

The Total Economic Impact™ Of Everbridge CEM Platform

Cost Savings And Business Benefits
Enabled By A CEM Platform

JULY 2020
(WITH COVID-19 ADDENDUM, MARCH 2021)

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Executive Summary

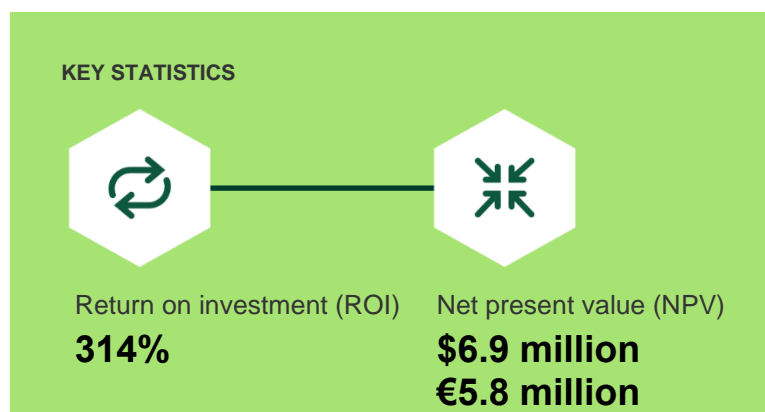
Threats to the modern organization are growing, and they come from all sides, from severe weather and wildfires to civil unrest, terrorism, and even global pandemics. Everbridge helps security teams cut through the noise to quickly identify, assess and address those threats in order to safeguard company assets and employees.

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

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four customers with experience using CEM Platform. For the purposes of this study, Forrester aggregated the experiences of the interviewed customers and combined the results into a single [composite organization](#).

Prior to using the platform, these organizations typically relied on data from multiple newsfeeds to monitor developing critical events, such as severe weather, wildfires, political unrest, and terrorism. They also employed teams of analysts to assess the potential impact of these events on their businesses and recommend or execute mitigation plans.

As many of the customers interviewed were global organizations, the wide-ranging nature of their news feeds, risk intelligence sources, and internal data sources required analysts to spend precious time sifting through the “noise” of worldwide events to



identify those that might impact company assets. They faced additional delays as companies identified appropriate personnel in remote locations and notified them (in their own languages) and as they launched teams into action. Often, companies wasted time and resources when activating erroneous or outdated notification lists and protocols at this local level. After their investment in Everbridge's platform, customers could respond to and contain critical events more quickly and effectively, thus better protecting employees, business partners, and company assets. As a result, the companies saw reductions in property damage, unplanned manufacturing and IT downtime, and lost employee productivity totaling more than \$9.1 million (€7.6 million) over the course of three years.

KEY FINDINGS

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

- **Reduced losses from business interruption added nearly \$2.7 (€2.3) million to the bottom line.** One of the most economically damaging events (or effects of such an event) is a disruption in the ability of the organization to carry on its business. The Everbridge CEM platform allowed the interviewed companies to identify and remedy critical events much more quickly, thus getting their revenue-generating activities back up to speed.
- **Lowered costs from IT downtime saved \$2.5 (€2.1) million.** Costs of IT downtime continue to rise as technology is increasingly linked to overall business operations. Everbridge's ability to facilitate a rapid response to critical IT outages significantly reduced the length of time the interviewed organizations spent offline as a result of IT outages.
- **Avoided property damage losses amounted to \$2.0 (€1.7) million.** Critical events often lead to property damage, whether to buildings, fleet, or inventory. Everbridge's asset-specific data feeds enable better advance planning for more predictable events and faster response to the unpredictable, minimizing property damage as a result.
- **Averted costs of lost employee productivity amounted to \$1.1 million (€932,289).** Every year, a significant portion of work forces waste what could be productive work time due to critical events such as wildfires or disruptive weather. Everbridge's alerting and mass notification capabilities allow organizations to help their employees avoid these situations and recapture much of that lost productivity.
- **Increased security team productivity freed up employee time worth \$843,961 (€707,831) for higher-value tasks.** Everbridge automated many complex, time-intensive tasks (such as tracking down, notifying, and rerouting executives in response to emergencies) and enabled templated communications for employee alerts.

“More rapid awareness and knowledge of risk areas allows us to divert assets away from an area or minimize the impact.”

— Chief security officer, chemical manufacturing

This freed up a significant amount of analyst and administrative time, allowing those employees to focus on higher-value work, such as detailed risk analysis, rather than manually collating feeds.

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

- **Improved security for employees at all levels.** The Everbridge system allows for two-way notification of all employees or others for whom the organization has a duty of care. During extreme weather or civil unrest, or in the case of employees who visit people's homes, companies can be confident that their employees are safe.

“We had an employee who left the office at lunchtime as a bombing was occurring, and she was walking towards that area. We were able to instantly notify her, so she didn’t get caught in the mayhem.”

Global head of security and facilities operations, pharmaceutical industry

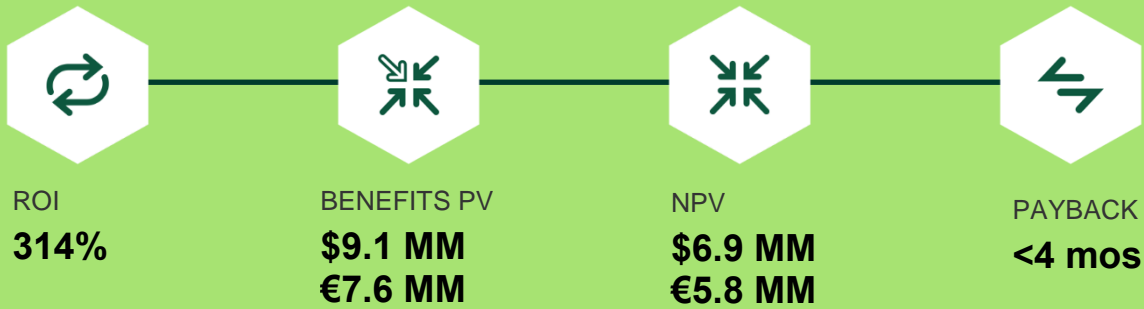
- **Better customer experience.** The benefit of reduced losses due to downtime captures the quantified value of being able to continue selling and delivering an organization's goods and services; there is also a less quantifiable benefit of being able to serve the organization's customers during a period of disruption. A store that can reopen immediately after a hurricane or a manufacturer that can deliver food and medicine during a blizzard or pandemic is performing a valued service for its customers—one that is likely to increase customer loyalty and brand perceptions.

- **Increased investor and regulator confidence in the organization's proactive approach to risk.** While every enterprise involves some level of risk, interviewed executives told Forrester that investors responded positively to the investment in Everbridge as evidence of the companies' proactive approach to managing that risk.

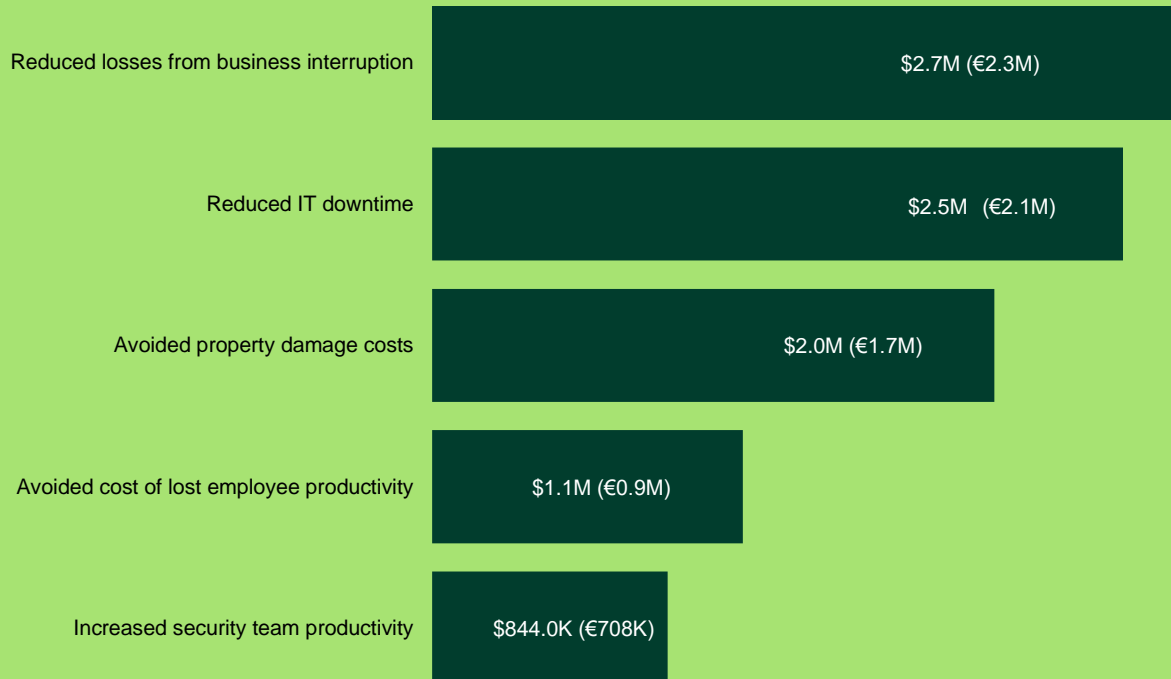
Costs. Risk-adjusted PV costs include:

- **Subscription fees cost approximately \$2.0 (€1.7) million over three years.** Everbridge fees include both an upfront initialization fee and an ongoing annual license fee. The annual fee is based on both the number of contacts in an organization and the capabilities the company chooses to deploy.
- **Management oversight was approximately \$149,000 (€125,000) over three years.** The interviewed executives agreed that the platform needs some administrative oversight and control, although all achieved this using one or more managers already on their teams. The relevant portion of their time is accounted for here, but no additional headcount was required at any of the interviewed organizations.
- **Internal training costs were minimal at just over \$17,000 (€14,000).** A day or so of dedicated training upfront was sufficient to get analysts up and running on the platform, and additional on-the-job training took place as they used the software over the next several weeks.

