

The Business Value of Google Cloud VMware Engine



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Table of Contents



CLICK ANY HEADING TO NAVIGATE
DIRECTLY TO THAT PAGE.

- Executive Summary 3
- Business Value Highlights 3
- Situation Overview 4
- Google Cloud VMware Engine Overview 5
- The Business Value of Google Cloud VMware Engine..... 6
 - Study Demographics 6
 - Choice and Use of Google Cloud VMware Engine 7
 - Business Value and Quantified Benefits 9
 - Operational Impacts of Google Cloud VMware Engine 10
 - Business Impact of Google Cloud VMware Engine 19
 - ROI Summary 23
- Challenges/Opportunities 24
- Conclusion 24
- Appendix 1: Methodology..... 25
- Appendix 2: Supplemental Data 26
- About the IDC Analysts 27

Executive Summary

Digital business growth and productivity depend on enterprises' ability to rapidly deploy, scale, and integrate workflows and data across existing workloads and new cloud-native applications. Most organizations rely on multicloud environments that allow them to match the performance, cost, and regulatory requirements of specific workloads to the best infrastructure and services available across datacenter, edge, and public cloud options. Maintaining cost-effective and reliable operations in multicloud environments can be complex if operations teams are forced to constantly learn and integrate new sets of tools, processes, and skills.

Google Cloud VMware Engine (GCVE) is a managed enterprise-grade platform that allows enterprises to rapidly provision, migrate, and modernize their existing VMware-based workloads to Google Cloud while maintaining existing VMware-based license investments, management controls, tooling, staff, and skills. Further, GCVE allows customers to take advantage of the scale, performance, and security that are foundational to Google Cloud services while enabling customers to accelerate their business transformation using advanced Google Cloud analytics and GenAI capabilities and modernizing applications at their own pace.

As workloads are migrated and modernized, GCVE provides VMware operational continuity, allowing customers to shift to cloud consumption payment models while lowering the total cost of ownership (TCO). Using GCVE, customers can reduce infrastructure costs and improve the efficiency of IT staff, who are responsible for many important aspects of operations, security, disaster recovery, and app migration. Application development teams will become more productive, thereby enabling the organization to achieve revenue goals more quickly.

To validate these benefits, IDC interviewed seven organizations that are using Google Cloud VMware Engine and have experience with or knowledge about the benefits and costs of using it to run important enterprise applications. IDC's research demonstrates the value that interviewed organizations have achieved.

Business Value Highlights

Click the highlights below to navigate to content within this document.

- ➔ **6 months**
to payback
- ⬆ **391%**
3-year return on investment
- ⬆ **52%**
more efficient IT infrastructure management teams
- ⬇ **74%**
less time needed for IT teams for "keeping the lights on"
- ⬆ **52%**
more productive IT security teams
- ⬆ **28%**
more productive disaster recovery and backup operations and teams
- ⬆ **46%**
more efficient application migration teams

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IDC projects that they will realize a 391% three-year ROI and a six-month payback by:

- Boosting the performance of IT infrastructure teams, including those responsible for computer, storage, and security operations
- Enhancing the productivity of other IT-related staff, including disaster recovery and backup teams, and enabling IT infrastructure, database, and security teams to work more efficiently and effectively
- Increasing employee productivity levels through faster application migrations and resource agility
- Developing more new applications and features by boosting the overall productivity of application development teams
- Improving business operations and results via these cumulative benefits cost-effectively

Business Value Highlights (continued)

- ↑ **58%**
faster application migrations
- ↑ **26%**
more productive application development teams
- ↑ **\$22.6 million**
additional revenue gained
- ↑ **\$2.87 million**
in operational cost savings

Situation Overview

Globally, most enterprises understand the mission-critical role that digital infrastructure plays in enabling business innovation at scale. IDC's research shows that even as organizations continue to invest in datacenter, public cloud, and edge capabilities, they continue to worry about the impact of inflation, IT staffing and skill shortages, supply chain disruptions, and sustainability demands. With GenAI becoming the focal point of many digital business initiatives, infrastructure costs and performance are front and center on the C-suite agenda.

The recent *IDC Worldwide Generative AI Study* in August 2023 surveyed 927 decision makers and found that on average, they expect that 52% of 2024 GenAI spending will be allocated to infrastructure, ranging from AI-specific server and storage hardware and instances in on-premises/colocation datacenters, remote edge locations, and public cloud services. In many cases, GenAI workloads will draw on data that both existing applications and cloud services create and manage. The ability to efficiently manage the integration, security, performance, and end-to-end resilience of these environments will add to the day-to-day pressures facing many IT operations and security teams and application developers.

To simplify and optimize complex multicloud environments, many enterprises have invested heavily in automated infrastructure and application management capabilities that deliver consistent multicloud security, data management, and disaster recovery as well as operational controls for storage, computing, and networking. Enterprises will need to find ways to leverage and extend existing automation, observability, and security capabilities in ways that allow existing staff to take on more complex and business-critical operational activities.

VMware has long been a market leader in providing multicloud management controls. Many organizations have significant existing investments in staff and skills that are optimized around VMware stacks and workloads. These organizations have built up large portfolios of automations, templates, ecosystem integrations, and performance- and cost-optimization strategies based on VMware capabilities. Creating the ability to use public cloud services without disrupting existing business activities requires these organizations to find ways to cost-effectively lift and migrate workloads using many existing tools, people, and skills. Many cloud migration cost savings cannot be fully realized until the last workload has been migrated and the datacenter can be completely shut down. Speed of migration is also a critical factor as the datacenter will incur costs during the migration process.

