The Total Economic Impact™ Of Cyara

Cost Savings And Business Benefits Enabled By Cyara

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

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Key Benefits

Savings from reduced number of call center agents:
$2,678,215

Savings from avoided call center downtime:
$2,190,203

Recaptured value of abandoned callers:
$441,818

Executive Summary

Contact centers around the world are undergoing a wave of modernization. According to Forrester research, 50% of global telecommunications technology decision makers plan to increase their usage of interactive voice response (IVR) in the next year. Over 40% of respondents also indicated that they plan to increase usage of chat (web and mobile) and email in the next year.[1] The digitization of contact center systems is meant to expedite and mitigate disruptions in the customer service process. However, the shift to digital, increasing complexity of systems, and ongoing occurrence of high call volume create potential technical errors.

Until the past few years, businesses had few options but to manually test the technical and functional requirements of their various contact center systems. Those processes are costly and time-consuming, requiring testers to call their business' phone systems and engage in web chat or other outreach channels to identify defects, disruptions, or disconnections in their experiences.

Cyara, a platform for testing and monitoring contact center technologies, automates testing for IVR, agent routing, email, short message service (SMS), and web chat. To accomplish this, users create test scripts in Cyara that instruct bots to follow defined paths in their IVR and other contact center systems, just as a customer would, helping to discover where defects may exist in their systems. Cyara tests across the development cycle, including load tests that recreate high call-volume periods with the assistance of bots to gauge system performance. Altogether, the platform provides testers with a comprehensive view when developing contact center technology and monitoring the performance of these complex systems.

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

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four customers with years of experience using Cyara.

Prior to deploying Cyara, the interviewed businesses manually tested their contact center systems. Although teams could identify problems with these systems manually, the process required several employee hours to complete the process and was often subject to human error associated with the task. As a result, the businesses sought a solution that could expedite and improve the testing process.

An interviewee from a financial services company shared: "Cyara does a whole lot of automated tasks. With that automation, we have become more agile and improved the speed with which we actually start to deploy changes into our product. It helps us keep up to date with everyone else."

Based on four Cyara customer interviews, Forrester created a composite organization to illustrate the benefits and costs associated with an investment in the Cyara platform.
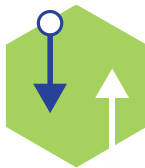
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**ROI
283%**

**Benefits PV
$6.3 million**

**NPV
$4.7 million**

**Payback
<3 months**

Key Findings

Quantified benefits. The following risk-adjusted present value (PV) quantified benefits are representative of those experienced by the companies interviewed:

› **Repurposed upwards of 10% of call center agents.** Cyara's automated testing of IVR systems ultimately refines the customer experience. Interviewees reported fewer dropped calls and improved completion of customer calls within IVR systems, reducing the number of customer engagements with agents. As a result, businesses could repurpose budget that would have otherwise gone toward funding agent support by phone.

› **Reduced time spent dealing with SEV1 errors by 90%.** SEV1 errors are production outages that result in callers not being able to get through to call centers. Before Cyara, organizations often only became aware of these errors after an outage occurred, resulting in lost sales and hours spent on remediation among development and operations teams. With Cyara, contact center teams can identify these potential errors in preproduction environments and avoid service outages.

› **Reallocated two-thirds of IVR testers to other tasks.** Cyara improves productivity at organizations by reducing time spent on manual testing of systems through automation. As a result, organizations have reallocated testers who previously conducted manual tests to other projects or tasks.

› **Recaptured value of 80% of abandoned callers.** Organizations' manual testing systems often resulted in missing system errors that caused customers to be disconnected from calls or delivered to the wrong agent for their needs. Since automating IVR testing, routing of customers has improved and has produced fewer abandoned callers. This proves especially valuable for sales calls where potentially lost conversions are now realized.

Unquantified benefits. The interviewed organizations experienced the following benefits, which are not quantified for this study:

