REGION FOCUS: WORLDWIDE

The Business Value of Azure VMware Solution

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Executive Summary

For more than a decade, public cloud has been the major force reshaping the IT industry. The road to cloud is long and diverse, encompassing both net-new workloads and migration of existing workloads. While public cloud is a huge shift, on-premises is not disappearing, which necessitates the need for more seamless integration between on-premises environments and public cloud.

IDC spoke with organizations that have migrated and deployed important business workloads to Azure VMware Solution about their experiences. Study participants reported that the solution has provided a cost-effective, efficient, and high-performing platform that allows them to leverage existing investment and expertise in VMware and Microsoft technologies while benefiting from the agility and flexibility of the Microsoft Azure cloud.

Based on these interviews, IDC projects that interviewed customers will achieve benefits worth an annual average of $147,500 per 100 users ($17.22 million per organization) by:

- **Increasing the value of investment in existing licensing and infrastructure**, thereby running the same workloads more cost-effectively

- **Empowering IT teams** to uplevel their focus by providing a functional and reliable infrastructure foundation

- **Ensuring that development teams and lines of business** can move with speed, agility, and flexibility

- **Achieving better business results** by generating new revenue streams and ensuring customer satisfaction with timely and high-performing services and products

Business Value Highlights

Click each highlight below to navigate to related content within this document.

357%
3-year ROI

37%
lower 3-year cost of operations

9 months
to payback

30%
lower infrastructure costs

45%
more efficient IT infrastructure teams

91%
less unplanned downtime

86%
faster to deploy new compute/storage resources

48%
higher developer productivity

$70.0 million
higher revenue per organization per year, business enablement

Situation Overview

Public cloud has been changing organizations' IT strategies as digitally based products, services, or delivery have placed greater emphasis on agile and modern digital infrastructure. Public cloud service models and architectures have also made their way into on-premises enterprise datacenters, with private clouds beginning to replace traditional IT. Most organizations are leveraging a mix of public and dedicated infrastructure resources, which allows them to optimize for each workload and use case. The term *hybrid cloud* is often used to refer to such a mix, but hybrid cloud is more than simply a combination of the two environments. Hybrid cloud encompasses a mix of technologies that integrate on-premises and cloud that results in more seamless management and workload portability.

However, the technology stacks in public and private clouds, while providing similar end results, are often vastly different in implementation. This can lead to challenges in management tools, skill sets, and portability. This is particularly apparent for existing workloads that customers want to migrate to cloud. It is not cost-effective to simply throw out old applications and rebuild them from scratch. Sometimes applications can be refactored to some extent, while others are risky to change. However, many customers want a cloud option and modernization strategy for these workloads. Without a migration option, these workloads can often hold up realizing maximum returns for cloud. Much of the savings can come from completely evacuating certain locations, which means finding a way to move these workloads to cloud. Refactoring can be impossible or take many years to work through the entire estate, so enterprises often need a way to move them as is, as quickly as possible.

A similar software stack between on-premises and cloud can be one strategy to avoid refactoring and ease migration. This consistency can be particularly beneficial for legacy workloads that are tightly coupled to the infrastructure, allowing enterprises to use familiar tools, processes, and IT skills. Solving these challenges means that the public cloud can become a seamless extension of enterprise datacenters to address legacy applications while also supporting next-generation cloud-native applications.

Hybrid cloud is more than simply a combination of the two environments. Hybrid cloud encompasses a mix of technologies that integrate on-premises and cloud that results in more seamless management and workload portability.

Azure VMware Solution

Azure VMware Solution allows enterprises to run VMware workloads natively on the Microsoft Azure cloud. It is a native Microsoft Azure service that is VMware Cloud Verified and runs on Azure infrastructure:

- Offers the full VMware Cloud stack, which includes vSphere, vSAN, and NSX and can be managed with the same VMware tools used for on-premises (vCenter, vRealize, CLI, APIs, etc.)

- Supports VMware HCX technology for seamless migrations

- Provisioned on dedicated bare-metal hosts

- Integration with Azure, including the Azure portal and access to the full range of Azure cloud services

- Benefits for Microsoft technologies such as:

  - Free extended security updates for Windows Server 2008/2012 and SQL Server 2008/2012

  - Bring and use existing Windows and SQL server licenses with Azure Hybrid Benefit

  - Support for Office 365 in Horizon virtual desktop infrastructure (VDI) desktops

- Unified consumption, licensing, and billing with other Azure services

- All life-cycle management and support of Azure infrastructure and VMware components provided by Microsoft

- Rapid deployment and scaling up/down

- Flexible purchasing options: Hourly On-Demand, 1- and 3-Year Reserved Instances, VMware Cloud Universal credits

The Business Value of Azure VMware Solution

Study Demographics

IDC conducted research that explored the value and benefits customers reported when using Azure VMware Solution as an infrastructure platform for running many of their important business applications. Interviews covered a variety of quantitative and qualitative questions about the impact of Azure VMware Solution on interviewed organizations' IT costs and operations, IT performance, and business results.

As shown in **Table 1**, study participants were generally large companies by measure of both employees and revenue. Interviewed organizations had an average base of 20,570 employees and total average annual revenues of $8.28 billion. All study participants were based in the United States but provided the experiences of a variety of industry verticals, including the education, banking, healthcare, and insurance sectors.

TABLE 1

Demographics of Interviewed Organizations

	Average	Median
Number of employees	20,570	20,000
Number of IT staff	3,477	2,000
Number of business applications	1,100	200
Revenue per year	$8.28B	$5.0B
Countries	United States	
Industries	Education (2), banking, healthcare, insurance	

n = 5; Source: In-depth Interviews, April 2023

Choice and Use of Azure VMware Solution

Study participants expressed common reasons for choosing VMware Azure Solution, noting especially their expectations that it would provide a cost-effective, efficient, and high-performing cloud-based platform while allowing them to leverage their existing IT investment and expertise in VMware and Microsoft technologies. With significant investments in VMware and Microsoft infrastructure and licensing already in place, they wanted an optimal migration and modernization path to establish hybrid operations. They needed to become more flexible and agile to adjust to and scale to fluctuations and variability in business demand.