Forrester's interviews and subsequent financial analysis found that an organization based on these companies will gain benefits of \$9.1 million (€7.6 million) over three years, costs of \$2.2 million (€1.8 million), a net present value of \$6.9 million (€5.8 million) and ROI of 314%.



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 the CEM Platform.

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 the CEM Platform can have on an organization.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by Everbridge 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 the CEM Platform.

Everbridge 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.

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



DUE DILIGENCE

Interviewed Everbridge stakeholders and Forrester analysts to gather data relative to the CEM Platform



CUSTOMER INTERVIEWS

Interviewed four decision makers at organizations using the CEM Platform 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 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 Everbridge CEM Platform Customer Journey

■ Drivers leading to the CEM Platform investment

Interviewed Organizations			
Industry	Region	Interviewee	[Relevant metric]
Chemical manufacturer	Global	Chief security officer	\$50 billion revenue, 37,000 employees, 100+ facilities
Pharmaceutical manufacturer	Global	Global head of security and facilities operations	\$5 billion revenue, 7,000+ employees, 40 countries
Retailer	North America	Head, enterprise response and resiliency	\$250 billion revenue, 300,000 employees, 10,000+ sites
Insurance provider	Global	Director, global security, risk and intelligence	\$90 billion revenue, 70,000 employees, 300+ facilities

KEY CHALLENGES

Before deploying the Everbridge platform, the interviewed organizations faced similar challenges in responding to critical events, whether those events were related to weather, natural disasters, terrorism and civil unrest, or internal equipment failures.

- **Difficulty identifying a critical event quickly.**

The most universal metric for the security executives whom Forrester interviewed was speed of response. How quickly could the team identify a threat, assess it, and alert the appropriate decision makers? Before Everbridge, these teams sifted through a deluge of news reports, risk intelligence feeds, and internal data sources with varying levels of reliability. The process of determining whether the threats were real and relevant to the organization was time-consuming and distracting.

- **Delays and miscommunication in alerting affected employees.** Once organizations had identified a threat, it was not uncommon to issue alerts to the wrong employees. Depending on the type of event, notifications could come from a global security officer at headquarters or from an office manager or HR assistant at a warehouse. As a result, the quality of the communications varied greatly, often leaving employees wondering what actions they should take.

“We had multiple risk alert platforms. We would receive emails, then we had to bounce around to two or three different platforms to get the information we needed to do an initial triage.”

Director of global security risk and intelligence, insurance provider

- **Inability to coordinate response across a global enterprise.** To respond effectively to events around the world, teams of internal experts need to work together from the same understanding of the situation. Without a common set of data about the event and its impact on company assets, firms wasted valuable time bringing remote team members up to speed or arguing about what was really happening. This cost the organizations valuable reaction time.

SOLUTION REQUIREMENTS

The interviewed organizations searched for a solution that would:

- Enable security team members to learn about and assess threats quickly by allowing them to focus on a more relevant set of data.
- Allow employees in locations around the world to work together using the same information without having to patch together multiple data and communication systems.
- Enable the organizations to coordinate physical and IT security activities as their businesses increasingly required.
- Provide a scalable platform that would improve employee and asset security immediately while allowing them to build in additional capabilities as their organizations demanded them.

Several interviewed organizations took a phased approach to deploying the Everbridge solution, most commonly beginning with the mass notification solution. They would then add other functional modules and data feeds over time to introduce or automate security systems. The Everbridge CEM platform provided a means to orchestrate all these tools and provide analysts with a single screen overview of their organization and its security threats.

The interviews revealed several key results from the investment in the Critical Event Management platform: Analysts can go beyond flagging crises to creating analytic products that drive decision making. Organizations can better fulfill their duty of care for their employees. Communications during a crisis are timely, consistent, and useful. The organization shifts from reactive to proactive mode with regard to critical event management.

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 that Forrester synthesized from the customer interviews has the following characteristics:

Description of composite. The composite organization is a global manufacturer of consumer products with headquarters in the United States. It has annual revenues of \$30 billion, employs 30,000 people, and operates approximately 100 facilities around the world, including factories, distribution centers, and corporate offices.

Key assumptions

- **\$30 billion revenue**
- **30,000 employees**
- **100 facilities**
- **Multiple countries**

The organization begins by deploying the Everbridge mass notification tool to replace an outdated tool it was using for this purpose. The organization quickly adds the IT-alerting product and the Safety Connection module to monitor the safety of employees around the globe exposed to different kinds of risks. With all those tools and a variety of news/data feeds in place, the organization leverages the CEM platform as a “single pane of glass,” integrating everything on one cloud-based screen and keeping analysts constantly up to date.

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	Reduced losses from business interruption	\$1,080,000 €905,796	\$1,080,000 €905,796	\$1,080,000 €905,796	\$3,240,000 €2,717,388	\$2,685,800 €2,252,581
Btr	Reduced IT downtime	\$995,625 €834,975	\$995,625 €834,975	\$995,625 €834,975	\$2,986,875 €2,504,925	\$2,475,972 €2,076,459
Ctr	Avoided property damage costs	\$810,000 €679,347	\$810,000 €679,347	\$810,000 €679,347	\$2,430,000 €2,038,041	\$2,014,350 €1,689,435
Dtr	Avoided cost of lost employee productivity	\$447,445 €374,887	\$447,445 €374,887	\$447,445 €374,887	\$1,342,336 €1,124,661	\$1,112,730 €932,289
Etr	Increased security team productivity	\$339,369 €284,630	\$339,369 €284,630	\$339,369 €284,630	\$1,018,108 €853,889	\$843,961 €707,831
Total benefits (risk-adjusted)		\$3,672,439 €3,079,635	\$3,672,439 €3,079,635	\$3,672,439 €3,079,635	\$11,017,319 €9,238,904	\$9,132,813 €7,658,595

REDUCED LOSSES FROM BUSINESS INTERRUPTION

Evidence and data. All of the interviewed executives told Forrester that Everbridge helped them maintain business operations and revenue during critical events, as they could react to unpredictable events more quickly and confidently and put appropriate plans in place for events (such as storms) that were more predictable. Because Everbridge uses an organization's unique asset footprint to analyze news feeds, analysts do not waste time sorting through irrelevant alerts and can react more quickly to situations that pose a real threat to their assets.

One interviewee told Forrester: that his company could better foresee the delayed effects of a hurricane as its remains made their way north. The organization was able to alert sites that prepared better and stayed open or moved operations to a nearby facility, thus minimizing the lost revenue that would have resulted.

Modeling and assumptions. Before deploying the Everbridge CEM platform, the composite organization lost revenue from multiple unplanned downtime episodes each year. Forrester assumes:

- At least 24 hours of unplanned downtime each year across its manufacturing facilities.
- A conservative average downtime cost of \$250,000 (€209,675) per hour.
- A 20% reduction in downtime as a result of earlier alerts, faster response team communication, and better advance planning (in the case of predictable events).

“We did predictive modelling of wildfires in California this year, and proactively brought in generators to keep stores and production sites up and running.”

Head of enterprise response and resiliency, retailer

Risks. Multiple risk factors could impact the actual benefit organizations realize in the area of improved business continuity:

- Organizations may experience more or less frequent episodes of unplanned downtime.
- Their total hourly cost of downtime may vary.

- Organizations may experience a greater or lesser proportion of unpredictable events in their mix of unplanned downtime.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk-adjusted total PV (discounted by 10%) of \$2,685,800, or €2,252,581.

Reduced Losses From Business Interruption

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
A1	Average cost of unplanned manufacturing downtime per hour	From industry sources	\$250,000 €209,675	\$250,000 €209,675	\$250,000 €209,675
A2	Average annual hours unplanned downtime	From industry sources	24	24	24
A3	Annual cost of unplanned downtime	A1*A2	\$6,000,000 €5,032,200	\$6,000,000 €5,032,200	\$6,000,000 €5,032,200
A4	Reduction due to Everbridge		20%	20%	20%
At	Reduced losses from business interruption	A3*A4	\$1,200,000 €1,006,440	\$1,200,000 €1,006,440	\$1,200,000 €1,006,440
	Risk adjustment	↓10%			
Atr	Reduced losses from business interruption (risk-adjusted)		\$1,080,000 €905,796	\$1,080,000 €905,796	\$1,080,000 €905,796
Three-year total: \$3,240,000 (€2,502,687)			Three-year present value: \$2,685,800 (€2,252,581)		

REDUCED IT DOWNTIME

Evidence and data. Interruptions in IT service impact virtually all organizations today, and the cost of these outages rises every year. Data center and server outages can cause disruption in many ways, from disabling eCommerce transactions to leaving thousands of employees disconnected and idle at their desks. These disruptions may be the result of power outages, human error, or, increasingly, malware.

