



ESG RESEARCH INSIGHT PAPER

The Cloud Complexity Imperative

Why Midmarket Organizations Must Unify and Simplify the Management of Their Sprawling Multi-cloud Environments

A Research Study Assessing What Midmarket Organizations Stand to Gain by Streamlining Their Cloud Management Experience

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Executive Summary

One of the biggest transformations in IT service delivery over the past decade has been the emergence of public cloud infrastructure consumption. ESG has annually tracked midmarket (100 to 999 employees) organizational adoption of cloud infrastructure and, not surprisingly, the proportion of organizations leveraging public cloud infrastructure services like AWS or Microsoft Azure has almost quadrupled (12% versus 47%) since 2011 (see Figure 1).¹

Figure 1. Percentage of Midmarket Organizations Currently Using Infrastructure-as-a-service (IaaS), 2011-2019



Please indicate your organization's usage of or plans for infrastructure-as-a-service (IaaS). (Percent of respondents reporting IaaS is in use)

Additional data shows that this trend is not losing steam. ESG asked IT decision makers to share their 2019 spending plans for several specific technology segments. Public cloud was forecasted to continue to draw bigger allocations of IT budgets as organizations provision new cloud services and expand the scope of existing deployments. Based on ESG's research, 60% of organizations expected to increase spending on cloud compared with the prior year, and cloud was the most likely technology area to receive a spending increase versus other categories.² The agility and flexibility of public cloud services clearly drives value for organizations, and value drives utilization.

At the same time, organizations are rapidly evolving their on-premises IT environments to keep pace, investing in solutions which can enable a public cloud-like operating model, in terms of both agility and economics, on-premises. ESG's research indicates that 44% of midmarket organizations forecasted that their IT organization would increase spending in 2019 for virtualization/private cloud initiatives while 45% of midmarket organizations reported they would do the same for cloud-optimized hyperconverged infrastructure platforms.³ Why? According to the survey conducted for the purposes of this paper, on average, users of HCI report these technologies free up staff from infrastructure management tasks. In fact, users of HCI reported 34% more time-savings on system management tasks on average, compared to before HCI was in use.

This time savings, critical to often under-resourced IT teams, can be reinvested toward architecting and orchestrating a more effective hybrid cloud environment. This relationship is borne out by the data: Users of HCI were 7.5x more likely than non-users to have hybrid cloud initiatives underway that were "highly effective" at driving value for the organization (68% versus just 9%). Ultimately, an effective hybrid cloud environment means infrastructure parity across public and private

Source: Enterprise Strategy Group

¹ Source: ESG Master Survey Results, 2019 Technology Spending Intentions Survey, March 2019.

² ibid.

³ ibid.

environments, allowing organizations to choose a location for a workload, on-premises or off-premises, based on requirements and business needs, not arbitrary outside factors. This correlation is bolstered by the survey data: 76% of organizations extensively using HCI have repatriated one or more mission-critical workloads, migrating them from public cloud infrastructure back on-premises—a figure 17% higher than among organizations not using HCI (65%).

To keep up with customer demands and stay market-competitive, midmarket organizations are rapidly investing in solutions that enable them to optimize their on-premises service delivery, while matching the scalability, elasticity, and self-service nature (via employee-accessible service catalogues) of public cloud environments.

Today's IT leaders evaluate many options when deciding where to run IT infrastructure to support their evolving business needs. However, there is inherent complexity that comes with the abundance of infrastructure delivery options available and in use, a problem many IT departments are finding challenging to navigate. Despite the increasing propensity of organizations to offload their infrastructure to public cloud service providers (CSPs), and their continued progress to optimize their on-premises environments, 74% of respondents agree that using infrastructure in the public cloud (or multiple public clouds) in addition to on-premises infrastructure has added complexity to their IT operations.

One way that organizations can reduce the impact of multi-cloud complexity is through the use of improved systems management available in modern server solutions. To quantify the impact of modern servers, ESG asked respondents how "cloud competitive" their server infrastructure is with public cloud alternatives. Those with modern servers (said another way, a server environment that is cloud competitive across all or almost all features) enjoy a 43% increase in their propensity to complete cloud projects under budget and a 32% increase in the number of cloud projects completed ahead of schedule.

