The Business Value of IBM Maximo

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Executive Summary

While operational performance has advanced markedly over the years, organizations face significant pressure to push the envelope of performance. Even with years of progress in their digitization efforts, asset-intensive industries still have plenty of opportunities to further improve various aspects of their operations, including maintenance execution, work scheduling, spare parts procurement, and asset life-cycle management (ALM). Attaining near-perfect levels of operational predictability, reliability, and efficiency is now what leading organizations are aiming for, as it is an achievable goal. How an organization manages their assets plays a critical role in success, with a more predictive asset management approach being where true value is generated and serving as the foundation for resilient operations. At the center of these efforts are asset life-cycle management solutions such as IBM Maximo.

Through a series of in-depth interviews, IDC conducted research that explored the value and benefits for organizations using IBM Maximo to track, support, manage, and maintain their assets.

Based on this extensive data set and employing a specialized Business Value methodology, IDC calculates that these customers will achieve benefits worth an annual average of $13.9 million on a per organization basis ($2.9 million per 50 maintenance workers) and a five-year ROI of 522% by:

- Supporting business needs by minimizing unplanned downtime, avoiding disruptive events and asset failure
- Reducing equipment spend, reducing mean time to repair (MTTR), and improving inspection equipment accuracy
- Improving the performance of asset management, IT platform management, compliance, and field workforce teams using the best available technology
- Improving end-user productivity and contributing to better business results

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BUSINESS VALUE HIGHLIGHTS

$2.9 million
average annual benefits per 50 maintenance workers

522%
five-year ROI

10.5 months
payback period from deployment

40%
more productive asset managers

18%
better overall equipment effectiveness

26%
more productive technicians

34%
increase in inspection accuracy rate

17%
increase in average lifespan of assets

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Situation Overview

Organizations have faced constant disruptions, geopolitical restrictions, and an ever-changing workforce. At the same time, traditional pressures around cost, efficiency, and quality cannot be overlooked. Unfortunately, many asset-intensive companies still take a primarily reactive approach to asset management, performing basic preventive maintenance and addressing breakdowns as they arise. Another common approach is performing calendar-based preventive maintenance due to a lack of insight on the condition of critical assets that leads to higher spend/costs as a result of over-maintaining assets. Both of these approaches are inefficient and risky and typically lead to increased unscheduled downtime, higher repair costs, and overextension of maintenance resources (including personnel, material, and parts). Competing in this challenging environment has led many companies to rethink fundamental aspects of their operations and what is needed to be successful. In response, COOs are beginning to define their future success by how well they can balance resiliency and operational excellence. This goal can only be achieved by automating manual processes and providing employees with near-real-time information, detailed insights into asset performance, and analytics to improve the decision-making process. Taking this approach will allow organizations to start predicting issues before they occur, shifting asset management from reactive to proactive, where true value can be realized.

Asset life-cycle management (ALM) solutions automate the many aspects of managing an organization's physical assets, such as facilities, production equipment/machinery, oil rigs, fleets, and linear assets (roads, rail, pipelines, etc.). These applications support asset record management, descriptions of items maintained, work order management, and maintenance reporting. ALM applications combine maintenance and asset life-cycle management, following assets from "as built" to "as maintained" and through to decommissioning. Enterprise asset management (EAM) applications typically include asset tracking and location, spare parts inventory management, maintenance procurement, capital planning, and financial analysis. Many applications also have asset performance management, rounds/inspection management, and field service functionality.

Today, asset management solutions are experiencing an intelligence revolution. Organizations are beginning to adopt smart assets, Internet of Things (IoT) systems, and autonomous workflows.

Click highlights for related content in this document.

HIGHLIGHTS CONTINUED

57%
improvement in the mean time-to-repair rate

21%
more productive compliance teams

47%
reduction in unplanned equipment or site downtime events

52%
quicker unplanned downtime resolution

As data becomes ubiquitous, EAM software providers will face new expectations because assets, as well as the methods for managing them, are changing. EAM applications can now apply AI and ML to capture, organize, and analyze massive amounts of data to make asset-related predictions and recommendations. Modern, innovative, and cloud-enabled EAM applications will allow organizations to trigger service events, track asset locations, predict failures based on conditions, and ensure compliance.

IBM Maximo Overview

IBM Maximo Application Suite (MAS) is an integrated and configurable asset life-cycle management solution that provides a set of applications for asset remote monitoring, management, predictive maintenance, and reliability planning. IBM Maximo combines EAM, APM, and reliability-centered maintenance capabilities in a single platform to allow organizations to better manage high-value assets based upon historical and real-time data bolstered with analytics to optimize performance, extend asset life cycles, and reduce downtime and costs. IBM Maximo leverages embedded AI, using both supervised and unsupervised machine learning to uncover insights, and supplies low-code capabilities for applications such as Visual Inspection. Its mobile functionality enables technicians to collaborate remotely with experts or get access to AI-based assistance for support. Maximo serves a wide range of industries including energy and utilities, manufacturing, oil and gas, transportation, and government, with industry-specific solution accelerators available. In addition, IBM's Maximo Application Suite includes Maximo Asset Performance Management applications and has integrations with IBM Cognos Analytics and Maximo MRO Inventory Optimization as well as external integrations for location-based services and MRO digital commerce.

