

FORRESTER®

The Total Economic Impact™ Of Fourthline

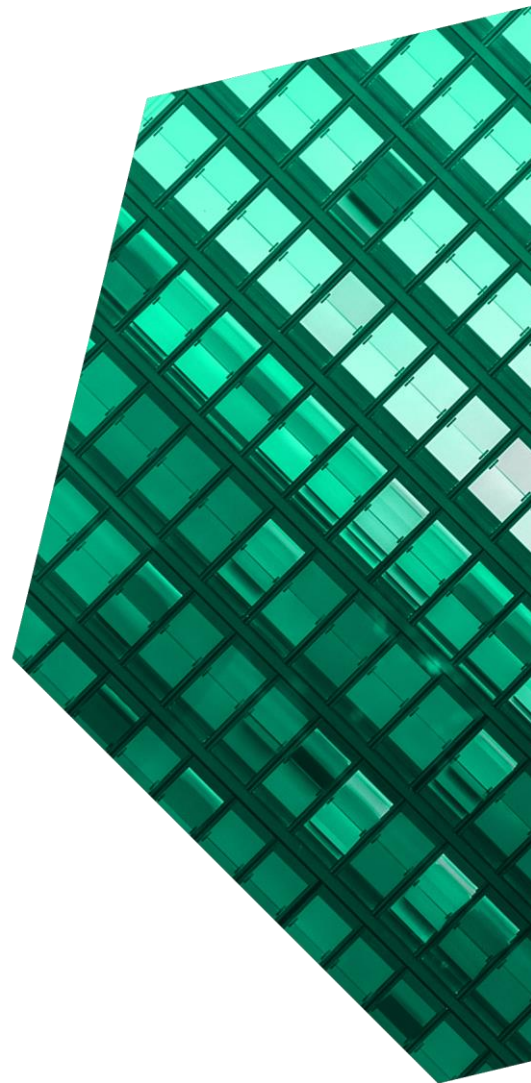
Cost Savings and Business Benefits
Enabled By Fourthline's KYC Solution

JULY 2022

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Executive Summary

In today's increasingly digital marketplace, one of the toughest challenges organizations face is providing a seamless and consistent user experience to customers across all touchpoints, while minimizing risk and preventing fraud. Fourthline offers an AI-driven onboarding solution that automates the identity verification process and increases onboarding productivity while providing a robust scalable platform that is fully compliant and enhances fraud protection.

Fourthline digitally verifies users' real identities using a mix of automated AI-driven checks and human experts, streamlining the onboarding of customers. Fourthline provides a fully modular and scalable end-to-end know-your-customer (KYC) solution, which includes all steps required for a locally anti-money laundering (AML)/General Data Protection Regulation (GDPR) compliant onboarding (i.e., identification and verification [ID&V] with optional near field communication [NFC], liveness checks, device data and geolocation analysis, and AML screening including investigations, risk scoring, CDD reporting, and an audit trail). The solution is backed by a propriety technology stack and a team of AML and fraud experts that provide their regulated clients industry-leading fraud prevention, compliance, and data security. This means a business can trust the identities of its customers and create a fast, seamless onboarding experience.

Fourthline commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Fourthline.¹ The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Fourthline on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four representatives with experience using Fourthline's KYC solution. For the purposes of this study, Forrester aggregated the interviewees'

KEY STATISTICS



Return on investment (ROI)

390%



Net present value (NPV)

\$21.03M

experiences and combined the results into a single [composite organization](#)

Prior to using Fourthline, the interviewees noted their organizations either verified applicants' identities manually, which usually required applicants to appear in person or via time-consuming video calls or used other digital solutions. Those that used electronic solutions found that their suppliers were unable to deliver on their service-level agreements (SLAs) and expected conversion levels, which led to delays in approval times and lost prospects who were not willing to wait long periods for onboarding.

Those using manual verification lost business to competitors that made the account-opening process easier. The need to incorporate new identity documents and local regulations into the verification process also impacted the interviewees' organizations' abilities to grow their businesses into new markets.

After investing in Fourthline, the interviewees' organizations offered applicants faster and smoother online account-opening experiences while collecting the information they needed to meet local regulations and maintain their own security standards. Key results from the investment included increased revenues due to lower abandonment rates during the application process, lower risk of fraudulent account openings, and improved productivity for onboarding teams.

