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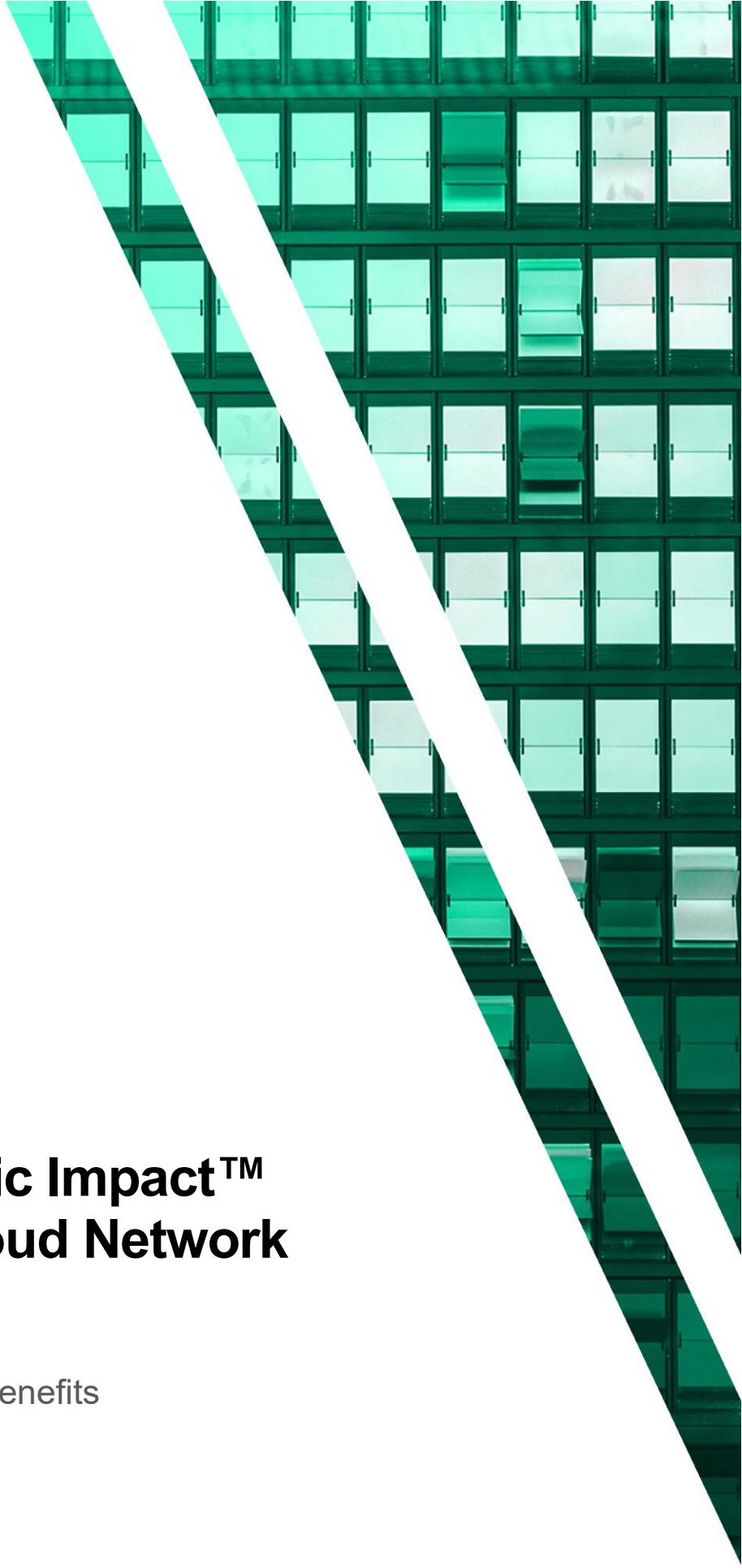

