



Capital  
Markets



Sustainable  
Finance Group

# Sustainability Matters

*Private Markets Innovation  
in Climate Adaptation & Resilience*

DECEMBER 2025

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Introduction

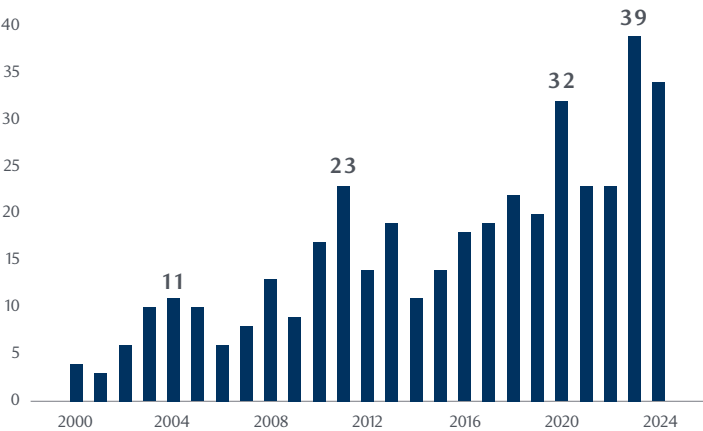
This edition of RBCCM’s Sustainability Matters highlights companies offering emerging products and solutions that address climate adaptation and resilience. Climate adaptation and resilience (“Climate A&R”) represents interconnected strategies for addressing the impacts of climate change: adaptation involves systemic adjustments to prepare and respond to impacts of climate change, while resilience focuses on the capacity to recover from its risks and impacts.<sup>1</sup> This paper will examine these concepts collectively and showcase a range of innovations that illustrate the breadth of opportunities in Climate A&R.

Growing Costs from Severe Weather Events

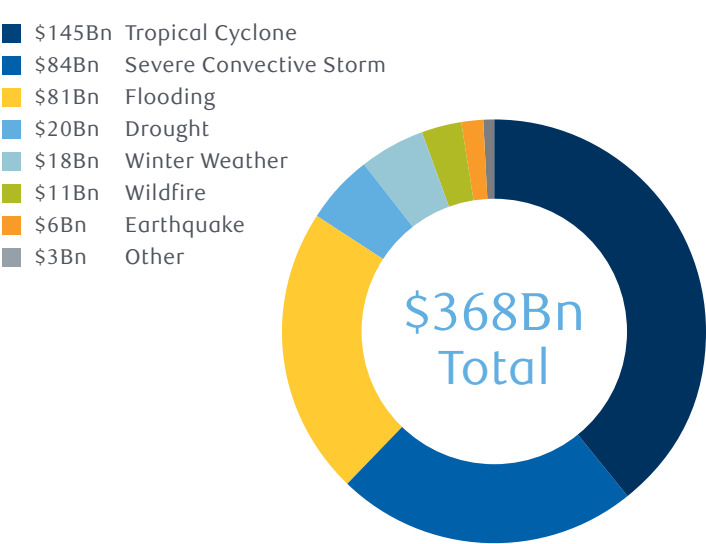
As the impacts of climate change accelerate in scale and frequency, the global economy faces an inflection point. Wildfires, flooding, and extreme weather events are no longer distant threats—they are present realities for governments, corporations, and households. In Los Angeles, the Pacific Palisades wildfires in 2025 burned over 50,000 acres, impacted over 20,000 structures, and caused 30 fatalities.<sup>2</sup>

Global natural catastrophes in 2024 caused \$368 billion in economic losses and \$145 billion in insured losses.<sup>3</sup> In 2024, 34 global disasters caused insured losses of \$1 billion or higher, second only to 2023, with this trend of “billion dollar disasters” expected to increase.<sup>4</sup> As a result of bigger and more frequent disasters and chronic stressors, Moody’s projects that the global economic impact from physical risk may reach \$41 trillion, equivalent to a 14.5% loss in GDP in 2050.<sup>5</sup> By 2050, one estimate suggests there could be 1.2 billion people internally displaced by weather-related hazards by 2050.<sup>6</sup>

Global Billion-Dollar Insured Loss Events<sup>7</sup>  
(Number of Events above \$1Bn)



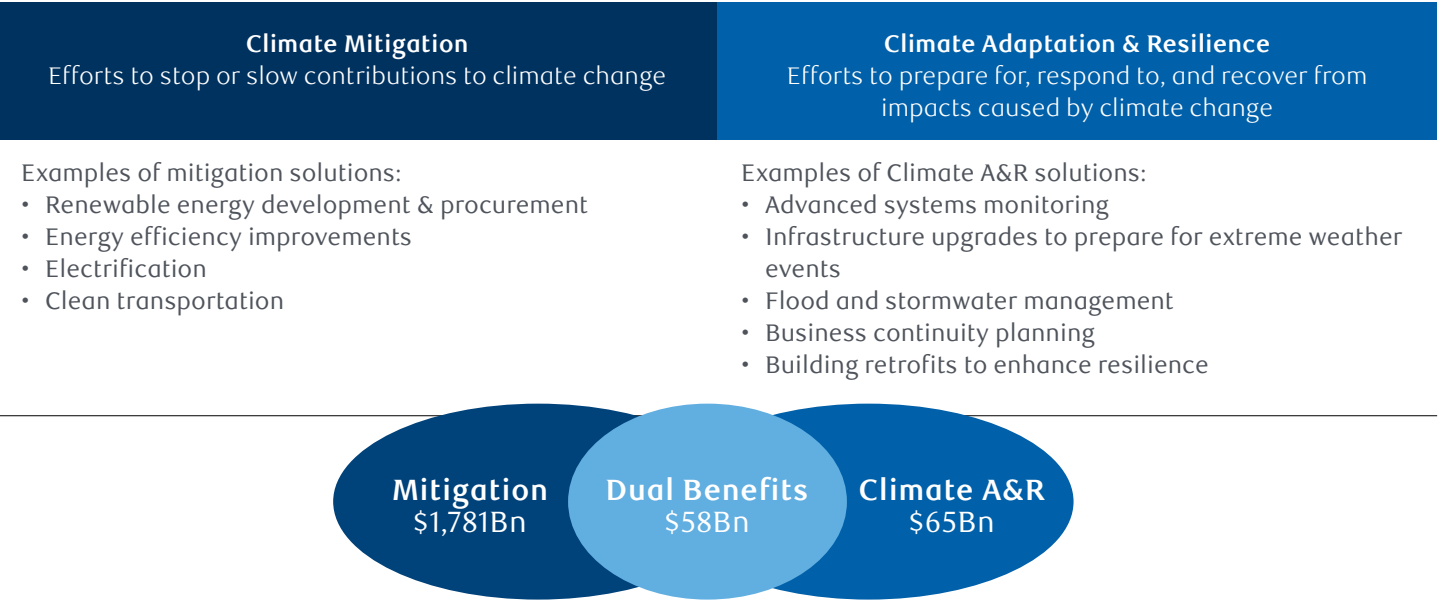
Global Economic Losses by Peril<sup>8</sup>  
(2024 \$Bn)



