

The Business Value of Delphix



Ladislav Kinda
Consultant,
Business Value Strategy Practice, IDC



Matthew Marden
Research Vice President,
Business Value Strategy Practice, IDC



Jim Mercer
Program Vice President,
Software Development, DevOps and
DevSecOps, IDC



Table of Contents

Business Value Highlights	3
Executive Summary	3
Situation Overview	4
Test Data Management	4
Compliance and Security	5
Heterogeneous Cloud Architectures	6
Delphix Overview	7
The Business Value of Delphix	9
Study Demographics	9
Choice and Use of Delphix	10
Reasons for Selecting Delphix Compliance Solutions	10
Reasons for Selecting Delphix Test Data Management Solutions	11
Business Value and Quantified Benefits	13
Most Significant Benefits for Test Data Management	13
Most Significant Benefits for Security and Compliance	14
Software Development, Database Administration, and Quality Assurance Benefits	17
Security, Risk, and Compliance Benefits with Delphix	22
IT Infrastructure Benefits with Delphix	24
Business Outcomes Improvement with Delphix	26
Challenges/Opportunities	28
Conclusion	29
Appendix 1	31
Appendix 2: Methodology	32
About the IDC Analysts	33
Message from the Sponsor	34

BUSINESS VALUE HIGHLIGHTS

Click any link and look for the ► symbol on the corresponding page. Use the Return to Highlights button to return this page.

408%

three-year ROI

6-month

payback on investment

77%

more data and data environments masked and protected

\$8.4 million

additional revenue from improved software development team productivity

53%

less time to create a testing environment

58%

faster to develop a new application

\$7.15 million

average annual benefits per organization

\$1.9 million

three-year infrastructure cost savings

\$47,000

average annual benefits per software development team member

\$1 million

average annual additional revenue

36%

more applications released annually

\$15,000

average annual benefits per terabyte in Delphix managed database

Executive Summary

Delphix, a division of Perforce, offers enterprise data management solutions to provide on-demand, secure, and easy access to high-quality data. Delphix solutions help modernize business applications, improve the software development and release process, and allow companies to protect against and recover from cybersecurity attacks more effectively. IDC conducted research that explores the value and benefits for organizations using Delphix to achieve an improved data compliance environment, including more secure and efficient application development and data testing. The project included 10 interviews with organizations that use Delphix and had experience with and/or knowledge about the platform's benefits and costs.

► **Based on a series of in-depth interviews and a specialized Business Value methodology, IDC projects that Delphix customers will, on average, achieve annual benefits of \$7.15 million and a 408% three-year ROI by:**

- Improving the overall performance of IT, database, and software development teams, thereby optimizing the speed, quality, and delivery of applications and data usage
- Lowering the overall cost of data environments and IT infrastructure operations
- Helping database administrator (DBA) teams with automation functionality and enabling them to focus on higher-value and more business-oriented tasks, improving database data delivery
- Lowering business risk by ensuring better data compliance and minimizing the impacts of cybersecurity attacks
- Achieving better annual business results by leveraging the described performance benefits

Situation Overview

As responsibilities such as software testing shift more toward software developers and the complexity of cloud platforms and architectures grows, organizations are finding that data management or ready access to quality test data is becoming a significant barrier to delivering software updates quickly and with adequate quality, controls, and security.

Software development teams face increasing pressure to deliver faster and improve quality. As they move to DevOps and the cloud, they need seamless automated processes to increase velocity. However, overlooking test data can become a bottleneck in case of improper modernization, automation, and protection.

This data challenge primarily affects three critical areas of software development that require enhanced automation, consistency, and oversight: test data management, compliance and privacy, and data organization across heterogeneous cloud environments.

Test Data Management

While automated testing can enhance productivity, it ensures software quality, which depends on test data's reliability, availability, and quality. Test data is crucial for the accuracy and effectiveness of automated tests; just as a car cannot run well with poor fuel, unreliable and unrepresentative test data can lead to significant issues in production. When an application running in production fails due to inadequate test data, the cost to the business is significant.

IDC's November 2022 *AIOps and Observability Survey* estimated that an application outage costs a business about \$4.2 million per day, and for certain mission-critical applications, that amount can be much higher. Despite the critical role of test data, adopting a modern approach to test data has lagged behind other areas of software development modernization and automation, particularly as enterprises move toward DevOps methodologies and CI/CD pipelines.

The challenge of obtaining safe, reliable, up-to-date, and representative test data at the speed modern software release cadences require is significant. Traditional models of test data management, which rely on manual processes and request-fulfill ticketing systems, are slow, unnecessarily add to the workload of DBAs, and create bottlenecks in the software development process. By using a legacy approach to test data management, software development teams have to work with insufficient and stale data sets, limiting their ability to achieve continuous testing and quality with sufficient velocity. Modern digital organizations require a new and programmatically driven approach to test data management that works across different environments and can handle the complexity and large scale of enterprise data estates, including mainframe, cloud, and distributed architectures.

Compliance and Security

To ensure data compliance and protect customer data in non-production environments, software development teams need a way to automate the masking of personally identifiable information (PII) and other sensitive data. IDC survey data shows that data privacy is a major operational challenge in software development. Manual processes are insufficient for safeguarding sensitive information, especially given the increasing complexity of data regulations such as GDPR and CCPA and emerging regulations like the EU AI Act. Data privacy has become a top priority for organizations. However, teams using sub-optimal methods struggle to protect sensitive data in software environments without bottlenecking innovation or hurting software quality.

The importance of data masking extends beyond compliance and mitigates the risk of data breaches in lower environments, which are attractive targets for bad actors. IDC's *DevSecOps Adoption, Techniques, and Tools* survey reveals that software supply chain attacks are up 241% between 2022 and 2023, and the *2024 Verizon DBR* report revealed that one-third of all breaches involved ransomware or some



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other form of extortion. Moreover, the *2024 CrowdStrike 2024 Global Threat Report* showed a 76% increase in data-theft extortion YoY, noting it provides an easier route to monetization.

Zero-trust access to data is critical, as compromised development pipelines can expose customer data. As modern cloud-native architectures complicate test data management, automation becomes vital for maintaining application software release velocity, ensuring application quality, and upholding stringent security and compliance standards.

Heterogeneous Cloud Architectures

As organizations shift to heterogeneous cloud environments that can include multicloud and hybrid cloud configurations, the diversity of cloud providers and their proprietary solutions introduces significant complexity in data management. As data shifts to the cloud, adversaries enhance their capabilities to exploit these unique cloud data storage and abuse features. While cloud providers take some responsibility for the security of the cloud infrastructure, the end customer is responsible for the security of their data and applications running on the cloud.

Each cloud provider offers distinct functionalities, APIs, and controls, which can result in fragmented data ecosystems. These differences in functionality and security protocols across cloud platforms create challenges in ensuring consistent data governance and compliance.

Without a unified approach, managing and securing data across multiple clouds can become unwieldy and error prone for DBAs and software developers, leading to potential vulnerabilities and inefficiencies.