That said, organizations need a better way to holistically and efficiently manage all of their infrastructure, regardless of where their workloads reside—whether hosted in a public cloud, in a private cloud, at the edge, or on-premises. To validate this belief, and in partnership with Dell Technologies, VMware, and Intel, ESG conducted a global survey of 1,257 IT decision makers at enterprises (those with 1,000+ employees, 72% of the respondent base) and midmarket organizations (those with 100-999 employees, 28% of the respondent base) using both public cloud infrastructure and operating a modern, on-premises private cloud environment. The remainder of this report summarizes ESG's observations among midmarket respondents.

Key Findings

ESG's research indicates that organizations see tremendous value in management simplifications, as they are struggling with the continuously increasing complexity of multi-cloud environments. When respondents were asked about the prospect of using consistent infrastructure management tools across private and public cloud locations, they told us they would expect to:

- Reduce costs by 16% on average.
- Reduce the number of security breaches, application outages, or other events affecting their public cloud-resident data by 26% on average.

Midmarket organizations see tremendous value in the concept of management simplification; among the few organizations represented in the full survey that have made material progress implementing cloud management consistency, the benefits realized consistently outstripped expectations.

- Shorten the calendar time needed to migrate a cloud workload from one cloud to another, or back on-premises, by 30% on average.
- Free up an average of 53.2 person-hours per week (or nearly 1.3 full-time equivalents) in infrastructure management time.
- Improve developer experience and performance: 97% believe it will be easier for developers to push code to production, with 54% saying they would expect at least daily code pushes.
- Reduce the frequency of problematic cloud projects, shrinking the frequency of budget overages and timeline overruns by 22% and 33% respectively.
- Increase their pace of innovation (71% reported), ultimately resulting in four incremental products/services launched annually.

More importantly, we observed that among the few organizations represented in the full survey that have made material progress implementing cloud management consistency, realized benefits consistently outstripped expectations.

Defining What It Means to Have Cloud Management Consistency

To assess cloud management consistency, ESG included three questions in its survey:

- 1. How many infrastructure management tools are in use to administer public cloud resources?
- 2. Is the organization able to use any of the same infrastructure management tools on-premises as it does for public cloud resources?
- 3. Are the infrastructure management tools used across on- and off-premises locations extensively relied upon?

Only organizations that have consolidated their cloud management tools down to three discrete tools or fewer that are usable regardless of infrastructure locality (on-premises or off-premises) and are using those same tools to manage the majority of their on-premises environment were considered to have a high degree of cloud management consistency. Only 7% of respondents met all of these criteria (see Figure 2).

Used across both public

and private clouds

Figure 2. Characteristics and Scarcity of Consistent Cloud Managers



The organization must be using a manageable number of tools to administer public cloud-resident infrastructure Tools in use to manage public cloud infrastructure must also be usable for infrastructure in an onpremises private cloud environment.



Used extensively on-premises

Organizations must be actively using these tools to manage a material proportion of their onpremises infrastructure.



Only 7% of all midmarket respondents met all three criteria.

The next section of this report details the benefits expected by the 93% of survey respondents who have a fragmented cloud environment, presuming a successful shift toward a more consistent cloud management experience.

The More Consistent the Management Experience, the Better the Expected Technical Outcomes

Among midmarket organizations, there is broad-based agreement that increased cloud management consistency will deliver critical technical improvements (see Figure 3). Based on ESG's research, nearly three-quarters of respondents believe increased consistency will improve operational efficiency, reduce risk and enhance security, increase cloud agility, and accelerate application deployment.

Figure 3. Perceived Technical Value of Increased Cloud Management Consistency

Which of the following benefits, if any, do you believe your organization would receive if it was able to significantly consolidate the management tools it uses to manage infrastructure across on-premises and in the public cloud environments? (Percent of respondents, N=327)



Improve IT Operations Efficiency through Management Consistency

While IT staff have many competing priorities, performing basic operational tasks on their infrastructure should not be at the top of their task list. By diminishing these tedious tasks, time savings can be redirected to efforts related to their organization's hybrid cloud or digital transformation initiatives or drive innovation to competitively differentiate their company. However, some of these tasks will remain for the foreseeable future. For example, organizations must provision, configure, and deprovision their virtual machines and infrastructure as needed; applications must be patched; and alerts and issues must be investigated and remediated. So, the question remains: Is there an opportunity for organizations to optimize these tasks?