KEY FINDINGS

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

- **Improved operational efficiency worth \$13.3 million.** Onboarding new customers is a time- and labor-intensive process. Although there are many steps in most organizations' onboarding routines, automating the entire KYC process speeds up the entire process. As a result, onboarding staff process more applications and bring on more customers than they could before. This provides a financial benefit for the composite organization, as it can add more customers without having to increase the size or overtime hours of its onboarding team.
- **Improved conversions driving incremental account openings worth \$10.4 million.** Before Fourthline, potential customers abandoned the account-opening or registration process because they were frustrated due to the long wait times for verifications. Wait times were also significantly longer especially if additional checks were needed. As a result, frustrated prospects would abandon the process and go to a competitor or just give up.

After implementing Fourthline's use of AI-driven identity verification and robust fraud detection system, the composite organization's process of onboarding becomes faster and more seamless, providing a better user experience for customers.

“We were looking for a partner that could support our rapid growth in Europe. Fourthline’s extensive presence in Europe, their highly efficient onboarding solution, flexibility of documentation that they accept, and existing local license agreements makes them an ideal partner for us.”

COO and head of KYC, fintech

This ultimately leads to higher conversion rates and significant revenue improvements.

- **Reduced exposure to fraud worth \$2.7 million.** For the composite organization, investing in Fourthline provides additional security. Its previous processes relied on a wide mix of digital and manual checks and the protection was only as strong as employees' skills at detecting fraudulent papers or spotting differences between the photos and the presenters of the identification (ID). The Fourthline solution employs extensive screening against watchlists (e.g., PEPs, sanctions and adverse media screenings); automated, AI-driven validation of identity; and checks for device and whereabouts data. All of it is done entirely through the solution. Additionally, the Fourthline solution includes QA on 5% of all cases for all partners and a dedicated team of fraud specialists who are entirely focused on continuously optimizing fraud prevention, developing training, and performing post onboarding checks. The composite organization significantly improves its ability to screen out fraudulent applications that may otherwise have caused financial and reputational damage.

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

- **Faster time-to-market.** Because Fourthline's AI learns to recognize documents from all around the world and the software already recognizes identity cards, passports, driver's licenses, and other forms of ID from different countries, the interviewed executives said their organizations moved into new markets (at least in terms of enrolling new members or clients) without having to buy, upload, and debug new software each time or training personnel to recognize and verify each new type of ID document. Combined with Fourthline's expertise in the local regulations, this made entering new markets easier and faster than before.
- **Improved regulatory compliance.** Fourthline's extensive knowledge of local regulations and compliance requirements enabled the interviewees' organizations to fully comply with local regulations. From surprise compliance audits to annual filings to everyday cooperation with local authorities, Fourthline allowed the interviewees' organizations to access and compile specific information quickly to facilitate the necessary cooperation without interfering in the organizations' everyday work. Fourthline also has large teams working in anti-financial crime (AFC), compliance, and law to support clients in the fragmented and complex regulatory landscape on an ongoing basis.
- **Scalability/ability to flex capacity based on demand.** As the volume of new customers onboarded grew, the interviewees' organizations need to scale up their KYC operations to meet demand. As one head of KYC and operations in fintech pointed out, Fourthline have a track record of scaling up operationally in a relatively short time frame to meet spikes in their demand without missing any SLAs. Even when they went 10 times over the budgeted onboarding volume during a particular promotional event, Fourthline flexed up capacity on their end to meet the demand.

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

- **Fees paid to Fourthline totaling \$5.4 million over three years.** The composite organization pays for Fourthline's platform based on the volume of identity checks it performs each month. Those fees are approximately \$1.9 million to \$2.5 million annually. The fees increase along with the growth of the business and its customer acquisition rate.
- **Minimal implementation effort and training for onboarding agents totaling \$5,650 over three years.** API integration only requires a minimal amount of developer time. For the composite organization, this costs \$3,944 up front. Over a three-year period, the total implementation effort and training cost is around \$5,650 for the composite.

The representative interviews and financial analysis found that a composite organization experiences benefits of \$26.43M over three years versus costs of \$5.40M, adding up to a net present value (NPV) of \$21.03M and an ROI of 390%.