› **Improved call quality as a result of Cyara led to improved customer sentiments.** The final goal for organizations adopting Cyara is to strengthen the customer service experience, which the interviewees achieved since adopting Cyara for their contact center testing. While Forrester calculates recaptured value from fewer disconnections and transfers in this study, it doesn't reflect improved customer attitudes from the experience. Forrester did not quantify benefits like increased likelihood to purchase additional items or recommendations of the service to others for the study due to differences in measuring the customer experiences among the interviews.
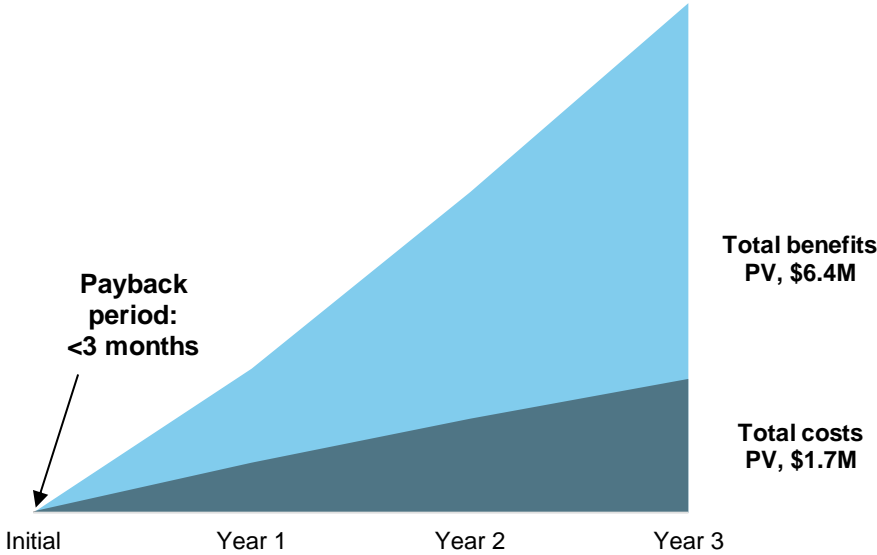
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> › **Faster time-to-market for new features and updates to contact center system.** Before Cyara, manual testing required the time-consuming process of following customers' paths through the contact center system to find errors. This laborious process acted as a bottleneck in the whole development process. By automating testing with Cyara, organizations reduced time spent testing significantly. Moreover, they found defects earlier in the process when they were less costly to fix. And, because automated testing rooted out more errors throughout the process, development teams spent less time in rework and more time in new feature development. Cyara sped up testing and increased test coverage, helping organizations improve time-to-market for updates.

Costs. The interviewed organizations experienced the following risk-adjusted PV costs:

> › **Cyara subscription and support costs for Cyara.** Annual licensing costs for Cyara are based on the number of ports needed for testing. Several of the organizations' licensing agreements included unlimited load testing as well.

> › **Training costs.** Interviewed organizations held three-day sessions with Cyara team members to train staff on using of the Cyara platform.

Forrester's interviews with four existing customers and subsequent financial analysis found that an organization based on these interviewed organizations experienced benefits of $6,354,770 over three years versus costs of $1,657,254, adding up to a net present value (NPV) of $4,697,516 and an ROI of 283%.

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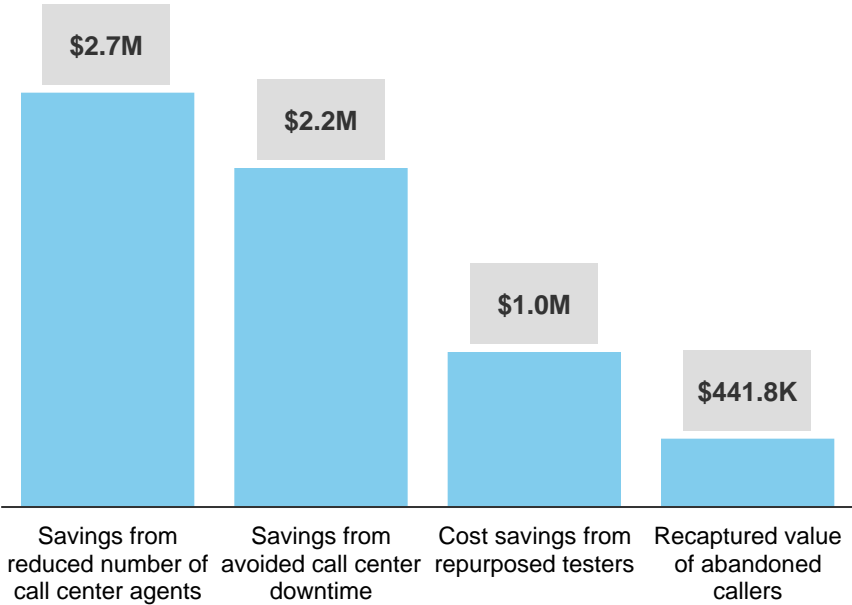
Financial Summary

Payback period: <3 months

Total benefits
PV, $6.4M

Total costs
PV, $1.7M

| Initial | Year 1 | Year 2 | Year 3 |

Benefits (Three-Year)

$2.7M

$2.2M

$1.0M

$441.8K

| Savings from reduced number of call center agents | Savings from avoided call center downtime | Cost savings from repurposed testers | Recaptured value of abandoned callers |

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TEI Framework And Methodology

From the information provided in the interviews, Forrester has constructed a Total Economic Impact™ (TEI) framework for those organizations considering implementing Cyara.

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 Cyara can have on an organization:

The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

DUE DILIGENCE
Interviewed Cyara stakeholders and Forrester analysts to gather data relative to Cyara.

CUSTOMER INTERVIEWS
Interviewed four organizations using Cyara to obtain data with respect to costs, benefits, and risks.

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

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

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

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by Cyara and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in Cyara.

Cyara 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.

