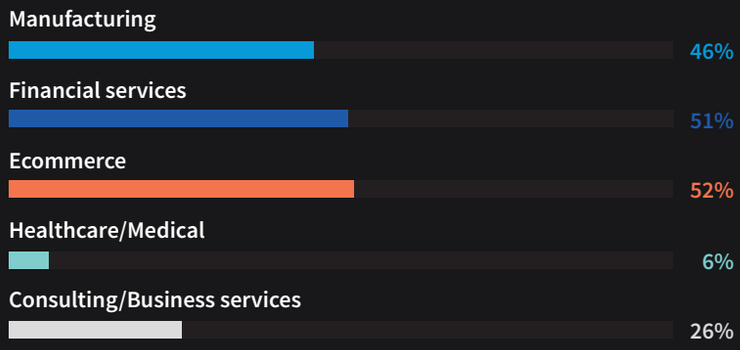
3 Healthcare, $10 million – $100 million in revenue

NETWORK INFRASTRUCTURE

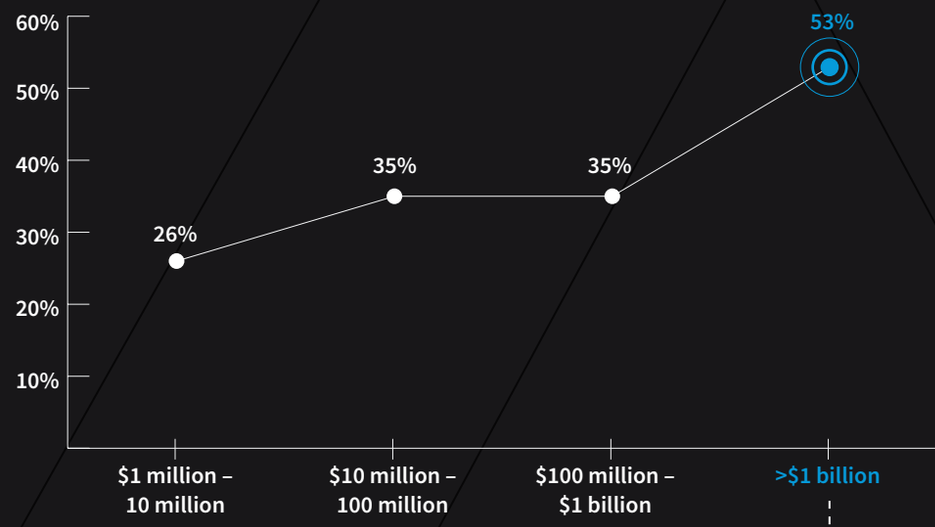
MPLS expansion

Of enterprises that use or are familiar with MPLS, **40 percent said they plan to continue to invest heavily in MPLS network infrastructure.**

MPLS expansion in 2019, by industry



Significant invesement in MPLS in 2019, by company size (revenue)



AVANT Insight: Large enterprises are continuing to double down on MPLS, making major investments in routers, firewalls, and SDN equipment that is depreciating. As hardware reaches End of Life and MPLS contracts expire, we expect large opportunities within this segment.