# The Total Economic Impact™ Of The Aviatrix Cloud Network Platform

## Cost Savings And Business Benefits Enabled By Aviatrix

**FEBRUARY 2021**

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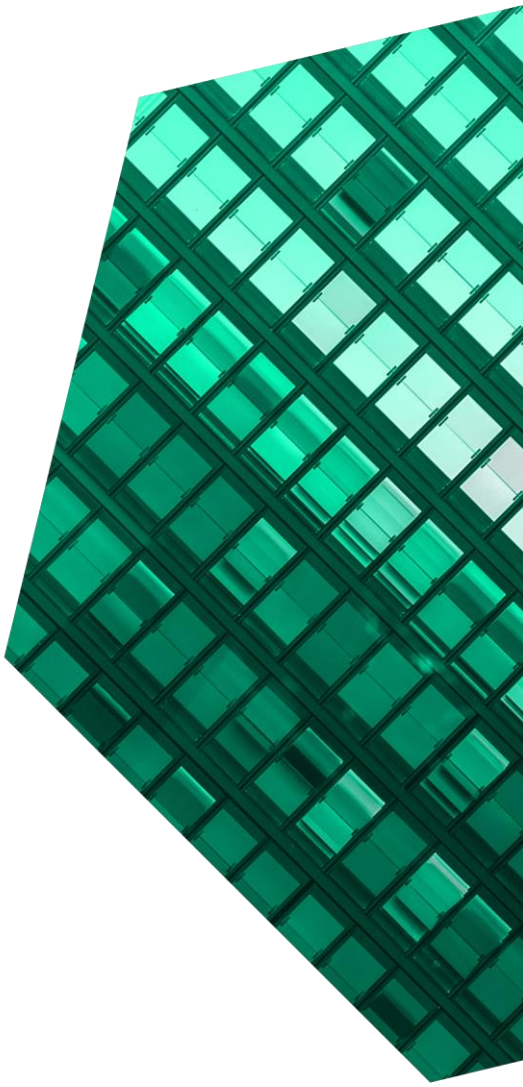


ABOUT FORRESTER CONSULTING

Forrester Consulting provides independent and objective research-based consulting to help leaders succeed in their organizations. For more information, visit forrester.com/consulting.

## Executive Summary

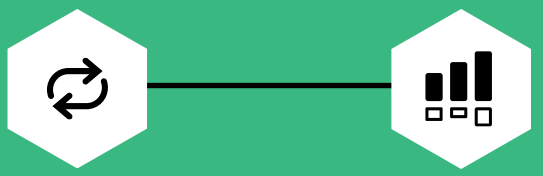
Public cloud infrastructure is the norm for many organizations. Decision-makers may plan to focus on a single cloud platform, but they often need to support many due to acquisition, client requirements, or app developer preferences. Each cloud service provider comes with its own processes and tools that slow cloud network operations. The Aviatrix cloud network platform helps organizations automate and control public cloud network infrastructure, maintain security compliance, and respond to clients faster.

Aviatrix commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Aviatrix. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Aviatrix for organizations looking for more advanced cloud networking, security, and operational visibility for their cloud or multicloud network environments.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed cloud and network administrators with organizations that found value in Aviatrix while operating in a single public cloud platform, which greatly increased when business needs and opportunities required a multicloud approach.

For the purposes of this study, Forrester aggregated the experiences of the interviewees and combined the results into a single composite organization. The composite represents an enterprise technology product and service provider that subscribes to all three of the big cloud-platform providers (Amazon Web Services, Google Cloud Services, and Microsoft Azure) to support software development efforts and client service delivery. The composite adds the Aviatrix cloud network platform to efficiently and securely build cloud networks that connect its enterprise data and applications.

**KEY STATISTICS**



Return on investment (ROI)
**222%**

Net present value (NPV)
**$3.01M**

Prior to using Aviatrix, the interviewees' organizations struggled to operate networking services, even in a single cloud platform service (CSP). For example, setting up a distributed network across multiple application environments required manually setting up underlying route tables and network connections from scratch, even when both application environments operated in the same platform. This slowed down the process and increased the risk of human error, leading to reduced efficiency and an increased risk of security issues.

After the investment in Aviatrix, the interviewees' organizations were able to deploy network infrastructures quickly and automate network builds with repeatable designs with consistent and secure settings that reduced the chance of human error. Aviatrix helped network engineers operate multicloud networks across disparate cloud networks in a repeatable way. Key results from the investment include improved IT efficiency because of faster

deployment, reduced risk, and fewer cloud networking issues; increased revenue by taking advantage of business opportunities quickly and delivering results faster; and reduced cloud network infrastructure costs.

> **"We have been able to open new lines of business and keep up with increased demand."**
>
> *Assistant director of cloud architecture and engineering, manufacturer*

**KEY FINDINGS FROM AVIATRIX CUSTOMERS**

**Quantified benefits.** Risk-adjusted present value (PV) quantified benefits for the composite organization include:

- **Multicloud readiness increases revenue and margin from new business.** Aviatrix allows businesses to be multicloud ready, even if still operating in a single cloud. This readiness allowed the interviewees' organizations to increase profitability by winning new business. Responding to business requirements faster leads to delivering revenue-generating services to prospective clients sooner, and on their preferred public cloud platforms. For the composite organization, this adds up to between $2.5 million and $11.25 million in incremental annual revenue, which translates to $375,000 to $1.7 million in net new, risk-adjusted operating margin each year.

Delivery time-to-market

**2 to 4 weeks (instead of 6 to 8 months)**

- **Increased revenue and margin from existing customers enabled by faster time-to-market.** In addition to increasing new business opportunities, multicloud readiness can lead to more revenue and profit from existing customers, as faster delivery and responsiveness lead to larger deals and more repeat business. Faster

**"We can shine a light in the dark corners of public cloud [with Aviatrix]."**

— Senior cloud architect, business software and services vendor

network setups save network engineer time, and added automation streamlines network and security reviews. For the composite organization, this is estimated at between $1.25 million and $2.5 million in increased revenue each year. This leads to a three-year, risk-adjusted present value of nearly $776,000 in new operating margin.