Many of the interviewed organizations use Everbridge to reduce IT downtime by speeding up both the identification of a problem and the teamwork required to resolve it. One executive in the pharmaceutical industry told Forrester: “Right now a lot of it is manual, but the CEM Platform allows us to

automate it. It sees the alert, creates an incident in the CEM platform, and quarantines the machine virtually instantaneously.” Another stated, “In the past, it’s taken us 30 minutes or more to assemble the response team for an IT outage, but with Everbridge, we’re all talking in about 5 minutes.”

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

- It experiences a mission-critical IT outage lasting 80 minutes approximately every other month.
- The cost of those outages is an industry average \$8,850 (€7,422) per minute, growing at a conservative 3% per year.

- It reduces initial response time from 30 minutes to 5 minutes by identifying the issue and assembling a response more quickly than before.

Risks. The savings from reduced IT downtime will vary based on these factors:

- The number and duration of critical outages in the organization.
- The costs to the organization of an IT outage, assuming some organizations will have costs

significantly higher or lower than the industry average.

- The relative improvement in speed of response when using Everbridge.

To account for these risks, Forrester adjusted this benefit downward by 25%, yielding a three-year risk-adjusted total PV of \$2,475,972 (€2,076,459).

Reduced IT Downtime					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
B1	Data center outage cost per minute	Ponemon	\$8,850 €7,422	\$8,850 €7,422	\$8,850 €7,422
B2	Average minutes per outage		80	80	80
B3	Average frequency of outages per year		6	6	6
B4	Cost of IT downtime	$B1 \times B2 \times B3$	\$4,248,000 €3,562,560	\$4,248,000 €3,562,560	\$4,248,000 €3,562,560
B5	Average minutes saved due to faster response with Everbridge		25	25	25
Bt	Reduced IT downtime	$B1 \times B3 \times B5$	\$1,327,500 €1,113,300	\$1,327,500 €1,113,300	\$1,327,500 €1,113,300
	Risk adjustment	↓25%			
Btr	Reduced IT downtime (risk-adjusted)		\$995,625 €834,975	\$995,625 €834,975	\$995,625 €834,975
Three-year total: \$2,986,875 (€2,768,612)			Three-year present value: \$2,475,972 (€2,076,459)		

AVOIDED PROPERTY AND INVENTORY DAMAGE

Evidence and data. The interviewed organizations experienced a reduction in property damage as a result of deploying the Everbridge CEM platform. These losses often extend beyond the physical damage to buildings in the case of a critical event. They may include damage to fleet and production equipment, as well as loss of inventory, either in storage or in transit.

Because Everbridge works with location and other data about all of an organization's valuable assets—from buildings to inventory to employees—it allows analysts to quickly identify threats to all kinds of physical assets and rapidly notify the appropriate teams to act. An interviewee in the retail business noted that the company could predict and track the progress of a tropical storm and its remnants for days as it made its way north through the US. This allowed the organization to provide advance notice to stores and distribution centers so they could properly protect buildings and the inventory inside against flooding, wind damage, and power outages. It also allowed the company to account for the costs of mitigation and damage as related to the same critical event.

Modelling and assumptions. Forrester assumes the composite organization:

- Experiences three major property loss events per year across its 100 facilities.
- Faces an average loss per event of \$1.5 million (€1.3 million).
- Avoids 20% of that property loss through advanced planning and rapid response, enabled by Everbridge.

Risks. The property loss benefits any particular organization will gain from adopting the Everbridge solution may vary based on:

- A greater or lesser risk of property loss-causing events than industry average.
- Higher or lower costs per event than average.

“If our supply chain routes are interrupted, product inventory in transit could be lost because it isn’t kept at a controlled temperature. A single dose of one of our medications costs around \$18,000.”

Global head of security and facilities operations, pharmaceutical industry

“During Tropical Storm Imelda, we were able to alert our people to a bridge out on I-10 before there was any media reporting at all. With Everbridge, we picked it up on social media and confirmed it with DOT cameras, allowing us to reroute the goods in transit.”

Chief security officer, chemical manufacturer

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk-adjusted total PV of \$2,014,350, or €1,689,435.

Avoided Property and Inventory Damage					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
C1	Average loss claim	Industry sources	\$1,500,000 €1,258,050	\$1,500,000 €1,258,050	\$1,500,000 €1,258,050
C2	Likelihood of claim per facility	Industry sources	3%	3%	3%
C3	Number of facilities		100	100	100
C4	Projected losses per year	C1*C2*C3	\$4,500,000 €3,774,150	\$4,500,000 €3,774,150	\$4,500,000 €3,774,150
C5	Percent avoidable with Everbridge	From interviews	20%	20%	20%
Ct	Avoided property and inventory damage	C4*C5	\$900,000 €754,830	\$900,000 €754,830	\$900,000 €754,830
	Risk adjustment	↓10%			
Ctr	Avoided property and inventory damage (risk-adjusted)		\$810,000 €679,347	\$810,000 €679,347	\$810,000 €679,347
Three-year total: \$2,430,000 (€1,877,150)			Three-year present value: \$2,014,350 (€1,689,435)		

AVOIDED COST OF LOST EMPLOYEE PRODUCTIVITY

Evidence and data. The Everbridge CEM platform helped organizations respond not only more quickly, but more accurately, to threats. Because it uses data from both external and internal feeds, including the location of employees and assets, Everbridge helped security teams better assess the likely impact from events. As a result, the interviewed organizations were better able to alert employees to react appropriate. Employees were also more likely to heed notifications, quickly learning that they were accurate.

Modeling and assumptions. Forrester has calculated lost employee productivity benefits for the composite organization assuming the following:

- On average, 6% of its workers cannot work due to weather conditions each year and miss 17 hours of work as a result.

- Each employee contributes \$481 (€403) in revenue per hour to the organization.
- Advance and reliable notification through Everbridge allows the organization to plan and save 50% of lost hours, either by enabling work at home or by providing alternative routes and transportation options.
- Eighty percent of those hours saved are recaptured in productive work time

Risks. Among the risks that can impact an organization's ability to fully capture this benefit are:

- The average productivity of the employee base.

- Work locations that are more or less subject to critical event closings.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of \$1,112,196, or €986,544.

Avoided Cost Of Lost Employee Productivity

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
D1	Revenue per hour per employee	\$30bn/30000/ 2,080	\$481 €403	\$481 €403	\$481 €403
D2	Average employees not working due to weather annually	From BLS	1,800	1,800	1,800
D3	Average hours missed	From BLS	17	17	17
D4	Revenue lost due to lost productivity	D1*D2*D3	\$14,718,600 €12,331,800	\$14,718,600 €12,331,800	\$14,718,600 €12,331,800
D5	Average industry margin		8%	8%	8%
D6	Profit impact of lost productivity	D4*D5	\$1,177,488 €986,544	\$1,177,488 €986,544	\$1,177,488 €986,544
D7	Portion regained with Everbridge		50%	50%	50%
D8	Percent recaptured		80%	80%	80%
Dt	Avoided cost of lost employee productivity	D6*D7*D8	\$470,995 €394,618	\$470,995 €394,618	\$470,995 €394,618
	Risk adjustment	↓5%			
Dtr	Avoided cost of lost employee productivity (risk-adjusted)		\$447,445 €374,877	\$447,445 €374,877	\$447,445 €374,877
Three-year total: \$1,342,336 (€981,357)			Three-year present value: \$1,112,730 (€932,289)		

INCREASED SECURITY TEAM PRODUCTIVITY

Evidence and data. Before investing in Everbridge's CEM platform, some interviewees told Forrester that they had individuals or small teams devoted to specific logistically complex tasks. One executive remarked: "We had two specialists solely focused on traveler security. If there was an incident in Brussels, they would download everyone in the travel system that was going to or through Brussels, contact all those people, and change their itineraries. The Everbridge system was able to do all that seamlessly, so we grew our team's capacity by redeploying those two analysts to work on other projects."

Three security analysts redeployed
500 hours saved at remote locations

For some interviewed organizations, the Everbridge platform allowed for expansion of capabilities without growing team size. A global director in the insurance business told Forrester: “As we continue to grow, we won’t need as many additional staff. Whether we have 300 locations or 600, the alerts are still coming into one place and clearing. It’s less back-end work, so we wouldn’t need to scale up our staffing.”

“It could be life and death, and people in remote offices are looking for their continuity plan, typing up notifications and sometimes having to get them translated.”