MPLS expansion, Top 3 disruption hotspots

1 Financial services, $100 million – $1 billion in revenue

2 Manufacturers, $100 million – $1 billion in revenue

3 Retail, $100 million – $1 billion in revenue

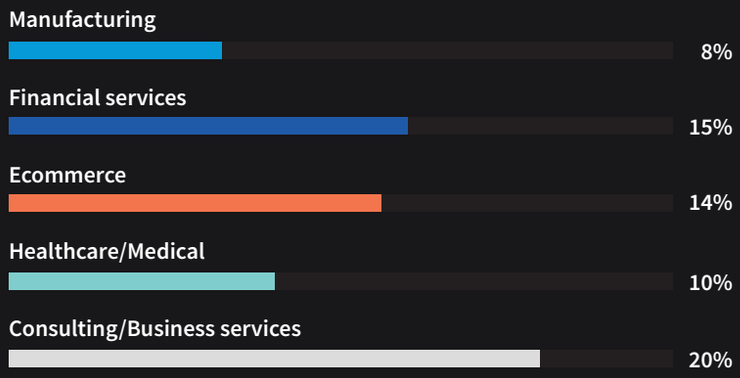
NETWORK INFRASTRUCTURE

Public broadband SD-WAN

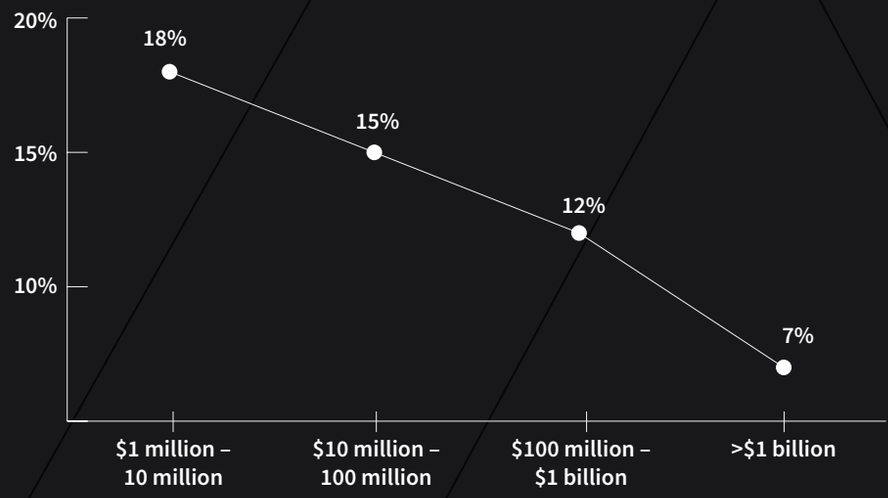
Most respondents (76 percent) are familiar with SD-WAN, with about three-quarters (74 percent) planning to use it in their corporate networks by the end of 2019. Between 2018 and 2019, there will be an 11% RDI in terms of SD-WAN traffic used over public broadband internet circuits. Industry plays a notable role in determining this rate of change, with consulting, retail and financial services leading the pack.

What percent of your SD-WAN traffic did you — and will you — utilize over public broadband Internet circuits?

RDI of public broadband internet circuit use in SD-WAN, by Industry



RDI of public broadband internet circuit use in SD-WAN, by company size (revenue)



AVANT Insight: SD-WAN's biggest impact to corporate networks has been the double-digit adoption of public internet broadband usage. This adoption is also inversely correlated with plans to increase MPLS usage in larger companies.

SD-WAN traffic used over public broadband internet circuits, Top 3 disruption hotspots

1. Financial services, $1 million – $10 million in revenue
2. Healthcare, $100 million – $1 billion in revenue
3. Manufacturers, $10 million – $100 million in revenue

COMPUTE IT INFRASTRUCTURE

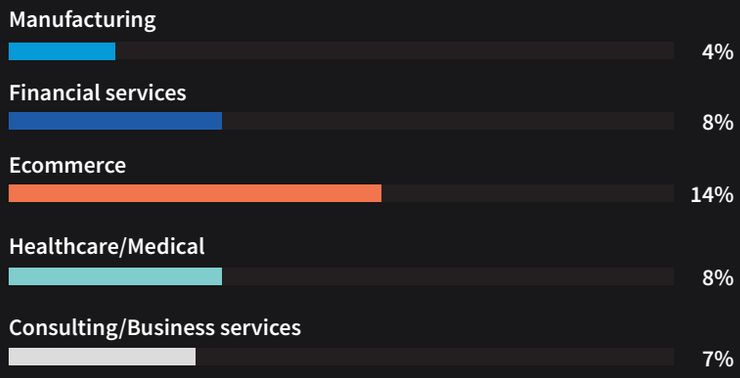
Cloud adoption

To: Cloud-based use of compute infrastructure (IaaS providers, AWS, Azure, Google Cloud, etc.) and third-party managed IT Compute infrastructure

