Business Value Highlights

1%
increase in revenue

39%
reduced total cost of data operations

24%
increase in IT staff productivity

40%
increase in application development productivity

72%
reduction in infrastructure cost waste

76%
reduction in business risk

560%
five-year ROI

9 month
payback period

Delphix DataOps Platform Increases Revenue by $14 Million, Slashes Cost of Data Operations by $15 Million

EXECUTIVE SUMMARY

Successful digital transformation (DX) necessitates investments in new technologies and processes that can drive tangible business value. Enterprise organizations are working on DX initiatives to develop engaging applications designed to maintain and capture new business opportunities and grow market share. IDC projects that more than 500 million new applications will be created by 2023 (*see IDC FutureScape: Worldwide IT Industry 2020 Predictions,* IDC #US45599219, October 2019).

Data is the fuel that runs a digital organization and the aforementioned applications and the teams that develop them will have voracious needs for data availability, while carrying increasing burdens associated with data governance. Initiatives such as building new applications, modernizing/upgrading existing applications, and a constant stream of enhancements to existing applications generate hundreds, and often thousands, of data operations that an enterprise must support and fulfill. Often, these data operations are inefficient and create an unwarranted financial burden for teams and, ultimately, impact velocity and unnecessarily expose organizations to data governance and compliance risks. So, to stay competitive, organizations need to master data agility or the ability to get relevant data to the end users who need it — quickly, efficiently, and securely.

This need for data agility is driving organizations to look at the viability of data delivery software tools that can optimally support the data operations needs of modern application development, DevOps, IT operations, and data scientist teams. Many organizations have strung together point solutions or homegrown utilities only to discover that creating a collection of one-off approaches to solve for data delivery, data compliance, and data operations automation can be costly and often does not scale. As demand for data access increases, there

is a proliferation of data silos across a growing number of on-premises and cloud data stores that introduce complexity, reduce velocity, increase cost, expose additional risk, and make data compliance more arduous. This lack of data efficiency and clarity impedes organizational agility, making it hard to innovate, adapt to change, and compete in the digital economy.

This IDC white paper examines one solution to these challenges, the Delphix DataOps Platform, and the business value realized by organizations that use it. It is based on interviews with Delphix enterprise customers and covers important top-line metrics such as return on investment (ROI), payback period, and total cost of operations. Further, the white paper examines reliability and business impacts, including development velocity, staff productivity, and IT infrastructure costs. The survey data, when applied to IDC's Business Value model, showed that study participants realized significant value with the Delphix platform. IDC calculates that study participants will achieve average annual benefits of 39% reduced cost of data operations, along with a five-year ROI of 560% by:

- Fostering more efficient IT operations and application development teams and related DataOps processes, resulting in a more frictionless approach to developing and delivering applications

- Lowering the overall cost of data operations, application development, and IT infrastructure development, maintenance, and management

- Translating IT operational benefits into improved application performance with fewer errors and better business results

- Lowering business- and compliance-related risk while increasing end-user productivity

SITUATION OVERVIEW

Data is an increasingly critical part of the overall business success of enterprise organizations. As companies begin to treat software applications as a major differentiator, they are also realizing that optimal data management drives the value of those applications. However, if they want to compete with nimble digital natives and start-ups, they need data strategies that support better agility and faster data access.

To meet these goals, many organizations are moving toward agile software development and the adoption of DevOps. As part of these efforts, they have invested heavily in automation to improve the speed and velocity of their IT teams with the goal of becoming more innovative, competitive, and responsive to customer needs.

While most of the focus to date has been on code and infrastructure automation, there has been insufficient effort and emphasis placed on data automation.

For some organizations, the ability to access the right data quickly and easily has become the laggard in the application development value chain. Their IT teams cannot adopt true continuous integration and continuous delivery (CI/CD) capability if there is an unexpected multiple-day delay in the application delivery pipeline. Some teams try to circumvent these data delays by turning to synthetic data or outdated data sets, but that often leads to poor test quality and potentially the costly process of trying to debug data-related defects in production environments.

The other side of this dilemma are database administrator (DBA) and other IT operations teams getting ad hoc requests for custom cuts of data and ending up being overburdened. These teams must spend time extracting custom data segments and comb through the data to identify data that needs to be masked to ensure appropriate levels of security and governance. This absence of data availability and automation creates a silent cost to the business in lost productivity and revenue.

There is a need for data automation solutions that can support all the necessary operations of today's application development and data science teams, or "DataOps." Much like DevOps itself, the practice of DataOps uses agile methodologies and breaks down silos between people, processes, and technology to enable automated self-service and secure distribution and management of data. DataOps also helps reduce the friction between the key links in the data value chain.