An ideal solution is for organizations to minimize the number of management consoles needed to operate their environments. This enables IT administrators to be more productive, by reducing the time they spend on mastering and switching between different tools, with differing interfaces and functional capabilities. Furthermore, there are real cost-saving implications to a consistent management approach: Organizations would spend far less on training and consulting services to enable employee mastery of their organizations' tools. ESG's research supports this conclusion, as 76% of respondents with fragmented cloud management experiences agree that greater consistency would provide their organization with increased efficiency and simplified operations.

Additionally, when ESG asked respondents to quantify the personhours that would be saved on infrastructure management if their organization were able to increase cloud management consistency, the mean response was 53.1 hours per week—the equivalent of about 1.3 full-time employees. With this type of efficiency gain, IT organizations

Respondents believe consistent cloud management will save them 53.1 person-hours per week.

could make tremendous progress toward accelerating their strategic projects.

Figure 4. Efficiency Gains Expected Due to Increased Cloud Management Consistency

How many full-time equivalents (FTEs)/person-hours do you think your organization would save on infrastructure management if your organization was able to use consistent infrastructure management tools across on-premises and cloud locations? (Percent of respondents, N=327)



Source: Enterprise Strategy Group

Reduce Risk Exposure through Consistent Management

Toggling between numerous management consoles increases security concerns and organizational risks. To prevent exploits and data loss, as well as minimize downtime associated with these attacks, organizations need to configure and patch these cloud instances efficiently and properly. However, the number of cloud instances running on different cloud platforms is positively correlated to the difficulty associated with ensuring the proper security and configuration of all those instances. In fact, it is possible that organizations may need to source security-fluent administrators specializing in each cloud environment, creating cost and staff resourcing challenges as environments scale up. An ideal solution is one that consolidates the management of cloud instances in a single interface, allowing administrators greater visibility and eliminating configuration and patching blind spots.

Based on ESG's research, nearly three-quarters (72%) of midmarket respondents who are currently grappling with a fragmented cloud management experience agree that greater consistency would reduce risk and enhance security for their organization. To quantify that impact, ESG asked respondents the percentage reduction in the number of security breaches, application outages, or other events affecting its public cloud-resident data they would expect if their organization had more infrastructure management consistency across clouds. On average, midmarket respondents reported a 26% anticipated reduction in security incidents (see Figure 5).

Another potential solution for organizations is to standardize on a single public cloud vendor. However, this type of consolidation leaves organizations vulnerable to a host of "single point of failure" risk vectors (e.g., infrastructure pricing changes, service level agreement modifications, etc.). Organizations appear to recognize these issues, as their propensity to partner with multiple public cloud infrastructure providers continues to increase. Based on ESG's research, 81% of midmarket organizations utilize multiple infrastructure CSPs today, and 84% expect to do so three years from now. Moreover, the proportion using more than three infrastructure CSPs is expected to increase 2x over this time horizon.

Figure 5. Reduction in Cloud Security Incidents Expected Due to Increased Cloud Management Consistency

By what percentage do you believe your organization would reduce the number of security breaches, application outages, or other events affecting its public cloud-resident data if it had more infrastructure management consistency across clouds? (Percent of respondents, N=327)



Source: Enterprise Strategy Group

Consistency Enables Developer Efficiency

By increasing their infrastructure environment consistency, organizations not only help their IT and security teams, but also increase the efficiency of their development teams. Creating consistency between public cloud and private cloud infrastructure allows developers to code for a single environment. This improves developers' efficiency by enabling them to deploy code to either on-premises or public cloud infrastructure based on the application's requirements without needing to refactor an application if the desired location changes over time. ESG's research indicates this level of flexibility is highly sought after, with 84% of midmarket organizations reporting that achieving workload placement flexibility is a top-five priority among all of their existing technology initiatives.

95% of respondents believe consistent cloud management will make it easier for developers to do their jobs.

