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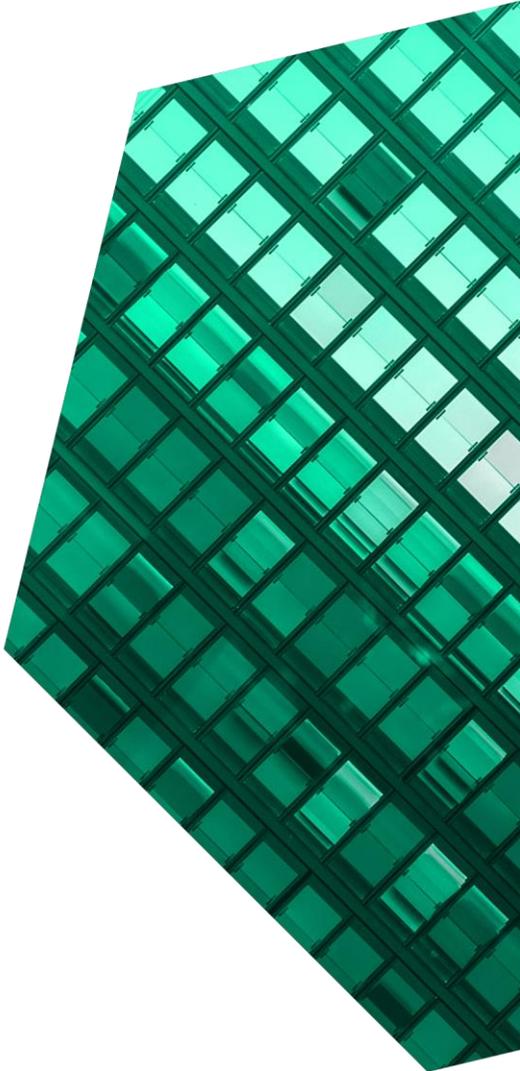
The Total Economic Impact™ Of Equinix Digital Services

Cost Savings And Business Benefits
Enabled By Equinix Digital Services

SEPTEMBER 2022

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ABOUT FORRESTER CONSULTING

Forrester provides independent and objective research-based consulting to help leaders deliver key transformation outcomes. Fueled by our customer-obsessed research, Forrester’s seasoned consultants partner with leaders to execute on their priorities using a unique engagement model that tailors to diverse needs and ensures lasting impact. For more information, visit forrester.com/consulting.

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Executive Summary

Making the decision to move to the cloud is a complicated and expensive prospect for companies looking to deliver a seamless, real-time experience for employees and consumers. Equinix Digital Services simplifies the journey from a centralized to distributed network infrastructure to help companies improve speed to market, localize their data, decrease operational downtime, and lower costs compared to traditional on-premises facilities or cloud services.

Leveraging compute, storage, networking, and connectivity through [Equinix Digital Services](#) helps companies improve their business agility and lower costs through foundational virtual infrastructure and interconnections to cloud partners and business partners. By leveraging its products, including Network Edge (virtual network devices), Equinix Fabric (interconnection), and Equinix Metal (bare metal solution for multicloud connectivity and storage) and Equinix's ecosystem of vendor partners and cloud providers, organizations can quickly react to business needs while building secure interconnections through a single-pane-of-glass experience. Through Equinix's data centers located in major metros around the world, organizations can bring their data closer to customers and partners, improve data performance, and become better positioned to meet compliance standards.

Equinix commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Equinix Digital

Decrease in holistic costs
for internal infrastructure

60%



KEY STATISTICS



Return on investment (ROI)

142%



Net present value (NPV)

\$15.59M

Services.¹ The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Equinix Digital Services on their organizations.

To better understand the benefits, costs, flexibility and risks associated with this investment, Forrester interviewed eight representatives at six different companies with experience using Equinix Digital Services. For the purposes of this study, Forrester aggregated the interviewees' experiences and combined the results into a single [composite organization](#) that has revenues of more than \$1 billion, has 25,000 employees distributed across over 100 locations, and offers multiple B2B and B2C services internationally.

Interviewees said that prior to using Equinix, their organizations were dealing with high costs for maintaining their current data and connections coupled with long lead times for equipment or third-party resources. The complexity of on-premises

facilities and maintaining aging hardware contributed to slower connections, inconsistent delivery of services, operational downtime, and process inefficiencies.

Interviewees shared that after the shift to Equinix Digital Services, their organizations gained flexibility in how they scaled their business while improving their ability to meet regional compliance standards. Their companies realized costs savings by eliminating physical data centers and hardware, driving operational efficiencies, and lowering the cost of connections. Moreover, with better business agility, the organizations were able to deploy services and drive value for customers and strategic partners significantly quicker than with previous solutions.

KEY FINDINGS

Quantified benefits. Three-year, risk-adjusted present value (PV) quantified benefits for the composite organization include:

- **Faster speed to market and improved business agility.** Equinix helps simplify internal processes and allows for improved speed to deployment for services and applications. With transitioning to a virtual infrastructure across Equinix's more than 240 locations internationally, the composite organization spins up new infrastructure and interconnections to key partners 10 times more quickly than with its previous solution.
- **Reduced internally managed infrastructure costs driving \$19.3 million in gains.** As the composite organization shifts its foundational and incremental infrastructure to Equinix Digital Services, the company significantly reduces costs for physical hardware, facilities management, utilities, and labor, and it sees a 25% reduction in incremental infrastructure purchases through Equinix. Overall, the composite organization saves 60% on internally managed infrastructure compared to with its

previous solution by the end of the third year of its investment.

“Equinix, to my mind, was far and away out in front of everybody as far as being able to provide a virtual infrastructure.”

Lead network engineer, food services

- **Cost of connections decreased by 30%.** The composite organization decommissions its private multiprotocol label switching (MPLS) routing while decreasing its costs for data egress, direct B2B connections, and circuit expenses with its investment in Equinix Digital Services. The company utilizes Equinix's products and services to build secure interconnections to key partners on a global scale and avoid inefficient connections. Overall, the composite organization sees \$1.6 million in savings over three years.
- **Increased productivity leading to \$5.7 million in gains.** Equinix Digital Services enables the composite organization to reduce operational costs for maintenance, design, change management, and other tasks so internal resources can be redeployed to higher-value tasks internally. Additionally, with redundancies built into its virtual infrastructure through Equinix, the organization cuts operational downtime by 80% to drive \$5 million in annual savings.