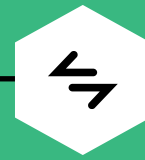
ROI
390%



BENEFITS PV
\$26.43M

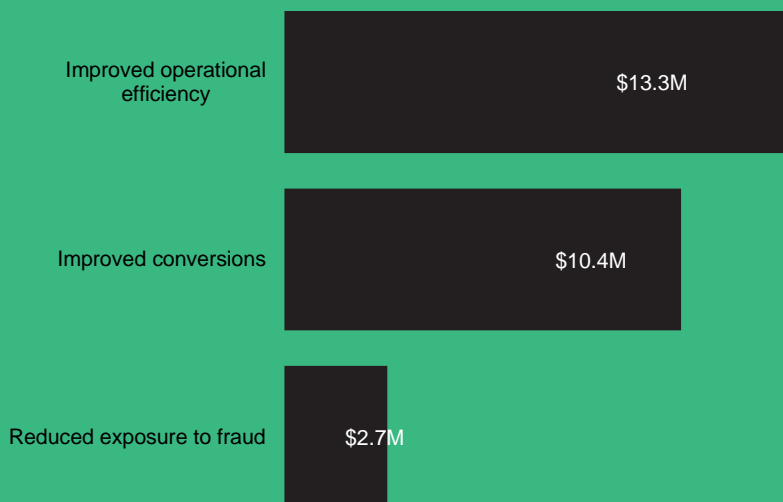


NPV
\$21.03M



PAYBACK
<6 months

Benefits (Three-Year)



“Fourthline’s robust AI-driven KYC processing combined with their regional regulatory expertise means we are able to onboard new customers faster while remaining fully compliant with local regulations”

— Head of KYC and AML, fintech

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 Fourthline's KYC solution.

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 Fourthline can have on an organization.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by Fourthline 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 Fourthline's KYC solution.

Fourthline 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.

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



DUE DILIGENCE

Interviewed Fourthline stakeholders and Forrester analysts to gather data relative to the KYC solution.



INTERVIEWS

Interviewed four representatives at organizations using Fourthline to obtain data with respect to costs, benefits, and risks.



COMPOSITE ORGANIZATION

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



FINANCIAL MODEL FRAMEWORK

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



CASE STUDY

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

The Fourthline Customer Journey

■ Drivers leading to the Fourthline investment

Interviews			
Role	Industry	Region	Annual Revenue
Director of product management and operations	Fintech	EMEA	\$160 million
COO and head of KYC & AML	Fintech	EMEA	\$114 million
Head of compliance and AML	Fintech	EMEA	\$459 million
Head of business and KYC operations	Fintech	EMEA	\$143 million

KEY CHALLENGES

Most of the interviewees noted their organizations either started their operations with Fourthline or were using a mix of external vendors and internal solutions. They relied heavily on human expertise and in-person interactions for identity verification. In addition to the risk of human error, this approach also contributed to poor customer experience owing to significant processing times and dropped connections.

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

- Providing suboptimal experience to potential customers when identity verification was required. The interviewees' organizations needed to maintain large onboarding staffs comprised of employees skilled in verifying documents and assessing the match between people and their ID photos, which led to additional expenses for training, hiring, office space, and equipment.
- Expensive subscription costs for working with multiple different vendors for verifications, compliance, and legal support.
- Losing money from fraudulent account activity when authentication processes failed to identify fraudulent applications.

- Having difficulty expanding into new markets and regions because of a lack of knowledge local/regional verification requirements, identity documents, and compliance with regional regarding know-your-customer regulations and documentation requirements.

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 four interviewees, 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, digital-native financial institution with \$150 million in annual revenue. It has been in business for less than five years, and it has 1.5 million customers. Due to growing interest in digital and mobile banking among millennials and other developments in the wake of the COVID-19 pandemic, it experiences double-digit growth (around 15% year-over-year [YOY] growth in new accounts) with rapid expansion into new regions and markets, and decision-makers expect this growth to continue for at least several years.