The added multiplicity and risk of cloud architectures means that leaders must be careful with the management of increasingly complex:

- Data governance and compliance
- Data migration and synchronization
- Cloud performance and latency
- Cost management and optimization

Organizations need comprehensive multicloud data security to integrate data governance, compliance, and automation across all their cloud environments. When compliance management occurs in isolated silos, it can stifle innovation by creating barriers that hinder the flow of data and limit the ability to leverage cloud services. Additionally, using different data masking tools across various platforms can lead to data inoperability, as inconsistent

masking methods obscure critical data differently. Without a unified approach to data discovery and referential integrity, software development and analytics efforts become ineffective, and organizations cannot harness the full potential of their multicloud strategies.

These challenges are particularly impactful for organizations developing intelligent applications using AI/ML technologies. These applications depend on accurate data for model training techniques, such as retrieval-augmented generation, which enhances large language models by enabling them to access and use up-to-date and trustworthy information from internal knowledge bases and enterprise systems.

Delphix Overview

The Delphix Data Platform streamlines data management and delivery across software development pipelines, helping organizations accelerate software development and deployment, achieve compliance, and simultaneously deliver quality software. Delphix platform users appreciate that they no longer have to choose between software speed, compliance, and quality. One of the platform's primary benefits is its ability to provide API-driven, self-service access to data for software development teams, testing environments, analytics, and AI environments.

A core benefit of the Delphix Data Platform is its support for data compliance and security. The platform offers advanced data masking capabilities that automatically protect sensitive information in non-production environments, such as software testing, development, analytics, and AI, by obfuscating it. This prevents exposure of PII and other confidential data during testing and development.

Delphix data masking quickly masks large-scale data sources while preventing innovation bottlenecks. Unlike other masking techniques, Delphix static data masking is irreversible, offers stronger protection for sensitive data, and ensures data compliance.

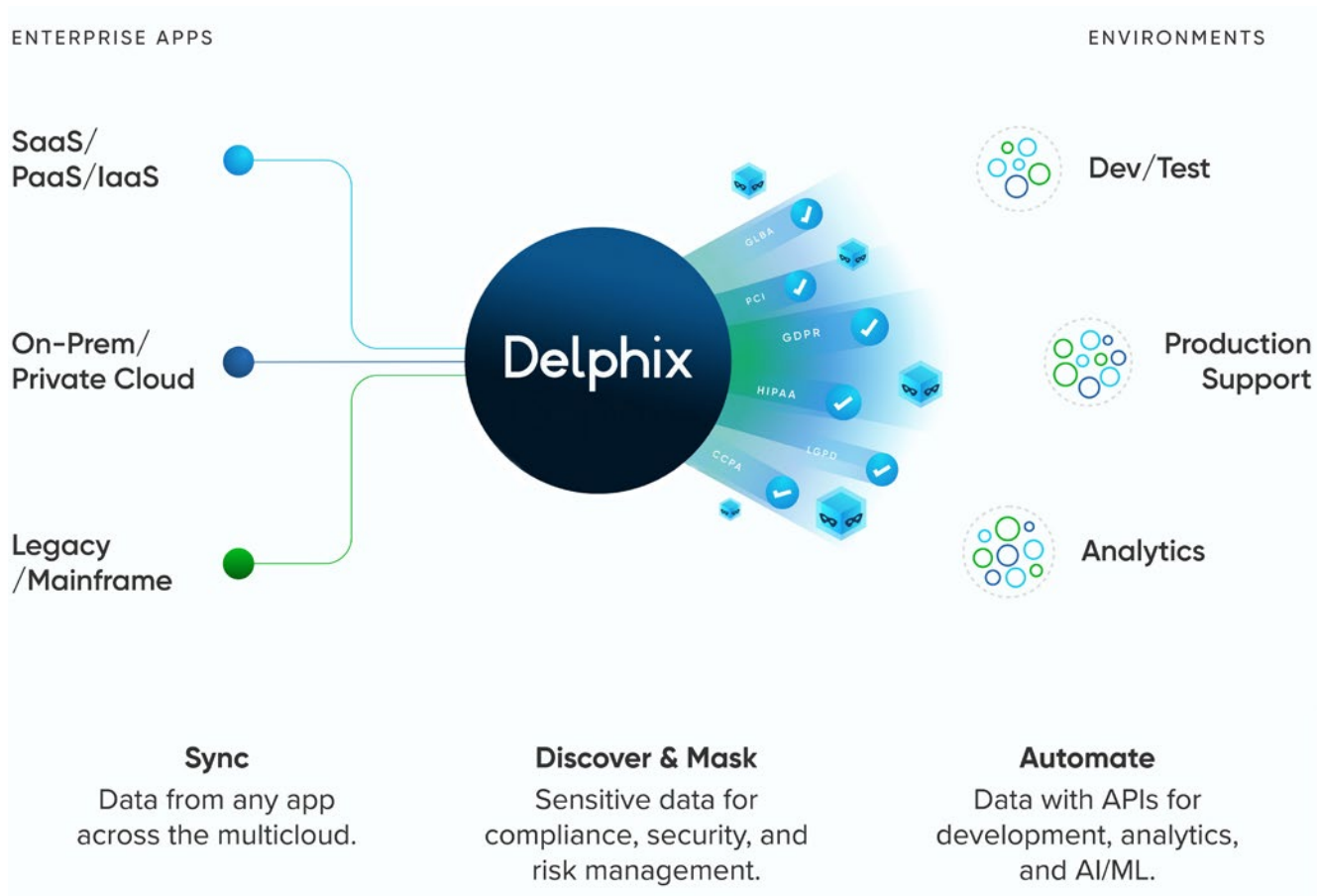
This capability is particularly important for organizations that must comply with stringent regulations such as GDPR, CCPA, and HIPAA or emerging regulations like the EU AI Act and California SB1047. By securing data without compromising utility, Delphix helps modern digital organizations drive innovation at the necessary pace while maintaining compliance and reducing the risk of data breaches.

By automating compliant data provisioning, the platform reduces the time, effort, and cost to set up a virtually unlimited number of safe data environments, enabling software developers to work more securely and efficiently without relying on ticketing systems or DBA teams. By delivering developers and testers the data they need to test early and often, Delphix enables organizations to shift left and iterate, reducing the incidence of software

defects closer to production or in production, where errors are much more costly and time-consuming to address. This automation mitigates risk and removes bottlenecks and defects in the software development process. It allows teams to innovate and release updates more quickly and with higher quality while ensuring compliance, which is crucial in today’s fast-paced digital marketplace.

The Delphix Data Control Tower is a centralized management interface within the Delphix Data Platform (see **Figure 1**). It oversees and controls data environments across the organization and is a command center for managing, monitoring, and automating data operations, particularly in complex, multicloud, and hybrid environments.

FIGURE 1
Delphix Data Platform



Source: Delphix by Perforce

The platform can manage data across on-premises and multicloud environments, which are becoming increasingly complex as organizations adopt diverse hybrid cloud strategies. Delphix enables data management across different cloud platforms and on premises, ensuring consistent and secure handling of data regardless of where it resides. This flexibility allows organizations to leverage the strengths of various cloud providers and architectures while maintaining control over their data. The platform's ability to synchronize data across clouds ensures alignment of all environments, which is essential for maintaining the integrity and accuracy of testing and development processes.

