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APEX Custom Solutions: A Study of Usage-Based Consumption Models for Storage

EXECUTIVE SUMMARY

IDC interviewed organizations using APEX Custom Solutions, specifically APEX Flex on Demand and APEX Data Center Utility, to understand the solutions' impact on their costs, agility, and business results. Study participants credited moving to a pay-per-use model with Dell Technologies' storage solutions with better sizing their environments and optimizing their capacity use, allowing for lower overall storage costs. Further, they experienced much easier and faster access to new storage capacity, which helps them increase agility and respond faster to potential new business opportunities.

Specifically, the interviewed organizations cited clear cost savings, along with significant gains in efficiency, productivity, and revenue, when acquiring storage using APEX Custom Solutions, including the following:

- **23%** lower average storage cost of operations per year
- **64%** lower cost of unplanned outages (due to reduced loss of productivity and revenue)
- **25%** lower storage acquisition costs
- **20%** more available capacity
- **92%** faster time to deploy new storage capacity
- **54%** fewer incidents of unplanned downtime
- **\$36,400** gain in business operations per 100 users (as a result of increased revenue and user productivity)

SITUATION OVERVIEW

Organizations around the world strive to become more data centric and digitized — using technology to evolve IT infrastructure, operations, and processes — so that they can differentiate their business and gain an advantage. They seek creative technology solutions that will deliver all the performance and security needed to satisfy a diverse range of critical business applications and workloads running in multiple operating environments — such as private cloud, public cloud, and edge locations. In addition, they need to find ways to drive out inefficiencies and free up time, money, and resources to focus on the critical initiatives they must pursue to meet strategic objectives.

These objectives are important but can be difficult to obtain. Many business and IT leaders say they're budget and resource constrained, unable to easily direct resources from mundane maintenance tasks toward new areas of innovation. Quite simply, they don't have the capital resources and technology expertise on hand to achieve key milestones.

Today, there are many consumption-based solutions available that can shift technology and services spending from a capital expenditure (capex) to an ongoing operating expenditure (opex). These flexible payment solutions can reduce the cost and complexity of infrastructure operations, deliver consistent performance metrics, and accelerate business transformation. All these advantages are leading to faster adoption of new consumption models, including on-premises infrastructure — which remains a top consideration for some organizations due to certain performance, service-level, and compliance advantages.

The shift to pay-per-use models will drive the providers of these offers to streamline adoption through clearer metrics about pricing, capacity, and services that will simplify deployment. IDC research shows that customers want models that offer flexible capacity, simplified management, transparent pricing, and robust services. In a 2019 survey, we asked customers about the specific drivers for adoption of pay-per-use models, and the top drivers cited are listed as follows:

- Improve hardware, software, services, and support.
- Align cost of applications to the infrastructure.
- Reduce costs for capacity.
- Improve business outcomes.
- Move workloads to infrastructure that can scale.
- Conserve capital by using opex-structured budgets.
- Automate and offload IT chores.

These flexible payment solutions can reduce the cost and complexity of infrastructure operations, deliver consistent performance metrics, and accelerate business transformation.

Recently, Dell Technologies announced APEX, a strategic initiative to address these drivers, providing an expanded portfolio of consumption-based and as-a-service solutions that span its entire infrastructure portfolio — from edge to core to cloud.

APEX Custom Solutions

With APEX Custom Solutions, customers can select the appropriate technology and services to design a custom solution that is right for their business. These consumption offerings allow them to scale capacity up or down and pay for only what they use, giving them the financial flexibility to maintain greater agility within their organizations.

APEX Flex on Demand and APEX Data Center Utility make up the APEX Custom Solutions.

APEX Flex on Demand is a pay-per use flexible consumption model for custom configurations, delivering elastic capacity that is measured at the product level. Flex on Demand allows customers to acquire the Dell Technologies products and services they need to support their changing business with payments that scale to match actual usage while eliminating the need for a large upfront expenditure.

APEX Data Center Utility is highly customizable and enables organizations to move part, or all, of their data center operations into a pay-per-use model that includes professional services to fully support manage the data center and its operations and provides a single invoiced monthly payment based on actual usage.

The difference between APEX Flex on Demand and APEX Data Center Utility is in the scope and scale of the opportunity and the degree to which each solution is customized to meet the customer's exact specifications.