Key Assumptions

- **\$150 million in annual revenue**
- **1.5 million customers**
- **600,000 new accounts (Y1)**
- **15% YOY growth in accounts**

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	Improved operational efficiency	\$4,673,077	\$5,374,038	\$6,180,144	\$16,227,260	\$13,332,840
Btr	Improved conversions	\$3,645,000	\$4,191,750	\$4,820,513	\$12,657,263	\$10,399,615
Ctr	Reduced exposure to fraud	\$945,000	\$1,086,750	\$1,249,763	\$3,281,513	\$2,696,196
	Total benefits (risk-adjusted)	\$9,263,077	\$10,652,538	\$12,250,419	\$32,166,035	\$26,428,651

IMPROVED OPERATIONAL EFFICIENCY

Evidence and data. Interviewed executives said that Fourthline helped significantly reduce the processing times for each case, thereby improving operational efficiency and leading to significant savings for their organizations.

- Most interviewees' organizations saved at least 15 to 20 minutes per case.
- In 90% of the cases, verification was completed in 5 minutes or less.
- Fourthline provided a one-stop solution for all onboarding requirements ranging from ID verification, watchlist screening, and metadata and geolocation analysis to fraud detection, all investigations, and CDD reporting, thereby reducing time and effort needed to complete onboarding

With onboarding teams freed of the time-consuming task of verifying identities and ensuring applicants were who they say they were and legally entitled to do business with the organization, the onboarding staff processed significantly more applications and created more accounts each day. Thus, each employee on the team created more revenue, and the organizations could handle more growth without expanding the size of the onboarding team.

Modeling and assumptions. Forrester assumes the following about the composite organization:

- The composite organization processes 600,000 accounts in Year 1. The accounts grow at 15% year-over-year.
- Fourthline end-to-end KYC solution decreases the time to process an application by 15 minutes.
- The average fully burdened annual salary of an onboarding analyst is \$81,000.

Risks. Factors that could potentially impact the value of this benefit include:

- The volume and complexity of new account applications an organization receives.
- The productivity of the onboarding team before deploying Fourthline.
- The salaries of the onboarding team members.
- Actual time saved per case.

Results. To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total of \$13.3 million.

Improved Operational Efficiency					
Ref.	Metric	Source	Year 1	Year 2	Year 3
A1	New accounts opened per year	Composite	600,000	690,000	793,500
A2	Reduction in processing time (minutes per account)	Interviews	15	15	15
A3	Reduced onboarding effort (FTE)	$A1 \cdot A2 / (47 \text{ weeks} \cdot 5 \text{ days per week} \cdot 8 \text{ hours per day})$	72	83	95
A4	Onboarding analyst fully burdened annual salary*	Assumption	\$81,000	\$81,000	\$81,000
At	Improved operational efficiency	$A3 \cdot A4$	\$5,841,346	\$6,717,548	\$7,725,180
	Risk adjustment	↓20%			
Atr	Improved operational efficiency (risk-adjusted)		\$4,673,077	\$5,374,038	\$6,180,144
Three-year total: \$16,227,260			Three-year present value: \$13,332,840		

*Note: Benefits modifier includes training, recruiting, idle time, capacity buffer, office and equipment, etc.

IMPROVED CONVERSIONS

Evidence and data. Interviewees said they improved the speed and accuracy of verification for most applicants, and this was true even for organizations that already used digital tools or in-house solutions. They also said these improvements in convenience and speed were important to their customers, leading to lower abandonment rates and improved conversions.

- A head of KYC and AML at a fintech bank said: “We used to have a poor track record of conversions as there was a lot of paper-based validation required especially in countries like France and Spain. But with Fourthline’s automated, AI-driven verification checks and their know-how of the local country specific requirements, we have experienced a 25% improvement in customer conversions.”
- A director of product management and operations at a fintech said, “Fourthline is great when it comes to validating photo identification and security features even when the quality of photo or documentation is not good, thereby

“We used to convert roughly about 70% of new cases, which was higher than industry average, but Fourthline managed to improve that by another 15% and that is truly impressive, very pleased.”

Head of KYC and operations, fintech

avoiding unnecessary delays and checks which ultimately results in higher conversions and better onboarding experience for our customers.”

Modeling and assumptions. Forrester assumes the following about the composite organization:

- The composite organization processes 600,000 accounts in Year 1. The accounts grow at 15% year-over-year.
- The average customer revenue is \$100 with an industry average net margin of 30%.

- There is a 30% increase in conversions after deploying Fourthline solution out of which 90% is attributed directly to Fourthline.

Risks. Factors that could potentially impact the value of this benefit include:

- The average revenue value per customer.
- The number of new applications per year.
- Application abandonment rates, which may be affected by ID verification delays and other

technical and demographic differences between applicants.