DELPHIX DATAOPS PLATFORM OVERVIEW

Delphix provides a solution for DataOps that supports data delivery as well as data compliance and is the maker of the Delphix DataOps Platform. This integrated data platform supports DataOps and is designed for today's complex data access, security, and residency issues across on-premises, hybrid, and multicloud environments. It is also designed to address data bottlenecks in software delivery, governance, and release. The platform is typically used by teams such as application development, security and compliance, IT operations, line-of-business leaders, and data scientists.

Using database virtualization, the platform provides fully functional virtual databases and decreases data storage consumption by intelligently sharing common data blocks

across environments, rather than making and moving new data blocks for these separate environments. This enables the delivery of lightweight, virtualized copies of data at scale and automates provisioning so that data delivery times can be collapsed from hours/days/weeks to just minutes. Additional capabilities include enabling adherence to compliance and regulatory policies using data risk profiling, policy management, and intelligent masking (see Figure 1).

FIGURE 1 Delphix Architecture

Source: Delphix, 2020
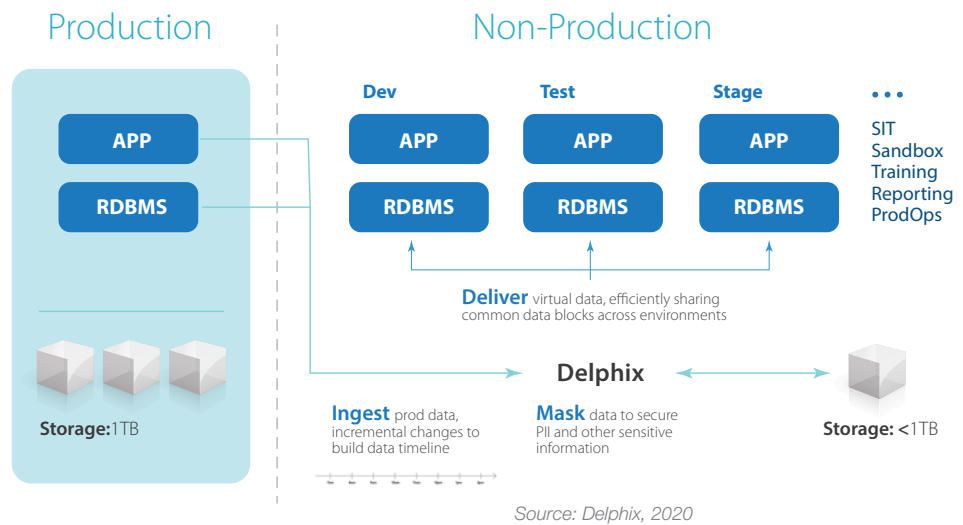
DevOps teams can take advantage of the platform to improve data security and compliance while gaining API-automated, self-service data access to accelerate application development. This helps DevOps teams streamline their end-to-end integration, functional, and performance testing using production-like data. By enabling automated data delivery, development and test cycles are compressed and software quality is improved while shortening overall application delivery lead time. Further, the platform improves DevOps teams' ability to isolate and reproduce data-related issues using features such as data rewind (i.e., Time Machine) to identify and extricate elusive production issues thereby improving metrics such as mean time to repair (MTTR).

The platform supports a wide collection of data sources as well as hybrid cloud environments. It can synchronize/replicate data from on premises to cloud in support of teams that want to move non-production (e.g., dev/test) to the cloud within a hybrid architecture or migrate production data sources to the cloud as part of a lift/shift or modernization effort. The data locations can include on-premises, private cloud, hybrid cloud, and multicloud scenarios. Data sources include distributed RDBMS databases such as DB2, Oracle, and MS SQL; NoSQL

databases such as MongoDB; and cloud data sources residing on the main public clouds (i.e., Amazon AWS, Microsoft Azure, Google Cloud Platform, IBM Cloud, and Oracle Cloud).

THE BUSINESS VALUE OF DELPHIX DATAOPS PLATFORM

Study Demographics

IDC conducted research that explored the value and benefits of using Delphix DataOps Platform. The project included 10 interviews with large enterprises that are using this solution and have experience with its benefits and costs. Through both quantitative and qualitative questions and analysis, the interviews assess Delphix's impact on the enterprises' IT infrastructure, application development, core business, and cost profiles.

Table 1 presents study demographics and profiles. The organizations interviewed had a base of 71,180 employees that was supported by an IT staff of 10,105 engaged in managing 1,685 business applications for 69,440 internal business application users and 28.6 million external customers. In terms of geographical distribution, seven companies were based in the United States with the remainder in Belgium, New Zealand, and Switzerland. The organizations represented a diverse mix of vertical industries, namely, the information technology, financial services, health insurance, retail, telecommunications, and transportation sectors. (Note: All numbers cited represent averages.)