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

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The Cyara Customer Journey

BEFORE AND AFTER THE CYARA INVESTMENT

Interviewed Organizations

For this study, Forrester conducted four interviews with Cyara customers. Interviewed customers include the following:

INDUSTRY	REGION	INTERVIEWEE	NUMBER OF CALLS ANNUALLY
Financial services	Asia Pacific	Product owner, contact center platform	30,000,000+
Automotive	North America	VP, technology and shared services	100,000+
Healthcare	North America	Staff VP	40,000,000+
Travel	North America	Head of contact center systems	50,000,000+

Key Challenges

The interviewed organizations shared several challenges they faced prior to adopting Cyara, including:

› **Lengthy discovery and remediation of defects.** Interviewees explained that manually testing required testers to walk through the same scenarios that customers would experience in a call. Some companies reported that several of the tests that they wanted to run for their systems were too complex for their employees to test in a reasonable amount of time. As a result, they would only conduct a handful of tests per year that were as comprehensive as time allowed. Even after several rounds of testing, organizations still found defects in the system due to human error.

› **Inconsistent contact center service for customers.** Errors in IVR systems typically led to callers being disconnected or routed to the wrong customer service representative. Likewise, high caller volume would create lower-quality phone calls where audio noise would interfere. While callers could hang up and call back to try and reach their intended destination, the caller by that point was dissatisfied with their experience.

› **Threat of outages throughout the years.** Each of the interviewees experienced a SEV1 error at least a handful times annually, leading to outages of their systems and requiring hours of time from development and operations teams to isolate the cause of the error and then to remediate it.

> "We came from a background of having a lot of human errors that led to problems sitting on our platform. We didn't recognize these problems because we didn't have enough coverage to catch them."
>
> *Product owner, contact center platform, financial services*

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Key Results

The interviews revealed that key results from the Cyara investment include:

› **Faster project velocity and reduced time spent addressing defects.** Interviewees reported that Cyara's automation of overall contact center testing effectively removed the middleman tasked with manually dialing through their systems to find errors. The comprehensiveness of the reporting also enabled developers to reduce remediation time of bugs. As a result of these time savings, organizations reallocated testers to conduct other projects and accelerate the cadence on the releases of functional updates to IVR and other applications.

› **Improved call center service for customers.** Increased speed toward addressing bugs and outages helped organizations to provide a more reliable service to customers. Disconnections with customers became less frequent, and customers experienced fewer transfers to reach the required agent for help.

› **Reduced likelihood of call center outages.** With Cyara, interviewees were able to identify SEV1 errors during the preproduction phase of IVR development. As a result, contact center systems experienced less downtime for callers, and teams spent less time on remediation of the defects.

Composite Organization

Based on the interviews, Forrester constructed a TEI framework, a composite company, and an associated ROI analysis that illustrates the areas financially affected. The composite organization is representative of the four companies that Forrester interviewed and is used to present the aggregate financial analysis in the next section. The composite organization has the following characteristics:

Description of composite. The composite organization is a North American travel company with annual revenues totaling $2 billion. The organization has 10,000 employees and services 20 million customer service calls annually. On average, 10 full-time development or operations employees spend a portion of their time interacting with the Cyara platform. Cyara licensing costs on average $600,000 per year for the organization, which includes unlimited load testing. Before adopting Cyara, the organization manually tested its contact center systems and, once per year, outsourced assistance for load testing.

Deployment characteristics. In Year 1, the organization creates scripts for Cyara to run and test its IVR and contact center systems. In addition, one load test is conducted to gauge how systems will perform during high-traffic call times. Over the three-year period, the organization adds more scripts for automated testing and increases its frequency of load tests to ensure a consistent customer experience. As a result of increased automated testing, the organization repurposes agents and testers to other tasks over time.

> "The solution allows us to monitor end-to-end IVR systems and react to it very quickly. We can now detect a failure and automatically shut down an IVR region."
>
> *VP, technology and shared services, automotive*

> "In the past, a severe outage would have happened, and only afterward could we address it. Now we can be proactive against potential production-based outages."
>
> *Staff VP, healthcare*

Key assumptions
20 million customer service calls annually
10 FTEs initially using Cyara
$600,000 in licensing costs per year

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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	Savings from reduced number of call center agents	$674,112	$1,132,508	$1,503,270	$3,309,890	$2,678,215
Btr	Savings from avoided call center downtime	$816,000	$918,000	$918,000	$2,652,000	$2,190,203
Ctr	Cost savings from repurposed testers	$320,094	$426,792	$533,490	$1,280,375	$1,044,534
Dtr	Recaptured value of abandoned callers	$151,200	$178,200	$209,088	$538,488	$441,818
	Total benefits (risk-adjusted)	$1,961,406	$2,655,500	$3,163,848	$7,780,753	$6,354,770

Savings From Reduced Number Of Call Center Agents

Organizations seek testing solutions like Cyara to ensure that their IVR systems, which operate like other robot process automation (RPA) systems, will provide a reliable customer experience. According to the Forrester Analytics Global Networks And Telecommunications Survey, 2019, RPA is a top priority for technology investments in call centers among 37% of surveyed telecommunications technology decision makers.[2]

Like any technology, IVRs are susceptible to defects. These errors can be costly as they lead to disconnected calls or calls misdirected to the wrong agents. Cyara's testing helps to catch these issues and improve the quality of the experience for customers. Since adopting Cyara, interviewees reported that customers are more likely to be completely handled by an IVR or experience fewer transfers between agents. Although improvement to IVR quality is incremental, it results in a sizable repurposing of call center agents.