Flexibility benefits. Future supplemental value enabled by longer-term added investments or nearer-term investments and scenarios that are not factored into the composite organization analysis include:

- **Simplification of processes.** Virtual infrastructure and interconnection through

Equinix Digital Services helps reduce touchpoints on business decisions so that companies can have a more consistent delivery of services while reducing the risk of critical business failures that could impact top-line revenues. Additionally, organizations may see reduced costs as the need for specialized skill sets lessens with streamlined processes through Equinix.

“In my business, [flexibility is] really important. I don’t have enough people. I can’t put somebody on a plane or hire somebody local. I’d have to procure the servers in a time with supply-chain issues. That’s almost impossible to do. Being able to bring up a server in 5 minutes as opposed to three months from now [is] a huge competitive advantage.”

VP of IT operations, IT services and consulting

- **Long-term financial benefits beyond three-year period of analysis.** Companies can realize value beyond the three-year analysis period measured with the composite organization. Interviewees’ organizations saw considerable long-term benefits for incremental costs savings related to transitioning from physical infrastructure to Equinix Digital Services as well as compounding impacts from lower infrastructure and interconnection costs as business and data needs expand.
- **Localization of data leads to improved performance and positioning to meet**

compliance standards. By creating regional hubs of data through Equinix, the composite organization cuts latency for employees and consumers while allowing the company to meet data compliance requirements across each of its global locations.

- **Improved internal sustainability driving lower costs.** Organizations can leverage Equinix’s 95% renewable energy coverage across its global locations to lower its carbon footprint and power usage efficiency (PUE) while improving brand equity and employee loyalty. Moreover, organizations can realize financial benefits through lowered operational and energy costs while avoiding the risk of noncompliance in various regions.

Additional unquantified benefits. Other benefits that provide value for the composite organization but are not quantified in this study include:

- **Improvement in data security and response time to threats.** Equinix helps organizations improve security controls and visibility across their foundational infrastructures while decreasing security risks for their internal networks. Additionally, as new threats are identified, companies can improve response times and set up new firewalls and controls quicker compared to with previous solutions.

“Anybody who wants to deploy anything in a hurry with minimal capex, Equinix is your ideal platform. You can do anything that you want.”

Lead network engineer, food services

- **Strong ecosystem of vendor and cloud partners.** With hundreds of existing customers across its global locations, Equinix offers companies a one-stop shop of vendor partners to develop B2B and cloud partner connections. Companies can save time compared with developing individual interconnections with strategic partners while improving time to value creation.

Costs. Three-year, risk-adjusted PV costs for the composite organization include:

- **License fees investment of \$10.3 million.** Equinix license fees are dependent on the solutions utilized, the scope of services, and the type of licensing model deployed. Over three years, the composite organization pays a present value of \$10.3 million for its total investment in Equinix Digital Services.
- **\$670,000 for planning, implementation, and change management costs.** The composite organization utilizes internal resources for planning, implementation, and ongoing change management activities. Ongoing maintenance costs increase as the composite's overall investment in Equinix Digital Services expands.

The representative interviews and financial analysis found that a composite organization experiences benefits of \$26.54 million over three years versus costs of \$10.95 million, adding up to a net present value (NPV) of \$15.59 million and an ROI of 142%.



ROI
142%

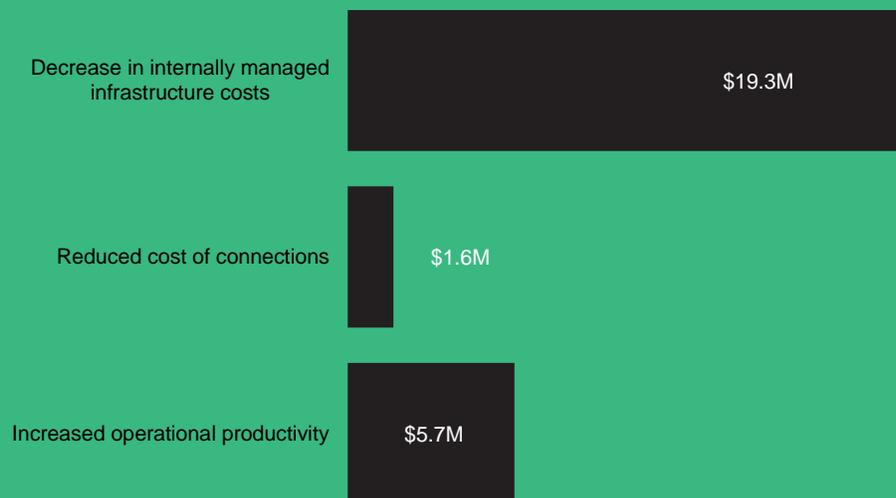


BENEFITS PV
\$26.54M



NPV
\$15.59M

Benefits (Three-Year)



“It’s about scalability and it’s about the ability to grow quickly. I can turn up a server with Equinix in 20 minutes, and it adds value to my business because it gives me cloud flexibility without being on the cloud.”

— VP of IT operations, IT services and consulting

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 Equinix Digital Services.

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 Equinix Digital Services can have on an organization.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by Equinix 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 study to determine the appropriateness of an investment in Equinix Digital Services.

Equinix 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.

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



DUE DILIGENCE

Interviewed Equinix stakeholders and Forrester analysts to gather data relative to Equinix Digital Services.



INTERVIEWS

Interviewed six representatives at organizations using Equinix Digital Services to obtain data with respect to costs, benefits, and risks.



COMPOSITE ORGANIZATION

Designed a composite organization based on characteristics of the interviewees' 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 interviewees.



