

The Total Economic Impact™ Of VoCoVo

Cost Savings And Business Benefits Enabled By VoCoVo

A FORRESTER TOTAL ECONOMIC IMPACT STUDY
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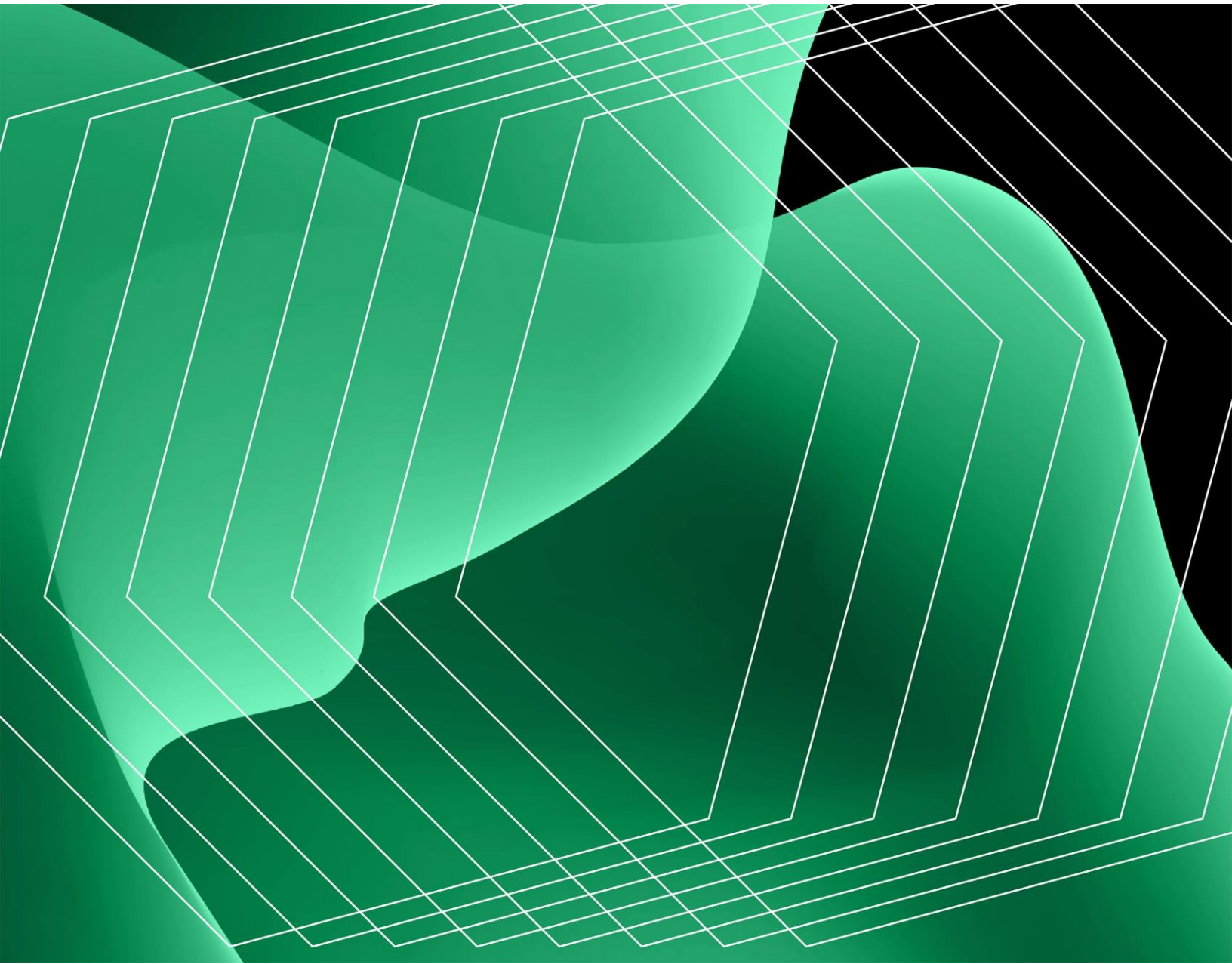


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Executive Summary

While today's consumers are tech-savvy, they still place value on in-store shopping for its immediacy and sensory benefits, which digital platforms cannot replicate.¹ These consumers compare in-store experiences with online ones, requiring retailers to strategically design stores for enhanced customer experience (CX).² Retailers must therefore invest in technology to provide better CX, achieve operational excellence, and drive specific business outcomes.