- **Reallocated FTE from operational efficiency.** Network engineering is more efficient with repeatable networking setup and teardown, all operated through a single pane of glass or fully automated leveraging infrastructure as code. The composite organization's decision-makers are able to reallocate several skilled resources to higher-value roles: two FTEs in Year 1, growing to seven FTEs by Year 3. This adds up to between $181,000 and $632,000 in annual cost savings for the composite.
- **Infrastructure cost savings.** With the Aviatrix cloud network platform, the interviewees' organizations have been able to accelerate their cloud deployments and retire legacy on-premises solutions more quickly, as well as avoid the renewal purchase of legacy virtual routers and other networking software deployed for their early cloud infrastructure designs. This leads to risk-adjusted cloud network infrastructure cost savings of more than $200,000 PV over three years.

**Unquantified benefits.** Interviewees described additional benefits that have not been quantified for this study. These benefits include:

- **Reduced risk exposure.** With repeatable and standard setup and teardown tasks, organizations only need to evaluate and test network security once. Rework due to human error, data leaks, and security breaches can be avoided. A senior cloud architect at a business software and services company said, "We can shine a light in the dark corners of public cloud."
- **Avoided recruiting, hiring, and training costs.** The interviewees' organizations avoided extra training for network engineers, as they no longer needed to learn the nuances of each cloud platform. The organizations can also now recruit from a broader pool of experienced candidates instead of prospective recruits who are skilled with a specific cloud platform. That also means network engineers can work in a flexible environment with opportunities to learn new skills, potentially improving employee experience and reducing turnover.
- **Multicloud application development.** With Aviatrix, organizations can deploy application modules to the cloud platform best-suited for a specific task (e.g., OCR applications in Azure) to deliver higher-quality total solutions.
- **Increased visibility and compliance.** Aviatrix's operational visibility console provides access to granular network reporting across public clouds to help identify and resolve issues faster.

**Costs.** Risk-adjusted PV costs include:

- **Aviatrix service costs.** The composite organization's decision-makers estimate a three-year, risk-adjusted PV cost of just less than $1.3 million for the Aviatrix Cloud Networking Platform.
- **Resource costs.** Resource costs are minimal. Aviatrix helps reduce network operational costs, although some implementation and ongoing tasks are required to set up and manage cloud networking with Aviatrix. For the composite organization, this adds up to a three-year risk adjusted PV of less than $70,000.

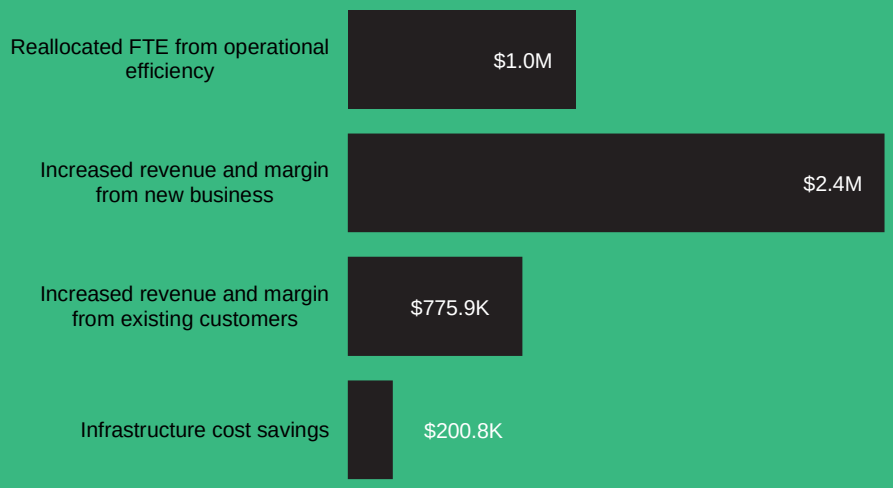
The customer interviews and financial analysis found that a composite organization experienced benefits of $4.37 million over three years versus costs of $1.36 million, resulting in a net present value (NPV) of $3.01 million and an ROI of 222%.

ROI
**222%**

BENEFITS PV
**$4.37M**

NPV
**$3.01M**

**Benefits (Three-Year)**




Margin or profit benefits shown here are based on nearly $26 million in new revenue across the three-year analysis period.

> **Without Aviatrix, it would have taken an extra year and twice the staff.**

— Senior infrastructure architect, insurance company

## TEI FRAMEWORK AND METHODOLOGY

From the information provided in the interviews of current Aviatrix customers, Forrester constructed a Total Economic Impact™ framework for those organizations considering an investment in Aviatrix.

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 Aviatrix can have on an organization.


**DISCLOSURES**

Readers should be aware of the following:

This study is commissioned by Aviatrix 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 the Aviatrix.

