

FORRESTER®

The Total Economic Impact™ Of Cisco Intersight Workload Optimizer

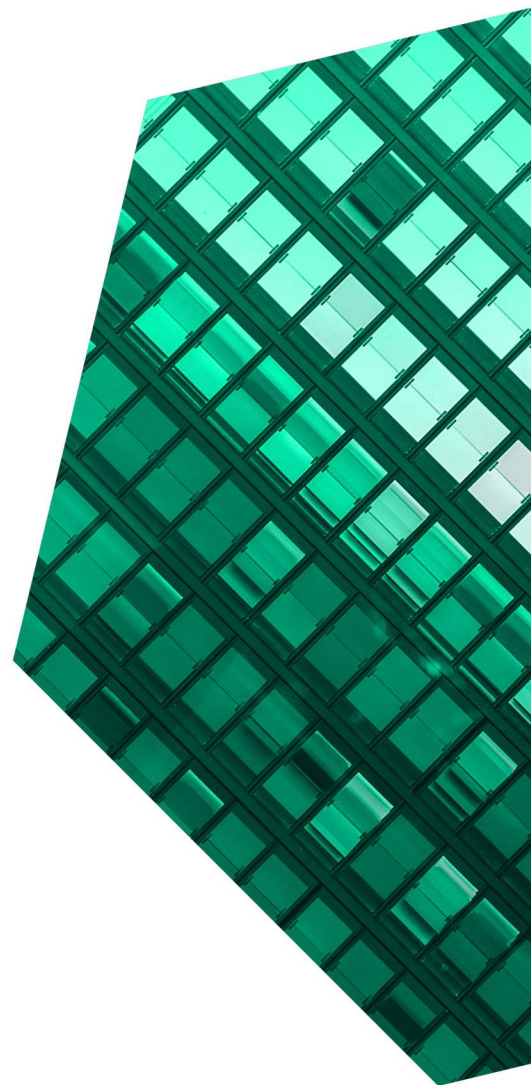
Revenue Improvements And TCO Savings Enabled By
Optimization Of Workloads Across Hybrid Cloud
Environments

FEBRUARY 2021

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ABOUT FORRESTER CONSULTING

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Executive Summary

Forrester's analysis of six current Cisco customers found that Intersight Workload Optimizer enabled these organizations to improve the performance and availability of their business-critical applications while saving on infrastructure costs and IT personnel productivity. An analysis of the composite organization, which is based on revenues of \$15 billion and a headcount of 20,000 employees, demonstrates benefits of \$6.9 million over three years versus costs of \$1.3 million. This adds up to a net present value (NPV) of \$5.6 million and an ROI of 451%.

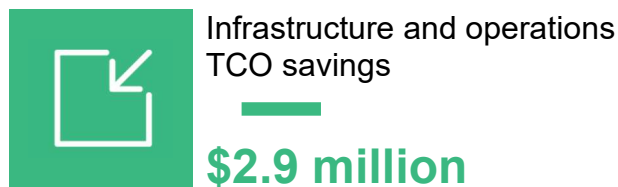
Today's customers and employees demand great digital experiences — fast. To satisfy them, infrastructure and operations (I&O) leaders and teams must ensure that they can continuously deliver on both innovation and quality, leveraging automation and modern technology operations practices.¹ To ensure these seamless experiences, it is critical to optimize infrastructure utilization and provision for this utilization appropriately.

Cisco commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying [Intersight Workload Optimizer](#). The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Intersight Workload Optimizer on their organizations. Cisco's Intersight Workload Optimizer combines IT resource management with governance and compliance functionalities both on-premises and in the cloud with rich compatibility of other Cisco solutions. This allows cost savings to be achieved for virtual and physical infrastructure, along with additional business benefits such as improvements to revenue.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed six customers with experience using Intersight Workload Optimizer. For the purposes of this study, Forrester aggregated the experiences of the interviewed customers and combined the results into a single [composite organization](#).

Prior to using Intersight Workload Optimizer, the interviewed organizations struggled with increasingly complex, congested, and expensive virtual and public cloud environments.

Deploying Cisco Intersight Workload Optimizer allowed the interviewed organizations to: ensure the performance and availability of their critical applications; improve infrastructure utilization through automation; optimize infrastructure spend; and enable IT teams to manage more with fewer personnel.



“ Cisco Intersight Workload Optimizer not only helps us reduce our infrastructure-related costs, but [it also] allows us to ensure that our business-critical applications have the right level of resourcing. ”

— Head of cloud services, financial services

KEY FINDINGS

Quantified benefits. Risk-adjusted present value (PV) quantified benefits include:

