FORRESTER®

The Total Economic Impact™ Of Heroku

Cost Savings And Business Benefits Enabled By Heroku

A Forrester Total Economic Impact™ Study
Commissioned By Salesforce, March 2025

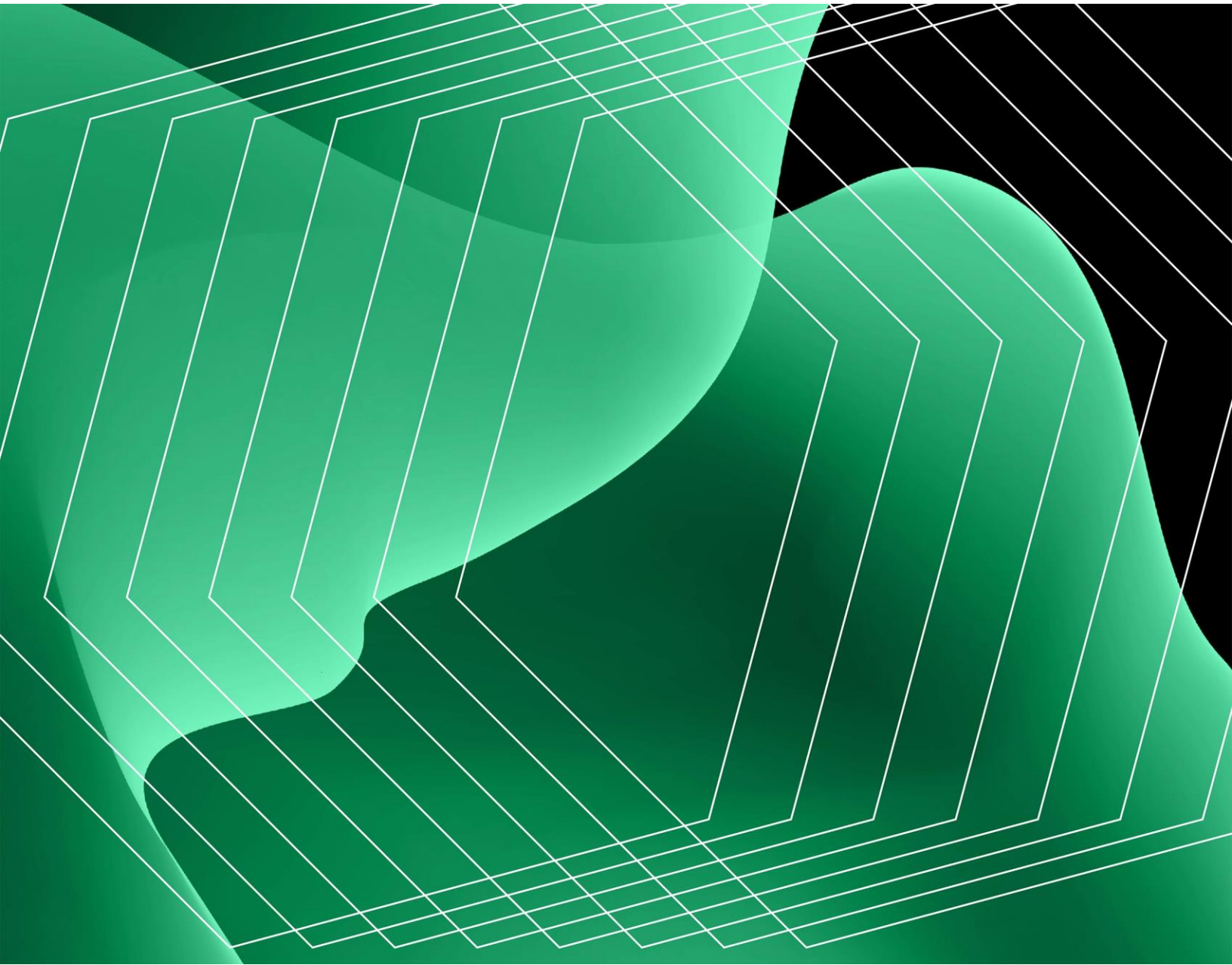


Table Of Contents

Consulting Team:

Kara Luk

ABOUT FORRESTER CONSULTING

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

© Forrester Research, Inc. All rights reserved. Unauthorized reproduction is strictly prohibited. Information is based on best available resources. Opinions reflect judgment at the time and are subject to change. Forrester®, Technographics®, Forrester Wave, and Total Economic Impact are trademarks of Forrester Research, Inc. All other trademarks are the property of their respective companies.

Executive Summary

Software development is increasingly critical to a firm's ability to win, serve, and retain their customers. As organizations seek to differentiate themselves through their applications, they must use a set of technologies to enable modern software development practices and reduce the burden on development teams.[1] Heroku's platform as a service (PaaS) helps organizations reduce DevOps toil, improve developer efficiency, and accelerate time to value, allowing them to quickly meet customer demands and respond to business opportunities.

Heroku is a PaaS offering from Salesforce designed to help teams accelerate cloud-native application development. With an end-to-end platform, fully managed data services, and easy ecosystem extensibility, Heroku unites app development, infrastructure, and IT operations with cloud operations (CloudOps), DevOps, and site reliability engineering (SRE) best practices. Heroku provides support for popular languages and frameworks, such as Java, Node.js, Python, Ruby, and .NET. Heroku's fully managed and opinionated platform reduces DevOps variation in requirements, enabling developers to focus on building robust applications and operators to easily manage systems at scale.

Heroku commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Heroku.[2] The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Heroku on their organizations.