Aviatrix 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.

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

# The Aviatrix Cloud Network Platform Customer Journey

Drivers leading to the Aviatrix investment

**Interviewed Organizations**

| Industry | Interviewee | Solution focus |
|---|---|---|
| Business software and services vendor | Senior cloud architect | Delivering data analytics and analysis services on clients' preferred cloud platforms |
| Healthcare insurer | Senior infrastructure architect | Leveraging the right cloud platform for the right applications for managed care services delivered to millions |
| Data software and services vendor | Senior manager of traffic engineering | Delivering cloud-based, large data analytics for clients via public cloud platforms |
| Multinational manufacturing conglomerate | Assistant director of cloud architecture and engineering | Quickly and securely developing pilot and demo applications for (primarily aerospace and defense) customers |

## KEY CHALLENGES

As the interviewees' organizations migrated more business services, data, and applications to public cloud infrastructure, limitations arose. Decision-makers who wanted to network data and applications across multiple regions or clouds found they had to repeat the networking setup sequence for each environment; a simple copy function was not provided, even within a single public cloud platform.

Several interviewees said their organizations provide services for many clients delivered on public cloud platforms. Their clients often request services to be delivered on a particular cloud provider. These organizations were aligned to a certain cloud provider (e.g., Google Cloud Services, Microsoft Azure, Amazon Web Services), which created development and delivery problems and missed opportunities when a client requested a different cloud platform.

And finally, creating consistent networking architecture across cloud platforms was difficult. Even simple networking tasks like setting up end-to-end encryption or transit networking used different approaches and involved different steps to set up across each platform. A senior manager of traffic engineering at a data software firm said, "We were basically faced with trying to enable our business with a team of one, without taking too long."

These challenges led to:

- **Cloud provider networking inefficiency.** The interviewees' organizations had to manually repeat networking tasks for each network infrastructure build-out. And while network engineers have experience and training, specific cloud networking experience could be lacking. The assistant director of cloud architecture and engineering at the manufacturer said: "Cloud platform deployment and management required a lot of touch and retouch. Specific processes didn't work how our network engineers expected, so they were confused and required training. It was very cumbersome."
- **Lost or reduced business and revenue opportunities.** Decision-makers for the interviewees' organizations recognized they were missing opportunities by not responding quickly

> **"Networking on different clouds is not easy. There are a lot of different 'gotchas' that you don't realize exist until you start digging in."**
>
> *Senior cloud architect, business software and services vendor*

enough to existing or prospective new customers. This led to missed business value opportunities including lost new business, faster revenue recognition, and larger deals from existing customers.

- **Added infrastructure costs.** Services such as end-to-end encryption can be a costly add-on. Solutions varied across public cloud service providers and increased overall costs significantly.

**INVESTMENT OBJECTIVES**

With Aviatrix, the interviewees' organizations were able to set up networking on cloud platforms both in a much more familiar way, as well as a consistent way across all platforms. They can now set up, automate, and support application environments, data stores, and other business infrastructure requirements across Microsoft Azure, Amazon Web Services, and/or Google Cloud Services with access to advanced networking and security tools that enterprises expect.[1]

Organizations can take advantage of IT efficiencies and use that efficiency to respond to business opportunities more quickly and to save costs.

**COMPOSITE ORGANIZATION**

Based on the examples and results shared by the four interviewees, Forrester constructed a TEI framework, a composite company, and an ROI analysis that illustrates the financial business value compared to estimated costs. The composite organization is representative of the interviewees' companies, and it is used to present the aggregate financial analysis in the next section. The composite organization has the following characteristics:

**Description of the composite.** The composite organization is a technology service vendor. Historically, the organization has provided its services to be installed in its customers' own on-premises data centers or in private cloud infrastructure to deliver customized proof-of-concept, piloting, large-scale prototyping and testing, and production.

Recently, the composite organization expanded its service delivery options by leveraging the speed and agility of public cloud infrastructure to provide more options to its customers.

**Deployment characteristics.** The composite organization had already started its solution delivery options via cloud services. While it is the long-term plan for all future sales and customer delivery to be via cloud services, this line of business is still currently a smaller portion of total sales revenue.

At the start of Year 1, the organization implements Aviatrix and decision-makers start to take advantage of intracloud opportunities, such as deploying its application across multiple platform zones. Throughout Year 1, decision-makers also start to add additional cloud platforms for application services delivery. In Years 2 and 3, that multicloud approach continues, with cloud platform infrastructure needs growing substantially to keep up with the organization's growing services business with new closed deals and repeat customers buying more.

For the composite organization, a new business deal is estimated to average $625,000 per deal, or about $12,500 in average revenue per client per week. Forrester conservatively estimated the organization's operating margin on cloud at 20%.