The VP of technology and shared services at an automotive company relayed: "We need our IVR system to be ready 100% of the time because we need it available for drivers on the road — it's a safety issue. Without Cyara, we wouldn't have been able to confidently roll out our IVR systems. . . . Since rollout, it's helped toward us taking 250 to 270 contact center seats out of the mix."

The impact of Cyara on call center agents wasn't overnight for each of the interviewees; it came gradually as organizations transformed to continuous testing and ran more tests through Cyara, pushing out more updates to their IVR systems.[3] The interviewees felt flexible to reassess their call center agents as their confidence grew in the reliability of their IVR systems to deliver a strong customer experience.

> The table above shows the total of all benefits across the areas listed below, as well as present values (PVs) discounted at 20%. Over three years, the composite organization expects risk-adjusted total benefits to be a PV of more than $6.35 million.

By Year 3, improved IVR reliability through Cyara testing gives the composite the confidence to repurpose 10% of call center agents.

For the composite organization, Forrester assumes:

› There are 500 call center agents in Year 1, which decreases by 4% to 480 agents to start in Year 2 and then falls another 7% to 446 agents to start in Year 3. The reductions are driven by improvements to IVR systems and increased confidence to rely on the system to handle the bulk of the engagement.

› The fully burdened salary for a call center agent is $42,132.

The following risks can affect the estimated agent reduction:

› Businesses will draw varying results based on the number of call center agents currently employed and if there is bandwidth for reduction. In addition, the frequency of high-volume call traffic may limit an organization's ability to further reduce call center agents.

To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year risk-adjusted total PV of $2,678,215.

> Impact risk is the risk that the business or technology needs of the organization may not be met by the investment, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for benefit estimates.

| **Savings From Reduced Number Of Call Center Agents: Calculation Table**					
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
A1	Number of agents who handle routed calls		500	480	446
A2	Reduction in number of agents due to improved IVR quality	Interviews	4%	7%	10%
A3	Average fully burdened salary of agents		$42,132	$42,132	$42,132
At	Savings from reduced number of call center agents	A1*A2*A3	$842,640	$1,415,635	$1,879,087
	Risk adjustment	↓20%			
Atr	Savings from reduced number of call center agents (risk-adjusted)		$674,112	$1,132,508	$1,503,270

Savings From Avoided Call Center Downtime

Alongside Cyara's assurance of improved customer experiences with contact center systems, the solution is critical for capturing errors that cause major contact center outages. A SEV1 error, triggered by a production error or unexpectedly high volume of call traffic, can result in hours of downtime for callers. Losses from these outages manifest themselves in two forms: lost consumer business and time spent among development and operations team members to remediate the defect.

According to the staff VP at a healthcare company, Cyara was instrumental in alerting teams to an error where specific routers were only allowing 20% of session initiation protocol (SIP) traffic through to the systems. This was a simple error stemming from a standard security policy applied to a router to which it didn't belong; however, the losses would have been severe. The interviewee said: "January 1st is an important time of year for us because people call with questions about their new healthcare policy. We have a lot of performance guarantees for that period, and catching this error prevented us from enduring an outage during peak time."

Since Cyara helps teams to catch severe errors in preproduction, it reduces time spent on several fronts, including war room meetings during an outage to discuss the plan and address the defect, tracing and finding the root of the error, and then actual time spent on remediation.

$2.2 million

three-year benefit PV
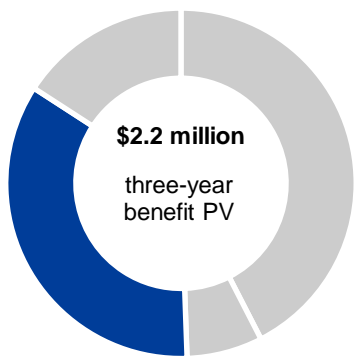
Savings from avoided call center downtime: **35%** of total benefits

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The healthcare company interviewee shared: "If the major outage had happened, it would have taken a week to pin down the problem if we were lucky. If the outage was a result of high traffic, it would have taken us having high traffic again to determine the cause of the outage. With Cyara, we found the cause of the issue within 24 hours and had it resolved within three days."

For the composite organization, Forrester assumes:

› The travel organization experiences 12 hours of downtime annually due to SEV1 errors.