The common attributes of these models are:

- Establish a predictable rate for all deployed capacity.
- Ensure pricing for committed capacity is competitive.
- Bill for buffer capacity only when it is consumed (no charge for idle capacity).
- Scale up and down as needed with elastic capacity.
- Provide multiple options at the end of committed term — customers can opt to go month to month, extend the term, or return the equipment.

IDC views the APEX Custom Solutions program through the lens of their ability to meet actions required for Flexible Consumption 3.0. These include keep the branding consistent, make the offer simple to sell and consume, and provide life-cycle services — all with transparent pricing. In our view, APEX Custom Solutions meet these key criteria. These pay-per-use pricing models provide customers with the flexibility and choice to select the hardware and services they need, reduce capital expenditures and shift to operational budgets to align payments with usage. In addition, to expand market reach, Dell Technologies has over 2,000 partners that are already using these models to enable their clients to be more agile and competitive in their key markets. Dell Technologies' continued investment and realignment of its vast array of offers across its broad portfolio into one cohesive program enable the company to keep pace with rapidly expanding market demands and deliver technology infrastructure solutions at scale.

THE BUSINESS VALUE OF APEX CUSTOM SOLUTIONS FOR STORAGE

Study Demographics

IDC interviewed nine organizations about their experiences with APEX Custom Solutions for storage. Interviews were both quantitative and qualitative in nature and designed to understand the cost, operational, and business impact of their use of Dell Technologies' usage-based flexible consumption offerings.

Interviewed Dell customers were generally relatively large organizations, with an average employee base of 13,756 and annual revenue of \$17.25 billion and medians of 2,100 employees and \$350 million in revenue. Interviewed organizations were based in both North America and EMEA and presented the experiences of various industry verticals — most prominently, the communications/media (4 organizations) and professional services (3 organizations) sectors, but also the healthcare and manufacturing verticals (1 organization each). Table 1 (next page) provides additional details about the interviewed organizations.

TABLE 1 Firmographics of Interviewed Organizations

	Average	Median
Number of employees	13,756	2,100
Number of IT staff	1,441	60
Number of business applications	747	38
Revenue per year	\$17.25 billion	\$350 million
Countries	Canada (3), United States (3), United Kingdom, Australia, New Zealand	
Industries	Communications and media (4), professional services (3), healthcare, manufacturing	

Source: IDC, 2020

Choice and Use of APEX Custom Solutions

The organizations interviewed spoke to the varied reasons for choosing to move to a pay-per-use model for IT infrastructure resources with Dell Technologies. At base, all study participants concluded that their business and IT operations required an approach that would more closely align costs to business requirements and provide more flexibility in creating and addressing business opportunities. They reported that APEX Custom Solutions offered a robust value proposition in terms of the technology, means of delivering capacity, and design as an offering that allows them to move away from capital expenditure-based models for securing IT resources. Interviewed organizations spoke to the criteria upon which they made the decision to obtain IT infrastructure using APEX Custom Solutions from Dell Technologies:

- Match spend to use:** *“The primary advantage of Dell Technologies APEX Flex on Demand is being able to match spend on storage to the number of projects we’re running at any given time Dell Technologies was the only vendor offering this type of on-premises on-demand model.”*
- True pay-as-you-use model:** *“We chose Dell Technologies APEX Flex on Demand because it is a true pay-as-you-use model. We considered some other vendors but concluded they were nothing more than leases.”*
- Deliver cloud-like infrastructure:** *“We naturally look at how we can make our on-premises environment more cloud like and try to drive this through the APEX Flex on Demand model!”*

Study participants reported that they are primarily using pay-per-use models with Dell Technologies for their storage environments, although interviews also included two organizations obtaining hyperconverged and data protection capacity. Table 2 shows the significant extent to which these organizations have turned to Dell Technologies to obtain storage resources, with an average of eight storage arrays and almost 9PB of storage capacity. Overall, storage obtained through these models with Dell Technologies accounts for almost half of interviewed organizations’ storage environments, reflecting storage’s key role in their business activities that require strong storage performance and flexibility that include:

- Four companies in the **media and communications vertical** that face significant but varying storage requirements as well as time-sensitive business demands
- Three **professional services providers** that must deliver top-quality services and rely on having a high-performing storage infrastructure available to match fluctuating client demand
- A **manufacturer** that needed an on-premises storage solution that would allow it to deliver storage across its operations in a more cloud-like manner
- A **healthcare** provider that needed to find a cost-effective way to constantly provide its operations with the newest and highest-performing storage capacity

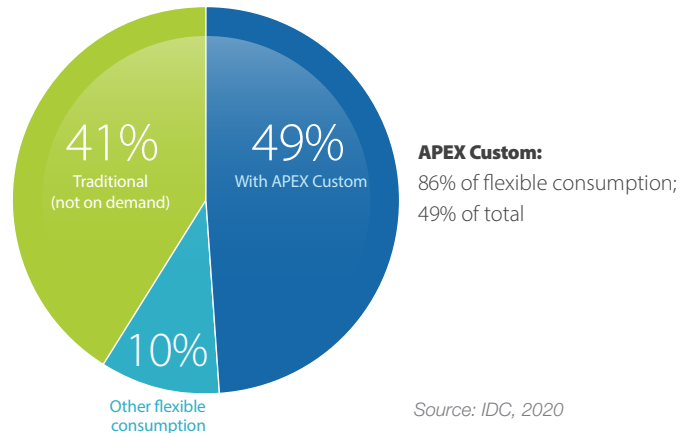
TABLE 2 APEX Custom Solutions Use by Interviewed Organizations

	Average	Median
Number of storage arrays	8	1
Number of terabytes (TB)	8,929	1,685
Overall storage environments	49%	50%

Source: IDC, 2020

Interviewed organizations are making significant use of both on-demand provisioning and APEX Custom Solutions to secure the storage capacity they need to run their businesses. As shown in Figure 1 (next page), they obtain almost 60% of their storage through on-demand delivery models, with Dell Technologies making up most of that storage (86%). Overall, study participants are obtaining just less than half of their overall storage capacity through APEX Custom Solutions (49%).

FIGURE 1 APEX Custom Solutions as a Percentage of Interviewed Organizations' Storage Capacity



Business Value and Quantified Benefits

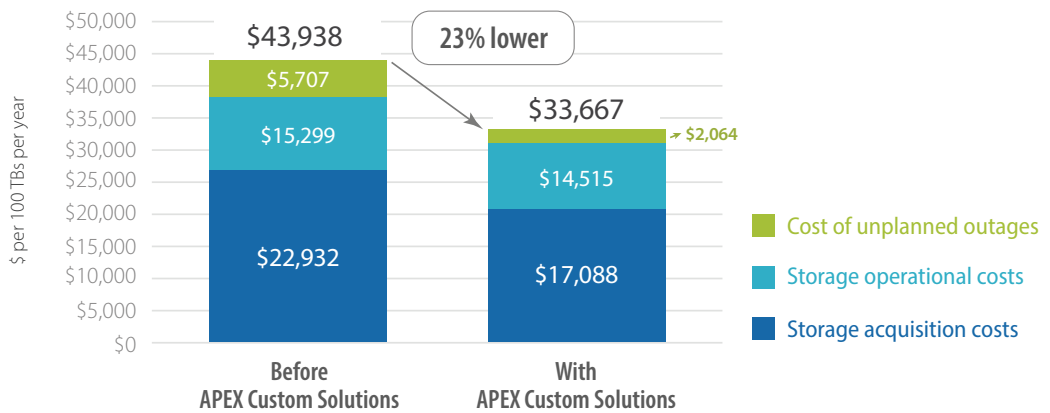
Interviewed organizations reported that using Dell Technologies' pay-per-use models has delivered important incremental cost advantages as they can optimize use of storage resources as well as much-needed agility. These benefits yield clear cost savings as well as business benefits for interviewed organizations, with IDC calculating that interviewed organizations will reduce the cost of operating their storage environments by an average of 23% even as they benefit from revenue and employee productivity increases. Study participants provided specifics about how flexible consumption with Dell Technologies has impacted their costs and business capabilities:

- Ability to tie costs to use and then leverage for business decisions:** *"The advantages of APEX Flex on Demand with Dell Technologies are having spare capacity that we can use and pay for on demand It gives us flexibility to make a business decision as to whether it's worth it or not to spend the overage."*
- Ability to use newest technology at much lower cost:** *"The biggest advantage is clearly price for us from an operating cost perspective. Disadvantages, I haven't found one yet We can essentially get the newest technology for a fraction of what we would pay for it outright."*