When midmarket respondents were asked about the impact of increasing infrastructure consistency between on-premises and public cloud locations on developers, 95% stated it would make developers' lives easier if they only needed to build for one environment. Moreover, 97% of midmarket respondents stated it would be easier for developers to push code to production. In fact,

when ESG asked midmarket respondents how often their organization would deploy new code to production if cross-cloud consistency were improved, the majority (54%) thought they would be able to push code daily (see Figure 6).

Figure 6. Expected Frequency of Code Deployment After Increasing Infrastructure Consistency





Consistency Enables Workload Mobility

For midmarket respondents, increasing infrastructure and operations consistency across environments helps them achieve one of their most important technology priorities: workload placement flexibility. Based on ESG's research, 84% of respondents rank the freedom to deploy workloads wherever they want as one of their top-five technology initiatives. Moreover, 73% of midmarket respondents believe an increase in infrastructure consistency will improve their cloud onboarding and migrations. Why? Using familiar tools and models for application deployments and migrations creates efficiencies for administrators, increasing their comfort with tasks while reducing their errors.

To show the impact of infrastructure management consistency across clouds, ESG asked midmarket respondents to estimate the percentage reduction in the calendar time it would take to change where an application is running. On average, respondents reported a 30% reduction (see Figure 7). In other words, if it takes organizations a quarter to migrate workloads across clouds, they would be able to reduce that time by nearly a month with cloud management consistency.

Figure 7. Reduction in Expected Workload Migration Time Due to Increased Cloud Management Consistency

By what percentage do you believe your organization would reduce the time it takes to change where an application is run if it had more infrastructure management consistency across clouds? (Percent of respondents, N=327)



Not at all By less than 10% By 10% to 25% By 26% to 50% By 51% to 75% By more than 75% Don't know

How Consistent Cloud Management Drives Business Outcomes

While technical benefits drive IT efficiency and streamline operations (i.e., make technology teams more efficient and more effective), the true value driver for the IT organization is how those technical benefits manifest as business benefits (see Figure 8).

Seventy-six percent of midmarket respondents believe cloud management consistency will improve IT/line-of-business collaboration and more directly align IT performance metrics to real business outcomes. Additionally, respondents believe that increased consistency would improve their pace of innovation and product development (71%), reduce costs (67%), and improve their time to market (64%).

Figure 8. Perceived Business Value of Increased Cloud Management Consistency

Which of the following benefits, if any, do you believe your organization would receive if it was able to significantly consolidate the management tools it uses to manage infrastructure across on-premises and in the public cloud environments? (Percent of respondents, N=327)



How Management Consistency Reduces Costs

The aforementioned research shows that a consistent cloud management strategy unlocks efficiencies for IT teams, including application developers. When applications are optimized for a unified infrastructure platform, agnostic to where they reside in the IT environment, costly application architecture decisions can be avoided (e.g., migrating applications with unnecessary data egress to an external microservice or needing to refactor an application for a new location). As applications become more portable, organizations also gain the agility needed to capitalize on changing cloud economics and easily migrate them to where they run most affordably and effectively.

These considerations are only a subset of those affecting the total cost of an IT environment. It's no wonder that nearly seven out of ten respondents foresee increased cloud management consistency driving down overall costs. On average, midmarket respondents believe infrastructure management consistency will reduce IT costs by 16% (see Figure 9).



Figure 9. Reduction in Infrastructure Costs Expected Due to Increased Cloud Management Consistency





How Management Consistency Improves Organizational Agility

In today's fast-paced and always-on world, organizations must compete with agility and transformative technologies to provide better experiences for their customers, students, patients, or constituents and differentiate themselves from others in their markets.

With this backdrop in mind, it is easy to understand how the expected technology benefits of increased cloud management consistency will also drive business agility. Instead of working on mundane infrastructure break-fix tasks, IT operations teams will be freed to collaborate with their line-of-business counterparts to work on more strategic objectives, such as rationalizing application portfolios

97% of respondents believe consistent cloud management would free up IT staff to refocus on new projects.

through advanced analytics initiatives or discussing the requirement of their next game-changing business application. Based on ESG's research, 97% of midmarket respondents believe their IT staff would be more flexible to shift to new projects as needed if their organization had consistent infrastructure management tools across their on-premises and cloud locations.

