

# VMware vRealize Intelligent Operations Delivers Efficiency And Performance

To better understand the benefits, costs, and risks associated with vRealize Intelligent Operations, Forrester Consulting conducted a Total Economic Impact™ (TEI) study based on interviews with organizations that have used Intelligent Operations to manage their virtual infrastructure. With the solution, which comprises vRealize Operations, vRealize Log Insight, and vRealize Business for Cloud, interviewees gained visibility across their infrastructure in a single console, allowing them to balance workloads, troubleshoot issues more efficiently, and improve performance and availability. By upgrading to the application monitoring add-on feature, customers can gain comprehensive visibility across applications via a single unified management tool. The following is a summary of the business impact that enterprises may realize by leveraging vRealize Intelligent Operations. Readers can download the full study at <http://www.vmware.com/products/vrealize-suite.html>.

## QUANTIFIED BENEFITS OF vREALIZE INTELLIGENT OPERATIONS

Based on the composite organization, benefits of vRealize Intelligent Operations include:



20% improvement in operational efficiency

- ▶ **A 20% improvement in operational efficiency.** vRealize Intelligent Operations delivers real-time performance metrics, log analytics, and proactive capacity management, which allows for faster incident resolution and compliance monitoring activities. These functionalities ease the workload of the infrastructure operations team, allowing it to complete the same amount of work in less time.



10% reduction in hardware spending

- ▶ **Over 10% savings in hardware costs.** Workloads are proactively balanced across clusters, providing capacity scenario planning capabilities and both rightsizing and reclaiming capacity. This functionality maximizes existing server utilization, reducing not only overall capacity requirements but also annual growth rates.



75% reduction in unplanned downtime

- ▶ **A 75% reduction in unplanned downtime.** The IT operations team receives alerts about potential issues so it can then automate an action, such as rebalancing workloads. It also receives log analytics data that helps pinpoint the root causes of problems, allowing teams to solve problems before they become critical errors. Together, these functionalities reduce system shutdowns and the ensuing unplanned downtime.

Based on the analysis, a composite organization has experienced the following results.

FIGURE 1

Financial Summary Showing Three Year Risk-Adjusted Results



## OVERVIEW

This is a summary of the VMware vRealize Intelligent Operations Total Economic Impact case study.

## METHODOLOGY

VMware commissioned Forrester to conduct a Total Economic Impact (TEI) study to provide IT and business leaders an understanding of the potential return on investment (ROI) they may realize by implementing vRealize Intelligent Operations to manage their virtual infrastructure.

Forrester developed a TEI analysis based on four in-depth interviews with IT leaders responsible for managing the virtual infrastructure.

## COMPOSITE ORGANIZATION

This analysis uses a composite organization based on interviewee characteristics to report cost and benefit findings. This organization is a global company with 4,000 employees and 2,000 virtual machines.

Prior to the deployment of Intelligent Operations, the IT operations team struggled to manage its growing infrastructure. Team members could never break out of firefighting mode, relentlessly battling a growing ticker of service incidents while searching for underlying root causes. Capacity ebbed and flowed, with virtual machines redlining during peak periods.

## Approach And Methodology

Forrester took a multistep approach to evaluate the impact that VMware vRealize Intelligent Operations can have on an organization. Specifically, we:



Based on the interviews, Forrester constructed a TEI framework, a composite organization, and an associated ROI analysis that illustrates the financial impact of the technology. The composite organization, which Forrester synthesized from these results, represents a global organization with 4,000 employees and 2,000 virtual machines (VMs). Prior to implementing VMware, the organization was managing its complex virtual infrastructure and supporting business-critical applications with a variety of disjointed tools from VMware and third-party vendors and ad hoc spreadsheets. It was a laborious task that involved a significant number of time-consuming and error-prone manual steps and entailed significant labor costs, external product licenses, and the overhead of learning and managing multiple tools.

Prior to the deployment of the Intelligent Operations tools, the IT operations team struggled to manage its growing infrastructure. One interviewee described it as requiring “constant care and feeding.” Team members could never break out of firefighting mode, relentlessly battling a growing ticker of service incidents while searching for underlying root causes. As a result, capacity ebbed and flowed, with virtual machines redlining during peak periods. The team needed to reduce its number of tickets and improve availability, ideally with a management solution that was more user friendly.

Team members identified several key drivers for implementing a cloud management solution. They hoped to:

- › Optimize capacity.
- › Reduce incidents.
- › Improve availability.
- › Troubleshoot more quickly and effectively.

