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RESEARCH REPORT

2019 PUBLIC CLOUD COMPUTING TRENDS

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Research Overview

In order to assess IT spending priorities over the next 12-18 months, ESG recently surveyed 600 IT professionals representing midmarket (100 to 999 employees) and enterprise-class (1,000 employees or more) organizations in North America and Western Europe. All respondents were personally responsible for or familiar with their organizations' 2018 IT spending as well as their 2019 IT budget and spending plans at either an entire-organization level or at a business-unit/division/branch level. A subset of ESG's questions in this survey focused on respondents' usage of and plans for public cloud computing services.

Specifically, the survey asked the following questions with respect to public cloud computing services:

- How will 2019 spending for public cloud computing services change relative to 2018 levels?
- How widespread is the adoption of public cloud computing across the three service models, software-as-a-service (SaaS), infrastructure-as-a-service (IaaS), and platform-as-a-service (PaaS)?
- What are the usage trends and plans for IaaS?
- When it comes to new application deployments, are organizations more likely to take a cloud-first approach? How does this vary based on the age of an organization (i.e., the length of time it has been in operation)?
- What are the most common cloud infrastructure service use cases for current IaaS users?
- How pervasively do organizations deploy production applications via public cloud application (i.e., SaaS) and/or infrastructure (i.e., IaaS/PaaS) services? How has this changed over the last several years?

Survey participants represented a wide range of industries including manufacturing, financial services, communications and media, retail, government, and business services. For more details, please see the *Research Methodology* and *Respondent Demographics* sections of this report.

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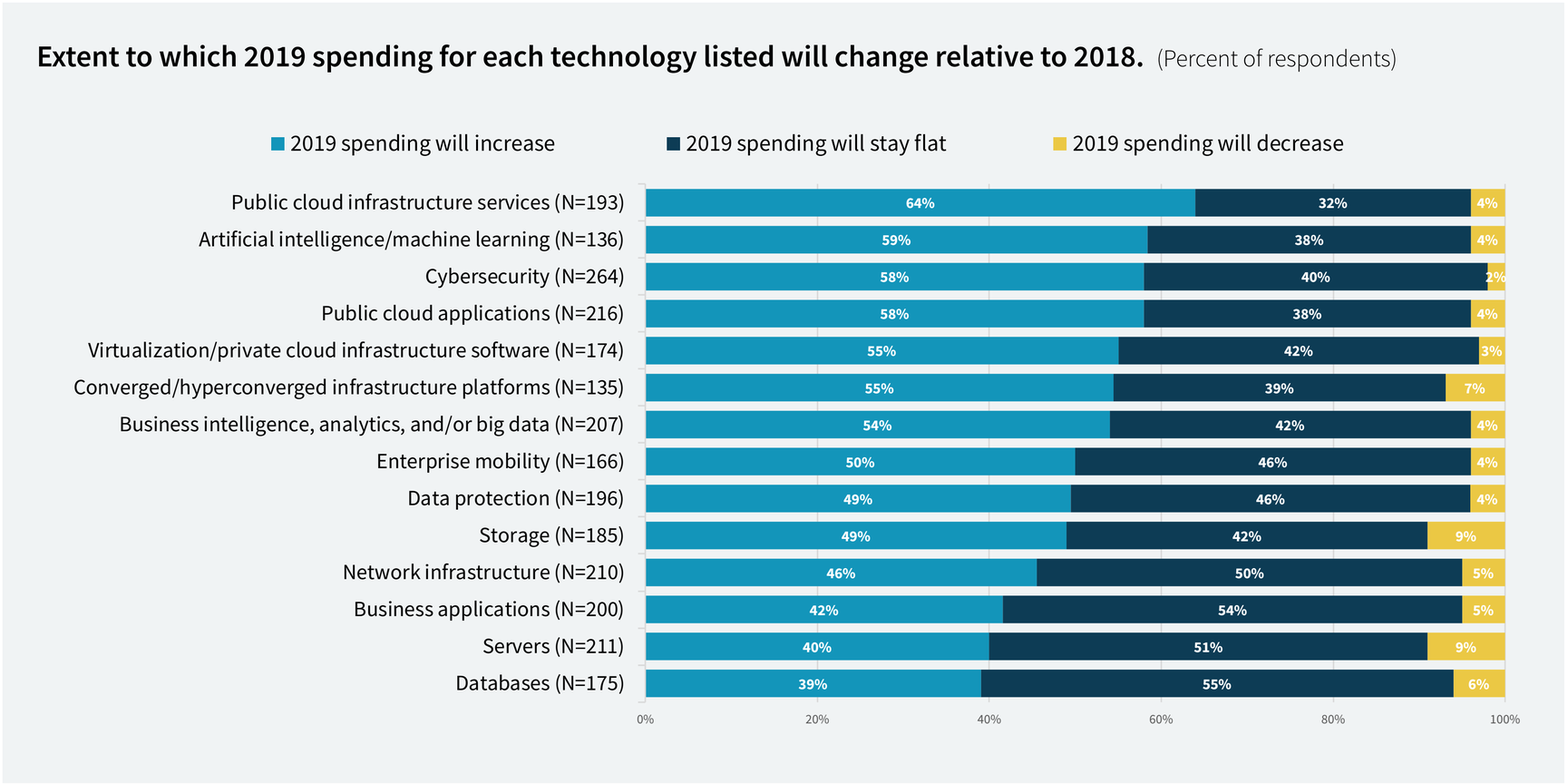
Public cloud leads 2019 IT spending charge.