The Delphix Data Platform enhances data management within the software development life cycle. Delphix allows organizations to implement consistent data governance policies across all environments by providing a single platform for managing and tracking data. This centralized approach reduces the complexity of data management, improves traceability, and ensures data handling per organizational standards. Organizations can achieve greater transparency and accountability in their data management practices, leading to higher-quality software and more reliable operations.

The Business Value of Delphix

Study Demographics

IDC conducted anonymous research that explores the value and benefits for organizations using Delphix to achieve additional business growth, improved data compliance, and a more secure and efficient development and test data environment. The project included 10 interviews with organizations that were using the solution and had experience with and knowledge about its impacts. Study participants answered various quantitative and qualitative questions about IT operations, software development, compliance efforts, core businesses, and costs.

As shown in **Table 1** (next page), study participants had an average base of 26,000 employees and total average annual revenues of \$43 billion, indicating the involvement of several large companies. Geographically, five companies were in the United States, with the remainder in India (2), the United Kingdom (2), and Singapore. The participants represented various vertical markets, including healthcare (3), financial services (2), hospitality (2), ecommerce and telecom, manufacturing, and healthcare insurance sectors. This mix captured a broad range of customer experiences and use cases. However, it's worth noting that many companies deal with sensitive customer/patient data and, therefore, place a premium on the issues of security, privacy, and compliance.

TABLE 1
Demographics of Interviewed Organizations

	Average	Median	Range
Number of employees	26,600	13,500	1,000–100,000
Number of IT staff	3,060	650	120–13,000
Number of business applications	540	200	7–2,000
Annual revenue	\$43.00B	\$8.00B	\$1.15B–\$226.60B
Verticals	Healthcare (3), Financial Services (2), Hospitality (2), Ecommerce and Telecom, Manufacturing, Healthcare Insurance		
Countries	United States (5), India (2), United Kingdom (2), Singapore		

n = 10; Source: IDC Business Value In-Depth Interviews, July 2024

Choice and Use of Delphix

Study participants explained their selection criteria in choosing Delphix to improve data compliance and establish more secure and efficient application development and data testing operations. They provided extensive and detailed comments to IDC about their choice of Delphix, ultimately representing a broad range of deployment motivations. Generally, these fell into two distinct categories: data compliance-related and test data management-related.

Reasons for Selecting Delphix Compliance Solutions

When asked about the reasons for selecting Delphix from a compliance standpoint, organizations noted the organizational challenges they faced in meeting the obligations of data privacy and protection legislation, such as the EU’s stringent and ever-evolving GDPR. As many interviewed companies were in the financial and healthcare sectors, these challenges were integral to their core businesses, as they faced unique and fluid compliance and legislative challenges. Interviewed organizations spoke about the need to protect PCI and HIPAA data, and therefore, compliance represented a core motivation for selecting Delphix. Most organizations spoke highly about their results with data masking and other Delphix features for data compliance and security.

Study participants provided these comments:

GDPR challenges (hospitality):

“Our organization has long been challenged around data security. The key driver would’ve been the implementation of EU GDPR about six or seven years ago. As part of GDPR, the company got very serious about data protection.”

Compliance automation (ecommerce and telecom):

“One challenge was meeting regulatory requirements, which includes addressing consumer complaints. We needed to automate compliance processes to enable real-time visibility into data usage in a way that would reduce the risk of data breaches and regulatory fines.”

Test data compliance (financial services):

“As a payment company, we need to test with data that complies with PCI and GDPR. We use production data for accuracy and to replicate real scenarios. Our product delivery involves extensive regression testing, requiring frequent database interaction. Spinning up a new database for each instance is costly and challenging, especially since we don’t use the cloud for everything.”

Quick solution change (healthcare):

“We have another organization that sets the rules and the standards for us as a hospital. We were advised to stop using the solution we had at the time and quickly find an alternative. Doing it in the timeframe they had set us was a challenge.”

Reasons for Selecting Delphix Test Data Management Solutions

Regarding test data management-related selection criteria, responses mostly related to data management and testing during the application development life cycle. In particular, organizations discussed the need to reduce test database storage sizes. They also expected a post-adoption synergistic effect in delivering new productivity levels for their software developer teams. Study participants noted the need to automate data delivery as a crucial driver and discussed how data delivery for non-production testing helped substantially increase software development teams’ productivity (these teams also included quality assurance [QA] members) and associated development metrics. Delphix effectively delivered test data to software development teams, resulting in savings in data storage and IT infrastructure costs.

Study participants provided these comments:

Data delivery automation (healthcare):

“Apart from the initiatives around data masking, our organization saw the need to automate some of its processes related to data delivery to lower environments and optimize storage and infrastructure costs.”

Test database size reduction (health insurance):

“The backend database our organization used for testing purposes was 80TB. Making non-prod copies proved to be way too costly. We needed to reduce the database size and the related high costs.”

Complex business challenges related to data access (manufacturing):

“Our data was located in different places (on premises, co-loc centers, cloud SaaS...). With this, we faced many challenges around security, the productivity of software development teams, and business operations innovation. To help us solve these problems, our organization was looking for a solution that would give us proper protection of applicational development in our innovation lab.”

Storage infrastructure savings evolved to data masking (hospitality):

“Our organization was originally looking for a solution to help us with high storage costs associated with physical datacenters. This shifted to data masking after we experienced a data breach to a non-production database and discovered it contained production data.”

Table 2 (next page) provides an overview of study participants’ use of Delphix during interviews. IDC asked Delphix customers baseline questions to establish how they interacted with the Delphix environment, such as the number of branches and business applications involved, the number of software development teams, and the number of other relevant team members interacting with Delphix daily.

Companies described using the platform to run significant portions of their IT operations, including software development and production or non-production database processes. On average, 230 business applications were in play per company, with 29 databases and 455TB of total storage and data capacity. Table 2 presents additional metrics.



Companies described using the Delphix platform to run significant portions of their IT operations, including software development and production or non-production database processes.

TABLE 2

Organizational Usage of Delphix

Delphix Usage	Average
Total number of sites/branches	6
Total business applications, organization	230
Total number of software development team members	165
Total number of databases	29
Terabytes needed, databases	455

n = 10; Source: IDC Business Value In-Depth Interviews, July 2024

Business Value and Quantified Benefits

IDC’s Business Value research evaluated and quantified the benefits for companies adopting Delphix to improve security and data compliance and achieve a more secure and efficient application development and testing environment. Interviewed organizations managed to lower their business risk by ensuring better compliance and minimizing the impact of a cybersecurity attack, including ransomware. IDC determined that companies improved the overall performance of IT, software development, compliance workflows, and database teams, optimizing the speed, quality, compliance, and delivery of applications and data usage.

Data availability for non-production testing substantially increased the productivity of software development teams (including associated QA teams). Moreover, Delphix adoption improved database performance and provided built-in automation functionality, helping DBA teams focus on higher-value tasks.

Additionally, these benefits proved cost effective. IDC calculated that Delphix offered direct and immediate cost savings compared to previous or alternative solutions. IDC confirmed that the above improvements helped Delphix customers achieve better business results over time, with complete documentation.