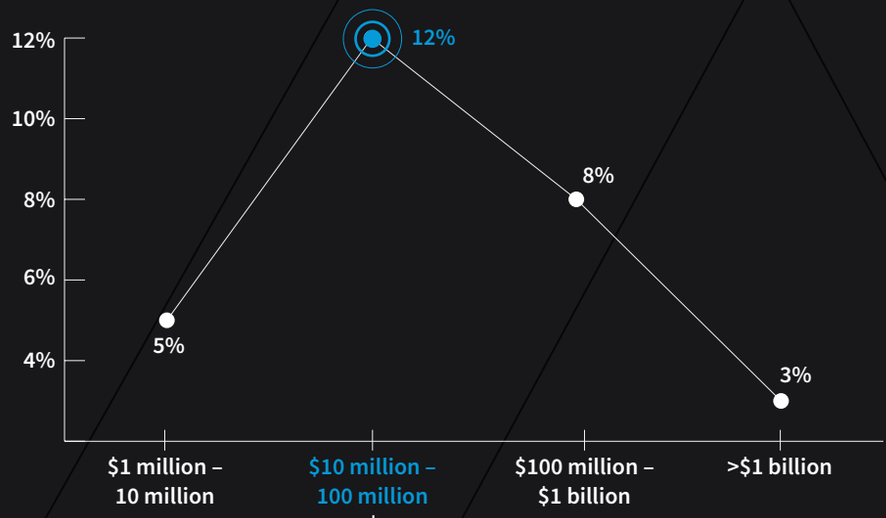
7% RDI

From: Physical servers located in-house or in company-owned data centers and third-party colocation data centers

RDI of cloud adoption, by industry **RDI**



RDI of cloud adoption, by company size (revenue)



AVANT Insight: The wave of IT Compute infrastructure disruption is moving upmarket. The $10-$100 million segment is in the sweet spot where companies have cloud-ready applications without a lot of custom implementations that would complicate migration to cloud services. These attributes position this segment for rapid cloud adoption.

Cloud adoption, Top 3 disruption hotspots

1	**Healthcare, $10 million – $100 million in revenue**
2	**Retailers, $10 million – $100 million in revenue**
3	**Consulting firms, $100 million – $1 billion in revenue**

COMPUTE IT INFRASTRUCTURE

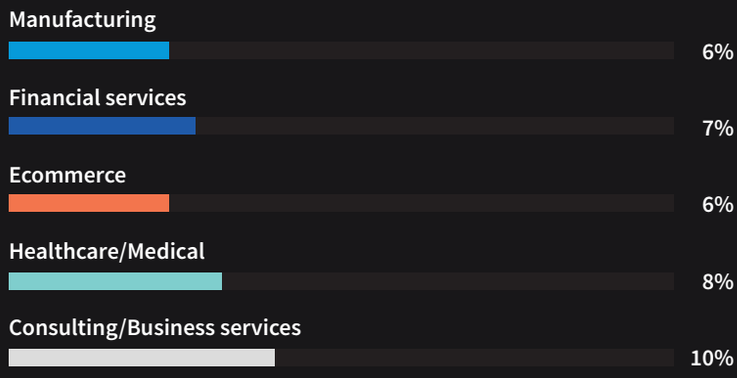
Physical servers only

To: Third-party colocation data centers

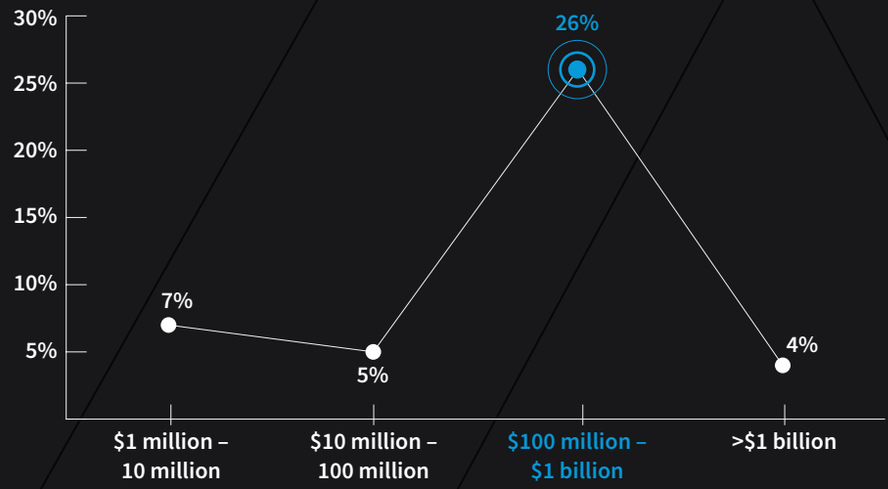
6% RDI

From: In-house located servers and company-owned data centers

RDI of physical servers only, by industry **RDI**



RDI of physical servers only, by company size (revenue)