The composite organization researched several different solutions and ultimately chose vRealize based on its ability to meet those objectives and its own longstanding relationship with VMware. The adoption of a cloud management solution with VMware delivered:

### › **Visibility across the infrastructure.** vRealize Intelligent

Operations provided the IT team with a comprehensive picture of the physical and virtual infrastructure, including workload distribution, log analytics, and costs. It also provided real-time performance and health metrics. These insights empowered the team to solve incidents more quickly and work more efficiently. Said one interviewee: “We now have a better view into our environment: how the storage is implemented, how the network is behaving, and much more. Before, we were just blindly monitoring; now we are better able to troubleshoot and communicate with our other teams.”

### › **Improved performance and capacity optimization.** vRealize Intelligent Operations automatically balances workloads and resolves contention. By optimizing existing capacity, the composite organization reduces the number of physical servers required to operate its virtual machines and improves performance of the existing infrastructure. This improved performance reduces the number of service incidents, driving further efficiencies for the system administrators.

### › **Insight into technology usage costs.** vRealize Intelligent Operations tracks private and public cloud costs, allowing teams to justify investments, make informed decisions about where to invest, and track costs back to specific departments.

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*“We’re able to sleep at night knowing that our tools are monitoring our environment and sending us critical alerts in a timely manner, so that we’re able to proactively fix problems before they hit production.”*

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~ Data center manager, utility

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## vRealize Intelligent Operations Delivers Visibility, Efficiency, And Performance

The composite organization experienced the following benefits:

- › **Cost savings from a 20% improvement in operational efficiency.** Prior to its adoption of Intelligent Operations, the composite organization required approximately 10 resources to manage its infrastructure and operations, with additional headcount needed each year to support growth. Today, with Intelligence Operations, it has reduced its headcount to eight and requires only half an additional resource to meet its growing workload. Several elements contribute to this overall efficiency gain, including:

<b>Improved incident management</b>	Alerts warn operators to potential issues, and analytics pinpoint the root cause, allowing teams to resolve issues before they become actual problems and preventing teams from having to run time-consuming, in-depth diagnostic tests. When incidents are avoided, operators have fewer problems to respond to, reducing the time dedicated to resolving tickets.
<b>Visibility into the infrastructure</b>	The visibility into the performance, capacity, and configuration of the infrastructure makes ramping new employees more straightforward as well as improves the productivity of existing staff.
<b>Compliance</b>	The composite organizations reduced the amount of time dedicated to the several audit requests it fields each month. It used to spend a half hour gathering the necessary inputs to respond to the audit requests, and it can now complete the same task in just minutes.

This operational efficiency leads to a cost savings of two headcounts in Year 1 and three full headcounts in Year 3, for a total risk-adjusted benefit of \$810,000.

- › **Hardware cost avoidance of over 10%.** Analytics and optimization capabilities enabled the composite organization to identify and rightsize overprovisioned resources, balance workloads, and consolidate VMs. Previously, the composite organization required 133 servers to host its 2,000 virtual machines. With these capacity management insights, the composite organization is able to run an equivalent number of VMs on 10% fewer physical servers and reduce the amount of excess server capacity it purchases each year from 10% to 5%. With its capacity optimized, the composite organization saved \$1,131,764 over three years.
- › **Cost savings from a 75% reduction in unplanned downtime.** Prior to implementing Intelligent Operations, the composite organization experienced 99.6% uptime in its production environment. It was not able to identify issues before they became critical, and would therefore have to shut down the environment to administer patches. With the capabilities outlined above, interviewees were able to detect issues before they required a shutdown. The composite organization improved its performance to 99.9% reliability, saving \$1,340,280 over three years.

**TABLE 1: Total Benefits (Risk-Adjusted)**

Benefit Category	Year 1	Year 2	Year 3	Total	Present Value
Labor cost savings from ease of management	\$216,000	\$270,000	\$324,000	\$810,000	\$662,930
Hardware cost avoidance	\$239,400	\$371,070	\$521,294	\$1,131,764	\$915,961
Cost savings from a reduction in downtime	\$446,760	\$446,760	\$446,760	\$1,340,280	\$1,111,026
<b>Total benefits (risk-adjusted)</b>	<b>\$902,160</b>	<b>\$1,087,830</b>	<b>\$1,292,054</b>	<b>\$3,282,044</b>	<b>\$2,689,917</b>

## vRealize Intelligent Operations Costs Include Labor, Hardware, And Licensing

The composite organization experienced the following risk-adjusted costs.

- › **Due diligence, planning, and implementation.** Planning and implementation required a combined three weeks of effort from several different resources, for a total of just over \$7,000.
- › **Hardware.** A vRealize Intelligent Operations implementation requires two servers for hosting, for a total of \$42,000.
- › **Licensing and maintenance fees.** The composite organization paid VMware roughly \$1 million over three years for licensing and maintenance.
- › **Ongoing management.** The composite organization has one full-time employee managing the tool, for a total of approximately \$400,000 over three years.

Table 2 shows the total of all risk-adjusted costs as well as associated present values (PVs), discounted at 10%.