These themes of cost optimization alongside business enablement through enhanced agility and scalability ran across the interviews conducted with Dell Technologies' customers. Figure 2 shows how the use of a flexible consumption model with Dell Technologies has enabled interviewed organizations to buy, run, and support their storage environments at a

significantly lower cost — 23% on average — representing over \$10,000 in savings per year per 100TB (more than \$900,000 per organization) in terms of storage hardware costs, storage operational costs, and the cost of lost user productivity and revenue due to storage-related unplanned outages (see Figure 2).

FIGURE 2 Average Storage Cost of Operations



Source: IDC, 2020

Lowering the Cost of Operating Storage

Study participants reported that they have optimized the cost of acquiring storage capacity with Dell Technologies. Given the scale of their data environments and storage requirements, interviewed organizations face a business imperative to find ways to make storage cost effective, but without sacrificing performance or flexibility. They identified several challenges associated with more traditional means of procuring storage — that is, as a capex investment — that made it challenging for them to optimize storage volumes and costs:

- **Overprovisioning:** With traditional storage models, organizations often overprovision capacity to address anticipated forecast need, but this capacity may sit idle or may potentially go unused.
- **Inefficient use:** When organizations cannot easily add storage capacity in a timely manner, their overall agility in meeting business demand is diminished, and their ability to redirect storage resources as needed affects use patterns and creates inefficiencies.
- **Lack of visibility into actual costs:** When organizations are unable to provide the true cost of storage to application owners, they are less able to scale capacity up or down to align with the need of applications or services.

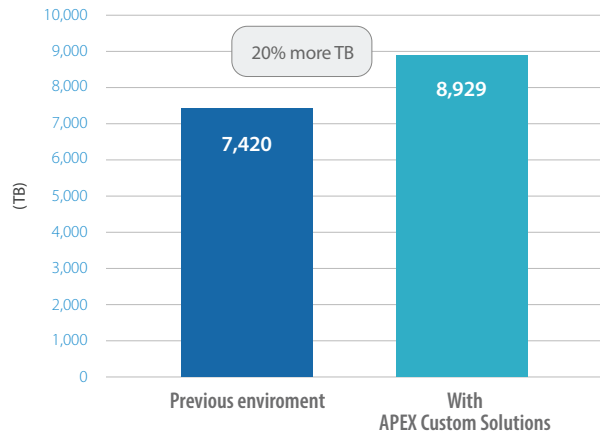
- **Moving to an operational cost model:** With flexible consumption models, organizations avoid significant up-front capital investment costs. An opex-driven storage model provides more flexibility in using scarce capital budgets even if overall costs do not change.

Study participants spoke about how they leveraged flexible consumption with Dell Technologies to cost effectively secure storage resources and rightsize their environments to ensure efficient utilization of assets:

- **Predictable costs and sizing to requirements:** *“The benefits of APEX Flex on Demand with Dell Technologies really come down to having predictable costs This allows us to better budget our storage costs. Also, we planned the APEX Flex on Demand structure and sized it to provide what we need for the next five years. We’ve essentially just turned storage into a utility.”*
- **Avoid overprovisioning:** *“APEX Flex on Demand has enabled us to avoid needing to overprovision our storage resources. We would not have been able to do that with traditional equipment because it would have been a capital expenditure.”*
- **Operating cost model while meeting client demand:** *“Right now, our clients don’t allow us to use public cloud, so we still have to go with an on-premises infrastructure approach. The APEX Flex on Demand model allows for an operating expense model, so we’re not forking out millions of dollars all in one shot, which is a better cash flow to the company.”*
- **Cost alignment with flexibility to meet varying business demands:** *“Our use of APEX Flex on Demand is really more related to cost alignment. What I mean by that is that it gives us both up and down flexibility. If we need incremental capacity, we don’t have to go buy it all.”*
- **Visibility into costs of running applications, ability to speak with application owners about cost:** *“APEX Flex on Demand is part of a fair cost transparency journey for us, where we’re trying to give the businesses a much better view of what the cost of their applications and activities are. The benefit of that is that we can have a conversation with owners of those business applications. Based upon that dialogue and an understanding of what the costs are, if they want to make a shift, they’re able to do so, and we’re able to respond.”*

Figure 3 (next page) shows how study participants have delivered more effective storage to support business activities with Dell Technologies’ usage-based payment solutions by ensuring more efficient use and avoiding overprovisioning. They reported increasing their effective storage environments by an average of almost 20%, adding almost 1.5PB of storage per organization (up to 2.5PB for one interviewed organization) without increasing costs.