Migration and modernization strategies that ignore the impact on existing resources and workloads can often create negative business impacts and reduce ROI due to mission-critical application disruptions, lack consistent data access and security, and unstable application performance and integration. Staff scrambling to master new management tools and processes may struggle to keep existing applications running or may need to bring in expensive third-party support to help with the added workload.

Google Cloud VMware Engine Overview

Google Cloud VMware Engine addresses many of the challenges facing today's digital business leaders. As a Google Cloud–managed cloud service, GCVE allows customers to lift and migrate VMware-based applications from existing datacenters to dedicated instances in the Google Cloud. It also supports native integrations with advanced Google Cloud services such as Google Cloud BigQuery or VertexAI.

GCVE is designed to help customers rapidly move to cloud-based infrastructure, thereby improving data management, storage, backup, and recovery capabilities, which are included as part of the core GCVE service. Customers can take advantage of Google Cloud's built-in scalability to match individual workloads with the right mix of RAM, CPUs,

and storage to optimize the end-to-end performance. The recently announced ve2 node platform, powered by 3rd Generation Intel® Xeon® Scalable Processors with DDR4 RAM with all-NVMe drives, provides a highly performant platform to run VMware workloads in the cloud. Customers can also size vCPUs and storage capacity independently to meet compute and storage requirements for storage-intensive VMs. GCVE also supports large cluster sizes with up to 32 nodes per cluster, which becomes very important for larger customer environments. Further, the environment provides 4 9's of cluster uptime SLA for cluster sizes of greater than 5 nodes in a single zone. It also supports stretched clusters for higher availability by improving site failure tolerance. With fast provisioning, a VMware private cloud can typically be created in under an hour.

GCVE provides fully redundant and dedicated 100 Gbps networking with 99.99% availability to provide fast access to native Google Cloud services and for latency-sensitive applications such as VDI. Native VPC networking provides private Layer 3 access between VMware environments and Google Cloud services, allowing customers to use standard access mechanisms such as Cloud VPN or Interconnect. Billing, identity, and access control integrate to unify the experience with other Google Cloud services. The service is available in 19 Google Cloud global regions, private clouds can be created typically in under an hour simply in 3 clicks.

GCVE allows customers to move their existing VMware licenses and applications without disrupting any existing operational and security controls. It also provides capabilities to accelerate application modernization by allowing customers to extend operational controls to cloud-native workloads as needed. Customers can pay for the enabling infrastructure hardware, software, and datacenter services via a single consumption-based subscription.

For organizations that want rapid access to advanced capabilities and need on-ramps to cloud-native platforms, GCVE can help to ensure the transition goes smoothly, improve operational efficiency, and optimize the performance and scale of existing applications.

The Business Value of Google Cloud VMware Engine

Study Demographics

IDC conducted research that explores the value and benefits for organizations using Google Cloud VMware Engine to run their enterprise applications. The project included seven interviews with organizations that were using this solution and had experience with

or knowledge about its benefits and costs. During the interviews, companies were asked various quantitative and qualitative questions regarding the impact of the solution on their IT and business operations and overall costs.

Table 1 presents the study demographics and profiles. The interviewed organizations had a base of 3,064 employees. This workforce was supported by an IT staff of 668

TABLE 1
Firmographics of Interviewed Organizations

Firmographics	Average	Median	Range
Number of employees	3,064	2,000	1,200–7,500
Number of IT staff	668	110	17–4,000
Number of business applications	23	10	6–85
Revenue per year	\$1.14B	\$968.0M	\$92.2M–\$3.0B
Industries	Education, entertainment, healthcare, information technology, insurance, manufacturing, telecommunications		

n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

engaged in managing 23 business applications. Annual revenue for these companies was \$1.14 billion. In addition, a mix of vertical industries was represented, namely the education, entertainment, healthcare, information technology, insurance, manufacturing, and telecommunications sectors.

Choice and Use of Google Cloud VMware Engine

Interviewed organizations described usage patterns for the Google Cloud VMware Engine and provided information about their IT environments. They also discussed the rationale behind their choice of platform to run and optimize their enterprise applications and the IT infrastructure supporting them. They cited the need for a more scalable and easier-to-manage cloud solution, thereby avoiding reinventing processes to support private cloud or on-premises setups, which proved expensive. They noted several other key factors in their choice, including their plans to go cloud native for VMware applications, and that Google Cloud VMware Engine helped solve significant issues with backup, replication,

and performance. They appreciated having a solution that could support and scale their VMware environments because on-premises environments didn't always have enough hardware, time, or other resources to scale and build the environments needed by development teams.

Study participants elaborated on these decision criteria:

Looking for a more scalable and easier-to-manage cloud solution, Telecommunications:

"It's the ease and simplicity of the tools that are integrated with the Google Cloud VMware Engine platform for the VMware Engine that's the main draw. I've worked in the private cloud as well with our own companies. The challenge we faced in the private cloud was that we had to reinvent our processes to support it. That in itself becomes an expensive proposition, and it's a business challenge. It's not very scalable, which becomes cost prohibitive. Google Cloud VMware Engine eliminates all the complexity for you and provides standard tools and processes, so you can migrate or build cloud solutions for your customers."

Wanting to go cloud native for VMware applications, Insurance:

"For some of our environments, we have some technical debt, some legacy devices we're running in VMware where we want to go cloud native and get the benefit of that while migrating out of datacenters. This was a good alternative to fit into that slot."