Study participants provided detailed comments about their reasons for choosing Azure VMware Solution:

Already using VMware, site recovery capabilities a differentiator:
"We have been using VMware on premises so Azure VMware Solution is a natural fit as we look to extend workloads to the cloud. … Having site recovery in the cloud was different than other solutions we considered and important because it allows us to extend our operations and to move from on-premises to the cloud and from the cloud to on-premises."

Enables strong hybrid infrastructure:
"Azure VMware Solution helps us build a hybrid cloud infrastructure so that we can keep sensitive data on premises and use the Azure cloud. … We chose Azure VMware Solution because VMware is a leader in the space, has better integration with the Microsoft ecosystem, as well as good performance, better customer support, and strong overall innovation."

Enhanced flexibility and leverage existing knowledge:
"We chose Azure VMware Solution because it allows us to be more flexible in where applications can go, whether on premises or in the cloud, because not everything is Azure-native and not everything can be 'cloudified.' It helps us be more flexible in that way and it is not a huge lift when it comes to training."

Table 2 (next page) provides an overview of study participants' use of Azure VMware Solution at the time of interviews. They described using the platform to run significant portions of their overall business operations. On average, they had an average of 281 virtual machines (VMs) on Azure VMware Solution to run 249 business applications and 470 terabytes (TBs).

TABLE 2

Azure VMware Solution Use by Interviewed Organizations

	Average	Median
Number of VMs	281	200
Number of business applications	249	20
Number of TBs	712	150
Number of internal users of applications	11,670	8,000
Number of VDI users	2,126	30

n = 5; Source: IDC In-depth Interviews, April 2023

Business Value and Quantified Benefits of Azure VMware Solution

IDC's study shows how Azure VMware Solution generates significant value for organizations by providing an efficient and cost-effective path to the Azure cloud for VMware-based workloads. Study participants reported benefiting from enhanced manageability, agility, and performance. These improvements result in value in terms of both optimized IT costs and improved business results, with IDC calculating that interviewed VMware customers will realize benefits worth an annual average of $147,500 per 100 users per year ($17.22 million per organization per year) in the following areas (see also **Table 9** in Appendix 2 for additional details).

- **Business productivity benefits:**
  Study participants win more business and enable employees to work more effectively by providing a high-performing, agile, and adaptable platform for VMware-based workloads in the Azure cloud. IDC calculates that they will achieve net revenue and productivity gains worth an annual average of $80,600 per 100 users ($9.40 million per organization).

- **IT staff productivity benefits:**
  Study participants reduce the amount of staff time required for cloud migrations, ongoing management, and troubleshooting, while empowering development teams to meet business needs. IDC puts the value of IT staff efficiencies and productivity gains at an average of $51,500 per 100 users per year ($6.02 million per organization).
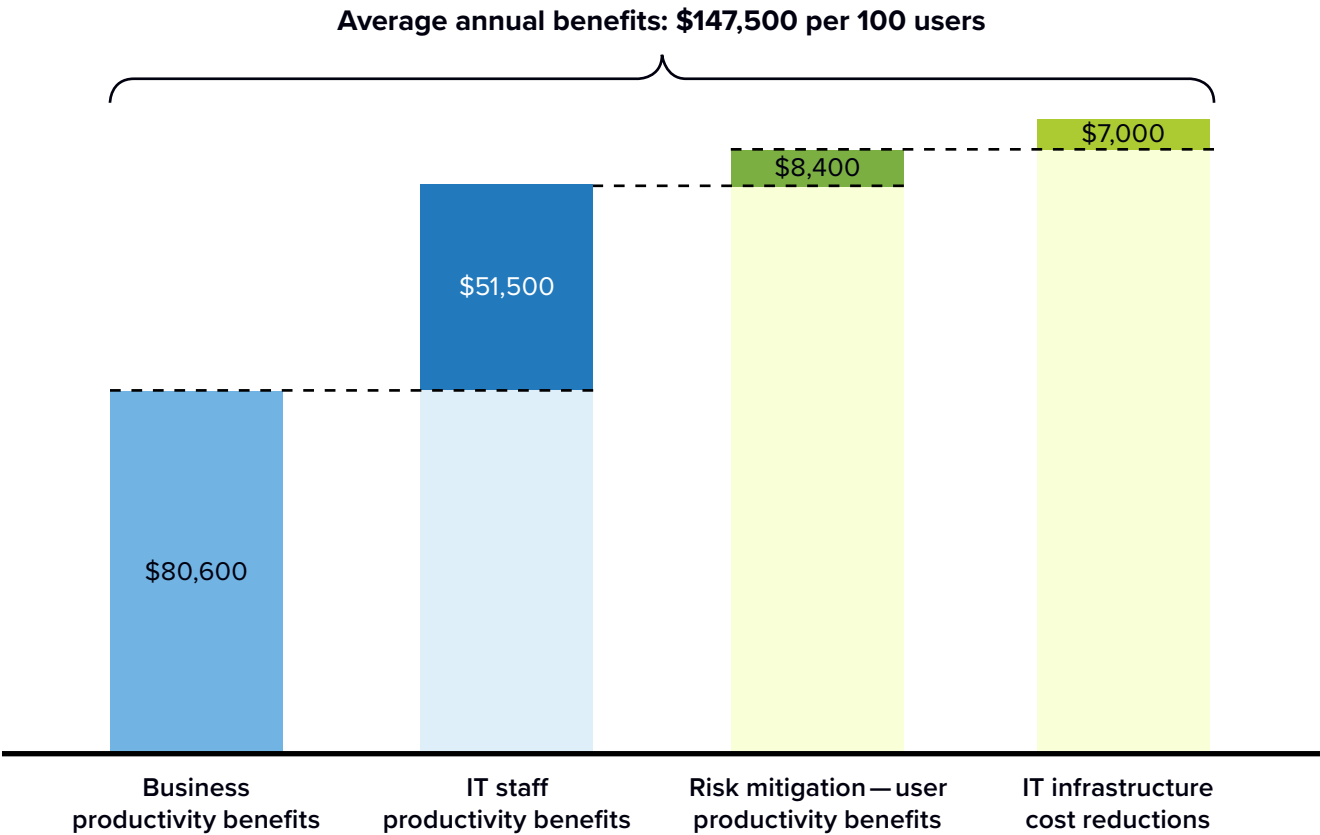
- **Risk mitigation – user productivity benefits:**
  Study participants limit risk related to data and application performance by creating cost-effective disaster recovery (DR) environments and limiting the impact of unplanned outages affecting infrastructure and applications. IDC values risk-related net revenue and productivity gains at an average of $8,400 per 100 users per year ($0.98 million per organization).