- Conversions may be attributed to other factors like discounts, promotions, campaign efforts, and other customer incentives for account opening.

Results. To account for these risks, Forrester adjusted this benefit downward by 25%, yielding a three-year, risk-adjusted total PV of \$10.4 million.

Improved Conversions					
Ref.	Metric	Source	Year 1	Year 2	Year 3
B1	Volume of new onboarding cases	Composite	600,000	690,000	793,500
B2	Increase in Conversion Rate	Interviews	30%	30%	30%
B3	Additional converted customers	B1*B2	180,000	207,000	238,050
B4	Value of additional conversions	Composite	\$18,000,000	\$20,700,000	\$23,805,000
B5	Attribution to Fourthline	Assumption	90%	90%	90%
B6	Industry average net margin	Assumption	30%	30%	30%
Bt	Improved conversions	B4*B5*B6	\$4,860,000	\$5,589,000	\$6,427,350
	Risk adjustment	↓25%			
Btr	Improved conversions (risk-adjusted)		\$3,645,000	\$4,191,750	\$4,820,513
Three-year total: \$12,657,263			Three-year present value: \$10,399,615		

REDUCED EXPOSURE TO FRAUD

Evidence and data. Interviewed executives said using the Fourthline solution lowered their organizations' risk of exposure to fraudulent accounts.

- A head of KYC and AML at a fintech bank said, "The reliability of the Fourthline verification process combined with the extensive list checking against Fourthline's database helped us improve our fraud detection rate significantly."
- Another head of compliance and AML at a fintech said, "Earlier we were able to screen out less than 30% of fraudulent accounts but with Fourthline we have been able to improve that by at least 50%."

Modeling and assumptions Forrester assumes the following about the composite organization:

- The average financial loss per fraudulent account is \$900.
- Before deploying Fourthline, 0.5% fraudulent accounts remained undetected using manual methods or other identification verification processes.
- After implementing Fourthline, there was an incremental 50% improvement in fraud detection rates.

Risks. By nature, fraud losses are unpredictable, so the risk applied to this benefit is higher than those used for other benefits. Factors that could potentially impact the value of this benefit include:

"Fourthline is very efficient and proactive when it comes to fraud prevention. They have invested significant time and effort in building a robust fraud-checking process that includes an extensive database for screening fraudulent accounts and this database is constantly updated, which goes a long way in identifying and preventing fraudulent cases."

Head of KYC and AML, fintech

- The inherently unpredictable nature of losses from fraudulent accounts and activity.
- The extent to which an organization is able to screen out fraudulent applications before and after investing in Fourthline.
- The average loss an organization tends to experience due to fraudulent activity.
- The nature of an organization's integration with Fourthline, its risk tolerance, and its industry.

Results. To account for these risks, Forrester adjusted this benefit downward by 30%, yielding a three-year, risk-adjusted total PV of \$2.6 million.

Reduced Exposure To Fraud					
Ref.	Metric	Source	Year 1	Year 2	Year 3
C1	Accounts opened per year	Composite	600,000	690,000	793,500
C2	Fraudulent online applications undetected before Fourthline	Assumption	0.5%	0.5%	0.5%
C3	Average loss per fraudulent account	Assumption	\$900	\$900	\$900
C4	Fraud loss before Fourthline	C1*C2*C3	\$2,700,000	\$3,105,000	\$3,570,750
C5	Incremental fraudulent accounts screened out	Interviews	50%	50%	50%
Ct	Reduced exposure to fraud	C4*C5	\$1,350,000	\$1,552,500	\$1,785,375
	Risk adjustment	↓30%			
Ctr	Reduced exposure to fraud (risk-adjusted)		\$945,000	\$1,086,750	\$1,249,763
Three-year total: \$3,281,513			Three-year present value: \$2,696,196		

UNQUANTIFIED BENEFITS

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

- **Faster time-to-market.** One of the key benefits all interviewed executives highlighted was how well Fourthline facilitated their organizations to enter new regions/markets much faster than they would otherwise be able to. Most of them experienced at least a 50% improvement in their time-to-market. This was attributed to Fourthline

“Before Fourthline, entering a new region was a long, drawn, tedious process taking anywhere between one to three months. Since implementing Fourthline, thanks to their existing reliance agreements and local expertise, we have added three new markets in less than two months with further launches already in the pipeline.”