Google Cloud VMware Engine seemed to have the cloud infrastructure, support, and redundancy they wanted, Education:

"We had everything on premises before. I was having tremendous issues with backup, replication, and performance, especially when we would release report cards or scheduling, and we couldn't handle the data; we aren't really a true datacenter. We looked at a couple of options, and Google Cloud VMware Engine seemed like the better way to go. I really liked their cloud, infrastructure, support model, and redundancy."

Wanted a solution that could support and scale their VMware environments, Healthcare:

"My company had been growing rapidly in the past three or four years. One of the challenges was with our on-prem environment — sometimes, we didn't have hardware or enough resources to scale and build the environment that was needed by our development team. We talked to VMware to see what our options were. That was when we brainstormed and decided to go into the cloud and run it there. We would have Google Cloud VMware Engine—managed infrastructure so that we could use the VMware platform more efficiently."

Table 2 (next page) describes organizational usage associated with the deployment of the Google Cloud VMware Engine platform. There was a substantial footprint across all companies, as evidenced by 55% of revenue from an average of 52 applications, 96 databases, and 109 TBs of storage and data capacity in use. Additional usage patterns are presented in **Table 2**. (Note: All numbers cited represent averages.)

TABLE 2

Organizational Usage of Google Cloud VMware Engine

	Average	Median	Range
Average number of Google Cloud VMware Engine VMs	346	50	19–2,000
Average number of sites	49	30	2–200
Number of applications	52	15	4–200
Number of databases	96	16	3–550
Number of internal users	1,919	400	30–10,000
Number of external customers	151,400	15,000	50–1M
Number of storage TBs	109	16	5–500
Number of networking datacenters	5	3	1–20
Percent of revenue supported by Google Cloud VMware Engine applications	55%	50%	15%–100%

n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

Business Value and Quantified Benefits

IDC's Business Value model expresses the benefits for organizations using Google Cloud VMware Engine to run and optimize their business-critical enterprise applications. Considering the use of alternative or previous solutions, survey data obtained from Google customers was applied to this model to arrive at an array of quantified post-deployment benefits. Using this methodology, IDC found that these customers realized significant value for their IT infrastructure and business operations.

The use of Google Cloud VMware Engine cost-effectively boosted the performance of IT infrastructure teams, including those responsible for computer, storage, and security operations. In addition, it served to enhance the productivity of other IT-related teams, including disaster recovery and backup teams, and enabled IT infrastructure, database, and security teams to work more efficiently and effectively. These improvements served to increase overall employee productivity levels through faster migrations

and the development and deployment of more new applications and features. Cumulatively, these improvements resulted in better business operations and results.

Study participants elaborated on these benefits:

Simpler infrastructure management, Entertainment:

“Simplicity of operation is the biggest benefit. My team is very familiar with VMware, has been using it for years, knows it inside, outside, and upside down. We use (Google Cloud VMware Engine’s) capabilities to do this for us. If we are hammered on something, then we have built mechanisms for dealing with being swamped. As long as you have enough firepower behind Google Cloud VMware Engine, it has self-curing capabilities.”

Have an infrastructure that could grow with the business, Healthcare:

“The most significant element for me is to support the business in growth and scale. It’s less overhead and less dependency on the infrastructure.”

Reduced licensing costs and ease of management, Insurance:

“The lift and shift were relatively straightforward. We’re able to use most of the same apps, tools, and processes we were using. We’ve taken some of the burden off the VMware licensing components as well. We’re not managing the hardware anymore, we’re not managing the hypervisors or the underlying storage behind it, so a lot of that stuff has taken some of the burden off the internal IT teams.”

Better performance, and security with reducing costs, Information Technology:

“It provides a hybrid platform in the sense that it enables high-speed, low-latency connectivity. There is high security — Google Cloud VMware Engine’s security is cutting edge. At an organizational level, it has low costs — VMware Engine provides a high level of automation and operational efficiency. It’s integrated with cloud services, and there are various tools we can use. We spend less than \$150,000, whereas when we were on prem, we spent \$500,000. So, we’re saving a huge amount.”

Operational Impacts of Google Cloud VMware Engine

IDC predicts that by 2025, cloud usage will surpass on-premises infrastructure as the primary location where operational data is stored, managed, and analyzed for 65% of A2000 organizations. Cloud infrastructure spending is shifting toward robust configurations geared toward more complex workloads and new AI initiatives. The slower growth for non-cloud infrastructure reflects an expectation that this market will face headwinds. However, IDC data shows that cloud spending will remain positive as the result of new and existing mission-critical workloads often requiring higher-end, performance-oriented systems.

To help companies move their cloud-based digital transformation efforts forward, Google Cloud VMware Engine provides a fully managed service that facilitates running the VMware platform in Google Cloud. It provides VMware operational continuity so that IT operations can benefit from a cloud-consumption model while lowering the TCO. VMware Engine also offers the benefits of on-demand provisioning and capacity optimization. It runs natively on Google Cloud bare metal infrastructure in Google Cloud locations while fully integrating with the rest of Google Cloud.

Study participants confirmed the benefits of Google Cloud VMware Engine in their comments to IDC. They appreciated that the platform reduced their management burden for their system admin, software admin, and network admin staff, who no longer had to support the physical environment. They noted that Google Cloud VMware Engine provided holistic support for infrastructure monitoring and troubleshooting, which helped with operational continuity.