**TABLE 2: Total Costs (Risk-Adjusted)**

Cost Category	Initial	Year 1	Year 2	Year 3	Total	Present Value
Due diligence and implementation costs	\$7,615	\$0	\$0	\$0	\$7,615	\$7,615
Hardware	\$42,000	\$0	\$0	\$0	\$42,000	\$42,000
Licensing and maintenance fees	\$0	\$525,250	\$232,513	\$244,138	\$1,001,901	\$853,084
Ongoing management	\$0	\$132,000	\$132,000	\$132,000	\$396,000	\$328,264
<b>Total costs (risk-adjusted)</b>	<b>\$49,615</b>	<b>\$657,250</b>	<b>\$364,513</b>	<b>\$376,138</b>	<b>\$1,447,516</b>	<b>\$1,230,964</b>

Source: Forrester Research, Inc.

## Benefit And Cost Results Are Risk Adjusted

Risk adjustment is included in the TEI analysis because a proposed investment in vRealize Intelligent Operations may deviate from the original or expected requirements, resulting in higher costs than anticipated, or the business or technology needs of the organization may not be met by the investment in vRealize Intelligent Operations, resulting in lower overall total benefits. Benefit and cost results have been adjusted by a factor based on the likelihood and severity of any deviation from estimated results. Benefit adjustments range from 5% to 15%; costs were increased by 5% to 10%. Readers are urged to apply their own risk ranges.

## An Investment Today Can Lead To Future Opportunities

Flexibility represents an investment in additional capacity or capability that could be turned into future opportunity or business benefit for some future additional investment. This provides an organization with the ability to engage in future initiatives at a lower incremental cost but not the obligation to do so. The composite organization identified three areas that it might consider in the future:

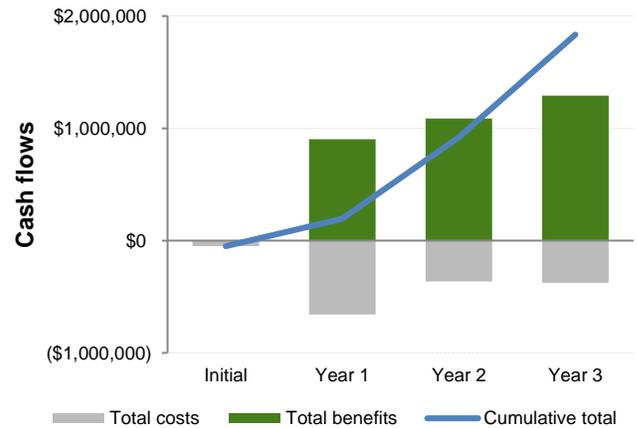
- › With improved operational efficiency, interviewees expect to leverage their team's recuperated time to explore new ways to support their business partners.
- › With improved capacity management and visibility into their infrastructure, interviewees anticipate an improved ability to forecast the business' needs and growth, which can accelerate procurement processes and reduce delays.
- › By selecting to use the Blue Medora application monitoring add-on feature to vRealize Operations, Intelligent Operations customers can create a single pane of glass for their operating environment, delivering additional visibility.

## Financial Summary

The risk-adjusted financial results calculated in the Benefits and Costs sections (including expected growth in client deployment) can be used to determine the ROI, NPV, and payback period for the composite organization's investment in vRealize Intelligent Operations. Table 3 shows the risk-adjusted ROI, NPV, and payback period values.

For more information, visit the vRealize Intelligent Operations website, where you can download a full, more detailed TEI analysis of the benefits and costs: <http://www.vmware.com/products/vrealize-suite.html>.

**FIGURE 2: Financial Summary**



**TABLE 3: Cash Flow And Financial Summary**

<b>ROI:</b> <b>119%</b>	<b>Payback:</b> <b>3 months</b>	<b>Benefits (PV):</b> <b>\$2,689,917</b>	<b>Costs (PV):</b> <b>\$1,230,964</b>	<b>NPV:</b> <b>\$1,458,954</b>
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Source: Forrester Research, Inc.

### DISCLOSURES

The reader should be aware of the following:

- › The study is commissioned by VMware and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.
- › Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in VMware vRealize Intelligent Operations.
- › VMware reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.
- › VMware provided the customer names for the interviews but did not participate in the interviews.

### ABOUT FORRESTER CONSULTING

Forrester Consulting provides independent and objective research-based consulting to help leaders succeed in their organizations. Ranging in scope from a short strategy session to custom projects, Forrester's Consulting services connect you directly with research analysts who apply expert insight to your specific business challenges. For more information, visit [forrester.com/consulting](http://forrester.com/consulting).

### ABOUT TEI

Total Economic Impact™ (TEI) is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders. The TEI methodology consists of four components to evaluate investment value: benefits, costs, risks, and flexibility. <http://www.forrester.com/consulting>