Climate Adaptation and Resilience Market

While climate mitigation efforts remain a priority to decarbonize industry, Climate A&R efforts have become increasingly in focus. According to BCG, global demand for Climate A&R investments is projected to expand up to \$1.3 trillion by 2030.<sup>9</sup> Investing in Climate A&R, however, has been perceived as a secondary initiative to climate mitigation, and thus, Climate A&R has been a historically underinvested theme. The closest approximation comes from the Climate Policy Initiative, which estimates that \$65 billion in investment and financings went towards adaptation in 2023.<sup>10</sup> Meanwhile, approximately \$1.8 trillion of capital flows were allocated to mitigation that same year.<sup>11</sup>

Recent findings from the MSCI Institute observe that only 11% of roughly 800 public companies offer technologies, solutions, or equipment to address Climate A&R,<sup>12</sup> and according to McKinsey, less than \$8 billion has been raised for dedicated private market climate resilience funds, whereas more than \$650 billion has been raised for decarbonization and broader sustainability investments.<sup>13</sup> For the private sector, this represents not just a challenge, but a transformative economic opportunity for Climate A&R innovation and investment.



Opportunity in the Innovation Economy

In this context, a growing number of emerging companies are advancing Climate A&R opportunities, driven by the convergence of three factors: the escalating toll of severe weather damages, the funding gap in Climate A&R, and the market inefficiencies of climate risk. These factors may present an opportunity for entrepreneurs and investors, especially in the venture capital ecosystem.

According to PwC, startups focused on Climate A&R accounted for 28% of all climate tech deals in the first three quarters of 2024. Of this group, dual benefit startups comprised 18% of deals and pure-play ventures made up 10%. Dual benefit and pure-play Climate A&R deals, however, only accounted for 12% of the total climate tech investment by value through the same period.<sup>14</sup>

As the investment universe broadens, there are opportunities across three phases of adaptation and resilience: *preparation and prevention*, *response*, and *recovery*.<sup>15</sup>

<b>Prepare and Prevent</b> Solutions <b>enabling prevention and preparation</b> prior to a climate-related natural disaster. These companies offer risk, analytics, modeling, or forecasting to increase foresight and understanding of climate-related risks.	<b>Respond</b> Solutions <b>enabling elevated response during</b> climate-related natural disasters. These innovations often involve technology that strengthens physical systems to withstand climate shocks.	<b>Recover</b> Solutions <b>enabling accelerated recovery after</b> adverse physical impacts. These innovations involve technology that enables faster re-builds and more resilient business operations.
<p>Examples include <a href="#">Climate X</a>, which helps businesses integrate climate intelligence into real asset investment decision-making; and <a href="#">Technosylva</a>, which specializes in wildfire and extreme weather risk modeling and real-time monitoring. <a href="#">Tomorrow.io</a> provides advanced weather intelligence through its satellite constellation.</p>	<p><a href="#">Cascadia</a> provides energy-efficient and wildfire-resistant building materials. <a href="#">TS Conductor</a> develops advanced power line technology that improves grid resilience and supports renewable energy integration. <a href="#">ZwitterCo</a> enables industries to reclaim and reuse water, addressing climate-induced water stress.</p>	<p><a href="#">Adaptive Insurance</a> offers parametric insurance products for small businesses after power outages. <a href="#">Parsyl</a> insures temperature-sensitive goods like food and vaccines, reducing supply chain losses from climate disruptions. <a href="#">Floodbase</a> leverages AI and real-time flood monitoring to power parametric flood insurance, ensuring swift financial relief for communities recovering from flood events. <a href="#">Kin Insurance</a> utilizes advanced data and analytics to more effectively price and market insurance policies in high-risk areas.</p>

## CONCLUDING THOUGHTS

As this publication will illustrate, Climate A&R is a thematic opportunity for innovators and investors where there is no “one size fits all.” Each solution tackles a unique problem, and innovation will be needed to address the increasing frequency and intensity of extreme weather events. We make three high-level observations:

- While decarbonization has dominated climate investment historically, Climate A&R solutions have been historically underinvested and viewed increasingly as essential to complement mitigation.
- Climate A&R solutions must address local impacts, demanding context-specific strategies to address regional risks and vulnerabilities.
- Addressing climate impacts requires a myriad of solutions, including asset-light technologies for risk modeling, physical hardening products for resilience, and financial mechanisms for recovery.