AVANT Insight: Larger companies are shutting down in-house data centers and looking to migrate to opex models, but can be held back for a number of reasons, including a lack of app cloud migration readiness or a desire to maintain control for security/compliance.

Physical servers only, Top 3 disruption hotspots

1	**Consulting firms, $1 million – $10 million in revenue**
2	**Retailers, $1 million – $10 million in revenue**
3	**Financial services, $1 million – $10 million in revenue**

VOICE INFRASTRUCTURE

UCaaS adoption

To: Cloud-based UCaaS (like 8x8, Ringcentral, Cisco or Broadsoft hosted service from a service provider, etc.)

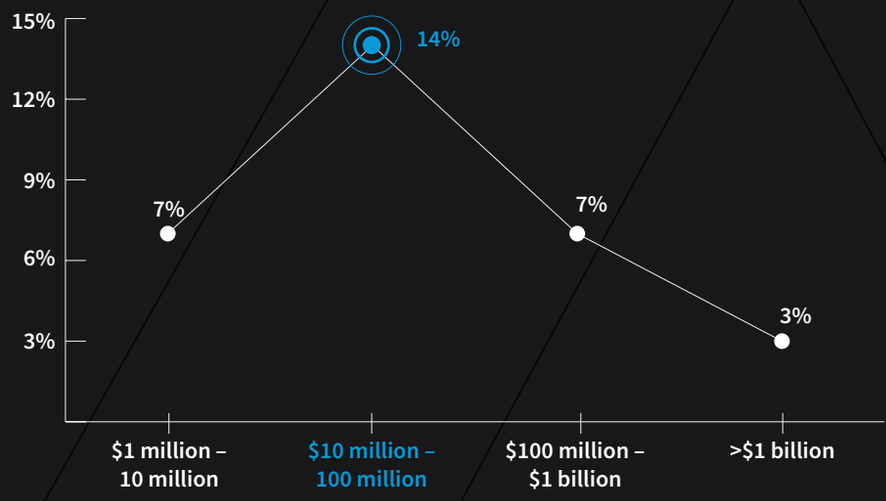
7% RDI

From: In-house PBX and Key Systems, Voice Circuits (PRI, POTs, SIP Trunks)

RDI of UCaaS adoption, by industry

	RDI
Manufacturing	6%
Financial services	5%
Ecommerce	10%
Healthcare/Medical	12%
Consulting/Business services	16%

RDI of UCaaS adoption, by company size (revenue)



AVANT Insight: The UCaaS wave of disruption is clearly moving upmarket. We are seeing more high tens of thousand to hundred thousand+ seat evaluations than ever before. UCaaS was once considered more of an SMB offering but things have clearly changed in the past 1-2 years. The acquisition of Broadsoft by Cisco and Avaya's struggles with bankruptcy have been market proof points that the on-premise PBX and key system is on the decline while UCaaS is accelerating.

UCaaS adoption, Top 3 disruption hotspots

1. Healthcare, $10 million – $100 million in revenue
2. Retailers, $10 million – $100 million in revenue
3. Consulting firms, $1 million – $10 million in revenue