VoCoVo is a technology solutions provider that enables retail teams to collaborate in a connected working environment. VoCoVo's product ecosystem includes lightweight, robust headsets, keypads, customer call points, and software that enable teams to elevate in-store communication and maximize the value of other smart retail technology. VoCoVo aims to empower teams to collaborate, communicate, and connect through voice.

VoCoVo commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying [VoCoVo](#).³ The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of VoCoVo on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four representatives with experience using VoCoVo. For the purposes of this study, Forrester aggregated the interviewees' experiences and combined the results into a single [composite organization](#) that is a retail organization with 300 stores and revenue of €3 billion per year.

Interviewees said that prior to using VoCoVo, their organizations typically relied on internal portals accessible on personal devices (mobile phones), public announcement (PA) systems, or wireless walkie-talkies for communication purposes. However, these solutions posed limitations in terms of communication speed, efficiency, and real-time



Return on investment (ROI)

142%



Net present value

€5.93M

collaboration. These limitations led to delays in serving customer queries, delays in assigning activities or tasks to associates, and difficulty in ensuring a safe, connected working environment.

After the investment in VoCoVo, interviewees' organizations improved the speed of customer service, enhanced collaboration among store associates, and improved store safety and security. Key results from the investment include store associate productivity savings from faster response to customer queries, store associate shift optimization through enhanced communication and collaboration, and a reduction of in-store theft through real-time notification of suspicious incidents.

KEY FINDINGS

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

- **Improving customer query response times by 90% and experiencing time savings in sharing internal messages of 76%, leading to productivity savings of €2.6 million.** VoCoVo headsets enable real-time peer-to-peer communication and connectedness. This reduces the time taken for associates to respond to customer queries by up to 90%. Additionally, the composite organization saves time in setting up and sharing broadcast messages intended for store associates by up to 76%. These benefits result in productivity time savings for the composite organization that amount to approximately €2.6 million over three years.
- **Reducing shifts by 33%, enabling labor savings of €7.4 million.** VoCoVo devices enable a connected working environment. This improves staff collaboration and task management, especially in larger retail environments where backroom associates and sales floor associates are needed to work in close collaboration with each other. This helps the composite organization improve task management and optimize associate headcounts in large stores, resulting in headcount savings that amount to €7.4 million over three years.
- **Further reducing store theft by 4%.** VoCoVo headsets deter in-store theft behavior at the composite organization's stores. Further reductions in theft are derived from integration with other retail technology, such as smart shelving

“If you speak to the store colleagues, they really appreciate having the headsets. I think it would be very difficult to take the headsets away from them because they rely on their headsets a lot for communicating with each other.”

PRINCIPAL PRODUCT MANAGER, HOME FURNISHING RETAILER

systems. The integration with smart-shelving systems enable real-time notification of theft activity, which helps store associates take timely action to prevent or control such incidents. The composite organization enables this integration in stores with high-theft incidents which results in theft reduction by 4% per week, saving €39,000 over three years.

Reduction in time spent answering customer queries

90%

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

- **Improving retail associate safety and well-being.** VoCoVo's always accessible, connected communication channel offers the composite organization the ability to orchestrate a safe and connected environment for associates at all times.

- **Driving a culture of team learning and knowledge sharing.** With VoCoVo headsets, associates can listen in on real-time customer queries and conversations, which allows them to learn from the responses given and fosters a culture of shared learning within the composite organization.
- **Improving the new associate onboarding experience.** Associates can instantly communicate with other store colleagues, which help new store associates easily integrate into the team environment.
- **Increasing speed to action.** Associates can promptly respond to work tasks due to VoCoVo's ability to instantly transmit memos or reminders.

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

- **Hardware and installation costs of €4.1 million.** Hardware costs include the cost of headsets, base units, and controllers. The installation of VoCoVo infrastructure is also accounted for with this cost.
- **Proof of concept (POC), implementation, and training costs of €107,000.** Deployment involves an initial proof of concept followed by implementation and associate training.
- **Cost of integrating VoCoVo Smart Shelving System of €12,000.** This cost involves the one-time cost of integrating VoCoVo with smart shelving systems

The representative interviews and financial analysis found that a composite organization experiences benefits of €10.11 million over three years versus costs of €4.18 million, adding up to a net present value (NPV) of €5.93 million and an ROI of 142%.



ROI

142%



BENEFITS PV

€10.11M



NPV

€5.93M



PAYBACK

12 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 VoCoVo.