COO and head of KYC, fintech

“They know the local markets, and all the local compliance rules like for example in Spain, ID cards has a special hologram on one specific place. They warned us about this and explain how to tell customers that this might be a problem and how to mitigate.”

Head of business and KYC operations, Fintech

being a regulated entity in all markets where the organizations operate; Fourthline’s extensive knowledge of the local markets and regulations; and the fact that Fourthline software already recognized identity cards, passports, driver’s licenses, and other forms of ID used in countries around the world which makes it easier and faster to integrate with our onboarding process.

- **Improved regulatory compliance.** As all the interviewees’ organizations were in the banking industry, they are all heavily regulated and required to be fully compliant at all times. A head of compliance and AML at a fintech bank said:

“Complexity of regulations is only increasing and we must be completely compliant at all times. Failure [to comply] is not an option. Being a regulated entity themselves, Fourthline realize this and they have been very good so far.”

Fourthline provided easy visibility into data about the ID verification process, and it made it easier and faster to comply with requests from regulatory authorities. One head of business and KYC operations said, “[Fourthline] are good at keeping us informed about the changes and whatever new regulations are coming in for each country, which helps us respond to these changes much faster.”

- **Scalability/ability to flex capacity based on demand.** Although most of the interviewees’ organizations had a fairly stable load (i.e., volume of new onboarding customers) through the year, there would be the occasional spike in new users coming through the onboarding process. This could be due to a variety of reasons like ongoing promotions or other incentives for account opening. This would involve organizations having to supplement their onboarding teams with extra staff or paying significant amounts of money to augment existing capacity at the risk of losing additional customer revenue. The interviewees pointed out that Fourthline were great at scaling up capacity based on demand.

One Director of product management and operations at a fintech said: “Our inflow [of new customers] is fairly stable, but only a couple of times through the year we have, let's say, spikes. In those cases, Fourthline has always been able to accommodate for those spikes operationally with very minimal delays that are maybe even not noticeable to the end customer and always within the agreed SLAs.”

“We grew at 1,500% and Fourthline have been able to grow with us. They have proved that they are a very flexible and scalable partner for our operations.”

COO, fintech

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	Fourthline annual subscription fees	\$0	\$1,890,000	\$2,173,500	\$2,500,050	\$6,563,550	\$5,392,787
Etr	Implementation & Training costs	\$3,944	\$686	\$686	\$686	\$6,003	\$5,650
	Total costs (risk-adjusted)	\$3,944	\$1,890,686	\$2,174,186	\$2,500,736	\$6,569,553	\$5,398,437

FOURTHLINE ANNUAL SUBSCRIPTION FEES

Evidence and data. Interviewees told Forrester that Fourthline's fees were based on the number of identity checks the organizations perform. The price-per-verification check primarily depended on product configuration and the volume of checks processed each year.

Modeling and assumptions. Forrester assumes the following about the composite organization:

- The cost per completed KYC verification is \$3. This is based on the volumes the composite organization processes.
- Each verification comprises the full suite of end-to-end KYC checks, including ID&V, NFC,

liveness detection, device data and geolocation analysis, and AML screening and investigations. The annual identity check volume is equal to the number of applications projected. For the purposes of modeling, the cost per verification is assumed constant over a three-year period.

Risks. Factors that could potentially impact the fees paid to Fourthline include:

- Potential increases in the cost per check.
- A change in the way fees is charged (e.g., fees based on revenue, number of employees, etc.).
- Differences in the volume of identity checks that an organization processes each year.

Fourthline Annual Subscription Fees						
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
D1	Cost per verification	Composite		\$3	\$3	\$3
D2	Number of Verifications (Annual)	Composite		600,000	690,000	793,500
Dt	Fourthline annual subscription fees	D1*D2	\$0	\$1,800,000	\$2,070,000	\$2,381,000
	Risk adjustment	↑5%				
Dtr	Fourthline annual subscription fees (risk-adjusted)		\$0	\$1,890,000	\$2,173,500	\$2,500,050
Three-year total: \$6,563,550				Three-year present value: \$5,392,787		

Results. To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV \$5.4 million

IMPLEMENTATION AND TRAINING COSTS

Evidence and data. Each of the interviewed executives said Fourthline requires very little effort from developers, IT support staff, or system administrators. Because the product runs within each organization’s own app, the training required for the onboarding team is not significant. Internal costs were limited to a relatively straightforward API integration or installation of Fourthline’s out-of-the-box software development kits (SDKs).