TABLE 1 Firmographics of Interviewed Organizations

	Average	Median	Range
Number of employees	71,180	22,500	5,500 to 325,000
Number of IT staff	10,105	2,750	500 to 25,000
Number of IT users	69,440	22,000	125 to 310,000
Number of external customers	28.6 million	3.6 million	300 to 100 million
Number of business applications	1,685	700	24 to 5,500
Company revenue	$51.3 billion	$15.0 billion	$1.7 billion to $242 billion
Countries	United States (7), Belgium, New Zealand, Switzerland		
Industries	Information technology (3), financial services (2), health insurance (2), retail, telecommunication, transportationl		

Source: IDC, 2020

Choice and Use of the Delphix DataOps Platform

The companies that IDC surveyed described usage patterns for the Delphix platform as well as providing relevant data about their IT and business environments. They also discussed the rationale behind their choice of Delphix. Interviewed customers cited several factors for their choice such as the need for better management tools; the need for improving overall agility while reducing costs; and GDPR compliance challenges. Study participants elaborated on these and other benefits:

- **Delphix offered more functionality:** *"We evaluated multiple options. Delphix seemed to be proven ... on the top, it met all of our requirements. We could not find anyone who had the same functionality."*

- **Needed better management tool:** *"We have 3,000 databases in production, with at least four non-production environments associated with each. We have development, integration, test, and performance environments and are managing an enormous number of physical databases. We wanted to simplify that, save money, and save time for our DBAs."*

- **Desire to improve all-round agility:** *"The organization wanted to improve agility in terms of being able to deliver changes to their applications more quickly and therefore be responsive to business demand. The organization wanted to reduce costs in terms of the effort it took to do development. It also wanted to improve testing quality."*

- **Improve masking and production data refresh:** *"There were two main challenges for us. One was GDPR, which led us to look for a masking solution. The second challenge was that we are moving to a more agile way of working. We needed to refresh environments with production data and that took too long. So we looked at a solution to reduce the time required."*

Table 2 describes usage patterns for the Delphix solution. In the organizations surveyed, there was a substantial Delphix footprint. Delphix platforms supported 15,383 (64% of total) internal users engaged with 207 business applications and 1,282 databases, which would encompass a data usage of 1,974TB (terabytes). 216 of these users were working on DevOps-related projects. Additional usage patterns are presented. (Note: All numbers cited represent averages.)

TABLE 2 Delphix Environment

	Average
Number of sites/branches	302
Number of business applications	207 (39% — two companies using Delphix for DevOps only)
Number of internal employees being supported	15,383 (64% of total)
Number of DevOps staff	216
Number of databases	1,282
Number of TBs for databases	1,974
Number of production databases	190 (16%)
Number of non-production virtual databases	1,092 (84%)

Source: IDC, 2020

Business Value and Quantified Benefits

IDC's Business Value model identified the benefits for organizations using the Delphix DataOps Platform to support their ongoing IT, application development, and business operations. Survey data obtained from Delphix customers was applied to this model to arrive at an array of quantified benefits directly attributed to improvements in data operations related to Delphix. Using this methodology, IDC found that these customers realized significant value for their IT, application development, and business operations.

The extensive use of the Delphix platform provided these companies with the benefit of more efficient IT and application development teams and processes, resulting in significant reductions in development time while also improving quality and decreasing errors. In addition, it helped lower the cost of IT infrastructure data operations and business risk while increasing end-user productivity. Study participants described the most significant benefits:

- **Supports an agile business strategy:** *"Delphix is helping accelerate our business strategy because both IT and business units are moving toward an agile model. Delphix fits very well with that model."*

- **Increase testing — reduce business risk:** *"One of the biggest things is being able to manage data in minutes instead of hours or days. For example, if we want to do parallel testing or regression testing, we can set bookmarks as project teams do their work and they can rewind or fast forward to those bookmarks. We are now able to do different kinds of testing within the same environment."*

- **Can solve issues faster with rewind:** *"Rewind is a great benefit that we leverage a lot. When there is a problem in a deployment, rewind can be used to see where the problem is and where resolution is needed. It also affects time to provision. The business does not need to wait for 10 hours to get a copy. Right now, it is getting a copy in less than 30 minutes."*

- **Development engineers more productive:** *"Increasing our engineer's productivity in development environments is the primary reason we got Delphix. End users are getting their features faster. If you are making the engineers highly efficient, they can do much more and build more features quickly."*

Cost benefit and TCO reduction metrics resulting from deployment of the Delphix solution are shown in Figure 2. The greatest benefits were seen in the increasing IT and application development productivity. Overall, organizations were able to reduce their annual data operations costs by $15.3 million (39% reduction). More specific information on these improvements are discussed in the sections that follow.