The IBM Maximo Application Suite comes in two packages: client-managed software and software as a service. MAS is purchased using a simplified licensing and usage model leveraging a credit-based system called AppPoints. This provides the flexibility to easily add functionality and users, scale your business, and pay only for what you use with a single entitlement. IBM Maximo Application Suite includes all the supporting software required to install, implement, and use it, including IBM Cloud Pak for Data, Red Hat OpenShift, Db2, and WAS Liberty. For the included programs, there's no additional purchase required when you're using them within the suite.

The Business Value of IBM Maximo

Study Firmographics

IDC conducted research that explored the value and benefits for organizations using IBM Maximo to track, support, and maintain their assets. The project included interviews with 10 organizations that use IBM Maximo and have experience with and/or knowledge about the benefits and costs of using the platform. During the interviews, companies were asked a variety of quantitative and qualitative questions about the offering's impact on their operations, core businesses, and costs.

Table 1 presents the study firmographics. The organizations that IDC interviewed had an average base of 15,840 employees and total aggregate average annual revenue of $7.9 billion. On average, these companies had IT teams of 839 staff members engaged in supporting 454 business applications and services for 2,034 maintenance employees. Six companies were based in the United States with the remainder in the Netherlands (2), the United Kingdom, and Denmark. From a vertical market standpoint, IDC's survey included organizations from the construction (2), utilities (2), food and beverage, nonprofit, life sciences, biotech, retail, and manufacturing sectors.

TABLE 1

Firmographics of Interviewed Organizations

	Average	Range
Number of employees	15,840	400–85,000
Number of maintenance employees	2,034	25–12,000
Number of IT staff members	839	4–5,000
Number of business applications	454	20–1,500
Total organizational revenue	$7.9B	$200.0M–$32.4B

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	Average	Range
Countries	United States (6), Netherlands (2), United Kingdom, and Denmark	
Industries	Construction (2), utilities (2), food and beverage, nonprofit, life sciences, biotech, retail, and manufacturing	

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

Choice and Use of IBM Maximo

The organizations that IDC interviewed described the decision criteria involved in their selection of IBM Maximo to track, support, manage, and maintain their assets. The move toward more robust digital transformation while leveraging automation and other advanced capabilities was a common theme. In specifically discussing their criteria and decision-making methodologies, IDC interviewees identified a number of benefits that informed their decision. Proactive maintenance and depreciation-tracking capabilities were identified as clear benefits along with enabling improved mobility use cases. The need for a shift toward digital transformation strategy was cited along with IBM Maximo's ability to develop and support a globalized standard maintenance template.

Study participants elaborated on their selection criteria:

Maintenance and depreciation-tracking capabilities (manufacturing organization):
"My organization selected IBM Maximo for multiple reasons. The biggest impact on our decision was the maintenance and depreciation tracking we would gain from IBM Maximo. We also appreciated that IBM Maximo would help with proactive maintenance and security."

Mobility and efficiency gains (nonprofit organization):
"My organization is a maintenance contractor that does primarily Department of Defense (DoD) work. The challenge was that the DoD infrastructure did not enable us to work efficiently; we selected IBM Maximo to help with this challenge and to gain mobility."

Shift to digitalized strategy (construction organization):
"The reason my organization selected IBM Maximo was that we made a decision to make this digital shift in our strategy and service; now we talk about the digital technician. We already had a CRM in place, and IBM Maximo combined the best with it."

Globalized standard maintenance template (beverage organization):
"My organization acquired a large business in APAC. As a result, we became the owner of many brands in APAC that were on IBM Maximo. At that time, it was decided to see if we can develop a global standardized IBM Maximo maintenance template that we would deploy across the organization."

Table 2 provides a quantitative view of the organizational usage of IBM Maximo across all companies at the time of interviews. The number of internal users averaged 1,029. The number of assets being maintained was 124,172. Two-thirds (66%) of revenue was supported by IBM Maximo in the survey base. Additional metrics are presented.

TABLE 2

IBM Maximo Usage

	Average
Number of sites	28
Number of maintenance users	242
Number of end users (non-maintenance)	1,029
Number of assets being maintained	124,172
Value of equipment being maintained	$2.6B
Percentage of revenue supported by IBM Maximo	66%

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

Business Value and Quantified Benefits

IDC's Business Value research evaluates and quantifies the benefits for companies in adopting IBM Maximo to improve overall asset management operations. For these companies, the platform served to avoid unnecessary operational costs while increasing EAM efficiency with the use of automation, AI, and other state-of-the-art tools. IBM Maximo improved the performance of asset management, IT platform management, compliance, and field workforce teams. In large measure, it accomplished these goals by enabling the shift from legacy/manual processes to more streamlined operations via automation and other features. IBM Maximo also served to reduce equipment spend, reducing MTTR and improved inspection equipment accuracy. The platform supported business needs by minimizing unplanned downtime, avoiding disruptive events and asset failure. All of these benefits combined helped the companies in this study to improve end-user productivity and contributed to better business results and financials.

Study participants offered these comments on the most significant benefits of IBM Maximo:

Data accessibility (biotech organization):

"A significant benefit of IBM Maximo is that my organization has gained greater accessibility to data. It saves our people time."

