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The Business Value of Cloud SQL: Google Cloud's Relational Database Service for MySQL, PostgreSQL, and SQL Server

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June 2022 | IDC Doc. #US49250622

Navigating this White Paper

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BUSINESS VALUE HIGHLIGHTS

Click on highlights below to navigate to related content within this PDF.

246%
three-year ROI

11 months
to payback

28% lower
three-year cost of operations

44% more
efficient DBAs

79% more
databases per DBA

12% lower
database cost

96% faster
to create and deploy a new database

14% higher
developer productivity

$21.75 million
higher revenue per organization per year

Executive Summary

This document describes the experiences of businesses that chose to redeploy self-managed database servers from their datacenters or cloud environments to Cloud SQL, Google Cloud's relational database service for MySQL, PostgreSQL, and SQL Server. Doing so enabled them to reduce their operational costs on the premises while taking advantage of impactful automation and the advanced expertise of cloud service engineers who manage databases in the cloud environment.

IDC spoke with organizations that were previously using self-managed databases and migrated to Cloud SQL to understand the impact on database-related costs, staff time requirements, flexibility, and performance. Study participants, which are mostly technology focused and already had relatively robust database environments, reported that using Cloud SQL yields significant efficiencies and performance benefits compared with self-managed databases. They noted enabling database administrator (DBA) teams to work on innovation and focus on leveraging IT capabilities to drive business strategy and gaining from much enhanced database agility and scalability as benefits.

Based on these interviews, IDC calculates that interviewed Cloud SQL customers will achieve an average three-year ROI of 246% by:

- **Freeing up DBA and infrastructure team members** to work on value-add and innovative activities
- **Reducing overall database cost of operations,** including lower direct infrastructure and database costs
- **Enabling much faster deployment and extension of database resources,** thereby supporting business and development activities
- **Winning more business** by addressing opportunities as they arise, delivering faster and higher-quality products and services to customers, and ensuring improved application performance and user experience

Situation Overview

Database management systems (DBMSs) are complex products that drive the data upon which enterprises depend for operations and insight. Maintaining them can be difficult, expensive, and fraught with the risk of human error. Operating them at peak efficiency requires expertise and also the immediate availability of system resources, including servers and storage, needed to ensure smooth performance and continuous availability. Most businesses that maintain such systems are not in the database business; they are in banking, or retail, or healthcare, or manufacturing, or logistics, or some other industry that is not directly related to database management but depends on the immediate and reliable availability of the data that drives the business.

The public cloud offers an environment in which compute and storage resources are readily available. A public cloud service provides automation at scale and employs database professionals to perform secondary tasks, and it also can apply software patches, maintain the hardware, perform backups, and tune the database for maximum performance and reliability—all without involving any effort on the part of the staff of a client enterprise. Cloud SQL is such a service.

Cloud SQL

Google is one of the premier providers of public cloud services in the world, in the form of Google Cloud. Among the many services that Google Cloud offers is Cloud SQL, which can deploy and manage database servers on behalf of subscription customers. This service includes all maintenance activities, as well as database tuning and optimization. Google offers this service in support of MySQL, PostgreSQL, and SQL Server. Since MySQL and PostgreSQL are open source, the client pays only for the Google service. In the case of Microsoft SQL Server, the license is embedded in the fee.

In addition to providing a platform for the client's database, Google Cloud offers integration with other Google data services such as BigQuery, a data warehouse, and enables clients to leverage the data in App Engine, Google Compute Engine, and Google Kubernetes Engine, as they modernize their applications. Google Cloud also offers a migration service for moving data from the on-premises environment to Cloud SQL using a database migration service (DMS).

The Business Value of Cloud SQL

Study Demographics

IDC carried out research via in-depth interviews with IT and database managers at organizations using Cloud SQL to understand the impact on their database, IT, and business operations. Interviews were designed to elicit feedback concerning both the quantitative and qualitative impact for these organizations of using Cloud SQL.

Table 1 provides details about the firmographics and overall database use of study participants. Interviewed organizations shared an overall profile of technology-focused companies that rely on their ability to develop, deploy, and deliver timely and high-quality solutions to their customers. Interviewed Google customers had 1,834 employees and annual revenue of $1.02 billion (medians of 375 employees and $200 million, respectively) on average, showing the scale of their operations. They support their business activities with an average of 572 databases, with 79% of these databases in the cloud on average and 43% in production environments, suggesting the importance of their development and testing activities to business activities.