ESG asked survey respondents to share their 2019 spending plans for a number of specific technology segments. According to Figure 1, public cloud continues to draw bigger allocations of corporate IT budgets as organizations provision new cloud services and expand the scope of existing deployments, with nearly two-thirds (64%) of organizations increasing spending on cloud infrastructure and 58% doing so for cloud applications. Given the spending prioritization for public cloud services, it's not surprising that the outlook is not as positive when it comes to traditional on-premises IT infrastructure resources like servers, storage, and networking, for which the majority of organizations are holding the line on spending (i.e., not increasing or even decreasing). In fact, this trend of flat to decreasing year-over-year spending for on-premises infrastructure has been emerging since 2015 as public cloud service usage becomes more pervasive.[1]

FIGURE 1. PUBLIC CLOUD, AI, AND CYBERSECURITY LEAD THE 2019 SPENDING CHARGE



[1] Source: ESG Research Report, *2018 IT Spending Intentions Survey,* February 2018.

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Public cloud adoption is almost ubiquitous, and nearly 6 in 10 enterprises now use IaaS.

In addition to gauging the spending plans for cloud infrastructure and applications over the course of 2019, ESG wanted to assess where the market was from an adoption and breadth of usage perspective. In terms of adoption, nearly nine out of ten (85%) respondent organizations are currently leveraging at least one of the three public cloud computing service models, with another 15% expressing plans for or interest in using these services (see Figure 2). While overall cloud usage has been consistently increasing to the point of near ubiquity, it is also worth noting the significant uptick in the use of infrastructure-as-a-service (i.e., IaaS). Specifically, Figure 3 confirms that the number of corporate IT departments leveraging public cloud infrastructure services like AWS or Microsoft Azure has more than tripled (17% versus 58%) since 2011.[2]