Return on investment (ROI)
286%

Net present value (NPV)
$3.65M

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four decision-makers with experience using Heroku. For the purposes of this study, Forrester aggregated the interviewees' experiences and combined the results into a single composite organization that is a global organization with revenue of $3 billion per year.

Interviewees said that prior to using Heroku, their organizations leveraged and evaluated a variety of tools and infrastructures to deploy and manage applications. Prior approaches to deployment and infrastructure created complexity for development teams, requiring significant

DevOps effort that limited developer capacity, delayed time to value, reduced application stability, and extended lead time to deliver new features.

After the investment, Heroku enabled interviewees' organizations to optimize their teams' work toward feature development instead of undifferentiated DevOps activities, including infrastructure management, data service configuration, and app scaling. With improved DevOps and developer efficiency, the organizations accelerated development cycles, allowing them to release more features faster and accelerate business outcomes.

KEY FINDINGS

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

- **A 40% increase in developer productivity.** The Heroku platform streamlines app deployment and reduces operational complexity, helping developers deploy and manage their applications efficiently. The improved productivity allows the composite's developers to provide richer feature sets for app users. Over three years, the enhanced developer productivity equates to 6.8 full-time equivalents (FTEs), valued at $2.1 million in labor.
- **A 35% reduction in DevOps toil.** By leveraging Heroku's managed platform infrastructure, data services, security controls, and other tools, the composite organization avoids DevOps toil and associated expenses. The operational efficiency gain enables the composite organization to redirect resources from DevOps to building apps. Over three years, the reallocated effort is worth $725,000 to the composite organization.
- **A $12 million increase in annual topline revenue growth.** Heroku reduces operational complexity and enables faster, more cost-efficient innovation. As a result, the composite organization improves time to market for its apps and provides customers with richer feature sets. With the ability to deploy apps and new functionalities faster, the composite can better respond to emerging opportunities for revenue growth. Over three years, it generates a cumulative total of $27 million additional revenue with an incremental profit worth $1.9 million.

Unquantified benefits. Benefits that provide value for the composite organization but are not quantified for this study include:

- **Customer experience and satisfaction.** Heroku helps the composite organization create robust, data-driven app experiences for its customers, leading to higher satisfaction scores and loyalty.
- **Scalability and performance.** The composite can easily scale its app capacity to meet changing business requirements, and autoscaling features ensure it maintains app performance during periods of high activity.
- **Security.** Heroku provides the composite organization with security and compliance features, helping it reduce risk, protect sensitive data, and uphold regulatory requirements with minimal overhead.
- **Seamless Heroku and Salesforce data synchronization.** The composite organization leverages Heroku Connect to easily set up and manage data synchronization between its Heroku and Salesforce apps, eliminating the need for complex configuration effort.
- **Code quality and upskilling.** Although the composite organization's developers primarily recapture their time savings by writing more code, they also have more time to focus on code quality and upskilling.

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

- **Heroku fees.** The composite organization incurs fees of $1.2 million over three years for Heroku compute, data services, and add-ons.
- **Heroku implementation and ongoing management.** The composite organization incurs costs for training, implementation, and ongoing management, totaling $43,000 over three years.

The representative interviews and financial analysis found that a composite organization experiences benefits of $4.92 million over three years versus costs of $1.28 million, adding up to a net present value (NPV) of $3.65 million and an ROI of 286%.

40%

Increase in developer efficiency

"Because the Heroku platform is easy to develop on, we can quickly create multiple apps with small teams and meet customer demands and business opportunities. It does not require us to have large development teams or investments in massive data lake repositories for the amount of data that we have. Heroku is a very easy decision to make when our business necessitates a fast response to a business opportunity."

SENIOR MANAGER OF IT BUSINESS STRATEGY, MANUFACTURING

"Using Heroku's PaaS future-proofs our organization and enables long-term growth. It allows us to scale while minimizing impacts to the business."

DIRECTOR OF TECHNOLOGY INNOVATION, FINANCIAL SERVICES

Return on investment (ROI)

286%

Benefits PV

$4.92M

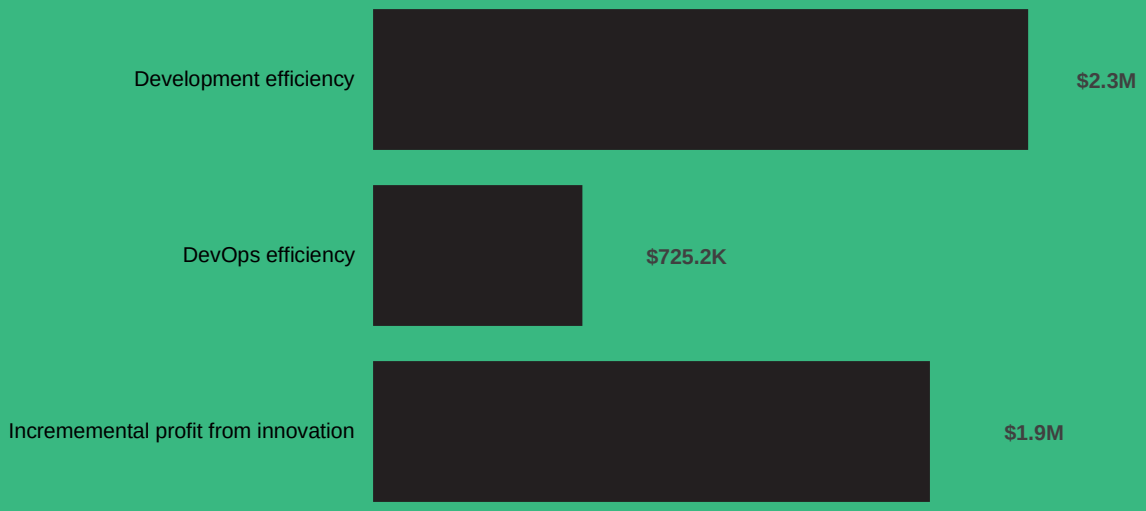
Net present value (NPV)

$3.65M

Payback

<6 months

Benefits (Three-Year)



TEI FRAMEWORK AND METHODOLOGY

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

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 Heroku can have on an organization.