- **IT infrastructure cost reductions:**
  Study participants make better use of infrastructure resources and optimize spending on licenses and tools. IDC estimates that they will save an average of $7,000 per 100 users per year ($0.98 million per organization).

FIGURE 1

Average Annual Benefits per 100 Users

($ per 100 users)

Average annual benefits: $147,500 per 100 users

$80,600	$51,500	$8,400	$7,000
Business productivity benefits	IT staff productivity benefits	Risk mitigation—user productivity benefits	IT infrastructure cost reductions

n = 5; Source: IDC In-depth Interviews, April 2023

Ease of Migration

Study participants consistently described the ease of migrating and deploying workloads to the Azure cloud with Azure VMware Solution as an important benefit. While they saw making greater use of the public cloud as an IT and business imperative, they needed to find a path that would create as little friction as possible in terms of time and resources required. They concluded that they could best accomplish efficient migrations by choosing Azure VMware Solution and leveraging existing knowledge and application architectures with an Azure cloud solution designed specifically for VMware-based workloads.

Their experiences moving to and deploying on Azure VMware Solution confirmed their expectations of a less burdensome migration experience. One study participant commented: *"If we weren't using Azure VMware Solution, migration would take a lot longer, two to three times longer at least, because it's just not as clear cut."* By consistently completing their migrations and deployments faster, study participants had to devote less staff time to migrations and could begin taking advantage of enhanced performance and functionality of Azure VMware Solution sooner. While each migration involves unique factors, including the nature of the applications migrated and the previous environment, study participants estimated that they completed migrations 42% faster with Azure VMware Solution than they otherwise could have completed a similar migration to another cloud environment. This shaves weeks or even months off a typical migration scenario and frees up staff time and resources that otherwise would have been required to execute a different migration scenario.

Infrastructure Cost Efficiencies

Cloud and cloud-centric operating models have become integral components of the modern IT environment, which emphasizes the importance of flexibility and resilience. Study participants reported that Azure VMware Solution enables them to make better use of infrastructure resources and optimize spending on licenses and tools. In addition, they better link capacity and use to actual business needs. Thus, use of Azure VMware Solution has translated to more efficient use of compute, storage, licenses, and other IT resources, thereby generating cost savings compared with their previous on-premises environments.

In their comments to IDC, study participants noted that they used Azure VMware Solution to replace capital-intensive on-premises infrastructure that required continual refreshes and updates. As one study participant noted: *"Azure VMware Solution replaced a massive on-premises infrastructure that we had to refresh and keep maintained. To do what we're now doing with Azure VMware Solution would have cost 50% more on premises."* Another commented on more efficient use of compute resources: *"The servers we had on premises would not have been enough for what we're now doing with Azure VMware Solution. We've not only avoided having to refresh the old servers, but we've avoided expanding. … By reducing our server footprint, our team has time to do work improving and analyzing our systems and do more projects, including innovation."*

Study participants also accrued licensing and tool cost savings by maximizing the value of existing investments in VMware and Microsoft licensing and solutions and leveraging the capabilities built into the Azure VMware Solution platform. One interviewed organization explained: *"If we tried to do this on a native cloud solution and organized VMware licenses ourselves, we would spend probably 50% more on licenses."* Another study participant noted: *"We would otherwise have to pay for licensing, which is included with VMware on Azure, so we're saving $30K per year on extra licenses."*

In addition, the ability to cost-effectively establish robust disaster recovery environments helped optimize overall infrastructure costs while lowering risk profiles. One study participant commented on reduced tooling requirements: *"We're saving on management tools with Azure VMware Solution. I think we would have doubled the number of tools required, which would have been tens of thousands of dollars per year, in addition to training and staff time required that would have added to costs."* Another talked about the benefits of having a cost-effective DR environment: *"We're avoiding additional infrastructure for disaster recovery with Azure VMware Solution. On top of other IT infrastructure savings, we're avoiding around one million dollars in additional costs per year."*
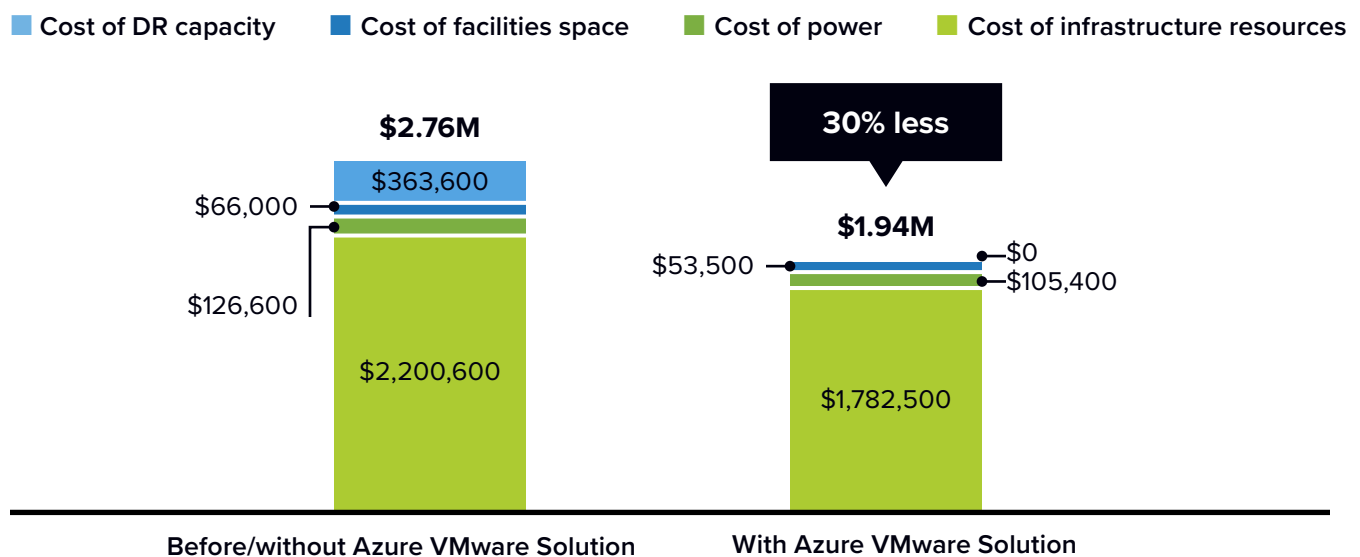
IDC quantified these savings over time in terms of annualized infrastructure costs. **Figure 2** illustrates that interviewed companies will see an average 30% cost reduction compared with previous or alternative solutions with Azure VMware Solution.