A full-page background image featuring a vibrant green aurora borealis (northern lights) dancing across a dark, starry night sky. Below the lights, several large, jagged icebergs float in a body of water. The foreground shows the textured surface of the water with small waves and ice floes. The overall color palette is dominated by deep blues, greens, and whites, creating a serene yet powerful natural scene.

## EARTH DATA

For the world's largest companies that make up the S&P Global 1200, the total cost of climate physical risk is projected to reach \$1.2 trillion annually by 2050.<sup>16</sup> As climate risks intensify, the ability to see, measure, and model environmental change in real time has become a key consideration for adaptation. Advances in satellite, aerial imaging, and sensor networks are unlocking granularity in climate intelligence and earth data to determine how severe, how soon, and how frequently climate hazards will occur across geographies. Earth and climate data analytics become the upstream enabler to identify and manage this risk exposure for corporates buyers.





### ***Revolutionizing Weather Forecasting for a Resilient Future***

- Based in Boston, MA
- Backed by Activate Capital
- Leveraged by 250+ global customers, including 6 of the Fortune 10
- Raised \$300M+ in funding

Tomorrow.io offers advanced weather intelligence through its Resilience Platform™, integrating proprietary satellite technology, agentic AI, and hyperlocal forecasting to help industries and governments adapt to increasingly volatile weather, maintaining operational continuity and safety. Its microwave sounder satellite constellation delivers near real-time atmospheric insights, closing critical global weather data gaps.

***With Shimon Elkabetz, Co-Founder & CEO***

### **How is Tomorrow.io different than the status quo in weather forecasting?**

Tomorrow.io differentiates in two ways.

First, our agentic platform is helping customers make decisions at scale, automating entire company's weather operations, and turning challenges into business opportunities. The old way of doing things was pretty manual—literally talking to the meteorologists of 'weather vendors.' Instead, Tomorrow.io is enabling a digital transformation that leaves no room for mistakes.

Secondly, traditional weather forecasting relies on repackaged data and models that refresh infrequently, leaving significant gaps in accuracy and timeliness. Tomorrow.io is the only company addressing these gaps end-to-end through its satellite constellation that covers the entire globe, powering our AI models to create more accurate forecasts, which power our decision-making platform.

More specifically, we created a real breakthrough via our space technology. Traditional satellites stop at the edge of clouds, but Tomorrow.io's constellation of microwave sounder satellites acts like an MRI for clouds, providing detailed cross-sectional observations of atmospheric temperature, water vapor, and precipitation, even through cloud cover. This capability is especially critical for improving forecasts in data-sparse regions, such as Africa or over oceans.

On top of that, our FOCUS model integrates real-time satellite data to close latency gaps, providing actionable insights that enable faster, smarter decision-making.

### **What is Tomorrow.io's thesis on the diverse need for advanced weather forecasting, and can you provide some examples of clients that have benefited the most?**

Weather impacts every industry, but in different ways. For example, JetBlue leverages Tomorrow.io to power its global operations and one specific way is to optimize de-icing workflows, improving scheduling, reducing delays, and enhancing overall efficiency during winter operations.

Similarly, Uber has incorporated Tomorrow.io's weather intelligence across its platform to improve operational efficiency. With street-level forecasts, Uber can anticipate demand surges, optimize routing, and communicate proactively with drivers and riders. Resulting in better ETAs, increased trust, and significant revenue opportunities.

### **How does Tomorrow.io embed AI across the entire business?**

AI is truly at the center of everything we do at Tomorrow.io, powering our 150-person operation, models, and how clients engage with our platform. Our FOCUS model leverages AI to learn from real-time satellite data, updating continuously as our constellation approaches sub-hourly, 60-minute revisit rates.

AI also elevates the user's experience, particularly through Gale, the world's first weather and climate agent. Gale acts as an intelligent assistant, summarizing weather impacts, generating reports, and now can take action through agentic workflows. This evolution enables Gale to suggest and execute decisions, such as rerouting shipments or optimizing operations, in response to live weather data.

### **Heat is becoming increasingly disruptive. Can you provide an example of how Tomorrow.io is enabling adaptation to this hazard?**

Extreme heat is one of the most rapidly intensifying weather risks, threatening infrastructure, operations, and lives. Backed by Tomorrow.io's microwave constellation, our heat forecasts provide the most accurate detection of risks before they escalate.

Our platform then translates these risks into action: helping rail operators monitor and predict heat-induced track buckling, reducing the risk of train derailments. In logistics, we support warehouses in optimizing staffing schedules to protect workers from dangerous heat exposure. In grids,

our platform is crucial during heatwaves to support energy companies in managing grid demand.

### How does Tomorrow.io enable decision-making in historically underserved regions?

Currently, 5 billion people live outside of reliable weather radar coverage, concentrated in emerging markets like Africa, for example. Our satellite constellation fills these critical data gaps, enabling high-resolution modeling and localized insights in parts of the world that have traditionally not had access to reliable forecasting.

Likewise, through our nonprofit arm, TomorrowNow.org, we deliver actionable weather intelligence to smallholder farmers in Africa, delivering early warnings and planting insights via SMS, enabling them to make proactive decisions to protect crops and livelihoods. A recent validation study demonstrated a 12% increase in crop yields during the program's initial pilot, showcasing the transformative potential of this technology.<sup>17</sup>

#### INVESTOR SPOTLIGHT



Activate Capital is a growth stage venture firm investing at the intersection of sustainability, infrastructure, and industrial systems. Founded in 2017 and headquartered in San Francisco, Activate manages over \$800 million in assets across three funds. The firm's investment philosophy hinges on the belief that secular shifts in sustainability, technology, resiliency, and adaptation are transforming how we power, produce, and move economic activity.