Increased wrench time (nonprofit organization):

"The largest and most impactful benefit of IBM Maximo is that it has increased technician wrench time. Our competitors typically have 25%–30% wrench time, and we're at 35%–40%. So it's 33% efficiency over our competitors, which allows us to do more with fewer technicians, and we use this to get contracts."

Increased technician efficiency (construction organization):

"The big gain my organization has achieved from use of IBM Maximo is efficiency. When you look at our volume of assets, you can only get efficiencies when you start to use digital tools and by providing the technician with the details of the job they're about to do and planning and scheduling well."

Standardized approach to maintenance (food and beverage organization):

"The big advantage of IBM Maximo is that everyone is working within the same platform, meaning that all of the maintenance teams across the globe are working in exactly the same way. The processes, the tools, and the way we measure success are all the same."

Figure 1 presents IDC's calculations of cumulative customer benefits after adoption of IBM Maximo. As shown, average annual benefits were quantified at $13.9 million per organization ($2.9 million per 50 maintenance workers).

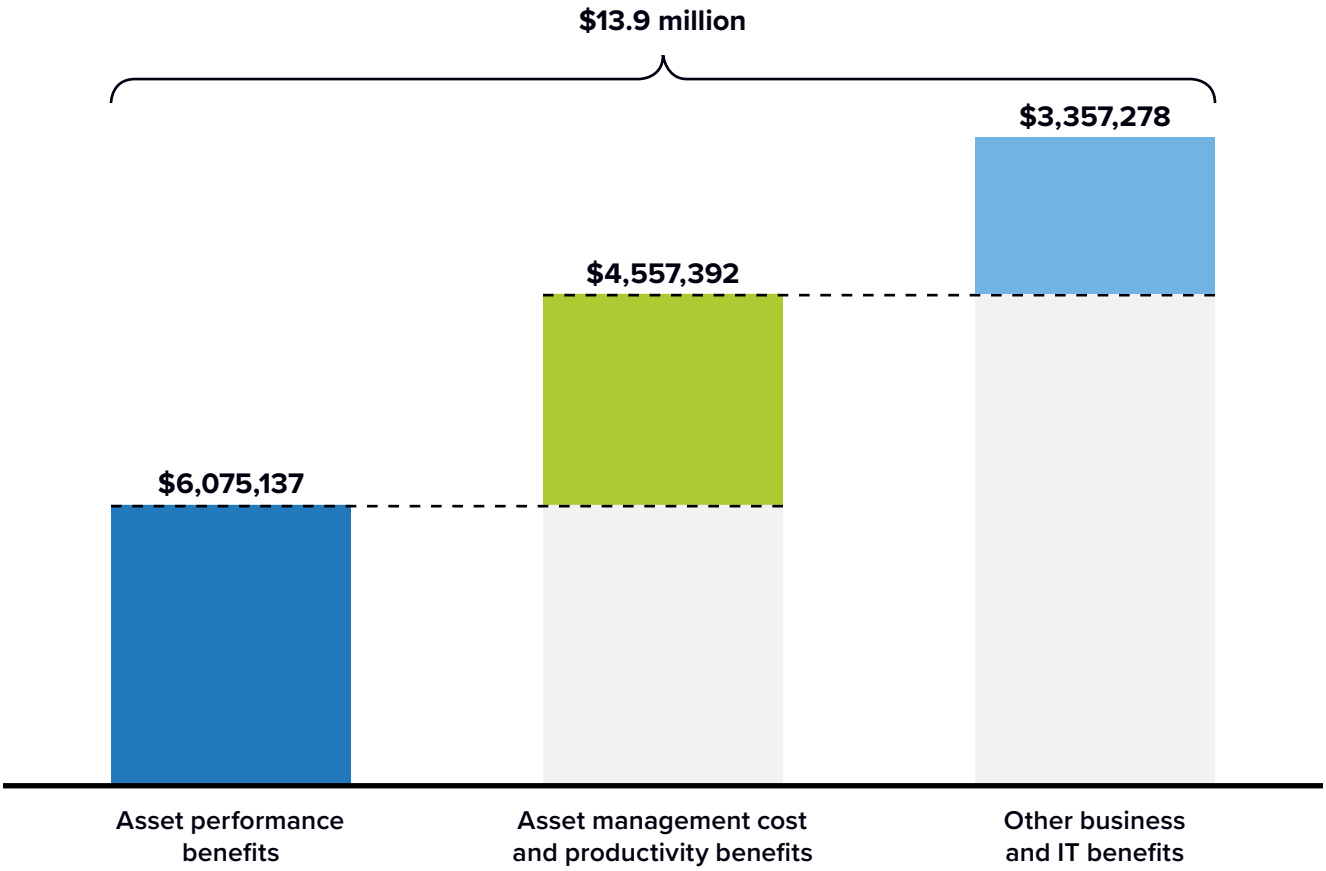
Figure 1 breaks down these benefits further, as show, in terms of:

- Asset performance benefits
- Asset management cost and productivity benefits
- Other business and IT benefits

FIGURE 1

Average Annual Benefits per Organization

($ per interviewed organization)



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

For an accessible version of the data in this figure, see Figure 1 Supplemental Data in Appendix 2.