**Key assumptions**

- **Business technology services provider**
- **Single cloud at the start of Year 1**
- **Multicloud by the middle of Year 1**

# 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 | Multicloud readiness increases revenue and margin from new business | $375,000 | $937,500 | $1,687,500 | $3,000,000 | $2,383,546 |
| Btr | Increased revenue and margin from existing customers enabled by faster time to market | $212,500 | $318,750 | $425,000 | $956,250 | $775,920 |
| Ctr | Reallocated FTE from operational efficiency | $180,500 | $451,250 | $631,750 | $1,263,500 | $1,011,668 |
| Dtr | Infrastructure cost savings | $80,750 | $80,750 | $80,750 | $242,250 | $200,813 |

### MULTICLOUD READINESS INCREASES REVENUE AND MARGIN FROM NEW BUSINESS

**Evidence and data.** The interviewees' organizations were able to turn operational efficiency into greater customer value that led to increases in new business opportunities. When faced with the request for a specific cloud platform or the need to create a new application environment to deploy a proof-of-concept solution for a customer, the organizations could respond more quickly when using the Aviatrix solution.

Before using Aviatrix, networking tasks could take the interviewees' organizations up to a few months with all the time-consuming and repetitive setup tasks, longer review cycles to ensure quality was maintained, and the extra time needed to complete customer-security audits for each unique network environment. Often, prospects didn't have time to wait, and business would be lost.

With Aviatrix, the organizations could demonstrate product capabilities and provide proof of concept deployments in a week or less. They set up secure, client-specific spaces using repeatable cloud-network designs that can be replicated quickly and reduces human error. Consistent networking and security settings were documented and presented to prospects to speed up security audit reviews. With this response speed, the organizations won more deals. This led to more revenue, operating margin, and profit. Examples include:

- Faster demos and proof-of-concepts help close deals. The manufacturing organization won more business by demonstrating technical capabilities more quickly. It also accessed more data more quickly, and package it as product add-ons. The assistant director of cloud architecture and engineering said, "We are still rolling out our cloud network infrastructure with Aviatrix, but we have already been able to open new lines of business and keep up with increased demand."
- The business services provider now works with several clients that required a preferred cloud provider. It was able to accomplish this and

Increased margin from new business

**$2.4 million (3-year PV)**

deliver quickly, adding up to millions in additional annual revenue from that new business.

**Modeling and assumptions.** For the composite organization, Forrester assumes:

- The organization gains net new business deals that may have been lost if the organization did not have the multicloud networking capabilities that Aviatrix enables. Forrester estimates there are four deals in Year 1, and that number grows to eight by Year 3.
- A single deal is estimated to be worth an average of $625,000 in revenue per year.
- The composite organization's operating margin for its cloud services is 20%.

**Risks.** Since it is often difficult to judge the full extent of the influences on a customer's decision to buy a product or service, Forrester applied a 25% risk adjustment to allow for new-business-deal and revenue-per-deal overestimation.

**Results.** The three-year, risk-adjusted total PV benefit of new operating margin and profit from net new business is nearly $2.4 million.

**Multicloud Readiness Increases Revenue And Margin From New Business**

| Ref. | Metric | Calculation | Year 1 | Year 2 | Year 3 |
|---|---|---|---|---|---|
| A1 | New business deals won each year enabled by broader cloud platform support | | 4.0 | 6.0 | 8.0 |
| A2 | Annual revenue per new business deal | | $625,000 | $625,000 | $625,000 |
| A3 | Total annual revenue from new business | Year 1: A1*A2<br>Years 2 and 3: $A1*A2+A3_{PY}$ | $2,500,000 | $6,250,000 | $11,250,000 |
| A4 | Operating margin | | 20% | 20% | 20% |
| At | Multicloud readiness increases revenue and margin from new business | A3*A4 | $500,000 | $1,250,000 | $2,250,000 |
| | Risk adjustment | ↓25% | | | |
| Atr | Multicloud readiness increases revenue and margin from new business (risk-adjusted) | | $375,000 | $937,500 | $1,687,500 |
| | **Three-year total: $3,000,000** | | | **Three-year present value: $2,383,546** | |

**INCREASED REVENUE AND MARGIN FROM EXISTING CUSTOMERS ENABLED BY FASTER TIME TO MARKET**

**Evidence and data.** In addition to bringing new business to the interviewees' organizations, faster time-to-market for product and service delivery also led to higher revenue, margin, and profit from existing clients. What used to take the organization six months or more to deliver can now be delivered in two to four weeks. Quicker response to requests and opportunities can incentivize customers to add more to their plan.

- For the manufacturer, faster time-to-market not only saved costs, but it also added to revenue as faster delivery helped keep up with demand.

Delivery time-to-market

**2 to 4 weeks (instead of 6 to 8 months)**

- For a data software and services provider, building its cloud platform turned on a new revenue stream that can be delivered in weeks. A senior manager said: “If I have to think about how long this used to take for a legacy engagement, it would probably be months and months. I think [it would take] a minimum of six months or more.”