› After adopting Cyara, the organization avoids 80% of downtime spent on resolving SEV1 errors in Year 1 as the automated testing detects defects that could trigger an outage. By Year 2, 90% of downtime is avoided from increased testing and fewer bugs making it into production.

› These outages cost $100,000 on average, accumulated from lost revenue and sales, costs toward development and operations spending time on remediations, and any additional allocations to compensate for poor customer experience or negatively impacted brand image.

The following risks can affect the estimated savings from avoided outages:

› The benefit will vary based on the number of SEV1 errors that occur for an organization annually, the length of time that an error lasts, the number of calls per hour, and their associated value.

› The number of employees responsible for resolving a defect will vary for organizations, especially depending on its scale of impact. Likewise, time spent on errors per operations analyst will vary based on the number of employees working together toward remediation.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year risk-adjusted total PV of $2,190,203.

Organizations avoid 90% of downtime caused by SEV1 errors annually.

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
Savings From Avoided Call Center Downtime: Calculation Table					
B1	Annual downtime in production environment prior to deploying Cyara	Interviews	12	12	12
B2	Reduction in downtime with Cyara	Interviews	80%	90%	90%
B3	Average hourly cost of downtime	Assumption	$100,000	$100,000	$100,000
Bt	Savings from avoided call center downtime	B1*B2*B3	$960,000	$1,080,000	$1,080,000
	Risk adjustment	↓15%			
Btr	Savings from avoided call center downtime (risk-adjusted)		$816,000	$918,000	$918,000

Cost Savings From Repurposed Testers

Organizations looking to scale the development and complexity of their IVR applications were limited by the length of time required for manual testing. The VP of technology and shared services at the automotive company told us: "Frankly, Cyara can handle more complexity than a manual tester. You can't give a manual tester much more than simple

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paths through systems, whereas Cyara tests run automatically and repeat the same steps without fail."

In one example shared by an interviewee, automated tests are run against a suite of basic functions. If an IVR code fails a test after it is deployed to an environment, then it is automatically stopped from being deployed to another region. Previously, human error might lead to the code still being deployed in another region. The product owner of the contact center platform at a financial services company elaborated: "What we've got now is an automated pipeline for our work. Our environments only perform as well as the environment in the last test, and now we're better at maintaining IVRs in their earliest deployments."

The interviewees noted that creating the initial scripts for running tests through their IVR systems took a lengthy amount of time to make sure they would run properly and comprehensively. However, once scripts were up and running in the Cyara system, testers were able to stay hands-off.

Time savings from avoiding manual testing were so significant that each interviewed organization was able to increase the amount of testing it conducts. A couple of the interviewees said they now see Cyara as more of an ongoing monitor for their IVR systems than just a testing platform.

For the composite organization, Forrester assumes:

› Before adopting Cyara, six team members were responsible for IVR testing. Cyara reduces the number of responsible team members by 50% in Year 1. As more testing takes place through Cyara, the percentage rises to 66% in Year 2 and 75% in Year 3.

› The fully burdened salary for a tester is $125,527.

The following risks can affect the estimated savings from avoided outages:

› The benefit will vary based on the number of people responsible for manually testing IVR systems and the complexity of the IVR systems before adopting Cyara.

To account for this risk, Forrester adjusted this benefit downward by 15%, yielding a three-year risk-adjusted total PV of $1,044,534.

$1.0 million

three-year benefit PV
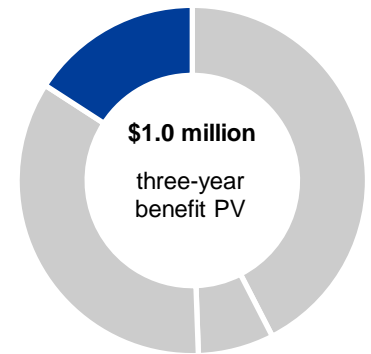
Cost savings from repurposed testers: **16%** of total benefits

	Cost Savings From Repurposed Testers: Calculation Table				
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
C1	Number of IVR tester FTEs before Cyara	Assumption	6	6	6
C2	Percentage reduction in IVR tester FTEs after adopting Cyara	Interviews	50%	66%	75%
C3	Number of IVR tester FTEs after Cyara (rounded)	C1*C2	3	4	5
C4	Average fully burdened salary of IVR tester FTEs		$125,527	$125,527	$125,527
Ct	Cost savings from repurposed testers	C3*C4	$376,581	$502,108	$627,635
	Risk adjustment	↓15%			
Ctr	Cost savings from repurposed testers (risk-adjusted)		$320,094	$426,792	$533,490

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Recaptured Value Of Abandoned Callers

Poor call experiences have a greater financial impact beyond requiring more agent handle time; they can be the reason behind missed business opportunities. The head of contact center systems at a travel company shared: "Cyara saves us in brand damage when a customer is trying to access reservation information and can't get through. If they're tired after traveling, it can be very frustrating for the customer, and they'll cancel, file a complaint, and take their business elsewhere."