FIGURE 2 Annual Total Costs of Data Operations ($M)
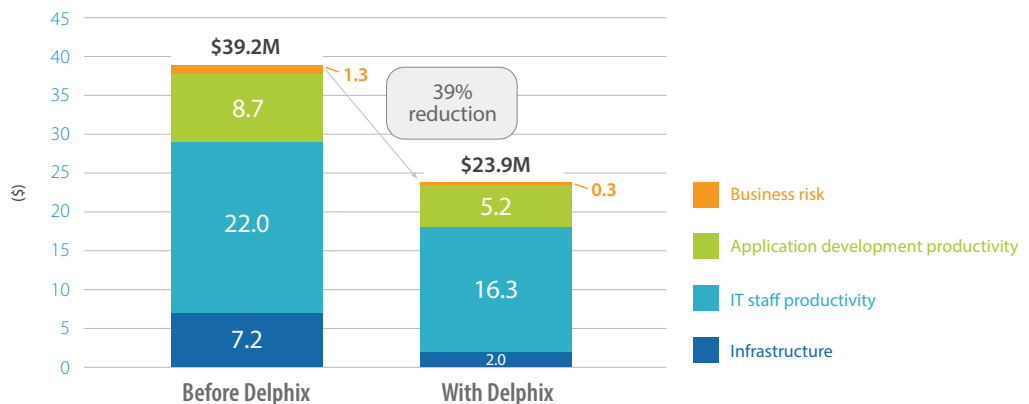
Source: IDC, 2020

Productivity Improvements for IT Operations Teams

The Delphix DataOps Platform injects speed and automation into IT Ops tasks that are usually slow and manual, making these teams far more productive. The platform typically benefits a variety of IT teams including application development, security and compliance, database and storage operations, and data scientists.

Interviewed organizations reported that with Delphix, various IT functions including database management, IT infrastructure management, security, and compliance teams

were able to enhance performance levels. Study participants also discussed how they were able to use Delphix to cost-effectively improve the efficiency of applications development operations overall. They cited valuable features and capabilities such as the ability to improve development workflows, improving the overall quality of application testing, and increasing the productivity of DevOps teams. Also cited was the benefit of saving on infrastructure costs. Study participants commented on these and related benefits:

- **Lower costs, easier management, better agility:** *"Delphix helps a lot with compression, which saves on infrastructure costs. We can be a lot more creative in our use of existing environments and this saves us from having multiple environments, driving more infrastructure savings. The other big area is velocity. For example, one of the recent wins we had was based on a change that a customer made to a project. Before Delphix, it would have taken 3 weeks to rework the project. With Delphix, we were able to do a rewind and solved the problem in 24 hours. There's huge time savings when there are customer requirement changes that need to be retested."*

- **More productivity for DevOps:** *"Delphix has had a dramatic impact on our DevOps. Our team is saving 70% over their normal time. It's not so much that the applications are 'screaming'. The productivity side means that the same number of people are doing something like four to five times the amount of work. Let's say that I'm a user, and I have people behind the scenes in IT who are working much more productively and are releasing mobile apps. That helps everyone."*

- **Helps with development workflows and improves application testing:** *"The single-biggest advantage of using Delphix for our development workflow is the ability to bookmark and rewind or fast forward in time … Delphix definitely helps us drive up the quality of what we do, especially when using a data-masked environment. The data masking uses real names and addresses that look like real people and places. It helps us drive up the quality of our testing. Our old tool sort of randomized the data and wasn't very testing friendly."*

- **Quicker turnaround leading to increased operational resilience:** *"Every environment had a pre-Delphix set of metrics and a post-Delphix set of metrics. Everything that used to take days now takes hours. For example, something that used to take say 12 hours now takes minutes."*

- **Data deployed faster:** *"Delphix has helped our DBAs because they are not having to spend a day deploying each of their environments. They don't have to do that anymore because it's being deployed within minutes. Before that we would have two DBAs working full time. So now two full-time DBAs were able to do other things besides deployment."*

Interviewed companies reported that the Delphix platform helped a variety of IT teams to be more productive in their day-to-day tasks by eliminating the friction that can occur at every stage of the DataOps value chain. One study participant spoke about how security teams could access data quicker: "Our security team saves time because they can identify vulnerabilities very quickly. This is because they can get the data quickly. They can identify the issues rather than waiting for more than 10 hours. It saves quite a bit of time, about 40%." Another discussed how server teams have reduced footprints to manage: *"It's the footprint that changes. Instead of managing 30 database servers ... they are managing just 6. That's the amount of time they are saving."*

Table 3 shows the productivity improvements across various IT data operations teams. Those functional areas showing the greatest level of improvement included database management (47%), security management (28%), and infrastructure management (22%). Overall, IDC found that total IT staff productivity saw a 24% improvement and generated $5.3 million in value.