SECURITY

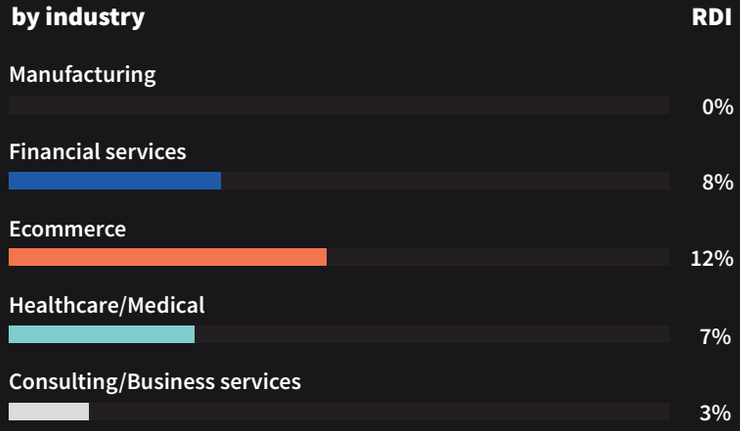
Third-party security services

To: 100% third-party managed services providers

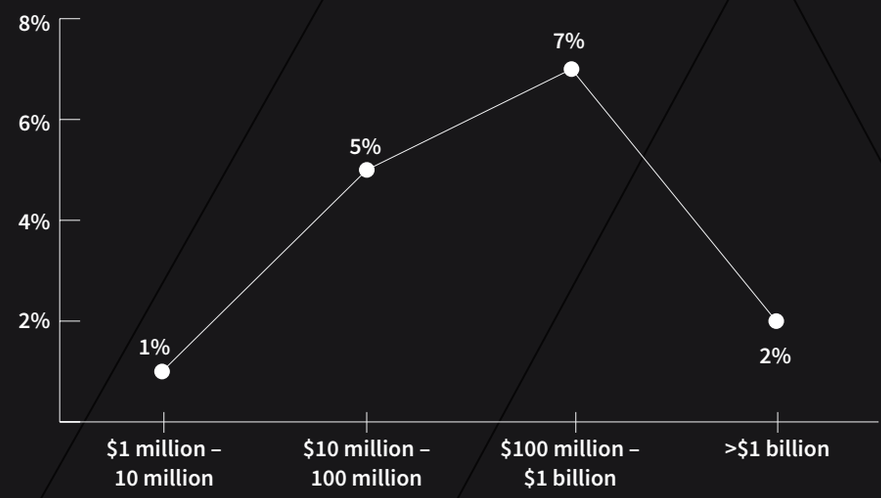
5% RDI

From: 100% in-house resources

RDI of third-party security services adoption, by industry



RDI of third-party security services adoption, by company size (revenue)



AVANT Insight: Many manufacturing companies mistakenly think they're at lower risk of attack and therefore don't pursue third-party solutions. But their intellectual property can be of high value, particularly to bad-actor foreign governments, and manufacturers that maintain entirely in-house security face this risk.

Third-party security services adoption, Top 3 disruption hotspots

1. Retailers, $1 million – $10 million in revenue
2. Healthcare, $1 million – $10 million in revenue
3. Financial services, $10 million – $100 million in revenue

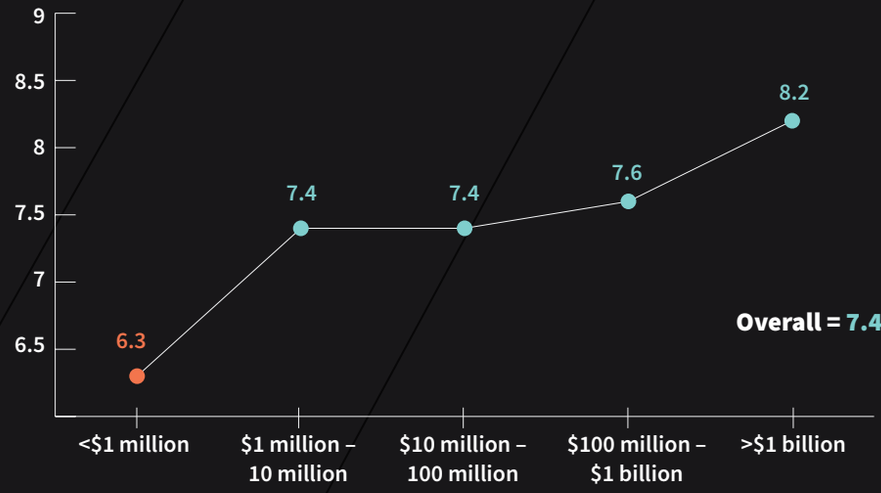
Security posture

For enterprises across industries, disruptive technologies introduce new cybersecurity threats. Therefore, we wanted to understand where our respondents rank their security posture by the end of 2019 — and what a cyberattack, were it to happen today, would mean both for their business and their own careers.