DISCLOSURES
Readers should be aware of the following:

This study is commissioned by Salesforce 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 Heroku. For the interactive functionality using Configure Data/Custom Data, the intent is for the questions to solicit inputs specific to a prospect's business. Forrester believes that this analysis is representative of what companies may achieve with Heroku based on the inputs provided and any assumptions made. Forrester does not endorse Salesforce or its offerings. Although great care has been taken to ensure the accuracy and completeness of this model, Salesforce and Forrester Research are unable to accept any legal responsibility for any actions taken on the basis of the information contained herein. The interactive tool is provided 'AS IS,' and Forrester and Salesforce make no warranties of any kind.

Salesforce 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.

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

Due Diligence
Interviewed Salesforce stakeholders and Forrester analysts to gather data relative to Heroku.

Interviews
Interviewed four people at organizations using Heroku to obtain data about 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 Heroku Customer Journey

Drivers leading to the Heroku investment

Interviews				
Role	**Industry**	**Region**	**Revenue**	**Employees**
Senior manager of IT business strategy	Manufacturing	Division: US HQ, global operations	Division: $4.5 billion	Division: 360
Chief technology officer	Software	Europe HQ, global operations	$5.5 million	36
Director of technology innovation	Financial services	US HQ, national operations	$261 million	4,000
VP of analytics	Financial services	US HQ, global operations	$73 billion	225,000

KEY CHALLENGES

Before adopting Heroku, the interviewees' organizations leveraged a variety of tools and infrastructures to build, deploy, and manage their applications. Interviewees shared that their organizations adopted Heroku to build new applications and/or migrate existing applications from prior infrastructures. Common challenges with prior infrastructures and other cloud services that they evaluated to build and run their applications included:

- **Infrastructure complexity.** Interviewees reported that their organization's prior application infrastructures and other evaluated solutions were prohibitively complex and required significant effort to set up and maintain apps on. The VP of analytics at a financial services company said: "There were many challenges in infrastructure and deployment. Multiple teams were involved in server set up, configurations, scaling, and maintenance. It was time consuming and people dependent."
- **Optimization of developer effort.** Interviewees shared that their organizations looked to optimize developer resources so they could focus on development versus DevOps activities. However, existing approaches and alternative options for infrastructure and development limited developer efficiency and their capacity for building features. The

senior manager of IT business strategy at a manufacturing company shared, “Because I have such a small team and I’ve got such a large audience of end users, we prefer to buy out-of-box solutions rather than build heavy customization, simply because the long-term costs are too enormous to do heavy, customized work.”

> “We had issues with our previous platform. We had to use certain packages and development processes, and it wasn’t working well. There were too many configurations and components to set up, making it a hassle to deal with. Our company had only three or four people and we couldn’t afford to spend a month figuring out how to use [cloud providers]. We thought, ‘Isn’t there an easier way?’”
>
> **CHIEF TECHNOLOGY OFFICER, SOFTWARE**

- **Time to value.** Interviewees shared that their organizations needed to deliver new features, products, and services to customers quickly and efficiently. The time to configure and manage infrastructure components, data services, and security controls led to development bottlenecks that impacted time to market. For example, the chief technology officer at a software company said: “With our prior cloud service, there was a lot of configuration and too much to do to get up and running. At the time, we were a startup and had an idea and a plan that we needed to execute on quickly. We did not want to spend our time getting the infrastructure up and running.”
- **Data requirements.** Interviewees noted that their applications required integration with various data services but shared that these data architectures would have been complex and costly to develop, integrate, and maintain with other approaches. Additionally, the senior manager of IT business strategy at a manufacturing company said that they initially considered building their app on the existing Salesforce platform but had concerns about performance degradation. They said: “We did consider using our existing tool set within Salesforce, but we were worried about the overall performance of the entire platform because of the sheer amount of data we had. We did not want to create any bottlenecks or service degradation. In our first data load, we imported over 15 million

rows of data. If we had done this through the Salesforce platform, it would have brought everything to a standstill, using up all our storage limits and rendering the platform unusable."

WHY HEROKU?

The interviewees' organizations searched for a solution to address their key challenges and selected Heroku because it offered:

- **Managed infrastructure and data services.** Interviewees shared that one of the primary reasons their organization chose Heroku was its managed platform service inclusive of infrastructure, DevOps tooling, and data service offerings, which reduced operational complexity and accelerated time to market. The chief technology officer at a software company said: "We had a business to run and didn't want to figure out how many servers we needed or how to configure the infrastructure. We wanted to get set up quickly so we could build the product. When we tested out Heroku, it started working right away, which made me really happy." The director of technology innovation at a financial services company said, "Another reason we chose Heroku was because it offered services for our Postgres database, Redis, and Heroku Connect for Salesforce."
- **Performance and scaling.** Interviewees noted that Heroku's app containers, referred to as dynos, could be scaled easily to maintain app performance during periods of increased demand and adjusted as their application requirements evolved. The VP of analytics at a financial services company said, "We use Heroku because of its ability to scale with high volumes of data queries and visualizations during peak business hours."
- **Ease of use.** Heroku offered the interviewees' organizations a developer-friendly platform including an intuitive interface and easy-to-use tools for managing deployment workflows, various environments, app performance, and team collaboration. These features were all factors in selecting Heroku.
- **Pricing flexibility.** The VP of analytics at a financial services organization said: "[Our cloud service provider] was very strict in their pricing. Heroku offered a more pay-as-you-go structure, which was a major factor for us because it lowered infrastructure costs."