Asset Performance Benefits from IBM Maximo

IBM Maximo is designed to help companies benefit from a fully featured EAM life-cycle and workflow management system. The platform consists of a set of applications for asset monitoring, management, predictive maintenance, and reliability planning designed to help companies extract maximum value from their enterprise assets. IBM Maximo employs a single, integrated cloud-based platform that uses AI, IoT, and analytics to optimize performance, extend asset life cycles, and reduce operational downtime and costs. AI is used to analyze data to transition from reactive to proactive maintenance and increase first-time fix rates.

In their comments to IDC, interviewed companies appreciated the platform's ability to make better proactive maintenance decisions, which, in one case, helped increase first-time fix rates for equipment. They also appreciated the platform's ability to perform predictive maintenance, which, in turn, minimized the occurrence of forced outages. They also noted that it offered greater workflow transparency to the user base.

Study participants elaborated on these benefits:

Increased proactive maintenance (construction organization):

"IBM Maximo has given my organization a better sense of the health of our assets overall, and that enables us to make better proactive maintenance decisions."

Increased first-time fix rate (construction organization):

"In the past, our customer would call our workshop to say that a machine is down and to send someone to fix it. The person available may or may not have the expertise and equipment needed at the time. Now, we have that person going out there with all the needed information, so they can go out with confidence and fix this machine. They'll have the spare parts manual in the work order with the appropriate settings and locations. As a result, we have been able to increase first-time fixes."

Ability to perform predictive maintenance (utilities organization):

"The biggest value-add of IBM Maximo is that we are starting to perform predictive maintenance on our equipment, which will cut down on our forced outages. IBM Maximo provides greater workflow transparency to our user base, which we lacked before. Everyone knows where things are in the process, and our business gets done much more efficiently by using IBM Maximo."

IDC validated these anecdotal observations by applying its Business Value methodology and quantifying the benefits using aggregated data sets from interviews. A variety of impacts were evaluated, beginning with unplanned equipment and site-related failure rates with IBM Maximo compared against previous or alternative solutions. Study participants reported that IBM Maximo significantly reduced the frequency of unplanned equipment and site-related failures that occurred. In part, this was accomplished via AI monitoring,

which facilitates condition-based maintenance that can resolve issues before they happen. The reason behind this focus on asset management becomes clear when examining the potential impact to a business from asset downtime. Separate from this Business Value study, IDC's *2022 IT/OT Convergence Study* showed that the average cost per hour of unscheduled downtime is over $200,000 across industrial segments (manufacturing — $201,000, utilities — $204,000, and oil and gas — $233,000). It is important to note that the quantified benefits in this Maximo value analysis do not include the cost per hour of unscheduled downtime (aside from personnel cost). While many factors can influence the cost of downtime, such as company size, segment, and asset criticality, even small improvements to asset downtime can result in millions of dollars saved through the course of a year. Having access to asset data is a necessary first step for any operational group looking to eliminate this downtime and become more predictive in their asset management approach.

In addition, the platform improved the time it took to remediate and resolve problems that caused assets and equipment to go offline. Ultimately, this benefit served to enable greater end-user productivity levels. **Table 3** quantifies these benefits. The total average number of unplanned asset failures annually was cut by 47%, and the time to resolve them was significantly lessened by 52%. This translated into an annual average value of end-user lost productivity benefit of $274,961.

TABLE 3

Unplanned Equipment/Site-Related Failures — End-User Benefit

	Before/ Without IBM Maximo	With IBM Maximo	Difference	Benefit
Number of unplanned asset failures per year	18.4	9.7	8.7	47%
Time to resolve per unplanned asset failure (hours)	11.4	5.5	5.9	52%
Number of users impacted by failure	81.8	81.8	n/a	n/a
Percentage of productivity loss per end user	58	58	n/a	n/a
Total number of FTEs impacted	5.3	1.3	3.9	75%
Salary benefit	$368,642	$93,682	$274,961	75%

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

IDC then drilled down on annualized equipment cost savings. Interviewed companies reported that in utilizing IBM Maximo, they were able to increase the average lifespan of their fleet of assets by up to 17%. This, in turn, resulted in significant cost avoidances in overall equipment spend. As one study participant working in the construction area noted:

"IBM Maximo helps my organization to be very structured in the way we are working and extend the lifespan of our assets. We have decided to keep our assets at a high level of quality because we believe that instead of waiting for it to break down, it's cheaper to proactively fix and manage our assets."

Interviewed organizations found that by expanding the lifespan of their equipment with IBM Maximo, they were able to decrease their equipment costs by $172 million, which amounted to a 6.3% benefit. Using a 25-year equipment lifespan assumption, **Table 4** presents IDC's calculations showing $6,879,273 in total equipment cost savings realized annually for all companies.

TABLE 4

Annualized Equipment Cost Savings

	Before/ Without IBM Maximo	With IBM Maximo	Difference	Benefit
Total equipment cost — assumption of 25-year lifespan	$2,748,732,174	$2,576,750,358	$171,981,816	6.3%
Total equipment cost per year	$109,949,287	$103,070,014	$6,879,273	6.3%

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

Asset Management Benefits from IBM Maximo

In their detailed conversations with IDC study participants discussed specific asset management benefits derived from the use and deployment of IBM Maximo.