“As climate and weather volatility intensifies, Tomorrow.io is redefining how organizations anticipate and respond to weather risk. Our investment reflects our conviction that actionable climate intelligence will become a foundational layer of global resilience infrastructure.

*Tomorrow.io's satellites in orbit and software on the ground create a vertically integrated moat that we are deeply excited about and positions the company to become the operating system for real-time, weather-informed, decision making.”*

– Jon Guerster, Partner, Activate Capital



# CLIMATE X

## *Transforming Climate Risk into Actionable Insights*

- Backed by Google Ventures
- Supports clients with over \$13 trillion in combined AUM
- Raised \$24M+ in funding

Climate X helps businesses and financial institutions manage physical climate risks by integrating climate intelligence into decision-making. Serving global banks and commercial real estate firms, Climate X drives innovation in climate adaptation, tackling portfolio risk, due diligence, and asset valuation challenges. Its Spectra platform provides analytics for evaluating portfolio risks, while the Adapt solution supports resilience strategies and quantifies the financial benefits of adaptation.

*With [Kamil Kluza](#), Co-Founder & COO*

## **What gap did Climate X identify, and how did the company seek to address it?**

When we launched Climate X, we identified a major gap in how businesses and financial institutions managed physical climate risks. Traditional tools were either too generic or too narrow, lacking actionable insights for strategic decision-making. For instance, banks often couldn't integrate physical risk assessments into due diligence or origination processes, leaving them unprepared for climate-related financial impacts.

We built Climate X Spectra to fill this gap. The platform combines advanced climate science and modeling to deliver granular, location-specific insights into risks like flooding, wildfires, and extreme heat. This helps clients understand risks to individual assets and interconnected risks across portfolios and supply chains. By providing actionable intelligence, we enable informed decisions that enhance resilience and create long-term value.

## **Can you share an example of how Climate X has supported a client?**

Climate X supports global commercial real estate firm CBRE with advanced climate risk analytics to enhance sustainability planning and decision-making for property investors and occupiers. Using Climate X's platform, CBRE translates complex climate scenarios into actionable insights. These tools enable CBRE to evaluate risks at specific locations, calculate CapEx requirements, and assess the ROI

of retrofits and acquisitions aimed at increasing resilience. This partnership empowers CBRE's clients to make informed decisions that mitigate climate risks and enhance the long-term value of their portfolios.

## **How do you help customers quantify the financial and operational benefits of climate adaptation strategies?**

Quantifying the financial benefits of climate adaptation is central to our Adapt platform. It provides detailed cost-benefit analyses for resilience investments, such as installing flood defenses or using fire-resistant materials, to demonstrate how these measures reduce potential losses, protect revenues and lower insurance premiums over time. For instance, a commercial real estate client used Adapt to evaluate the ROI of retrofitting an asset with storm-resistant features and decided to proceed after seeing the projected long-term savings and reduced tenant disruption risk. Additionally, we integrate these insights into financial planning, showing how adaptation measures improve asset valuation, lower insurance costs, and enhance operational continuity. By turning climate adaptation into a measurable business case, we empower clients to invest proactively in resilience.

## **How has demand for Climate X's solutions evolved, and how are you forecasting future growth?**

The demand for our solutions has grown exponentially over the past few years, driven by increasing awareness of climate risks and regulatory pressure. When we started, climate adaptation wasn't even part of the conversation for most businesses. We were the first platform to launch adaptation at a global scale. That changed dramatically after key events like COP27, which highlighted the urgency of addressing physical risks. Since then, we've seen a surge in interest from sectors like commercial real estate, banking, and private equity.

Looking ahead, we expect this momentum to continue as regulators and rating agencies push for greater transparency around climate risks. For example, credit rating agencies are starting to downgrade companies based on physical risk data, prompting banks and investors to seek out tools like ours to stay ahead of the curve. With our defensible product and growing client base, we're well-positioned to scale rapidly and capture a significant share of this expanding market.

## **How does Climate X's innovation drive its roadmap for future growth and impact?**

Innovation is at the core of everything we do at Climate X. From day one, we've focused on building solutions that are both scientifically rigorous and highly practical for our

clients. For instance, our R&D team developed proprietary methodologies, enhanced by AI, that allow us to model weather volatility impacts with unprecedented accuracy, setting a new benchmark for resilience analytics.

Looking ahead, our roadmap includes expanding the capabilities of our platforms to address emerging risks and new use cases. For example, we're exploring how to integrate real-time climate data into pre-IPO readiness assessments,

helping companies quantify and mitigate physical risks before going public. We're also working on enhancing our Adapt platform to provide more robust end-to-end due diligence for resilience investments, enabling clients to clearly see the financial returns of adaptation strategies and execute those. By staying at the forefront of innovation, we aim to not only grow our impact but also redefine what's possible in resilience analytics and enablement space.

## INVESTOR SPOTLIGHT



GV is an independent venture capital firm with a mission to support innovative founders tackling the world's biggest challenges. Backed by Alphabet as its sole limited partner, GV manages over \$10 billion in assets and has invested in more than 400 active portfolio companies offering founders access to Google's technology, talent, and resources, as well as operational support in areas like design, marketing, and executive talent.