FIGURE 2

Annualized Infrastructure Costs

($ per organization per year)

■ Cost of DR capacity   ■ Cost of facilities space   ■ Cost of power   ■ Cost of infrastructure resources

$2.76M

$363,600

$66,000

$126,600

$2,200,600

30% less

$1.94M

$53,500 $0

$105,400

$1,782,500

Before/without Azure VMware Solution   **With Azure VMware Solution**

n = 5; Source: IDC In-depth Interviews, April 2023

For an accessible version of the data in this figure, see Figure 2 Supplemental Data in Appendix 3.

IT Staff Efficiencies

Study participants reported that Azure VMware Solution has also delivered efficiencies for their IT teams responsible for activities such as on-premises-to-cloud migrations, ongoing management, and troubleshooting. As noted, Azure VMware Solution saves staff time, beginning with application migrations and refactoring by allowing for a smoother move from VMware-based on-premises platforms to the Azure cloud. Further, routine tasks associated with management, troubleshooting, and support require less staff time because Azure VMware Solution enables study participants to rely on the back-end infrastructure of Azure to run VMware vSphere, vSAN, and NSX-T platforms natively and at scale and run workloads on fully managed, single-tenant, bare-metal Azure infrastructure.

Study participants appreciated being able to free up substantial time across their large IT teams and to reposition IT as a strategic partner within the organization. They also reaffirmed the value of Azure VMware Solution for providing a platform for robust and efficient disaster recovery environments.

Interviewed organizations provided detailed comments.

Frees up substantial time across large team:
"For the same applications, we had a team that was totally dedicated with our on-premises setup, and they have drastically reduced the time required to 60–70% with Azure VMware Solution."

Repositions IT as strategic partner:
"With Azure VMware Solution, we're aligning the IT organization to be more strategic thinking with the business. We're more involved with what's the next future-state architectures and technologies that we have to enable in the cloud."

More efficient disaster recovery operations:
"With Azure VMware Solution, we can be compliant in doing disaster recovery properly. Before, it was a lot more work and higher costs. … We're now doing DR exercises on a quarterly basis, and we're saving around $200,000 per year in capacity and $800,000 per year including staff time."

IDC's analysis shows the significant value for study participants of efficiencies for their IT infrastructure teams when operating at scale with Azure VMware Solution. On average, interviewed organizations reported benefiting from 45% efficiencies for these teams, freeing up the equivalent of 19 full-time employees (FTEs) per organization (see **Table 3**, next page). Looked at differently, Azure VMware Solution has enabled each IT infrastructure team member to handle significantly more infrastructure workloads, an average of 81% more VMs per team member.

TABLE 3

Impact on IT Infrastructure and Administration Teams

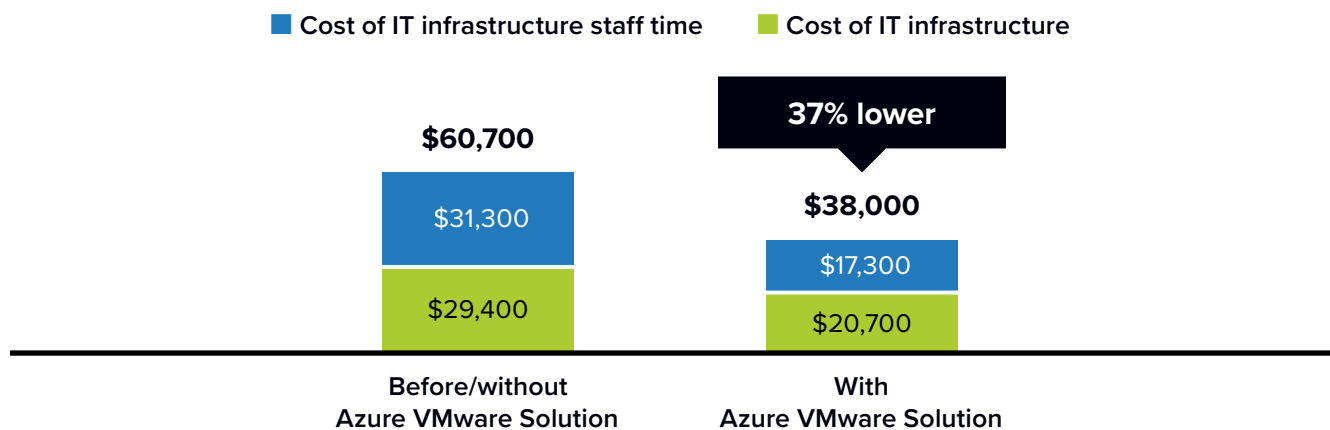|	Before/ Without Azure VMware Solution	With Azure VMware Solution	Difference	Benefit
Equivalent FTEs required for same workloads	34.1	18.8	15.2	45%
Staff hours per VM per year	228	126	102	45%
Value of equivalent FTE time required ($ per organization per year)	$3.41M	$1.88M	$1.52M	45%

n = 5; Source: IDC In-depth Interviews, April 2023

IDC combined infrastructure cost and staff findings to evaluate the overall impact of Azure VMware Solution on cost of operations. This analysis shows that study participants will optimize their cost of operations, lowering their costs by an average of 37%, which equates to saving $22,700 on average per VM over three years. Across hundreds or even thousands of VMs, these cost savings accumulate rapidly and justify the decision to migrate and run applications on Azure VMware Solution.