Study participants commented on these and other benefits:

Reduced management burden, Education:

“It’s reduced the amount of work on my core team, which is my sys-admin, software-admin, and network-admin. They don’t have to support the physical environment here anymore. With the services Google Cloud VMware Engine offers, it’s almost like I have another FTE working with me who takes care of a lot of this stuff for me — patching and maintenance day to day — so it’s saved money in terms of resources I can reallocate. We used to have to schedule report card deployment or scheduling deployment over three to five days because we couldn’t handle the traffic — that’s no longer an issue. From an IT standpoint, I wish I had done this a long time ago — the resource of having our stuff in the Google Cloud VMware Engine Cloud is tremendous.”

Google Cloud VMware Engine provides holistic support, Information Technology:

“In regard to infrastructure monitoring, troubleshooting, and support, Google Cloud VMware Engine operates our infrastructure — it caters for failed hardware. Since we’re in the cloud, it replaces everything automatically — everything is on servers. There is operational continuity as Google Cloud VMware Engine is based on a certain architecture. Coupled with our existing VMware-based applications, we get the compliance rules and security protection — everything is being impacted.”

Can create a cost-efficient setup that supports their current needs, Entertainment:

“Our experience has been that (especially with the way some of our apps run) this appears to reduce latency because the app itself thinks it’s running in the same environment. Because there’s a balancing act going on at an operating system level rather than a human being level, we can operate in a consistent range, and users don’t experience variations. Financially, we can size all the components and the data — it makes it easier for us. It also allows us to play a bit — if I increase memory, do I get enough performance increase that it’s worth extra money? This makes that conversation easy to do. We can turn the knobs and know what we’re doing when we turn them.”

Time freed up to work on various strategic projects, Education:

“We have a laundry list of projects we’ve wanted to do. We’re focusing on security stuff now with MFA for teachers. We’re looking at revamping our registration gateway to get new students in. We’re looking at rolling out 300 SmartBoards to bring more instructional technology into the classroom. We’re rolling out one-to-one devices for our kindergarten to fourth-grade students. We’re looking at upgrading our student information system ... ”

To evaluate the operational impacts of Google Cloud VMware Engine, IDC first looked at staffing impacts after adoption. Interviewed companies reported that the platform took the management burden off the main teams responsible for managing compute and storage. **Table 3** quantifies these impacts. After adoption, interviewed companies saw a 52% efficiency boost. In real-world terms, this means that 6.3 FTEs were freed up to work on other projects instead of day-to-day management tasks, resulting in an annual productivity-based business value of \$626,900 for each organization.

TABLE 3
IT Infrastructure Impact

	Before Google Cloud VMware Engine	With Google Cloud VMware Engine	Difference	Benefit
Management of IT infrastructure, FTEs per organization per year	12.2	5.9	6.3	52%
Equivalent value of staff time per year	\$1.22M	\$589,800	\$626,900	52%

n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

Networking staff also saw improvements in ongoing performance. Organizations told IDC that Google Cloud VMware Engine simplified the operational aspects of their network environments. After adoption, interviewed companies saw a 52% productivity boost for these teams. This amounted to the equivalent of freeing up 5.3 FTEs and resulted in an annual productivity-based business value of \$534,300 for each organization (see **Table 4**).

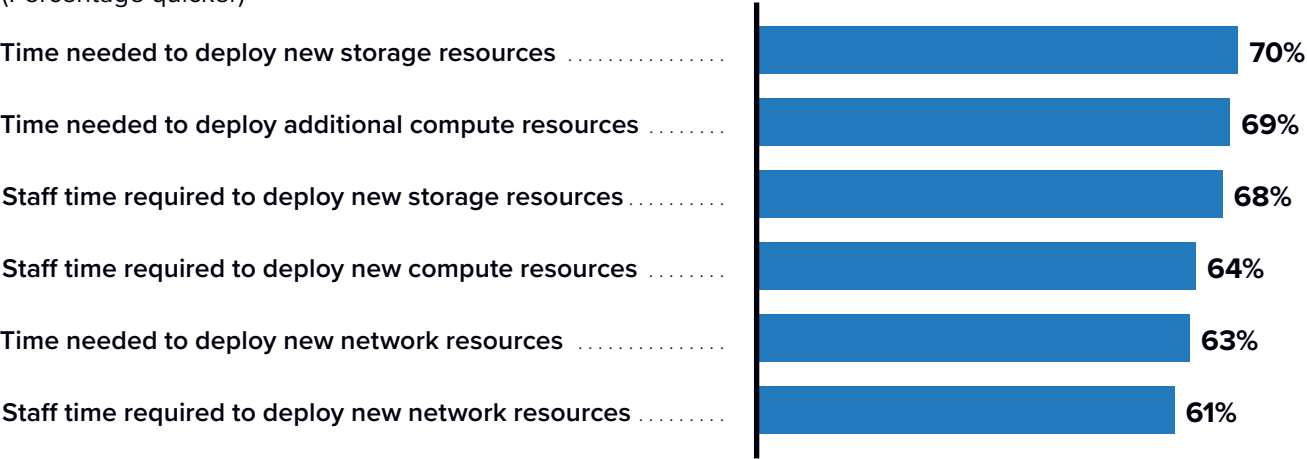
TABLE 4
IT Management Staff Impact — Networking

	Before Google Cloud VMware Engine	With Google Cloud VMware Engine	Difference	Benefit
Management of IT infrastructure, FTEs per organization per year	10	4.7	5.3	53%
Equivalent value of staff time per year	\$1.0M	\$465,700	\$534,300	53%

n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

One of the core benefits of Google Cloud VMware Engine is infrastructure agility. This is enabled via on-demand self-service provisioning of VMware cloud environments with the ability to add and remove capacity on demand or reserve capacity to lower costs. Interviewed companies reported that they benefited from improved speed to deploy new compute, storage, and network resources to be better in sync with changing business requirements. As shown in **Figure 1** (next page), the greatest improvements were seen in time needed to deploy new storage resources (70% less); time needed to deploy additional compute resources (69% less); and staff time required to deploy new storage resources (68% less). Additional metrics are presented.