> “We felt that Heroku could handle the data load and performance requirements. It offered a platform that was easy to develop on so we could quickly develop our applications and push them into production. It was one of the primary platforms that we considered, and it has worked out phenomenally well.”
>
> SENIOR MANAGER OF IT BUSINESS STRATEGY, MANUFACTURING

> “We needed a scalable platform that could grow with us in the long term. It’s a very developer-friendly platform. And the seamless integration with Salesforce and compliance features provided by Heroku Shield were beneficial.”
>
> DIRECTOR OF TECHNOLOGY INNOVATION, FINANCIAL SERVICES

> “We needed extensive infrastructure setup, including running servers, environment configuration, and deployment management. Deployment timelines could take weeks or months, depending on complexity and resource availability. With Heroku, the deployment process and environment management were streamlined, reducing time to market by 40% to 50%.”
>
> VP OF ANALYTICS, FINANCIAL SERVICES

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 interviewees' 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 organization is a global company with annual revenue of $3 billion. App development and iteration is business-critical as customers routinely interact with the organization through its applications and employees utilize them to drive workflows and revenue. The organization has 30 software engineers who are responsible for feature development and DevOps.

Deployment characteristics. The composite organization adopts Heroku to develop new revenue-driving applications, migrate and enhance existing applications, and scale with the demands of a growing customer base while limiting DevOps expenses. The composite organization uses Heroku's managed data services to build data-driven app experiences and Heroku Connect to synchronize app data with its Salesforce platform.

Key Assumptions

$3 billion in revenue

30-person app development team

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	Development efficiency	$911,880	$911,880	$911,880	$2,735,640	$2,267,711
Btr	DevOps efficiency	$291,600	$291,600	$291,600	$874,800	$725,166
Ctr	Incremental profit from innovation	$528,000	$792,000	$1,056,000	$2,376,000	$1,927,934
	Total benefits (risk-adjusted)	$1,731,480	$1,995,480	$2,259,480	$5,986,440	$4,920,811

DEVELOPMENT EFFICIENCY

Evidence and data. Interviewees shared that Heroku streamlined deployment processes and provided integrated development tools, data services, and other features, driving app development efficiencies. As a result, interviewees reported that their developer teams had more capacity for building apps and features, leading to increased velocity and feature development. They detailed several areas in which Heroku created efficiencies, including:

- **Deployments.** Heroku provided the interviewees' organizations with an integrated platform that has tools to manage deployment workflows and environment configurations and track member collaboration. These tools helped streamline deployment processes and drive greater development efficiency, translating to accelerated release cycles and the ability to deliver more features. The director of technology innovation and the VP of analytics at the financial services companies noted that their development teams could launch apps and new features more than 40% faster with Heroku compared to other approaches. Similarly, the senior manager of IT business strategy at a manufacturing company shared that it took four months to build the organization's first app on Heroku, which would have taken several more months to complete with other cloud service providers.

> "In the last two years, our velocity has skyrocketed on Heroku. We've got 10 times more development going than we had prior."
>
> DIRECTOR OF TECHNOLOGY INNOVATION, FINANCIAL SERVICES

- **Testing.** Interviewees shared that Heroku enabled their organizations to efficiently manage test environments, streamlining testing processes and reducing defect leakage. The director of technology innovation at a financial services company said: "We can spin up test instances in Heroku, which is beneficial because it provides a full version of the app for testing. Once testing is complete, the instance can be easily removed, eliminating the need to maintain a large test environment. We can just set them up as needed and that's been really beneficial in helping with our defect leakage, which is as low as it's ever been as we're pushing code." Similarly, the VP of analytics at a financial services company said: "Automated testing and continuous integration processes are integrated in Heroku. So, even testing has become faster and more efficient. Manually creating a separate testing environment is not needed anymore, so that's a big time saver."
- **Data services.** Interviewees noted that their organizations used Heroku's services for Postgres, Redis, and Kafka, which simplified provisioning, configuration, and management of data services. By using Heroku's fully managed services, developers could quickly integrate data sources into their applications without significant provisioning and configuration effort. Additionally, integrated platform tools helped developer teams easily monitor data services performance and scale capacity as needed.

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- There are 30 FTEs on the developer team, 75% of whom are allocated toward feature development without Heroku.
- Heroku increases development efficiency by 40%.

- Seventy-five percent of development time savings are recaptured toward productive activities.
- The average fully burdened annual salary for a software engineer is $149,000.

Risks. Forrester recognizes that these results may not be representative of all experiences. The following factors may impact this benefit:

- An organization's prior application environment and development processes.
- The skill and effectiveness of an organization's developer team with respect to feature development.
- The size of an organization's developer team and the percentage of FTEs that are dedicated to app development before Heroku.
- Actual salaries of developer resources.
- The degree to which time savings are recaptured toward productive activities.

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $2.2 million.