FIGURE 3

Three-Year Cost of Operations per VM
($ per VM over 3 years)

- ■ Cost of IT infrastructure staff time
- ■ Cost of IT infrastructure

$60,700
$31,300
$29,400
Before/without Azure VMware Solution

37% lower
$38,000
$17,300
$20,700
With Azure VMware Solution

n = 5; Source: IDC In-depth Interviews, April 2023

For an accessible version of the data in this figure, see Figure 3 Supplemental Data in Appendix 3.

IDC also evaluated how Azure VMware Solution provides ancillary benefits for help desk operations responsible for supporting application users. Study participants noted that these teams face fewer issues thanks to improved application and system performance and can remedy problems faster when they occur. Study participants reported that after adoption, their business end users required less help desk support due to improved application and system performance and better ability to quickly remedy problems when they cropped up. On average, interviewed organizations reported requiring 41% less time to handle help desk tickets, contributing to average help desk team efficiencies of 47% through the use of Azure VMware Solution (see **Table 4**).

TABLE 4

Impact on Help Desk Teams

	Before/Without Azure VMware Solution	With Azure VMware Solution	Difference	Benefit
Time to handle per ticket (minutes)	22	13	9	41%
Equivalent FTEs required for same workloads	27.5	14.7	12.8	47%
Staff hours per VM per year	184	96	88	47%
Value of equivalent FTE time required ($ per organization per year)	$2.75M	$1.47M	$1.28M	47%

n = 5; Source: IDC In-depth Interviews, April 2023

Risk and Performance Benefits

Study participants also reported that Azure VMware Solution provides a cost-effective and better-performing platform that reduces risks to data integrity through improved disaster recovery capabilities and application use as well as by limiting the frequency and impact of outages.

Interviewed organizations sometimes went without robust disaster recovery environments with their on-premises setups because of the challenges and costs of building these environments.

However, Azure VMware Solution has offered them a ready and cost-effective way to provide full disaster recovery capabilities, which helps them lower risk associated with data loss and unavailability. One study participant explained: *"Azure VMware Solution has impacted our resiliency and robustness because we have a 'third leg' for our infrastructure stool. Basically, we have two on-premises datacenters and now Azure VMware Solution, which lowers our risk — by at least 50%."*

Figure 4 summarizes the disaster recovery benefits associated with study participants' use of Azure VMware Solution. They reported gains in VM recovery speed (31% faster), shortening backup windows (20% faster), and recovery time objective (RTO)/recovery point objective (RPO) performance (20% and 10% faster, respectively).

FIGURE 4

Disaster Recovery Benefits
(% benefit)

Faster to recover VM 31%

Shorter data backup windows 20%

Faster RTO 20%

Faster RPO 10%
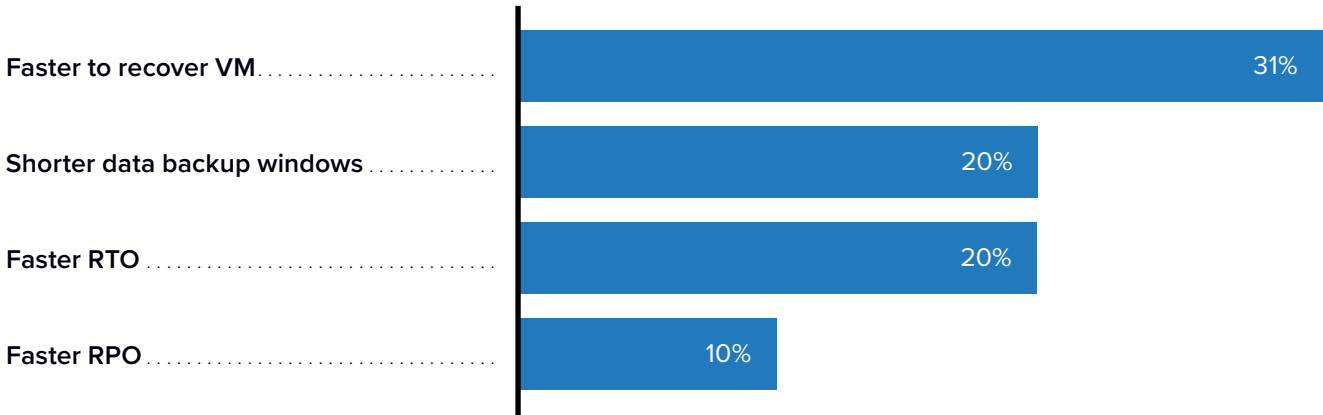
n = 5; Source: IDC In-depth Interviews, April 2023

Study participants noted that enhanced availability and resiliency with Azure VMware Solution has limited impacts on day-to-day work and operations. They confirmed that they now have more reliable access to their data and applications. The most visible manifestation of this was minimizing the frequency and impact of unplanned downtime. For end users, business partners, and customers, this translated into improved digital experiences and less business and operational downtime from outages involving business-critical applications.

Table 5 (next page) summarizes these benefits. After adoption there were 62% fewer unplanned outages, which were remediated 36% faster. As a result, study participants have lost an average of 91% less productive time due to unplanned outages, worth over five hours per user per year of higher productivity. Further, IDC found that interviewed organizations have limited actual business disruption with Azure VMware Solution, thereby incurring 87% lower revenue losses, worth more than $5 million per year in additional revenue.

TABLE 5

Impact on Unplanned Downtime Key Performance Indicators

	Before/ Without Azure VMware Solution	With Azure VMware Solution	Difference	Benefit
Number of unplanned outages per year	17.5	6.7	10.8	62%
Mean time to repair (hours)	6.4	4.1	2.3	36%
Hours of productive time lost per user per year	5.9	0.6	5.4	91%
Productivity loss per year in FTEs per organization	36.8	3.5	33.3	91%
Value of lost productivity time per organization per year	$2.58M	$0.24M	$2.33M	91%
Value of lost revenue per organization per year	$5.94M	$0.70M	$5.24M	87%

n = 5; Source: IDC In-depth Interviews, April 2023

Enhanced Agility and Application Development

Interviewed organizations cited improved IT agility and application development capabilities with Azure VMware Solution. Agility relates to the ability to deliver new compute and/or storage capacity in much less time, to tighten and remove unnecessary friction from application development timelines, and to onboard new VDI users faster, all of which benefited business operations. Study participants linked improved agility with Azure VMware Solution to unfettered on-demand access to additional capacity as well as the automation and functionality of the Azure platform.