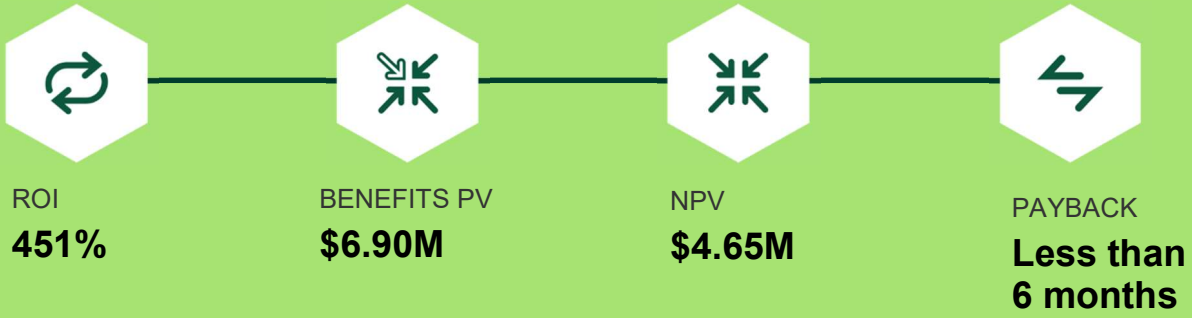
- **Infrastructure total cost of ownership (TCO) savings of nearly \$1.6 million per year.** Each of the interviewed organizations noted savings through better optimization on their current infrastructure investments. This allows additional or redundant public cloud resource consumption while rightsizing on-premises workloads on current hardware, and it saves the organizations on net-new infrastructure purchases, refreshes, and maintenance.
- **IT productivity increases of 35% on average.** Visibility and insights across every layer of the application stack plus automated actions free up application and IT teams to focus on innovation and competitive advantage. This allows organizations to reclaim valuable FTE hours for other value-added tasks and/or to avoid future hires.
- **Revenue improvements attributable to improved application performance and availability.** With Cisco's Intersight Workload Optimizer, interviewees cited an increase in application performance and availability of over 20% through enhancements brought on by resource utilization. This impacts both internal and customer-facing applications; the latter of which directly impacts revenue.
- **Nearly \$1 million in profit from accelerated time-to-market for key IT projects.** By reallocating IT resources and cutting down procurement cycles, which support revenue-generating IT projects, revenue and profit are realized sooner.
- **Avoided software license fees.** The interviewed customers also reported savings on license fees for tools replaced by Cisco's Intersight Workload Optimizer, as well as on virtualization license savings due to consolidation and increased host density.

Unquantified benefits. Benefits that are not quantified for this study include:

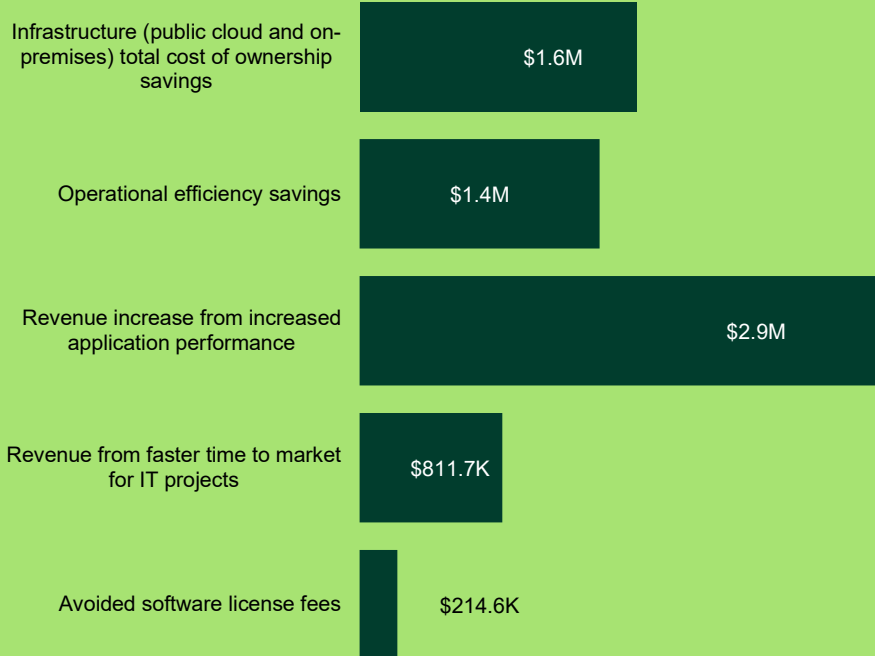
- **Improved visibility and insights.** While the interviewed organizations cited productivity benefits for their IT personnel, which is attributable to an increase in visibility throughout their infrastructure, it should also be noted that this visibility also yields confidence in the decision-making of capacity-related infrastructure.
- **The ability to create new offerings at a lower cost.** Interviewees noted that both a reduction in infrastructure spend and an increase in application performance will enable them to build better products and services at a lower cost down the road, potentially yielding additional revenue or market share.
- **License fees paid to Cisco of \$285,000 per year over three years.** The interviewed organizations described paying a license fee to Cisco for Intersight Workload Optimizer usage that was based on the number of virtual machines (VMs). This fee included licensing for Intersight Workload Optimizer and professional services to assist with the initial deployment.
- **Implementation personnel costs of just over \$100,000.** The interviewed organizations described the level of personnel effort that was required over the initial deployment period for Intersight Workload Optimizer. Most interviewees reported averaging a three-month implementation, including the development of the business case and its deployment.
- **Ongoing management and training personnel costs of just under \$75,000 per year (on average) over three years.** Personnel costs for management and initial/ongoing training were detailed by the interviewed organizations and included in this analysis.

“ Amid the 2020 pandemic, we’ve been able to confidently add resources for remote workers without adding infrastructure or affecting production workloads. This is fantastic.”

— Capacity planner, energy



Benefits (Three-Year)



TEI FRAMEWORK AND METHODOLOGY

From the information provided in the interviews, Forrester constructed a Total Economic Impact™ framework for those organizations considering an investment in the Intersight Workload Optimizer.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact that the Intersight Workload Optimizer can have on an organization.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by Cisco 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 the Intersight Workload Optimizer.