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 VoCoVo can have on an organization.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by VoCoVo 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 VoCoVo.

VoCoVo 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.

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

1. Due Diligence

Interviewed VoCoVo stakeholders and Forrester analysts to gather data relative to VoCoVo.

2. Interviews

Interviewed four representatives at organizations using VoCoVo to obtain data about costs, benefits, and risks.

3. Composite Organization

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

4. 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.

5. 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 VoCoVo Customer Journey

Drivers leading to the VoCoVo investment

Interviews				
Role	Industry	Region	Revenue	Number Of Stores
VP of retail operations	Supermarket chain	United Kingdom	€18.8 billion	350
Retail transformation manager	DIY and home improvement retail chain	United Kingdom	€3.5 billion	311
Principal product manager	Home furnishing retailer	United Kingdom	€1.4 billion	198
Program manager	Retail grocery chain	United Kingdom	€354 million	350

KEY CHALLENGES

Prior to using VoCoVo, the interviewees' organizations primarily depended on PA systems, personal devices (mobile phones), wireless walkie-talkies, or a combination of these for communicating and collaborating with store associates.

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

- **Delays in addressing customer queries.** The interviewees' organizations faced challenges in quickly and efficiently resolving customer queries. Interviewees noted that when staff were asked a question they did not have the answer to, they usually left the customer waiting while they either found a colleague who was better equipped to address the query or attempted to find the answer themselves. Such instances had a significant impact on speed of service and damaged the overall customer experience. In certain cases, it also led to loss of sales.
- **Ineffective management of employee shifts in large stores.** In large-format retail stores, interviewees highlighted challenges in effectively managing workflows and optimizing the schedules of their associates. It was cited that the

interviewees' organizations experienced a disconnect in communication and collaboration between backroom staff and storefront staff, often leading to operational inefficiencies and disjointed customer service. As a result, store managers often found themselves in a position where they needed additional headcount to manage operations, leading to increased labor costs.

- **Challenges with controlling store theft.** The interviewees' organizations faced significant challenges with controlling loss of inventory due to theft. Despite substantial efforts and investments in equipping their stores with closed-circuit television (CCTV) systems, they proved insufficient in curbing theft incidents. It was cited that the impact of theft extended beyond financial loss; it also had serious implications for the safety and well-being of store associates.

“Getting hold of colleagues was actually quite a challenge for us sometimes. A lot of our operational tasks require good communication... [for instance] getting stock from the back of the store to the front or just dealing with daily ad hoc tasks as they come up on the shop floor. We had to improve how we communicate.”

PROGRAM MANAGER, RETAIL GROCERY CHAIN

SOLUTION REQUIREMENTS

The interviewees' organizations searched for a solution that could:

- Enhance speed and efficiency of service delivery.
- Empower associates to work collaboratively and improve productivity.
- Orchestrate a safer and connected working environment.

“The main things for me are speed, communication, and engagement, productivity, and now security increasingly as a real benefit.”

VP OF RETAIL OPERATIONS, SUPERMARKET CHAIN

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 UK-based, nationwide general retail chain with 300 physical stores. It has an annual revenue of €3 billion and operates across large (40,000+ square feet), medium (15,000 to 40,000 square feet) and small (3,000 to 15,000 square feet) format stores. The composite organization has low technology maturity and does not employ smart devices, such as wearables or tablets, for store associates to communicate with each other or manage tasks. Public

announcements systems and personal devices, such as mobile phones, are the primary communication method used.

Deployment characteristics. The composite organization deploys VoCoVo across all store formats in Year 1, following a three-month proof-of-concept period. It also expands at 1% per year and continues to deploy VoCoVo in new stores. The composite also deploys smart shelving systems in selected stores and integrates it with VoCoVo headsets. The integration with VoCoVo headsets scales from five stores initially in Year 1, to 10 stores in Year 2 and 15 stores in Year 3.