TABLE 1

Demographics of Interviewed Organizations

	Average	Median
Number of employees	1,834	375
Number of IT staff	311	178
Number of business applications	518	150
Total number of databases	572	200
Databases in cloud	79%	100%
Databases in production	43%	37%
Annual revenue	$1.02B	$200.00M
Countries	United States (4), United Kingdom (2), Canada, Netherlands	
Industries	SaaS (2), technology (2), elearning, legal services, research publishing, retail	

n = 8, Source: IDC In-depth Interviews, April 2022

Choice and Use of Cloud SQL

Study participants cited common considerations in either moving from an on-premises database environment to Cloud SQL or deciding to use Cloud SQL for new databases. First and foremost, interviewed organizations unanimously wanted to move away from the time required to manage their own databases and instead rely on the automation capabilities that Cloud SQL delivers along with Google's expertise. Further, they realized that Cloud SQL would serve as a better database foundation for their businesses from the perspectives of flexibility, risk, and performance.

Interviewed Google Cloud customers spoke to their organizations' specific decision criteria:

- **Shift away from challenges of self-management:**
  "We wanted to minimize the effort the team puts into maintaining our infrastructure. Maintaining and upgrading our own MySQL databases was too time consuming and nerve wracking with the risk of data loss, and it wasn't scaling in the way management was looking for. Moving to a managed service with Cloud SQL checked most of the boxes we need to run our business."
- **Attractiveness of Google managed solution:**
  "When we saw there was a managed version of SQL with Google, meaning that once set up, the care and feeding was no longer on our small team, we definitely jumped at the chance to offload that workload to Google."
- **Value of known service-level agreements (SLAs):**
  "We are money rich and time poor. It was more valuable for us to take advantage of a hosted solution with Cloud SQL with known SLAs to help us get out of the gate."
- **Move day-to-day activities away from internal DBA team:**
  "The main reason we chose Cloud SQL is to reduce staff toil, to offload work from our database team to a managed service."
- **Enable growth by optimizing engineering team use:**
  "We chose Cloud SQL because we are growing and believe that our engineers can provide more value to our teams as data consultants instead of patching and maintaining and adding more servers to our farm. We also see that we cannot keep up with the pace of automation that Google applies to its infrastructure."

Table 2 (next page) provides information about study participants' use of Cloud SQL. They reported that over half of their organizations' total databases on average are running on Cloud SQL (315 databases out of 572 databases). They reported using various database engines, with most significant use of MySQL databases (222 databases on average), followed by PostgreSQL (88 databases on average) and SQL Server databases (6 databases on average). Table 2 provides additional information about their use of Cloud SQL.

TABLE 2

Cloud SQL Environments Use by Interviewed Organizations

	Average	Median
Number of Cloud SQL databases	315	125
Number of MySQL databases	222	30
Number of PostgreSQL databases	88	31
Number of SQL Server databases	6	0
Database volume (TB)	47	35
Number of applications	143	48

n = 8, Source: IDC In-depth Interviews, April 2022

Business Value and Quantified Benefits of Cloud SQL

Study participants reported that using a fully managed relational database service with Cloud SQL has delivered significant efficiencies and performance benefits compared with self-managed databases. Interviewed Google customers noted especially their ability to free up DBA and infrastructure team time to focus on value-add activities as well as business enablement through improved database agility, scalability, availability, and performance.

They provided specific examples of how their organizations have achieved important benefits through use of Cloud SQL:

- **Ability to invest in innovation, speed, and agility:**
  "We have a huge increase in speed and agility with Cloud SQL and spend more time focusing on our product and building things we care about. Our personnel head count gets reallocated to product development and engineering teams. We trade money for Google to run our systems and spend the savings on innovation and running our core products."
- **Much lower management costs and burden:**
  "Cloud SQL substantially reduces management costs on our side. The abstraction that we have with using the database as a service is probably the primary benefit that we have."
- **Application programming interface (API) functionality, quality of service:**
  "The most significant benefit of using Cloud SQL is having a clean, simple API without having to dive into database internals. We can spin databases up very quickly, without having to worry about purchasing hardware, and a consistent API allows us to have an environment that works very predictably."

- **DBA efficiencies and platform availability:**
  "First, our database team has more time to innovate and create value, and second, we benefit from increased stability of our platform, which runs on Cloud SQL."