Cisco 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.

Cisco provided the customer names for the interviews but did not participate in the interviews.



DUE DILIGENCE

Interviewed Cisco stakeholders and Forrester analysts to gather data relative to the Intersight Workload Optimizer.



CUSTOMER INTERVIEWS

Interviewed six decision-makers at organizations using the Intersight Workload Optimizer to obtain data with respect to costs, benefits, and risks.



COMPOSITE ORGANIZATION

Designed a composite organization based on characteristics of the interviewed organizations.



FINANCIAL MODEL FRAMEWORK

Constructed a financial model representative of the interviews using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewed organizations.



CASE STUDY

Employed four fundamental elements of TEI in modeling the investment impact: benefits, costs, flexibility, and risks. Given the increasing sophistication of ROI analyses related to IT investments, Forrester's TEI methodology provides a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

The Cisco Intersight Workload Optimizer Customer Journey

Drivers leading to the Cisco investment

Interviewed Organizations			
Industry	Region	Interviewee	Number of VMs
Energy	Australia	Capacity planner	~1,000
Financial services	Global	Head of cloud services and platform architecture	~8,000
Healthcare	United States	Team lead, systems engineering	~1,000
Insurance	United States	Director of infrastructure	~5,000
Oil and gas	Global	Cloud services and optimization manager	~9,000
Transportation	Global	Technology and security manager	~<500

KEY CHALLENGES

Before implementing Cisco Intersight Workload Optimizer, the interviewed organizations struggled with common challenges, including:

- **Excessive public cloud and on-premises infrastructure costs.** A variety of factors among the interviewed organizations were driving resource costs higher than ever. Two of the four interviewees noted that growth through acquisition contributed to redundancies and excessive costs within their public cloud and on-premises infrastructure. These organizations previously looked for tools that could assist with major consolidation efforts. Other interviewees cited a steady increase of internal and customer-facing applications that place additional demand on both their cloud and physical infrastructure deployments and requirements moving forward.
- **A lack of visibility into key infrastructure.** Interviewees noted that the lack of visibility, in regard to a single-pane-of-glass view, into critical infrastructure and dependencies in their organizations not only forced additional work on those tasked with managing it, but it also

obscured potential areas of workload rightsizing and cost savings.

- **A lack of staff capacity to manage infrastructure.** A lack of automation functionality on legacy tools contributed to the additional burden on staff to manually plan for capacity and act on the appropriate actions. Interviewees told Forrester that these increases in workload outpaced their organizations' ability to hire more staff to address it.

“Our staff was spending way too much time on tasks that did not add any business value.”

Head of cloud services, financial services

- **Challenges pinpointing customer-impacting application performance issues.** IT teams spent inordinate amounts of time identifying the root causes of performance issues that were impacting both revenue and customer

experience. This prolonged their impact and consumed valuable IT personnel hours.

INVESTMENT OBJECTIVES

The interviewed organizations searched for a solution that could:

- Work across multiple categories of public cloud and on-premises infrastructure.
- Minimize disruption of application end users.
- Reduce infrastructure costs over time.

KEY RESULTS

The interviews revealed the following key results from the Cisco Intersight Workload Optimizer investment:

- **Reductions in infrastructure spending.** Through optimization of workloads on existing infrastructure, each of the interviewed companies reported savings on infrastructure spending in the public cloud and on-premises deployments.
- **Productivity increases for staff from automation and a single-pane-of-glass view into infrastructure.** With Cisco Intersight Workload Optimizer and AppDynamics, staff assigned to infrastructure management gain visibility, decisions, and the ability to automate tasks that once overburdened them. This allowed organizations to do more with less and avoid net-new hires while improving infrastructure and application performance.
- **Improvements to revenue-generating application performance.** Through this visibility and automation of key infrastructure tasks, interviewees reported a decrease in incidents that lead to application instability or unplanned downtime. In the case of customer-facing applications, this correlates to reclaiming potentially lost revenue.

COMPOSITE ORGANIZATION

Based on the interviews, Forrester constructed a TEI framework, a composite company, and a ROI

Composite organization facts

- **\$15B revenue**
- **3,500 VMs**
- **250 servers**
- **2 data centers**

analysis that illustrates the areas financially affected. The composite organization is representative of the six companies that Forrester interviewed and is used to present the aggregate financial analysis in the next section. The composite organization has the following characteristics:

Description of composite. The composite organization is a global, \$15 billion financial services organization with an employee headcount of 20,000 that is spread in multiple locations throughout the world. It has grown primarily through acquisitions over the past decade. Additionally, the composite organization leans heavily on its applications, notably customer-facing applications which directly affect revenue. The size of this composite organization is based on the average of the interviewed organizations.

Deployment characteristics. The composite organization has a mixture of public cloud and on-premises infrastructure as a result of acquisition growth. Globally, there are approximately 3,500 VMs, 250 physical servers, two data centers, and significant public cloud consumption making up the bulk of the organization's infrastructure. Given the nature of the company's growth, there are inherent redundancies and inefficiencies within the infrastructure that are affecting application performance, and they represent a potential area for cost savings once optimized. Cisco Intersight Workload Optimizer is selected to empower

employees with the tools they need to proactively identify performance issues and automate against them in the future with AI-powered decisions and performance with real-time actions.