TABLE 3 IT Staff Productivity Improvements

IT Staff Function	Number of Staff (FTEs)	Productivity Increase (%)	Equivalent FTE Value
Managing and provisioning databases	52.8	47	24.9
Running/managing the workloads	79	14	11.0
Security management	3	28	0.8
Compliance	27	14	3.07
Managing infrastructure	58.3	22	12.8
Total	220	24	53.1
Total value at $100,000 annual salary ($M)	$22.00	24	$5.31

Source: IDC, 2020

Cloud Migration

Other IT benefits were identified in the functional area of cloud migration. Eight of ten organizations interviewed related how Delphix supported their migration from on premises to a hybrid cloud or multicloud environment:

- *"I think it's the capacity of Delphix that's able to work on premises, in the cloud, and in the multicloud ... so it's the capacity to serve all of those technologies. That's what we like about it."*

- *"We are just starting with moving some workloads to Azure and we are ... shipping masked*

data to the cloud using Delphix … so it's really part of the road map to use Delphix to ship on-premises data to the cloud for testing purposes, but in a masked way."

IDC survey results indicated that on average, Delphix helped reduce the time required to move data from on premises to the cloud from 16 hours to less than 2 hours. Companies stated that they experienced time reductions of 81% to 99% with 91% as the average.

As one study participant noted: *"Delphix impacts the time it takes to move data. For example, it takes 30 minutes with their platform. If we were not using Delphix, it would take as much as two to three days."* Another said: *"With Delphix, it probably takes (depending on the size of the database) an average of 3 hours. Without Delphix, it would be a lot longer … more like two days."*

Cost Efficiency Improvements for IT Infrastructure

Deployment of the Delphix platform helped companies lower the costs of building, managing, and maintaining their IT infrastructures. One study participant commented on how the solution was able to reduce storage costs: *"A lot of the physical storage went away once we started using Delphix. We were using more than 2PB+ of storage. All that went away. That was probably six or seven arrays. To refresh that hardware would have cost more than $5 million to $6 million."*

Table 4 shows an array of functional areas where cost reductions were enabled. $5.2 million in infrastructure savings were realized in the areas of storage compression (82%), server footprint reduction (32%), and others. Based on these metrics, IDC calculates a 72% total cost reduction improvement.

TABLE 4 Infrastructure Cost Reduction

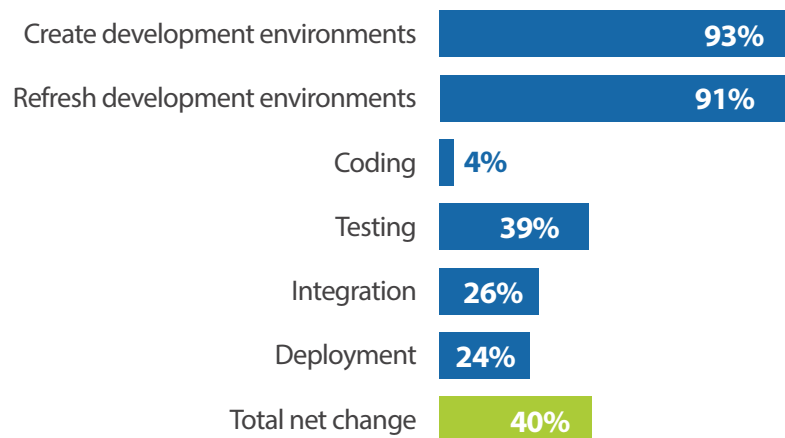|	Before Delphix	With Delphix	Benefit Value	Benefit (%)
Server footprint reduction — servers	336	230	106	32
Value at $10,000 per server ($4,240 annualized over three years to include initial cost +15% annual support + power + datacenter space)	$1.42	$0.97	$0.45	32
Storage compression (TB)	1,593	281	1,312	82
Value at $3,594 average annual cost per TB	$5.73	$1.01	$4.72	82
Total	$7.15	$1.98	$5.17	72

Source: IDC, 2020

Productivity Improvements for Application Development Teams

Study participants reported that DevOps teams were able to use the Delphix platform to optimize the application development process and improve software quality. These benefits were driven by two capabilities enabled by Delphix:

- **Faster data,** the capability to accelerate application development starting with reducing the time to provision, refresh, and integrate development environments

- **Higher-quality data**, the capability to accelerate and improve the quality of testing enabled the ability to run additional testing cycles, which, in turn, led to fewer data-related defects/errors and fewer errors being introduced into the DataOps value chain (Companies estimated they improved the performance of their applications by 5% to as much as 50%.)