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 Equinix Digital Services Customer Journey

■ Drivers leading to the Equinix Digital Services investment

Interviews			
Role	Industry	Geography	Revenue
Network architect	Identity services	North American headquarters, operations in 200+ countries	\$500 million to \$1 billion
Director of global engineering	Hospitality	United Kingdom headquarters, operations in 100+ countries	\$1 billion to \$10 billion
Lead network engineer	Food services	North American headquarters, operations in 75+ countries	\$10 billion to \$50 billion
VP of IT operations	It services and consulting	North America headquarters, operations in 75+ countries	\$50 million to \$100 million
Senior network engineer Network architect	Transportation	North American headquarters, operations in 50+ countries	\$10 billion to \$50 billion
Network services manager Project manager	Beverages and media	EMEA headquarters, operations in 150+ countries	\$1 billion to \$10 billion

KEY CHALLENGES

Interviewees came from widely distributed companies with their business applications and data infrastructures spread across multiple data centers. Their organizations primarily leveraged on-premises facilities supplemented with third-party data centers and cloud services. Although their organizations' data environments, long-term IT strategies, and industries varied, interviewees shared common needs to support globally distributed offices or point-of-sales locations. These companies utilized public or MPLS networks through third-party telecommunications partners.

The interviewees noted how their organizations struggled with common challenges, including:

- **High costs for physical infrastructure and connectivity.** Interviewees said their organizations internally managed multiple data centers to service their globally distributed offices and point-of-sale locations and they maintained a mix of expensive hardware and facilities that drove additional operational and utilities costs. The senior network engineer in transportation shared, "The cost savings are from having a huge managed data center that we own or lease

and pay somebody to manage to where we only consume [with Equinix]."

"We wanted to eliminate the data center as a hairpin and make access to micro-service applications faster and easier for all of our folks out in the field as well as the applications themselves."

Lead network engineer, food services

- **Limited business agility to address changes in business needs.** Interviewees shared that their organizations were dealing with limited flexibility with their previous data infrastructure solutions. The companies were dealing with long lead times and inconsistent availability of hardware that impacted response time to business needs. The network services manager

at the beverages and media company said: “We [previously] had issues where we wanted to integrate a new location into our global backbone, and it took us more than a year to do so. With Equinix [and] having that many data centers on a global basis, we are now much more flexible and way faster to deploy new entry points.”

- **Data issues leading to process inefficiencies and lost revenue.** Slow speeds for internally managed data led to delayed business applications and services. Additionally, system outages led to lost revenue for client-facing teams of the interviewees’ organizations.

- Drive costs savings for infrastructure, interconnections, and operational costs.
- Offer a strong global presence with enhanced interconnectivity and entry points worldwide.

After a request for proposal (RFP) and business-case process evaluating multiple vendors, the interviewees’ organizations chose Equinix Digital Services based on its capabilities and reputation.

- They gained access to partners through the Equinix ecosystem to drive multicloud experience.
- The director of global engineering said, “It really comes down to the flexibility Equinix gives us — the flexibility to go in a number of different directions as the business requires and to be able to do it quickly.”
- Multiple competitors in the RFP process were utilizing Equinix as part of their own comprehensive strategies.

COMPOSITE ORGANIZATION

Based on the interviews, Forrester constructed a TEI framework, a composite company, and an ROI analysis that illustrates the areas financially affected. The composite organization is representative of the eight interviewees at six organizations, and it is used to present the aggregate financial analysis in the next section. The composite organization has the following characteristics:

Description of composite. The composite is a North American company operating globally with a distributed workforce of 25,000 employees spread across more than 100 locations internationally. The organization offers multiple B2B and B2C services that generate more than \$1 billion in revenue annually, and it operates in a general regulated industry. The composite currently manages its data through five on-premises data centers in the United States and utilizes a private MPLS network managed

“During the IP process, we talked to five providers. For three of them, their solution for cloud connectivity was based on Equinix services. It proved to us that Equinix offers proper services for cloud connectivity.”
Project manager, beverages and media

INVESTMENT OBJECTIVES

The interviewees’ organizations searched for a solution that could:

- Transition to a virtual infrastructure that could help drive business flexibility and scalability.
- Meet regional compliance standards for data storage and infrastructure.

through a third-party telecommunications company. With increasing regulatory requirements for regionally distributed data and a need to improve speed to market and deployment for its services, the organization intends to gradually transition to a virtual infrastructure in partnership with Equinix.

Key Assumptions

- **More than \$1 billion revenue**
- **More than 100 global locations**
- **25,000 employees**
- **Manages 5 on-premises data centers**

Deployment characteristics. The composite organization completes the initial planning and implementation process over the course of six months for a team of six people who dedicate 50% of their time to the process. Ongoing planning and implementation during the three-year investment period require three months annual time commitment and 20% of the time of the implementation team members. Change management efforts are managed by a small team of three to five people who spend 20% of their time on changes and enhancements to the organization's existing infrastructure. The company decommissions four of its five data centers over a four-year period while utilizing Equinix Digital Services using a combination of Network Edge, Equinix Fabric, Equinix Metal, and Interconnection products across 12 Equinix facilities for its global infrastructure and connectivity requirements.

Customer Voices

"In our Canada region, over the last few weeks, we'd discovered that our gig interface was hitting 800 megabits, so we wanted to expand it. We had a call with Equinix today, and over that 30-minute call, I expanded that circuit from one gig to two gigs on the fly.

Had I needed to do that in the physical world, it would have been a whole different story. Had I not had that ability to expand that interface, I would've had to do less for that circuit until I could expand it. It's a big deal. You don't realize that people are flying across the world to put in the [changes] after they ordered a circuit that finally got delivered after six months and making sure the cross connects, fiber, and all [the] other stuff is right.

A virtual digital infrastructure that somebody else has reset and is ready to go is a game-changer, especially at the cost. We're making so much money on that circuit. It's nowhere near what I used to [make] — nowhere near."