KEY ASSUMPTIONS

Nationwide general retail chain

€3 billion revenue

300 physical stores

Low technology maturity

Does not employ smart devices for task management/communication

Deploys VoCoVo across all store formats in Year 1

Integrates VoCoVo with smart shelving system

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	Shop floor associate time savings	€1,049,480	€1,059,975	€1,070,575	€3,180,031	€2,634,425
Btr	Savings from replenishment associate shift reduction in large stores	€2,990,301	€2,990,301	€2,990,301	€8,970,902	€7,436,435
Ctr	Savings from theft reduction	€8,147	€16,293	€24,440	€48,880	€39,234
	Total benefits (risk-adjusted)	€4,047,928	€4,066,569	€4,085,316	€12,199,813	€10,110,094

SHOP FLOOR ASSOCIATE TIME SAVINGS

Evidence and data. VoCoVo headsets offer a wireless channel for instant communication that connects the entire team within a retail operation. Interviewees noted this enabled their store associates to stay connected, communicate, and collaborate with each other, enhancing their ability to respond to customer needs effectively. The principal product manager at a home furnishing retail organization explained that when customers approach their associates with queries, they used to spend up to 10 to 15 minutes either looking for a colleague to help answer the question or find out the answer themselves. With VoCoVo, they reduced the time it took to answer customer queries by 90%, as associates could find answers much faster since they were connected through the wireless communication channel. Speedier service delivery also improved the overall purchasing experience for the customer.

In addition to this, interviewees noted VoCoVo headsets could also be used to relay important messages or announcements directly to the staff instead of using internal portals or PA systems, which ensured customers were not disturbed. The VP of retail operations at a supermarket chain explained that, on a daily basis, they had to share

ANALYSIS OF BENEFITS

multiple messages or reminders with their staff, ranging from reminders for product withdrawal to periodic checks or other important ad hoc updates. Sharing such messages through VoCoVo was instantaneous. Associates were no longer tied to PA systems or their personal devices to check the internal portal for such messages. This enabled them to cut down the time taken to compose and share such broadcast messages by 75%.

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

- Each store in the composite organization's chain receives an average of 10 customer queries every day. These queries include questions about product availability, recommendations, or category specific questions, such as specifications, comparisons, alternatives, and source and policy information.
- The average time taken for store associates to resolve a customer query is 10 minutes. This involves either physically finding a colleague who can answer the query or finding out the answer themselves.
- The composite experiences a reduction of 90% in the time taken to answer customer queries with VoCoVo.
- Each store in the composite organization's chain shares two reminders or broadcast messages with their associates every day.
- The average time taken for associates to compose and share broadcast messages is 20 minutes. This involves gathering the information from the store manager's office, walking to the PA system, and sharing the message.
- The composite experiences a reduction of 76% in time taken to answer customer queries with VoCoVo.
- A productivity capture rate of 50% is applied as a TEI standard, as it can be assumed associates reallocate only a certain part of the time saved to productive work.

Risks. The benefits experienced may vary for organizations based on:

- The nature of goods and services the organization sells. Customers purchasing home improvement products, electronic products, etc., might have more

clarifications and questions or might require more guidance from store associates to help them with their purchases.

- The number of customer queries received by the stores.
- The number of reminder or broadcast messages stores share.
- The average fully burdened hourly wage of retail associates.

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 €2.6 million.

“We were able to communicate with our customers better. Our colleagues could ask questions much quicker than before and deal with customer queries. They didn’t have to wait for a colleague to come down to answer some of those queries.”

PROGRAM MANAGER, RETAIL GROCERY CHAIN

“We had a lot of customer compliments about speed and helpfulness. Anecdotally, it’s quite impressive for customers if you’re always checking and you’re always doing it, and the colleagues show that effort.”

VP OF RETAIL OPERATIONS, SUPERMARKET CHAIN

ANALYSIS OF BENEFITS

Shop Floor Associate Time Savings					
Ref.	Metric	Source	Year 1	Year 2	Year 3
A1	Total number of stores	Composite	300	303	306
A2	Average number of customer queries per store per year	Interviews	3,650	3,650	3,650
A3	Time spent per query without VoCoVo (hours)	Interviews	0.17	0.17	0.17
A4	Time spent per query with VoCoVo (hours)	Interviews	0.02	0.02	0.02
A5	Reduction in time spent on answering queries with VoCoVo	Assumption	90%	90%	90%
A6	Fully burdened hourly rate for a retail associate	TEI standard	€12	€12	€12
A7	Subtotal: Shop floor associate time savings in answering customer queries	A1*A2*A3*A5*A6	€1,967,776	€1,987,454	€2,007,328
A8	Average number of broadcasting messages per store per year	Assumption	730	730	730
A9	Time spent to create a broadcasting message without VoCoVo (hours)	Interviews	0.33	0.33	0.33
A10	Time spent to create a broadcasting message with VoCoVo (hours)	Interviews	0.08	0.08	0.08
A11	Reduction in time spent on creating a broadcasting message	Assumption	76%	76%	76%
A12	Subtotal: Time savings in sharing broadcasting message	A1*A6*A8*A9*A11	€655,925	€662,485	€669,109
A13	Productivity recapture rate	TEI standard	50%	50%	50%
At	Shop floor associate time savings	(A7+A12)*A13	€1,311,851	€1,324,969	€1,338,219
	Risk adjustment	↓20%			
Atr	Shop floor associate time savings (risk-adjusted)		€1,049,480	€1,059,975	€1,070,575
Three-year total: €3,180,031			Three-year present value: €2,634,425		