They elaborated on these benefits:

Reduced friction enables faster development cycles:
"Because our developers don't have to wait around on the infrastructure team with Azure VMware Solution if they need capacity or resources, they are more productive. … For an entirely new application, we now need six to eight months compared with a full year."

Leveraging a more agile IT platform means development moves faster:
"Azure VMware Solution has allowed us to take advantage of cloud capabilities, especially some of the platform-as-a-service capabilities. As a result, we can get things out faster and get to market faster, and we can deliver business capabilities faster."
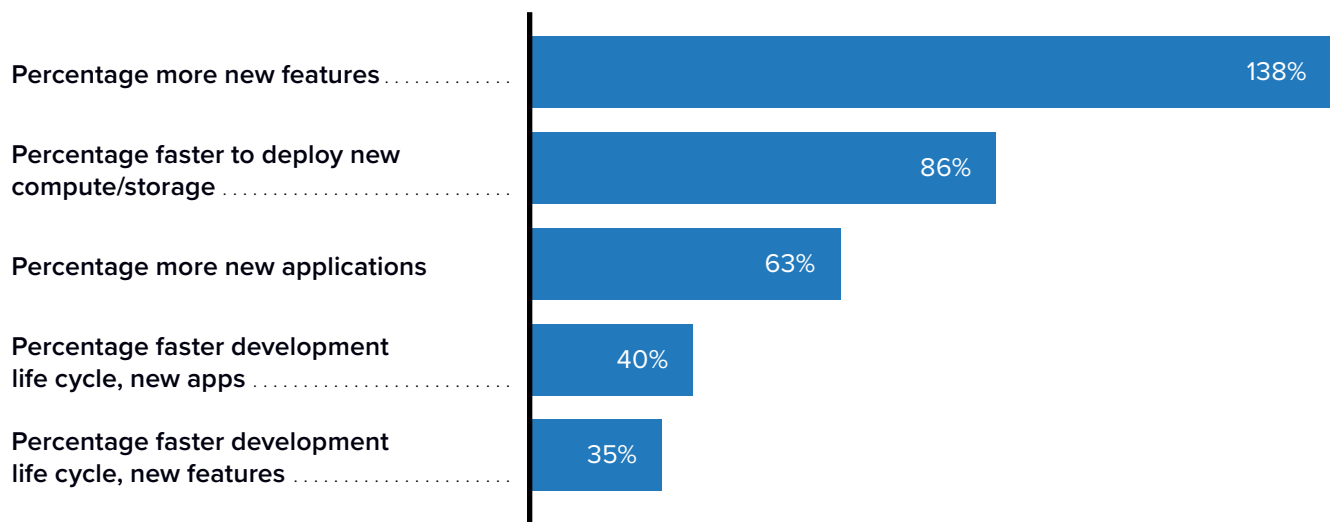
Faster to provide VDI access to new users:
"It's faster for us to add a new VDI user with Azure VMware Solution than on premises. It takes a couple of hours versus a full day on premises. This happens a few times per month depending on the projects going on and allows for more time savings."

IDC evaluated how enhanced agility and performance with Azure VMware Solution affects application development and DevOps teams. Interviewed organizations reported converting enhanced IT agility to improved outcomes for their development teams in terms of both volume and time to deliver. Study participants reported average productivity gains for developers of 48%, which reflects the criticality of limiting friction and moving more quickly to address business needs.

Figure 5 summarizes these agility- and development-related benefits. As shown, interviewed organizations reported requiring far less time to deploy new compute and/or storage resources (86% less on average). This contributes to improved development results, including more than two times as many features released per year (138% more) and 63% more new applications, as well as faster development life cycles (40% faster for new applications and 35% faster for new features).

FIGURE 5

Development Benefits
(% benefit)

Percentage more new features	138%
Percentage faster to deploy new compute/storage	86%
Percentage more new applications	63%
Percentage faster development life cycle, new apps	40%
Percentage faster development life cycle, new features	35%

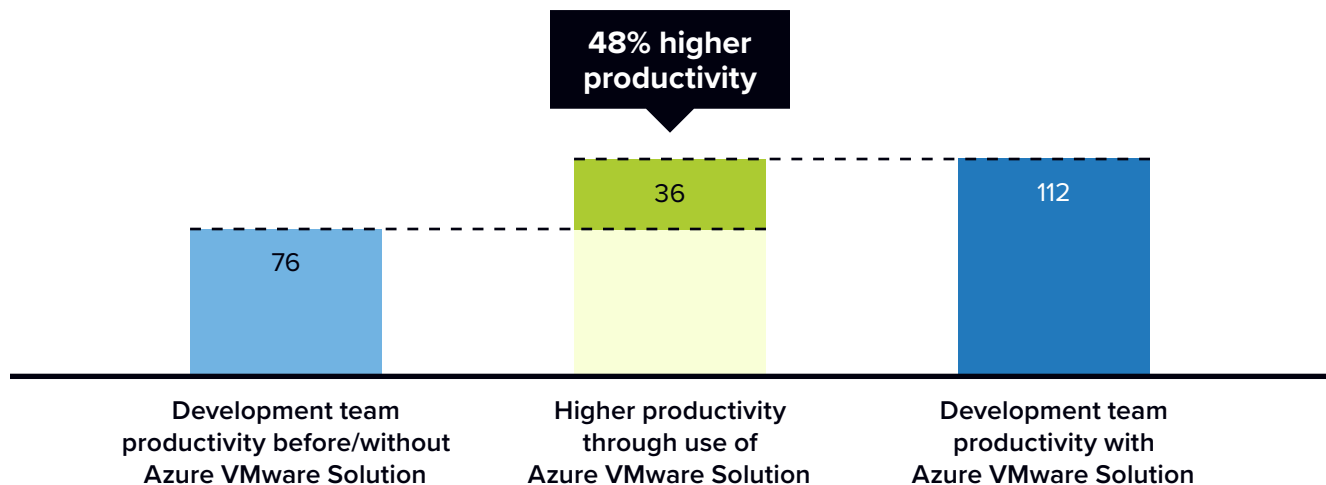n = 5; Source: IDC In-depth Interviews, April 2023

Enhanced agility enables development teams to deliver more value to their businesses. Commenting on this, one study participant noted: *"Azure VMware Solution has improved the productivity of our developers. The expertise costs more per FTE but the efficiency is higher. We have six developers on the platform who are 20% more productive."* Addressing the benefits from better automation, another said: *"Azure VMware Solution has helped developers deliver new applications more quicky and to make changes and modifications faster. We can automate the entire process, which has led to these improvements."*

IDC calculated average productivity gains for application development and DevOps teams at 48% as shown in **Figure 6**, reflecting a gain in team capabilities of 36 FTEs per organization.