Global head of security and facilities operations, pharmaceutical industry

Finally, Everbridge freed up time at remote locations. Because Everbridge held up-to-date information on employees throughout the organization and had templated messaging for each type of event, employees at remote locations did not need to create and maintain emergency notification systems.

Modeling and assumptions. For the purposes of this study, Forrester assumes that the composite organization experiences two types of productivity improvement:

- Within the security team, this \$30 billion company frees up three analysts previously focused on tasks requiring complex coordination. The organization redeploys these analysts, providing the equivalent of their salaries in productivity savings.
- Administrators in remote locations (factories, distribution centers, etc.) each save 5 hours per year that they previously spent updating the emergency call binder.

Risks. The value of this productivity savings will vary depending on:

- The number and salary of analysts who work on complex tasks that can be offloaded to the Everbridge platform.
- The amount of time in remote locations devoted to developing and maintaining emergency protocols.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of \$843,961, or €707,831.

Increased Security Team Productivity					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
E1	Security analysts redeployed	From interviews	3	3	3
E2	Security analyst fully loaded annual salary		\$114,750 €96,241	\$114,750 €96,241	\$114,750 €96,241
E3	Analyst productivity savings	E1*E2	\$344,250 €288,723	\$344,250 €288,723	\$344,250 €288,723
E4	Annual HR specialist hours per location updating protocols	From interviews	5	5	5
E5	Number of locations		100	100	100
E6	Total hours updating protocols	E4*E5	500	500	500
E7	HR specialist fully loaded salary		\$54,000 €45,290	\$54,000 €45,290	\$54,000 €45,290
E8	Annual cost to update protocols	E6*E7/2,080	\$12,981 €10,887	\$12,981 €10,887	\$12,981 €10,887
Et	Increased security team productivity	E8+E3	\$357,231 €298,396	\$357,231 €298,396	\$357,231 €298,396
	Risk adjustment	↓5%			
Etr	Increased security team productivity (risk-adjusted)		\$339,369 €284,630	\$339,369 €284,630	\$339,369 €284,630
Three-year total: \$1,018,108 (€745,086)			Three-year present value: \$843,961 (€707,831)		

UNQUANTIFIED BENEFITS

Interviewed organizations experienced several benefits from the Everbridge platform that are difficult or impossible to quantify.

- **The platform enables organizations to fulfill their duty of care to employees.** For example, the composite organization has executives traveling around the world to locations that may be disrupted by weather, epidemics, or political unrest. It also has thousands of employees in its factories, warehouses, and offices. Similar kinds of critical events could put these employees' lives or health in danger while they are at work.

The CEM platform allows security analysts to quickly identify threats to employees and escalate them for appropriate action. An executive in the pharmaceutical industry recalled: "We had an employee who had left the office at

lunchtime as a bombing was occurring, and she was walking towards that area. We were able to instantly notify her so she didn't get caught in the mayhem."

- **It can function as an employee benefit.** One interviewee told Forrester that their organization uses Everbridge as a selling point for employees by offering to include employees' homes and family travel plans in the assets being monitored. As a result, employees and their families receive similar protections in the case of threats to their home or vacation travel.
- **Investors and regulators react positively to a more proactive risk posture.** Another valuable benefit for the interviewed executives was the impact on investors' and regulators' perception of their organizations. While all businesses face risks from unexpected events, an organization's

investment in Everbridge and the accompanying process reviews and improvements signal its proactive rather than reactive approach to those risks. Interviewees universally believe that this proactive stance to risk mitigation improves their firms' attractiveness to investors.

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 the Critical Event Management platform and later realize additional uses and business opportunities.

- More than one executive told Forrester they believe that the investment in Everbridge has put their organization in a position to do business in the future in geographic areas they would have considered too risky before deploying the platform.
- The data available through Everbridge, not only about the events but also about an organization's response to them, allows security teams to produce analytical products that enhance the organization's ability to predict, prepare for, and respond to future critical events.

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
Ftr	Subscription fees	\$210,000 €176,127	\$735,000 €616,445	\$735,000 €616,445	\$735,000 €616,445	\$2,415,000 €2,025,461	\$2,037,836 €1,709,133
Gtr	Cost of management oversight		\$59,772 €50,130	\$59,772 €50,130	\$59,772 €50,130	\$179,316 €150,391	\$148,644 €124,667
Htr	Internal training	\$14,025 €11,763		\$2,003 €1,680	\$2,003 €1,680	\$18,031 €15,122	\$17,185 €14,413
	Total costs (risk-adjusted)	\$224,025 €187,890	\$794,772 €666,575	\$796,775 €668,255	\$796,775 €668,255	\$2,612,347 €2,190,974	\$2,203,665 €1,848,213

SUBSCRIPTION FEES

Evidence and data. For all the interviewed organizations, the bulk of the overall cost of the Everbridge CEM platform is the subscription fee. This fee includes both an upfront onboarding cost and ongoing annual licensing fees.

Modeling and assumptions. The costs used in this part of the model are based on Everbridge pricing for a company the size and structure of the composite.

- The upfront fee includes the Everbridge team's work with users to load assets, create notification templates, and connect any proprietary data feeds the organization wants to include.

- The ongoing annual licensing fee is a packaged fee, based on the modules recommended for the number and type of assets the organization wishes to protect.

Risks. The primary implementation risks with Everbridge are:

- The possibility of a future price increase.
- An organization with an unusual structure, such that the ongoing fees would not be scalable based on revenue or number of assets.

To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year risk-adjusted total PV (discounted at 10%) of \$2,037,836 (€1,709,133).

Subscription Fees						
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
F1	Subscription fees		\$200,000 €167,740	\$700,000 €587,090	\$700,000 €587,090	\$700,000 €587,090
Ft	Subscription fees		\$200,000 €167,740	\$700,000 €587,090	\$700,000 €587,090	\$700,000 €587,090
	Risk adjustment	↑5%				
Ftr	Subscription fees (risk-adjusted)		\$210,000 €176,127	\$735,000 €616,445	\$735,000 €616,445	\$735,000 €616,445
Three-year total: \$2,415,000 (€2,025,461)			Three-year present value: \$2,037,836 (€1,709,133)			

COST OF MANAGEMENT OVERSIGHT

Evidence and data. The interviewees told Forrester that the Everbridge CEM platform requires some degree of oversight by a middle-to senior-level administrator. This person monitors the functionality of the system, sets up training for new users, ensures that communication templates are up to date, and performs other tasks to ensure that the quality of the data going into the system.

Modeling and assumptions. Forrester assumes, based on input from the interviewees, that this role could account for one-third of a manager or director's time.



One FTE, one-third of time each year

\$59,772 (€45,573)

Risks. The primary implementation risk with this cost is that the system requires more time to administer or the attention of a more highly paid executive.

To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year risk-adjusted total PV of \$148,644 (€124,667).

Cost Of Management Oversight

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
G1	Percent security management FTE for oversight/administration	From Interviews		35%	35%	35%
G2	Fully loaded security management salary	Industry sources		\$155,250 €130,208	\$155,250 €130,208	\$155,250 €130,208
Gt	Cost of management oversight	G1*G2		\$54,338 €45,573	\$54,338 €45,573	\$54,338 €45,573
	Risk adjustment	↑10%				
Gtr	Cost of management oversight (risk-adjusted)			\$59,772 €50,130	\$59,772 €50,130	\$59,772 €50,130
Three-year total: \$179,316 (€150,391)			Three-year present value: \$148,644 (€124,667)			

INTERNAL TRAINING

Evidence and data. Training costs for the Everbridge platform are not significant. Once established in the organization, the system itself is not difficult to use. In fact, a key purpose of the CEM platform is to take multiple types of complex data, then simplify and visualize them to allow security analysts to apply their skills to identifying issues and making recommendations to improve outcomes.

Modeling and assumptions. Forrester assumes that all users of the platform require 10 hours of dedicated training, followed by a three-to four-week period of on-the-job learning before they are fully productive in

making use of the platform. The model further assumes that a small number of analysts need to be trained in future years due to turnover.

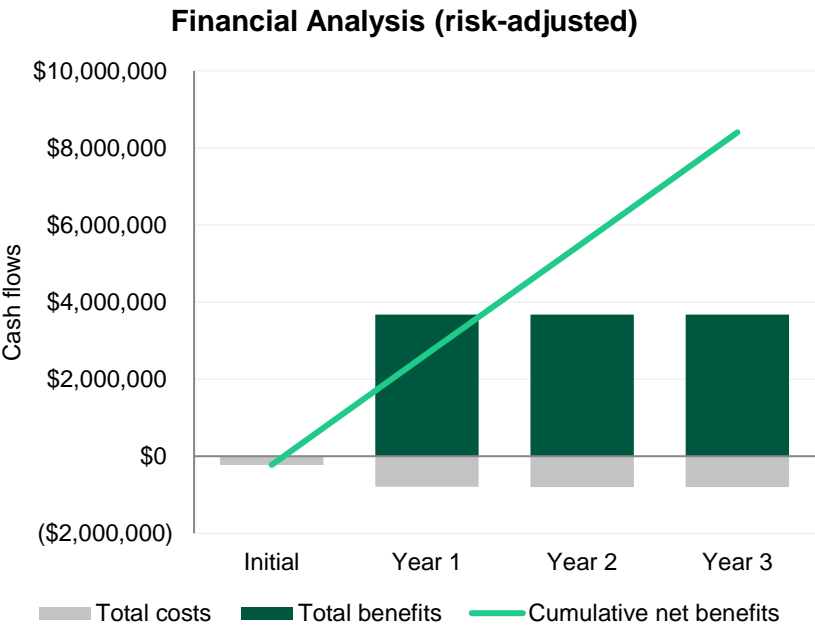
Risks. The key risk is that it will take substantially longer than expected to train the global security analyst team in the use of the software. To account for this risk, Forrester has adjusted these costs up by 5%, yielding a three-year risk-adjusted total PV of \$17,186, or €14,413.