In order to quantify the expected improvement in business agility, we asked respondents to consider the potential impact of management consistency on their time to market, in terms of product cycles and annual product launches. On average, respondents expected to reduce their launch or product cycle time by 5.2 weeks and launch 4 net-new products or services annually (see Figure 10). In both cases, cloud management consistency is expected to dramatically transform organizational innovation.

Figure 10. Accelerated Innovation Expected Due to Increased Cloud Management Consistency





Source: Enterprise Strategy Group

It's important to note that a modern approach to optimize data storage and protection has an impact on cloud agility and overall hybrid cloud success. ESG asked respondents how "cloud competitive" their storage and data protection infrastructure is with public cloud alternatives, across features like data security, assurance of data quality, and automated insights/analytics. Seventy-nine percent of organizations with modern storage (that is, cloud competitive across all or almost all features) report they are effective at driving value with hybrid cloud initiatives. The same is true for 79% of organizations with modern data protection infrastructure. Moreover, organizations with modern on-premises storage environments complete 54% more of their cloud projects significantly ahead of schedule, while those with modern data protection are 1.6x and 1.9x more likely to be very confident in their ability to meet their organization's hybrid cloud goals, respectively.

More than Just Optimism: Consistent Cloud Management Is a Game Changer for Organizations on the Leading Edge

As noted, just 7% of midmarket firms represented in the research are on the leading edge of consistent cloud management. These organizations were asked about the actual improvements they have seen to date. When ESG analyzed the actual returns of all organizations on the leading edge of consistent cloud management, it was clear that in many cases, actual benefits achieved outpace the magnitude of benefits expected. While these organizations are few and far between, the early returns they are reaping are noteworthy.

For example, 90% of organizations with consistent cloud management reported they have increased efficiency and simplified operations as a result. This compares favorably with the 78% of organizations with fragmented cloud management today who anticipate that benefit. Additional statistically significant differences exist between the proportion of respondents achieving/expecting faster time to market and accelerated cloud onboarding and migrations; however, ESG observed a positive trend across all benefits included in the survey (see Figure 11).



Figure 11. Differences between Actualized and Expected Benefits for Consistent Cloud Management

Incidence of Actual Benefits vs. Incidence of Expected Benefits (Percent of respondents) Increased management efficiency/simplified 78% operations Statistically significant 67% Faster time to market differences 74% Accelerated cloud onboarding and migrations Improved collaboration between IT and line-ofbusiness stakeholders Respondents without cloud management Reduced risk and enhanced security consistency today that believe in value Increased pace of innovation/product proposition (N=1,195) development/service delivery Respondents with cloud Accelerated application development management consistency today Reduced costs reporting benefit achieved (N=62) Increased ability to use artificial intelligence/machine learning Reduced vendor lock-in/greater workload portability

Easier to find and train employees

Source: Enterprise Strategy Group

Validating Real Risk Reductions with a Consistent Cloud Management Experience

We observed that respondents both expect and report that cloud management consistency improves security capabilities and reduces risk. In addition to questioning respondents about their perception, we asked respondents how many times in the past 12 months their organization experienced a security breach, application outage, or other event resulting in data loss or improper exposure of public cloudresident data. When comparing organizations with fragmented cloud

Organizations with fragmented cloud environments have experienced 3.6x more cloudrelated security and availability incidents in the past 12 months.

66%

environments to those with consistent cloud environments, the differences are stark: On average, those with fragmented environments reported between 2.6 and 3 of each type of events in the past year, and in total they have experienced 3.6x more security and availability incidents compared with those few organizations achieving consistent cloud operations (see Figure 12).

How are consistent cloud managers effecting such dramatic change to their risk outcomes? Visibility is one major reason. When ESG asked respondents to characterize the level of visibility and control their organization has over its public cloud infrastructure, 44% of respondents with a consistent management experience said they had total visibility and control, 3.4x the incidence observed among organizations with fragmented cloud management (13%). Unifying the cloud management experience allows organizations to manage all their cloud infrastructure holistically, eliminating blind spots, maximizing control, and—as the data shows—dramatically improving security efficacy.