Most Significant Benefits for Test Data Management

When asked about the most significant benefits of using Delphix for test data management, organizations noted that they could realize storage cost savings through data virtualization (the ability to distribute virtual data sets). Organizations also highlighted software development team productivity, faster testing environment creation, and readiness.

These software development productivity increases translate into reduced go-to-market times and greater business value.

Study participants summarized the most significant data testing benefits of the platform:

Reduction of defects (hospitality):

“Fewer defects are going into production because QA staff can now test against a full-size production database without using real data. This leads to better testing results, as they get more accurate, production-like data instead of fabricated entries like ‘Mickey Mouse at 123 Walt Disney Square.’”

Storage cost savings with data virtualization (hospitality):

“Delphix’s virtualization product helped our organization save tremendous storage costs. We can virtualize a database that is over 100TB into multiple non-production databases for software development and QA. This has also enabled us to plan storage capacity more efficiently.”

Data virtualization savings plus software development productivity (health insurance):

“Here are some hard numbers: If we had 20 environments that were non-virtual, non-Delphix, it would cost us \$4.3 million annually. The Delphix environments cost \$2.7 million yearly, plus the licensing cost. One-year savings are \$1.5 million; two-year savings are \$3.1 million. On top of that, software development teams like having their environments ready for them faster. The other big benefit is that we can refresh production data in a day, which used to take us six to eight days.”

Speed, compliance quality, and cost reduction (ecommerce and telecom):

“With Delphix, our organization can achieve faster development cycles, with quicker provisioning of fresh production data. Our developers can be more productive by not waiting for manual data provisioning, resulting in an improved go-to-market time. On top of that, Delphix ensures that our non-production environments are more secure and compliant with data protection regulations. Furthermore, we are seeing reduced infrastructure costs and a more efficient and accurate testing environment.”

Most Significant Benefits for Security and Compliance

Interviewed organizations spoke about significant benefits in terms of security and compliance and mentioned data masking with high frequency. After deployment, organizations felt much more secure about data integrity in non-production environments that previously presented a threat of data breach. They can anonymize data and use it for testing while rendering little value to hackers.

Study participants offered these assessments:

Masking in case of a breach (hospitality):

“From a security standpoint, testers and developers can test against production-sized databases that don’t contain production data, which is a major benefit. Upon the compromise of our environment, the hackers first went after non-production databases, which contained seemingly real data. However, thanks to Delphix and its masking feature, it didn’t contain any real production information.”

Data access and masking (ecommerce and telecom):

“Data masking anonymizes sensitive information, preventing unauthorized exposure. It ensures secure data delivery and access only by authorized users, reducing data breach risks. Delphix helps us implement rule-based access control on non-production environments, allowing only authorized users to view sensitive data. It also aids in compliance reporting and auditing, demonstrating our adherence to data and privacy regulations, including integration with existing security tools and processes.”

Solution for new compliance challenges (financial services):

“There’s a new data privacy law in India, which is very stringent. Delphix helps our organizations a lot by data masking. The negative business impact of masking is almost zero, which is one of the greatest benefits of Delphix. On top of that, the masking is done super-fast.”

Protecting data in lower environments (hospitality):

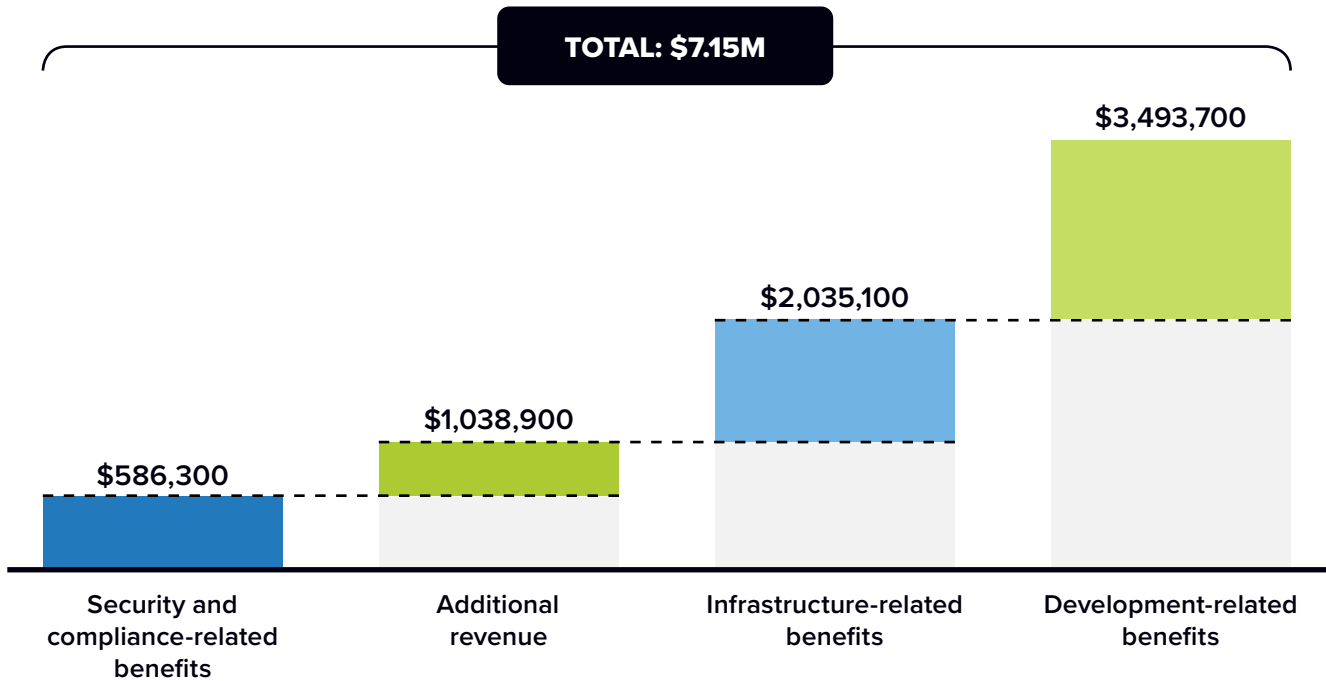
“Delphix allows us to mask our non-production data, which was one of the compliance risks we’ve identified. Our data is secure in lower environments, sometimes thought to be less protected than production environments.”

Figure 2 (next page) summarizes the overall business value benefits that IDC could analyze/calculate from the data received from Delphix customers. The average organization **▶** can expect \$7.15 million in business value benefits annually.