Network architect, identity services

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	Decrease in internally managed infrastructure costs	\$4,000,000	\$8,000,000	\$12,000,000	\$24,000,000	\$19,263,711
Btr	Reduced cost of connections	\$510,000	\$637,500	\$765,000	\$1,912,500	\$1,565,252
Ctr	Increased operational productivity	\$2,265,250	\$2,300,313	\$2,335,375	\$6,900,938	\$5,715,005
	Total benefits (risk-adjusted)	\$6,775,250	\$10,937,813	\$15,100,375	\$32,813,438	\$26,543,968

IMPROVED BUSINESS AGILITY, SPEED TO MARKET, AND SCALABILITY

Evidence and data. Making the transition to a virtual infrastructure through Equinix Digital Services enabled interviewees’ organizations to respond to data and infrastructure needs quickly. This included the ability to scale up or scale down global infrastructure in near-real time and better meet client needs. Moreover, internal resources were able to develop and deploy new applications and services more quickly.

Interviewees shared that their organizations were able to greatly improve business agility, speed to market, and scalability over their previous solutions with their investment in Equinix. Interviewees shared that shifting to a virtual infrastructure simplified the process and greatly reduced the timeline required to add or decommission servers and connections.

- The VP in IT operations in IT services and consulting discussed the struggles his company had with its prior solution compared to Equinix. He said: “Somebody’s got to receive [the equipment]. Somebody’s got to go rack and stack it. All that takes weeks of coordination and project management that now we don’t have to deal with.”

“Equinix provided an ideal solution for us in terms of their performance of architecture. We have regionally local but globally connected access to multiple cloud providers through their fabric. And it became an ideal point for us to migrate our cloud access over to.”

Director of global engineering, hospitality

- Interviewees’ organizations were better able to scale and distribute their infrastructures globally by leveraging Equinix’s international presence. The network architect with the identity services company shared: “We start moving data off to other regions [and] that database becomes smaller, which makes the access time faster. It’s a different world. The ability to do local geographies really helps us tremendously. [Equinix] connects all of them together, and that cost [is] far lower than MPLS.”

- Interviewees' organizations leveraged Equinix's ecosystem of vendor partners and cloud providers to quickly build secure connections and speed up connections with key strategic partners. The lead network engineer in food services discussed the potential his company sees. He said: "I'm most excited about the B2B connectivity. I mean, the cloud connectivity is kind of a no-brainer, but I think the game-changer is getting that quick connectivity to vendors without having to deal with private MPLS circuits."
- All the interviewees said their organization's investment in Equinix Digital Services helped improve its overall speed to market and deployment of services. Overall, the end-to-end process for infrastructure deployment was 10 times quicker for interviewees' organizations compared to with their previous solutions.

reduction in complexity reduces the need for internal resources with specialized skill sets while reducing touchpoints internally.

The VP of IT operations in IT services and consulting explained: "When adding a server to a site, I need somebody to buy the server, somebody to ship the server, somebody to receive the server, somebody to install the server, and somebody to build the server. Now [with Equinix], all I really need is a person that can build the server via an API. You're cutting out five or 10 people in a process to giving one person the ability to go and do that."

- Organizations can find value by decreasing the variability in delivery for deployed applications and services. Interviewees shared how the simplified processes and improved speed to market delivered through Equinix Digital Services positively impacted customer and partner services through more consistent delivery while cutting out unknowns in the process. Value for potential customers would be measured through improved customer, partner, and employee satisfaction, as well as the potential to impact top-line revenues.

Improved speed to market over physical deployments

10x



Flexibility. Forrester traditionally views flexibility benefits as future supplemental value enabled by longer-term added investments. But flexibility can also be applied to nearer-term scenarios in considering the potential of investment decisions outside the benefit category that may be relevant to readers.

- Organizations can measure the potential business agility of Equinix Digital Services in how the simplification of processes could decrease maintenance and development staff costs. The

Results. While it's an unquantified benefit for the composite organization, improved business agility, scalability, and speed to market may be measurable. The ability to meet current and new business needs quickly could be measured in the improvement in business opportunities, and improved speed to market could be measured as the faster or incremental revenue generated each period.

DECREASE IN INTERNALLY MANAGED INFRASTRUCTURE COSTS

Evidence and data. Interviewees shared how their organizations realized significant savings as they transitioned to utilizing a virtual infrastructure through Equinix Digital Services. Their companies were able to decrease their investments in physical hardware and infrastructure while realizing savings for real estate, utilities, and supporting maintenance costs associated with operating on-premises data centers. Additionally, their organizations were able to decrease the incremental costs for adding additional capacity internationally as business needs for data and connections expanded.

- Several interviewees said their organization was using its investment in Equinix Digital Services to enable the decommissioning process for its internally managed data centers. This transition led to significant cost savings across several areas as interviewees were able to focus more on data consumption strategies and less on maintenance for aging hardware and facilities.
- The VP of IT operations in IT services and consulting discussed the impact on their company. They said: “It saves me on procurement. I don’t have to go out and buy a server. I don’t have to worry about space and power. It’s saving me operational time also. There’s a bunch of things now that I don’t have to worry about [with Equinix]. Then we’re saving on the future cost of having to upgrade hardware. Now I move to a new machine, and it’s somewhat instantaneous.”
- With decommissioned or downsized on-premises management, interviewees’ companies were able to decrease electricity, cooling, water, and other utility costs in addition to building maintenance and rent. The network architect in transportation said: “Keeping up with replacing the electrical and the cooling and maintaining the backup battery units ... are huge expenditures that we

have that we’re trying to eliminate. Equinix is doing that for us, and we don’t have that extra expenditure.”

Modeling and assumptions. For the financial analysis, Forrester assumes:

- The composite previously paid \$25 million for its internally managed infrastructure prior to investing in Equinix Digital Services.
- The composite organization decreases the cost of its internally managed infrastructure by 20% annually during the three-year period of its Equinix investment.

“What Equinix is providing is a way to validly discuss significantly shrinking physical data center footprint up to completely moving out of it without eliminating the stuff that you’ve got to have in your hands. I think it’s a super exciting foundation to build on. I can’t wait to add more function to it.”