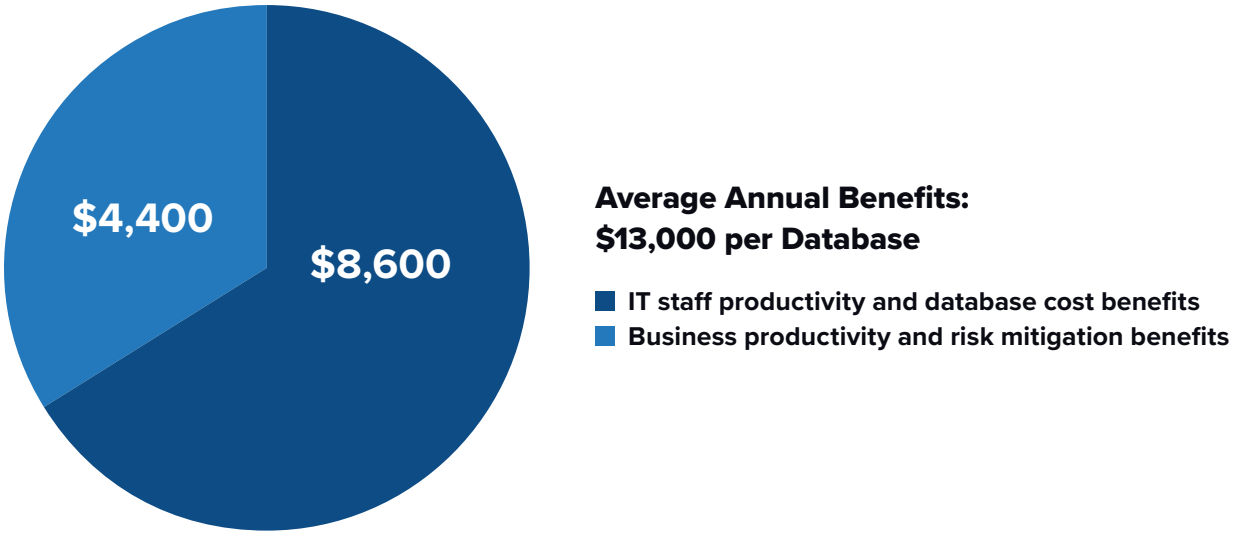
IDC calculates that study participants will realize average annual benefits worth $13,000 per Cloud SQL database ($4.11 million per organization) in the following areas (see Figure 1):

- **IT staff productivity and database cost benefits:** Interviewed organizations reported that their database administrator and IT infrastructure teams save significant amounts of time on day-to-day activities, which increases their effectiveness and frees up time to focus on other activities. Study participants also reported that Cloud SQL costs less for running equivalent databases. IDC calculates that these staff time and database cost savings will be worth an annual average of $4,400 per Cloud SQL database ($1.41 million per organization).
- **Business productivity and risk mitigation benefits:** Interviewed organizations leverage improved database agility, scalability, and performance to achieve improved business results. IDC estimates that they will capture additional net revenue per year worth $8,600 per Cloud SQL database ($2.70 million per organization).

FIGURE 1

Average Annual Benefits per Cloud SQL Database

($)



n = 8, Source: IDC In-depth Interviews, April 2022

Database Administrator and IT Infrastructure Team Efficiencies

Study participants emphasized that their desire to move their DBA and infrastructure teams away from day-to-day maintenance and monitoring activities informed their decision to move to a fully managed database approach with Cloud SQL. They realized that as long as they managed their own databases with an on-premises approach, they would incur inefficiencies for these staff members and struggle to provide top-quality database services.

Interviewed organizations reported achieving significant time savings and efficiencies for their DBA and infrastructure teams with Cloud SQL. They benefit from strong automation capabilities as well as Google handling and supporting activities such as upgrades and monitoring. As a result, with fully managed Cloud SQL study participants must delegate significantly less staff time to running their SQL database environments.

They described the specific benefits for their DBA and infrastructure teams of using Cloud SQL:

- **Google handles upgrades and failover:**
  "With Cloud SQL, we don't need to do many of the things that our DBAs would typically do. Google takes care of upgrades and deals with failover and underlying machine health."
- **Minimizes DBA work:**
  "Compared with a self-managed solution, Cloud SQL has pretty much eliminated DBA work. Once we scaled up, we had some administrative work to do, but it's still pretty minimal, and we got the entire development life cycle of the app for free. We had years where we did not need to have any DBAs, which was very helpful with our start-up."
- **Cloud-based approach changes knowledge requirements:**
  "For Cloud SQL we don't really need DBAs—we need system engineers who know cloud. So the real database knowledge will be less required for what we provide as a product because we don't have any datacenters to maintain anymore, but we can help teams on how to cope with data …. . About 50% of the time of the DBAs can be freed up by not maintaining hardware with Cloud SQL."