Study participants reported that DevOps teams were able to use the Delphix platform to optimize and accelerate application development through the use of self-service data access and other capabilities. In addition, the platform helped them streamline end-to-end integration testing by enabling automated data delivery. With these improvements, development and test cycles were compressed while increasing developer efficiency. Delphix reduced the development cycle by 40% overall and, in some cases, enabled more time for coding. Figure 3 presents various improvement metrics for key developments in the application development process, including very substantial improvements in creating and refreshing development environments.

FIGURE 3 Developer Efficiency: Time Reduction by Development Stage

Stage	%
Create development environments	93%
Refresh development environments	91%
Coding	4%
Testing	39%
Integration	26%
Deployment	24%
Total net change	40%

Source: IDC, 2020 *(% of respondents)*

Accelerating and improving the testing process helped reduce the number of errors per application by 73%. Respondents stated that before Delphix they were spending 15% of their time dealing with errors. Delphix helped reduce this to 7%. As shown in Table 5, there was a 53% reduction in the time spent by DevOps in correcting application errors, which essentially freed up 37 developers to increase the value of the application development operations by increasing the number of new applications and application upgrades.
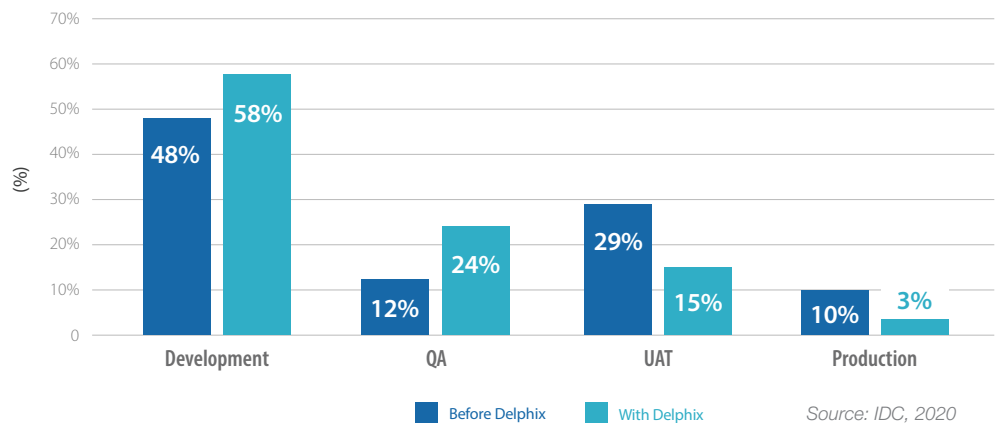
TABLE 5 Application Development Productivity —
Errors and Defects Reduction

|	Before Delphix	With Delphix	Benefit Value	Benefit (%)
Number of errors per application	22	6	16	73
Time spent by developers	15.1%	7.2%	7.9%	53
Time spent by developers (equivalent FTEs)	71.12	33.78	37.34	53
Value of time saved	$7.1 million	$3.4 million	$3.7 million	53

Source: IDC, 2020

In addition to reducing errors and defects overall, application development teams were able to find and correct errors earlier in the development cycle. Figure 4 quantifies these improvements. Delphix reduced the number of errors reaching UAT by 55%, which greatly reduced the need to retest and recode. More importantly, the number of errors leaking into production was reduced by 70%, which significantly reduced the negative impact on business risk.

FIGURE 4 Defect Correction by Development Stage

Source: IDC, 2020

The net results of the improvements in application development productivity are shown in Figure 5. By reducing the time to develop new applications by 30% and new features/upgrades by 41%, application development teams now are developing 33% more releases per new application and 26% more features.

FIGURE 5 Application Development Productivity
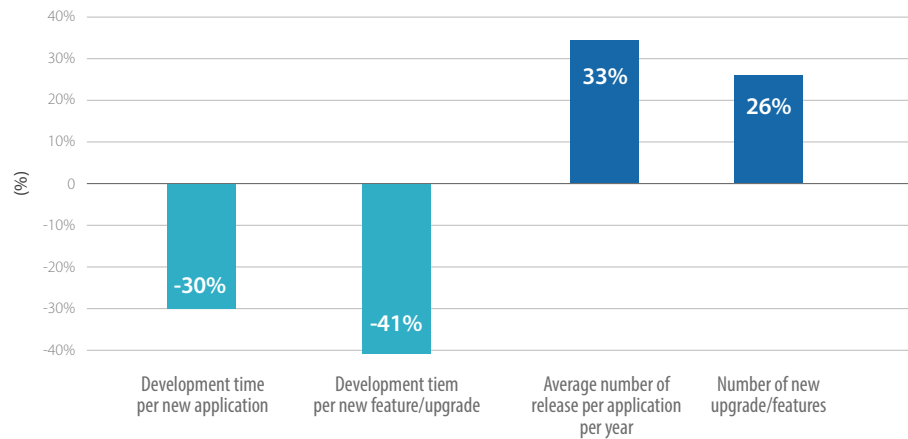
Source: IDC, 2020

Managing and Mitigating Business Risk and Regulatory Risk

As previously described, DevOps teams can use the Delphix platform to improve security and compliance while optimizing core application development processes. Better adherence to compliance and regulatory policies is enabled with various capabilities such as data risk profiling, policy management, and intelligent masking.