Lead network engineer, food services

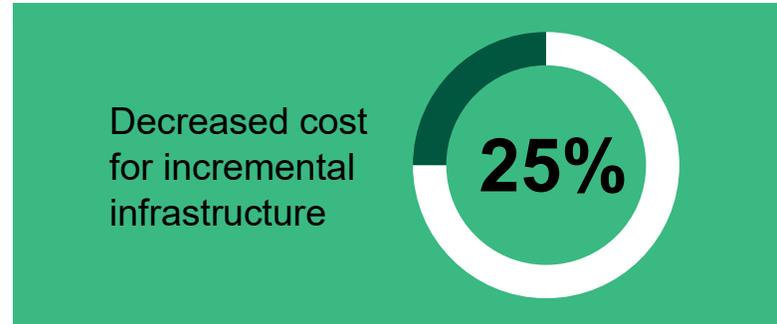
Flexibility. Forrester traditionally views flexibility benefits as future supplemental value enabled by longer-term added investments. But flexibility can also be applied to nearer-term investments and scenarios that are not factored into the composite organization analysis.

- In addition to cost savings, potential customers can measure the value related to the decreased risk of critical business failures. Interviewees' organizations were able to ensure service to their customers with their transition to Equinix and avoid potential revenue impacts. Measuring reduced risk of failures can cover a variety of benefits such as reduced downtime, avoided revenue losses, improved customer retention, and others.

The director of global engineering in hospitality said: "We were given six months to migrate and deploy a whole new data center. It would take a minimum of 12 months outside of Equinix. If we hadn't been able to meet that six-month timeline, we would have lost all revenue within the region, and it would have been in the neighborhood of \$300 million."

- While not measured as a savings for the composite organization, companies can save on incremental infrastructure as business needs expand. Interviewees shared that costs were

25% less to add virtual infrastructure as compared to adding physical infrastructure.



Risks. Several factors may affect the impacts organizations experience, including the following:

- The cost of managing the organization's existing data infrastructure.
- The previous environments deployed, which impacts the magnitude of efficiencies gained by utilizing Equinix Digital Services.
- The scope of services and virtual infrastructure utilized through Equinix.

Results. To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$19.3 million.

Decrease In Internally Managed Infrastructure Costs					
Ref.	Metric	Source	Year 1	Year 2	Year 3
A1	Cost of internally managed physical infrastructure prior to Equinix investment	Interviews	\$25,000,000	\$25,000,000	\$25,000,000
A2	Reduction in internally managed infrastructure with Equinix investment	Interviews	20%	40%	60%
At	Decrease in internally managed infrastructure costs	A1*A2	\$5,000,000	\$10,000,000	\$15,000,000
	Risk adjustment	↓20%			
Atr	Decrease in internally managed infrastructure costs (risk-adjusted)		\$4,000,000	\$8,000,000	\$12,000,000
Three-year total: \$24,000,000			Three-year present value: \$19,263,711		

REDUCED COST OF CONNECTIONS

Evidence and data. Interviewees' organizations looked to replace their outdated private MPLS networks. Through their investments in Equinix Digital Services, the companies were able to decrease their connectivity costs compared to with cloud providers and telecommunications companies including reduced data egress, direct connection, and circuit expenses. In addition to cost savings, the companies were able to leverage secure software-defined interconnections, private internet services, and B2B connections through Equinix's global network of locations to improve interconnection to partners and improve data performance.

- Interviewees' organizations were able to save on physical equipment including circuits, routers, and network power switches (NPS) previously used to connect directly to vendor partners and cloud providers by transitioning to direct connections within Equinix's ecosystem of vendors.
- The network architect with the identity services company shared: "Our [previous] budget on circuits was close to a million dollars a year compared to Equinix cost of \$100,000 a year. That is a huge difference. One of the big drivers of using Equinix connection was to get rid of the MPLS and the associated cost because it was

"[With] the experiences with the resiliency that we've put together, the users don't see an impact if we have a minor outage. Things are rerouted throughout the network."

Network architect, transportation

"The cost of those circuits was significantly less than the cost of the cloud-specific circuits and much more flexible. We can run everything over those circuits. We'll be able to see over a half-million dollars cost savings [with Equinix]."

Lead network engineer, food services

extremely expensive. We constantly had to work with our vendors on the ongoing support of the routers. With Equinix, we reduce the people, we reduce the MPLS cost, and we reduce the physical hardware along with the support cost."

- By leveraging Equinix's wide network of global locations, interviewees' companies were able to avoid inefficient connections. The senior network engineer in transportation shared: "If we have 20 [locations], and they're on the West Coast, they all have an MPLS circuit coming back to the East Coast to connect to our systems on-prem. Now, we will connect them to San Jose or Seattle. The cost savings there will be realized on those telecommunication costs to a nearer point of presence."
- Some interviewees' organizations saw a 90% decrease in data egress charges when transitioning to Equinix Digital Services from traditional cloud providers.
- One interviewee shared that by eliminating circuits to key partners, private NPS, and internally managed routers, their company saved

\$1 million annually with the transition to Equinix Network Edge.

Modeling and assumptions. For the financial analysis, Forrester assumes:

- The composite organization pays \$3 million annually in data connectivity costs prior to its investment in Equinix Digital Services.
- The organization decreases its costs by 20% in the first year. Their savings increase to 30% by the third year as the organization transitions more of the connectivity from private MPLS routing to leveraging connections through Equinix.

Flexibility. Some flexibility benefits may apply to organizations that are faced with scenarios that were not factored into modeling for the composite organization. For example:

- Companies can create regional points of connectivity for internet services and interconnections to business and cloud partners through Equinix to localize their data. Companies could see benefits beyond what is modeled for the composite organization including improved internal data performance as latency decrease. This could lead to increased business and customer retention in these markets.

- Organizations may also measure the value of localization through the ability to better meet data compliance standards internationally and avoid compliance and audit fees or by manually taking the time to ensure compliance. The network architect at the identity services company shared: “It’s all about expansion outside of our borders [with Equinix] — from the fact that we service so many countries and you can no longer keep the PII (personally Identifiable Information) data in the US.”

Risks. Several factors may affect the impacts organizations experience, including the following:

- The cost of managing the organization’s existing data connections.
- The previous solutions deployed, which impacts the magnitude of efficiencies gained by utilizing Equinix Digital Services.
- The scope of interconnection services utilized through Equinix.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of nearly \$1.6 million.