As shown in **Table 3**, IDC calculates that interviewed organizations have achieved average efficiency gains of 44% for their database administrator teams with Cloud SQL. This means that they require an average of only 5.8 FTEs to handle database workloads that otherwise would have required 10.3 FTEs without the fully managed Cloud SQL services.

TABLE 3

Impact on Database Administrator Teams

	Before/Without Cloud SQL	With Cloud SQL	Difference	Benefit
FTEs required for equivalent workloads	10.3	5.8	4.5	44%
Value of staff time required for equivalent workloads	$1.03M	$0.58M	$0.45M	44%

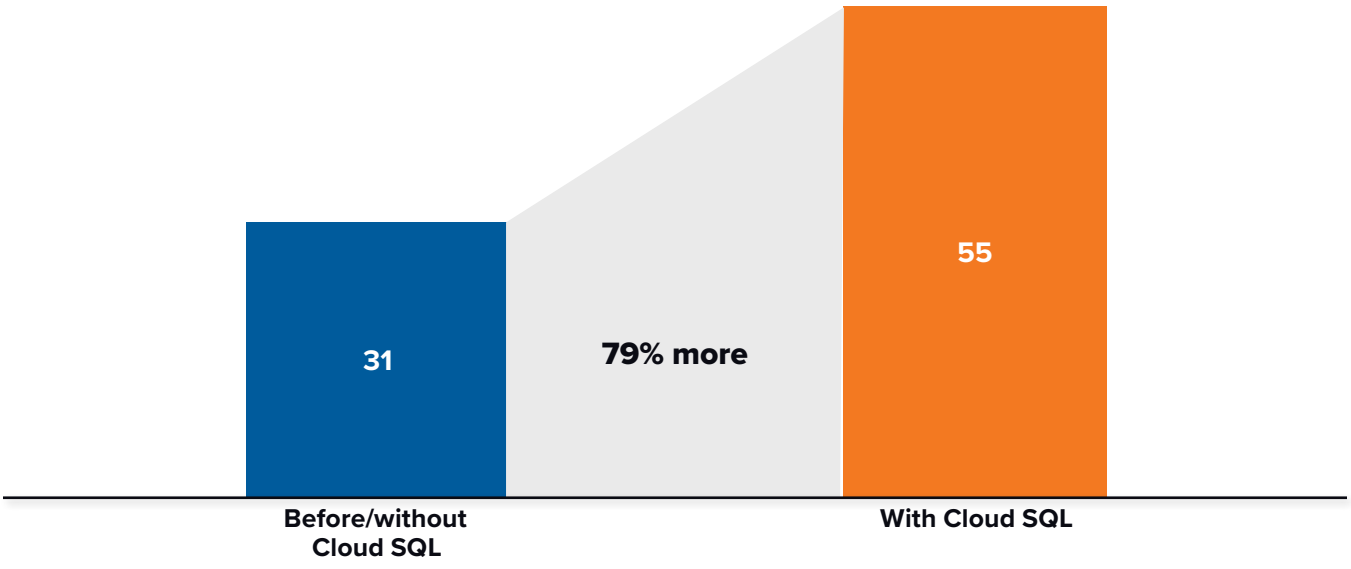
n = 8, Source: IDC In-depth Interviews, April 2022

Figure 2 provides another view of the impact of this efficiency for DBA teams. A key measure of the effectiveness of a DBA is the number of databases they can administer and manage. Cloud SQL enables each DBA to handle 24 more databases, or 79% more databases, by minimizing the time required to handle day-to-day tasks such as updates, patching, configuration, and monitoring.

FIGURE 2

Number of Databases per DBA

(# of databases)



n = 8, Source: IDC In-depth Interviews, April 2022

Study participants emphasized that the value of DBA and infrastructure team efficiencies with Cloud SQL is not just about what these teams no longer must do but what they are freed up to do. Specifically, when these valuable IT members spend less time on routine tasks, they can often repurpose that time to focus on project work, innovation, and other value-add work. One interviewed Cloud SQL customer explained: *"Our DBAs focus on more forward-thinking projects like getting our Kubernetes environment in a state that it auto updates. They're able to focus their time on a very large backlog instead of doing monotonous tasks … especially with databases. With Cloud SQL, they can take a step back, look at the landscape, and decide what to work on."*

Study participants spoke to various activities that their DBA and infrastructure teams can now focus on with time freed up by use of Cloud SQL, including:

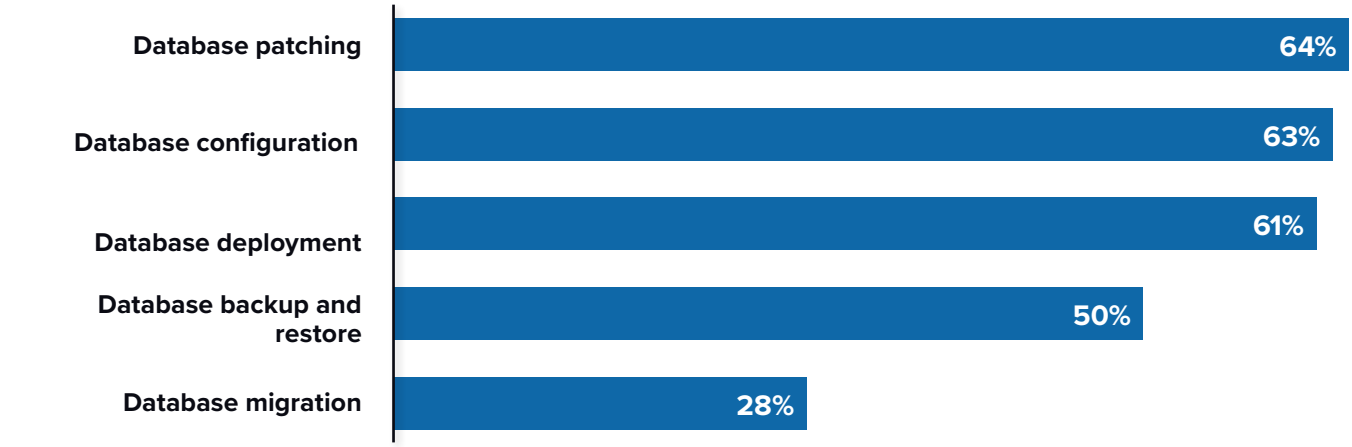
- Proactive use of data in support of business activities
- Reallocation of staff time to product development and engineering work
- Leverage engineer staff as "data consultants" rather than for day-to-day maintenance
- Deepen use of new technologies such as Kubernetes

Figure 3 shows how use of Cloud SQL frees DBAs from day-to-day responsibilities. Study participants report that their DBAs spend far less time on tasks such as database patching, configuration, and deployment—areas on which they can take full advantage of automation and direct support delivered by Google (time savings of 64%, 63%, and 61%, respectively). In addition, interviewed Google Cloud customers reported achieving further value in terms of database continuity and security (50% less time on database backup and restore activities) and on completing database migrations (28%).

FIGURE 3

DBA Staff Time Savings by Responsibility with Cloud SQL

(% efficiency/time savings)



n = 8, Source: IDC In-depth Interviews, April 2022

Lower Overall Cost of Database Operations

Study participants explained that Cloud SQL also provides direct cost savings for their databases and related infrastructure. They especially appreciated having increased clarity about database-related costs, as well as the ability to add databases with less need to consider infrastructure provisioning requirements. One study participant explained: *"One huge benefit of Cloud SQL is the overall clarity on how much the infrastructure costs. With Google, you have a clear idea on that piece of information so you can plan accordingly …. .Another huge business impact is that if we need to expand rapidly, we are not blocked."* On average, study participants reported that they spend 12% less to run equivalent databases with Cloud SQL—that is, 12% reduction from $8,200 to $7,200 per database over three years (see **Figure 4**).

Direct database cost savings and staff time efficiencies combine to create a strong value proposition for Cloud SQL from a total cost of operations perspective. One study participant described the need to consider overall costs, rather than fixating on annual subscription fees, to understand the scale of such cost efficiencies: "*If you compare the most obvious cost, yes, Cloud SQL is more expensive. In my opinion, you can only come to that conclusion if you close your eyes on other hidden costs that are more significant. Then it flips the situation in favor of Cloud SQL because you have to account for things like database backups and the underlying scalability of the hardware.*" Another interviewed organization explained how it relies on Google-provided managed services to ensure cost-effective and high-performing relational databases: *"We basically have no chance to provide the same level of service as Cloud SQL …. . There is a lot of complex engineering behind the scenes happening on the Google side, so it makes sense for us to just benefit from it rather than put ourselves in a competition against much bigger engineering teams."*