As shown, benefits fall into four categories:

- Development
- IT infrastructure
- Additional business growth
- Security and compliance

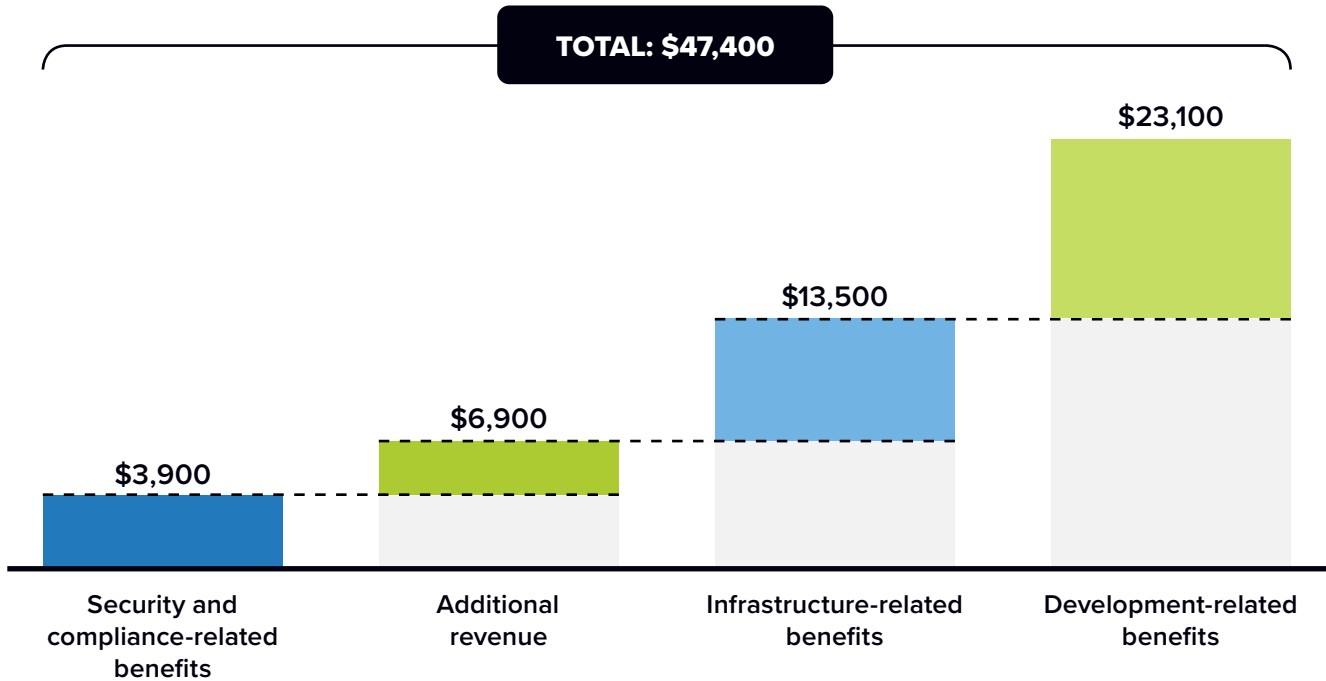
► **FIGURE 2**
Average Annual Benefits per Organization



n = 10; Source: IDC Business Value In-Depth Interviews, July 2024

IDC refined these results based on **average annual benefits per software development team member**, including quality assurance (see **Figure 3**, next page). The average annual benefits were \$47,400 or 0.47 FTEs per software development team member, with IDC’s assumption of a \$100,000 annual salary for IT personnel.

FIGURE 3
Average Annual Benefits per Software Development Team Member, Including QA



n = 10; Source: IDC Business Value In-Depth Interviews, July 2024

Software Development, Database Administration, and Quality Assurance Benefits

By reviewing and analyzing comments and data from study participants, IDC determined that companies could improve the overall performance of their IT, software development, and database teams with Delphix. These benefits helped them optimize the speed, quality, and reliability of application delivery and data usage. Interviewed organizations noted that Delphix facilitated automation, which proved beneficial for DBA teams that could focus on higher-value tasks, such as database/query efficiency, rather than routine tasks, like backups. Interviewed organizations highlighted how software development productivity through the Delphix platform translated into faster business value delivery. Additionally, study participants noted that developers could receive virtual copies of test data on demand by automating time-consuming database tasks. This enables them to test more frequently, whenever and wherever they need test data, without waiting for it.

Study participants provided detailed comments:

Automation for database teams (hospitality):

“With Delphix, we’ve been able to automate the requests from one of the database’s internal heavy users. Previously, the database team often worked over the weekend to fulfill a Friday database refresh request to deliver it on Monday. Delphix automation can update the database in hours on Friday afternoon.”

DBA team benefits (health insurance):

“Things that used to take us a month, we can do in two days regarding development testing because of the use of Delphix. DBA team members can focus on higher-skills tasks, like optimizing and making databases and queries run faster, instead of doing backups and restores.”

Faster and more accurate testing (ecommerce and telecom):

“Faster provisioning of test data is a big benefit. Developers can receive virtualized copies of test data on demand, which has led to accelerated testing cycles. Receiving realistic and accurate test data has also improved the accuracy of testing results. Delphix allows testers to refresh data on demand, enabling them to work with data without relying on IT admin. This increases agility and reduces certain dependencies on IT resources.”

Faster delivery with Delphix (health insurance):

“I feel like because we can deploy faster, we make the test engineering team faster, which means we can deliver faster.”

Shorter project delivery time with Delphix (healthcare):

“We don’t have to wait two hours for a data refresh. In case of an issue, we can ‘rewind’ to the prior upgrade, change something, and re-run the upgrade. This has helped us shorten the project delivery time.”

Software development teams used the platform to improve security and compliance while gaining self-service data access to accelerate application development and streamline end-to-end integration testing. Interviewed companies reported that Delphix helped these teams, including their quality assurance staff, achieve substantial productivity growth by providing test data faster and with greater independence to end users.

One study participant working in the ecommerce sector commented on faster development cycles and time to market:

“Delphix ensures that development and testing environments have consistent and up-to-date test data. We can maintain data consistency across the development life cycle.”

The data in **Table 3** confirms these benefits and indicates an overall 25.2% increase in efficiency for software development teams, including QA. The average organization reported 123.4 FTEs working in their software development efforts. With Delphix, these teams realized average efficiency benefits of 31.1 FTEs in equivalent workloads. This translated into a business value of \$3.1 million annually in efficiency using the IDC standard salary assumption of \$100,000.

TABLE 3
Software Development Team Efficiency with Delphix, including QA

	Without Delphix	With Delphix	Difference	Benefit
FTEs required for equivalent environments	151.00	123.40	27.60	22.4%
Value of staff time required for equivalent environments	\$15.10M	\$12.34M	\$2.76M	22.4%
Overall impact, including avoided hires	154.50	123.40	31.10	25.2%
Value of staff time required for equivalent environments, including avoided hires	\$15.45M	\$12.34M	\$3.11M	25.2%

n = 10; Source: IDC Business Value In-Depth Interviews, July 2024

IDC looked at how this increase in productivity for software development teams enabled positive changes in these organizations’ overall development efforts. As shown in **Figure 4** (next page), after adoption, the time to develop a new application reduced by 58%, while the number of applications released annually increased by 36%. In addition, the average annual number of releases per application grew by 28%.