FIGURE 2. PUBLIC CLOUD SERVICE USAGE IS UBIQUITOUS

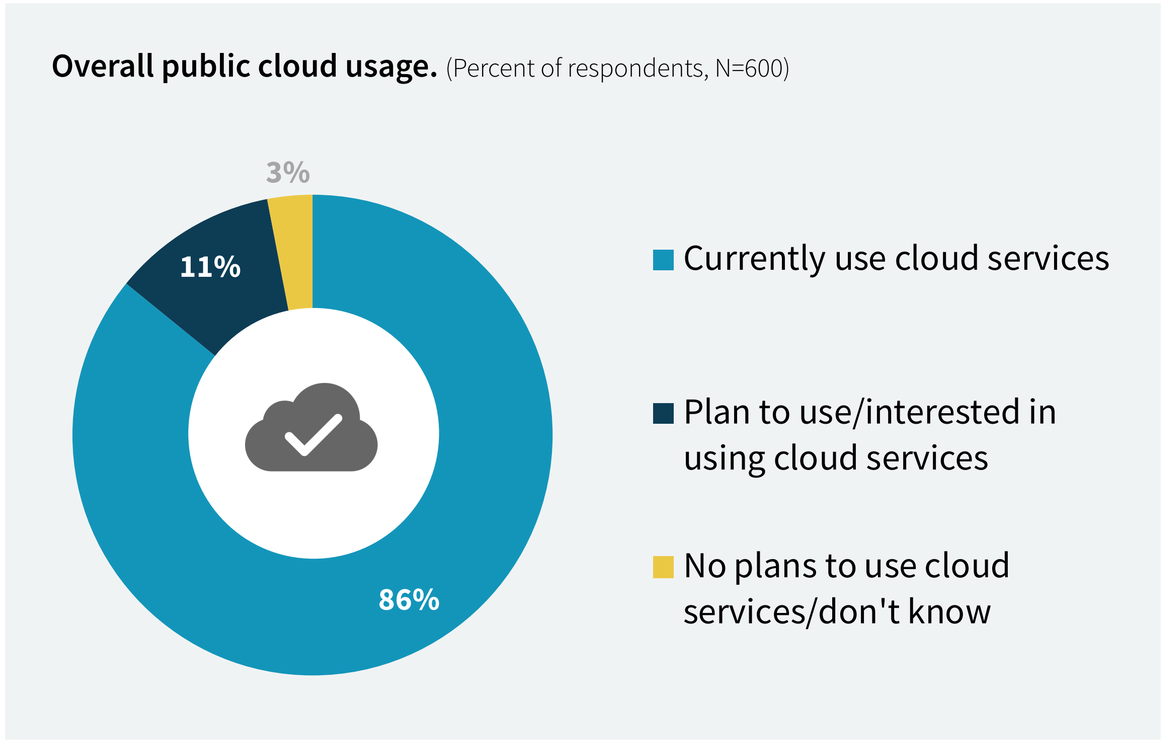
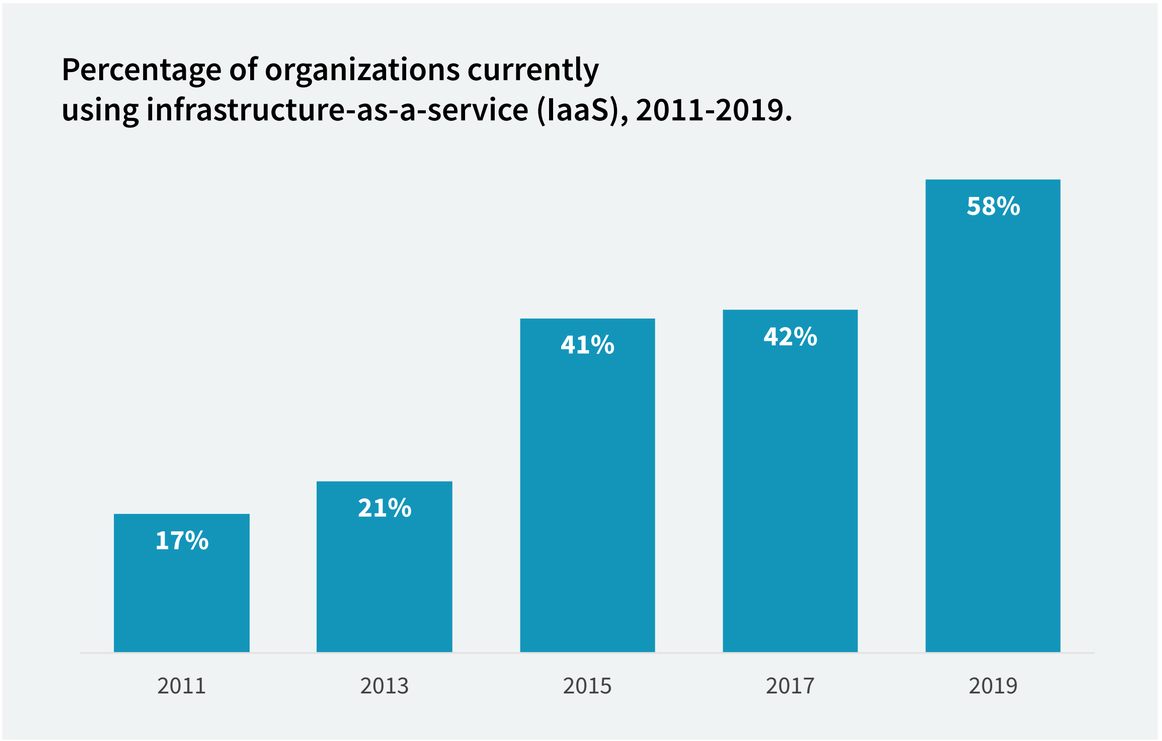


FIGURE 3. 2018 BROUGHT A SIGNIFICANT INCREASE IN PUBLIC CLOUD INFRASTRUCTURE ADOPTION



[2] Source: ESG Research Report, *Cloud Computing Adoption Trends: Software- and Infrastructure-as-a-Service Usage among Enterprise and Midmarket Organizations*, May 2011.