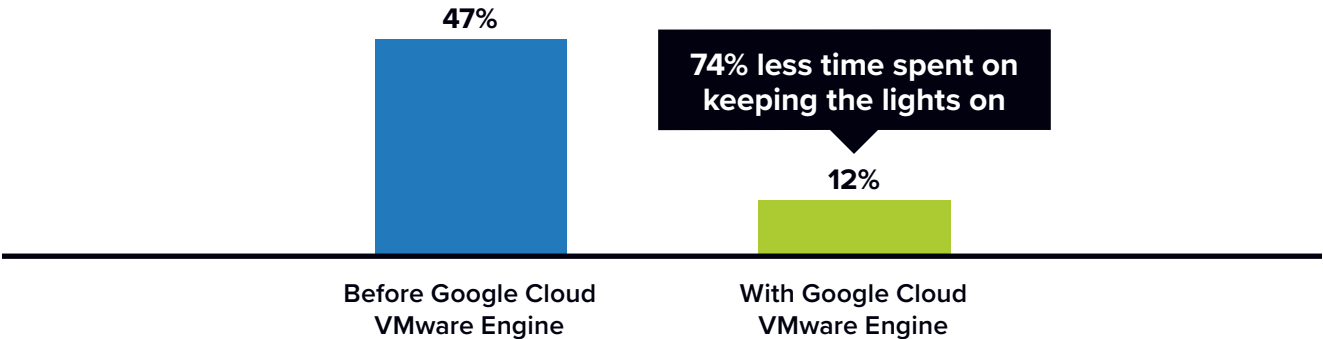
FIGURE 1
Infrastructure Agility Impact
(Percentage quicker)



n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

Drilling down further into benefits for IT teams, interviewed companies reported that Google Cloud VMware Engine enabled a greater focus on innovation and other strategic business activities. As one study participant noted: *“A lot of these people are being shifted into new organizations where they can do more productive work. It all comes down to the business decisions of the organization. They don’t just lay everybody off.”* Figure 2 shows these impacts and that, after adoption, 74% less time was spent “keeping lights on,” i.e., working on routine operational maintenance tasks.

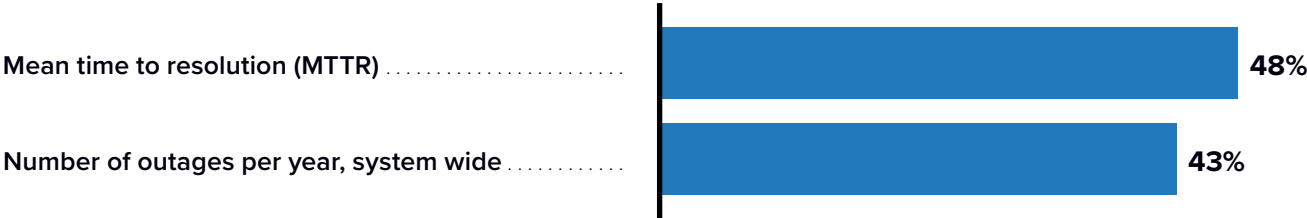
FIGURE 2
Impact on IT Infrastructure Team Activities
(Percentage time spent keeping the lights on)



n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

The agility and reliability of the Google platform yielded additional benefits. Another major benefit that study participants reported was a substantial reduction in unplanned downtime. As shown in **Figure 3**, after adoption, there was a substantial reduction in the mean time to resolution (MTTR) metric as well as the annual frequency of downtime events. Outages declined 43% annually.

FIGURE 3
Unplanned Downtime Impact
(Percentage improvement)



n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

IDC then looked at application migration staff impacts. Organizations reported that it was much quicker (58%) for them to migrate and deploy their VMware-supported applications with Google Cloud VMware Engine. After adoption, applications migration project teams saw a 46% efficiency boost. This resulted in an annual productivity-based business value of \$2.89 million for each organization (**Table 5**, next page).

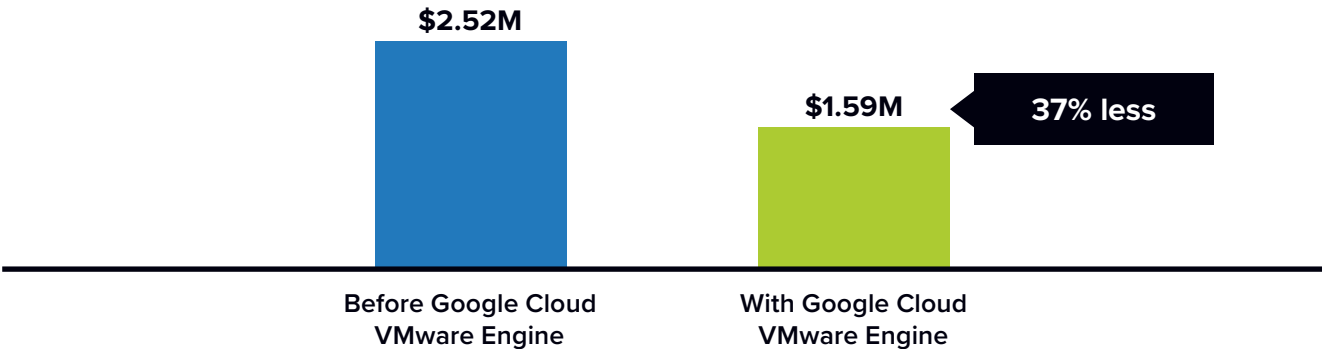
TABLE 5
Application Migration Staff Impact