Organization-wide benefits included, but were not limited to:

- Asset management team productivity
- Technician team productivity
- Improved operational benefits
- Asset management cost avoidance

Interviewed companies appreciated that IBM Maximo gave their technicians greater efficiency with innovative mobile applications. They also noted that the platform allowed them to eliminate wait times because technicians could use iPads to order parts and get work orders along with any technical documentation needed onsite. In addition, they noted that IBM Maximo's greater visibility using a single pane of glass provided them with better operational data for the purposes of managing and scheduling maintenance.

Study participants explained these benefits in greater detail:

Greater efficiency through mobility (construction organization):
"IBM Maximo Mobile is a game changer for my organization. Mobile has given technicians all the needed information about jobs, which they lacked before. With their smart device, you can issue them the work order. From there, they get the job number, the serial number of the equipment, and the hours they're meant to spend on it, along with any job-specific instructions. This has had a very positive impact on technician efficiency."

Wait time elimination through mobile usage (nonprofit organization):
"My organization is extremely aggressive with our use of mobile; we have won two national awards for how we use it. We've configured IBM Maximo support into every process so that wait times are eliminated. Technicians can do everything from their iPad, such as alerting the building manager, ordering parts, getting their work orders and technical documentation, and updating notes and inspection forms."

Better control of maintenance (food and beverage organization):
"My organization is very happy with IBM Maximo because we have been able to get in control of maintenance and we have visibility to everything that's happening in dashboards."

Singular platform view (retail organization):
"The single-platform approach of IBM Maximo has made the job of being an asset manager in my organization much easier."

Visibility into maintenance and scheduling (utilities organization):
"IBM Maximo is the primary tool of asset managers within my organization. Without it, they would be blind to how they manage and schedule maintenance."

Robust planning functionality (construction organization):
"My organization uses IBM Maximo to keep track of parts and ordering as well as to issue work orders for the contractors. IBM Maximo has given us a really good planning feature that we are benefiting from."

IDC then verified these observations with quantified data beginning with asset management team productivity. Study participants reported that asset management teams, including planners, schedulers, and supervisors, benefited from IBM Maximo's greater visibility into projects and work orders, automation, and planning and scheduling tools. These teams

enjoyed a better user experience with shared data and workflows while advanced analytics delivered highly relevant insights for taking the best actions to optimize assets.

Table 5 quantifies benefits in terms of productivity gains. After adoption, interviewed companies saw a 40% productivity boost for their asset management teams. This effectively meant that after adoption, teams of 69.6 could work at the equivalent level of an additional 27.5 FTEs on staff. This resulted in an annual productivity-based business value of $1,922,644 for each organization.

TABLE 5

Asset Management Team Productivity Gain

	Before/ Without IBM Maximo	With IBM Maximo	Difference	Benefit
Equivalent productivity level (FTEs)	69.6	96.1	27.5	40%
Value of staff time per year	$4,803,750	$6,726,394	$1,922,644	40%

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

IDC then looked at benefits for technician teams. Interviewed organizations reported that their technicians benefited from the mobile IBM Maximo solution because it enabled them to be more prepared for work assignments while cutting down wait times and being able to more effectively order parts and update work orders. **Table 6** (next page) quantifies calculated benefits in terms of productivity gains. After adoption, interviewed companies saw a 26% productivity gain for their technician teams, which meant that this team could work with the equivalent productivity level of having 45.7 additional FTEs on staff. IDC calculated that this resulted in an annual productivity-based value of $3,201,256 for each organization.

TABLE 6

Technician Team Productivity Gain

	Before/ Without IBM Maximo	With IBM Maximo	Difference	Benefit
Equivalent productivity level (FTEs)	173.7	219.4	45.7	26%
Value of staff time per year	$12,156,667	$15,357,922	$3,201,256	26%

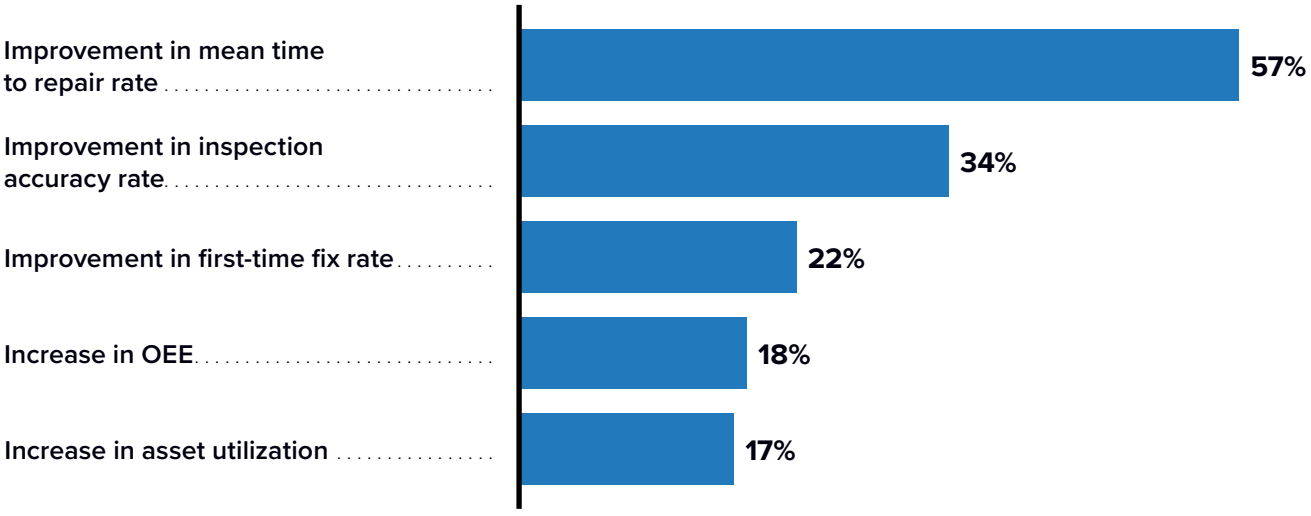
n = 10; Source: IDC Business Value In-Depth Interviews, January 2024