SAVINGS FROM REPLENISHMENT ASSOCIATE SHIFT REDUCTION IN LARGE STORES

Evidence and data. Interviewees noted that VoCoVo helped orchestrate a connected working environment for store associates, improving coordination and productivity. The VP of retail operations at a supermarket chain explained that in large-format stores, they experienced a disconnect in communication and collaboration between the backroom staff, who were responsible for replenishment, and the storefront staff, who directly interacted with customers. This disconnect often manifested as uncoordinated actions, leading to operational inefficiencies like delayed restocking, misplaced products, and out-of-stock situations, which increased the need for additional associates to manage operations. Such situations not only resulted in increased labor costs but also led to a negative shopping experience for customers. Introducing VoCoVo enabled better coordination and task management with reduced effort, allowing the interviewees' organizations to reduce their backroom associate (replenishment) headcount by one.

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

- Large stores in the composite organization's chain employ three associates in replenishment.
- A retail associate works 40 hours weekly.
- The composite experiences a reduction of 33% in the number of associates required in large stores for replenishment.

Risks. The benefits experienced may vary for organizations based on:

- The number of associates dedicated to replenishment in large stores.
- The extent of technology used within the store to manage tasks, such as a dedicated task management solution.
- The average fully-burdened hourly wage of retail associates.

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 €7.4 million.

Savings From Replenishment Associate Shift Reduction In Large Stores					
Ref.	Metric	Source	Year 1	Year 2	Year 3
B1	Total number of large stores	Composite	150	150	150
B2	Number of replenishment associates per shift in a large store before VoCoVo	Interviews	3	3	3
B3	Total hours worked by replenishment associate per week	TEI standard	40	40	40
B4	Percentage reduction in associates per shift	Interviews	33%	33%	33%
B5	Fully burdened hourly rate for a retail associate	TEI standard	€12	€12	€12
Bt	Savings from replenishment associate shift reduction in large stores	$B1*B2*B3*B4*B5*52$ weeks	€3,737,876	€3,737,876	€3,737,876
	Risk adjustment	↓20%			
Btr	Savings from replenishment associate shift reduction in large stores (risk-adjusted)		€2,990,301	€2,990,301	€2,990,301
Three-year total: €8,970,902			Three-year present value: €7,436,435		

SAVINGS FROM THEFT REDUCTION

Evidence and data. VoCoVo offers API-based integrations with intelligent retail technologies such as smart fridges, shelving, security cameras, and workflow applications. Interviewees noted that with VoCoVo, any notification generated by such smart devices could be converted to an instant voice notification, delivered to the associates through their headsets. The program manager at a retail grocery chain explained how their organization integrated VoCoVo with the smart shelving systems in their stores with high levels of theft incidents. This integration enabled store associates to receive instant voice notification of suspicious activity, allowing them to respond in real time. This helped the interviewed program manager's organization reduce store theft by 4%.

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

- The composite organization initially deploys smart shelving systems in five stores in Year 1, scaling to 10 in Year 2 and 15 in Year 3.
- The composite organization integrates smart shelving technology with VoCoVo to enable instant voice notification.
- Stores with high levels of theft incidents experience an average theft of €2,304 each per week.
- The composite experiences a 4% reduction in theft due to the smart shelving and VoCoVo notification integration.
- Since the savings from theft reduction due to faster response to incidents are enabled by a combination of the smart shelving system and its integration with VoCoVo, the study cannot attribute 100% of the benefits to VoCoVo. Therefore, VoCoVo is accredited with 40% of the overall savings.

Risks. The benefits experienced may vary for organizations based on:

- The value of theft experienced by the stores.
- The amount of security measures adopted by stores that can prevent theft incidents, such as RFID scanners, closed-circuit televisions (CCTV), and security personnel.
- The reliability or success rate of the smart shelving system to correctly identify a shoplifting attempt.
- The standalone capability of the smart shelving system to trigger alarms or notifications by itself without the need for a third-party tool like VoCoVo.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of €39,000.