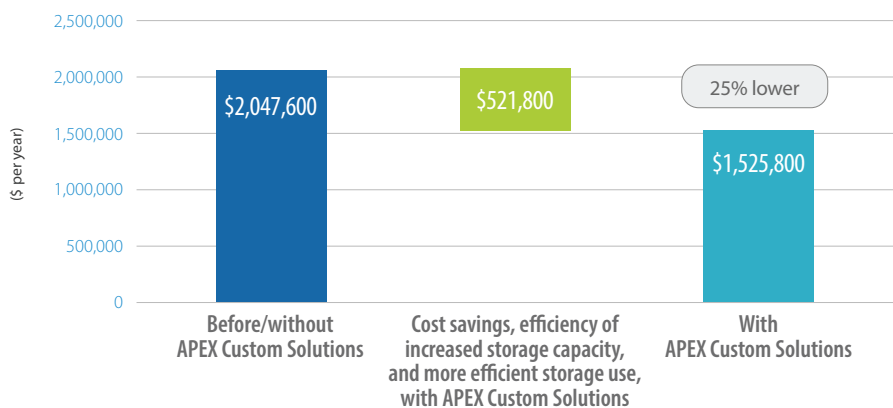
FIGURE 3 Available Storage Capacity per Organization



Source: IDC, 2020

Figure 4 illustrates the significant cost advantages the interviewed organizations achieved using Dell Technologies’ flexible consumption models to acquire storage capacity for running the same workloads. Study participants avoid overprovisioning and make more efficient use of available capacity, allowing them to spend 25% less on storage acquisition. This results in cost savings of over \$500,000 per organization per year. For study participants, this represents a major gain in their ability to cost effectively support changing and growing business demands.

FIGURE 4 Cost of Storage for Equivalent Workloads



Source: IDC, 2020

Storage Operational Efficiencies

Interviewed organizations also reported that moving to a flexible consumption model with Dell Technologies has enabled them to reduce ongoing expenses associated with running their storage environments. These operational costs include staff management time requirements and expenses such as power and facilities costs.

Overall, study participants have lowered these operational expenses by an average of 5% with Dell Technologies, further contributing to lowering the overall cost of obtaining and running storage to support their businesses. Several interviewed organizations explained that the ease of access to storage has eased day-to-day management and operational tasks for their storage infrastructure and support teams.

One study participant commented on this advantage: *“Much of our infrastructure team’s time is now proactive with Dell Technologies APEX Data Center Utility looking at what advancements or other services we can do, as opposed to spending that time doing reactive maintenance. So we’re developing some new products, we’re looking at all types of technologies for our solutions and cloud migration, and the focus is now on new services in the hybrid cloud model.”*

As shown in Table 3, interviewed organizations have on average achieved 3% efficiencies for these teams, which provides around 50 hours of additional time per staff member to use for other activities and/or initiatives.

TABLE 3 IT Infrastructure Teams: Efficiencies

	Before/Without APEX Custom Solutions	With APEX Custom Solutions	Difference	Benefit with Dell
FTEs per year per organization	9.8	9.6	0.3	3%
Value of staff time required per organization per year for equivalent workloads	\$980,000	\$955,000	\$25,000	3%

Source: IDC, 2020

In addition to IT staff efficiencies, study participants are seeing other operational efficiencies. For example, rightsizing helps them deliver resources more efficiently across their business operations, thus requiring less power and space to operate storage arrays.

IDC calculates that study participants can on average lower their power and space costs by 12%, saving \$500 per year per 100TB (\$45,000 per organization) and contributing to the overall 5% operational efficiencies described previously.

Revenue and Productivity Benefits

Interviewed organizations also described how moving to a pay-per-use model for storage with Dell Technologies has helped them overcome limitations that inhibited their businesses. For these Dell Technologies customers, having the ability to access storage capacity without disrupting other IT and business operations is imperative to addressing and responding to new business opportunities.