In many cases, customers discover IVR defects when calling in. Even with updates pushed out to IVR systems to mitigate these issues, interviewees noted that updates can present new errors of their own.

Through Cyara's automation of IVR testing, organizations have greater visibility to catch potential errors during pre- and post-production and prevent customers from being exposed to them. With fewer errors making it into production, interviewees reported fewer complaints from customers. Although inbound sales calls comprised a small portion of business for some interviewees, reduction in disconnections and transfers led to smaller risk for lost business.

For the composite organization, Forrester assumes:

› The travel organization receives 20 million inbound customer calls in Year 1, which increases at a rate of 10% annually. Of those calls, 20% are sales based while 80% are service related.

› Among the annual sales-based calls, 15% are either abandoned by the caller from repeated transfers or poor call quality or disconnected altogether. Of the callers either abandoned or disconnected, 10% do not call back.

› The average conversion rate of sales calls is 30%.

› The assumed value of sales calls is $150 based on the average spend of consumers on any type of travel reservation.

› The total number of callers who represent a potential sale total 18,000 in Year 1, 19,800 in Year 2, and 21,780 in Year 3. The value of abandoned callers for the travel organization totals $2.70 million in Year 1, $2.97 million in Year 2, and $3.27 million by Year 3.

› Regular testing of IVR systems with Cyara improves delivery of customers to their desired call center agent with fewer or no transfers and reduces the number of disconnections that customers experience. The reduction in these occurrences helps recapture 70% of customers in Year 1. As more testing is run on IVR systems and call quality improves, the percentage of recapture climbs to 75% in Year 2 and 80% in Year 3.

› An operating margin of 10% is applied to the recaptured value.

The following risks can affect the estimated agent reduction:

› The benefit will vary based on the demographics of the organization, with the type of industry influencing conversion rates, the percentage of calls that are sales based, and value of each call.

› The current reliability of an organization's IVR system and its timeline for ramping up usage of testing through Cyara will impact the scaling of benefit results.

To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year risk-adjusted total PV of $441,818.

> "In the past, it was, 'Our IVR system isn't fully built and needs work.' Now, Cyara is affording us the time to ask what's the right experience that we want for our customers and to build around that."
>
> *Product owner, contact center platform, financial services*

$441,818

three-year benefit PV
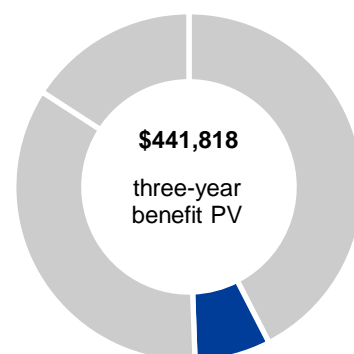
Recaptured value of abandoned callers: **7%** of total benefits

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Recaptured Value Of Abandoned Callers: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
D1	Number of inbound calls		20,000,000	22,000,000	24,200,000
D2	Percentage of calls that are sales based	Assumption	20%	20%	20%
D3	Percentage of callers that are abandoned or disconnected	Assumption	15%	15%	15%
D4	Percentage of abandoned callers who don't call back	Assumption	10%	10%	10%
D5	Conversion rate of callers	Assumption	30%	30%	30%
D6	Value per caller	Assumption	$150	$150	$150
D7	Value of abandoned calls	D1*D2*D3*D4*D5*D6	$2,700,000	$2,970,000	$3,267,000
D8	Percentage of value recaptured from improved IVR systems due to Cyara	Interviews	70%	75%	80%
D9	Operating margin		10%	10%	10%
Dt	Recaptured value of abandoned callers	D7*D8*D9	$189,000	$222,750	$261,360
	Risk adjustment	↓20%			
Dtr	Recaptured value of abandoned callers (risk-adjusted)		$151,200	$178,200	$209,088

Unquantified Benefits

In addition to the quantified benefits above, the interviewees experienced additional benefits that Forrester could not quantify but are just as impactful to the experience with Cyara, including:

› **Improved customer attitudes toward brands.** Positive interactions from service calls with quick, accurate routing and no disconnects can bolster customer retention and favorability toward a brand by underscoring the consistency of the brand's service. Interviewees couldn't speak to a standard method for measuring such improvements across their organizations, but they did record fewer callers dropping from calls after 30 seconds, indicating a higher rate of engagement and opportunity for a positive caller experience.

› **Reduced time-to-market for IVR system updates.** Since deploying Cyara, organizations can more quickly test updates for their contact center systems and push them to market. Faster velocity of testing was a key factor for Cyara winning "bake offs" of testing platforms among interviewees. The staff VP at a healthcare company relayed: "When we did a comparison, one of the things we did was have our testers write some test scripts on different technology and then work through those scripts. It was pretty much a unanimous recommendation from them as far as ease of use of the two solutions that Cyara was easier for them to get up to speed." As for variability on the results of this benefit, the amount of time saved was driven by the complexity of the system and commensurate testing required.