*“Climate X is revolutionizing how businesses and governments understand and address climate risk, providing actionable insights at a time when resilience has never been more critical.”*

*Kamil Kluza and Lukky Ahmed bring a rare combination of deep expertise in corporate risk management and a bold vision for the future of climate intelligence. Their innovative platform has the potential to become the foundation for climate risk-related decision-making across industries. We are thrilled to support the Climate X team as they scale their solution and help organizations worldwide.”*

*– Roni Hiranand, Principal, Google Ventures*



## **RESILIENCE IN BUSINESS AND SOCIETY**

From floods disrupting global shipping routes to droughts halting river transport, climate volatility is reshaping how goods move and where risks concentrate. In the US, nearly half of manufacturing sites are at high risk from climate-related hazards, yet only 11% are fully prepared to manage these disruptions.<sup>20</sup> As extreme heat, storms, and other hazards expose geographic and operational vulnerabilities in the supply chain, companies are turning to data driven supply chain intelligence, risk modelling, and parametric insurance to anticipate shocks and fortify logistics.





### ***Democratizing Homeowners' Insurance through Technology***

- Based in Chicago, Illinois
- \$600 million in premiums under management
- Backed by Activate Capital and QED Investors

Founded in 2016, Kin is a technology company revolutionizing the homeowners' insurance industry. Kin improves home insurance by eliminating the traditional middlemen, the 400,000 local brokers and agents through which 95% of home insurance is distributed, appealing to the more than 70% of customers who prefer a direct, digital experience. Kin also replaces manual data collection with big data and AI, enabling more accurate pricing and underwriting. Kin serves more than half the addressable market including high-risk areas like California, Florida, and Texas, and has more than \$600 million in premiums under management.

***With Sean Harper, Co-Founder & CEO***

### **What inspired the founding of Kin and what industry chokepoint is the company solving?**

When I first started my career as a strategy consultant, I had the opportunity to dive deep into the insurance industry, and what I saw was shocking. The risk analysis was fundamentally broken because it relied so much on data collected from third party insurance agents. Every home is unique, but the data being used to assess risk was often incomplete, inaccurate, or outright manipulated. As a result, the customers who had adapted their homes to today's weather were being treated the same as customers who hadn't made any adaptations.

Since the insurers didn't have a good way of determining which homes could withstand today's weather, they were just leaving some markets entirely, including some of the most important economic areas of our country. It was clear the system wasn't serving homeowners, especially in high-risk areas where people were desperate for reliable coverage.

In speaking to frustrated homeowners, I realized these customers were highly engaged, knowledgeable, and desperate for a solution—the result of a failed system. Through leveraging data and technology, we've evolved from a startup to a trusted partner for hundreds of thousands of

homeowners by prioritizing transparency, accuracy, care, and trust.

### **How does Kin's insurance model address the gaps left by traditional insurance?**

Unlike traditional insurers that rely on data manually collected by insurance agents, our algorithms are able to generate thousands of data points for each home, including geospatial data and property-specific features like quality of shingles, roof condition, electrical panel model, vegetation clearance, etc. Because we have more accurate data, we are able to price and underwrite the risk more accurately which enables us to sustainably participate in higher risk markets.

Our policy administration system is modular and built from the ground up unlike our competitors who are largely running on outsourced technology that's several decades old. Our technology provides a better experience for our customers—for example, they can file claims with natural language over text message. It also helps our internal business users like our actuaries, streamlining and automating work that was previously done manually in spreadsheets.

Additionally, we provide guidance to homeowners on mitigating risks. This “win-win” type of model can lower both premiums and reinsurance costs, and we believe that's led to our high customer review scores and high retention compared to the rest of the industry.

### **Can you elaborate on how Kin's flood and insurance products and partners are different from traditional offerings?**

The policies themselves are pretty standard—customers actually want consistency in the policies and what they cover. However, the customer experience is much better, more streamlined, and digital. Most importantly for our customers, we can be active in the markets where other insurers are pulling out since our risk analysis is so much better.

Flood insurance is critical since it is the only type of coverage that can pay for damage to a home caused by storm surges. Yet traditional options like the National Flood Insurance Plan (NFIP) leave significant gaps. For example, NFIP covers less than 10% of the overall market,<sup>21</sup> whereas 90% of all natural disasters in the country involve some kind of flooding.<sup>22</sup>

The NFIP primarily covers FEMA-designated flood zones, often subsidized by lower-risk homeowners, which makes it hard for private insurers to compete in those areas. We're focused on filling the gaps left by NFIP, particularly in non-

FEMA-designated zones where most flood losses occur. We offer flood insurance as an endorsement that allows homeowners to get broader coverage more quickly than a standalone policy. Our policies are tailored to meet the unique needs of homeowners in high-risk areas, offering more comprehensive and accessible coverage.

**How does Kin address the growing risks associated with extreme weather and how do these evolving risks impact the demand for Kin's products?**

At Kin, we are sharply focused on providing the best customer experience. This includes helping homeowners build more resilient properties by providing education on risk mitigation, like installing wind-resistant roofs, using fire-resistant materials, or removing vegetation near homes. We also connect customers to programs like My Safe Florida Home, which can help fund these improvements.

During severe weather events, such as Hurricane Milton, we take a proactive approach. We texted customers in that geographical area to see if they were okay, if they've left town, whether they needed aerial pictures of their home, and offered to connect them to service providers, enabling them to recover quicker. By helping customers reduce risks and recover quickly, we not only minimize damage but also ensure our customers feel supported when they need it most.

**Kin recently raised \$50 million in Series E funding. How will this funding support the company's growth?**

The Series E was opportunistic—we are EBITDA positive even while growing ~30%, so we didn't need to raise money. We are using the funds to further expand our competitive moat within homeowners insurance and invest in additional products that our customers are requesting.

For example, we recently entered the home financing market, offering a suite of solutions including mortgage loans, home equity loans, home equity lines of credit, and refinancing. We're also focused on cross-selling to our existing customer base, which allows us to grow efficiently without increasing marketing spend and hand those savings back to customers in the form of Kin-exclusive rates.