Most study participants compete in industries in which their services and products rely on significant volumes of data, making storage available and performance paramount for them. Thus when they found themselves constrained to using existing storage resources, they sometimes could not move with the agility or scalability needed to take advantage of opportunities.

Study participants provided numerous examples of how APEX Custom Solutions have given them the flexibility, agility, and scalability that they need to compete for and win more business. Several study participants reported leveraging burst capabilities to meet time-sensitive or changing customer demand. Study participants provided examples of how utilizing an APEX Custom Solution has enabled them to better deliver on and meet their customers' needs:

- **Enabling storage bursting changes business timing patterns:** *"A large part of our decision making in going with APEX Flex on Demand was having the capacity to bid on a project that we might not have enough storage space With the burst capabilities that we have with APEX Flex on Demand, what used to be a 6–8 weeks long order is now an administrative configuration taking less than an hour."*
- **Ability to offer clients pay-per-use model, scale datacenter operations up or down:** *"The number 1 advantage is that we will be able to present our clients with a pay-per-use model, which is what they have been asking for. Number 2, from strictly an IT perspective, we'll be able to better tailor our datacenter operations to business requirements."*
- **Having the ability to access capacity to meet unplanned business demand:** *"APEX Flex on Demand has definitely helped us be more agile from the perspective of storage availability. We have the storage already sitting on the floor to meet our business demands."*

Table 4 demonstrates the tangible impact on the study participants’ businesses of using a flexible consumption model for storage with Dell Technologies. On average, study participants linked increased revenue worth \$3.62 million per year to having on-demand access to storage. They linked these revenue increases to responding to more business opportunities, moving faster to deliver to customers and prospects, and having greater confidence that they could push the limits of their storage environments to support their customers, whether as a service provider or in the creation and delivery of their products/services.

TABLE 4 Business Operations Impact: Revenue

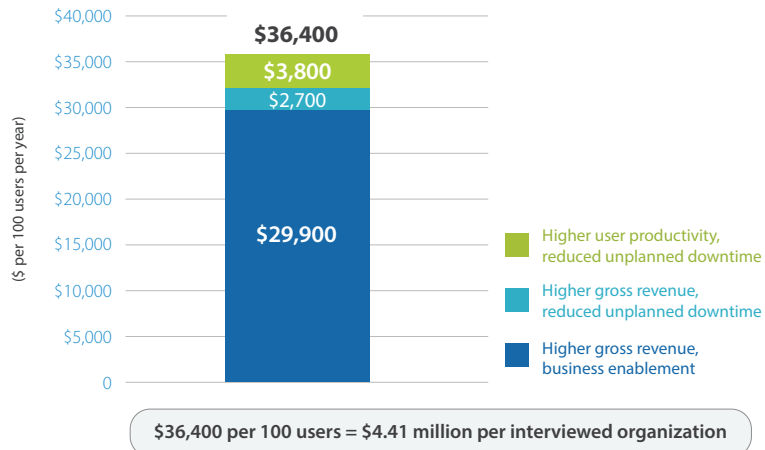
	Per Organization	Per 100 Users
Business impact — Revenue from better addressing business opportunities		
Total additional gross revenue per year	\$3.62 million	\$29,900
Total net revenue per year*	\$542,400	\$4,500

* Assuming a 15% margin

Source: IDC, 2020

As previously noted, moving to a pay-per-use model for storage has enabled study participants to significantly lower the effective cost of buying and operating storage resources (23% lower on average). In addition, Figure 5 demonstrates the significant value they achieve through improved storage agility, performance, and reliability. IDC calculates that interviewed Dell Technologies customers will on average see benefits worth \$36,400 per 100 users (\$4.41 million per organization) in terms of higher revenue and user productivity (see Figure 5).