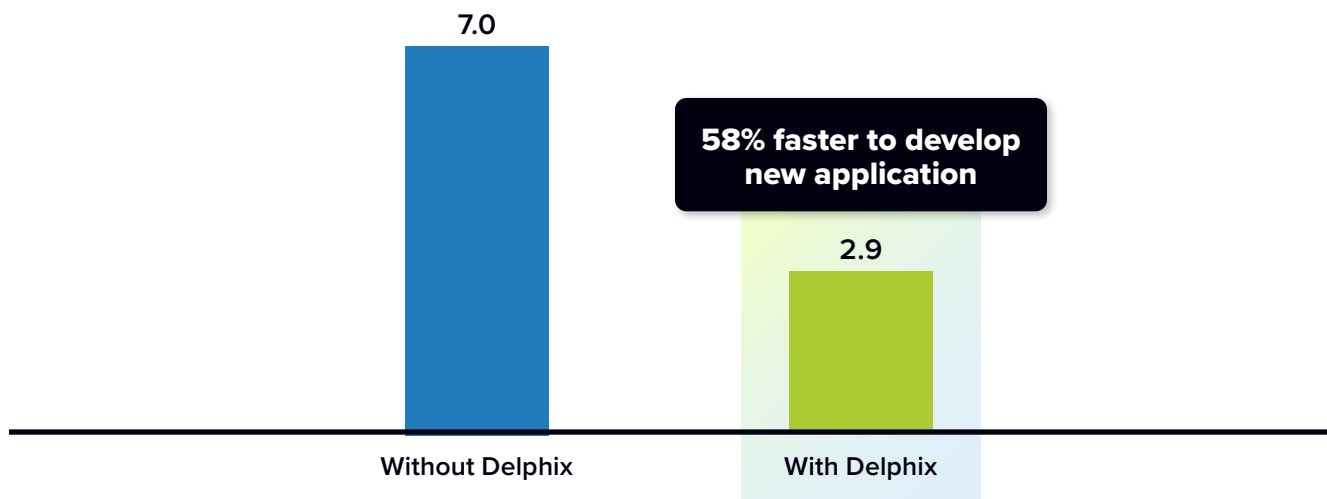
FIGURE 4
Development and Release KPIs Improvements with Delphix



n = 10; Source: IDC Business Value In-Depth Interviews, June 2024

Moreover, IDC focused on the impact of software development by examining the time required to develop new applications (Figure 5). The 58% improvement resulted from improved on-demand and rapidly available access to test data. Before adoption, an average application development project took seven weeks, which Delphix reduced to 2.9 weeks.

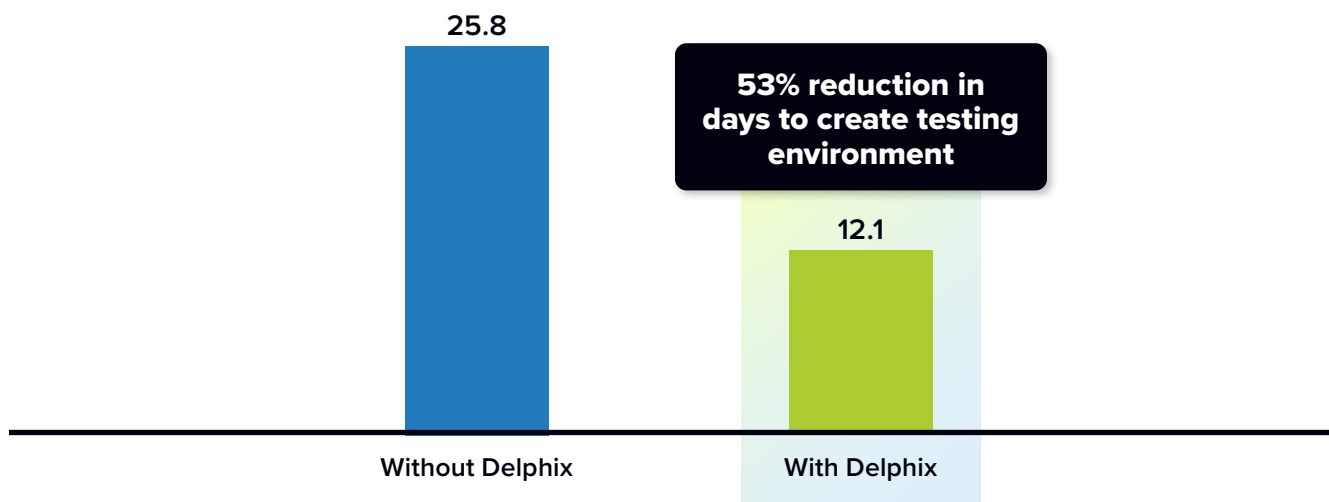
FIGURE 5
New Application Development Benefits with Delphix
(Number of weeks per application)



n = 10; Source: IDC Business Value In-Depth Interviews, June 2024

Building test data environments is a crucial element in software development efforts. Study participants reported that Delphix enabled automation of their testing environments and noted that this significantly reduced operational completion times because testers and developers could access data and results faster and more easily. After adoption, software development teams experienced an average 53% reduction in the days needed to build usable testing environments (Figure 6).

► **FIGURE 6**
Time to Create Testing Environment
(Number of days to create per testing environment)



n = 10; Source: IDC Business Value In-Depth Interviews, June 2024

IDC then shifted the focus to database operations and performance. Greater automation helped DBA teams focus on higher-value tasks, such as database and query improvement or business-related projects, instead of undertaking routine tasks, such as facilitating backups and restores in support of manually delivering data to the software development and test team, which was usual before Delphix. **Table 4** (next page) shows that DBA teams were 27.5% more efficient after adoption. A \$100,000 salary assumption translated into 7.5 FTEs of equivalent workloads and an annual business value of \$750,000 for each organization.

TABLE 4

DBA Team Efficiency Benefits

	Without Delphix	With Delphix	Difference	Benefit
FTEs required for equivalent environments	27.3	19.8	7.5	27.5%
Value of staff time required for equivalent environments	\$2.73M	\$1.98M	\$750,000	27.5%

n = 10; Source: IDC Business Value In-Depth Interviews, July 2024

Security, Risk, and Compliance Benefits with Delphix

Another major category that IDC researched was security, risk, and compliance. In today’s complex business environments, enterprise data represents a strategic asset that can become a serious liability with improper management. Compliance requirements are complex and increasingly challenging to navigate and manage. Regional privacy policies such as the EU’s GDPR and U.S.-based regulatory programs such as HIPAA and SOX are increasingly stringent and subject to change and revision. Moreover, it only takes a single event, whether a compliance violation, an audit, or a high-profile cybersecurity incident, to result in costly or damaging impacts on corporate reputation and business success.

Interviewed organizations told IDC that Delphix helped them achieve greater levels of compliance and security for their data operations. With the benefit of data masking, organizations were able to better comply with privacy regulations and improve their overall security posture. Companies talked about region- and industry-specific challenges that Delphix helped them address and identified its data masking functionality as best in class concerning data protection and compliance. They noted that the Delphix masking engine helped mitigate the regulatory risks of having production data in non-production environments, including HIPAA compliance upon involvement of overseas development teams.

Study participants offered these detailed comments:

Masking and regulatory risk avoidance (hospitality):

“Mitigation and avoidance of regulatory risk was the main reason we chose Delphix. The masking engine helps us avoid the regulatory risks of having production data in non-production environments. The ability to mask our customer data per GDPR is the

best-in-class method to adhere to privacy regulations when working with production data in your lower environments.”

Compliance and security with Delphix (manufacturing):

“As a publicly listed company, compliance is a big concern. The compliance laws are very strict in our region. We see Delphix as a core part of helping us in compliance and security areas, working in concert with the measures we’ve already implemented. So far, the data masking solution is very helpful for our company.”