On the horizon, we have plans to launch another reciprocal exchange and are testing new ventures like auto insurance. Many of our customers have asked for bundled options, and we're excited to deliver solutions that could save them up to 20% while simplifying their insurance experience. As we look ahead, our priority is continuing to build trust and deliver innovative, customer-first solutions.

**INVESTOR SPOTLIGHT**

**QED  
INVESTORS**

QED Investors is a venture capital firm focused on investing in early-stage, disruptive financial services and technology companies. Founded in 2007 and headquartered in Alexandria, Virginia, QED has invested in over 250 companies across more than 20 countries, with a mission to back entrepreneurs who are reshaping the future of financial services.

“Kin Insurance is transforming home insurance affordability and accessibility, particularly in communities impacted by extreme weather.

*Kin serves consumers directly, combining precision, efficiency, and empathy to serve homeowners where legacy insurers are falling short. We're proud to support Kin as they expand and offer financial security to homeowners when disasters strike.”*

**– Amias Gerety, Partner, QED Investors**



## ***Revolutionizing Business Resilience with Parametric Insurance***

- Based in Austin, Texas
- Led by ex-Hippo Insurance management
- Incubated by Montauk Capital and backed by Congruent Ventures
- Raised \$5M in seed funding

Adaptive Insurance is pioneering how small and medium-sized enterprises (SMEs) build resilience against emerging climate-related risks through data-powered parametric insurance. Adaptive's flagship product, "Grid Protect," provides rapid payouts for short-duration power outages, filling a critical gap left by traditional insurance. Leveraging AI, IoT sensors, and real-time data, Adaptive delivers scalable, customized coverage, ensuring businesses can recover quickly from disruptions.

**With Mike Gulla, Co-Founder & CEO**

### **What inspired the founding of Adaptive Insurance, and how did the partnership with Montauk Capital support its development?**

Adaptive Insurance was born out of a need to address the intersection of climate resilience and grid vulnerabilities. After leaving Hippo Insurance, I worked as a consultant exploring the long-term profitability of insurtech and the role of data in driving innovation. Montauk Capital hired me to examine how parametric insurance could address grid and climate resilience, and I quickly saw the untapped potential in this space. Montauk's venture studio approach provided the perfect incubator to bring me on board to build Adaptive.

Traditional insurance often falls short when it comes to short-duration power outages, which are increasingly common due to climate change and growing energy demands. These outages can cause significant financial losses for SMEs, from spoiled inventory to lost revenue, but traditional policies typically only offer coverage for outages lasting 72 hours or more. Even when claims are approved, payouts can take weeks or months, leaving businesses in financial limbo.

### **How does Adaptive's parametric insurance model address gaps left by traditional insurance?**

Adaptive's parametric model fills this gap with a simple "if-then" structure: if a power outage lasts for a

specific duration, then a pre-agreed payout is triggered automatically. Our AI-powered platform leverages real-time data from IoT sensors and the grid to confirm outages and initiate payouts within 24-48 hours. This approach eliminates the need for claims adjusters, reduces fraud risk, and ensures SMEs receive timely financial support to recover and reinvest in their operations.

Outages impact small businesses beyond direct losses, creating ripple effects that strain financial resilience. Even businesses with generators may face revenue losses due to broader disruptions, like traffic lights being down or customers unable to leave homes because garage doors won't open. These impacts deter foot traffic and reduce daily revenue, especially for restaurants or retail shops.

Adaptive's parametric policy isn't designed to make a business entirely whole after an event but provide a crucial financial lifeline. By quickly putting capital in business owners' hands, it enables logical decisions—paying employees, replacing inventory, or addressing immediate needs—that determine whether a business recovers or permanently closes.

### **What has been the market response to Grid Protect, and how does Adaptive plan to scale its offerings?**

The market response to Grid Protect has been overwhelmingly positive. SMEs, particularly in sectors like hospitality, retail, and warehousing, appreciate the simplicity and speed of our solution. Unlike traditional property insurance, which often excludes short-duration outages, Grid Protect provides coverage for events lasting 8-24 hours—a critical gap for businesses reliant on continuous power.

To scale, we're focusing on three go-to-market strategies: working with retail agents, partnering with wholesale brokers and aggregators like Amwins and Bold Penguin, and embedding our product into the supply chain through B2B2SMB partnerships. For example, we're collaborating with commercial OEMs to offer Grid Protect at the point of sale, providing customers with immediate protection and peace of mind.

### **What role do partnerships, like those with Tokio Marine HCC or refrigeration brands, play in Adaptive's growth and customer reach?**

Partnerships are vital to Adaptive's growth and customer reach. The alliance with Tokio Marine HCC provides Adaptive with access to expertise, resources, and credibility from a leading specialty insurance group, strengthening its operations and market position.



Collaborations with commercial OEMs and other product providers allow Adaptive to embed its insurance offerings directly into products or services. For example, Adaptive can co-sell its parametric insurance solutions at the point of sale, such as when businesses purchase refrigeration units, IoT devices, or generators, ensuring SMEs have immediate access to coverage. These strategic partnerships expand Adaptive's distribution channels, enhance accessibility for SMEs, and promote resilience investments, driving both growth and impact.

### **How does Adaptive's Resiliency Marketplace "Omnia" align with its mission to support SMEs, and what are the expected benefits for clients?**

Omnia is an integral part of Adaptive's mission to not only protect SMEs from financial losses, but also help them reinvest in resilience. For instance, after a payout, a restaurant could use the funds to upgrade its refrigeration units or invest in a generator to prevent future losses. By providing access to these resources, Omnia turns insurance payouts into opportunities for long-term resilience. The Omnia marketplace connects businesses with data, tools and services that enhance their operational continuity, such as backup generators, energy-efficient refrigeration, and advanced monitoring systems.