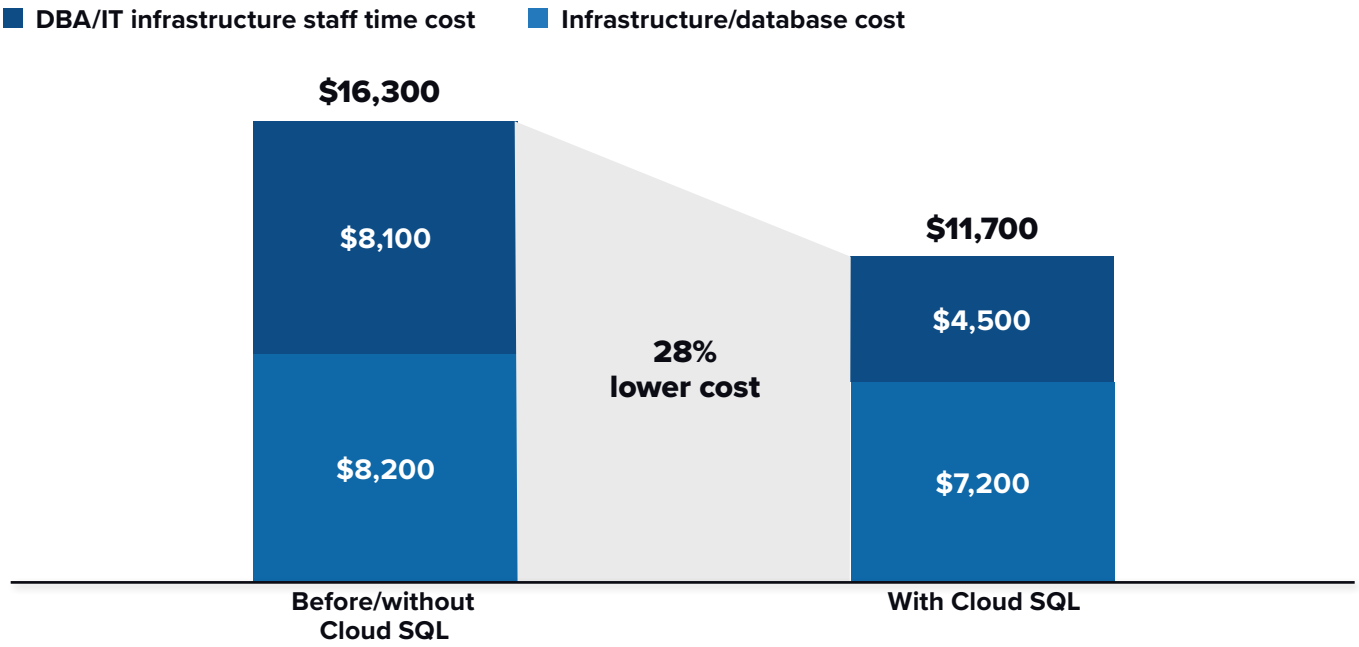
Figure 4 confirms the overall cost efficiencies for study participants of using fully managed Cloud SQL as opposed to managing their own databases in an on-premises environment. IDC calculates that they will lower costs over three years by an average of 28%, saving $4,500 per database, even as they achieve significant and valuable gains in database agility, performance, and reliability as discussed elsewhere in this study.

Across hundreds or even thousands of databases, these cost efficiencies add up to substantial savings, thereby allowing organizations to reduce the overall cost of running databases key to their business operations and potentially invest cost and staff time savings into other initiatives and business activities (see **Figure 4**, next page).

FIGURE 4

Three-Year Cost of Operations per Database

(Cost per database for three years $)



n = 8, Source: IDC In-depth Interviews, April 2022

Enhanced Database Agility

Study participants unanimously cited the speed with which they can spin up new databases and extend their database environments as a primary benefit of using Cloud SQL. Interviewed organizations repeatedly spoke to the importance of having constant access to additional database capacity with Cloud SQL and the value of automated provisioning in ensuring fast and timely completion of database deployment and extensions. A number of Cloud SQL customers linked this much enhanced database agility to their development activities, with several emphasizing how true agility and speed enhance development capabilities:

- **Limits development friction associated with database complexity:**
  "We can develop solutions with Cloud SQL without having to worry about the complexity of the underlying database architecture and the implications of having to add or manage new databases."
- **Enables faster time to market with automated database deployment:**
  "Cloud SQL has enabled us to deliver products much faster than we would have been able to previously because we now use automation to deploy databases in a much more efficient way."

Figure 5 demonstrates the extent to which Cloud SQL provides true flexibility and agility to study participants in their use of databases to support their business activities. Several interviewed organizations reported going from needing days or weeks to deliver a new database to a matter of minutes with Cloud SQL. Such enhanced agility is reflected in findings such as requiring 96% less time overall and 94% less staff time to create and deploy a new database with Cloud SQL. Furthermore, interviewed Cloud SQL customers can much more readily extend databases to a new region, requiring an average of 98% less time to complete such extensions critical to their business activities.