	Before Google Cloud VMware Engine	With Google Cloud VMware Engine	Difference	Benefit
Application migration project teams, FTEs per organization, one time	63.2	34.3	29.0	46%
Time to migrate applications (months)	6.8	2.9	3.9	58%
Equivalent value of staff time, one time	\$6.32M	\$3.43M	\$2.89M	46%

n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

The next operational area that IDC evaluated was the cost-effectiveness of both IT infrastructure and operations using the Google platform. These results are presented in **Figure 4**, beginning with infrastructure savings. Over a projected three-year period, IDC’s analysis shows that study participants experienced a 37% cost reduction compared with previous or alternative approaches.

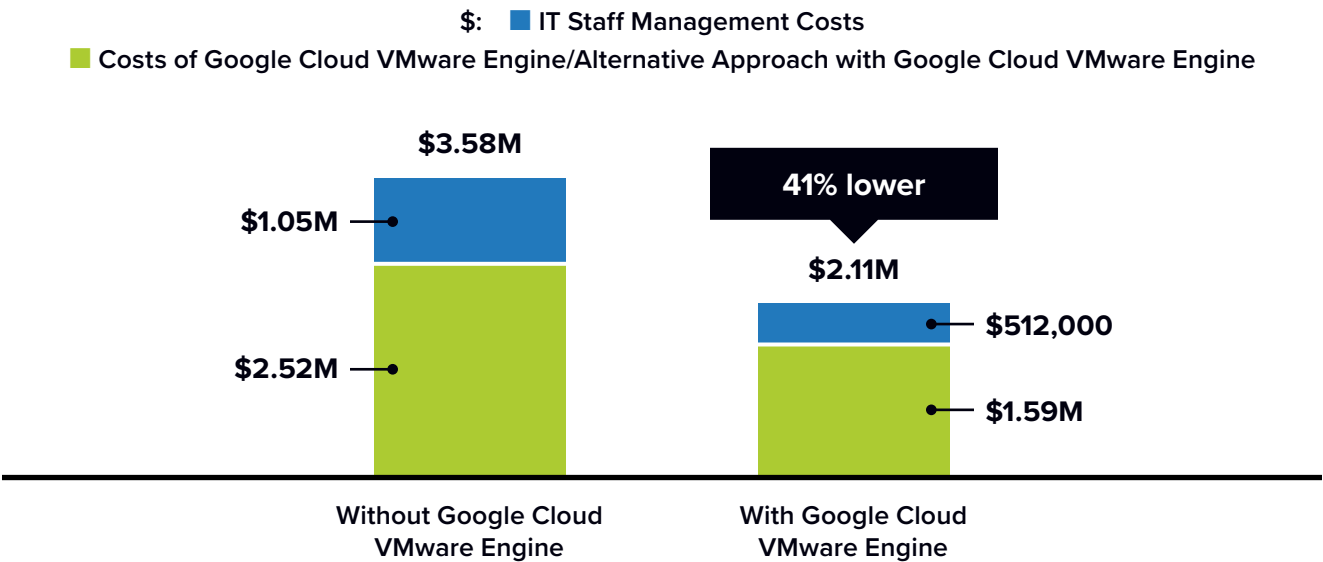
FIGURE 4
IT Infrastructure Savings per 100 VMs, Three Years
(Cost of Google Cloud VMware Engine/Other Infrastructure)



n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

IDC then calculated the cumulative costs of operations for surveyed organizations. This calculation included IT staff management and platform costs. As shown in **Figure 5**, over a three-year period, costs were 41% lower overall due to the combined benefits of easier management and reduced infrastructure costs.

FIGURE 5
Cost of Operations per 100 VMs, Three Years



n = 7; Source: IDC Business Value In-Depth Interviews, September 2023
For an accessible version of the data in this figure, see [Figure 5 Supplemental Data](#) in Appendix 2.

Drilling down further into the benefits for IT teams, study participants reported that their organizations mentioned strong satisfaction with Google Cloud VMware Engine’s built-in security setup. **Table 6** (next page) presents this data. After adoption, interviewed companies saw a substantial efficiency boost (52%). This amounted to the equivalent of freeing up 3.5 FTEs and resulted in an annual productivity-based business value of \$352,100 for each organization.

TABLE 6

IT Security Staff Impact

	Before Google Cloud VMware Engine	With Google Cloud VMware Engine	Difference	Benefit
IT infrastructure security management, FTE equivalent per organization per year	6.7	3.2	3.5	52%
Equivalent value of staff time per year	\$673,800	\$321,700	\$352,100	52%

n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

Continuing with IT team impacts, study participants reported that disaster recovery and backup staff found Google Cloud VMware Engine tools easy to use for carrying out data restoration and backups. **Table 7** shows the impact data. After adoption, disaster recovery and backup teams saw a 28% efficiency boost. This amounted to the equivalent of freeing up 1.3 FTEs and resulted in an annual productivity-based business value of \$128,800 for each organization.