40%

Increased developer productivity

Development Efficiency					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
A1	FTEs on developer team	Composite	30	30	30
A2	Percentage of developer FTEs focused on development without Heroku	Composite	75%	75%	75%
A3	Increased development efficiency with Heroku	Interviews	40%	40%	40%
A4	Productivity recapture	TEI standard	75%	75%	75%
A5	Additional FTE capacity	A1*A2*A3*A4	6.8	6.8	6.8
A6	Fully burdened annual salary of a software engineer	Composite	$149,000	$149,000	$149,000
At	Development efficiency	A5*A6	$1,013,200	$1,013,200	$1,013,200
	Risk adjustment	↓10%			
Atr	Development efficiency (risk-adjusted)		$911,880	$911,880	$911,880
	Three-year total: $2,735,640			**Three-year present value: $2,267,711**	

DEVOPS EFFICIENCY

Evidence and data. Interviewees reported that Heroku enabled DevOps savings by simplifying infrastructure management, data services, security controls, and monitoring. This enabled them to avoid hiring additional resources to manage DevOps and optimize existing developer team workloads toward feature development. On average, interviewees estimated a 41% reduction in DevOps' effort. They detailed several areas in which Heroku created efficiencies, including:

- **Infrastructure management.** Heroku offloaded several activities from developer teams at the interviewees' organizations, including container provisioning and orchestration, container lifecycle management and monitoring, environment configurations, and build process automation. Interviewees shared that these capabilities significantly reduced the required DevOps labor. The director of technology innovation at a financial services company said: "[Of a team of 25], I only have two people responsible for DevOps because with Heroku it's so easy to manage. I don't have an army of DevOps people pushing virtual machines (VMs) or managing virtual environments."

> “All of our developers can focus on building features. With [cloud service provider], we would lose a developer to DevOps tasks that constantly needed configuration and management. But with Heroku, our developers can concentrate on building features without worrying about underlying infrastructure.”
>
> CHIEF TECHNOLOGY OFFICER, SOFTWARE

- **Security.** Interviewees noted that Heroku offered features that simplified security configuration and control. The VP of analytics at a financial services company shared: “Before Heroku, the DevOps team had to keep the system secure and manually patch servers and manage security configurations. It required constant attention to stay up to date with the latest vulnerabilities and patches. Now, Heroku automatically handles the security updates for the platform, including patching underlying systems and applying security fixes.” The chief technology officer at a software company said: “Even managing secrets is easier in Heroku compared to before. With Heroku, settings, keys, and secrets are easy to manage. I can see and manage them in an organized manner.”

> “We’re not creating a whole other technology stack like we would have to with [cloud service providers]. That’s the power of the Heroku platform. With the Shield product and other offerings, we have an encompassing umbrella over all of the substacks. It makes it much easier to not only build apps but also to ensure security is maintained.”
>
> SENIOR MANAGER OF IT BUSINESS STRATEGY, MANUFACTURING

- **Monitoring and logging.** Interviewees noted that Heroku's monitoring and logging features enabled their organizations to easily collect and analyze application data to help monitor and fine-tune application performance, driving additional time savings. The VP of analytics at a financial services company said, "With the operating tools for monitoring and logging, such as Heroku Metrics for app performance and Heroku logs for viewing application logs in real time, we can track and diagnose issues without the need for complex set up."

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- Without Heroku, 25% of the composite organization's 30 developer FTEs are needed to support DevOps activities.
- Heroku improves DevOps efficiency by 35%.
- Seventy-five percent of DevOps time savings are recaptured toward productive activities.
- Those responsible for DevOps activities are senior engineers with advanced expertise in areas such as infrastructure management and development lifecycles. The average fully burdened annual salary for a senior engineer is $162,000.

Risks. Forrester recognizes that these results may not be representative of all experiences. The following factors may impact this benefit:

- An organization's prior application environment and deployment processes.
- The skill and effectiveness of an organization's developer team with respect to DevOps.
- The size of an organization's engineering team and the percentage of FTEs that are dedicated to DevOps before Heroku.
- Actual salaries of engineering resources.
- The degree to which DevOps time savings are recaptured toward productive activities.

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $725,000.

35%

Increased DevOps efficiency with Heroku

"With Heroku, we have shifted the ratio of developers to DevOps resources from 20:10 to 20:3."

VP OF ANALYTICS, FINANCIAL SERVICES

DevOps Efficiency					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
B1	FTEs on developer team	Composite	30	30	30
B2	Percentage of FTEs required to support DevOps without Heroku	Interviews	25%	25%	25%
B3	Increased DevOps efficiency due to Heroku	Interviews	35%	35%	35%
B4	Productivity recapture	TEI standard	75%	75%	75%
B5	Reallocated developer FTEs with Heroku	B1*B2*B3*B4	2.0	2.0	2.0
B6	Annual cost of DevOps resource	Composite	$162,000	$162,000	$162,000
Bt	DevOps efficiency	B5*B6	$324,000	$324,000	$324,000
	Risk adjustment	↓10%			
Btr	DevOps efficiency (risk-adjusted)		$291,600	$291,600	$291,600
	Three-year total: $874,800			**Three-year present value: $725,166**	

INCREMENTAL PROFIT FROM INNOVATION

Evidence and data. Interviewees shared that Heroku reduced operational complexity and helped their organizations innovate faster and more cost-effectively, enabling them to improve application time to market and provide customers with richer feature sets. By leveraging Heroku, developers could focus on innovation instead of managing complex infrastructures and data services, leading to accelerated development cycles. By deploying new features to customers faster, the interviewees' organizations could better respond to emerging business opportunities and drive business outcomes, including revenue growth and operational efficiency. Interviewees shared that it would have taken several additional months to get their initial apps into production and reported that Heroku had improved time to value for releases by up to 50%. They shared the following experiences:

- The senior manager of IT business strategy at a manufacturing company detailed their use of Heroku to build a self-service app that helps dealers find appropriate replacement parts. The interviewee explained that Heroku's data services enabled their organization to easily leverage Postgres data without significant set up or maintenance effort, and Heroku Connect piped sales opportunities and relevant data into Salesforce for sales personnel to close. They reported that with the improved customer experience and enhanced sales personnel enablement, their organization measured a significant increase in replacement part and accessories sales, equating to millions of dollars in incremental revenue.