Another major benefit reported by study participants involved a range of improved operational impacts. To validate this, IDC developed granular performance data by identifying and measuring a series of key performance indicators (KPIs). After adoption of IBM Maximo, mean time to repair rates improved substantially (57%). In addition, overall equipment effectiveness (OEE) improved by 18% while inspection accuracy rates got a 34% boost (see **Figure 2**). Additional metrics are presented.

FIGURE 2

Operational Impact of IBM Maximo on Asset Management

(% improvement/increase)



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

Better managing assets translated into financial benefits for the companies studied. IDC examined asset management cost avoidances specifically in terms of savings in equipment inventories. IBM Maximo enabled interviewed organizations to reduce overtime and inventory costs because it offered process simplification, proactive management, and greater levels of standardization. **Table 7** presents IDC's calculations for asset management cost avoidances. As shown, IDC calculated total annual cost avoidances at $243,000.

TABLE 7

Asset Management Cost Avoidances

	Annual Avoidance per Organization
Reduction in overtime spend	$130,000
Inventory savings	$113,000
Total annual cost avoidances	$243,000

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

Additional Business and IT Benefits from IBM Maximo

Interviewed organizations achieved significant business gains from the deployment and use of IBM Maximo. This was enabled by the staff and performance improvements described previously.

As discussed in this section, IDC then zeroed in on four specific areas where business-related gains were recognized:

- Compliance team productivity
- Impacts on total annual revenue
- End-user productivity
- IT platform management efficiencies

IDC found that interviewed organizations were able to achieve significant business gains from the deployment and use of IBM Maximo. The end-user benefits that study participants experienced fostered better business operations and results. Interviewed companies

realized higher revenue by better addressing business opportunities and boosting the efficiency of the full range of asset management operations. These improvements were also fostered by the staff improvements described previously. Study participants cited specific benefits to their organizations, including the ability to initiate quicker invoicing and the use of more consistent data from Maximo to make more informed and effective decisions. Organizations also appreciated the ability to do consistent supply chain tracking via predetermined dashboard KPIs.

Study participants also called out the benefit of consistent supply chain tracking. They elaborated:

Quicker invoicing (construction organization):

"A big benefit of IBM Maximo for my organization is that we can invoice once a job is closed. All of the needed information about the job is on IBM Maximo, so invoicing the jobs is a lot quicker. We were about 65% more effective when invoicing. It's a significant benefit, and we know we can get even better. We have an average of 45 days, and we think we can easily get that down to 21 days."

Informed decision-making (construction organization):

"Information provided by IBM Maximo is consistent and constant. There is no more guessing, which allows my organization to make more informed and effective decisions."

Quicker acquisition (utilities organization):

"In the past three years, my organization has acquired three plants. The first thing we do when we acquire a plant is load their data into IBM Maximo. We could not have efficiently and effectively acquired three plants in three years with another system."

Consistent supply chain tracking (food and beverage organization):

"My organization has dashboards with all the KPIs that we measure in a consistent way for all locations, so there's no debate about the numbers. We send out reports to senior supply chain directors from all the regions where we say, 'this was happening with the IBM Maximo sites of your region.' We do it very simply, with 'it's going well/it's not going well,' and it's very easy to raise a flag where it's not going well."

IDC drilled down further. Study participants reported that their compliance teams benefited from greater data accessibility and comprehensive visibility into project work being completed in highly regulated industries.

Study participants noted that the platform helped them enable useful prioritization on legislative work and provided a platform approach to compliance, as described in these comments:

Regulatory compliance support (life science organization):
"In the life science industry, there is a lot of regulatory compliance regarding the calibration of our equipment. IBM Maximo provides support and validation for compliance-related processes for our projects and equipment. Everything that we do is very sensitive in nature."

Prioritization on legislative work (food and beverage organization):
"We have a separate job type for all the legislative and mandatory work. IBM Maximo enables us to track this work with a higher priority and never let it linger."

Platform approach to compliance (utilities organization):
"Regulatory and compliance PMs, environmental efforts, chemical usage, and spend are all being tracked through IBM Maximo. As a result, this team is more efficient; that's one of the reasons we use IBM Maximo."

Significant regulatory improvements (nonprofit organization):
"Regulatory compliance and visibility has greatly improved for my organization from the digital capabilities of IBM Maximo. It has been a significant improvement in the eyes of our regulator. Everything needed is in the platform, including the tech notes and pictures. It's awesome."