Analysis Of Benefits

■ Quantified benefit data as applied to the composite

Total Benefits						
Ref.	Benefit	Year 1	Year 2	Year 3	Total	Present Value
Atr	Infrastructure TCO savings	\$742,500	\$569,250	\$569,250	\$1,881,000	\$1,573,140
Btr	Operational efficiency savings	\$548,625	\$548,625	\$548,625	\$1,645,875	\$1,364,349
Ctr	Increased application performance and availability	\$1,012,500	\$1,215,000	\$1,350,000	\$3,577,500	\$2,938,862
Dtr	Revenue from faster time-to-market for IT projects	\$326,400	\$326,400	\$326,400	\$979,200	\$811,708
Etr	Avoided software license fees	\$72,000	\$94,500	\$94,500	\$261,000	\$214,553
	Total benefits (risk-adjusted)	\$2,702,025	\$2,753,775	\$2,888,775	\$8,344,575	\$6,902,612

INFRASTRUCTURE TCO SAVINGS

Evidence and data. Before implementing Cisco Intersight Workload Optimizer, interviewed organizations' infrastructure costs were expanding due to increasing portfolios of applications, growth through acquisition, and mandates for higher performance. Additionally, these organizations reported decreased spending for cloud consumption and physical infrastructure due to workload optimization on current infrastructure with Cisco Intersight Workload Optimizer.

- The energy organization has employed Cisco Intersight Workload Optimizer to move workloads out of the data center while rightsizing on the public cloud, saving an estimated 10% (nearly \$500K) in physical infrastructure costs to date by reducing instances of oversized VMs and improving VM density. The interviewee anticipates close to a 40% savings for on-premises infrastructure by the end of 2021.
- The same energy interviewee also noted that Cisco Intersight Workload Optimizer helped the organization plan for and deploy additional

resources to support remote workers as the 2020 pandemic began. This was done on current infrastructure without affecting other production workloads. If not for their capacity planning capabilities with their Cisco solutions, the interviewee noted that they almost certainly would have purchased unnecessary on-premises infrastructure to accommodate this deployment.

- The interviewed financial services organization achieved savings in the cloud and in their data center as a result of the Cisco Workload Optimizer investment, realizing over \$3 million in savings over a three-year period. This breaks out to an approximate 15% savings on their average previous yearly spend. The interviewee expounded on their on-premises savings as well, noting: "We've been able to consolidate quite significantly in terms of the number of racks in our data centers. Through better optimization of our infrastructure, we've been able to reduce our physical compute footprint as well."
- Cisco Intersight Workload Optimizer allowed the insurance organization to identify nearly \$600K in data center savings through the optimization of

resource consumption while also informing future infrastructure purchasing decisions. The interviewee told Forrester: “Cisco helped with our identification strategy where we could identify exactly what our applications will need for resourcing so we can provision accordingly. From a cost avoidance perspective, we saved nearly \$1.3 million dollars between rightsizing workloads on servers we already had and avoiding additional refreshes in the short term.”

- The oil and gas interviewee has saved nearly \$1 million in the public cloud in just over two years since deployment by rightsizing their workloads with Intersight Workload Optimizer. This breaks out to an approximate 9% savings on their prior spend per year. They are also leveraging their Cisco solutions to assist with the consolidation efforts of a major data center , decreasing instances of wasted storage and compute while increasing VM host density.
- While the transportation organization has yet to migrate workloads from their data centers to the public cloud, they noted to Forrester that with Cisco Intersight Workload Optimizer and AppDynamics they can calculate what they stand to gain in terms of savings as they evaluate a migration in the near future.

Modeling and assumptions. For the composite analysis, Forrester assumes that:

- Annual spending on public cloud resources is \$2,750,000 for the composite organization; this is an average of those interviewed organizations .
- An average of between 15% and 20% per year is saved in the cloud through optimization of public cloud resource utilization.

“We were really pleased with the savings and have continued to save. There’s no sign that our savings are going to slow down any time soon. Eventually we may get to the point where we’re close to completely optimized, but there’s just so much opportunity in cloud cost savings than we ever imagined. We’ve outperformed the best-case scenarios from our initial business case.”

Head of cloud services, financial services

- The composite organization avoids between 40% and 50% of its yearly \$150,000 spending on the data center or infrastructure refreshes as workloads are consolidated on-premises or migrated to the cloud and consolidated.
- Maintenance on refreshed physical infrastructure is avoided along with each refresh.

Risks. This benefit will vary among organizations based on:

- Current and future levels of public cloud resource spending.
- The current optimization of public cloud resource utilization for an organization’s workloads. Some organizations may stand to gain more or less than those interviewed for this report based on these efficiencies.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of nearly \$1.6 million.