Reduced Cost Of Connections					
Ref.	Metric	Source	Year 1	Year 2	Year 3
B1	Cost of connections prior to Equinix investment	Interviews	\$3,000,000	\$3,000,000	\$3,000,000
B2	Reduction in cost of connections through Equinix	Interviews	20%	25%	30%
Bt	Reduced cost of connections	B1*B2	\$600,000	\$750,000	\$900,000
	Risk adjustment	↓15%			
Btr	Reduced cost of connections (risk-adjusted)		\$510,000	\$637,500	\$765,000
Three-year total: \$1,912,500			Three-year present value: \$1,565,252		

INCREASED OPERATIONAL PRODUCTIVITY

Evidence and data. Interviewees shared experiences with operational downtime, latency, and system issues as a result of their organizations' previous solutions. By transitioning to a virtual infrastructure and utilizing Equinix Digital Services across multiple data centers, their companies were able to build distributed redundancies to prevent outages while avoiding the inherent risk of outdated physical hardware. This led to improved operational productivity for IT professionals who were able to focus on higher-value tasks, as well as for general end users who avoided work stoppages and potential impacts on top-line revenue.

- Interviewees' organizations saw a decrease in system outages with their investments in Equinix. The senior network engineer at the transportation company discussed the impact on teams based on reducing outages from 12 incidents per year down to less than one per year for their company. They said: "4,500 [representatives] are sitting at home. All that runs through Equinix now, so we've got it deployed now in three different data centers that they connect to. That's been a big deal to provide stability to those agents."
- Interviewees shared how their companies were able to decrease the time their IT organizations spent on a variety of tasks based on the investment in Equinix Digital Services. Key impacts included decreased maintenance, design, planning, change management, and troubleshooting as processes were transitioned from physical hardware that required more manual and hands-on upkeep compared to virtual infrastructure with Equinix, which cut out several steps in the process.
- The lead network engineer in food services discussed how Equinix would allow their company to shift their focus away from remedial tasks. They said: "Different scenarios require a virtual device to be spun up instead of waiting for

physical hardware. Once it's up and it's just a virtual connection that's just pinned up all the time, I feel like we'll be able to reduce the amount of time we spend troubleshooting those connections more and more every year. If we can cut that down, then that's just more time that we have for more important stuff."

"Over the last two years that we've had [Equinix], I've opened one case. And in the physical environment, I would be opening up cases every week [and] several every month. It's less time to maintain the environment. That is a huge benefit for me."

Network architect, identity services

Modeling and assumptions. To reflect the interviewees' experiences, Forrester assumes the following about the composite organization:

- The composite organization previously utilized 50% of a team of 20 IT professionals for maintenance, design, and change management activities before deploying Equinix Digital Services.
- With the investment in Equinix, the composite sees a 20% improvement for its IT professionals in the first year with subsequent gains in Years 2 and 3.

ANALYSIS OF BENEFITS

- The composite organization decreases operational downtime from 5 hours to 1 hour for its 25,000 employees.
- On average, end users at the composite organization have a fully burdened hourly rate of \$50.

Risks. Forrester recognizes that these results may not be representative of all experiences, and the benefits will vary depending on:

- The organization's relative size, customer base, industry, and location of operations.
- The organization's prior solution and its capabilities.
- The skill set and training of the IT professionals managing the organization's data infrastructure.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of \$5.7 million.

Increased Operational Productivity					
Ref.	Metric	Source	Year 1	Year 2	Year 3
C1	Number of IT FTEs	Composite	20	20	20
C2	Time spent on internal infrastructure	Interviews	50%	50%	50%
C3	IT professional fully burdened salary	TEI Standard	\$165,000	\$165,000	\$165,000
C4	Increase in productivity with Equinix investment	Interviews	20%	25%	30%
C5	Subtotal: Increased IT professional productivity	$C1 \times C2 \times C3 \times C4$	\$330,000	\$412,500	\$495,000
C6	Number of end users	Composite	25,000	25,000	25,000
C7	Average end user fully burdened hourly rate	TEI Standard	\$50	\$50	\$50
C8	Operational downtime hours before implementing Equinix	Interviews	5	5	5
C9	Operational downtime hours after implementing Equinix	Interviews	1	1	1
C10	Subtotal: Increased end user productivity	$C6 \times C7 \times (C8 - C9)$	\$5,000,000	\$5,000,000	\$5,000,000
C11	Productivity recapture rate	TEI Standard	50%	50%	50%
Ct	Increased operational productivity	$(C5 + C10) \times C11$	\$2,665,000	\$2,706,250	\$2,747,500
	Risk adjustment	↓15%			
Ctr	Increased operational productivity (risk-adjusted)		\$2,265,250	\$2,300,313	\$2,335,375
Three-year total: \$6,900,938			Three-year present value: \$5,715,005		

ADDITIONAL UNQUANTIFIED BENEFITS

Interviewees mentioned the following additional benefits that their organizations experienced but were not able to quantify:

- Improved data security.** With Equinix’s globally distributed locations and easy-to-use interface, interviewees’ organizations were able to decrease security risks based on their investments in Equinix Digital Services. Interviewees discussed the advantages of being able to bring their organizations’ data closer to the security edge to improve control. Through localization and a single-pane-of-glass experience in Equinix, their organizations streamlined holistic processes and gained better visibility across their distributed architectures.
- Improved response time to security threats.** The lead network engineer at the food services company discussed how Equinix helps their organization address potential risks quicker. They said: “The payment provider was building a new edge that they wanted us to connect to. We were able to spin up a firewall, make the connections, and have traffic flowing across that in just a couple of weeks [for the end-to-end process]. Technically, we had the firewall spun up in 2 hours.”
- Access to vendor and cloud partners.** Interviewees’ companies also realized improved value and speed to value creation through Equinix’s rich ecosystem of internal partners. The VP of IT operations at the IT services and consulting company discussed the value of Equinix’s vendor ecosystem. They said: “It’s the rich connectivity diversity that [Equinix offers] in each of their data centers. They’re in the major places with the major players, and they usually have hundreds of providers that I can cross-connect to. That’s important for me because I want to monitor from different perspectives, and

“In terms of security, there’s a major impact [with Equinix]. We are bringing the security edge closer to our domain and our control as opposed to relying on somebody else to handle it for us. I also have the ability to create a security footprint that allows me to group things together, and I have ubiquitous security policy across [our network].”