While this cost is quite small relative to the total investment, it is included here in the interest of completeness.

Internal Training						
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
H1	Number of users	From interviews	7		1	1
H2	Dedicated training hours	From interviews	10		10	10
H3	On the job training hours	1 hr/day; 4 weeks	20		20	20
H4	Average fully loaded security analyst salary	Industry sources	\$132,300 €110,960		\$132,300 €110,960	\$132,300 €110,960
Ht	Internal training	$H1 \cdot (H2 + H3) \cdot H4 / 2,080$	\$13,357 €11,203	\$0	\$1,908 €1,600	\$1,908 €1,600
	Risk adjustment	↑5%				
Htr	Internal training (risk-adjusted)		\$14,025 €11,763	\$0	\$2,003 €1,680	\$2,003 €1,680
Three-year total: \$18,031 (€15,122)			Three-year present value: \$17,185 (€14,413)			

Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS



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	(\$224,025) (€187,890)	(\$794,772) (€666,575)	(\$796,775) (€668,255)	(\$796,775) (€668,255)	(\$2,612,347) (€2,190,974)	(\$2,203,665) (€1,848,213)
Total benefits		\$3,672,439 €3,079,635	\$3,672,439 €3,079,635	\$3,672,439 €3,079,635	\$11,017,319 €9,238,904	\$9,132,813 €7,658,595
Net benefits	(\$224,025) (€187,890)	\$2,877,667 €2,413,060	\$2,875,664 €2,411,380	\$2,875,664 €2,411,380	\$8,404,972 €7,047,930	\$6,929,148 €5,810,382
ROI						314%
Payback period (months)						<3 months

Appendix A: Total Economic Impact

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists 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.

Appendix B: Supplemental Material

Related Forrester Research

"The Forrester Tech Tide™: Digital Physical Security and Employee Safety, Q2 2020," Forrester Research, Inc., April 14, 2020

"Take A Unified Approach To Critical Event Management," a commissioned study conducted by Forrester Consulting on behalf of Everbridge, October 2018

Appendix C: Endnotes

¹ Source: "Work absences due to bad weather from 1994 to 2016," TED: The Economics Daily, U.S. Bureau of Labor Statistics, January 25, 2017 (<https://www.bls.gov/opub/ted/2017/work-absences-due-to-bad-weather-from-1994-to-2016.htm>).

² Source: "Cost of Data Center Outages," Ponemon Institute, January 2016 (https://www.vertiv.com/globalassets/documents/reports/2016-cost-of-data-center-outages-11-11_51190_1.pdf).

COVID-19 Addendum

Not long after the completion of the original Everbridge study, the world experienced the critical event of all critical events: the global COVID-19 pandemic. Everbridge asked Forrester to speak to decision-makers from organizations that used its critical event management (CEM) platform to manage operations during this unprecedented time, and to see what impact their investments had on their organizations' move to remote work and, in some cases, their eventual return to work.

To better understand the impact of the COVID-19 pandemic on the benefits, costs, and risks associated with this investment, Forrester interviewed seven additional decision-makers from organizations with experience using Everbridge products during the pandemic. Each of the organizations in this phase of the study were standing users of the Everbridge CEM Platform before the pandemic began. One of the organizations also purchased Everbridge's COVID-19 Shield product, designed specifically to help organizations manage the return to work after shutdowns in regions around the world. For the purposes of this study, Forrester aggregated the experiences of the interviewees' organizations and combined the results into the same [composite organization](#) used in the main study.

For the purposes of this appendix, Forrester assumes the composite organization is an apparel manufacturer; it is not an "essential goods" producer. The company invested in and deployed its CEM platform by the end of 2019, so Year 1 of the financial model is from January to December of 2020, Year 2 is 2021, and Year 3 is 2022.

Forrester also assumes the composite organization spent approximately nine months of 2020 (75%) in some state of interruption. This included two to four weeks of complete shutdown and a reduced level of operations during the rest of the year. Forrester projects the company will continue operating below capacity for the first six months of 2021, then decision-makers will manage a large-scale return-to-work initiative in the third quarter of 2021. This model

KEY STATISTICS



Return on investment (ROI)

354%



Net present value (NPV)

\$7.8M (€6.6M)

assumes that things will largely be back to normal in 2022, except that a significant portion of the eligible workforce (25% to 30%) will choose to continue to work from home.

KEY FINDINGS

This addendum focuses on the differences in the financial impact of the Everbridge CEM Platform in the COVID-19 scenario relative to the one examined in the main study. The addendum will cover those areas where there is a difference, but not those that are expected to substantially remain the same in both scenarios.

- **Recaptured profit from business reopening adds \$2 million (€1.7 million) to the composite organization's bottom line.** Using Everbridge to keep track of employee health status, shifting local regulations, and other aspects of restarting operations after lockdowns allows the composite organization to reopen earlier and more aggressively than competitors.

- **Lowered costs of business reopening adds more than \$671,000 (€562,000) to the composite organization's bottom line.** Keeping up with and following the regulations imposed by national, regional, and local governments could have tremendously added to the cost of returning employees to work where possible. Everbridge allows the composite organization to operate and maintain proof that it is operating in accordance with all regulations.
- **Avoided supply chain disruption saves the composite organization more than \$639,000 (€553,000) in wasted labor costs.** Because the composite organization is able to keep ahead of rapidly changing international shipping schedules and reach employees around the world quickly, decision-makers reschedule and redeploy workers where they are needed instead of paying them to sit at a factory or warehouse and wait for goods that never arrive.
- **Reduced losses from business interruption saves the composite organization a total of \$1.3 million (€1 million).** The composite organization continues to benefit from having the ability to respond more quickly to downtime events, although fewer are expected during the years affected by the pandemic.
- **Increased security team productivity lowers the composite organization's operating expenses by nearly \$621,000 (€521,000).** While Everbridge greatly improves the security team's ability to streamline workflows and do more with fewer resources, the exponential growth in security tasks associated with the pandemic means the company retains a significant portion of the resources that decision-makers would have redeployed.
- **Avoided cost of lost employee productivity returns more than \$336,000 (€281,000) to the composite organization.** While this benefit continues as modeled for Year 3 of the original analysis, the fact that the bulk of the workforce is already working from home or furloughed means there are no measurable savings in this area during Years 1 and 2.
- **Other benefits remain the same as in the original study.**

Unquantified benefits. Interviewees identified several benefits that were unprecedented before the pandemic and are difficult to quantify. These include:

“Everbridge lets us reach people on a device they want to be reached on with information they need in the moment.”

— Project manager, local government OEM

- **Redefined duty of care.** One thing came through loud and clear during each customer interview: Interviewees said their organization's definition of duty of care has greatly expanded. Everbridge let decision-makers frequently reach out to all employees as the situation changed to assess their personal situations and to provide assistance as needed.
- **Facilitated unprecedented communications increase.** The interviewees' organizations were able to increase messaging to accommodate the need to stay in frequent contact with remote employees and to keep them updated. Decision-makers also maintained contact with work sites, supply chains, and a virtual firehose of information about the virus during a year that also included extraordinary weather events, wildfires, and civil unrest.
- **Provided structure for confident management.** The Everbridge platform was critical in facilitating communication and coordination among remote management teams, and it allowed those who were new to crisis management to proceed with confidence.

Costs. Risk-adjusted PV costs are the same as those identified in the original study. While Everbridge has developed and marketed products specific to the COVID-19 pandemic, most of the interviewees' organizations in this appendix already had the Everbridge CEM Platform in place. In the case where one organization purchased an additional package, that company's total costs were on par with the cost of the full CEM platform.



Annual fees and administration

\$800K (€668K)

The customer interviews and financial analysis found that a composite organization experiences benefits of \$10 million (€8.4 million) over three years versus costs of \$2.2 million (€1.8 million), adding up to a net present value (NPV) of \$7.8 million (€6.6 million) and an ROI of 354%.

The Everbridge Customer Journey During The COVID-19 Pandemic

■ Factors leading to the use of the Everbridge CEM Platform during the pandemic

Interviewed Organizations			
Industry	Region	Interviewee	Number of contacts
Healthcare	United States	Head of business resilience	70,000
Retail	Global	Director of asset protection, emergency operations center	100,000
Retail	Global	Director of asset protection, health and safety and business continuity	13,000
Financial services	Global	Director of business resilience and recovery	12,000
Business services	Global	Resilience manager	66,000
Technology	Global	Senior security program specialist	3,000
Local government	United States	Project manager, office of emergency management	6,600,000

KEY CHALLENGES

Even without the COVID-19 pandemic, security teams for the interviewees' organizations would have been extremely busy in 2020. The year included massive wildfire outbreaks in Australia and the western part of the US along with a record hurricane season and violent civil unrest across the US.