HIPAA compliance with overseas development teams (healthcare):

“We are not allowed to share any HIPAA information outside the U.S. borders. In having our internal databases available to our India development team, we strip the private health information data so that the India-based team members only see masked data. It is valid test data for us but meaningless to the world.”

Security posture improvement (hospitality):

“Delphix has increased our security posture by not presenting production data on non-production accounts. Before implementing Delphix, we had one small breach in 2018, which could have been much worse. This eye-opener motivated us to use Delphix, since we have to adhere globally to GDPR with our hotels.”

IDC then validated these observations by applying its Business Value methodology to quantify improvements, beginning with impacts on data privacy and security team efficiency. With Delphix, team members responsible for these operational areas worked more efficiently. As shown in **Table 5**, these teams were, on average, 17.5% more efficient after adoption. This translated to 6.2 FTEs of equivalent efficiency valued at an average of \$624,900 annually.

TABLE 5
Data Privacy and Security Team Efficiency with Delphix

	Without Delphix	With Delphix	Difference	Benefit
FTEs required for equivalent environments	35.7	29.5	6.2	17.5%
Value of staff time required for equivalent environments	\$3.57M	\$2.95M	\$624,900	17.5%

n = 10; Source: IDC Business Value In-Depth Interviews, July 2024

IDC examined data masking capabilities. This functionality was consistently identified as one of the primary reasons for selecting Delphix and one of the biggest derived benefits. After adoption, 77.2% more data and data environments saw masking and protection, as well as 75% more records, values, or environments (**Figure 7**). This represented a major shift in the data security and testing environments for the interviewed organizations and enabled much of the resulting benefits presented elsewhere in the paper.

FIGURE 7
Data Masking KPIs with Delphix



n = 10; Source: IDC Business Value In-Depth Interviews, June 2024

IT Infrastructure Benefits with Delphix

IDC shifted the focus to IT infrastructure from a cost and staff efficiency standpoint. The first aspect of the benefit picture here was IT infrastructure team efficiency. Organizations reported that Delphix helped their IT infrastructure teams optimize data usage in this functional area through data virtualization capabilities. The average organization saw a 26.3% increase in efficiency and a 15.5 FTE equivalent workload improvement, translating into a significant business value of \$1.54 million annually (**Table 6**, next page).

TABLE 6

IT Infrastructure Team Efficiency with Delphix

	Without Delphix	With Delphix	Difference	Benefit
FTEs required for equivalent environments	58.6	43.1	15.5	26.3%
Value of staff time required for equivalent environments	\$5.86M	\$4.31M	\$1.54M	26.3%

n = 10; Source: IDC Business Value In-Depth Interviews, July 2024

Continuing with IT infrastructure impacts, study participants reported that Delphix reduced storage costs with data environment virtualization and physical IT infrastructure usage, driving substantial savings.

One study participant in an ecommerce/telecom organization noted:

“Delphix helps us reduce infrastructure costs and optimize storage utilization by sharing common data blocks across copies of virtualized data. This leads to cost savings in infrastructure resources, which we can redirect to other areas of our software development initiatives or invest in further improvement in our software development life cycle.”

IDC calculated total annual IT infrastructure cost savings with Delphix at \$707,600, as shown in Table 7.

TABLE 7

IT Infrastructure Cost Savings with Delphix

	Without Delphix	With Delphix	Difference
Cost of infrastructure	\$8.58M	\$7.87M	\$707,600

n = 10; Source: IDC Business Value In-Depth Interviews, July 2024

Business Outcome Improvement with Delphix

The final area of benefits analysis derived from Delphix adoption involved additional business growth. IDC Business Value research documented a direct link between business benefits and achieving optimized data performance, software development, process improvements, cost savings, and the previously described team and staff benefits. In addition, organizations told IDC that, with Delphix, their business operations were much more agile, partly thanks to lower data refresh time and easy access to older versions of their test databases. They saw performance improvements in the form of faster turnaround and go-to-market capabilities.

One organization prized the ability to work faster on projects involving multiple non-production environments simultaneously. Study participants elaborated:

Go-to-market speed improvement (financial services):

“Our organization is faster to market, has improved its performance, and saved a lot of hours of work.”

Faster project delivery (hospitality):

“We’ve improved our delivery speed of data-related projects, especially on projects involving multiple non-production environments. Delphix allows us to work simultaneously on more data-related projects within different environments.”

Business agility with Delphix (healthcare):

“With Delphix, our organization improved its agility due to lower refresh time and the ability to readily access older versions of our databases.”

Improved business results benefits (healthcare):

“Delphix helped improve our organization’s business results by improving business turnaround, upgrade process, testing, and live database process.”

These comments show that interviewed organizations valued faster go-to-market times for products and services and improved business agility. To quantify these business benefits, IDC calculated the total annual additional revenue that study participants attributed to Delphix (**Table 8**, next page). The average organization saw a substantial average revenue increase of \$7.6 million annually. With IDC’s 15% margin assumption (15% of the total benefit) applied, this totaled over \$1.1 million.

► **TABLE 8**

Additional Revenue with Delphix

	Revenue Growth Benefit
Additional revenue	\$7.65M
With a 15% margin assumption applied	\$1.15M

n = 10; Source: IDC Business Value In-Depth Interviews, July 2024

Summing up business and financial benefits, **Table 9** presents IDC’s ROI analysis for study participants’ use of Delphix. IDC calculated that the average organization would achieve three-year discounted benefits worth an average of \$16,973,800 through improved security and compliance, software development and database performance, better staff efficiencies, and enhanced business results. These benefits compare with a total of three-year discounted costs of \$3,342,400 per organization. These benefits and investments will result in an average three-year ROI of 408% and a break-even point in their investment in six months. IDC applies a 12% discount rate to the overall three-year sum of benefits and investments to account for the value of money (e.g., alternative investment) in the multi-year period.

► **TABLE 9**

Three-Year ROI Analysis

	Per Organization	Per Software Development Team Member, Including QA
Discounted benefits	\$16.97M	\$112,400
Discounted investment	\$3.34M	\$22,100
NPV	\$13.63M	\$90,300
ROI	408%	408%
Payback	6 months	6 months
Discount factor	12%	12%

n = 10; Source: IDC Business Value In-Depth Interviews, July 2024

Challenges/Opportunities

While the Delphix Data Platform can provide business and technical benefits to the enterprise, customers may face some challenges when trying to deploy and adopt this new way of managing enterprise data. In some cases, implementing the platform across the organization may require cultural changes, staff training, and connecting to unsupported or custom data sources.

Based on feedback from the customer survey participants, a side effect of adopting the Delphix Data Platform is rethinking how the organization can manage and use data. These new platform capabilities lead to changes in processes and responsibilities that can strain an entrenched culture reluctant to change and alter roles and responsibilities. Any initiative, such as adopting the Delphix Data Platform, should have clear support from leadership across all the affected roles, such as application development, IT operations, security, compliance, line-of-business leaders, DBAs, and data scientists. Typically, any displaced resource can undergo repurposing to do higher-value work that will be more gratifying.

Process changes and responsibilities require training the appropriate resources on using new technology to achieve maximum benefits. Organizations adopting the Delphix Data Platform must consider training for the data administrative staff and consumers.