FIGURE 6

Impact on Development Team Productivity

(Equivalent productivity, FTEs per organization)

48% higher productivity

| 76 | 36 | 112 |

Development team productivity before/without Azure VMware Solution

Higher productivity through use of Azure VMware Solution

Development team productivity with Azure VMware Solution

n = 5; Source: IDC In-depth Interviews, April 2023

For an accessible version of the data in this figure, see Figure 6 Supplemental Data in Appendix 3.

Business Benefits: Higher Revenue and User Productivity

Azure VMware Solution has had direct and measurable impacts on the business operations of interviewed organizations. They reported achieving better business results by generating new revenue streams and ensuring customer satisfaction with timely and high-performing services and products as the result of improved IT performance, enhanced flexibility, and business scalability.

Over time in the value chain, these benefits resulted in higher revenue and improved employee productivity. Line-of-business employees benefited from higher-performing applications including VDI, ensuring that they had the tools they need to deliver maximum value to their organizations. Commenting on being able to better address business needs, one participant noted: *"When our business now comes to us with a new idea with Azure VMware Solution, we can build applications in the cloud development environment in around two to three months, whereas it used to take more like a year because of resource capacity concerns."* Another noted: *"Our overall cloud strategy is simple. We want to make the most of our applications and our business resources with 24 x 7 availability. We looked at several cloud options to make sure we have the ability to access anywhere with 4- to 5-nine availability and chose Azure VMware Solution."*

Interviewed organizations also established faster business cadences and delivered enhanced digital experiences to their customers, helping generate better business outcomes. IDC quantified business enablement revenue gains after adoption of Azure VMware Solution. **Table 6** shows significant gains, with $70.0 million in higher average annual revenue for each organization.

TABLE 6

Business Productivity Benefits, Higher Revenue

	Per Organization	Per 100 Users
Higher revenue per year	$70.0M	$599,800
Assumed operating margin (%)	15%	15%
Higher net revenue per year	$10.5M	$90,000

n = 5; Source: IDC In-depth Interviews, April 2023

IDC further evaluated business productivity benefits by quantifying the value of higher end-user productivity. Business end users were able to work more effectively due to improved performance of key applications including VDI. Study participants confirmed that business productivity reduced friction and boosted productivity. As one study participant noted: *"About half of our users benefit from improved agility with Azure VMware Solution. This allows our employees to turn things around very quickly, and they probably save about 10 hours per year each."*

They also appreciated that improved performance drove productivity gains: *"Our users are more productive with Azure VMware Solution because we are not having the performance issues that created frustration with on-premises. Overall, user productivity has increased by at least 10–15%."*

Table 7 quantifies these benefits. Interviewed companies saw an important boost in productivity annually after adoption of Azure VMware Solution, with average productivity gains per user of 6.5 hours per year. In terms of net value, IDC calculates that each organization will capture productivity benefits worth an annual average of $421,700.

TABLE 7

Business Productivity Benefits, Higher User Productivity

	Per Organization	Per 100 Users
FTE gain in productivity per year	40.2	0.3
Hours of increased productivity per year	75,500	647
Higher net productivity per year	6.0	0.1
Value of higher net productivity per year	$421,700	$3,600

n = 5; Source: IDC In-depth Interviews, April 2023

ROI Summary

Table 8 (next page) presents IDC's return-on-investment analysis for study participants' use of Azure VMware Solution. As shown, IDC projects that they will achieve three-year discounted benefits worth an average of $40.59 million ($347,800 per 100 users) through IT cost savings, staff efficiencies, better application development, and improved business performance. These benefits compare with total three-year discounted costs of $8.88 million per organization ($76,100 per 100 users). These levels of benefits and investment costs are projected to result in an average three-year ROI of 357% and a break-even point in their investment occurring in nine months.

TABLE 8

ROI Analysis

	3-Year Average per Organization	3-Year Average per 100 users
Benefit (discounted)	$40.59M	$347,800
Investment (discounted)	$8.88M	$76,100
Net present value (NPV)	$31.71M	$271,700
Return on investment (ROI)	357%	357%
Payback period	9 months	9 months
Discount rate	12%	12%

n = 5; Source: IDC In-depth Interviews, April 2023

Challenges/Opportunities

Challenges

- Azure VMware Solution includes the full VMware stack with the latest technologies such as vSAN and NSX. Some of these may not yet be adopted by customers on premises, creating differences between environments that can affect migration, and there can be a learning curve. However, most customers will be rewarded with additional functionality by adopting them.

- Human factors such as trust, cultural resistance, and perceived loss of control can be difficult to overcome even if solutions can meet technical and security requirements, especially in conservative organizations that are used to doing everything themselves.

Opportunities

- Azure VMware Solution offers the path of least resistance for many existing datacenter applications that depend on VMware. This may be the only viable path to cloud for many complex legacy applications.

- Access to the full range of Azure services gives migrated applications many future options for modernization by accessing the large and ever-innovating portfolio of native Azure services, allowing customers to unlock the joint value of both VMware and Azure platforms.

Conclusion

Despite public cloud's continued ascendance, organizations continue to make extensive use of on-premises environments. This can create challenges as organizations look to migrate existing workloads to cloud environments because technology stacks in public and private clouds often differ markedly. One way for organizations to address this challenge is by looking for cloud-based solutions that deliver a similar software stack between on-premises and cloud environments, to minimize the need to refactor applications and ease migrations. This approach can allow organizations to continue to draw value from tools, processes, IT skills, and even licenses from their familiar on-premises environments.