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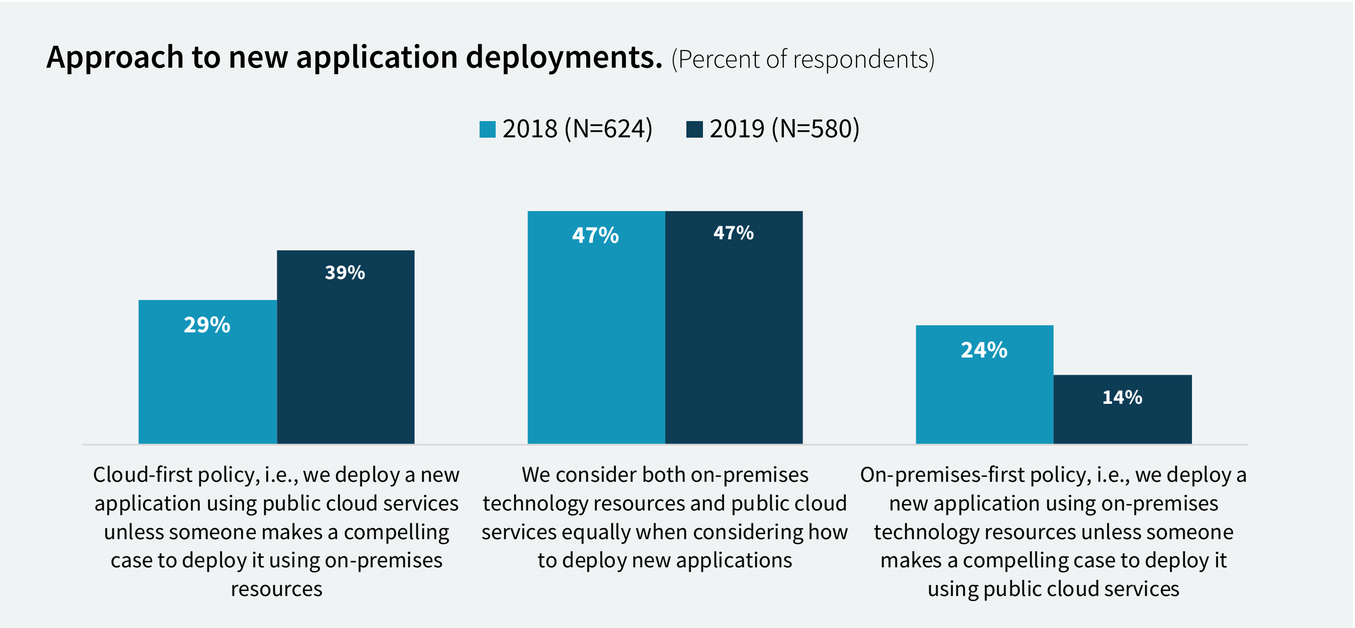
Cloud-first application deployment strategies becoming more common, especially among younger and more digitally transformed organizations.

In order to determine the significance of public cloud services as part of an overall IT strategy, respondents were asked to consider the approach their organization typically takes when it comes to new application deployments. Nearly four in ten (39%) take a cloud-first approach, meaning that new applications are rolled out on public cloud resources unless someone makes a compelling case to deploy them on-premises, marking a significant year-over-year increase (see Figure 4). Additionally, 47% consider cloud and on-premises selections equally when weighing application deployment options. The obvious takeaway is that a majority of organizations no longer view public cloud as merely an alternative or secondary means of supporting applications, but rather as a viable production platform. The cloud-first trend is especially pronounced among younger organizations and those with more mature digital transformation initiatives (see Figures 5 and 6, respectively).

FIGURE 4. CLOUD-FIRST APPLICATION DEPLOYMENT STRATEGIES BECOMING MORE PREVALENT



Percent of organizations with a cloud-first policy based on:

FIGURE 5. AGE OF ORGANIZATION

AGE OF ORGANIZATION:

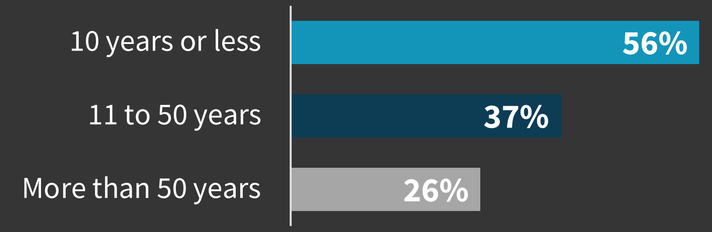
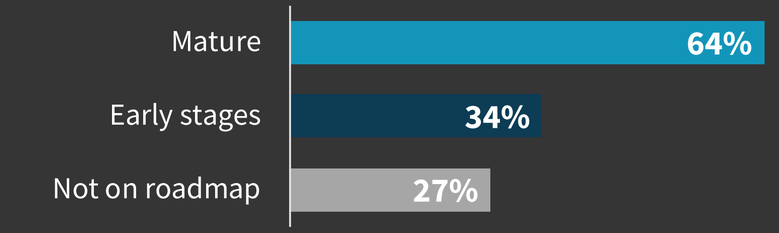


FIGURE 6. DIGITAL TRANSFORMATION MATURITY LEVEL

DIGITAL TRANSFORMATION MATURITY:



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Almost half of IaaS users leverage public cloud infrastructure to run production applications.