Modeling and assumptions. Forrester assumes the following about the composite organization:

- Implementation costs are for a minimum of 25 hours of work by internal teams before launching Fourthline.
- The average fully burdened hourly salary of an IT

and for an onboarding service agent is \$39 per hour.

Risks. The risks of fluctuation in this cost are relatively low. Factors that could potentially impact the fees paid to Fourthline include

- The salaries of an organization’s developers and onboarding staff.
- Differences in the training needs and costs for the agents

Results. To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV of \$5,650.

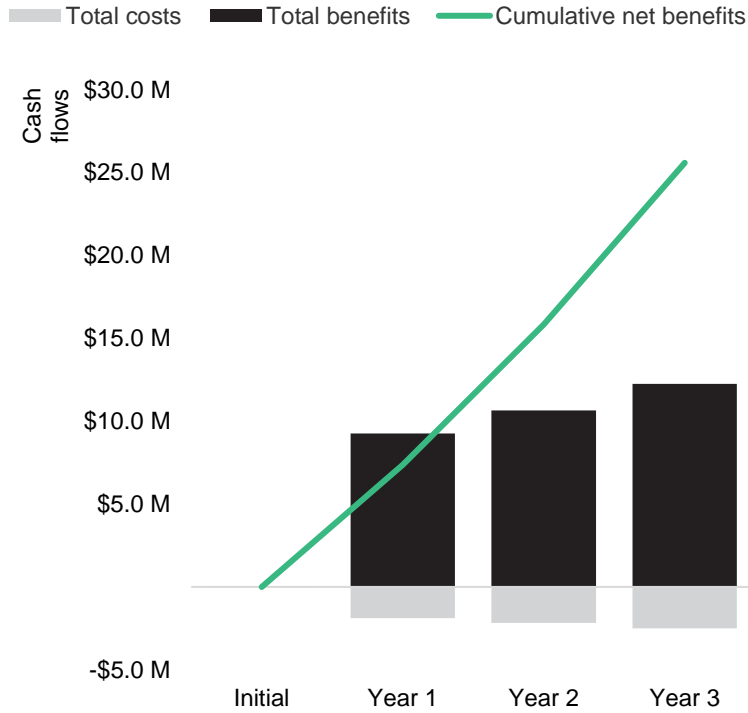
Implementation & Training Costs						
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
E1	Implementation cost	Interviews	\$0			
E2	Internal implementation effort (hours)	Interviews	25			
E3	Average project team fully-burdened hourly salary	Assumption	\$81			
E4	Onboarding service agents trained	Composite	5	2	2	2
E5	Onboarding service agents fully-burdened hourly salary	Assumption	39	39	39	39
E6	Training hours per agent	Composite	8	8	8	8
Et	Implementation & Training costs	$(E2 \cdot E3) + (E4 \cdot E5 \cdot E6)$	\$3,585	\$624	\$624	\$624
	Risk adjustment	↑10%				
Etr	Implementation & Training costs (risk-adjusted)		\$3,944	\$686	\$686	\$686
Three-year total: \$6,003			Three-year present value: \$5,650			

implementation team member is \$81 per hour

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 Estimates)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	(\$3,944)	(\$1,890,686)	(\$2,174,186)	(\$2,500,736)	(\$6,569,553)	(\$5,398,437)
Total benefits	\$0	\$9,263,077	\$10,652,538	\$12,250,419	\$32,166,035	\$26,428,651
Net benefits	(\$3,944)	\$7,372,391	\$8,478,352	\$9,749,683	\$25,596,482	\$21,030,214
ROI						390%
Payback period (months)						<6

Appendix A: Total Economic Impact

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

TOTAL ECONOMIC IMPACT APPROACH

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

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

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

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

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



PRESENT VALUE (PV)

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



NET PRESENT VALUE (NPV)

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



RETURN ON INVESTMENT (ROI)

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



DISCOUNT RATE

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



PAYBACK PERIOD

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

Appendix B: Endnotes

¹ Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

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