Table 8 quantifies benefits in terms of productivity gains for compliance teams. After adoption, interviewed companies saw a 21% productivity boost. This resulted in an annual productivity-based business value of $153,708 for each organization.

TABLE 8

Compliance Team Productivity Gain

	Before/ Without IBM Maximo	With IBM Maximo	Difference	Benefit
Equivalent productivity level (FTEs)	10.3	12.5	2.2	21%
Value of staff time per year	$723,333	$877,042	$153,708	21%

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

With the conferred advantages of better data availability, greater visibility, quicker processes, and better ability to demonstrate value to customers, IBM Maximo enabled interviewed organizations to better serve their customers and grow their business portfolios by making more informed and market-savvy decisions. Commenting on increased revenue benefits, one study participant working in the nonprofit field noted: *"This week, we had a major contract opportunity. We showed them our system backed by IBM Maximo, and we will likely get the contract. We've gotten contracts just on the applied system capability, because it's really providing value and efficiency gains. A large portion of our revenue would not have been achieved without those digital capabilities provided by IBM Maximo. We've got another $60 million in queue, which hasn't been awarded, but we would not have gotten that opportunity to bid without that digital capability."*

IDC quantified these benefits, beginning with revenue-related impacts. **Table 9** shows annual revenue gains. Factoring in an operating margin of 15%, IDC calculated that interviewed organizations were able to achieve additional annual net revenue of $2,833,608.

TABLE 9

Business Enablement — Higher Revenue

	Per Organization	Per 100 Internal Users
Total additional gross revenue per year	$18,890,721	$1,836,190
Assumed operating margin	15%	15%
Total additional net revenue — IDC model	$2,833,608	$275,428

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

In addition, interviewed organizations reported that IBM Maximo provided their end users engaged in manufacturing, supply chain, and other operations with reliable information and metrics that helped them continually improve operations. Over time, this had measurable impacts on end-user productivity and business enablement.

Table 10 (next page) quantifies these productivity gains. Factoring in a 15% operating margin, end users were able to work with the equivalent productivity level of having 12 additional FTEs on staff, which was valued at $843,299 per year. Additional granular metrics are presented.

TABLE 10

Business Enablement — End-User Productivity Benefit

	Before/ Without IBM Maximo	With IBM Maximo	Difference	Benefit
Equivalent productivity level (FTEs) — manufacturing	1,035	1,069	34	3%
Equivalent productivity level (FTEs) — supply chain	695	741	46	7%
Total FTE count	1,730	1,810	80	5%
Total FTE count — net	1,730	1,742	12	1%
Value of staff time per year	$121,079,000	$121,922,299	$843,299	1%

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

IDC then examined benefits for the team charged with running IBM Maximo. IT platform managers at interviewed organizations benefited from Maximo's ability to consolidate asset management into a singular, easy-to-manage, high-visibility platform. As one study participant working for a food and beverage organization noted: *"A big benefit of IBM Maximo is the centralized IT and template support for our entire global organization. We have now visibility of what maintenance is happening at all of our sites. We are in control, we see who's using it properly, and we see who doesn't use it properly."*

After adoption, interviewed organizations found that this team was able to work with 17% greater efficiency (see **Table 11,** next page). This means that interviewed organizations needed 1.2 fewer FTEs to manage the equivalent task environment of their previous staff levels. This improvement resulted in an annual business value of $123,000 for each organization.

TABLE 11

IT Platform Management Efficiency Gain

	Before/ Without IBM Maximo	With IBM Maximo	Difference	Benefit
Total FTE count	7.4	6.2	1.2	17%
Value of staff time per year	$738,000	$615,000	$123,000	17%

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

ROI Summary

Table 12 presents IDC's ROI analysis of study participants' use of IBM Maximo. As shown, IDC projects that these companies will achieve five-year discounted benefits worth an average of $48,294,300 per organization through better asset management, enhanced staff efficiencies, and improved business results. These benefits compare with total five-year discounted costs of $7,758,400 per organization. These levels of benefits and investment costs are projected to result in an average five-year ROI of 522% with a payback period of 10.5 months.

TABLE 12

Five-Year ROI Analysis

	Per Organization	Per 100 Internal Users
Discounted benefits	$48,294,300	$4,694,236
Discounted investment	$7,758,400	$754,121
Net present value	$40,535,900	$3,940,115
ROI	522%	522%
Payback period	10.5 months	10.5 months
Discount factor	12%	12%

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

Challenges/Opportunities

ALM applications are evolving rapidly as vendors invest research and development dollars into bolstering, augmenting, and, in some cases, redesigning their applications. As a result, it is extremely important for end users to understand how vendors and their software are positioned currently as well as how asset management solutions may be situated in the next three to five years. Organizations typically make a long-term commitment to their asset management applications because the costs to migrate the asset data, configure and customize workflows, integrate with adjacent systems, and train a distributed, and often partially outsourced, team of technicians are too high. Thus, it will always be vital to evaluate a software vendor's strategy, road map, and responsiveness to customer feedback in addition to its present features and functionality. Cost and price will always be top of mind for the segments IBM Maximo serves. It will be important for IBM to continue focusing on flexible pricing options for their ALM offering, especially as evolving market conditions can play a large role in the value/ROI an organization can realize.