As a result of the pandemic, interviewees' organizations struggled with new challenges:

- **A greatly increased need to communicate frequently with employees outside of the workplace.** Normally, in the event of a hurricane, wildfire, or protest, a team might send frequent messages to a limited number of employees for a few hours or days. But in the case of COVID-19, they needed to provide frequent updates to different populations all over the world for weeks on end. This was especially true between February and April 2020, but messaging continued at an elevated level all year.
- **Rapidly changing local conditions and regulations around the world.** The virus moved at its own pace, and different populations

responded in their own ways. As a result, executives found themselves trying to manage in constantly shifting environments.

- **A responsibility to monitor workplace compliance with local pandemic regulations.** Interviewees explained that their organizations' decision-makers needed and wanted to be directly in touch with their employees to make sure they were in good health throughout the pandemic. Local, state, and national governments also required them to closely monitor the health of any individual working at a company site.

OVERALL RESULTS

With the Everbridge CEM Platform already deployed, the interviewees' organizations found new and creative ways (along with tried-and-true ways) to use it. Interviewees credit Everbridge with playing a critical role in their management teams' abilities to help their companies and employees through the pandemic so far. They also expect to rely on the platform at least as heavily during the coming months as operations begin to work the way they did before the pandemic (referred to hereafter as "pre-COVID").

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 revenue from return to work	\$692,308 €580,638	\$1,661,538 €1,393,532		\$2,353,846 €1,974,171	\$2,002,543 €1,679,533
Btr	Minimized costs of business reopening	\$347,288 €291,269	\$429,975 €360,620		\$777,263 €651,889	\$671,067 €562,823
Ctr	Averted pandemic-related supply chain disruption	\$703,125 €609,375			\$703,125 €609,375	\$639,204 €553,977
Dtr	Reduced losses from business interruption	\$225,000 €188,708	\$450,000 €377,415	\$900,000 €754,830	\$1,575,000 €1,320,953	\$1,252,630 €1,050,580
Etr	Increased security team productivity	\$170,671 €143,142	\$255,020 €213,886	\$339,369 €284,630	\$765,061 €641,658	\$620,889 €520,741
Ftr	Avoided cost of lost employee productivity			\$447,445 374,887	\$447,445 374,887	\$336,172 281,658
Gtr	Reduced IT downtime	\$995,625 834,975	\$995,625 834,975	\$995,625 834,975	\$2,986,875 2,504,925	\$2,475,972 2,076,459
Htr	Avoided property damage costs	\$810,000 €679,347	\$810,000 €679,347	\$810,000 €679,347	\$2,430,000 €2,038,041	\$2,014,350 €1,689,435
	Total benefits (risk-adjusted)	\$3,944,016 €3,327,454	\$4,602,158 €3,859,775	\$3,492,439 €2,928,669	\$12,038,614 €10,115,898	\$10,012,827 €8,415,206

IMPROVED REVENUE FROM RETURN TO WORK

Evidence and data. When the virus began to spread rapidly, many localities issued some form of stay-at-home order, effectively shutting down most businesses for at least a short period of time. As a manufacturer of nonessential goods, the composite organization experienced shutdowns lasting from a week or two to more than a month in some locations.

However, interviewees told Forrester that even after restrictions were eased or lifted, there were daunting challenges to bringing employees back to work. Regulations varied from country to country, state to state, and even city to city, and all of these regulations changed abruptly as warranted by conditions. The situation required constant monitoring and adjustment to ensure operations met local protocols.

Interviewees also said many employees were justifiably afraid to enter their workplaces and to work closely with people who might be infected. The interviewees said it was important not only to follow

the rules, but also to be seen following the rules, and to even go beyond the rules to help employees feel secure. Also, several interviewees said they felt the need to document all this protective activity in case of future lawsuits.

The volume and complexity of work involved in bringing employees back to work, even at a low capacity, requires a great deal of additional manpower — not to mention risk. Interviewees said they were not confident their companies would have been able to take it on to the same degree without the Everbridge CEM Platform.

Modeling and assumptions. To model the value of this benefit to the composite organization, Forrester assumes:

- In the final nine months of 2020, the composite organization's potential revenue is dampened to 50% of its pre-COVID sales level.

- Using Everbridge, the organization gets its employees back to work two weeks earlier than it would have otherwise.
- While critical to enabling the organization's early return to productivity, Everbridge accounts for approximately 25% of the factors supporting the return-to-work initiative.
- Regulations and prudence cause the organization's decision-makers to hold each of its locations to 25% capacity during the nine-month period.
- Industry average net margins (usually around 5%) suffer during the pandemic due to increased expenses and promotional activity. During the period in question, the margins are closer to 4%.

Risks. Given the unpredictable nature of the pandemic and its impact on any given industry or

locality, organizations may experience a different magnitude of value from this benefit. This value may vary based on:

- The degree to which the organization's revenue is impacted by the recessionary effects of the pandemic (e.g., unemployment, quarantine).
- The organization's aggressiveness in implementing a return to work, both in terms of timing and capacity.
- The ability and willingness of the organization's workforce to return to job sites.

To account for these risks, Forrester adjusted this benefit downward by 40%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$2,002,543, or €1,679,533.

Improved Revenue From Return To Work

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
A1	Revenue on goods produced per day pre-COVID (rounded)	\$30 billion/ 260 days	\$115,384,615 €96,773,077	\$115,384,615 €96,773,077	\$115,384,615 €96,773,77
A2	Annual growth versus pre-COVID revenue	Industry sources	-50%	-40%	-5%
A3	Potential revenue on goods produced per day (rounded)	A1*A2	\$57,692,308 €48,386,538	\$69,230,769 €58,063,846	\$109,615,384 €91,934,423
A4	Productive days added during COVID	Interviews	10	10	0
A5	Protocol capacity during COVID	Local regulations	25%	50%	
A6	Revenue recaptured	A3*A4*A5	\$144,230,770 €120,966,345	\$346,153,845 €290,319,230	
A7	Industry margin	Industry sources	4%	4%	
A8	Profit recaptured (rounded)	A6*A7	\$5,769,231 €4,838,654	\$13,846,154 €11,612,769	
A9	Portion attributable to Everbridge	Interviews	20%	20%	
At	Improved revenue from return to work (rounded)	A8*A9	\$1,153,846 €967,731	\$2,769,231 €2,322,554	
	Risk adjustment	↓40%			
Atr	Improved revenue from return to work (risk-adjusted)		\$692,308 €580,638	\$1,661,538 €1,393,532	

Three-year total: \$2,353,846 (€1,974,171)

Three-year present value: \$2,002,543 (€1,679,533)

MINIMIZED COSTS OF BUSINESS REOPENING

Evidence and data. While there are revenue benefits to restarting operations as soon as possible, there are also heavy incremental costs. Managing even the simplest business during a global pandemic requires establishing and maintaining a new set of policies to protect employees and the company. It also means a great deal of additional monitoring, recording, advising, and regulating of employee health and behaviors.

“We have two health professionals on staff in HR, and when someone wanted to come to the worksite, [HR] had to review the health check questions and approve or disapprove. They were managing it with email and, even with only 3% of the workforce coming in, it was more than a two-person job.”

Director, business resilience and recovery, financial services

Interviewees described the protocols to facilitate even a partial return to work, and they include administering daily health checks, setting limits on building and room capacities, scheduling frequent disinfections, and taking unusual safety measures to protect small, disconnected workforces from everyday risks like fires and accidents.

Everbridge automates these essential tasks. It provides notification templates in multiple languages. It accomplishes daily health checks in a privacy-compliant manner, and it denies access to individuals who may be infected. It works with badging systems to track capacity and employee locations to facilitate emergency procedures. Interviewees said these and other features saved decision-makers from hiring additional resources to operate safely and prudently.

Modeling and assumptions. The model for this benefit is focused on the reduced need for trained health professionals to monitor the health of

employees going to company work sites. This is just one of the ways Everbridge can help manage incremental costs involved in operating a business during the pandemic, but it is the one for which interviewees provided the most reliable data. The model assumes that the composite organization:

- Brings back 7,500 of its 30,000 employees on at least a part-time basis during the final nine months of Year 1 (2020) and 15,000 more by the middle of Year 2 (2021).
- Without Everbridge, the organization would require one full-time HR representative/health professional for every 700 employees to monitor and evaluate the situation, conduct daily health checks, and make relevant decisions.
- With Everbridge, the organization needs only one FTE for every 2,000 employees.
- Avoids hiring incremental FTEs at an annual fully burdened salary of \$94,500 (€79,257) each.

“Our headquarters has 2,000 desks and about 13 people there now. There’s no fire warden who could run around fast enough to reach everyone in an emergency. We use Everbridge to notify employees and require them to check in that they are out and safe.”