Successful adoption may include dedicating time for affected resources to acclimate to the new platform to learn about all the available capabilities. Delphix provides elearning courses for customers via the Delphix Training Portal, which includes workshops, lab materials, and certification exams to assist with this training.

Organizations should make the up-front investment in training to maximize their investment in the Delphix DataOps Platform. However, the training is a sound investment of time, since it can remove significant toil for DBAs, developers, software testers, compliance managers, and other data stakeholders.

Data is at the heart and the lifeblood of the digitization process. Companies are leveraging data to improve customer experiences, open new markets, make employees and processes more productive, and create new sources of competitive advantage. As organizations digitally transform, there is an unending expansion of diverse structured and unstructured data sources that organizations must leverage. Not all data sources will enjoy the native support of the Delphix Data Platform. When this occurs, most customers can leverage one of the many data plug-ins from Delphix and Delphix partners. However, the data source or a homegrown proprietary data set is sometimes uncommon.

To access these more unusual data sources with the Delphix Data Platform, organizations must use the Delphix virtualization software development kit (SDK) to integrate these data sources into the platform. The SDK may require writing shell scripts and/or Python code to build a data management plug-in to the desired data source. The Delphix plug-in will

enable core platform capabilities such as making virtual copies, stopping and starting data operations, and storing the virtualized data. Once the data source connects to the platform via a plug-in, the core engine can provide all the normal Delphix functionality.

Conclusion

Organizations must meet the relentless demand for new applications and enhanced functionality in today's fiercely competitive digital landscape. While significant focus has been on automating code and infrastructure within application development teams, there has been a notable oversight in prioritizing data agility and automation.

With the growing integration of AI and the necessity for augmented training leveraging organizational data, data serves as the vital catalyst driving these innovative applications forward. Consequently, the application development teams responsible for delivering new digital solutions have unquenchable data availability and governance requirements.

Many organizations are realizing the need for a modern data delivery solution to effectively support the demands of modern application development and compliance in data operations. IDC advises these organizations to consider whether the Delphix Data Platform's benefits can enhance their data agility and drive improved business outcomes.

The results of this IDC white paper demonstrate that the Delphix Data Platform has enabled the participating Delphix customers to achieve significantly better data agility, compliance, and security that materialized as genuine business outcomes, such as:

- Better software release velocity, resulting in more frequent and resilient application releases
- Faster time to market, providing better business agility
- Improved developer productivity, featuring self-service creation of test environments



Many organizations are realizing the need for a modern data delivery solution to effectively support the demands of modern application development and compliance in data operations.

- Enhanced data security, mitigating the adverse effects of a breach and protecting PII
- Reduction in infrastructure costs, both on premises and in the cloud
- Significant IT cost savings for organizations, with a 408% three-year ROI

The Delphix Data Platform provides substantial advantages. It enables automated data delivery for software development and testing, analytics, and AI and ensures data compliance in non-production environments. The platform is an integrated solution that addresses the complexities of modern data access, security, and residency challenges across hybrid and multicloud-regulated environments.

Appendix 1

Table 10 summarizes previously discussed specific calculations for benefits from the use of Delphix.

TABLE 10
Specific Calculations: Benefits from Use of Delphix

	Average Quantitative Benefit	Calculated Average Annual Value
Software development team productivity	25.2% more productive, 31.12 FTE gain, assumed \$100,000 salary per year	\$2.82M
IT infrastructure savings (storage)	\$547,000 in infrastructure costs avoided	\$547,200
Data privacy and security team efficiency	17.5% more efficient, 6.25 FTE gain, assumed \$100,000 salary per year	\$565,300
IT infrastructure team efficiency	26.3% more efficient, 15.42 FTE gain, assumed \$100,000 salary per year	\$1.40M
Additional revenue	\$7.65M in additional annual revenue, 15% revenue margin applied	\$1.04M
Compliance team efficiency	17.5% more efficient, 0.23 FTE gain, assumed \$100,000 salary per year	\$21,000
DBA team members efficiency	7.5 FTE equivalent of additional productivity, assumed \$100,000 salary per year	\$678,400
IT infrastructure savings (servers, VMs, cloud)	\$92,700 in infrastructure costs avoided	\$92,700
Total annual benefits, use of Delphix	\$7.15M per organization	

n = 10; Source: IDC Business Value In-Depth Interviews, July 2024

Appendix 2: Methodology

IDC's standard Business Value/ROI methodology was utilized for this project. This methodology gathers data from organizations using Delphix.

Based on interviews, 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 Delphix.** This study's 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 Delphix and can include additional migrations, planning, consulting, and staff or user training costs.
- 3. Calculated the ROI and payback period.** IDC conducted a depreciated cash flow analysis of the benefits and investments for the organizations' use of Delphix over a three-year period. ROI is the ratio of the net present value (NPV) and the discounted investment. The payback period is when 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 burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and manager productivity savings. For 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 employees work 1,880 hours per year (47 weeks times 40 hours).
- The NPV 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 the assumed cost of money and the rate of return.
- Because IT solutions require a deployment period, the full benefits are not available during that period. To capture this reality, IDC prorates the benefits monthly and subtracts the deployment time from the first-year savings.

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

About the IDC Analysts



Ladislav Kinda

Consultant, Business Value Strategy Practice, IDC

Ladislav is a consultant in the IDC Business Value Strategy practice team. Ladislav conducts customized business value research and consulting projects for clients across various technology domains. His primary focus is assessing the return on investment (ROI) from their adoption of enterprise technologies. Ladislav's research delves into how organizations leverage digital technology solutions and initiatives to enhance efficiency and drive business growth.

[More about Ladislav Kinda](#)



Matthew Marden

Research Vice President, Business Value Strategy Practice, IDC

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 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](#)



Jim Mercer

Program Vice President, Software Development, DevOps and DevSecOps, IDC

Jim is a program vice president managing multiple programs spanning application life-cycle management, modern application development and trends, emerging generative AI software development, DevOps, DevSecOps, open source, PaaS for developers, and cloud application platforms. His focus areas are DevOps and DevSecOps solutions research practices. In this role, he is responsible for researching, writing, and advising clients on the fast-evolving DevOps and DevSecOps markets. Jim advises senior IT, business, and investment executives globally in creating strategy and operational tactics that drive the execution of digital transformation and business optimization.

[More about Jim Mercer](#)

Message from the Sponsor



About the Delphix DevOps Data Platform

Enterprise organizations worldwide use Delphix, the DevOps Data Platform studied in this report, for data compliance in non-production environments and test data management. Customers include BNP Paribas, Choice Hotels International, Worldpay, Michelin, Molina Healthcare, and Fannie Mae.

The Delphix DevOps Data Platform provides data delivery, masking, and control capabilities. Organizations that leverage Delphix enable the delivery of compliant data to accelerate releases. Delphix also supports a large-scale and complex enterprise data estate. This includes data sources from mainframes to public clouds of varying sizes and up to large-scale and analytical sources of billions of rows. As discussed in this report, Delphix helps organizations achieve development speed, quality, and compliance.

[Visit Delphix's DevOps Data Platform page.](#)

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IDC Research, Inc.
140 Kendrick Street, Building B, Needham, MA 02494, USA
T +1 508 872 8200

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