FIGURE 5 Business and Operational Benefits

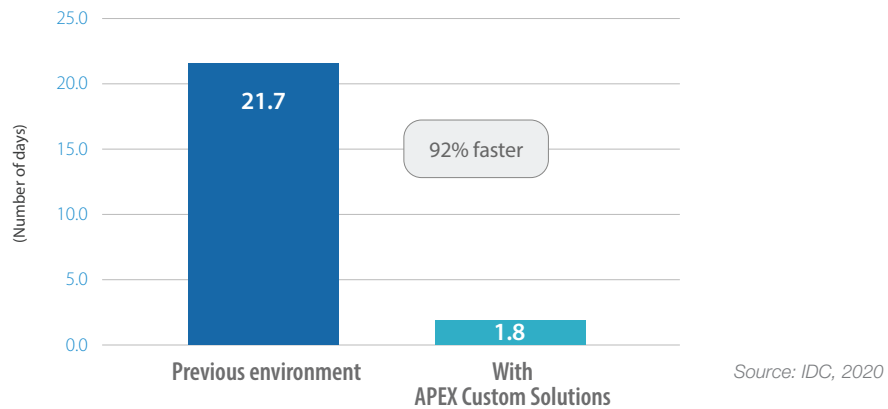


Source: IDC, 2020

Business Agility Improvements

The impact for study participants in terms of the cycle time required to provision completely new storage — that is, a new storage array — has significantly fallen with Dell Technologies' APEX Custom Solutions. They no longer need to engage in prolonged procurement cycles that require approval, requisition, delivery, and deployment, and they have thus reduced the time needed to stand up new storage from more than 4 work weeks to less than 2 days, a 92% improvement (see Figure 6). This reflects a significant improvement in agility related to providing storage to meet business demand as well as discrete time savings for IT team members responsible for provisioning activities.

FIGURE 6 Time to Deploy New Storage



Study participants have also achieved improved storage reliability and performance. While they described very few problems related to their storage technologies, they spoke to challenges that could arise when they reached capacity limits and could not deliver new capacity quickly enough.

One interviewed organization explained: *“Our storage use rate was frequently reaching 92% or 93%, which can create problems We’ve brought that use rate down by one-third with Flex on Demand.”*

As a result of being able to ensure that capacity matches business needs, study participants reported minimizing the frequency and impact of storage-related unplanned outages. They have reduced the frequency of such outages by more than half (54% fewer on average) and brought down the overall impact of such outages on business operations by 64% (see Table 5). In practice, this means that the average user has gone from losing one hour to only 22 minutes of productive time per year due to outages, which represents a substantial limitation of business risk and potential loss.

TABLE 5 Unplanned Downtime Impact

	Before/Without APEX Custom Solutions	With APEX Custom Solutions	Difference	Benefit with Dell
Frequency per year	2.2	1.0	1.2	54%
Hours of lost productive time per year per user	1.0	0.4	0.7	64%
Lost productive time per organization per year (FTEs)	6.6	2.4	4.2	64%
Cost of lost productivity per year per organization	\$459,900	\$166,300	\$293,600	64%

Source: IDC, 2020

Interviewed Dell Technologies customers also linked their ability to ensure strong application performance to using a pay-per-use model. Impacted applications varied by interviewed organization but included business-critical workloads such as customer facing, design, and visual effects; database; and enterprise operational applications as well as backup and data recovery environments. Improved performance relates to their ability to more readily ensure that storage resources are available to deliver optimal performance levels. Study participants reported increasing their effective storage capacity by an average of 16% and also indicated greater ease when upgrading storage as a direct benefit.

One interviewed organization noted: *“We’ve absolutely improved performance with Dell APEX Flex on Demand. We were able to get storage that is among the fastest offered and only pay a fraction of the cost of previously purchased storage because it was purchased based on size.”*

While these types of performance-related benefits can be organization specific and difficult to quantify, they are important for organizations seeking to deliver top-quality performance levels for applications and services to their customers and employees.

CHALLENGES/OPPORTUNITIES

The challenge for Dell Technologies, like most cloud and infrastructure providers, is articulating the value proposition to various stakeholders, often with differing viewpoints. It is important to position the distinct advantages offered by the various operating models available in our multicloud world — on private clouds, public clouds, and remote edge locations.

When you add pay-per-use models to the conversation, the challenge becomes more complex. Communicating the unique opportunities and advantages that these flexible consumption models deliver — and building consensus with leaders from IT, finance, procurement, or product groups — can be a daunting challenge. To overcome these challenges, it is important to focus on the key usage metrics of capacity, power, services, and costs to address the important objectives of the different stakeholders. Demonstrating how these metrics enable the organization to drive strategic business needs is crucial to building consensus.