Resilience manager, business services

Risks. Other organizations may not realize the same value for this benefit due to:

- The knowledge base and salary required in making health-related decisions about employees.
- The number and dispersal of employees being checked.
- The availability and efficiency of health monitoring personnel.

To account for these risks, Forrester adjusted this benefit downward by 30%, yielding a three-year, risk-adjusted total PV of \$671,067 (or €562,823).

Minimized Costs Of Business Reopening					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
B1	Employees requiring monitoring	30,000 employees*A5	7,500	15,000	
B2	Health check monitors before using Everbridge (rounded)	B1/700 employees	11	21	
B3	Health check monitors after using Everbridge (rounded)	B1/2,000 employees	4	8	
B4	Health check monitors avoided	B2-B3	7	13	
B5	Expected monitoring period per year	Percent of year with COVID-19 restrictions	75%	50%	
B6	Health check monitor fully burdened salary (rounded)	\$70,000+35% €58,709+35%	\$94,500 €79,257	\$94,500 €79,257	
Bt	Minimized costs of business reopening	B4*B5*B6	\$496,125 €416,099	\$614,250 €515,171	
	Risk adjustment	↓30%			
Btr	Minimized costs of business reopening (risk-adjusted)		\$347,288 €291,269	\$429,975 €360,620	
Three-year total: \$777,263 (€651,889)			Three-year present value: \$671,067 (€562,823)		

AVERTED PANDEMIC-RELATED SUPPLY CHAIN DISRUPTION

Evidence and data. The uncertainty associated with the virus and its spread led to sporadic shipping and receiving problems around the world. According to the interviewed executives, this was especially true during the early months of the pandemic when, for example, suppliers were unable to meet their own production schedules and shipping vehicles were grounded or commandeered to deliver essential medical supplies. This left receiving facility employees with no warnings, no deliveries, and no idea when to expect delayed shipments.

One executive said that during the first several months of the pandemic, his organization's factories and distribution centers would have a shift of employees show up for work, and there would be nothing for them to do. Everbridge allowed the team to see where the virus was spiking along its supply

chain, see where flights were being grounded or rerouted, determine which facilities would be affected, and notify those employees that there would be no need to come in for work that day.

With Everbridge, this could all be accomplished in a matter of minutes. Everbridge searched only for news and information related to the areas where the company's assets were located. Upon a security analyst's review, the system then automatically sent templated notifications to the appropriate worksites, management teams, and employees.

Modeling and assumptions. Forrester assumes the following is true for the composite organization:

- It employs 12,500 non-administrative employees working in manufacturing or distribution facilities around the world.
- Each of these employees are paid an average fully burdened wage of \$15 (€13) per hour.

- During the first two months of the pandemic, 15% of the composite organization's incoming shipments are disrupted with no warning or ability to plan.

“We had problems with freight to and from China. Lots of shipping changes, flights being cancelled. If materials didn't come in, we didn't need receiving teams or workers, so we sent messages every day saying, ‘Come to work,’ or ‘Don't come to work.’”

Director, asset protection/EOC, retail

- After two months, the supply chain begins to accommodate and regulate itself to the increase in uncertainty around shipping.
- Twenty-five percent of those disrupted shipments are actionable with Everbridge. As a result,

decision-makers are able to reroute them, or they are at least able to alert receiving facilities and employees not to come to work. This helps the organization avoid paying for nonproductive workers.

Risks. An organization's results may vary based on:

- The value and frequency of disrupted shipments due to the pandemic.
- The length of time before the supply chain begins to respond to and incorporate the likelihood of disruptions.
- The number and pay rate of employees affected by disrupted shipments.

To account for these risks, Forrester adjusted this benefit downward by 40%, yielding a three-year, risk-adjusted total PV of \$639,204 (€553,977)..

Averted Pandemic-Related Supply Chain Disruption

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
C1	Number of factory/distribution FTEs	Composite organization	12,500	12,500	12,500
C2	Monthly factory/distribution hours (rounded)	$C1 \times 2,000 / 12$	2,083,333	2,083,333	2,083,333
C3	Months with unanticipated COVID-19 supply disruptions	Interviews	2	0	0
C4	Percent of shipments disrupted	Interviews	15%	0%	0%
C5	Disrupted shipments rerouted/saved by Everbridge	Interviews	25%	0%	0%
C6	Factory/distribution worker average fully burdened hourly wage	payscale.com	\$15 €13	\$15 €13	\$15 €13
C7	Unproductive wages saved by Everbridge (rounded)	$C2 \times C3 \times C4 \times C5 \times C6$	\$2,343,750 €2,031,250		
C8	Percent recaptured		50%		
Ct	Averted pandemic-related supply chain disruption	$C7 \times C8$	\$1,171,875 €1,015,625		
	Risk adjustment	↓40%			
Ctr	Averted pandemic-related supply chain disruption (risk-adjusted)		\$703,125 €609,375		
Three-year total: \$703,125 (€609,375)			Three-year present value: \$639,204 (€553,977)		

REDUCED LOSSES FROM BUSINESS INTERRUPTION

Evidence and data. This dynamic is discussed in the original study, and most of the same evidence and logic applies, except for one additional assumption.

Modeling and assumptions. Due to reduced production levels during the pandemic period, the

organization experiences fewer incidents of downtime during Years 1 and 2, in keeping with pandemic capacity constraints.

Risks. Using the same risk assessment as the original model, Forrester adjusted the total benefit downward by 25% yielding a three-year, risk-adjusted total PV of \$1,252,630, or €1,050,580.

Reduced Losses From Business Interruption

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
D1	Average cost of unplanned manufacturing downtime per hour	Industry sources	\$250,000 €209,675	\$250,000 €209,675	\$250,000 €209,675
D2	Average hours downtime per year (rounded)	Interviews	6	12	24
D3	Cost of downtime per year	D1*D2	\$1,500,000 €1,258,050	\$3,000,000 €2,516,100	\$6,000,000 €5,032,200
D4	Reduction due to Everbridge	Interviews	20%	20%	20%
Dt	Reduced losses from business interruption	D3*D4	\$300,000 €251,610	\$600,000 €503,220	\$1,200,000 €1,006,440
	Risk adjustment	↓25%			
Dtr	Reduced losses from business interruption (risk-adjusted)		\$225,000 €188,708	\$450,000 €377,415	\$900,000 €754,830
Three-year total: \$1,575,000 (€1,320,953)			Three-year present value: \$1,252,630 (€1,050,580)		

INCREASED SECURITY TEAM PRODUCTIVITY

Evidence and data. Forrester modeled this benefit in the main study, and the same evidence and data apply.

Modeling and assumptions. The model for the COVID-19 scenario assumes that:

- The pandemic creates more work for the composite organization's security team, which

must continue to respond to events like fires, storms, and civil unrest.

As a result, the composite organization is only able to redeploy one FTE in Year 1 (instead of three), and two FTEs in Year 2 (instead of three).

Risks. Forrester adjusted this benefit downward by 5%, using the same risk assessment as in the main study, yielding a three-year, risk-adjusted total PV of \$620,889, or €520,741.

Increased Security Team Productivity

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
E1	Security analysts redeployed	Interviews	1	2	3
E2	Security analyst fully loaded annual salary	payscale.com	\$114,750 €96,241	\$114,750 €96,241	\$114,750 €96,241
E3	Analyst productivity savings	E1*E2	\$114,750 €96,241	\$229,500 €192,482	\$344,250 €288,723
E4	Annual HR specialist hours per location updating protocols	Interviews	25	15	5
E5	Number of locations	Composite organization	100	100	100
E6	Total hours updating protocols	E4*E5	2,500	1,500	500
E7	HR specialist fully loaded salary	\$40,000+35% €33,548+35%	\$54,000 €45,290	\$54,000 €45,290	\$54,000 €45,290
E8	Annual cost to update protocols (rounded)	E6*E7/2,080	\$64,904 €54,435	\$38,942 €32,661	\$12,981 €10,887
Et	Increased security team productivity	E8+E3	\$179,654 €150,676	\$268,442 €225,143	\$357,231 €299,610
	Risk adjustment	↓5%			
Etr	Increased security team productivity (risk-adjusted)		\$170,671 €143,142	\$255,020 €213,886	\$339,369 €284,630
Three-year total: \$765,061 (€641,658)			Three-year present value: \$620,889 (€520,741)		

AVOIDED COST OF LOST EMPLOYEE PRODUCTIVITY

Evidence and data. Forrester modeled this benefit in the main study, and the same evidence and data apply.

Modeling and assumptions. In addition to the assumptions presented in the main study, this calculation assumes:

- As a result of the reduced onsite workforce during the pandemic years, the composite organization experiences no benefit from employees being able to plan for bad weather.

Risks. Using the same risk assessment as in the main study, Forrester adjusted this benefit downward by 5%, yielding a three-year, risk-adjusted total PV of \$336,172, or €281,658.