**Modeling and assumptions.** For the composite organization, Forrester assumes:

- It has about 20 clients in Year 1 that can be impacted by the Aviatrix solution. This grows to 40 by Year 3.
- Decision-makers estimate an average of $62,500 in incremental revenue for these clients.
- Forrester assumes a 20% operating margin for online services.

**Risks.** Existing revenue is a little more predictable than new business. So, compared to the previous benefit, Forrester applied a 15% risk adjustment to allow for client or revenue overestimation.

Clients impacted by Aviatrix network efficiency

**Between 20 and 40 each year**

**Results.** The three-year, risk-adjusted total PV of increased operating and margin and profit from increased business from existing customers is nearly $776,000.

**Multicloud Readiness Increases Revenue And Margin From New Business**

| Ref. | Metric | Calculation | Year 1 | Year 2 | Year 3 |
|---|---|---|---|---|---|
| B1 | Existing clients impacted by Aviatrix management | Composite | 20 | 30 | 40 |
| B2 | Average additional annual revenue per client | A2/10 | $62,500 | $62,500 | $62,500 |
| B3 | Total project revenue from faster time to market | B1*B2 | $1,250,000 | $1,875,000 | $2,500,000 |
| B4 | Operating margin | Composite | 20% | 20% | 20% |
| Bt | Increased revenue and margin from existing customers enabled by faster time to market | B3*B4 | $250,000 | $375,000 | $500,000 |
| | Risk adjustment | ↓15% | | | |
| Btr | Increased revenue and margin from existing customers enabled by faster time to market (risk-adjusted) | | $212,500 | $318,750 | $425,000 |
| | **Three-year total: $956,250** | | | **Three-year present value: $775,920** | |

**REALLOCATED FTE FROM OPERATIONAL EFFICIENCY**

**Evidence and data.** Interviewees identified significant organizational efficiencies enabled by Aviatrix including the reallocation of network engineers reallocated to higher-value roles (as well as the avoidance of the impact of natural attrition and needing to make some future hires). Examples include:

- The data software and services provider has used Aviatrix to create and save common networking templates. The firm’s senior manager

said, “We have established various network patterns that we can deploy very quickly, and that we can basically just cookie cut in a sense.”

- The senior engineer with the business software and services firm identified troubleshooting as another significant savings. They said: “With Aviatrix, we have more data to investigate when something goes wrong. For example: Before, if our VPN connection would go down, provided tools wouldn’t really tell us what was happening or why the cloud network was not working. It was very much a black box.”

Network engineer efficiency with Aviatrix

**Between 50% and 70% each year**

- The manufacturer has significantly reduced cycle times for customized manufacturing. The assistant director of cloud architecture and engineering said, “It used to take about six to eight weeks just to get results back because of limited capacity in our job queue. … With Aviatrix, we are saving millions.”

**“With Aviatrix, we are saving millions.”**

*Assistant director of cloud architecture and engineering, manufacturer*

**Modeling and assumptions.** Overall, for the composite organization’s team focused on networking operation with Aviatrix, it estimates it can reduce networking resource needs by two or more FTEs. Assumptions include:

- Without Aviatrix, the composite organization would have needed between four and 10 FTEs to keep up with networking needs.
- With Aviatrix, decision-makers estimate the organization will only need two or three FTEs to meet current needs and to keep up with growth.
- The fully burdened average annual salary for a network engineer is $95,000.

**Risks.** As overall FTE requirements and salaries can vary and an organization’s ability to reallocate staff will differ, Forrester adjusted this benefit downward by 5%.

The three-year, risk-adjusted total PV (discounted at 10%) results in just over $1 million.

**Reallocated FTE From Operational Efficiency**

| Ref. | Metric | Calculation | Year 1 | Year 2 | Year 3 |
|---|---|---|---|---|---|
| C1 | Network engineers required before using Aviatrix | | 4 | 7 | 10 |
| C2 | Network engineers required with Aviatrix | | 2 | 2 | 3 |
| C3 | Average network engineer fully burdened annual salary | | $95,000 | $95,000 | $95,000 |
| Ct | Reallocated FTE from operational efficiency | (C1-C2)*C3 | $190,000 | $475,000 | $665,000 |
| | Risk adjustment | ↓5% | | | |
| Ctr | Reallocated FTE from operational efficiency (risk-adjusted) | | $180,500 | $451,250 | $631,750 |
| | **Three-year total: $1,263,500** | | | **Three-year present value: $1,011,668** | |

## INFRASTRUCTURE COST SAVINGS

**Evidence and data.** The Aviatrix platform includes several enterprise-class network and security services including VPN, end-to-end and high-performance encryption, multicloud network segmentation, internet egress filtering, and operational visibility. Leveraging those resources, the interviewees' organizations could reduce or retire expensive alternatives and reduce operational overhead. The manufacturer avoided using legacy virtual routers while maintaining high speeds and quality. The assistant director of cloud architecture and engineering said, "These are now included as part of my Aviatrix bill, *and* I get 10-GB performance."