As with any new initiative, these efforts may potentially fail due to a fragmented or siloed organizational structure. The ability to navigate within an organization and create agreement among the key stakeholders is essential to driving the adoption of both these diverse operating models and usage-based payment solutions.

IDC recommends that Dell Technologies continue to invest in education and training of its sales force, partners, and customers to accelerate adoption of both hybrid cloud operating models and pay-per-use models — both are tightly interrelated. As adoption of these models accelerates, Dell Technologies should leverage key learnings and expertise to establish centers of expertise within both its direct sales force and its partners. A center of expertise provides the metrics, sales tools, and training materials that will reduce learning curves and the sales cycle. Providing the tools to quickly propose, test, and scale these offerings will be key to accelerated market adoption.

The opportunities for APEX Custom Solutions are significant. IDC believes that the adoption of pay-per-use offerings will continue to escalate as customers embrace the opportunity to utilize technology without owning it and scale capacity up or down as needed. In fact, IDC predicts that by 2024, more than half of datacenter infrastructure will be consumed and operated via an as-a-service model, as customers adopt these models to gain the agility and cost predictability required to compete in today's competitive business environments.

IDC predicts that by 2024, more than half of datacenter infrastructure will be consumed and operated via an as-a-service model, as customers adopt these models to gain the agility and cost predictability required to compete in today's competitive business environments.

IDC believes that by unifying its messaging and driving consistency across all consumption and as-a-service solutions under one umbrella, Dell Technologies has addressed one of the most glaring challenges: removing internal product group silos to reduce overall complexity. Addressing this issue with a consistent approach and simplified offerings will enable Dell Technologies to improve the sales process, enhance partner programs, and reduce customer confusion.

As this Business Value research underscores, APEX Custom Solutions provide capabilities that enable businesses to align costs with use and provide flexibility to meet changing demands. Paying attention to the drivers for these models and continued investment in education of its sales force and partners will ensure Dell Technologies succeeds in this fast-growing segment.

CONCLUSION

Adopting consumption-based and as-a-service models ensures that the performance, efficiency, availability, scalability, and managed utility aspects of an organization's IT infrastructure align with business demands and deliver more predictable outcomes. These new technology consumption models can drive out inefficiencies and free up time, money, and resources for critical initiatives.

Since 2016, IDC has been studying both the drivers and the impact of consumption-based and as-a-service models, and the data is clear: organizations find that the simplicity, flexibility, and transparency of these models decrease the complexity of investing in and maintaining IT assets, reduce operational costs, and cut IT staff workloads.

Utilizing these models enables organizations to address rapidly changing business dynamics with the required agility and speed to succeed. And that is the bottom line: success in today's fluid business environment demands innovation at speed, requiring an agile IT architecture and pay-per-use models that can adapt to today's evolving demands.

IDC's research underscores the significant value that organizations can achieve with APEX Custom Solutions in terms of both lowering the cost of operations and supporting key business initiatives. Moving to a pay-per-use model for storage with Dell Technologies has allowed study participants to not only reduce their annual storage-related costs by 23% but also improve their ability to address capacity demand and increase overall agility.

For organizations operating in competitive markets that must find new ways to differentiate their value through data, consumption-based and as-a-service technology solutions can offer an important incremental competitive advantage.

APPENDIX

Methodology

IDC's standard Business Value methodology was utilized for this project. This methodology is based on gathering data from current users of APEX Custom Solutions for infrastructure — Dell Technologies APEX Flex on Demand and APEX Data Center services — as the foundation for the model. Based on interviews with organizations using these offers, IDC calculated the benefits and costs by:

- Gathering quantitative benefit information during the interviews using a before-and-after assessment of the impact of using APEX Custom Solutions (In this study, the benefits included storage- and IT-related cost savings, staff time-savings and productivity benefits, and revenue gains.)
- Creating a complete investment profile based on the interviews, including annual costs of using APEX Custom Solutions and costs related to deployment

IDC bases its financial analysis on the following assumption:

- Time values are multiplied by burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and manager productivity savings. For purposes of this analysis, IDC used its standard salary assumptions of an average fully loaded salary of \$100,000 per year for IT staff members and an average fully loaded salary of \$70,000 per year for non-IT staff members.

IDC Note: All numbers in this document may not be exact due to rounding.

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