Avoided Cost Of Lost Employee Productivity

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
F1	Revenue per hour per employee (rounded)	\$30 billion (€25 billion)/30,000/ 2,080			\$481 €403
F2	Average employees not working due to weather annually	Bureau of Labor Statistics	0	0	1,800
F3	Average hours missed	Bureau of Labor Statistics			17
F4	Revenue lost due to lost productivity	F1*F2*F3			\$14,718,600 €12,331,800
F5	Average industry margin	Industry sources			8%
F6	Profit impact of lost productivity	F4*F5			\$1,177,488 €986,544
F7	Portion regained with Everbridge	Interviews			50%
F8	Percent recaptured				80%
Ft	Avoided cost of lost employee productivity (rounded)	F6*F7*F8			\$470,995 €394,618
	Risk adjustment	↓5%			
Ftr	Avoided cost of lost employee productivity (risk-adjusted)				\$447,445 €374,887
Three-year total: \$447,445 (€374,887)		Three-year present value: \$336,172 (€281,658)			

REDUCED IT DOWNTIME

Forrester modeled this benefit in the original study and assumes it does not change in the COVID-19 scenario. The discussion is not included here, but it can be referenced in the Analysis Of Benefits section of the original study.

AVOIDED PROPERTY DAMAGE COSTS

Forrester modeled this benefit in the original study and assumes it does not change in the COVID-19 scenario. The discussion is not included here, but it can be referenced in the Analysis Of Benefits section of the original study.

UNQUANTIFIED BENEFITS

Interviewees identified several benefits that were unprecedented before the pandemic and are difficult to quantify. These benefits include:

- **Redefined duty of care.** One thing came through loud and clear during each customer interview: Interviewees said their organization's definition of duty of care has greatly expanded. During the pandemic, that duty has gone well beyond the usual rerouting of travelers heading

toward terrorist incidents or verifying evacuations ahead of storms. Each of the interviewees' organizations used Everbridge extensively to frequently stay in touch with employees around the world, provide up-to-date information about the situation in their area, and reach out to make sure they are well and do not need special assistance.

Interviewees also spoke about finding new ways to use the Everbridge CEM Platform's capabilities

for this purpose. A resilience manager at a business services company said their company used Everbridge to stay in touch with employees in China around the time of the Chinese New Year. They said: “It was very difficult to get ahold of everyone because it’s the one time of year when everyone takes time off, and it is expected that [nobody is] going to answer work emails. We used Everbridge because we could set it up to resend the notice to anyone who hadn’t responded until they did.”

- **Facilitated unprecedented communications increase.** The interviewees’ organizations were able to increase messaging to accommodate the need to stay in frequent contact with remote employees and to keep them updated. Decision-makers also maintained contact with work sites, supply chains, and a virtual firehose of information about the virus during a year that also included extraordinary weather events, wildfires, and civil unrest.

A director of asset protection for an emergency operations center said: “We sent out tens of thousands of messages in the first few months [of the pandemic]. That’s unheard of, and I was very happy that Everbridge allowed us to use the tool in as many ways as we needed to get through the initial part of the pandemic.”

- **Provided structure for confident management.** Managing an organization through a crisis such as the COVID-19 pandemic requires an unprecedented level of coordination and communication between members of the management team. For many of those managers, the pandemic is also the first time they’ve been so deeply involved in managing through a crisis.

Everbridge not only provided the infrastructure to keep executives who were working remotely around the world in constant communication, it also provided a structure and a set of tools that made users more confident they could handle the situation in which they found themselves.

“Everbridge is a key part of a crisis management program that makes this like any other crisis. It’s scary, but we know we have a proven process to follow.”

— Head of business resilience, healthcare

Analysis Of Costs

■ Quantified cost data as applied to the composite

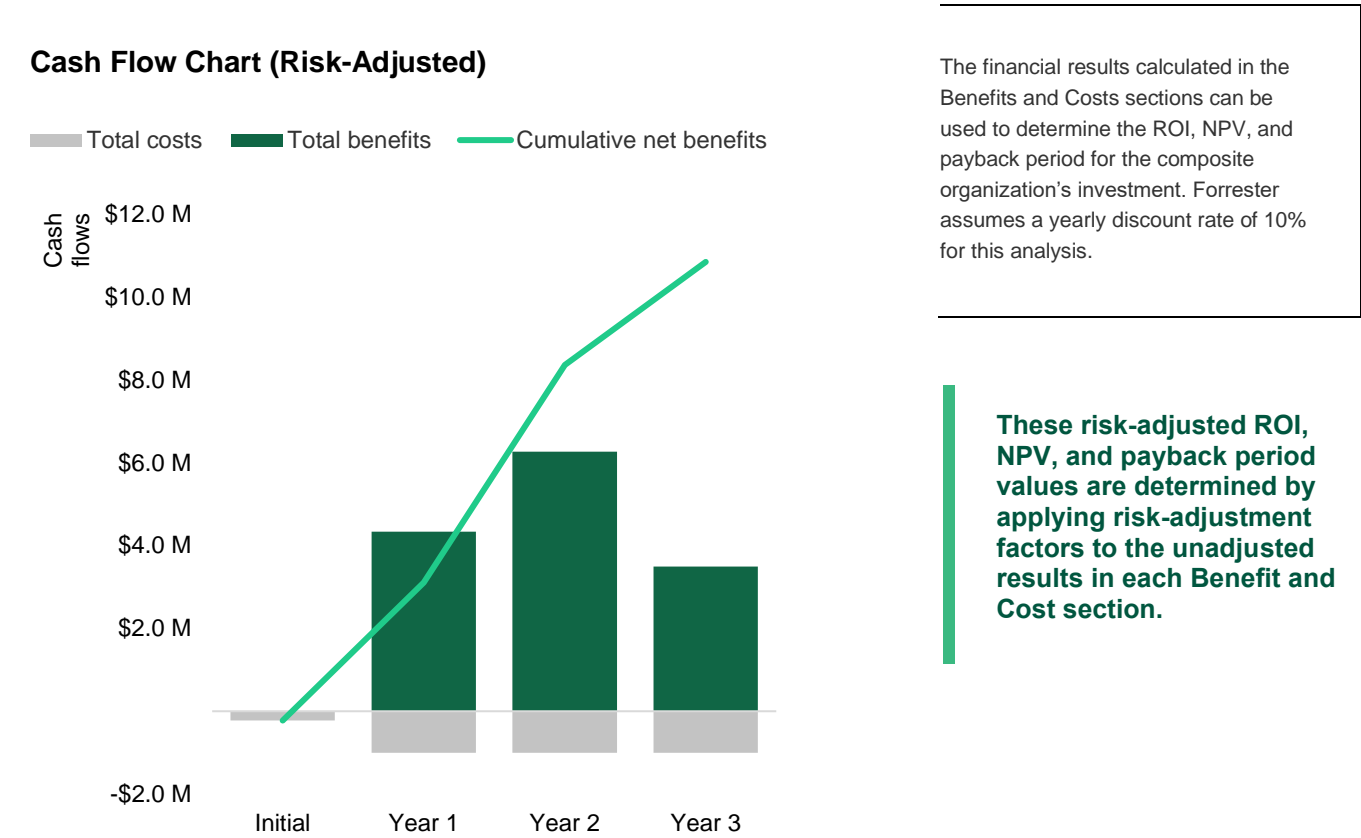
Total Costs							
Ref.	Cost	Initial	Year 1	Year 2	Year 3	Total	Present Value
Itr	Subscription fees	\$210,000 €176,127	\$735,000 €616,445	\$735,000 €616,445	\$735,000 €616,445	\$2,415,000 €2,190,974	\$2,037,836
Jtr	Cost of management oversight		\$59,772 €50,130	\$59,772 €50,130	\$59,772 €50,130	\$179,315 €150,391	\$148,644 €124,667
Ktr	Internal training	\$14,025 €11,763		\$2,003 €1,680	\$2,003 €1,680	\$18,031 €15,122	\$17,186 €14,413
	Total costs (risk-adjusted)	\$224,025 €187,890	\$794,772 €666,575	\$796,775 €668,255	\$796,775 €668,255	\$2,612,346 €2,190,974	\$2,203,666 €1,848,213

Risk-adjusted PV costs are the same as those identified in the original study. While Everbridge has developed and marketed products specific to the COVID-19 pandemic, most of the interviewees' organizations in this appendix already had the Everbridge CEM platform in place. In the case where

organization purchased an additional package, that company's total costs were on par with the cost of the full CEM platform.

Financial Summary

Consolidated Three-Year Risk-Adjusted Metrics



Cash Flow Analysis (Risk-Adjusted Estimates)						
	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	(\$224,025) (€187,890)	(\$794,772) (€666,575)	(\$796,775) (€668,255)	(\$796,775) (€668,255)	(\$2,612,346) (€2,190,974)	(\$2,203,666) (€1,848,213)
Total benefits		\$3,944,016 €3,327,454	\$4,602,158 €3,859,775	\$3,492,439 €2,928,669	\$12,038,614 €10,115,898	\$10,012,827 €8,415,206
Net benefits	(\$224,025) (€187,890)	\$3,149,244 €2,660,880	\$3,805,383 €3,191,520	\$2,695,664 €2,260,414	\$9,426,268 €7,924,924	\$7,809,151 €6,566,993
ROI						354%
Payback period (months)						<3 months



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