Interviewed organizations reported that they were able to lower their business and regulatory risk.

Regulatory Risk Reduction

Delphix enabled customers to move from 25% of data or environments being masked/protected to 74%, including for four organizations that had zero masking prior to Delphix. Study participants cited features and capabilities that were instrumental, such as the ability to increase regulatory response time, being able to deal more effectively with varying regulations in multiple jurisdictions, and better data masking functionality. Study participants commented on these and related benefits:

- **Automating privacy compliance:** *"Before Delphix, we didn't mask. But we spent a lot of time writing custom scripts to protect the data. There was security being put in place, but it was custom and repetitive. With data masking, it is reusable. Once you mask data, you enable a database and, let's say, change a social security number, it's always changed ... I think we have been able to free up five to six people who were doing that before Delphix."*

- **Leading-edge data masking tool:** *"It's definitely helping us mitigate because as newer policies and regulations come out, we're always tightening up the standards. We looked at Delphix as one of the leading-edge data masking tools .... We look at it as a way to future proof."*

- **Avoid regulatory risks:** *"We use masking to handle all of the European and California laws that went into effect. We avoid a lot of issues with that capability now."*

Business Risk Mitigation

By decreasing the number of errors leaking into production by 70%, interviewed organizations reported significant improvements in their business risk profiles after deployment. Table 6 identifies these improvements, including a significant decrease in unplanned downtime incidents by 65%. Deployment of the platform enabled end users to gain back 76% of the time they were losing due to applications downtime. IDC also determined that these organizations were gaining back about $72,000 in lost revenue, thanks to better availability. Additional metrics are also presented.

TABLE 6 Business Risk Reduction

	Before Delphix	With Delphix	Benefit Value	Benefit (%)
Unplanned downtime instances, per year	26	9	17	65
MTTR	1.67	1.03	0.64	38
Number of hours per user	14.58	3.11	11	79
Equivalent users	17	4	13	76
User productivity value	$1,190,000	$280,000	$910,000	76
Incidents impacting revenue	50%	50%		
Average revenue loss per incident	$56,667	$56,667		
Total revenue loss	$736,667	$255,000	$481,667	65
Net revenue loss	$110,500	$38,250	$72,250	65
Total risk mitigation benefits	$1,300,500	$318,250	$982,250	76

Source: IDC, 2020

Improving Business Effectiveness and Results

As a result of the staff and performance benefits previously described, interviewed organizations reported that they were able to improve their overall business effectiveness and results. Study participants cited features and capabilities that fostered these improvements, such as accelerated time to market, optimized productivity for end users, better database management, and the platform's contribution to ongoing digital transformation initiatives. Six of ten companies saw a revenue gain associated with improved data operations, or DevOps, from Delphix, generating a 1% average annual growth in revenue. Study participants commented on these and related benefits.

Revenue Growth

- **Accelerate revenue:** *"I think it does because we have more releases, and if we have better features, I'd say that it results in 1% more revenue ($6 million)."*

- **Faster to market:** For us, we're looking at maybe pulling away from like 4 months to 3 months; so we're looking at like maybe a 25% improvement, kind of thing ... but that's not for all of our revenue, just for the growth projects ... we'll get around $2.5 million/year that we benefit from being able to use Delphix ... that is the benefit from the velocity ... the quality improvements ... that's a gain in revenue.

- **Developing new services:** As a services company, we probably have grown revenue by about $5 million to $10 million a year with Delphix-enabling services.

Operations Costs Reduction

- **Business faster to market with reduced expenses:** *"For our business operation, we can roll out our code faster with Delphix. Our code is the lifeblood of the business. An example is rolling out for a new market. With a new market RFP, we are pressured to roll out in three or four months. If we could do that faster by shaving off several weeks, the business can start collecting revenue much faster. Also, if there are any regulatory changes or defects in the existing code, being able to fix those things quickly reduces expenses."*

- **Fosters digital transformation:** *"Delphix is supporting digital transformation in three ways. It is funding innovation by feeding infrastructure cost savings. The savings can then be invested in innovation. Second, it is creating operational efficiencies in how we deliver infrastructure services. Third, Delphix impacts the speed and performance of services to external clients."*

- **Better performance and faster applications mean more efficient employees:** *"Our application performance has improved by 10–15%. This is because on the production side, even if it is not being used, they really want to have better performance. Delphix impacts performance because the data is all virtual layer. Employees are more productive because they are getting their changes to the application faster and the features give them efficiency. And if there is a bug, the resolution is quicker."*

Table 7 presents a five-year ROI analysis of Delphix. IDC's analysis of the financial benefits and investment related to study participants' use of the Delphix solution shows that organizations in the study on average achieve total discounted five-year benefits of $43.12 million. These benefits compare with projected total discounted investment costs over five years of $6.83 million. IDC calculates that these organizations will achieve a five-year ROI of 560% and break even on their investment in nine months.