› **Reliable customer support for load testing.** A couple of the interviewees appreciated the level of support for load tests from Cyara. Previously, the interviewees' organizations would attempt fewer load

tests or none because of high costs and difficulty in planning with other vendors. Now load tests are a reliable option for organizations: They indicate the volume of call traffic and a date on which to run the test, and Cyara makes it happen.

Flexibility

The value of flexibility is clearly unique to each customer, and the measure of its value varies from organization to organization. There are multiple scenarios in which a customer might choose to implement Cyara and later realize additional uses and business opportunities, including:

› **Adoption of automated testing for chat- and email-based customer interactions.** Several of the interviewed customers that had used Cyara for testing their email- and chat-based desktop agents were only in the beginning stages of use when interviewed. However, the early reaction to the testing was positive. An interviewee said: "We're in the process of offering contact center chat windows to customers through our site. We likely wouldn't have been able to attain the reliability of our chat interface without Cyara."

One customer that had rolled out testing for chat- and email-based interactions shared: "I haven't seen these testing capabilities offered anywhere else because it's on the emerging side. But for a company like ours taking advantage of these features, it was nice to hear Cyara say, 'We can give you same type of testing functionality for text and web transactions.'"

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

> Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for a future additional investment. This provides an organization with the "right" or the ability to engage in future initiatives but not the obligation to do so.

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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	Cyara subscription and support costs	$0	$660,000	$660,000	$660,000	$1,980,000	$1,641,322
Ftr	Training costs	$15,932	$0	$0	$0	$15,932	$15,932
	Total costs (risk-adjusted)	$15,932	$660,000	$660,000	$660,000	$1,995,932	$1,657,254

Cyara Subscription And Support Costs

The composite organization incurs a licensing cost of $600,000 annually, enabling it to run as many tests as needed to deal with its 30 million annual customer service calls. Since Cyara is replacing a manual task that QA analysts already conducted, the service doesn't require any additional hires or work hours to manage the platform.

The cost calculation will vary based on:

› The scale of testing that an organization plans to deploy to ensure that its IVR system and call centers are running smoothly.

To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year risk-adjusted total PV of $1,641,322.

> The table above shows the total of all costs across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total costs to be a PV of nearly $1.66 million.
>
> Implementation risk is the risk that a proposed investment may deviate from the original or expected requirements, resulting in higher costs than anticipated. The greater the uncertainty, the wider the potential range of outcomes for cost estimates.

Cyara Subscription And Support Costs: Calculation Table

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
E1	Cyara subscription and support costs			$600,000	$600,000	$600,000
Et	Cyara subscription and support costs		$0	$600,000	$600,000	$600,000
	Risk adjustment	↑10%				
Etr	Cyara subscription and support costs (risk-adjusted)		$0	$660,000	$660,000	$660,000

Training Costs

The interviewees said that they booked several online training sessions with the Cyara team to educate their development, operations, and QA teams on how to use the platform. The training sessions were spread across multiple days and included no more than 12 attendees.

After training, Cyara remained supportive in educating team members. "Even if you couldn't attend training, they're always proactive to do a session. Their professional services team actually came up with a full-fledged team to stick with us and included with our regular subscription cost," said the staff VP president at a healthcare company.

For the composite organization, Forrester assumes:

› Ten FTEs attend training across three days.

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› The average full burdened daily rate for development, operations, and tester FTEs is $483.

The cost calculation can vary based on:

› The number of trainees and time spent on training.

To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year risk-adjusted total PV of $15,932.

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
Training Costs: Calculation Table						
F1	Number of development and operations FTEs attending training		10			
F2	Number of days spent training		3			
F3	Average fully burdened salary of development and operations FTEs per day	$60.35*8 hours	$482.80			
Ft	Training costs	F1*F2*F3	$14,484	$0	$0	$0
	Risk adjustment	↑10%				
Ftr	Training costs (risk-adjusted)		$15,932	$0	$0	$0

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Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Cash Flow Chart (Risk-Adjusted)