FIGURE 5

Improved Agility

(% improvement)

n = 8, Source: IDC In-depth Interviews, April 2022

As previously noted, study participants view enhanced database agility with Cloud SQL as integral to increased development effectiveness. They reported that real-time access to database capacity and automated provisioning capabilities enable more streamlined and continuous development activities. One study participant explained: *"Cloud SQL has allowed our developers to own and operationalize their entire stacks in a way that is repeatable .... . We want developers to be able to do quickly when they need to create applications. What Cloud SQL has done for us has been a huge component in that these teams no longer have to build reliance on another team on application delivery expectations."* When development teams deliver new applications and features with greater consistency and timeliness, it reflects increased team value. **Table 4** quantifies the value of higher development team productivity through use of Cloud SQL, with study participants realizing average productivity gains of 14%.

TABLE 4

Impact on Development Teams

	Before/Without Cloud SQL	With Cloud SQL	Difference	Benefit
Productivity level per organization	82.4 FTEs	93.6 FTEs	11.2 FTEs	14%
Value of productive development team time	$8.24M	$9.36M	$1.12M	14%

n = 8, Source: IDC In-depth Interviews, April 2022

Business Benefits

Study participants linked improvements in database scalability and performance with Cloud SQL to improved business results. The ability to better address business opportunities flows from interviewed organizations' dependence on availability of high-performing databases upon which their products and services depend. One study participant commented: "*Our entire business platform has database dependencies, so we're running our business on Cloud SQL, including our low-latency trading platform.*" Another noted its ability to minimize the duration of impactful outages: "*Before Cloud SQL, we had outages that were more severe and took longer to resolve .... . With Cloud SQL, many outages are dealt with automatically through failover and none of them have been longer than a few minutes.*"

Because study participants can more readily deploy and extend database capacity with Cloud SQL, they can move with greater speed when business opportunities arise and provide higher-quality services and solutions to their customers on an ongoing basis. Several interviewed Cloud SQL customers provided specific examples of business enablement:

- **Scalability and speed key to business survival:** *"We exist in a new industry where applications will either succeed rapidly or die on the vine. We don't have the luxury to re-architecture things when they do scale. With Cloud SQL, we can expand our capabilities on demand and this is really important to our business. We're starting to run into the upper limits, but it bought us two years of prototyping and surviving massive scaling events up to this point, and that's worth a lot."*
- **Flexibility enables greater speed and effectiveness:** *"Moving to Cloud SQL eliminates a complete category of problems to discuss or to consider. For example, if a team wants to deploy something that requires database infrastructure, we don't need to even discuss what sort of workload is anticipated ... . It's basically that not only are you able to do certain things but you're also able to simply save time on the conversations that no longer need to be had. That's quite substantial in its own right."*

The impact for study participants of having a database platform that better supports business activities is improved business results seen in the form of higher revenue. One study participant commented: *"Another huge business impact of Cloud SQL ... is that if we have to expand rapidly, we are not blocked. We're not limited on infrastructure for either our ideas or launches of products or deployments of renewed services. So it's good to have that bottleneck eliminated."* As shown in **Table 5** (next page), IDC calculates that study participants will realize average additional revenue of $21.75 million per year per organization ($69,000 per Cloud SQL database). For purposes of its financial analysis, IDC applies a 15% net profit assumption (see Appendix A for details), meaning that it considered net revenue gains of an average of $3.26 million per organization per year ($10,300 per Cloud SQL database).

TABLE 5

Revenue Impact

	Per Organization	Per Cloud SQL Database
Higher revenue per year	$21.75M	$69,000
Assumed operating margin	15%	15%
Higher net revenue per year	$3.26M	$10,300

n = 8, Source: IDC In-depth Interviews, April 2022

ROI Summary

Table 6 provides IDC's analysis of the benefits and investment costs for study participants related to their use of Cloud SQL services. IDC calculates that over three years they will realize discounted benefits worth an average of $9.63 million per organization ($30,500 per Cloud SQL database) in database and IT staff efficiencies, database cost savings, and higher net revenue. These benefits compare with total three-year discounted investment costs of an average of $2.78 million per organization ($8,800 per Cloud SQL database). IDC projects that interviewed Cloud SQL customers will realize an average return on their investment of 246% and break even on their investment in 11 months on average. As one study participant commented, *"We did not go for Cloud SQL because it's cheaper or faster but because we can leverage the innovation power of Google, and that is the most important reason for us."*