Figure 12. Differences in Security Event Frequency, by Cloud Management Consistency



Source: Enterprise Strategy Group

Validating Real Workload Mobility Improvements with a Consistent Cloud Management Experience

We observed that many respondents both expect and report that cloud management consistency improves cloud onboarding and migrations, while reducing vendor lock-in. In addition to asking respondents if they would receive this benefit and its expected magnitude, ESG asked respondents how long it typically takes for their organization to change where an application is run (i.e., move a workload from one public cloud to another or to on-premises infrastructure). Once again, the delta observed between organizations with fragmented cloud environments and those with consistent cloud management is significant (see Figure 13). While two-thirds (66%) of organizations with consistent cloud management report they can port a workload from one cloud to another in less than a week, 68% of organizations with fragmented cloud environments report the timeline would be multiple weeks or even months.

Figure 13. Differences in Workload Portability, by Cloud Management Consistency



Crunching the numbers, the average calendar time advantage enjoyed by organizations with a consistent cloud management experience relative to those without is about 2.4 work-weeks per cloud migration. The ability to shave time off these types of moves can be the difference between an organization gaining a competitive edge over its peer group or being left behind, bogged down in a prolonged migration effort.

Validating Real Cloud Cost and Agility Benefits with a Consistent Cloud Management Experience

Respondents with fragmented cloud environments were quite optimistic about the cost and agility gains they could achieve via cloud management consistency. In order to assess the extent to which these gains are materializing, ESG asked all respondents about their performance completing cloud projects relative to budget and timeline expectations. Once again, the data provides evidence that supports the idea that cloud management consistency drives real cost and agility improvements for organizations.

Respondents at organizations that have achieved cloud management consistency complete 19% more of the cloud projects they have undertaken to date on or under budget (74% versus 62% at organizations with fragmented cloud management environments). Similarly, these organizations complete 23% more of the cloud projects undertaken on or ahead of schedule relative to those with fragmented management environments (81% versus 66%) (see Figure 14).

Figure 14. Differences in the Ability to Complete Cloud Projects, by Cloud Management Consistency



Respondents with cloud management consistency today (N=62) Respondents without cloud management consistency today (N=1,195)



Average percent of cloud projects completed on or under Average percent of cloud projects completed on or ahead of budget schedule

Source: Enterprise Strategy Group

The Big Picture: Consistent Cloud Management Drives Hybrid Cloud Value and Helps Make IT a Hero

It's clear that whether discussing expectations or reality, respondents see multifaceted value from increasing the consistency of hybrid cloud management. It's important to understand how these various technical and business benefits roll up to impact bigger picture considerations. For example, all respondent organizations are operating a hybrid environment, but how effective have their hybrid cloud initiatives been to date at driving value for the organization? The answer is generally positive, though there is a clear divide based on management consistency: 38% of organizations with cloud management consistency report these initiatives have been *very* effective at driving value for the organizations compared with 27% of organizations without cloud management consistency.

38% of consistent cloud managers report hybrid cloud initiatives have been very effective at driving value for the organizations compared with 27% of organizations without cloud management consistency. IT's role in enacting cloud management consistency was also an area of interest in the research. We assessed whether IT's standing in the organization was related to their ability to enact cloud management consistency. The answer to that question was an emphatic "Yes!" ESG asked all respondents to characterize how the IT organization is viewed by others in the organization, specifically in this case by developer constituents. IT is viewed positively at nine out of ten (89%) organizations with cloud management consistency today, meaning IT is viewed as either a competitive differentiator or

a high-value service provider. By contrast, the plurality of organizations lacking cloud management consistency rate IT as just adequate. Said another way, IT organizations with consistent cloud management operations are 3.4x more likely to be viewed as a competitive differentiator (see Figure 15).

Figure 15. Differences in IT's Standing, by Cloud Management Consistency



Where to Start: Ask for Help from the Experts

For many organizations, enacting cloud management consistency into their current IT environment may feel like trying to squeeze toothpaste back into the tube: Rationalizing cloud services in use, as well as the native controls to manage them, may seem daunting. More often than not, organizations currently in the cloud, or expanding their cloud capabilities, simply do not have clearly defined cloud strategies in place. If this describes you, you are not alone. ESG's research indicates that nearly nine out of ten organizations (88%) work with third parties, including IT vendors, system integrators, and value-added resellers, to help architect and implement cloud infrastructure projects. Why? Because it helps organizations save time and money, among many other benefits (see Figure 16).