While previous ESG research has demonstrated a consistent synergy between public cloud infrastructure and data protection functions, the use of these services to support production applications has been steadily increasing over the years.[3] In fact, with nearly half (49%) of current IaaS users running production applications on public cloud infrastructure, 2019 marks the second consecutive year it is the most commonly identified IaaS use case (see Figure 7). It is, however, worth noting that the connection with data protection continues to thrive with—in total—more than one half of IaaS users still leveraging these services to store backup and archive data in the cloud (40%) and/or as offsite disaster recovery targets (37%).

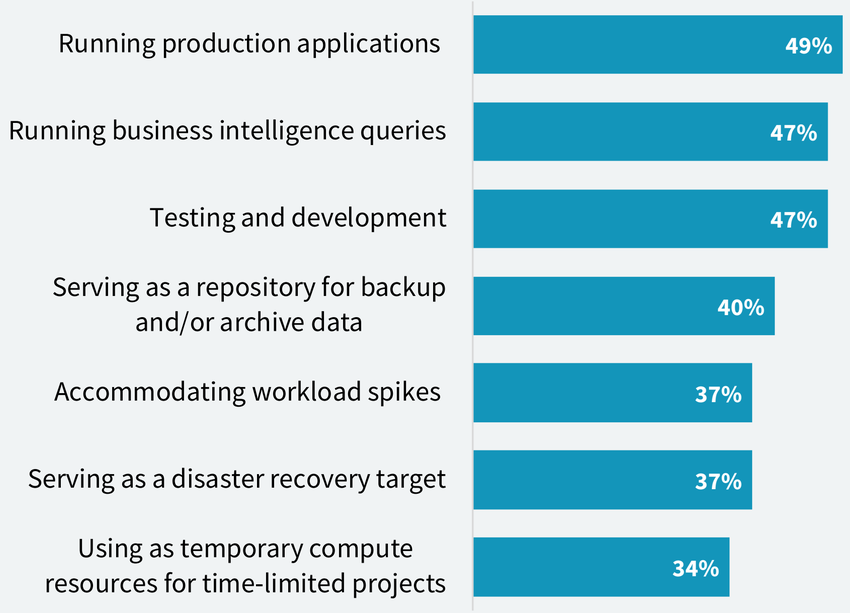
> "The use of public cloud infrastructure services to **support production applications** has been steadily increasing over the years."

The fact that many organizations expect to make a significant investment in cloud-based analytics over the next 12-18 months is evidence of a symbiotic relationship between cloud and data analytics, so it is not surprising that 47% of current IaaS users leverage these services for the purposes of extracting incremental value from their data.

FIGURE 7. PUBLIC CLOUD INFRASTRUCTURE USE CASES INCREASINGLY INCLUDE MORE PRODUCTION-FOCUSED ACTIVITIES

Public cloud infrastructure use cases.

(Percent of respondents, N=438, multiple responses accepted)



[3] Source: ESG Master Survey Results, *2018 IT Spending Intentions Survey*, December 2017.

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Steady year-over-year increase in organizations leveraging public cloud services to run applications.

In addition to tracking the adoption of cloud services, ESG has monitored the extent of usage of these services in terms of the production applications that run on them. In terms of SaaS, current users were asked to consider all of the business applications used by their organizations and then determine the percentage of these applications delivered via the software-as-a-service model today. There has been a healthy uptick in the number of applications delivered via cloud software services over the last five years. Specifically, while 61% of SaaS users delivered no more than 20% of their applications in this manner in 2013, more than two-thirds (67%) report that SaaS currently accounts for more than one out of five of their business applications (see Figure 8). A very similar pattern exists for cloud infrastructure services—since 2015, Figure 9 reveals the number of IaaS users leveraging cloud infrastructure to support production applications has nearly doubled (27% versus 49%).

