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THE POWER OF CONSUMPTION-BASED ON-PREMISES SERVICES IN MEETING DYNAMIC STORAGE DEMANDS

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Overview

Over the next five years, there is strong evidence that the shift to everything as a service will define the way IT (on and off premises) will be consumed. These new on-premises models aren't only being developed to shift procurement models and emulate common SaaS and IaaS models in public cloud, but also to enable companies to digitally transform with greater speed, agility, and flexibility. With trends like multi and hybrid cloud, containers, and microservices driving increased requirements for hybrid IT, two growing areas of focus for consumption-based models are on-premises compute, specifically as part of a hybrid cloud, and storage. Both of these focus areas provide a compelling case for on-demand consumption that allows companies to respond quickly to the needs of their business, while more effectively managing spend based upon actual use data, rather than traditional overbuy, under-buy models that often lead to unnecessary downtime.

In the following research brief, we share the findings of a recent executive pulse study on consumption-based IT, specifically cloud and storage.

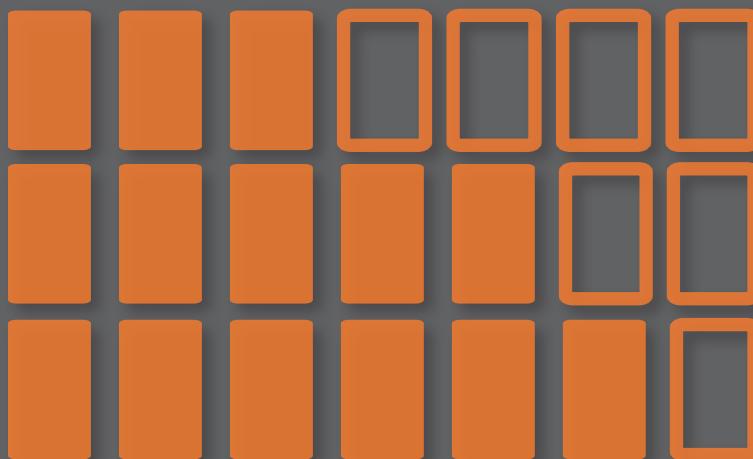
Our goal is to provide clear visibility into the impact that consumption-based models are having on IT and their ability to respond to the rapidly changing demands of business and customers.

Survey Demographics

To better understand industry-wide cloud and storage trends and their key touchpoints, our team at Futurum Research surveyed 167 business executives and technology professionals, primarily from North America, across eight major industries: Banking & Finance, Energy & Utilities, Healthcare & Pharma, Manufacturing, Media & Technology, Public Sector, Retail, and Travel & Hospitality.

Key demographic data points include:

- > 55% of respondents are primary decision-makers
- 66% of respondents are C-suite executives
- 83% of respondent organizations with > 5,000 global staff, primarily located in North America (99%)
- Size of organizations encompassed: 50,000+ (17%), 5,000-49,999 (41%), 1,000-4,999 (42%)



>55% Primary decision-makers

66% C-suite executives

83% Organizations with >5,000 global staff primarily in North America

Size of Organizations encompassed:
50,000, 5,000-49,999, 1,000-4,999



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Defining Cloud Strategy

The first section of the survey focused on the cloud strategy approach of the decision-makers. This included seven choices, broadly divided between a multi-cloud implementation approach (i.e., balanced across public/private implementations as well as a holistic, hybrid cloud strategy with multi-public, private, and on/off premise integration) and all-in on a single cloud implementation approach (i.e., public cloud-only, private cloud-only). Not surprisingly, the majority of respondents selected the balanced/holistic

multi-cloud approach by a notable margin (i.e., 54%). However, the modest majority was somewhat surprising, given the historical reluctance of organizations to rely on a singular vendor for IT capabilities, as well as entrusting an all-in approach to a third party such as a public cloud vendor. We anticipate the balanced/holistic multi-cloud strategy will increase in popularity as organizations gain more confidence in cloud security and better understand the risks of over reliance on a single cloud source.

The Pace of Cloud Adoption Is Meeting Expectations

On a positive note, cloud adoption rates are progressing, with 78% of respondents indicating that their cloud adoption strategy has gone as expected or even faster than expected. Only 22% have experienced barriers that prolonged their adoption expectations. The result is good news overall for the industry, since it confirms that organizations are becoming more adept in using cloud platforms to execute their storage strategies.