> "We are seeing, on average, about 400 parts being added to e-commerce shopping carts per week based on the search results. And 17% of visits to the app equate to parts and accessories being added to a shopping cart. The total revenue since the latest phase went live [two months ago] is in the six figures."
>
> **SENIOR MANAGER OF IT BUSINESS STRATEGY, MANUFACTURING**

- The director of technology innovation at a financial services company explained that their organization used Heroku to develop an agent-facing app for insurance quoting and leveraged Heroku's managed Postgres services for database integration, Heroku Connect for data-synchronization with Salesforce, and Heroku Shield for additional security and compliance functionalities. The interviewee highlighted how Heroku's managed features helped the organization's development team quickly deliver a robust app to meet growing business needs. Business outcomes from the app included improved operational efficiency and an 80% reduction in the time required for agents to generate quotes. This translated to a 6% increase in quoting capacity and associated revenue improvements.
- The chief technical officer at a software company shared that their organization used Heroku to build and run its B2B automotive management and trading platform. By simplifying infrastructure management and leveraging Heroku's managed data services and add-on capabilities, the organization freed valuable development resources, reduced infrastructure complexity and maintenance overhead, and refocused engineering resources on feature development. The interviewee shared that their core app would have taken several more months to complete without Heroku and that they wouldn't be able to continuously deliver as many new features, impacting the value of their platform for customers.

> "If we had stayed with our previous cloud provider or chosen a similar option, we would have spent too much time configuring and managing infrastructure. It wouldn't be good for the business. We would lose features and, consequently, customers who want those features. If we weren't able to build a feature or had to delay the release, there's a chance that we could lose out on customers or they could choose not to expand with us."
>
> **CHIEF TECHNOLOGY OFFICER, SOFTWARE**

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- It generates $3 billion in annual revenue before the Heroku investment.
- The organization measures an increase in topline growth directly attributable to Heroku of 0.2% in Year 1, 0.3% in Year 2, and 0.4% in Year 3.
- The organization has a profit margin of 11%.

Risks. Forrester recognizes that these results may not be representative of all experiences. The following factors may impact this benefit:

- The volume of revenue generated before Heroku.
- The degree to which an organization's Heroku apps drive revenue.
- The rate of app development and feature innovation.
- End-user adoption rates and user effectiveness in successfully using apps for intended purposes.
- An organization's profit margin.

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 $1.9 million.

Incremental Profit From Innovation					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
C1	Annual revenue	Composite	$3,000,000,000	$3,000,000,000	$3,000,000,000
C2	Revenue improvement attributable to Heroku	Interviews	0.2%	0.3%	0.4%
C3	Incremental revenue driven by Heroku	C1*C2	$6,000,000	$9,000,000	$12,000,000
C4	Operating profit margin	NYU Sterns Data	11%	11%	11%
Ct	Incremental profit from innovation	C3*C4	$660,000	$990,000	$1,320,000
	Risk adjustment	↓20%			
Ctr	Incremental profit from innovation (risk-adjusted)		$528,000	$792,000	$1,056,000
	Three-year total: $2,376,000			**Three-year present value: $1,927,934**	

0.4%

Revenue improvement attributable to Heroku

UNQUANTIFIED BENEFITS

- **Customer experience and satisfaction.** The senior manager of IT business strategy at a manufacturing company shared that Heroku helped their organization build intuitive, self-service experiences for customers, leading to higher satisfaction scores and loyalty. They said: “Building our app with Heroku allowed us to create a user-friendly and concise app. It’s enabled a much easier self-service model, and we are seeing much more use and a higher customer satisfaction score. From our perspective, the added revenue and sales are great, and the improved customer satisfaction means that we are building brand loyalty. They will continue to come back to us because we have created an easy-to-use application.”
- **Scalability and performance.** Interviewees highlighted that their organizations’ apps running on Heroku maintained high performance levels during surges in demand and could be scaled easily as business requirements changed. The chief technology officer at a software company shared that their organization experienced a thirtyfold increase in transaction volume on its Heroku-built app without degradation of performance. Similarly, the director of technology innovation at a financial services company shared that their organization expected a tenfold increase in use of one of its key Heroku apps and were confident it could handle the growth without compromising performance or user experience because of Heroku’s scalability. The senior manager of IT business strategy also appreciated how the Heroku platform provided alerts when app consumption exceeded the capacity of its dynos, enabling them to quickly add additional dynos to maintain processing speed.

> "With the amount of data that we have and the number of users that we're seeing on a weekly basis, the performance is still within seconds of response time, which is great. We are not experiencing any slowdowns."
>
> SENIOR MANAGER OF IT BUSINESS STRATEGY, MANUFACTURING

- **Security.** Heroku provided the interviewees' organizations with security and compliance features, helping reduce risk, protect sensitive data, and uphold regulatory requirements with minimal overhead. The Heroku platform automatically manages app security, deploys security updates, and offers options for additional security and compliance controls, including Heroku Private Spaces and Shield. Interviewees highlighted that these features helped their organization cost-effectively keep up with changing security and compliance requirements and vulnerabilities. The VP of analytics at a financial services company said: "Regulations, compliance, and security requirements are constantly evolving, necessitating frequent updates to our applications. Heroku's secure Private Spaces help us comply with key regulations like GDPR and payment card industry (PCI). Along with automated security patches, they make managing compliance-related risks much faster and more cost effective."