Infrastructure TCO Savings					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
A1	Annual spend on cloud resources (compute, storage, memory)		\$2,750,000	\$2,750,000	\$2,750,000
A2	Annual improvement from Cisco Intersight Workload Optimizer		20.0%	15.0%	15.0%
A3	Total cloud savings	A1*A2	\$550,000	\$412,500	\$412,500
A4	Yearly physical infrastructure purchases or refreshes		\$500,000	\$500,000	\$500,000
A5	Maintenance on new infrastructure	D1*10%	\$50,000	\$50,000	\$50,000
A6	Reduction of physical infrastructure due to optimization and consolidation		50%	40%	40%
A7	Total physical infrastructure savings	(A4+A5)*A6	\$275,000	\$220,000	\$220,000
At	Infrastructure TCO savings	A1*A2	\$825,000	\$632,500	\$632,500
	Risk adjustment	↓10%			
Atr	Infrastructure TCO savings (risk-adjusted)		\$742,500	\$569,250	\$569,250
Three-year total: \$1,881,000			Three-year present value: \$1,573,140		

OPERATIONAL EFFICIENCY SAVINGS

Evidence and data. Prior to investing with Cisco, the interviewed organizations’ staff — who were tasked with managing key infrastructure optimization and compliance — were hampered by a lack of visibility and automation capabilities across the infrastructure. And this led to slow, manual, and cumbersome management tasks.

- Without a singular view into their infrastructure, the transportation interviewee noted that capacity planning was a manual and laborious task for IT managers: “Before we implemented Cisco, there was certainly a bit of black magic to our capacity planning. It was very manual, and we couldn’t clearly see the way one part of our environment may affect the other.”
- A lack of process standardization across complex infrastructure at the financial services organization was cited as a productivity impediment for staff assigned to capacity planning and infrastructure management.

- The interviewee at the energy company described a negative productivity impact to their IT managers of excessive, ineffective performance alerts with their pre-Cisco tools. Many of the alerts were late and generated by the end user. By the time IT staff would investigate these alerts, the performance issues had often subsided as the VMs had since moved to different hosts. Yet, the end user experienced the degradation, and the IT staff member had spent time investigating a performance incident after the fact.

After implementing Intersight Workload Optimizer with AppDynamics, staff gained the visibility and automation capabilities required to successfully capacity plan and automate key actions while freeing up time for other value-adding tasks.

- The transportation interviewee estimated a 10% improvement to their IT staff’s productivity, resulting from improvements to infrastructure visibility and capabilities from AppDynamics and

Intersight Workload Optimizer. They added, “Our Cisco solutions have really taken the guesswork out of [infrastructure management].”

- More accurate infrastructure reporting with Cisco Intersight Workload Optimizer was cited by the energy interviewee as the driver of an estimated 15% productivity improvement among their IT staff.
- The disparate nature of the infrastructure for the interviewed financial services organization set the stage for a dramatic productivity improvement once Cisco solutions were deployed: Infrastructure management staff reclaimed an estimated 40% productivity via standardization on Cisco Intersight Workload Optimizer and AppDynamics.
- The interviewed insurance organization saved over 3,000 IT personnel hours per year on manual resource management tasks, avoiding nearly \$300K per year in additional and often redundant hiring.

Modeling and assumptions. For the composite analysis, Forrester assumes that:

- Fifteen IT managers are assigned to infrastructure capacity planning and management tasks.
- A 35% productivity uplift results from adoption of Cisco solutions. This is an average based on the customer interviews.
- The average loaded salary for an affected IT manager is \$110,000.

Risks. This benefit will vary among organizations based on:

- The scope and complexity of an organization’s virtual and physical infrastructure.
- The tools currently in use for workload optimization and infrastructure management, as it affects the productivity uplift an organization stands to gain with Cisco.
- The skill and capacity of an organization’s personnel assigned to infrastructure planning and management.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year, risk-adjusted total PV of nearly \$1.4 million.

Operational Efficiency Savings					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
B1	Total number of affected IT personnel		15	15	15
B2	Efficiency gains due to Cisco Workload Optimizer		35%	35%	35%
B3	Average annual IT personnel salary		\$110,000	\$110,000	\$110,000
Bt	Operational efficiency savings	$B1*B2*B3$	\$577,500	\$577,500	\$577,500
	Risk adjustment	↓5%			
Btr	Operational efficiency savings (risk-adjusted)		\$548,625	\$548,625	\$548,625
Three-year total: \$1,645,875			Three-year present value: \$1,364,349		

INCREASED APPLICATION PERFORMANCE AND AVAILABILITY

Evidence and data. Through improved virtual and physical resource allocation and automation with Cisco Intersight Workload Optimizer, the interviewed organizations reported that internal and customer-facing applications perform better while incidents of unplanned downtime are reduced.

- As a result of the Cisco investment, the interviewee at the financial services organization cited a 22% decrease in “major incidents,” or those that could directly affect revenue or the customer experience. They added that downtime on a customer-facing application gives the customer a chance to choose an alternative, potentially costing the organization the customer.
- When moving workloads from the data center to the public and private clouds, the oil and gas interviewee noted that Cisco Intersight Workload Optimizer allows them to keep these workloads online the entire time, whereas before implementing Workload Optimizer they would need to be taken offline for a short duration, affecting continuity. The interviewee continued, “It’s been a seamless migration for our customers’ experience.”
- An estimated 50% reduction in incidents that affected application performance was cited by the energy company after implementing Cisco Intersight Workload Optimizer.

Modeling and assumptions. For the composite analysis, Forrester makes the following assumptions:

- A current application portfolio availability of 99.9% per year, which is just under 9 hours of total yearly unplanned downtime.
- Fifty percent of the applications within the composite organization’s portfolio are impacted by Cisco Intersight Workload Optimizer.

- A revenue impact of just over \$850K per hour of unplanned downtime, which is based on the composite organization’s revenue.
- A 20% improvement to application availability from Cisco Intersight Workload Optimizer by Year 3 of the analysis.