TABLE 6

Three-Year ROI Analysis

	Per Organization	Per Cloud SQL Database
Benefit (discounted)	$9.63M	$30,500
Investment (discounted)	$2.78M	$8,800
Net present value (NPV)	$6.84M	$21,700
ROI (NPV/investment)	246%	246%
Payback	11 months	11 months
Discount factor	12%	12%

n = 8, Source: IDC In-depth Interviews, April 2022

Challenges/Opportunities

The move is on to the public cloud. IDC survey research has shown considerable momentum in the movement of enterprise databases from on-premises to cloud deployments. In many cases, those enterprises are choosing to switch from their expensive, proprietary DBMS product to a much less expensive open source alternative, such as MySQL or PostgreSQL. In other cases, they are sticking with familiar technology, such as SQL Server, but bringing it forward into the cloud to be managed as a cloud service. All the leading cloud providers are vying for their business, and the one that wins is the one offering the best outcome in terms of reliability and performance and the best overall business outcome in terms of cost effectiveness and future opportunity. As may be seen from this study, Cloud SQL makes an excellent case in this regard. The challenge here is to maintain and further develop this service in pursuit of market leadership.

Establishing a successful relationship with these enterprises not only provides Google with a profitable business but also presents the opportunity of ushering these enterprises into a much broader cloud world, and perhaps leading them to adopt, eventually, the highly scalable cloud-native Google Cloud Spanner in the future.

Conclusion

Enterprises rely on complex database management systems to ensure access to data and insights that they depend on to run their business operations. However, managing and maintaining these databases can be challenging from both a cost and a performance perspective if organizations lack the necessary staff skills and expertise. To help address these challenges, Google Cloud offers Cloud SQL to deploy and manage MySQL, PostgreSQL, and SQL Server database environments.

IDC's research demonstrates the significant benefits that organizations can achieve through use of fully managed relational databases with Cloud SQL. Study participants reported capturing significant efficiencies in terms of DBA time requirements and direct database-related costs while also enabling business activities through much enhanced database agility, reliability, and performance. As a result, they can not only devote more of their skilled staff's time to innovative and business-enabling activities but also deliver higher-quality applications and services to their employees and customers. Overall, IDC projects that interviewed Google customers will realize almost $3.5 for every $1 they invest in Cloud SQL, representing an average three-year ROI of 246% with breakeven on their investment occurring in less than one year (11 months on average).

Appendix A: Methodology

IDC's standard business value/ROI methodology was utilized for this project. This methodology is based on gathering data from organizations currently using Cloud SQL as the foundation for the model.

Based on interviews with organizations using Cloud SQL solutions, 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 Cloud SQL.** In this study, the benefits included IT and database staff time efficiencies and productivity gains, database- and IT-related cost savings, 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 Cloud SQL 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 Cloud SQL 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.
- IDC applies an assumed 15% net margin on all revenue gains.
- 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.

Appendix B: Quantified Benefits of Use of Cloud SQL

Table 7 shows the categories of value that IDC calculates study participants will achieve through their use of Cloud SQL.

TABLE 7

Quantified Benefits of Cloud SQL

	Average Quantitative Benefit	Calculated Average Annual Value*
Direct database cost reductions	12% lower cost, saving $124,900 per year	$103,400
DBA team efficiencies	44% more efficient, saving 4.5 FTEs time, valued at $100,000 salary per year	$373,700
Development team productivity gains	14% more productive, worth 11.2 FTEs in higher productivity, valued at $100,000 salary per year	$928,400
Higher net revenue	$21.75 million per year in higher revenue, 15% assumed operating margin applied	$2.70M
Total annual benefits per organization	$4.11 million	

n = 8, Source: IDC In-depth Interviews, April 2022 (*includes 6.2 months deployment time in year 1)

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

About the Analysts

Carl W. Olofson
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Carl Olofson has performed research and analysis for IDC since 1997, and manages IDC's Database Management Software service, as well as supporting the Data Integration Software service. Carl's research involves following sales and technical developments in the structured data management (SDM) markets, including database management systems (DBMS), dynamic data management systems, database development and management software, and dynamic data grid managers, including the vendors of related tools and software systems. Carl also contributes to Big Data research and provides specialized coverage of Hadoop and other Big Data technologies. Carl advises clients on market and technology directions as well as performing supply and demand-side primary research to size, forecast, and segment the database and related software markets.

More about Carl W. Olofson

Matthew Marden
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Matthew Marden 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 Mathew Marden

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