A Trio of Key Takeaways

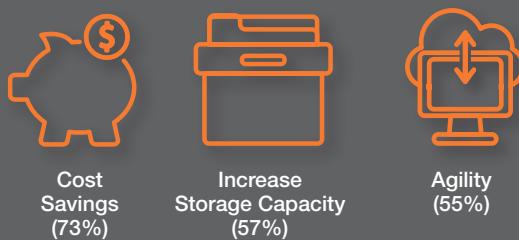
With cloud adoption continuing apace, it is important to understand the motivations for using cloud as an integral element of emerging storage strategies. For respondents, the top three factors in driving interest in the cloud are:

- Cost Savings (73%)
- Increase Storage Capacity (57%)
- Agility (55%)

Such factors are helping to offset the top three major concerns related to cloud adoption, consisting of:

- Security (73%)
- Performance & Availability (54%)
- Cost & Cost Management (44%)

Top Three Factors Driving Interest In the Cloud



Top Three Concerns Related to Cloud Adoption



In conjunction, the top three areas in which organizations require the most help include:

- Data & Data Management (35%)
- Security & Networking (29%)
- DevOps Agility (29%)

Top Three Areas That Require the Most Help



Data &
Data Management
(35%)



Security &
Networking
(29%)



DevOps
Agility
(19%)

Security reigns as the leader among the top three considerations in adopting a cloud implementation. Notably, while 73% cite security as a top three concern, only 29% feel they lack internal expertise. Decision-makers clearly perceive fulfilling security requirements as the top concern and key consideration in driving their overall decision-making. As a result, storage suppliers must prioritize their solutions to meet security demands even when customers and prospects already have vast security resources and expertise in-house. This serves as a good example of where on-premises consumption-based storage and solutions offer

a “best of both worlds” hybrid approach to reduce some of the significant concerns around security, while still being able to operationalize and scale with similar benefits to those of public cloud. Given that technology is rarely procured in silos, we also believe it is important to point out that while consumption services themselves can provide flexibility and scale, our data indicates that consumers both need and will benefit from seeking service providers that can integrate consumption-based offerings as part of meeting broader needs in areas like data management and cybersecurity.

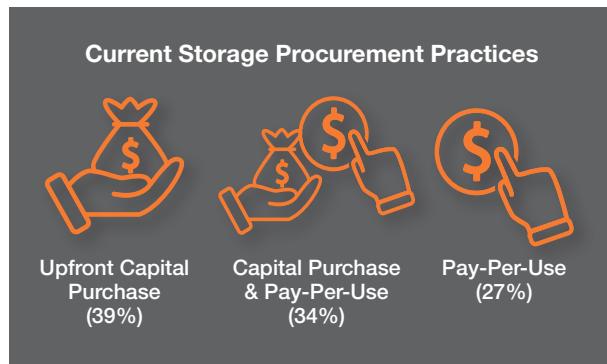


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Defining Storage Strategy

The second section of the survey focused on storage strategies. As a starting point, the current storage procurement practices needed to be identified. This produced the following results:

- Upfront Capital Purchase (We Buy It): 39%
- Combo of Upfront Capital Purchase and Pay-Per-Use: 34%
- Pay-Per-Use (Consumption-Based Pricing): 27%



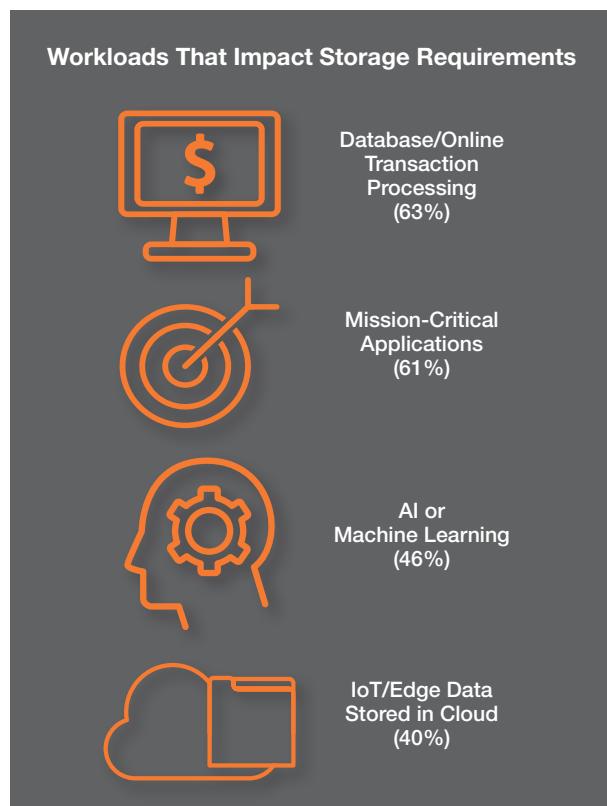
The ongoing practice of high capital purchases came as no surprise, since it confirms many organizations adhere to known and established purchasing practices. However, we expect pay-per-use (PPU) models to increase significantly over the next 12 months plus, as it enables organizations to right-size expenditures based on their actual storage requirements and avoid over or under purchasing storage when using the upfront capital approach.

Storage Workloads

With the PPU model playing an increasing role in storage implementations, it becomes important to better understand the workloads that impact storage requirements the most:

- Databases/Online Transaction Processing: 63%
- Mission-critical Applications: 61%
- Artificial Intelligence or Machine Learning: 46%
- IoT/Edge Data Stored in Cloud: 40%

Clearly, high-priority workloads are favorable to PPU models, and we project that will further fuel adoption of the PPU approach.