Infrastructure cost savings

**$85,000 each year**

**Modeling and assumptions.** Forrester estimates that the avoided costs of software and virtual hardware add up to $85,000 per year.

**Risks and Results.** Forrester adjusted this benefit downward by 5% to allow for overestimation. This yields a three-year, risk-adjusted total PV of nearly $201,000.

**Infrastructure Cost Savings**

| Ref. | Metric | Calculation | Year 1 | Year 2 | Year 3 |
|---|---|---|---|---|---|
| D1 | Annual cost of retired virtual hardware and software | | $85,000 | $85,000 | $85,000 |
| Dt | Infrastructure cost savings | D1 | $85,000 | $85,000 | $85,000 |
| | Risk adjustment | ↓5% | | | |
| Dtr | Infrastructure cost savings (risk-adjusted) | | $80,750 | $80,750 | $80,750 |
| | **Three-year total: $242,250** | | | **Three-year present value: $200,813** | |

## UNQUANTIFIED BENEFITS

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

- **Reduced risk exposure.** With consistent and repeatable network design across the multicloud environment, the interviewees' organizations could evaluate and test security once. A network engineer could create a new network space on a cloud provider with a few clicks and rely on that network following the same setup procedures and settings. Automated deployments reduce security issues, such as data leaks or security breaches from misconfigured infrastructure.
- **Leveraging the best value platform.** One interviewee highlighted their organization's distributed software development approach, where application modules would sit on the cloud platform that was the best at a specific task (e.g., OCR or machine learning). The senior cloud architect at the business services provider said, "We can make apps better when we can choose what we want from each platform."
- **Increased visibility and compliance.** The Aviatrix visualization platform provided access to continuous, granular network traffic reporting across platforms and clouds. This helped decision-makers identify where an issue might begin, discern what part of the infrastructure

(e.g., application, cloud network, underlying cloud service) might be the problem, and quickly resolve those issues. The senior architect at the business software and services company said, "Aviatrix allows us to see what the other domains or instances we're trying to talk to are doing, and to see whether there is anything nefarious or bad happening."

- **Reduced training costs.** Aviatrix lowered training costs, as network engineers didn't need to be trained on every cloud platform. Training on the Aviatrix management toolset allowed them to work on any of the popular platforms. Developers — especially newer hires — also benefitted, as they could now request their preferred and familiar cloud platform for their application. Otherwise, they would have had to take time to retrain on a new platform to understand any development nuances.
    - The business software and services provider stopped needing senior network engineers to resolve every issue. The senior engineer said, "Many on our team members can use Aviatrix to help troubleshoot an issue without having to learn the full breadth of knowledge and training of a networking architect or network engineer."
    - The senior manager for the data software and services firm said it's beneficial not needing to have every network engineer learn the nuances of every cloud platform. They said, "When we hire new people, we don't have to go and train them on platforms they've never used before."
- **Improved employee experience.** This flexibility led to more reduced development costs. Employees could complete tasks more quickly with less frustration and avoid more boring and repetitive tasks by using tools they are familiar with, and they could also learn new skills. This helped improve employee experience and reduced turnover. A platform-agnostic focus also provides organizations with access to a broader pool of potential recruits for more interesting jobs.

> **"When we hire new people, we don't have to go and train them."**
>
> *Senior manager, data software and services firm*

**FLEXIBILITY**

The value of flexibility is unique to each customer. There are multiple scenarios in which an organization might implement Aviatrix and later realize additional uses and business opportunities. These include:

- **Continued cloud rollout.** Organizations using Aviatrix are on a path to greater cloud deployment. Each new application, service migrated to cloud, and team or role that can use them can lead to even greater cost savings and revenue opportunities.
- **More focus on an intracloud strategy.** Multicloud networking infrastructure has been a result of acquisition, client requirements, or other needs. Some of the interviewees' organizations are also improving their intracloud infrastructures using Aviatrix to efficiently set up networking infrastructure that only needs a single cloud platform — especially for multiregion architecture.

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** |
| Etr | Licensing costs | $0 | $252,000 | $567,000 | $787,500 | $1,606,500 | $1,289,346 |
| Ftr | Incremental resource costs | $21,263 | $19,656 | $19,656 | $19,656 | $80,231 | $70,144 |
| | Total costs (risk-adjusted) | $21,263 | $271,656 | $586,656 | $807,156 | $1,686,731 | $1,359,490 |

### LICENSING COSTS

**Evidence and data.** Aviatrix licensing can be contracted with a pay-as-you-go (i.e., paying for service consumption as it's used) or fixed-rate model (i.e., agreeing up-front to pay a fixed cost for a period of time). The composite organization uses the pay-as-you-go option during Year 1. However, later years in the model reflect fixed-rate licensing. These totals are higher to meet the significant growth shown in the expected revenue growth detailed in the Analysis Of Benefits section, but also to include some volume pricing.