Risks. This benefit will vary among organizations based on:

- The current application availability across an organization’s portfolio.
- The percentage of applications within an organization’s portfolio which may affect revenue, customer experience, or employee effectiveness.
- The revenue of an industry or an organization as it relates to the impact of application downtime on revenue.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of just under \$3 million.

Improvement to business-critical application availability

20%



Increased Application Performance And Availability					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
C1	Current application availability		99.9%	99.9%	99.9%
C2	Percentage of portfolio impacted		50%	50%	50%
C3	Hourly downtime impact	$(\$15B/8,760)*C2$	\$856,164	\$856,164	\$856,164
C4	Improvement due to Cisco Workload Optimizer		15%	18%	20%
Ct	Increased application performance and availability	$8,760*(1-C1)*C3*C4$	\$1,125,000	\$1,350,000	\$1,500,000
	Risk adjustment	↓10%			
Ctr	Increased application performance and availability (risk-adjusted)		\$1,012,500	\$1,215,000	\$1,350,000
Three-year total: \$3,577,500			Three-year present value: \$2,938,862		

REVENUE FROM FASTER TIME-TO-MARKET FOR IT PROJECTS

Evidence and data. Inherent in an organization’s ability to enable IT personnel to spend less time on manual, time-consuming tasks — such as workload provisioning and application performance issue remediation — is the ability to reallocate these resources to IT projects that support customer experience and revenue generation.

- The interviewed healthcare organization noted that several key IT projects were accelerated by months (up to 50%) as a result of personnel optimization with Cisco Intersight Workload Optimizer.
- In addition, infrastructure/resource provisioning posed challenges to project timelines. The interviewee added: “Cisco Intersight Workload Optimizer is allowing us to reduce or eliminate the time associated with capacity procurement, speeding up each project. In the past, we would acquire compute to support those new projects since we had limited visibility into what we needed to support them, and our procurement process is a 60-to-90-day process typically.”
- The interviewee noted the dramatic acceleration of their telemedicine offerings (supported by Cisco) amid the COVID-19 pandemic.

“Telemedicine suddenly went from a three-to-five-year plan to [a] six-to-eight-month plan. We had it on our road map, but the timeline was significantly reduced to support the pandemic.”

Team lead, systems engineering, healthcare

- The composite organization reallocates IT personnel to twenty IT projects that support the organization’s customers and/or revenue.
- The average duration of an IT project is four months.
- Each project delivers on average, \$80,000 in revenue to the organization each month.
- Cisco Intersight Workload Optimizer enables the organization to increase the speed of these projects by 40%, accelerating time-to-market.
- The industry gross margin is 15%.

Risks. This benefit will vary among organizations based on:

- The scope of an organization’s IT operations as it affects personnel availability, project quantity, project duration, etc.
- An organization’s industry as it relates to the correlation between IT projects and revenue.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of just over \$800,000.

Modeling and assumptions. For the composite analysis, Forrester assumes that:

Revenue From Faster Time-To-Market For IT Projects

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
D1	Total affected revenue-supporting IT projects (yearly)		20	20	20
D2	Average IT project duration (months)		4	4	4
D3	Average revenue contribution per project per month		\$80,000	\$80,000	\$80,000
D4	Average time-to-market improvement due to IWO		40%	40%	40%
D5	Total time-to-market improvement (months)	$D1 \times D2 \times D4$	32.0	32.0	32.0
D6	Revenue from faster time-to-market	$D3 \times D5$	2,560,000	2,560,000	2,560,000
D7	Operating margin		15%	15%	15%
Dt	Revenue from faster time-to-market for IT projects	$D6 \times D7$	\$384,000	\$384,000	\$384,000
	Risk adjustment	↓15%			
Dtr	Revenue from faster time-to-market for IT projects (risk-adjusted)		\$326,400	\$326,400	\$326,400
Three-year total: \$979,200			Three-year present value: \$811,708		

AVOIDED SOFTWARE LICENSE FEES

Evidence and data. After contracting with Cisco for Intersight Workload Optimizer and any other Cisco solutions, interviewees noted that they were able to cease spending on legacy solutions.

- The transportation interviewee noted to Forrester that they've avoided an estimated \$90,000 per year on legacy solutions once their organization implemented the Cisco tools.
- The energy interviewee noted savings of up to \$50,000 per year on avoided legacy solution spend.

Additionally, automated workload optimization has allowed interviewees to avoid some software license fees associated with virtualization as host density has improved with Cisco Workload Optimizer.

Modeling and assumptions. For the composite analysis, Forrester assumes that:

- The composite organization avoids \$80,000 per year in legacy tool spend.
- Only 75% of the spend is avoided in Year 1 to account for mid-year contracts.

- By Year 3, \$25,000 per year is avoided in virtualization software licenses due to host density optimizations.

Risks. This benefit will vary among organizations based on:

- The current level of spending on now-redundant workload optimization tools.
- Contract duration or details that may affect an organization's ability to avoid the spend.
- Current host density as it affects an organization's ability to optimize virtualization software licenses.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of just over \$210,000.