TABLE 7

IT Disaster Recovery and Backup Impact

	Before Google Cloud VMware Engine	With Google Cloud VMware Engine	Difference	Benefit
IT disaster recovery and backup management, FTE equivalent per organization per year	4.6	3.3	1.3	28%
Equivalent value of staff time per year	\$460,000	\$331,200	\$128,800	28%

n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

Drilling down further into the benefits of disaster and backup recovery, after adoption, the time needed for staff to handle a backup was reduced by half while the number of backups was increased by 30%. **Figure 6** presents this data.

FIGURE 6

Backup Impact

(Percentage improvement)



n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

Business Impact of Google Cloud VMware Engine

The benefits that study participants experienced from the adoption of Google Cloud VMware Engine fostered better business operations and results. Interviewed companies realized higher revenue by better addressing business opportunities and fine-tuning their business operations to improve efficiency. This was enabled by the staff and performance improvements described previously. Study participants cited specific benefits such as supporting business growth by having applications easily available and running smoothly without the need for staff intervention and requiring significantly less time to deploy. They noted that business users were pleased with the improved and accelerated application performance and could access them remotely without having to use a VPN.

Study participants elaborated on these and other benefits:

Could support business growth, Healthcare:

“The main benefit that they see is our ability to support the growth of business and having their applications coming up and running smoothly without any help. The support of business growth is the most significant benefit that we see. If we did not have Google Cloud VMware Engine, the applications would probably take 50% to 100% more time in our first deployment than they do now.”

Business users are happy with improved application performance, Education:

“Our business department comprises about 20 people. They can access things remotely now without having to use a VPN. We use Point-and-Click for payroll. When we ran it internally, it was a slog, but now that it’s out in Google Cloud VMware Engine Cloud, the performance has benefited tremendously. It used to take days to run the payroll; now, they can get it done in less than a day. It’s amazing what kind of throughput and infrastructure Google Cloud VMware Engine has to support our applications. The team couldn’t be happier, and it’s rare to see the business office happy!”

Could scale and support a variety of business use cases, Insurance:

“We’ve got scalability if needed, so we’re not doing an acquisition of hardware and waiting. They’ve got some scalability built in. They’ve got dedicated high-speed networking. They’ve got some availability metrics as well in their infrastructure. From a file storage perspective, they’re running the file store, which is a manifest data store. It allows flexibility on the VMs or low latency on the storage pieces.”

They don’t need to hire additional headcount, Telecommunications:

“The business operations folks don’t have to employ hundreds of people to do this work — they can rationalize those analysts and data collectors because Google Cloud VMware Engine provides built-in efficiency.”

Application development represents a critical endeavor area in today’s business environments. Study participants reported that Google Cloud VMware Engine helped their development teams deploy applications more easily and that more reliable and scalable infrastructure for their VMware environment helped enable developers’ agility in building and deploying mission-critical applications to support the business. **Table 8** (next page) shows these impacts. After adoption, interviewed companies saw a 26% productivity boost, which means that these teams of an average size of 135 FTEs can now do the work of 169.8 FTEs, meaning they do not need to hire the additional 34.8 FTEs. This resulted in an annual productivity-based business value of \$3.48 million for each organization.

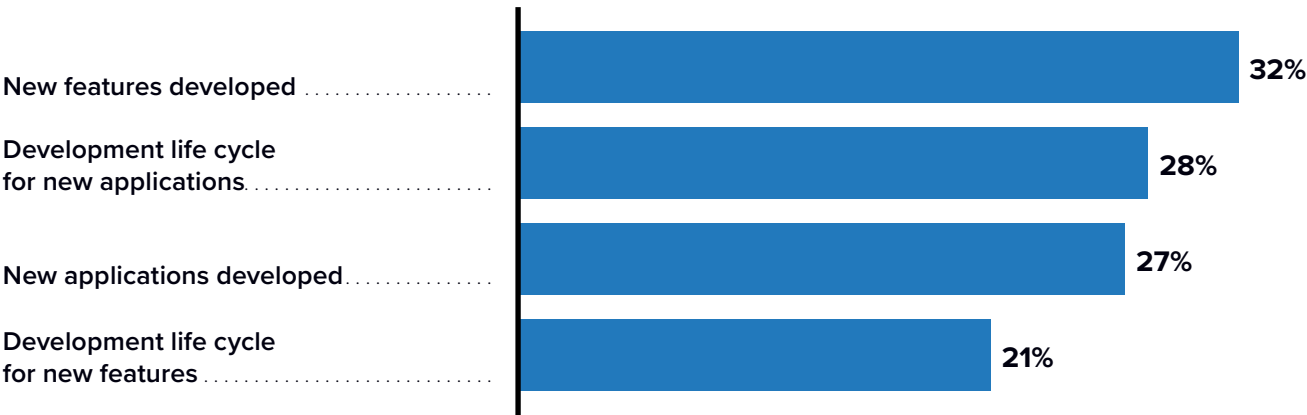
TABLE 8
Application Developer Impact

	Before Google Cloud VMware Engine	With Google Cloud VMware Engine	Difference	Benefit
AppDev, FTE equivalent per organization per year	135.0	169.8	34.8	26%
Equivalent value of AppDev team productivity, \$ per year per organization	\$13.50M	\$17.00M	\$3.48M	26%

n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

IDC then drilled down further into the development benefits. Developers were able to push out new applications and features quickly with Google Cloud VMware Engine. After deployment, 32% more new features were developed (Figure 7). In addition, development life cycles for new applications were 28% shorter, with 27% more new applications developed.