IBM Maximo's ongoing investments in technology such as mobility, remote monitoring, AI/ML, and cloud to improve/add new functionality has been well received by end users, but the asset management market has been crowded with new entrants moving into the space in recent years. Many of these vendors will say that they can support predictive asset management but in reality only provide high-level asset analytics, not possessing the failure mode libraries necessary to build out optimized maintenance strategies. It is not always the best solution that gets the most attention: This will only become more of a factor as the topic of AI has exploded recently, leading every company to market around it in some form. Cutting through all this noise and educating end users on what can actually be achieved through modern ALM solutions will be an ongoing challenge for IBM to focus on.

Conclusion

The operational environment is changing faster than ever before. As businesses come to terms with this shift, it will be those organizations that can balance efficiency and resiliency that will become the most successful. Operations play a critical role in enabling the achievement of this goal; companies that continue to take a reactive approach to asset management put their entire business at risk.

Becoming a leader in asset management requires nothing less than the adoption of a full complement of digital technology solutions and capabilities, including EAM, APM, and reliability-centered maintenance. The IBM Maximo Application Suite is one of the most comprehensive and widely adopted asset life-cycle management solution sets across numerous industries due to the benefits that operations can realize — including efficiency improvements, reductions in unplanned downtime, more productive employees, and lower asset management costs. Embracing new technology is what will allow a company to make the shift toward a predictive asset management approach and, ultimately, success.

Appendix 1: Methodology

Table 13 presents a summary of IDC's Business Value calculations.

TABLE 13

Benefits from Use of IBM Maximo

Category of Value	Average Quantitative Benefit	15% Margin Applied	Calculated Average Annual Value Factoring in Deployment Time*
Asset management cost avoidances	$243,000 annual asset management cost avoidance	No	$206,348
Technician team productivity benefit	26% more productive worth 46 FTEs — $70,000 salary	No	$2,718,400
Total equipment cost — assumption of 25-year lifespan	6.3% cost savings from increased asset lifespan worth 6,879,273 annually	No	$5,841,649
Asset management team productivity benefit	40% more productive worth 27 FTEs — $70,000 salary	No	$1,632,645
IT platform management efficiency	17% more efficient worth 1.2 FTEs — $100,000 salary	No	$104,448
Unplanned downtime — end-user benefit	79% reduction in unplanned downtime worth 3.9 FTEs — $70,000 salary	No	$233,488
Compliance team productivity benefit	21% more productive worth 2.2 FTEs — $70,000 salary	No	$130,524
Business enablement — staff productivity benefit	1% more productive worth 12 FTEs — $70,000 salary	Yes	$716,101
Business enablement — higher revenue	$2,833,608 additional revenue per year	Yes	$2,406,206
Total average annual benefits	**$13.9M per organization per year**		

* Includes 9.1 average months deployment time in year 1.
n = 10; Source: IDC Business Value In-Depth Interviews, January 2024

Appendix 1: Methodology (continued)

IDC's standard ROI methodology was utilized for this project. This methodology is based on gathering data from current users of IBM Maximo as the foundation for the model.

Based on interviews with organizations using IBM Maximo, 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 IBM Maximo.** In this study, the benefits included IT cost reductions and avoidances, staff time savings and productivity benefits, and revenue gains.
2. **Created a complete investment (five-year total cost analysis) profile based on the interviews.** Investments go beyond the initial and annual costs of using IBM Maximo and can include additional costs related to migrations, planning, consulting, and staff or user training.
3. **Calculated the ROI and payback period.** IDC conducted a depreciated cash flow analysis of the benefits and investments for the organizations' use of IBM Maximo over a five-year period. ROI is the ratio of the net present value and the discounted investment. The payback period is the point at which cumulative benefits equal the initial investment.

IDC bases the payback period and ROI calculations on 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 productivity savings. For the purposes of this analysis, IDC has used assumptions of an average fully loaded salary of $100,000 per year for IT staff members and an average fully loaded salary of $70,000 per year for non-IT staff members. IDC assumes that employees work 1,880 hours per year (47 weeks x 40 hours).
- The net present value of the 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 IBM Maximo requires 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.

Appendix 2: Supplemental Data

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

FIGURE 1 SUPPLEMENTAL DATA

Average Annual Benefits per Organization

	Per Organization
Asset performance benefits	$6,075,137
Asset management cost and productivity benefits	$4,557,392
Other business and IT benefits	$3,357,278
Total	**$13.9M**

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

Return to original figure

About the IDC Analysts

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Megan Szurley is a senior research analyst for the Business Value Strategy Practice, responsible for creating custom business value research that determines the ROI and cost savings for enterprise technology products. Megan's research focuses on the financial and operational impact of these products for organizations once deployed and in production. Prior to joining the Business Value Strategy Practice, Megan was a consulting manager within IDC's Custom Solutions division, delivering consultative support across every stage of the business life cycle: business planning and budgeting, sales and marketing, and performance measurement. In her position, Megan partners with IDC analyst teams to support deliverables that focus on thought leadership, business value, custom analytics, buyer behavior, and content marketing. These customized deliverables are often derived from primary research and yield content marketing, market models, and customer insights.

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