Figure 16. The Benefits of Partnering with Third Parties on Cloud Projects

For which of the following reasons has your organization engaged third parties for professional services to architect and implement cloud infrastructure projects? (Percent of respondents, N=309, multiple responses accepted)



Source: Enterprise Strategy Group

While cloud transformation projects will drive dramatic business and technical benefits, organizations should explore partnerships with cloud solution architects that will enable them to implement their transformation initiatives at a faster rate. This includes seeking out partners that can implement solutions in both private and public cloud environments, delivering openness and choice across public cloud providers, rather than proprietary solutions optimized for a single public cloud.

The Bigger Truth

The conundrum facing many organizations today is, simply put, that cloud adoption has outpaced the ability of many organizations to effectively monitor and manage data and applications across those clouds (both off-premises and onpremises). However, while the simplicity of purchasing with "swipe-and-go" ability is one of the public cloud's most valued propositions, unmanaged cloud sprawl can create multilayered challenges, such as inefficient and ineffective infrastructure management, increased cybersecurity risk, inefficient workflows, and budget and timeline overages for cloud projects; very simply, cloud sprawl creates far too many challenges for most midmarket organizations to remediate.

ESG research indicates that through consistent infrastructure and operations, organizations can reduce the management complexity of a multi-cloud environment and drive significant results. Respondents with fragmented, siloed, and complex cloud management experiences forecast great benefits across IT and for driving the business; and further, those who are on the leading-edge of cloud consistency are already experiencing meaningful cost savings, hardened security, reclaimed productive time, accelerated innovation and application development, and overall business agility.

How Dell Technologies Cloud Can Help

This ESG Research Insight Paper was commissioned by Dell Technologies, VMware, and Intel Corporation, all of which are keenly focused on helping organizations achieve their cloud goals with Dell Technologies Cloud. As has been discussed in depth in this paper, any technology decision must be made with consideration for the people, processes, and current state accounted for. Dell Technologies is focused on meeting organizations where they are and delivering the technology and

services solutions necessary to help them architect a winning multi-cloud IT strategy that builds on existing tools and skillsets to unlock better outcomes. Dell Technologies Cloud is a set of cloud infrastructure solutions designed to enable a consistent operating model and simplified management across private clouds, public clouds, and edge locations, which reduces the barriers of cloud adoption and provides the ability to let application and business requirements determine where workloads reside. This vision for the Dell Technologies portfolio is based on Dell's understanding of cloud as an operating model, not a place, and ambition to become the trusted technology partner for organizations that are looking to reduce the complexity of multiple cloud environments with a consistent infrastructure and operations layer.

To learn more about how Dell Technologies Cloud can help you, start here.

Appendix – Research Methodology and Respondent Demographics

To gather data for this report, ESG conducted a comprehensive online survey of IT decision makers from private- and public-sector organizations in 11 countries: US (36%), Canada (3%), UK (12%), France (8%), Germany (10%), Singapore (5%), Australia (5%), India (4%), Hong Kong (4%), Brazil (7%), and Mexico (6%). The survey was fielded between September 17, 2019 and October 12, 2019. To qualify for this survey, respondents were required to have influence in the purchase of cloud investments (public or private) at organizations utilizing public cloud infrastructure and operating modernized on-premises data center environments.

After filtering out unqualified respondents, removing duplicate responses, and screening the remaining completed responses (on several criteria) for data integrity, a final sample of 351 midmarket respondents remained.

All respondents were provided an incentive to complete the survey in the form of cash awards and/or cash equivalents. Note: Totals in figures and tables throughout this report may not add up to 100% due to rounding.

The figures below detail the demographics of the respondent base: individual respondents' current job responsibilities, as well as respondent organizations' total number of employees and primary industry.

Which of the following best describes your current job title/level? (Percent

Figure 17. Survey Respondents, by Job Title/Level





Figure 18. Survey Respondents, by IT Responsibility Areas

In which of the following areas of IT do you have significant involvement in the purchase process for your company? (Percent of respondents, N=351, multiple responses accepted)



Source: Enterprise Strategy Group

Figure 19. Survey Respondents, by Company Size (Number of Employees)



How many total employees does your organization have worldwide? (Percent of respondents, N=351)



21

Figure 20. Survey Respondents, by Industry



What is your organization's primary industry? (Percent of respondents, N=351)

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