FIGURE 7
Application Development Impact
(Percentage improvement)



n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

Summing up the business benefits, IDC found that Google Cloud VMware Engine allowed organizations to scale up as needed to address business opportunities. As a result of the efficiencies described in previous sections, surveyed organizations were able to leverage Google Cloud VMware Engine’s performance to better address business opportunities and generate more revenue. As shown in **Table 9**, the total annual additional revenue for study participants amounted to \$22,639,000.

TABLE 9
Business Operations and User Impact

	Per Organization	Per 100 VMs
Total additional revenue per year	\$22.64M	\$6.55M
Assumed operating margin	15%	15%
Total recognized revenue, IDC model, per year	\$3.40M	\$982,700

n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

Cost savings were also recognized. Improved application performance and capabilities allowed line-of-business teams to do more, avoiding the need for additional hires. As shown in **Table 10**, IDC calculated total annual operational cost savings of \$2,865,800 per organization and \$829,300 per 100 VMs.

TABLE 10
Business Operations and User Impact

	Per Organization	Per 100 VMs
Total operational cost savings per year	\$2.87M	\$829,300

n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

ROI Summary

IDC’s analysis of the financial and investment benefits related to study participants’ use of Google Cloud VMware Engine is presented in **Table 11** (next page). IDC calculates that on a per-organization basis, interviewed organizations will achieve total discounted three-year benefits of \$2.89 million based on infrastructure cost savings, staff efficiencies, and better business results. These benefits compare with projected total discounted investment costs over three years of \$5.89 million on a per-organization basis. At these levels of benefits and investment costs, IDC calculates that these organizations will achieve a three-year ROI of 391% and break even on their investment in six months.

TABLE 11
Three-Year ROI Analysis

	Per Organization	Per 100 VMs
Benefit (discounted)	\$28.90M	\$8.37M
Investment (discounted)	\$5.89M	\$1.70M
Net present value	\$23.00M	\$6.67M
ROI (net present value/investment)	391%	391%
Payback (months)	6 months	6 months
Discount factor	12%	12%

n = 7; Source: IDC Business Value In-Depth Interviews, September 2023

Challenges/Opportunities

Digital business imperatives continue to drive both IT innovation and operational complexity. Application modernization and the ability to migrate and match existing workloads to optimal infrastructure and cloud-service offerings are digital business imperatives. For many organizations, these efforts can create several operational challenges that reduce IT staff efficiency due to the use of disconnected tools and processes combined with the need to learn how to optimize new environments and maintain consistent security, cost, and performance SLAs.

Organizations with significant existing investments in VMware software stacks and operating models can reduce some of these operational and transitional risks by choosing migration and modernization strategies that allow them to get started with existing staff, skills, and tools while gaining access to advanced services and cloud-native platforms. Creating a smooth evolutionary path to cloud operations will help organizations to attain digital business innovation priorities efficiently while minimizing the risk and disruption to existing mission-critical workloads and business processes.

Conclusion

Digital business leaders are relying more heavily on multicloud environments to meet the requirements of specific workloads with the best choice of infrastructure and cloud services. However, managing disparate environments adds complexity, which can be difficult for many workloads.

GCVE is a managed enterprise-grade platform that allows enterprises to rapidly provision, migrate, and modernize their existing VMware-based workloads to the Google Cloud. It provides VMware operational continuity, enabling businesses to shift to cloud consumption payment models while lowering the total cost of ownership. The benefits include boosting the performance of IT infrastructure teams, enhancing the productivity of other IT-related staff, increasing employee productivity levels, and improving business operations. Organizations with significant existing investments in VMware software stacks and operating models can reduce operational and transitional risks by choosing migration and modernization strategies that allow them to get started with existing staff, skills, and tools while gaining access to advanced services and cloud-native platforms.

Appendix 1: Methodology

IDC's standard Business Value methodology was utilized for this project. This methodology is based on data gathered from current users of Google Cloud VMware Engine.

Based on interviews with organizations using Google Cloud VMware Engine, 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 Google Cloud VMware Engine. In this study, the benefits included IT cost reductions and avoidances, staff time savings and productivity benefits, and revenue gains.
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 Google Cloud VMware Engine 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 Google Cloud VMware Engine over a three-year period. ROI is the ratio of the net present value 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 several assumptions, which are summarized as follows:

- Time values are multiplied by the burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and productivity savings. For the purpose of this analysis, IDC has used assumptions of an average fully loaded \$100,000 per year salary for IT staff members and an average fully loaded salary of \$70,000 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.
- Further, because Google Cloud VMware Engine requires a deployment and migration period, the full benefits of the solution are not available during deployment and migration. To capture this reality, IDC prorates the benefits monthly and then subtracts the deployment time from the first-year savings.

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

Appendix 2: Supplemental Data

This appendix provides an accessible version of the data for the complex figure in this document. Click “Return to original figure” below the table to get back to the original data figure.

FIGURE 5 SUPPLEMENTAL DATA
Cost of Operations per 100 VMs, Three Years

	Without Google Cloud VMware Engine	With Google Cloud VMware Engine
Costs of Google Cloud VMware Engine/alternative approach with Google Cloud VMware Engine	\$2.52M	\$1.59M
IT staff management costs	\$1.05M	\$512,000
Total	\$3.58M	\$2.11M

n = 7; Source: IDC Business Value In-Depth Interviews, September 2023
[Return to original figure](#)

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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).

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[More about Mary Johnston Turner](#)

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