## **INVESTOR SPOTLIGHT**

### *Montauk Capital*

Founded in 2023, Montauk Capital is a venture studio and fund building transformative technology companies within the Electron Economy, where electricity becomes smarter, more efficient, and programmable through software-driven innovations.

“Adaptive was the first company to emerge from Montauk Capital's incubator, designed to address the urgent challenges of climate-related impacts by creating transformative tech companies for a sustainable and resilient future.

*Adaptive plays a critical role within the Electron Economy, which recognizes that adding intelligence to our grid creates entirely new business models and market opportunities that far exceed the commodity value of the electrons themselves. By developing innovative insurance products that leverage insights from an interconnected and intelligent energy grid, Adaptive is helping businesses build resilience and thrive in a rapidly evolving energy landscape.”*

– Philip Krim, Founder & Managing Partner, Montauk Capital



### ***Protecting Supply Chains with Smart Insurance***

- Based in Denver, Colorado; London, UK
- Backed by The Lightsmith Group, Lineage Ventures, HSCM Ventures
- \$100M+ in premiums supported
- Raised \$65M+ in funding

Parsyl is transforming supply chain insurance by combining underwriting excellence with advanced technology to address the risks of climate change and guide customers toward more resilient and sustainable supply chain outcomes. Parsyl leads the Essential Consortium at Lloyd's of London, is a Lloyd's Coverholder, and operates Syndicate 1796, the first mission-driven syndicate at Lloyd's. With a full suite of A-rated cargo insurance products, Parsyl serves a diverse range of clients, including businesses in food, pharmaceuticals, and non-perishables, helping protect goods across complex supply chains.

***With Ben Hubbard, Co-Founder & CEO***

### **How does Parsyl use technology and data to improve supply chain resilience?**

At Parsyl, we believe underwriting should have a positive impact on the world. That philosophy drives our approach to impact underwriting: combining data, technology, and purpose to make better risk decisions that strengthen global supply chains and improve outcomes for the people who depend on them.

As supply chains face growing pressure from climate change, that mission has never been more important. Extreme weather and temperature variability pose a greater risk to temperature-sensitive and perishable goods. To mitigate this risk, Parsyl uses multiple data sources to understand and price risk, and then incentivizes customers with better or improved risk management practices.

Parsyl integrates real-time and historical data from IoT sensors and public datasets with our predictive modeling and AI capabilities. This allows us to understand the risk and identify vulnerabilities in shipping routes, storage facilities, and transit conditions. Then, overlaying climate risk forecasts and facilities data, we can model how a specific

port or storage facility will fare in a hurricane, flood, or power outage.

By offering data-driven insurance solutions, we help clients anticipate and mitigate these risks while ensuring the safe delivery of essential goods.

Parsyl's Risk Rewards Program is one-way Parsyl rewards customers for their supply chain resilience practices. The program offers seamless integration with leading sensor providers like Sensitech, Copeland, and Tive. This program gives clients an immediate discount on their policy, enables faster claims investigation and processing, and provides Parsyl with a sea of data to train underwriting models.

### **Can you share a case study where Parsyl's solutions helped a client mitigate risk and preserve value?**

One notable example involves a client shipping frozen sorbet. During transit, the monitoring system detected a rapid temperature drop in a container. While the shipping company claimed the container was in open water, the data confirmed otherwise, enabling the client to intervene before the shipment was transported and rejected at the receiving port. This action prevented a \$100,000 loss and avoided a claim.

In another example, a crab exporter on the Chesapeake Bay faced a significant challenge when their shipment was stuck for months after a vessel ran aground. Sensors in the shipment confirmed that the frozen products remained properly refrigerated throughout the delay. This data verified the shipment was food-safe, preventing a \$360,000 claim that would have occurred without the sensor-provided evidence.

### **How does Parsyl think about its partnership with Lineage Logistics?**

Lineage is the largest dynamic temperature-controlled warehousing and logistics company, and our partnership yields valuable data, especially as we think about risk diversification. Storage facilities often house products from multiple clients, which can lead to significant risk concentration. A single warehouse might contain \$10 million worth of goods from five clients, creating a combined \$50 million exposure.

Through this partnership, Parsyl gains access to Lineage's proprietary data on facility attributes, such as backup power capabilities, flood zone location, and construction details. This information allows Parsyl to assess how a facility might perform during extreme events like hurricanes or power outages. Additionally, Lineage provides insights into

inventory movement, helping Parsyl understand when and how products are stored and the broader supply chain.

### What's it like innovating in the Lloyd's of London ecosystem?

Lloyd's of London, a cornerstone of the maritime insurance industry, has provided Parsyl with a platform to scale innovation globally. By leveraging its collaborative ecosystem, Parsyl is introducing modern, data-driven solutions to an industry steeped in tradition. The Lloyd's market also gives us the credibility, capacity, and reach to serve complex global supply chains and help build a more efficient, resilient insurance ecosystem.

### Beyond resilience, what co-benefits to climate mitigation does Parsyl offer?

Insurance is a powerful tool for driving behavior change, and at Parsyl, we use it to encourage risk management and sustainability. Our underwriting process rewards clients who adopt proactive risk management strategies, which are often aligned with broader sustainability. These measures can result in lower premiums and improved coverage, creating a win-win for clients and the environment.

For example, we've helped seafood companies reduce their reliance on ice for shipping by recommending alternative packaging solutions. This not only cuts energy use and emissions but also reduces the weight of shipments, lowering transportation costs. By aligning financial incentives with sustainability goals, we're helping clients build more resilient and environmentally friendly supply chains.

