



How increasing climate resilience will reduce your financial vulnerabilities



Introduction

Climate change is a major threat to organizations. Its impact is not limited to environmental damage and human suffering. It is also a catalyst for financial vulnerabilities for businesses across the globe. The failure of organizations to prepare for climate-related events is compounded by expanding regulations on Environmental, Social, and Governance (ESG), resulting in a weaker financial system. The financial impact of climate-related events on businesses is significant, and if not proactively addressed could lead to significant financial losses.





Financial vulnerabilities are a pressing concern for organizations in today's world. While many businesses take measures to mitigate risks and plan for the future, the increasing frequency and severity of climate change-related events are putting many at risk. Events, such as hurricanes, floods, droughts, and extreme temperatures, have the potential to wreak havoc on organizations, from damaging physical assets to disrupting supply chains and impacting human lives.

This white paper discusses the financial vulnerabilities that arise from climate change-related events, specific scenarios in which organizations may be at risk, and the impact of climate change on various aspects of organizations, including their people, assets, supply chains, and real estate.

Our goal is to provide organizations with a comprehensive understanding of the financial risks they face due to climate change, and to offer actionable insights and strategies to mitigate those risks. By focusing on specific climate change events and their financial impacts, we hope to equip organizations with the knowledge they need to prepare for the future and protect themselves from the potentially devastating effects of climate change.

The cost of climate change

The financial impact of climate change is expected to become more extreme with time. Without proactive measures in place to protect organizations, the costs alone could flatten businesses. The costs come from protecting people, products, supply chains, real estate, warehouses, and other areas.

According to the 2022 [Navigating Climate Threats and Proactive Mechanisms to Achieve Business Climate Resilience](#) report commissioned by Everbridge, “record numbers of severe weather events attributed to climate change—such as hurricanes, droughts, extreme temperatures, and flooding—have resulted in more than \$2.2 billion in damage to physical assets in the US alone.” Climate-related disasters are only increasing, which is in turn increasing the costs associated without proper mitigation steps.

In addition, “according to the US National Oceanic and Atmospheric Administration (NOAA) and National for Environmental Information (NCEI), there were \$71 billion dollar weather and climate events in the US between 2018 and 2021 cost a total of \$71 billion dollars, up from \$46 billion dollars between 2008 and 2011” ([Navigating Climate Threats and Proactive Mechanisms to Achieve Business Climate Resilience](#), 2022).

\$2.2B

in damage to physical assets in the US alone due to record numbers of severe weather events attributed to climate change—such as hurricanes, droughts, extreme temperatures, and flooding



When we look at the financial impacts worldwide, the numbers are even more staggering: “An analysis by AON shows that global economic losses resulting from extreme weather events were at least \$200 billion per year from 2012-2022, with global economic losses reaching over \$550 million in 2017” ([Navigating Climate Threats and Proactive Mechanisms to Achieve Business Climate Resilience, 2022](#)).

Climate disasters and their associated costs are only expected to increase:

- [For example](#), “if temperatures rise 4.5°C by 2090, 9,300 more people will die in American cities due to the rising heat. The annual losses associated with extreme temperature-related deaths alone are projected to be \$140 billion.” This projection underscores the urgency of taking action to address climate change.
- According to a [report by Columbia University](#), “Temperature extremes are also projected to cause the loss of two billion labor hours each year by 2090, resulting in \$160 billion of lost wages.” This loss will not just affect individuals but also the wider economy, and the financial impact of climate change on the economy will only continue to grow as temperatures continue to rise.
- A [report by the International Monetary Fund \(IMF\)](#) highlights the scale of the economic damage caused by climate-related disasters, estimating that “over the past decade, direct damages of such disasters are estimated to add up to around US \$1.3 trillion (or around 0.2% of world GDP on average, per year).” These losses are not just limited to individual businesses or countries, but have a global impact.

The financial impact of climate change is going to become more extreme with time, and without proactive measures in place to protect organizations, the costs could cripple organizations. The costs come from everywhere: protecting their people, their products, their supply chains, their real estate, their warehouses, etc. The consequences of climate change are not just environmental, but also economic and social, with far-reaching effects that are being felt by individuals, businesses, and governments alike. Overall, the evidence is clear that the cost of climate change is significant and growing, and urgent action is needed to mitigate its effects.



These losses are not just limited to individual businesses or countries, but have a global impact.

Recent events from around the globe and their costs

Recent climate-related events are happening at an alarming rate, and their impact is enormous. This section focuses on specific climate-related events from around the globe and their financial impact on businesses across the world, highlighting the vulnerability of businesses and the need for proactive measures.