Storage Procurement: The Fine Line Between Needs and Wants

When considering on-premises storage, predicting how much capacity may be required six months to a year or two in the future is an almost impossible task. Balancing the high cost of procuring too much capacity upfront with the business impact of running out of capacity is a constant challenge. Over-investing, while providing for future growth and de-risking operations, diverts resources away from other key IT and business initiatives that may drive greater competitive advantage. That said, IT organizations still overwhelmingly err on the side of caution, as evidenced here:

- Over-Invest (Invest in Storage Solutions in Excess of Current Needs): 67%
- Right-Size (Purchasing Only What is Currently Needed): 31%
- Misfire (Purchase Less than is Currently Needed): 2%

As shown in the results above, almost 70% of respondents using on-premises storage over-invest to avoid running out of capacity. We expect to see increased adoption of pay-per-use models, both on-premises and in the public cloud, to better align storage capacity and costs with business needs and avoid the long procurement cycles and high costs associated with upfront capital purchases.



Organizations that prefer to keep their storage on-premises for reasons of security, compliance, or performance can now gain the same advantages of the public cloud with pay-per-use storage offerings delivered in their own datacenter. This enables organizations to maintain control of their apps and data while gaining the benefits of pay-per-use, scalable storage.



Brutal: Running Out of Storage Even with Excess Planning

With 66% of the survey pool indicating they over-provision storage solutions at the time of acquisition, it would seem the odds would favor avoiding storage shortfalls. However, over one-third report they have either run out of storage capacity or hit utilization rates so high as to impact performance. Of those that have experienced performance issues due to storage shortfalls or over-utilized storage systems, over one-third (36%) say the realized cost of disruption was in excess of \$100K. For businesses with fewer than 5,000 employees, the impact can be even more severe, with 41% incurring costs in excess of \$100K. As a result, the legacy upfront capital purchase approach can prove a costly affair for many organizations, which the PPU model is designed to avoid.

This problem is projected to become more acute with storage needs growing significantly. While 7% have seen storage needs increase by more than 50% per year, 78% have experienced annual growth of between 11% and 50%. In particular, Retail, Banking, and Service firms are leading the way, with over 50% having seen growth in excess of 25% per year.

The rapid growth in storage demand is rendering the predictability of storage needs more difficult.

In fact, only 22% of respondents say their storage usage needs are very predictable.

Conversely, 75% say they are very or extremely confident in their ability to predict their storage needs over the coming three years. The clash in feedback suggests something is off here and it is likely a case of over-confidence in meeting future storage demand despite the consistent pattern of miscalculation inducing high costs to correct.

Overall this mounting challenge of calibrating future storage demand correctly is fueling additional evaluation of consumption-based on-premises solutions. For enterprises, this provides the additional benefit of offloading the maintenance, monitoring, and capacity management of their storage devices. This aligns with growing customer interest in getting out of the maintenance business in order to fulfill core business and digital transformation objectives.

Moreover, businesses de-risk their operations with automation, proactive monitoring, and pre-provisioning storage capacity ahead of demand while also lowering costs by only paying for what they use. A case of “win-win.”



Takeaways and Conclusions

While close to half of all enterprises say they can expand their storage capacity in less than three months, over half say it takes them three to nine months or longer to actually procure additional storage. As we stated previously, the cost of not having enough storage, or over-utilizing it with degraded performance, frequently proves significant. As a result, having access to flexible, on-demand storage can save significantly in operational costs or losses, particularly for Media & Technology, Retail, and Travel & Hospitality businesses, roughly a quarter of which say storage procurement can be in excess of six months.

Increasingly, organizations can ill-afford to rely on storage strategies that do not align with their specific requirements. The long-term key to success is better understanding the intrinsic benefits of using PPU models and relying less on upfront capital purchases dependent on frequently

inaccurate prediction methods. Avoiding unnecessary storage costs and inefficiencies means choosing a strategic partner that fulfills the full spectrum of emerging storage requirements.

In the bigger picture, there is a growing clarity based upon the data, that consumption-based IT models are growing in popularity and warrant consideration by IT organizations and business units that are seeking to meet the business demands in an agile, high-performance and secure environment. Storage and compute serve as two areas in particular that are well poised for migration from current consumption models to usage-based flexible consumption. This is a trend that we expect to see gain greater momentum over the next five years as businesses realize the need for on demand solutions in public, private, and hybrid domains as the pressure to transform and modernize IT grows in parallel with the enterprises ambition to digitally transform.

Learn About HPE GreenLake

HPE GreenLake delivers consumption-based services for your top workloads that are designed, delivered, and operated by Hewlett Packard Enterprise. Whether you're looking for a cloud-like experience on-premises or a fully managed hybrid cloud, HPE GreenLake can help you achieve the business outcomes you're looking for faster and more economically. With a broad portfolio of as-a-service offerings spanning compute, storage, virtualization, database, SAP HANA, hybrid cloud and more, organizations gain the benefit of a simplified IT experience and a pay-per-use model that scales with business needs.

Learn more at:

hpe.com/greenlake



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Futurum Research is an independent research, analysis, and advisory firm, focused on digital innovation and market-disrupting technologies and trends. Every day, our analysts, researchers, and advisors help business leaders from around the world anticipate tectonic shifts in their industries and leverage disruptive innovation to either gain or maintain a competitive advantage in their markets.



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