“We connected the VoCoVo headsets to intelligent shelving that detected any high-value products that were being taken off the shelf. It triggered a response that went directly to the headset, and we reduced the theft in that store quite considerably.”

PROGRAM MANAGER, RETAIL GROCERY CHAIN

Savings From Theft Reduction					
Ref.	Metric	Source	Year 1	Year 2	Year 3
C1	Number of stores with smart shelving integration	Assumption	5	10	15
C2	Average theft per week per store	Interviews	€2,304	€2,304	€2,304
C3	Percentage reduction in theft with VoCoVo integration	Interviews	4%	4%	4%
C4	Percentage attribution of theft reduction savings to VoCoVo	Assumption	40%	40%	40%
Ct	Savings from theft reduction	$C1 \cdot C2 \cdot C3 \cdot C4 \cdot 52$ weeks	€9,584	€19,169	€28,753
	Risk adjustment	↓15%			
Ctr	Savings from theft reduction (risk-adjusted)		€8,147	€16,293	€24,440
Three-year total: €48,880			Three-year present value: €39,234		

UNQUANTIFIED BENEFITS

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

- **Improving retail associate safety and well-being.** One of the primary benefits interviewees highlighted was VoCoVo's ability to orchestrate a safe and connected environment for associates at all times. The principal product manager at a home improvement retailer cited that VoCoVo significantly helped in reducing security incidents, such as violent and abusive customer behaviors. Being connected to colleagues via the headsets not only helped associates reach out for help or support but also deterred customers from behaving aggressively as they understood their actions could be reported immediately. The program manager of a retail grocery chain also echoed this, highlighting that VoCoVo provided a sense of security for associates who work late-night shifts. These benefits helped associate experience and overall morale.
- **Driving a culture of team learning and knowledge sharing.** Interviewees also noted the impact VoCoVo has on driving a culture of shared learning. One interviewee said that since every associate could listen in on customer conversations or customer queries that were being answered, it helped less-experienced colleagues learn from these conversations. It also created a shared sense of responsibility and enabled associates to communicate learnings.
- **Improving new associate onboarding experience.** Interviewees reported the ability to ease new store associates into a team environment as another positive impact of VoCoVo. One interviewee said that although new employees were provided training at the time of onboarding, they would still take time to understand the structure and operations within the store. With VoCoVo, new associates could receive assistance from a coworker immediately, helping associates settle into their new job easily.
- **Increasing speed to action.** Instant communication enabled by VoCoVo ensured that any messages or call to actions were instantly delivered. The VP of retail operations at a supermarket chain explained how memos or reminders were previously sent on personal devices, and it would take some time for associates to get a chance to read them. This reduced the speed at which

associates could be directed to tasks or activities. Having messages delivered directly to the headsets allowed associates to monitor or check any devices and manage tasks more effectively.

“Our colleagues felt safer. Things like evening time when you’re closing shutters down or closing the store down, to know that someone else is there and available is another one.”

PROGRAM MANAGER, RETAIL GROCERY CHAIN

“For our new colleagues, they’ve all given positive feedback to say it helps them with their learning or being able to ask; someone who has picked up that question can answer it there and then.”

PRINCIPAL PRODUCT MANAGER, HOME FURNISHING RETAILER

FLEXIBILITY

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

- **The ability to orchestrate a connected store experience.** Interviewees cited the significance of connecting VoCoVo to other technologies through API

integrations. This included integration with telephony services, smart fridges, and CCTV systems and other retail technologies that help create a connected store experience where colleagues as well as devices can communicate in real time.

- **The ability to multitask.** Interviewees also highlighted that VoCoVo enabled their associates to multitask more effectively as they were no longer tied down to a specific location. With VoCoVo's range of communication devices, such as customer call points and checkout keypads, store associates could answer queries remotely or provide responses remotely without leaving their task at hand. This enabled the workforce to be more mobile and productive.