**Risks.** Forrester applied a 5% risk adjustment to provide a more conservative estimate.

**Results.** The three-year, risk-adjusted total PV (discounted at 10%) is less than $1.4 million.

| Licensing Costs | | | | | | |
|---|---|---|---|---|---|---|
| **Ref.** | **Metric** | **Calculation** | **Initial** | **Year 1** | **Year 2** | **Year 3** |
| E1 | Aviatrix licensing | | $0 | $240,000 | $567,000 | $787,500 |
| Et | Licensing costs | E1 | $0 | $240,000 | $567,000 | $787,500 |
| | Risk adjustment | ↑5% | | | | |
| Etr | Licensing costs (risk-adjusted) | | $0 | $252,000 | $567,000 | $787,500 |
| | **Three-year total: $1,606,500** | | | **Three-year present value: $1,289,346** | | |

### INCREMENTAL RESOURCE COSTS

**Evidence and data.** While significant network engineer operating efficiency is detailed in the Analysis Of Benefits section, there are other new tasks associated with the Aviatrix platform. These include:

- Some up-front resource time is required to help with deployment and Aviatrix training.
- The cost includes a small amount of ongoing resource time for using the Aviatrix solution, consuming and summarizing reports for IT directors, and other tasks.

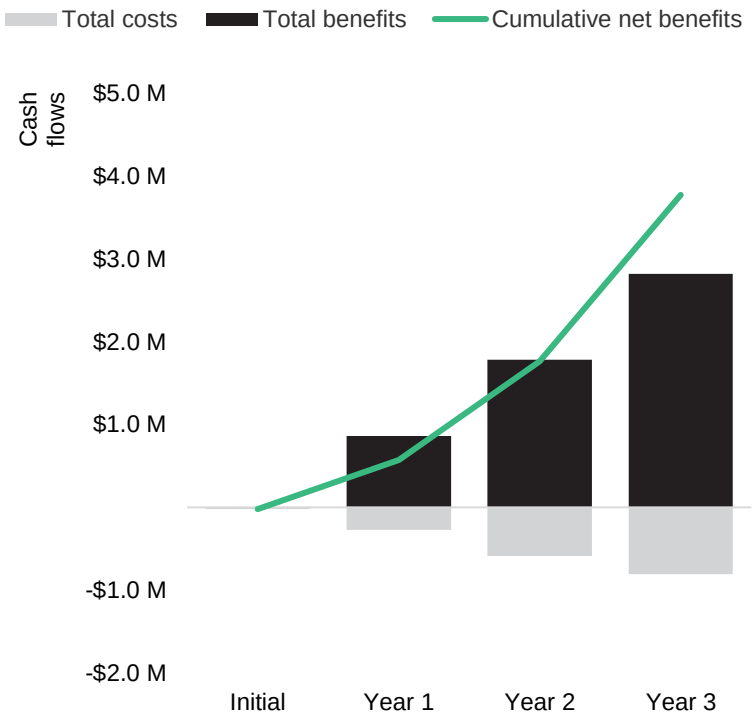
| Incremental Resource Costs | | | | | | |
|---|---|---|---|---|---|---|
| **Ref.** | **Metric** | **Calculation** | **Initial** | **Year 1** | **Year 2** | **Year 3** |
| F1 | Implementation resource costs to enable Aviatrix | $45 per hour* 450 hours | $20,250 | | | |
| F2 | Incremental ongoing resource costs | $45 per hour*8 hours per week*52 weeks | | $18,720 | $18,720 | $18,720 |
| Ft | Incremental resource costs | F1+F2 | $20,250 | $18,720 | $18,720 | $18,720 |
| | Risk adjustment | ↑5% | | | | |
| Ftr | Incremental resource costs (risk-adjusted) | | $21,263 | $19,656 | $19,656 | $19,656 |
| | **Three-year total: $80,231** | | | **Three-year present value: $70,144** | | |

**Risks.** Forrester applied a 5% risk adjustment to allow for resource underestimation. The three-year, risk-adjusted total PV is less than $20,000.

# 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 | ($21,263) | ($271,656) | ($586,656) | ($807,156) | ($1,686,731) | ($1,359,490) |
| Total benefits | $0 | $848,750 | $1,788,250 | $2,825,000 | $5,462,000 | $4,371,947 |
| Net benefits | ($21,263) | $577,094 | $1,201,594 | $2,017,844 | $3,775,270 | $3,012,457 |
| ROI | | | | | | 222% |

# 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%.

# Appendix B: Endnotes

[1] While there are three obvious cloud provider options, for the purposes of this analysis, no single cloud platform is considered as the “before state.” While cloud platform costs and requirements vary, if a single cloud platform is specified, a general description applicable to any cloud platform option should be considered. You can replace that generic description with the cloud platform(s) you use as you build your own business case.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