Avoided Software License Fees					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
E1	License fee(s) for incumbent tool(s)		\$80,000	\$80,000	\$80,000
E2	Percentage of retired spend		75%	100%	100%
E3	Avoided virtualization software license fees		\$20,000	\$25,000	\$25,000
Et	Avoided software license fees	$(E1 * E2) + E3$	\$80,000	\$105,000	\$105,000
	Risk adjustment	↓10%			
Etr	Avoided software license fees (risk-adjusted)		\$72,000	\$94,500	\$94,500
Three-year total: \$261,000			Three-year present value: \$214,553		

UNQUANTIFIED BENEFITS

Additional benefits that customers experienced but were not able to quantify include:

- **Improved visibility yields improved confidence.** In addition to productivity benefits attributable to an increase in visibility throughout an organization's infrastructure, it should be noted that this visibility also yields confidence in infrastructure-related decision-making. The energy interviewee noted that amid uncertainty in the 2020 pandemic, the visibility from Cisco Workload Optimizer has given the organization a much greater sense of confidence and predictability when considering infrastructure purchasing decisions.

FLEXIBILITY

The value of flexibility is unique to each customer. There are multiple scenarios in which a customer might implement Intersight Workload Optimizer and later realize additional uses and business opportunities, including:

- **The ability to create new products at a lower cost.** Interviewees noted that a reduction in infrastructure spend and an increase in application performance will enable them to build better products at a lower cost down the road, potentially yielding additional revenue or market share. The financial services interviewee explained: "If we can build systems in a more cost-effective way, then that gives us an advantage in our ability to create new product at a lower cost. I think that's relatively significant. From a performance perspective, having optimization enables us to focus on those other value-added features that drives our ability to create better, more reliable product in the future."

Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in [Appendix A](#)).

Analysis Of Costs

■ Quantified cost data as applied to the composite

Total Costs							
Ref.	Cost	Initial	Year 1	Year 2	Year 3	Total	Present Value
Ftr	Licensing fees to Cisco	\$0	\$365,750	\$365,750	\$365,750	\$1,097,250	\$909,566
Gtr	Implementation personnel costs	\$118,594	\$0	\$0	\$0	\$118,594	\$118,594
Htr	Ongoing management and training personnel costs	\$0	\$155,457	\$53,038	\$53,038	\$261,533	\$225,006
	Total costs (risk-adjusted)	\$118,594	\$521,207	\$418,788	\$418,788	\$1,477,377	\$1,253,166

LICENSING FEES TO CISCO

Evidence and data. The interviewed organizations described licensing fees for Cisco Intersight Workload Optimizer being based on the quantity of VMs within their infrastructure. The level of spend increased among interviewees with more VMs.

Modeling and assumptions. For the composite analysis, Forrester assumes that:

- The composite organization spends \$95 per VM per year for 3,500 VMs across their virtual and physical infrastructure deployments.
- This pricing per VM has been provided by Cisco based on the description of the composite

organization. For pricing specific to your organization, please contact Cisco.

Risks. This cost will vary among organizations based on:

- The quantity of VMs contracted for and the associated level of discount from Cisco.

To account for these variances, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of just over \$900,000.

Licensing Fees To Cisco						
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
F1	Number of VMs			3,500	3,500	3,500
F2	License fee per VM per year			\$95	\$95	\$95
Ft	Licensing fees to Cisco	F1*F2	\$0	\$332,500	\$332,500	\$332,500
	Risk adjustment	↑10%				
Ftr	Licensing fees to Cisco (risk-adjusted)			\$365,750	\$365,750	\$365,750
Three-year total: 1,097,250				Three-year present value: \$909,566		

IMPLEMENTATION PERSONNEL COSTS

Evidence and data. Interviewees described needing a relatively brief implementation period, about two weeks on average, to deploy Cisco Intersight Workload Optimizer. However, most of the interviewed organizations spent up to four months ahead of time working on the business case. This required the efforts of multiple FTEs across IT and the business. Some interviewees opted to work with Cisco professional services resources.

- The oil and gas and financial services interviewees noted that Cisco professional services personnel were leveraged in lieu of extra internal personnel for the initial implementation period.
- The energy organization ran a two-week proof of concept with Cisco and decided to move forward for production after a very successful trial.
- The transportation interviewee, who was responsible for their organization’s selection of Cisco Intersight Workload Optimizer, specifically pointed out to Forrester the exceptional support received from Cisco’s account management team while working on their business case.

Modeling and assumptions. For the composite analysis, Forrester assumes that:

- Five FTE resources across IT and the business spend 75% of their time on developing the business case and implementation over a three-month period.
- The average FTE salary for the implementation personnel is \$110,000.

Risks. This cost will vary among organizations based on:

- The scope and complexity of an organization’s infrastructure to be managed by Cisco as it affects the implementation effort required.
- The decision to leverage Cisco professional services at or skill and capacity of the IT and business personnel tasked with implementation.

To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV of just over \$115,000.

Implementation Personnel Costs						
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
G1	Implementation duration (months)		3			
G2	FTEs involved with implementation		5			
G3	Percentage of FTE time spent on implementation over duration		75%			
G4	Average FTE salary		\$110,000			
Gt	Implementation personnel costs	$G1 * G2 * G3 * G4$	\$103,125			
	Risk adjustment	↑15%				
Gtr	Implementation personnel costs (risk-adjusted)		\$118,594			
Three-year total: \$118,594			Three-year present value: \$118,594			

ONGOING MANAGEMENT AND TRAINING PERSONNEL COSTS

Evidence and data. Each of the interviewed organizations described a relatively modest level of effort to manage the Cisco implementation once deployed. Most of the interviewees told Forrester that no more than two part-time FTEs were needed to successfully manage the Cisco deployment.