FIGURE 8. SAAS USAGE CONTINUES TO BROADEN

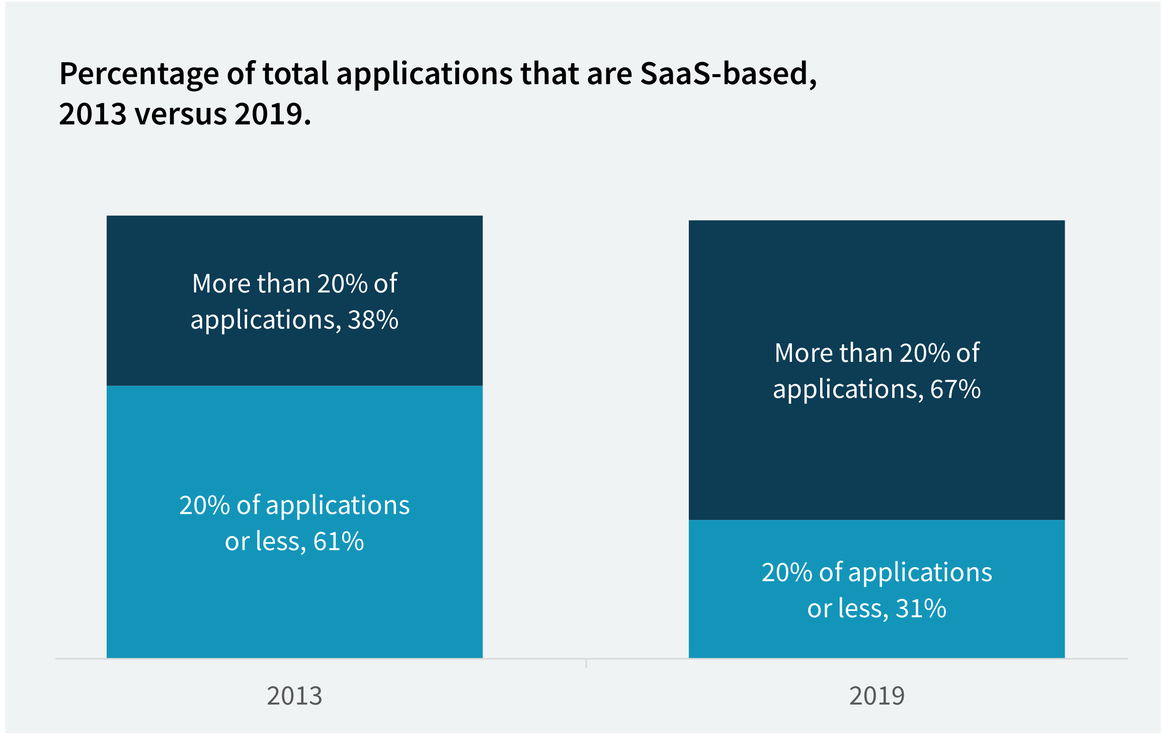
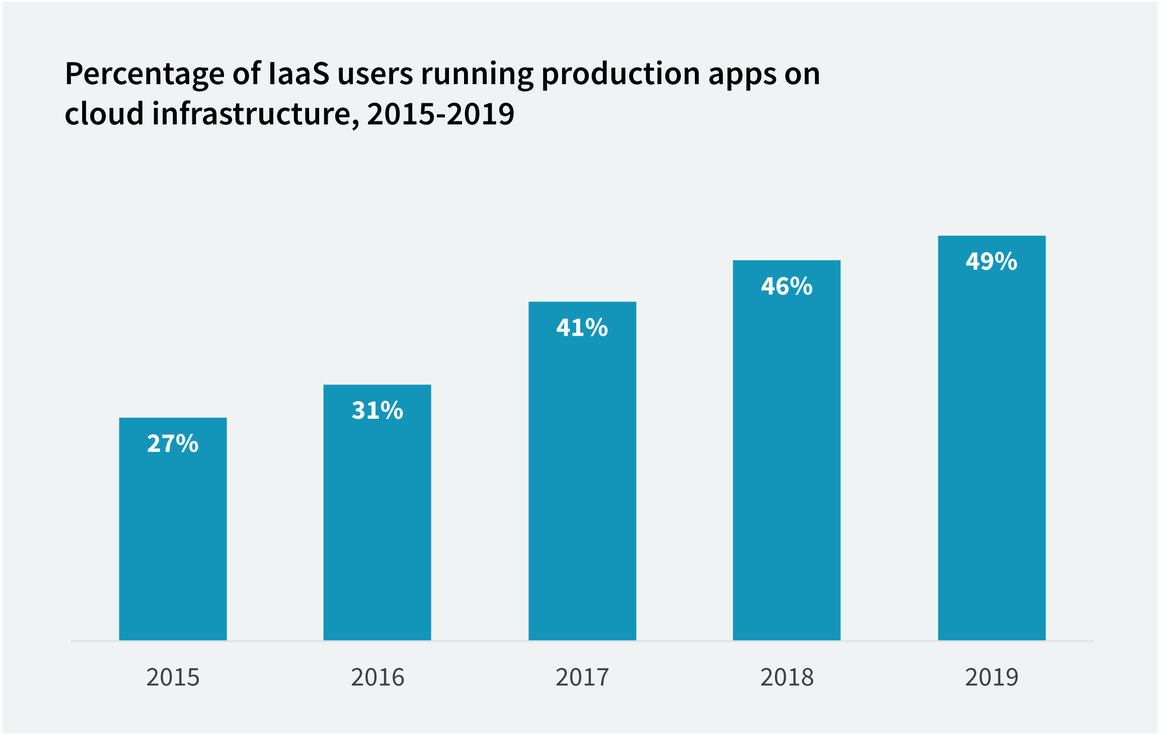