TABLE 7 Five-Year ROI Analysis

	Per Organization
Benefit (discounted)	$43.12 million
Investment (discounted)	$6.63 million
Net present value (NPV)	$36.59 million
ROI (NPV/investment) (%)	560
Payback (months)	9
Discount factor (%)	12

Source: IDC, 2020

CHALLENGES/OPPORTUNITIES

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

Based upon feedback from the customer survey participants, a side effect of adopting the Delphix DataOps Platform is rethinking how the organization manages and uses data. This leads to changes in processes and responsibilities that can strain an entrenched culture that is

reluctant to make changes and alter roles and responsibilities. Any initiative, such as adopting the Delphix DataOps Platform, should have clear support from leadership across all the affected roles such as application development, security and compliance, IT operations, line-of-business leaders, and data scientists. Typically, any displaced resource can be repurposed to do higher-value work. While there may be some bumps along the way, this is just another step toward digitally transforming the organization to be nimbler with the ability to adapt to market changes.

With changes in processes and responsibilities comes the need to train the appropriate resources on how to use new technology to achieve maximum benefits. Organizations adopting the Delphix DataOps Platform need to consider training for both the data administrative staff and the data consumers as well. This may include dedicating time for affected resources to get acclimated to the new platform so that they can learn about all the available capabilities. To assist with this training, Delphix provides elearning courses for customers that include workshops and lab materials. It is important that organizations make the up-front investment in training to maximize their investment in the Delphix DataOps Platform.

Data is at the heart of digital transformation, and the lifeblood of the digitization process. Currently, 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 need to be leveraged, and not all these data sources are going to be natively supported by the Delphix DataOps Platform. When this occurs, most customers are able to leverage one of the many data plug-ins available from Delphix and Delphix partners. However, sometimes the data source is more uncommon or some sort of homegrown proprietary data set.

To access these more unusual data sources with the Delphix DataOps Platform, organizations will need to use the Delphix Virtualization SDK to integrate these data sources into the platform. This may require writing some 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 is connected to the platform, via a plug-in, the core engine can provide all the normal Delphix functionality.

CONCLUSION

To withstand today's competitive digital climate, organizations need to be able to address the insatiable demand for new applications and functionality. Although much attention has been placed on DevOps teams using code and infrastructure automation, there has been insufficient effort and emphasis placed on the need for data agility and automation. Data is the fuel that makes these new applications tick and the teams that develop them have unquenchable requirements for data availability and governance.

Many organizations are now finding that they need a data delivery solution that can optimally support the data operation requirements of modern application development, DevOps, and data scientist teams. IDC recommends that these organizations explore whether the benefits of using the Delphix DataOps Platform can help them achieve better data agility and improved business outcomes.

The Delphix DataOps Platform supports automated data delivery as well as data compliance and is an integrated data platform designed for modern complex data access, security, and residency issues across hybrid and multicloud regulated environments. The results of this IDC white paper demonstrate that the Delphix DataOps Platform has enabled the participating Delphix customers to achieve better agility and genuine business outcomes. These benefits include organizations realizing a greater than 6:1 return on their investment while reducing their data operations cost by 39%. Organizations in this study were able to improve their time to market by utilizing the Delphix solution, which helped increase revenue of these sizable organizations by 1%.

APPENDIX

Methodology

IDC's standard ROI methodology was used for this project. This methodology is based on gathering data from current users of the Delphix solution as the foundation for the model. Based on interviews with organizations using it, IDC performed a three-step process to calculate the ROI and payback period:

- Gather quantitative benefit information during the interviews using a before-and-after assessment of the impact of Delphix. In this study, the benefits included staff time savings, productivity benefits, and operational cost reductions.

- Create a complete investment profile (five-year total cost analysis) based on the interviews. Investments can go beyond the initial and annual costs of using Delphix and

can include additional costs related to migrations, planning, consulting, and staff or user training.

- Calculate 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 five-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 $100,000 per year salary for IT staff members and an average fully loaded salary of $70,000 for non-IT staff members. IDC assumes that employees work 1,880 hours per year (47 weeks x 40 hours).

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

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

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

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