Director of global engineering, hospitality

they help give me that reach without having to go shop.”

- Improved employee satisfaction.** Through the simplification of processes, ease of use of the tool, and eliminating menial work for maintaining physical hardware or updating aging software that is now automated through Equinix, interviewees’ organizations saw improvements to overall employee satisfaction for the teams directly working with data infrastructure. Other employees were also indirectly impacted as latency and operational downtime decreased and allowed workers to focus on their core responsibilities.
- Partnership and support.** Each of the eight interviewees shared having a great experience with the end-to-end support from Equinix’s internal resources. The network architect in transportation said: “Every time we’ve asked them questions, they may not have the answer right away. But within 24 hours, they’re back to us saying, ‘Hey, this is what you guys can do,’ or,

‘Hey, this is coming up.’ Absolutely, those guys are just great resources for us.”

FLEXIBILITY

The value of flexibility is unique to each customer. Some flexibility opportunities have already been summarized for each benefit above, but there are other scenarios in which a customer might implement Equinix Digital Services and later realize additional uses and business opportunities, including:

- **Longer-term value of investment in virtual infrastructure.** Organizations can realize value from transitioning to virtual infrastructure beyond the three-year period modeled for the composite organization. Interviewees’ organizations were not expecting to see the full benefits of the transition to virtual infrastructure until at the end of a five-year period or longer. In the case of the composite organization, this would equate to an additional \$5 million in savings annually when its fourth data center is decommissioned.
- **Improved sustainability for data infrastructure driving lowered costs.** Interviewees told Forrester that compared to their organizations’ on-premises data centers, Equinix’s overall higher PUE efficiency helps reduce their energy consumption and costs.² Equinix’s 100% renewable energy in US data centers and 95% worldwide can aid companies in reducing emissions and their overall carbon footprints.³ In addition, Equinix gives companies the capabilities to better understand and measure their energy usage and prevent potential fines for not measuring these factors properly.
- **Improved brand equity and employee loyalty.** Sustainability ranks as a core value for both customers and employees of corporations of all sizes.⁴ Companies can measure returns based on the potential for revenue growth through attraction of new investments as well as the potential to improve employee attraction and retention.

Sustainability At Equinix

Environmental responsibility and sustainability impact the survival and growth of every organization, but especially in the technology space where information and communications technology equipment alone are responsible for 1.4% of total global carbon emissions.⁴

Companies that are sustainably focused see better financial results than their peers. To deliver on sustainability, organizations need a clear strategy, the ability to measure their results, and an understanding of what their efforts will need to be in the future.⁵

Equinix helps organizations reduce their overall energy usage by transitioning to a virtual infrastructure from on-premises facilities while providing resources to measure and report on their progress towards their environmental goals.

As a dedicated provider for data center management, Equinix can invest in substantial internal improvements to optimize the energy usage in its facilities beyond the resources of individual companies that consume data infrastructure. In 2021, Equinix achieved 95% renewable coverage for its more than 240 international locations and projects to have 100% coverage by 2030.⁶

- **Lowered travel and gas costs.** The network architect in identity services explained how Equinix Digital Services impacts their company. They said: “We don’t have to fly people around the world anymore, so that’s less jet fuel that we [are] using. We really did become more sustainable because we relied on Equinix connection between our various environments.”
- **Ability to pivot from capex and opex expense models.** Transitioning to a virtual infrastructure through Equinix Digital Services can improve business agility for companies looking to leverage more operational expenses as opposed to capital expenditures. The director of global engineering in hospitality discussed how Equinix impacts their organization’s business flexibility. They said: “In terms of capital versus opex, it’s massive. By going to network virtualization, all of that cost is operationalized now.”

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
Dtr	License fees (annual)	\$0	\$3,150,000	\$4,200,000	\$5,250,000	\$12,600,000	\$10,279,113
Etr	Planning, implementation, and change management costs	\$232,875	\$139,725	\$178,538	\$217,350	\$768,488	\$670,748
	Total costs (risk-adjusted)	\$232,875	\$3,289,725	\$4,378,538	\$5,467,350	\$13,368,488	\$10,949,861

LICENSE FEES (ANNUAL)

Evidence and data. License fee costs are dependent on the quantity and type of products and services utilized, the number of Equinix facilities where organizations are deployed, and the connections made to vendor partners and cloud providers.

Modeling and assumptions. For the purposes of the financial model, Forrester assumes the following:

- The composite organization utilizes Equinix products for Network Edge, Equinix Fabric, Equinix Metal, and connect across several Equinix facilities worldwide.
- Overall costs increase over time as the composite organization continues to transition

more of its data infrastructure to Equinix Digital Services.

Risks. Licensing fees will vary from company to company based on:

- The size and geography of the organization as well as the overall scale of investment in Equinix Digital Services.
- The mix of annual and monthly services included in the licensing agreement.
- The specific services, support model, and features the organization chooses.

Results. To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$10.3 million.

License Fees (annual)						
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
D1	License fees	Interviews		\$3,000,000	\$4,000,000	\$5,000,000
Dt	License fees (annual)	D1	\$0	\$3,000,000	\$4,000,000	\$5,000,000
	Risk adjustment	↑5%				
Dtr	License fees (annual) (risk-adjusted)		\$0	\$3,150,000	\$4,200,000	\$5,250,000
Three-year total: \$12,600,000			Three-year present value: \$10,279,113			

PLANNING, IMPLEMENTATION, AND CHANGE MANAGEMENT COSTS

Evidence and data. Interviewees' organizations incurred costs for the initial planning, design, migration, and deployment of Equinix Digital Services. In addition to the initial launch of services, the companies had ongoing efforts for implementation as they continued to transition to more virtual infrastructures in addition to change management efforts as their data and vendor connection needs evolved.