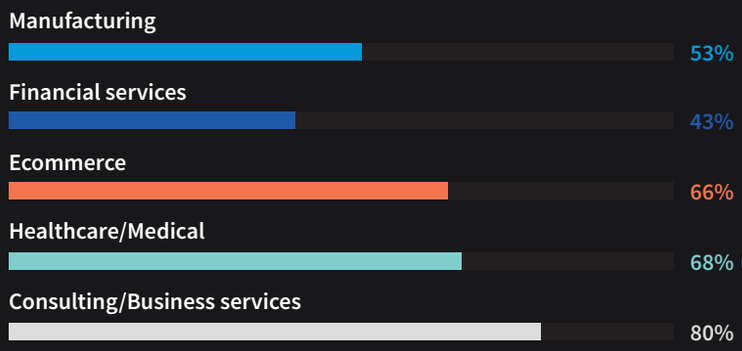
Most enterprises categorically fall into what we call the **Proactive** phase of security — that is, they've implemented resources like intrusion detection, penetration testing, and a formal incident response plan. However, most have yet to achieve the **Adaptive** phase of security, where they're introducing proactive threat hunting, monitoring the dark web, and implementing end user/entity behavior analytics to identify abnormalities. Reaching this phase is pivotal to achieving security resiliency in a disruptive climate.

Cybersecurity posture 2019, overall and by company size

Methodology: We asked respondents to rank their cybersecurity posture on a 1-10 scale, with the following markers: 1 = no security posture; **4 = Reactive security**; **7 = Proactive security**; 10 = Adaptive security



Somewhat prepared or unprepared to handle a cyberattack today, by industry



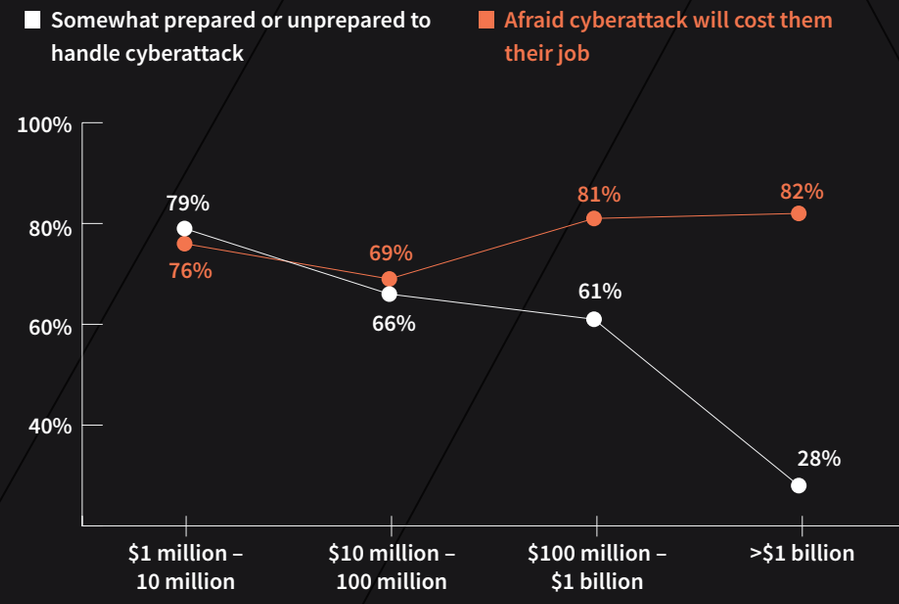
AVANT Insight: Healthcare records are among the most sought-after by cybercriminals. Additionally, healthcare organizations face the most stringent industry requirements for breach notifications and cyber compliance.

Security readiness

Enterprise technology leaders are confident in their security infrastructure, but it's a different story when it comes to actually handling a cyberattack. Among those we polled, fewer than half of technology decision makers said they're extremely prepared to handle a cyberattack and mitigate the fallout, were it to happen today.