FIGURE 9. IAAS USERS CONTINUE TO MOVE PRODUCTION APPLICATIONS TO CLOUD



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Research Methodology

To gather data for this report, ESG conducted a comprehensive online survey of IT professionals from private- and public-sector organizations in North America (United States and Canada) and Western Europe (United Kingdom, France, and Germany) between November 1, 2018 and November 30, 2018. To qualify for this survey, respondents were required to be IT managers personally responsible for or familiar with their organizations' overall 2019 IT budget and spending plans, either at an entire organization level or at a business unit/division/branch level. Respondents who were only responsible for IT spending at a departmental or workgroup level were disqualified. All respondents were provided an incentive to complete the survey in the form of cash awards and/or cash equivalents.

After filtering out unqualified respondents, removing duplicate responses, and screening the remaining completed responses (on a number of criteria) for data integrity, we were left with a final total sample of 600 IT managers.

Please see the *Respondent Demographics* section of this report for more information on these respondents.

Note: Totals in figures and tables throughout this report may not add up to 100% due to rounding.

Read the Full 2019 Technology Spending Intentions Survey Report »

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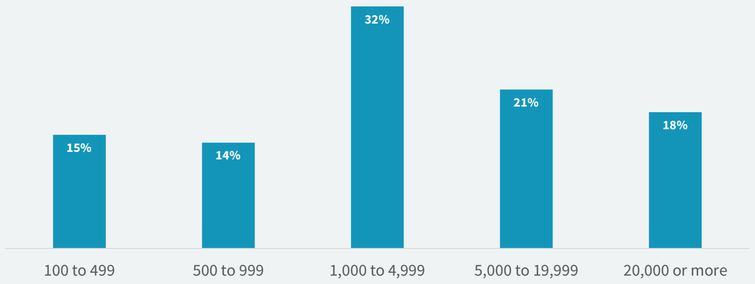
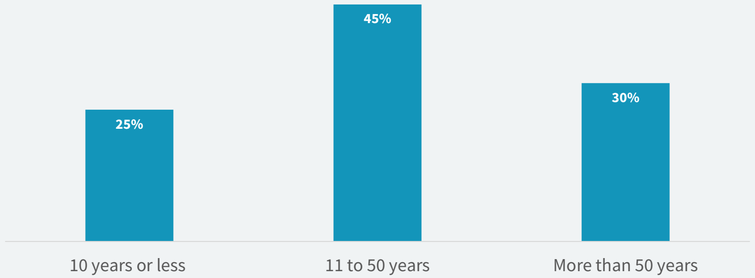
Respondent Demographics