North America

The increasing frequency and intensity of forest fires in North America have significant financial impacts on the economy and businesses in the affected regions. According to the IMF, “by some estimates, the total costs of the 2018 wildfires in California were up to \$350 billion, or 1.7 percent of U.S. GDP.” This event directly impacted businesses in the region, including those in the tourism and hospitality industry, as well as the agricultural sector, where crops were destroyed and livestock were lost.

Similarly, in 2021, British Columbia spent over half a billion dollars fighting forest fires, leading to major disruptions in the forestry and natural resource industries, which are key contributors to the region's economy. In addition, air quality issues resulting from the smoke caused by these fires can lead to health problems and disrupt travel and transportation, further impacting a wide range of businesses.



Latin America

In Latin America, heat waves fueled by climate change are causing significant damage to the region. For instance, Argentina is forecasted to experience some of the hottest temperatures in the world in 2023, “exacerbating a drought that an agricultural research group estimates will cause up to \$15 billion in lost export earnings this year.”

Agricultural businesses rely heavily on water availability and suitable temperatures for crop growth, so are particularly vulnerable to the impacts of climate change-induced heat waves and droughts. Additionally, other industries such as tourism, energy, and transportation also experience disruptions due to these extreme weather events. Additionally, infrastructure such as power grids and transportation systems may be impacted, leading to disruptions and reduced productivity for businesses in all sectors.



Europe

Climate change is causing Europe to experience warming at a faster rate than any other region. In fact, “temperatures in Europe have increased at more than twice the global average over the past 30 years—the highest of any continent in the world.” In addition to the rising temperatures, 84% of climate disasters in the region were floods or storms. These climate impacts are leading to a range of impacts that are affecting businesses across the continent.

The increased frequency and intensity of heatwaves are causing disruptions to agriculture, leading to decreased crop yields and increased food prices. This has a ripple effect across the supply chain, impacting food manufacturers and retailers. Additionally, extreme weather events such as flooding and storms are causing damage to infrastructure and disrupting transportation networks, leading to lost productivity and increased costs for businesses; in 2021, these costs exceeded US \$50 billion.



Africa

Africa is no stranger to droughts, but the frequency and severity of these events have been exacerbated by climate change. The Horn of Africa is currently facing one of the worst droughts on record, with failed rainy seasons for six consecutive years. This has resulted in crop failures, food shortages, and loss of livestock, impacting both agricultural and pastoral businesses.

In addition, the drought has led to the displacement of millions of people, putting a strain on local economies and disrupting supply chains. With the increased frequency and intensity of droughts, businesses in Africa are facing higher costs of production and reduced yields, which ultimately affect their bottom line.



Asia

Southeast Asia, specifically the Philippines and Indonesia, is one of the most vulnerable regions to the impacts of climate change. The rising sea levels, flooding, and extreme weather events such as typhoons and hurricanes are expected to cause significant damage to businesses in the region. The agriculture and fishing industries are likely to be hit the hardest as the changing climate affects the region's natural resources.

In the Philippines, for example, typhoons have caused widespread damage to the country's agriculture industry, which accounts for a significant portion of the country's GDP. Furthermore, the increase in the frequency and intensity of natural disasters will put a strain on the infrastructure, such as transportation and telecommunications, that businesses rely on to function.



Oceania

The devastating impact of climate change on Oceania cannot be ignored, as bush fires continue to pose a significant threat to human life, property, and businesses. For instance, in Australia, the 2020 bush fires resulted in the loss of more than 3,500 homes and caused an estimated economic impact of AUD 100 billion. In addition, recent studies have shown that the smoke from these bush fires can also deplete the ozone layer, exposing the population to the harmful effects of UV radiation.

This presents a significant risk for businesses that rely on the outdoor environment, such as agriculture and tourism. For example, Australia's tourism industry, which brings in around AUD \$60 billion annually, suffered a severe blow due to the bush fires, with many tourists canceling their trips due to the hazardous air quality and fire threats. The depletion of the ozone layer also poses a risk to the agriculture industry, which is a significant contributor to the Australian economy, as crops may be affected by the increased exposure to UV radiation.