With the significant levels of unpreparedness, **74 percent of technology decision makers are more likely than not to feel a cyberattack could cost them their job.**

Lack of cyberattack preparedness vs fear of losing job



AVANT Insight: Smaller companies are less prepared to handle cyberattacks. This is especially problematic, since the consequences of an attack are typically more pronounced in this segment. Small businesses often don't have the resources needed to recover from such a setback and go out of business as a result.

Top takeaways

01

82% of enterprises are working with trusted advisors to manage disruption. Those that use trusted advisors report much higher levels of innovation.

02

The vast majority of enterprises say they're unprepared for a cyberattack — even though most decisionmakers feel such an attack could cost them their job.

03

MPLS and colocation continue to grow in specific market segments despite disruption by SD-WAN and cloud-based IT compute services.

In their own words:

Decision makers reveal the **biggest challenges** they'll face when it comes to…

Achieving compute infrastructure transformation in 2019

"Getting executive management to realize the need for digital transformation"

"Having the right ecosystem of partners"

"Staying on budget through the transition"

Achieving voice infrastructure transformation in 2019

"Deciding on providers"

"Having to use two separate providers for internet and phone"

"Finding a solution that works across the whole organization with all of their differing needs"

Achieving network infrastructure transformation in 2019

'"Lack of budget or clear overall plan"

"Trying SD-WAN but not having sufficient in-house security to maintain it without taking away from other department heads that were needed elsewhere"

"Industry regulations"

Achieving better security posture in 2019

"Trying to keep up with the constant evolution of attack vectors"

"Adapting to increasing phishing attempts"

"Making sure all IT employees have at least a rudimentary understanding of our systems and security protocols, and also ensuring ongoing training for the subset of employees tasked with security-specific job duties"

Respondent demographics

Weighting statement

Sample Weighting: Most often in survey research, the distribution of respondent characteristics like age and company size differs from what is known to be the true distribution of the population from which it came. If characteristics of the true distribution are known, it is appropriate to weight the survey sample to reflect this true distribution.

In order to ensure that the results of the AVANT State of Disruption Survey are representative of the distribution of establishments in the U.S., a weighting scheme was applied based on number of employees in the respondent company. The population data was taken from:

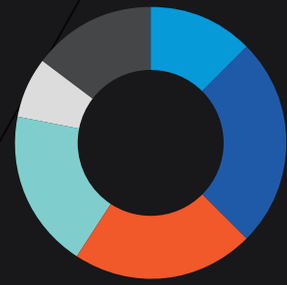
Number of Firms, Number of Establishments, Employment, and Annual Payroll for the United States, NAICS Sectors: 2016. For some size categories it was necessary to interpolate between categories in order to match the employment categories of the sample. Other adjustments were made in order to eliminate firms with under 10 employees from the weighting scheme since they were deemed to be irrelevant for the analysis.*

The weights applied were relatively small. Sensitivity testing revealed that in most aspects of the analysis, the results from the weighted and unweighted sample were not significant. We believe, however, that weighting the sample will make it easier to interpret results for future comparable studies.

Click here for Larger Firms (>500) | Click here for Small Firms (<500)

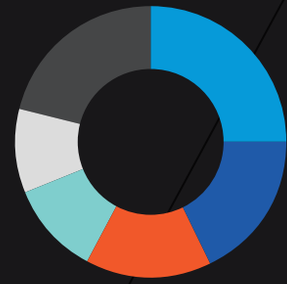
Demographics

Company size (# of employees)



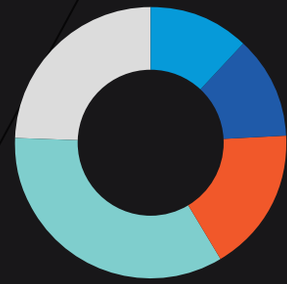
< 250: 12%
250 - 1000: 24%
1,001 – 3,000: 21%
3,001 – 10,000: 18%
10,001 – 50,000: 7%
> 50,000: 14%

Industry



Manufacturing: 25%
Financial Services: 18%
Ecommerce: 15%
Healthcare/Medical: 11%
Consulting/Business services: 10%
Other: 21%

Company revenue



<$1 million: 12%
$1 million – $10 million: 12%
$10 million – $100 million: 17%
$100 million – $1 billion: 34%
>$1 billion: 24%

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