Once deployed, IT managers tasked with infrastructure management were assigned a moderate level of training to ensure effectiveness on the Cisco solution.

Modeling and assumptions. For the composite analysis, Forrester assumes that:

- One IT manager is dedicated to maintaining the Cisco deployment. This FTE dedicates 60% of their time in the first year after the implementation and 40% in Years 2 and 3 to.
- The 10 IT managers tasked with infrastructure management spend 6 hours on training at

deployment and 4 hours on training in Years 2 and 3.

- Each IT manager spends 6 hours on training at deployment and 4 hours on training in Years 2 and 3.
- The salary for the IT manager maintaining the Cisco deployment is \$110,000.
- The hourly rate for the personnel assigned to infrastructure management is \$53.

Risks. This cost will vary among organizations based on:

- The scope and complexity of the deployment and the skill and capacity of an organization's personnel assigned to the Cisco solutions.

To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV of just over \$150,000.

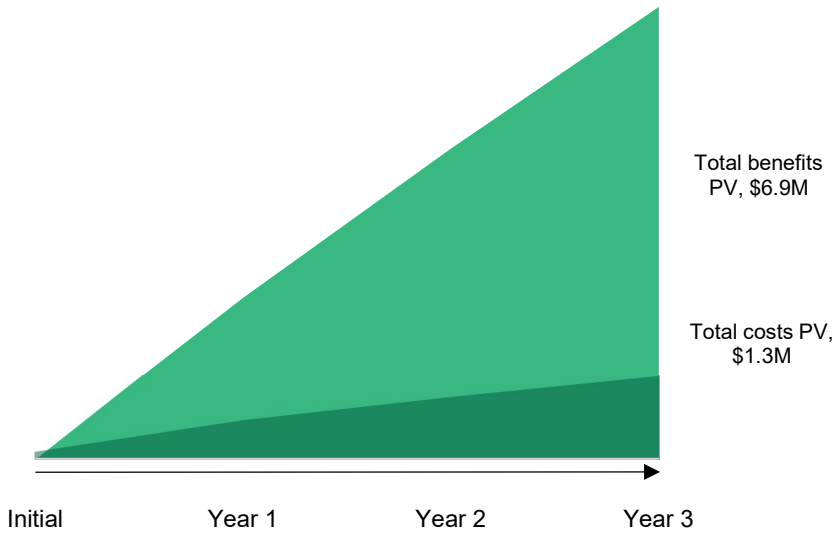
Ongoing Management And Training Personnel Costs

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
H1	FTEs assigned to oversee Cisco Workload Optimizer deployment			2	1	1
H2	Percentage of time spent overseeing Cisco Workload Optimizer			60%	40%	40%
H3	Average FTE salary			\$110,000	\$110,000	\$110,000
H4	Ongoing management personnel cost	H1*H2*H3		\$132,000	\$44,000	\$44,000
H5	IT engineers trained on Cisco Workload Optimizer			10	10	10
H6	Hours spent on Cisco Workload Optimizer training (annually)			6	4	4
H7	Average hourly rate (rounded)			\$53	\$53	\$53
H8	Training personnel cost	H5*H6*H7		\$3,180	\$2,120	\$2,120
Ht	Ongoing management and training personnel costs	H4+H8	\$0	\$135,180	\$46,120	\$46,120
	Risk adjustment	↑15%				
Htr	Ongoing management and training personnel costs (risk-adjusted)		\$0	\$155,457	\$53,038	\$53,038
Three-year total: \$261,553			Three-year present value: 225,006			

Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Financial Summary



The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

Cash Flow Analysis (Risk-Adjusted Estimates)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	(\$118,594)	(\$521,207)	(\$418,788)	(\$418,788)	(\$1,477,377)	(\$1,253,166)
Total benefits	\$0	\$2,702,025	\$2,753,775	\$2,888,775	\$8,344,575	\$6,902,612
Net benefits	(\$118,594)	\$2,180,818	\$2,334,987	\$2,469,987	\$6,867,198	\$5,649,446
ROI						451%
Payback period						Less than six months

Appendix A: Total Economic Impact

Total Economic Impact 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.

TOTAL ECONOMIC IMPACT APPROACH

Benefits represent the value delivered to the business by the product. The TEI methodology places equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization.

Costs consider all expenses necessary to deliver the proposed value, or benefits, of the product. The cost category within TEI captures incremental costs over the existing environment for ongoing costs associated with the solution.

Flexibility represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. Having the ability to capture that benefit has a PV that can be estimated.

Risks measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on "triangular distribution."



PRESENT VALUE (PV)

The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total NPV of cash flows.



NET PRESENT VALUE (NPV)

The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.



RETURN ON INVESTMENT (ROI)

A project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits less costs) by costs.



DISCOUNT RATE

The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%.



PAYBACK PERIOD

The breakeven point for an investment. This is the point in time at which net benefits (benefits minus costs) equal initial investment or cost.

Appendix B: Supplemental Material

Related Forrester Research

“Gauge Your Modern Technology Operations Maturity,” Forrester Research, Inc., September 29, 2020.

Appendix C: Endnotes

¹ Source: “Gauge Your Modern Technology Operations Maturity,” Forrester Research, Inc., September 29, 2020.

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