Organizational Profiles

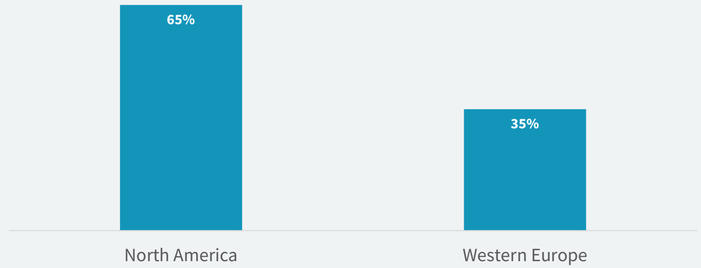
Respondents by Number of Employees



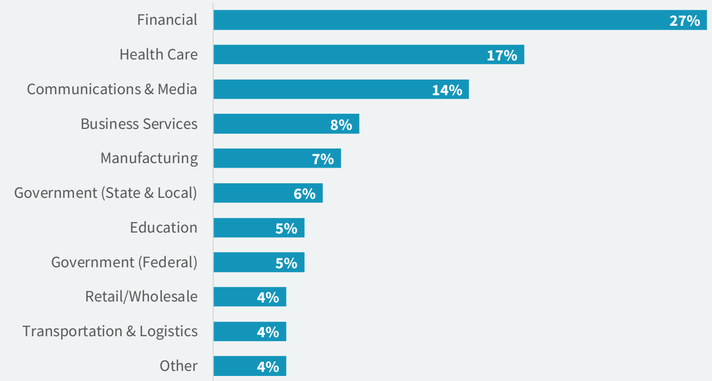
Respondents by Age of Organization



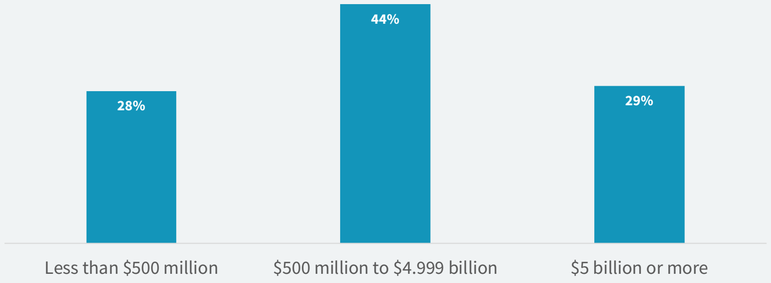
Respondents by Region



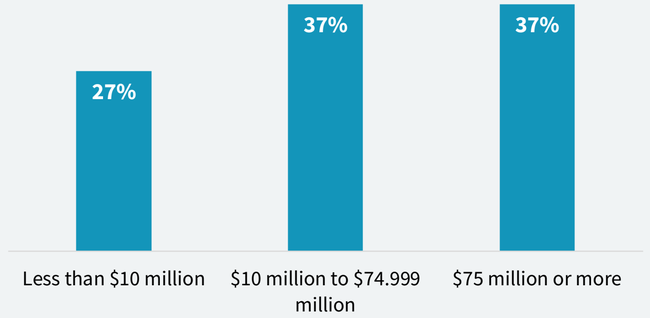
Respondents by Industry



Respondents by Annual Revenue



Respondents by 2019 IT Budget



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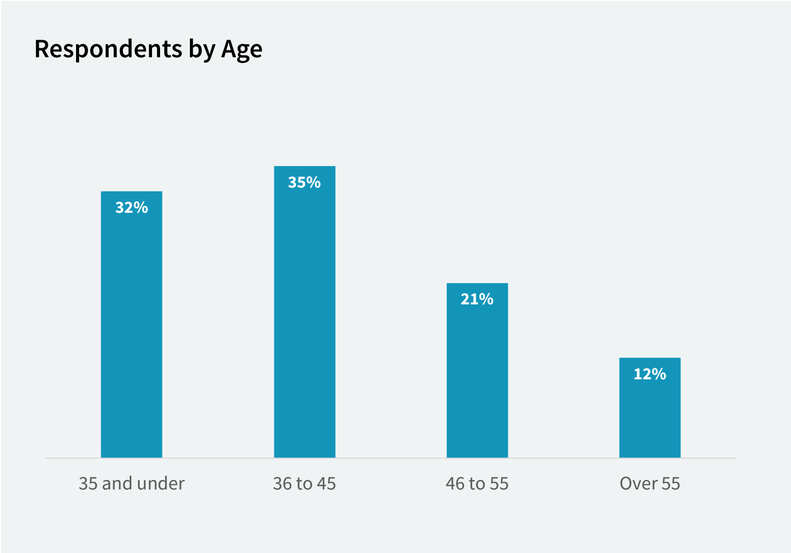
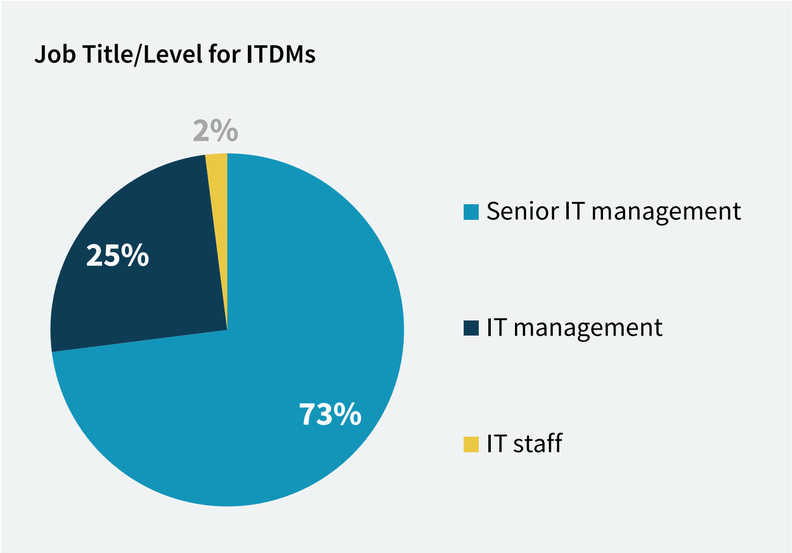
Respondent Demographics

Individual Respondent Profiles





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