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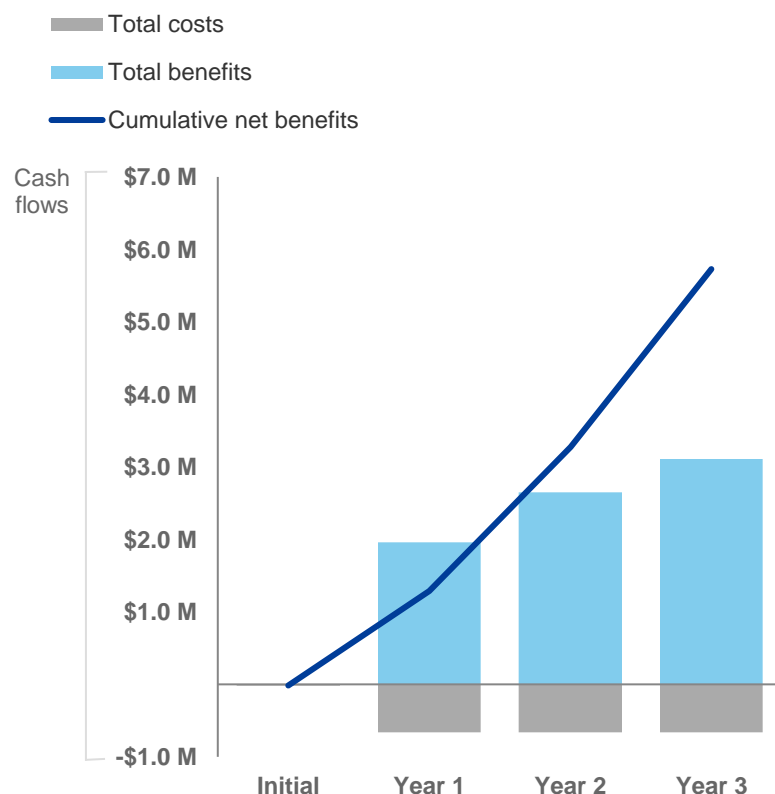
The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

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 Table (Risk-Adjusted)

	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Total costs	($15,932)	($660,000)	($660,000)	($660,000)	($1,995,932)	($1,657,254)
Total benefits	$0	$1,961,406	$2,655,500	$3,163,848	$7,780,753	$6,354,770
Net benefits	($15,932)	$1,301,406	$1,995,500	$2,503,848	$5,784,821	$4,697,516
ROI						283%
Payback period						< 3 months

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Cyara: Automated CX Assurance Overview

The following information is provided by Cyara. Forrester has not validated any claims and does not endorse Cyara or its offerings.

A great customer experience is today's battleground. And, with ever-evolving customer expectations, delivering a great CX requires constant innovation. Since technology is central to how many organizations deliver a great customer experience, being able to develop software faster is crucial. So, increasingly organizations are adopting Agile and DevOps methodologies, including test automation, to deliver these innovations with speed and quality. Business-critical applications, like the contact center, have lagged behind other parts of the organization in adopting these methodologies, but today that is changing. With Cyara, an increasing number of organizations are able to use these development approaches with their contact center technologies.

DevOps for CX that delivers high-quality software with speed and scalability.

Cyara's Automated CX Assurance platform is the most comprehensive platform to accelerate software development and deliver flawless omnichannel customer journeys. Cyara provides comprehensive testing and monitoring, across voice and digital channels, and self-service to agent-assisted service, including IVR, agent routing, web chat, SMS, email, and chatbots. This automation accelerates development and enables contact center technology teams to adopt Agile and DevOps software development methodologies. Cyara provides capabilities for CX design, functional and regression testing, load testing, and production monitoring. Cyara makes it easy to develop test scripts, which can be shared across the development lifecycle. Cyara's Automated CX Assurance platform gives you the speed and quality you need to assure amazing customer experiences, at scale. Fast. Flawlessly. Continuously.

- › **Accelerate development cycles** by eliminating bottlenecks created by manual testing. Cyara's Automated CX Assurance platform shifts testing left and right, maximizing automation throughout, and enables users derive test scripts directly from CX design documentation, and automate functional and regression testing, load testing, and production monitoring. By speeding up testing, developers can simultaneously test more and shorten time required for testing. Moreover, by testing earlier, development teams find defects earlier, which reduces the amount of rework required and frees up resources for more feature work.

- › **Improve quality** through automation. Because automation accelerates testing time, development teams are able to increase test coverage, meaning that more scenarios and customer journeys are tested. Moreover, automation is inherently more accurate than manual testing, so testing quality is better. And, by shifting testing right, with ongoing production monitoring, your assurance efforts continue into production ensuring that as issues arise, they are resolved quickly.

Assure omnichannel customer journeys. Cyara's Automated CX Assurance platform enables organizations to test and monitor customer journeys across voice and digital channels, including IVR, email, SMS, and web. Moreover, Cyara assures self-service as well as agent-assisted journeys, including agent routing and data passing. These channels and modes can be tested independently, or part of a connected journey to assure that the correct data and context moves from one technology to the next, assuring consistency of experience.

Appendix A: Total Economic Impact

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

Total Economic Impact Approach

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

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

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

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

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

Present value (PV)

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

Net present value (NPV)

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

Return on investment (ROI)

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

Discount rate

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

Payback period

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

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Appendix B: Supplemental Material

[1] Source: Forrester Analytics Global Business Technographics® Networks And Telecommunications Survey, 2019.

[2] Source: Ibid.

[3] Source: "The 12 Must-Dos For Achieving Continuous Software Testing," Forrester Research, Inc., August 14, 2019.

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