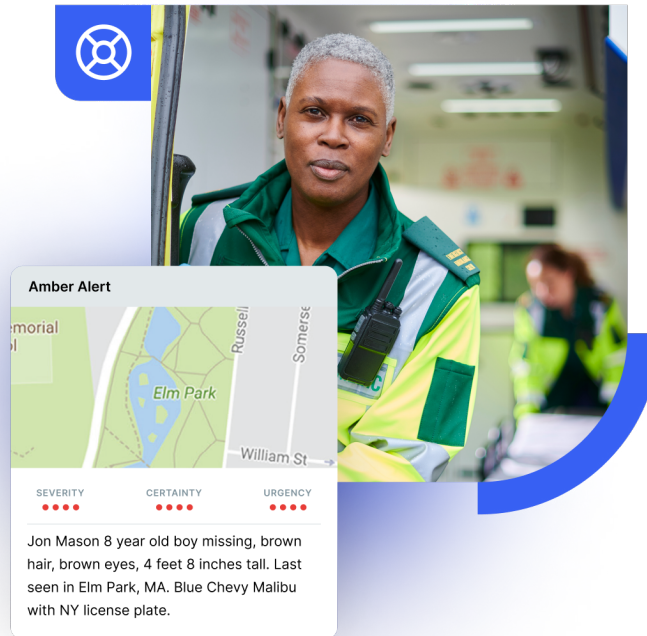
Everbridge solutions to reduce the cost of climate change for your organization

Investing in “green” solutions like those offered by Everbridge and proactively addressing climate change can yield significant financial benefits for organizations. According to the World Bank, “the world will need to make significant investment in infrastructure over the next 15 years – around US \$90 trillion by 2030. But it can recoup those investments. Transitioning to a green economy, it found, can unlock new economic opportunities and jobs. An investment of US \$1, on average, yields US \$4 in benefits.”

According to the 2023 study published by Forrester, customers using Everbridge’s CEM (Critical Event Management) Platform, over a 3-year period these organizations had an average ROI of 358%. Investing in CEM now can reduce financial losses due to acute hazards in the future. Everbridge provides organizations with a platform and a comprehensive suite of tools that enable them to prepare for, respond to, and recover from any climate disaster, reducing costs and keeping people safe.



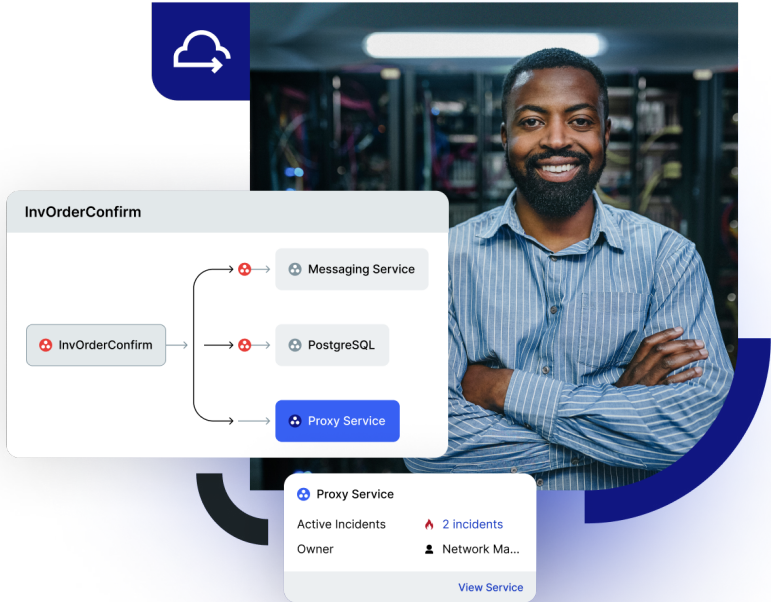
Public safety



The [public safety solution](#) enables organizations to quickly respond to and manage critical events by providing real-time situational awareness, communication tools, and incident response capabilities. With this solution, organizations can better prepare for and respond to extreme weather events such as forest fires, hurricanes, and floods. They can send out mass notifications to affected communities, track and communicate with first responders, and monitor the progress of the incident to ensure timely resolution. By having a coordinated and effective response, organizations can reduce the financial impact of critical events, including property damage, business interruption, and loss of revenue.

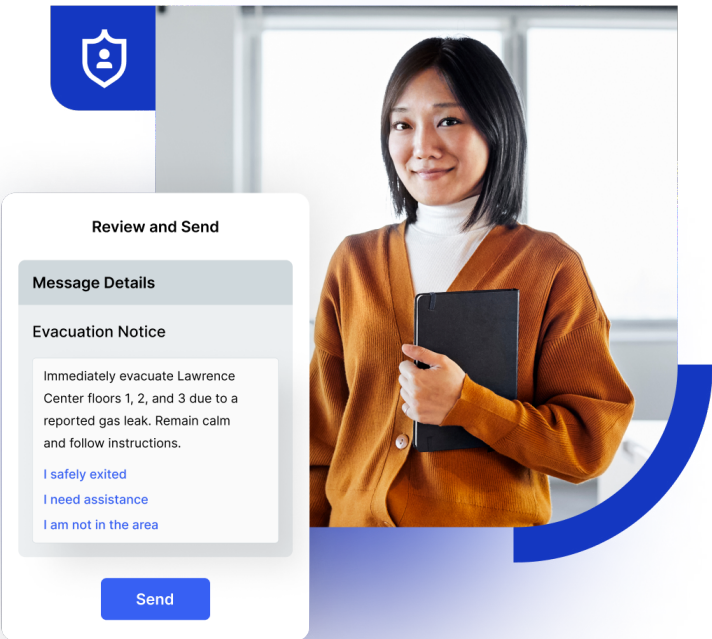
Public safety is particularly relevant to reducing the financial impacts of climate change. As extreme weather events become more frequent and severe, the ability to quickly and effectively respond becomes increasingly critical. By having the tools and resources to coordinate and communicate during these events, organizations can reduce the impact on communities and minimize financial losses. For example, by notifying residents of evacuation orders and shelter locations, organizations can reduce the risk of injury and property damage. By monitoring the progress of a critical event, organizations can adjust their response as needed to minimize the impact and reduce financial losses.