- Interviewees' organizations utilized implementation teams of IT architects, project managers, managers, and business consultants for end-to-end planning and implementation activities. The process ranged from three months to two years dependent on the number of resources deployed, the complexity of the organization's existing infrastructure, and the scope of services transitioning to Equinix.
- Interviewees' companies had ongoing expenses for incremental implementation and change management. Most of the time spent was for internal planning and development. Interviewees shared that the actual setup in Equinix was quick and straightforward with most infrastructure changes taking place over a period of days or hours.
- The network architect in identity services shared how the experience with Equinix compared to with their company's previous solution. They said: "There are things that used to take a year from the time that business said 'I want it' until the time they actually got it. I would say that's down to three months [with Equinix]. The flexibility and infrastructure is a huge driver in all of that. I think that's extremely attractive, cheap management, and they can deal with a lot less-technical and more business-oriented people."

"I went into the Equinix portal and started up that day. I didn't have any idea what I was doing. It took me a week to build something with the Equinix team holding my hand, and they were great. They're still being super helpful when I have issues and questions."

Lead network engineer, food services

Modeling and assumptions. For the purposes of the financial model, Forrester assumes the following:

- The composite organization utilizes 50% of the time of a team of six FTEs for various planning, design, and migration tasks during a six-month period for the initial implementation of Equinix Digital Services.
- Subsequent years require 25% of the time of the implementation team over three months. The team grows to eight FTEs as the size of the composite's virtual infrastructure increases year over year.
- A small team of three to five individuals spends 20% of its time on change management activities for the composite organization's data infrastructure and security settings and to deploy new applications and services.
- The average fully burdened annual salary of a planning, implementation, and change management FTE is \$135,000.

Risks. These costs may vary from organization to organization based on the following factors:

- The skill set and salary levels of the planning, implementation, and change management team members.
- The complexity of the organization’s existing data infrastructure.
- The company’s virtual infrastructure investment.

Results. To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV of \$670,000.

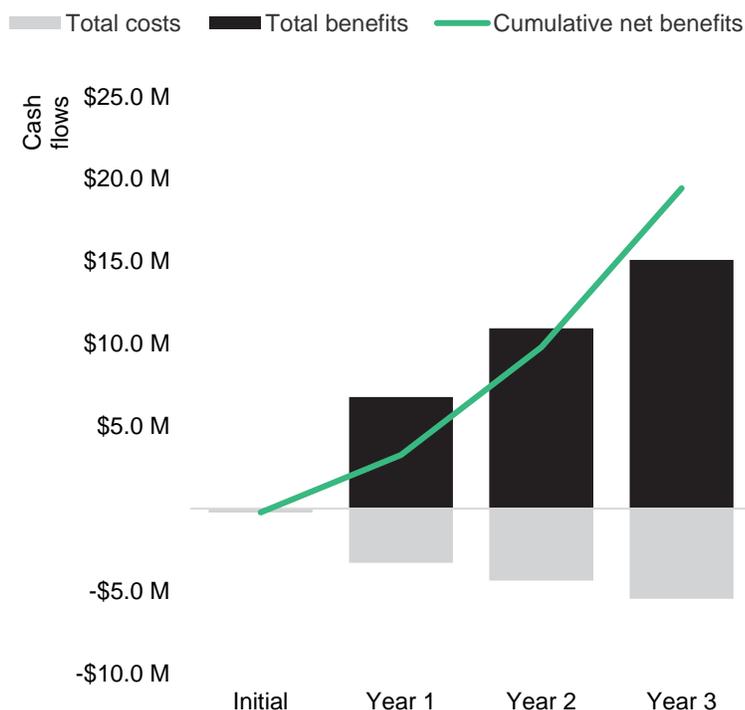
Planning, Implementation, And Change Management Costs

Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
E1	Number of FTEs involved in planning and implementation	Interviews	6	6	7	8
E2	Percent of FTE time spent on planning and implementation	Interviews	50%	20%	20%	20%
E3	Length of planning and implementation (in months)	Interviews	6	3	3	3
E4	Subtotal: Planning and implementation costs	$E1 \cdot E2 \cdot (E3/12) \cdot E8$	\$202,500	\$40,500	\$47,250	\$54,000
E5	Number of FTEs involved in change management tasks	Interviews		3	4	5
E6	Percent of FTE time spent on change management tasks	Interviews		20%	20%	20%
E7	Subtotal: Change management costs	$E5 \cdot E6 \cdot E8$		\$81,000	\$108,000	\$135,000
E8	Planning, implementation, and change management team member fully burdened salary	TEI Standard	\$135,000	\$135,000	\$135,000	\$135,000
E _t	Planning, implementation, and change management costs	$E4 + E7$	\$202,500	\$121,500	\$155,250	\$189,000
	Risk adjustment	↑15%				
E _{tr}	Planning, implementation, and change management costs (risk-adjusted)		\$232,875	\$139,725	\$178,538	\$217,350
Three-year total: \$768,488			Three-year present value: \$670,748			

Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Cash Flow Chart (Risk-Adjusted)



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

These risk-adjusted ROI and NPV values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost section.

Cash Flow Analysis (Risk-Adjusted Estimates)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	(\$232,875)	(\$3,289,725)	(\$4,378,538)	(\$5,467,350)	(\$13,368,488)	(\$10,949,861)
Total benefits	\$0	\$6,775,250	\$10,937,813	\$15,100,375	\$32,813,438	\$26,543,968
Net benefits	(\$232,875)	\$3,485,525	\$6,559,275	\$9,633,025	\$19,444,950	\$15,594,107
ROI						142%

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."

The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1 that are not discounted. All other cash flows are discounted using the discount rate at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations in the summary tables are the sum of the initial investment and the discounted cash flows in each year. Sums and present value calculations of the Total Benefits, Total Costs, and Cash Flow tables may not exactly add up, as some rounding may occur.



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: Endnotes

¹ 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.

² Source: "Data Center And Colocation Market Trends, 2021," Forrester Research, Inc., January 20, 2021.

³ Source: "Green Power Partnership National Top 100," United States Environmental Protection Agency, 2022.

⁴ Source: "The ROI of Sustainability, 2021," Forrester Research, Inc.

⁵ Source: Abhijit Sunil, "The ROI Of Sustainability: How Green Leads To Green," Forrester Blogs.

⁶ Source: "Equinix Sustainability Report," Equinix, 2021.

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