> "Securing our data and code platform is crucial for our clients, brand, and intellectual property. Protecting these areas is critical, and Heroku Shield provides me with a lot of comfort. It's fully encrypted, so all I have to worry about are access management and single sign-on. I don't have to worry about brute force attacks or data loss."
>
> DIRECTOR OF TECHNOLOGY INNOVATION, FINANCIAL SERVICES

- **Seamless Heroku and Salesforce data synchronization.** Two interviewees shared that their organizations leveraged Heroku Connect to synchronize data between apps and Salesforce, enabling real-time data updates and integrated workflows across their environments. They shared that without Heroku Connect, data synchronization would have been significantly more complex to build and maintain, requiring additional labor and time to complete. The senior manager of IT business strategy at a manufacturing company shared that their organization would have needed an additional FTE with expertise in data synchronization to connect data between its Heroku apps and Salesforce. They shared: "We did take a look at [cloud solution providers], and it was just going to be too complicated to connect those repositories, build an app on either of those platforms, and then connect it with Salesforce. We would have needed one person that was an expert in [cloud service provider] and then another person with expertise in making the connection."

> "Heroku Connect lets us leverage and push data in and out of Salesforce for specific objects. It would have been extensive to build, and getting it in real time would have also been a challenge with heavy activity on the Salesforce side. With Heroku Connect, you're basically turning it on and it works versus investing several months to build something similar that would have needed to be maintained."
>
> DIRECTOR OF TECHNOLOGY INNOVATION, FINANCIAL SERVICES

- **Code quality and upskilling.** Although developers primarily recaptured Heroku-enabled efficiencies by writing more code, interviewees shared that they also had more time to focus on code quality and upskilling. The VP of analytics at a financial services company said: "Developers are writing more code and fixing more bugs. They can also look at the new technologies in their spare time and explore new frameworks, tools, and platforms. They can try doing things a different way to see if it saves time or speeds up an entire process."

FLEXIBILITY

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

- **Long-term innovation.** Interviewees saw Heroku as a platform that could adapt to the needs of their organizations in the long term.

  The director of technology innovation at a financial services company highlighted how Heroku was a future-proof platform, allowing their organization to cost-effectively and securely scale apps as the business grows: “Our goal is to double the size of the business in the next three years. The decisions I make now are not short-term. I’m thinking about how this can work in the future when I have 10 times the volume coming through our applications. With Heroku, I can scale easily and be secure when my volume goes up. We’ll just need to flip a few switches here or there. I won’t have to build new infrastructure or get new hardware.”

  The senior manager of IT business strategy at a manufacturing company said Heroku’s managed platform would enable the organization to quickly innovate in the future to address new business opportunities. They said: “Because Heroku is a PaaS offering, the sky is the limit for what could be developed and what we can do with it. We are considering all of these different types of services that we can provide to our customers and how we can build those apps for them to utilize. I’m sure there’s other use cases out there that we will discover and can build out. With Heroku and our system integrator (SI) partner, we know that we will be able to build them out quickly and get them in the hands of end users to act on business opportunities as they arise.”

- **New features and enhancements.** Heroku continues to release new features to address the changing needs of organizations and their developer teams, increasing potential value and return on investment. The director of technology innovation at a financial services company said: “Heroku’s roadmap looks very impressive, which further validates that this is the right platform for our organization. As a growing company, it’s important that they are evolving the toolset in a way that resonates with us. That’s another benefit of Heroku.”

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

> “Whatever we plan on building, we’ll be able to build with Heroku. The deployment process is simple and scalable, which has enabled rapid development cycles and significantly reduced our time to market. If we receive feedback about a new feature from a competitor that customers like, we can quickly develop a similar feature for our customer portals, mobile apps, or analytics dashboards. This improves customer engagement.”
>
> VP OF ANALYTICS, FINANCIAL SERVICES

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	Heroku fees	$0	$495,000	$495,000	$495,000	$1,485,000	$1,230,992
Etr	Heroku implementation and ongoing management	$20,269	$9,617	$9,617	$9,617	$49,120	$44,185
	Total costs (risk-adjusted)	$20,269	$504,617	$504,617	$504,617	$1,534,120	$1,275,177

HEROKU FEES

Evidence and data. Fees for Heroku are determined by consumption of compute, data services, and add-ons. Compute costs were based on the number and type of dyno containers used by the interviewee's organizations. For more information on Heroku pricing, contact a Heroku representative.

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- The composite organization pays $450,000 annually in Heroku fees.

Risks. Forrester recognizes that these results may not be representative of all experiences. The impact of this cost will vary depending on the following:

- The scope of an organization's Heroku usage with respect to dynos, data services, and add-ons.
- Changes in Heroku consumption over time.

Results. To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $1.2 million.

Heroku Fees						
Ref.	**Metric**	**Source**	**Initial**	**Year 1**	**Year 2**	**Year 3**
D1	Heroku fees	Interviews		$450,000	$450,000	$450,000
Dt	Heroku fees	D1		$450,000	$450,000	$450,000
	Risk adjustment	↑10%				
Dtr	Heroku fees (risk-adjusted)		$0	$495,000	$495,000	$495,000
	Three-year total: $1,485,000			**Three-year present value: $1,230,992**		

HEROKU IMPLEMENTATION AND ONGOING MANAGEMENT

Evidence and data. The interviewees' organizations incurred costs in the following areas:

- **User set up and training.** Interviewees reported that Heroku required minimal set up and training for end users. To get started, developers at the interviewees' organizations installed Heroku's Command Line Interface (CLI) and Git, if not already in use. Due to the reported intuitive nature of the Heroku platform, users typically spent only a few hours reviewing documentation or other resources to understand the basics of Heroku's capabilities and workflows.