Digital operations



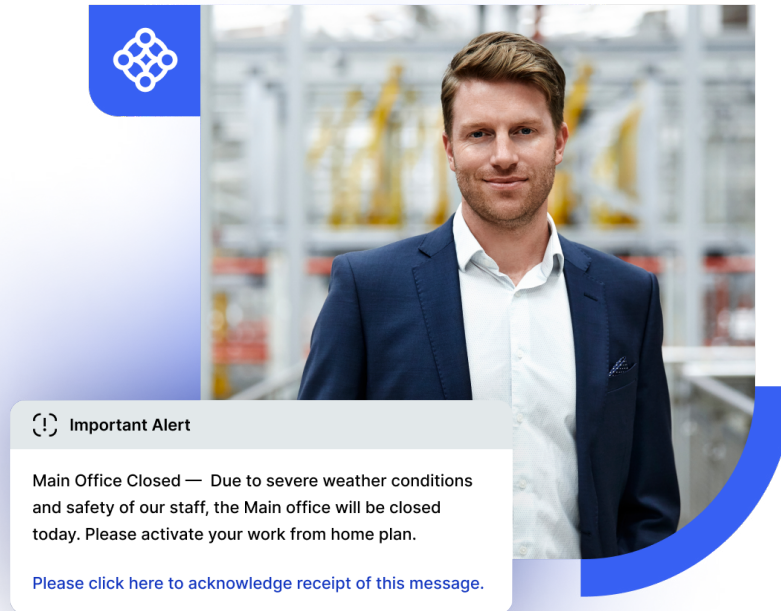
The [digital operations solution](#) helps organizations ensure continuity of operations in the face of disruptions such as power outages, extreme weather events, and other natural disasters. By leveraging automation and digital channels, organizations can maintain operational resiliency and ensure business continuity, reducing the risk of financial losses due to downtime, decreased productivity, or other impacts.

People resilience



The [people resilience solution](#) focuses on the well-being of employees, providing tools and resources to support them during critical events. By proactively identifying potential risks and providing timely communications and support, organizations can mitigate the impact of critical events on employee productivity and morale, reduce absenteeism, and minimize turnover.

Business operations



The [business operations solution](#) helps organizations ensure continuity of critical business functions in the face of disruptions. By providing real-time situational awareness, automated workflows, and incident response capabilities, organizations can minimize the impact of critical events on revenue, customer satisfaction, and brand reputation. This solution can also help organizations identify and mitigate risks proactively, reducing the likelihood and severity of future disruptions.

Conclusion

The financial impacts of climate change are far-reaching and pose significant risks to organizations across various industries and regions. However, by investing in proactive solutions, businesses can mitigate these risks and even turn them into opportunities.

When organizations implement Everbridge solutions, they take a proactive approach to managing the financial risks associated with climate change. By doing so, they can not only protect their bottom line but also contribute to a more sustainable future for themselves and the communities they serve. As we face an increasingly uncertain climate, investing in solutions that promote resiliency and sustainability is not just good for business but also for the planet.



The financial impact of climate change is going to become more extreme with time, and without proactive measures in place to protect organizations, the costs could cripple organizations.





About Everbridge

Everbridge, Inc. (NASDAQ: EVBG) empowers enterprises and government organizations to anticipate, mitigate, respond to, and recover stronger from critical events. In today's unpredictable world, resilient organizations minimize impact to people and operations, absorb stress, and return to productivity faster when deploying critical event management (CEM) technology. Everbridge digitizes organizational resilience by combining intelligent automation with the industry's most comprehensive risk data to Keep People Safe and Organizations Running™.

For more information, visit Everbridge.com, read the company [blog](#), and follow us on [LinkedIn](#) and [Twitter](#).