This study assesses the impact for organizations of using Azure VMware Solution, which allows enterprises to run VMware workloads natively on the Microsoft Azure cloud in a VMware Cloud Verified environment and with access to a full VMware stack. IDC's analysis demonstrates that interviewed organizations achieve significant value through use of Azure VMware Solution not only by gaining an efficient and cost-effective path to the Azure cloud for VMware-based workloads but also from enhanced manageability, agility, and performance. As a result, study participants reported both optimized IT costs and improved business results through their use of Azure VMware Solution, with IDC calculating that they will realize an average three-year ROI of 357% and break even on their investment in an average of nine months.

Appendix 1: Methodology

IDC's standard Business Value/ROI methodology was utilized for this project. This methodology is based on gathering data from organizations currently using Azure VMware Solution as an infrastructure solution for running important workloads.

Based on interviews with organizations using Azure VMware Solution, IDC performed a three-step process to calculate the ROI and payback period:

1. **Gathered quantitative benefit information during the interviews using a before-and-after assessment of the impact of using Azure VMware Solution.** In this study, the benefits included IT infrastructure cost savings, IT staff efficiencies, user productivity gains, and higher revenue.

2. **Created a complete investment (three-year total cost analysis) profile based on the interviews.** Investments go beyond the initial and annual costs of using Azure VMware Solution and can include additional costs related to migrations, planning, consulting, and staff or user training.

3. **Calculated the ROI and payback period.** IDC conducted a depreciated cash flow analysis of the benefits and investments for the organizations' use of Azure VMware Solution over a three-year period. ROI is the ratio of the net present value (NPV) and the discounted investment. The payback period is the point at which cumulative benefits equal the initial investment.

IDC bases the payback period and ROI calculations on a number of assumptions, which are summarized as follows:

- 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, based on the geographic locations of the interviewed organizations, IDC has used 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 assumes that employees work 1,880 hours per year (47 weeks x 40 hours).

- The net present value of the three-year savings is calculated by subtracting the amount that would have been realized by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost. This accounts for both the assumed cost of money and the assumed rate of return.

- Because IT solutions require a deployment period, the full benefits of the solution are not available during deployment. To capture this reality, IDC prorates the benefits on a monthly basis and then subtracts the deployment time from the first-year savings.

Note: All dollar figures in this white paper are in U.S. dollars.

Appendix 2: Quantified Benefits of Use of Azure VMware Solution

Table 9 provides details about the financial value that IDC calculates study participants will achieve on an annual basis over three years by using Azure VMware Solution.

TABLE 9

Annual Quantified Financial Benefits

Category of Value	Average Quantitative Benefit	15% Margin Assumption Applied	Calculated Average Annual Value
IT infrastructure cost savings	19% lower cost of infrastructure, saving $485,600 per year; 17% lower power costs, saving $24,600 per year; 19% lower facilities costs, saving $14,600 per year; DR cost savings of $363,600 per year	No	$815,500
IT infrastructure team efficiencies	45% more efficient, saving 15.2 FTEs per organization, $100K salary	No	$1.31M
Help desk team efficiencies	47% more efficient, saving 12.8 FTEs per organization, $100K salary	No	$1.10M
DR-related efficiencies	5.6 FTEs savings per organization, $100K salary	No	$479,700
Application development team productivity gains	48% higher productivity, worth 36.3 FTEs per organization, $100K salary	No	$3.12M
Productivity gains, reduced unplanned downtime	5.4 hours of productive time gained per user, 33.3 FTEs saving, $70K salary	No	$363,100
Revenue gains, reduced unplanned downtime	87% less lost revenue, $4.80M per year revenue loss avoided	Yes	$619,900
Revenue gains, business enablement	$70.0M per organization per year higher revenue	Yes	$9.04M
Productivity gains, business enablement	40.2 FTEs of higher productivity per organization, $70K salary	Yes	$363,100

n = 5 (*includes 5 months' deployment, year 1); Source: IDC In-depth Interviews, April 2023

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

Appendix 3: Supplemental Data

The tables in this appendix provide an accessible version of the data for the complex figures in this document. Click "Return to original figure" below each table to get back to the original data figure.

FIGURE 2 SUPPLEMENTAL DATA

Annualized Infrastructure Costs

	Cost of infrastructure resources	Cost of Power	Cost of Facilities Space	Cost of DR Capacity
Before/without Azure VMware Solution	$2,200,600	$126,600	$66,000	$363,600
With Azure VMware Solution	$1,782,500	$105,400	$53,500	$0

n = 5; Source: IDC In-depth Interviews, April 2023

Return to original figure

FIGURE 3 SUPPLEMENTAL DATA

Three-Year Cost of Operations per VM

	Before/Without Azure VMware Solution	With Azure VMware Solution
Cost of IT infrastructure	$29,400	$20,700
Cost of IT infrastructure staff time	$31,300	$17,300

n = 5; Source: IDC In-depth Interviews, April 2023

Return to original figure

Appendix 2: Supplemental Data (continued)

FIGURE 6 SUPPLEMENTAL DATA

Impact on Development Team Productivity

	Development Team Productivity Before/Without Azure VMware Solution	Higher Productivity Through Use of Azure VMware Solution	Development Team Productivity, with Azure VMware Solution
Base productivity	76	76	
Enhanced productivity		36	112

n = 5; Source: IDC In-depth Interviews, April 2023

Return to original figure

About the IDC Analysts

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Gary is IDC's research director for Software Defined Compute. His research focuses on server virtualization, container infrastructure and management, and cloud system software (system software used to build IaaS clouds such as OpenStack).

More about Gary Chen

Matthew Marden

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Matthew is responsible for carrying out custom business value research engagements and consulting projects for clients in a number of technology areas with a focus on determining the return on investment (ROI) of their use of enterprise technologies. Matthew's research often analyzes how organizations are leveraging investment in digital technology solutions and initiatives to create value through efficiencies and business enablement.

More about Matthew Marden

Message from the Partner

Microsoft

Accelerate your shift to the cloud with Azure VMware Solution, a jointly engineered offering from Microsoft and VMware that simplifies migrations while reducing long-term costs. Seamlessly move VMware-based workloads from your datacenter to Azure and integrate your VMware environment with Azure. Keep managing your existing environments with the same VMware tools you already know while you modernize your applications with Azure native services.

For more information on Azure VMware Solution:

Please visit https://www.vmware.com/cloud-solutions/azure

Contact Microsoft

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