> "My team was excited about the new platform and took the initiative to learn more about it. As they researched it, explored community notes, watched videos, and discovered how other companies were using it, they saw the diversity of potential that Heroku could provide."
>
> SENIOR MANAGER OF IT BUSINESS STRATEGY, MANUFACTURING

- **Implementation and migration.** Interviewees said that implementation efforts for Heroku were straightforward, primarily comprising configuration of dynos, environment variables, and required add-ons, such as data services and migration of existing code to Heroku.

- **Ongoing management.** Interviewees reported ongoing management efforts ranging from a few hours to up to eight hours per month. The chief technology officer at a software company said: “The management efforts vary depending on what we’re doing at the time. If we need to deploy an app, we’ll spend more time in the platform checking out monitoring and what’s going on.”

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- In the initial investment period, 30 users adopt Heroku and each spends half an hour on installation and two hours reviewing Heroku documentation. In Year 1 through Year 3, three new developers participate in training, accounting for turnover.
- The average fully burdened hourly rate for a Heroku user is $73.
- Employees at the composite spend 160 hours on Heroku set up, configuration, and existing app migration.
- Employees spend 104 hours annually on Heroku ongoing management.

Risks. Forrester recognizes that these results may not be representative of all experiences. The impact of this cost will vary depending on the following:

- The scope and complexity of an organization’s Heroku deployment.
- Actual salaries of Heroku users.

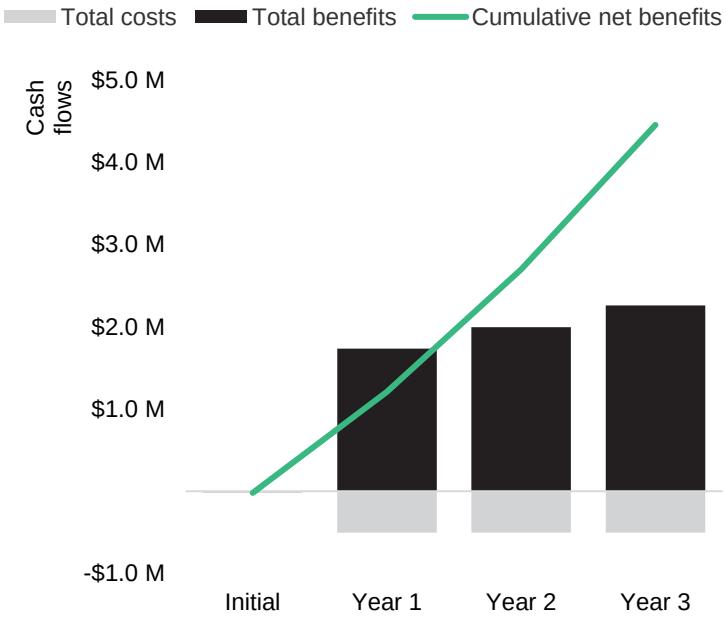
Results. To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $44,000.

Heroku Implementation And Ongoing Management						
Ref.	**Metric**	**Source**	**Initial**	**Year 1**	**Year 2**	**Year 3**
E1	New Heroku users	Composite	30	3	3	3
E2	Heroku installation time per user (hours)	Interviews	0.5	0.5	0.5	0.5
E3	Training and discovery time per developer (hours)	Interviews	2	2	2	2
E4	Average fully burdened hourly rate for a Heroku user	Composite	$75	$75	$75	$75
E5	**Subtotal: Heroku user adoption**	**E1*(E2+E3)*E4**	**$5,625**	**$563**	**$563**	**$563**
E6	Heroku set up and configuration effort	Interviews	160			
E7	**Subtotal: Heroku set up and configuration effort**	**E4*E6**	**$12,000**			
E8	Ongoing management hours	Interviews		104	104	104
E9	**Subtotal: Ongoing management labor**	**E4*E8**		**$7,800**	**$7,800**	**$7,800**
Et	Heroku implementation and ongoing management	E5+E7+E9	$17,625	$8,363	$8,363	$8,363
	Risk adjustment	↑15%				
Etr	Heroku implementation and ongoing management (risk-adjusted)		$20,269	$9,617	$9,617	$9,617
Three-year total: $49,120			**Three-year present value: $44,185**			

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, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

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

Cash Flow Analysis (Risk-Adjusted)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	($20,269)	($504,617)	($504,617)	($504,617)	($1,534,120)	($1,275,177)
Total benefits	$0	$1,731,480	$1,995,480	$2,259,480	$5,986,440	$4,920,811
Net benefits	($20,269)	$1,226,863	$1,490,863	$1,754,863	$4,452,320	$3,645,634
ROI						286%
Payback						<6 months

APPENDIX A: TOTAL ECONOMIC IMPACT

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists solution providers in communicating their value proposition to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of business and technology initiatives to both senior management and other key stakeholders.

Total Economic Impact Approach

Benefits represent the value the solution delivers to the business. The TEI methodology places equal weight on the measure of benefits and costs, allowing for a full examination of the solution's effect on the entire organization.

Costs comprise all expenses necessary to deliver the proposed value, or benefits, of the solution. The methodology captures implementation and 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. The ability to capture that benefit has a PV that can be estimated.

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

PRESENT VALUE (PV)

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

NET PRESENT VALUE (NPV)

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

RETURN ON INVESTMENT (ROI)

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

DISCOUNT RATE

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

PAYBACK PERIOD

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

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.

APPENDIX B: ENDNOTES

---

[1] Source: The Forrester Tech Tide™: Software Development, Q4 2024, Forrester Research, Inc., October 16, 2024.

[2] Total Economic Impact is a methodology developed by Forrester Research that enhances a company’s technology decision-making processes and assists solution providers in communicating their value proposition to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of business and technology initiatives to both senior management and other key stakeholders.

FORRESTER®