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

Analysis Of Costs

Quantified cost data as applied to the composite

Total Costs							
Ref.	Cost	Initial	Year 1	Year 2	Year 3	Total	Present Value
Dtr	Hardware and installation costs	€3,363,017	€281,854	€281,854	€281,854	€4,208,580	€4,063,947
Etr	POC, implementation, and training costs	€79,270	€29,029	€786	€786	€109,870	€106,900
Ftr	Cost of integrating VoCoVo with a smart shelving system	€0	€2,419	€4,838	€7,257	€14,515	€11,650
	Total costs (risk-adjusted)	€3,442,286	€313,303	€287,478	€289,897	€4,332,965	€4,182,497

HARDWARE AND INSTALLATION COSTS

Evidence and data. The primary costs associated with VoCoVo for the interviewees' organizations were hardware and installation charges. Interviewees noted that hardware costs included the headsets, base stations, and the controllers required to set up the solution. Installation costs included the charges associated with setting up the wiring and physical infrastructure for VoCoVo's connected communication ecosystem.

Modeling and assumptions. VoCoVo provided the license fee presented in this financial model. This fee has been adjusted to the composite organization's characteristics and deployment approach. The model also assumes a 15% annual replacement rate for headphones due to wear and tear.

Risks. This cost may vary depending on:

- The organization's requirement around headsets.
- The size of the organization's stores.
- The organization's headset replacement rate

- The labor cost for installation.
- Store expansion or changes over time.

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 €4.1 million.

“I have a very good relationship with VoCoVo as a partner. The people are excellent to work with ... even the way they handled [headset replacements] was really good and in general a good working relationship.”

PROGRAM MANAGER, RETAIL GROCERY CHAIN

Hardware And Installation Costs						
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
D1	Total number of stores	Composite	300			
D2	Hardware costs (headsets, base stations, controllers)	Interviews	€2,405,981			
D3	Installation costs	Interviews	€518,381			
D4	Average rate of headset replacements due to wear and tear	Interviews		15%	15%	15%
D5	Cost associated with headset replacements	Composite		€245,091	€245,091	€245,091
Dt	Hardware and installation costs	D2+D3+D5	€2,924,362	€245,091	€245,091	€245,091
	Risk adjustment	↑15%				
Dtr	Hardware and installation costs (risk-adjusted)		€3,363,017	€281,854	€281,854	€281,854
Three-year total: €4,208,580			Three-year present value: €4,063,947			

POC, IMPLEMENTATION, AND TRAINING COSTS

Evidence and data. The interviewees noted their organizations started implementation of VoCoVo with an initial proof of concept (POC) followed by full rollout. The initial POC stage was conducted in selected stores and was primarily done to evaluate the connectivity, voice clarity, and range of VoCoVo headsets. Interviewees explained this was done in four to five stores and lasted for a maximum of three months. It was then followed by implementation and complete rollout of the VoCoVo system to all the stores. The POC and implementation phases involved efforts from VoCoVo as well as the interviewees' organizations. The interviewees explained that both phases included a maximum of one project manager working full time and six retail associates dedicating their time part time. This team was provided with continuous support from the VoCoVo team, which consisted of an account manager and IT team. Post-implementation, interviewees also cited efforts for training and onboarding store associates, which were

supported by videos and guides VoCoVo provided. The interviewees also highlighted the simplicity and intuitiveness of the headphones, which helped associates get familiar and use the headsets within a matter of minutes.

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

- The proof-of-concept phase involves one project manager working full time and six retail associates working part time for a period of three months.
- The implementation phase involves one project manager working full time and six retail associates working part time for a period of five months.
- Training and onboarding involves one project manager spending up to 4 hours per store introducing and educating the store associates to effectively use VoCoVo.

Risks. This cost may vary depending on:

- The number of stores.
- The available resources to support implementation.
- The extent of training required.

Results. To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of €107,000.

“From my memory, VoCoVo were brilliant. Our VoCoVo account manager was fantastic. We had a couple of our colleagues, a product manager, and that was sufficient. It was relatively straightforward.”

VP OF RETAIL OPERATIONS, SUPERMARKET CHAIN

“I think, [store associates] immediately started using it they found the benefit. I would say after a week.”

VP OF RETAIL OPERATIONS, SUPERMARKET CHAIN

ANALYSIS OF COSTS

POC, Implementation, And Training Costs						
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
E1	Number of stores selected for POC and testing	Interviews	4			
E2	Time spent on testing and feedback gathering (hours)	Interviews	480			
E3	Number of retail project managers involved	Interviews	1			
E4	Fully burdened hourly rate for a retail project manager	TEI standard	€23			
E5	Percentage contribution from retail project manager	Interviews	100%			
E6	Number of part-time retail associates involved	Interviews	6			
E7	Fully burdened hourly rate for a retail associate	TEI standard	€12			
E8	Percentage contribution from retail associate	Interviews	50%			
E9	Subtotal: POC and testing costs	(E2*E3*E4*E5)+ (E2*E6*E7*E8)	€28,311			
E10	Number of stores implementing VoCoVo	Composite	300		3	3
E11	Time spent for implementation and rollout (hours)	Interview	800			
E12	Subtotal: Implementation and rollout costs	(E3*E4*E5*E11)+ (E6*E7*E8*E11)	€47,184		€472	€472
E13	Time spent per store on training and onboarding store associates (hours)	Interviews		4	4	4
E14	Subtotal: Training and onboarding costs	E4*E10*E13		€27,647	€276	€276
Et	POC, implementation, and training costs	E9+E12+E14	€75,495	€27,647	€748	€748
	Risk adjustment	↑5%				
Etr	POC, implementation, and training costs (risk-adjusted)		€79,270	€29,029	€786	€786
Three-year total: €109,870			Three-year present value: €106,900			

COST OF INTEGRATING VOCOVO WITH A SMART SHELVING SYSTEM

Evidence and data. Interviewees noted integrating VoCoVo to smart retail technology involved a one-time cost.

Modeling and assumptions. VoCoVo provided the integration fee presented in this financial model and adjusted this fee to the composite organization's characteristics and deployment approach.

Risks. This cost may vary depending on:

- The number of stores.
- The number of smart technology integrations needed per store.

Results. To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of €12,000.

“I think we’ve got more growth to have in the market. I think there’s a huge benefit to come with it, with their tech.”

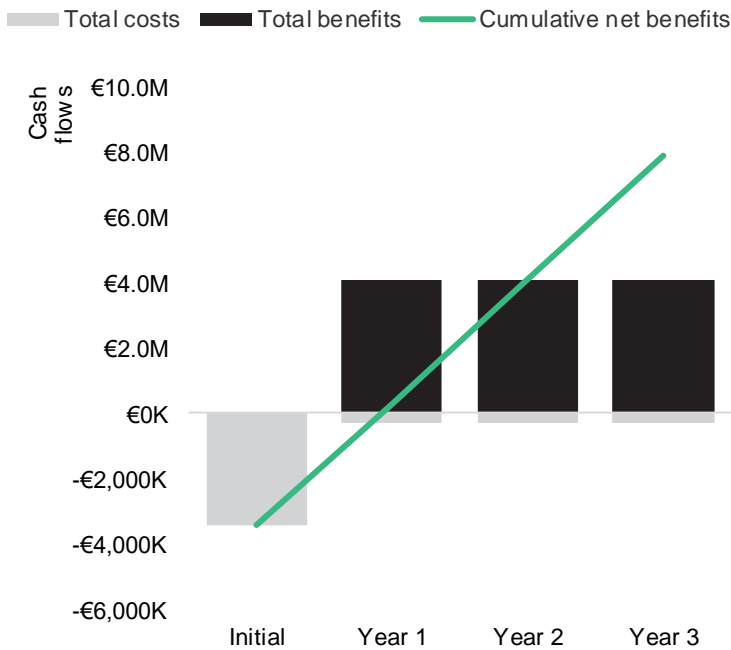
VP OF RETAIL OPERATIONS, SUPERMARKET CHAIN

Integrating VoCoVo With A Smart Shelving System						
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
F1	Stores with smart shelving integration	Assumption	0	5	10	15
F2	Cost of integration per store	Interviews		€461	€461	€461
Ft	Cost of integrating VoCoVo with a smart shelving system	F1*F2	€0	€2,304	€4,608	€6,912
	Risk adjustment	↑5%				
Ftr	Cost of integrating VoCoVo with a smart shelving system (risk-adjusted)		€0	€2,419	€4,838	€7,257
Three-year total: €14,515			Three-year present value: €11,650			

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	(€3,442,286)	(€313,303)	(€287,478)	(€289,897)	(€4,332,965)	(€4,182,497)
Total benefits	€0	€4,047,928	€4,066,569	€4,085,316	€12,199,813	€10,110,094
Net benefits	(€3,442,286)	€3,734,625	€3,779,091	€3,795,418	€7,866,848	€5,927,597
ROI						142%
Payback						12.0

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."

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 Future Of The Digital Store](#), Forrester Research, Inc., October 25, 2023

² Ibid.

³ 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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