## INVESTOR SPOTLIGHT

### The Lightsmith Group

The Lightsmith Group is a private equity firm uniquely focused on investing in the unavoidable opportunity of climate resilience. While much of the investment world has focused on decarbonization to address the causes of climate change, Lightsmith is leading the charge with growth equity investments in solutions that tackle the mounting physical impacts of climate change.

*“Adaptation solutions to climate change are no longer optional—they are an unavoidable opportunity for investors and a necessity for businesses and communities. Parsyl's data-driven approach to making global supply chains more climate-resilient is exactly the kind of solution we need.”*

*As climate change intensifies the frequency of extreme weather events, the risks to global trade and perishable goods grow exponentially. Parsyl's innovative insurance products and risk insights are enabling businesses to protect themselves in this new reality. We are proud to partner with Parsyl to scale their impact and address this critical need.”*

**– Jay Koh, Co-Founder & Managing Director, The Lightsmith Group**





## **WILDFIRE AND THE GRID**

Once a seasonal hazard, wildfire has become a year-round systemic risk across much of the world's temperate regions. The estimated economic burden from wildfires in the United States is between \$394 billion to \$893 billion annually, as of 2023.<sup>18</sup> Grid reliability has emerged as both a financial and operational risk for utilities, investors, and corporations. Weather-related events in the United States were responsible for 83% of major outages from 2000 – 2021.<sup>19</sup> As utilities, insurers, and municipalities confront escalating losses, innovators are deploying aerial intelligence, advanced reconductoring technology, and predictive analytics to prevent ignition, contain spread, and safeguard critical infrastructure.





# technosylva

## ***Advancing Wildfire Prediction and Management***

- Based in San Diego, California
- Founded in 1997
- Senior management team formerly from Uplight, clean tech platform for utilities
- Backed by TA Associates and BeyondNetZero

Technosylva is a global leader in wildfire and extreme weather risk management and AI/simulation modeling, delivering cutting-edge solutions to address the escalating challenges posed by climate change. The company operationalizes wildfire science by empowering utilities to reduce wildfire ignitions, minimize damages, and enhance public safety. Technosylva's platform performs nearly one billion simulations daily, providing actionable insights that enhance decision-making and safeguard critical infrastructure, communities, and ecosystems.

***With Indran Ratnathicam, Chief Growth Officer***

## **What sets Technosylva apart in the field of wildfire risk management, and how does its technology address the threat of wildfires?**

We specialize in AI-driven software that integrates predictive analytics, real-time monitoring, and consequence modeling to empower utilities, fire agencies, and government organizations to mitigate and respond to wildfire risks.

For utilities, our platform supports real-time monitoring and predictive analytics, helping them prioritize asset-hardening strategies, optimize resource allocation and guide operational mitigations like line de-energization to prevent asset-caused ignitions. For fire agencies, our tools enhance situational awareness with features like fire spread predictions, daily risk forecasting, and "what-if" scenario analysis. These capabilities allow decision-makers to pre-position crews, allocate resources, and make data-driven decisions during wildfire events.

We are currently launching these same capabilities for our insurance customers, to help them better underwrite and price risk across all of their customers.

## **How does Technosylva's platform support utilities in wildfire risk mitigation and vegetation management?**

Utilities face the dual challenge of maintaining reliable power delivery while minimizing wildfire risks caused by infrastructure failures. Our platform helps utilities operationalize wildfire risk by integrating historical fire weather data, wildfire spread modeling, and asset failure information. This allows utilities to quantify risks, prioritize grid-hardening strategies, and make informed decisions about resource allocation.

For example, our tools support Public Safety Power Shutoff (PSPS) decision-making by providing real-time insights into fire risk levels. Additionally, our daily wildfire risk forecasts and vegetation management tools help utilities identify high-risk areas and implement targeted mitigation measures, such as clearing vegetation near power lines. By combining predictive analytics with actionable insights, we enable utilities to reduce wildfire ignitions and enhance grid resilience.

## **How do Technosylva's recent acquisitions enhance its ability to address climate adaptation and resilience challenges?**

Our recent acquisitions are a key part of our strategy to expand our capabilities and address multi-hazard risks.

In October 2023, we acquired Atmospheric Data Solutions (ADS), which specializes in atmospheric data and analytics. This acquisition enhances our wildfire public safety initiatives by improving data integration for utilities and fire agencies. Shortly after, we acquired KatRisk, a leader in global catastrophe modeling, allowing us to extend our expertise beyond wildfires to include risks like floods and hurricanes.

In January 2024, we acquired Heartland Software Solutions, a Canadian company with advanced wildfire science capabilities. This acquisition strengthens our ability to predict, mitigate, and prevent wildfire risks using cutting-edge tools and expertise. Most recently, in 2025, we acquired two more companies, Gamma and Symfos, which deliver visualization, underwriting and portfolio management of physical risk data to the insurance and financial services industry.

Together, these acquisitions enable us to provide a multi-peril approach to risk management, ensuring our clients are better equipped to handle the compounding risks posed by climate change.

### Can you share an example of how Technosylva's solutions have improved wildfire response for fire agencies?

One of our most impactful collaborations is with the California Department of Forestry and Fire Protection (CAL FIRE), the State agency responsible for protecting natural resources from fire. CAL FIRE uses our tools to enhance situational awareness and operational decision-making during wildfire events. For instance, our real-time fire spread predictions and resource tracking capabilities provide a continuously updated overview of incident dynamics, enabling fire agencies to allocate resources more effectively and prioritize high-risk areas.

Additionally, our Tactical Analyst tool increases situational awareness for firefighters and fire managers, helping them plan and respond more effectively. By integrating with federal incident management systems, Tactical Analyst provides intuitive access to wildfire data, improving safety and operational efficiency. These real-world applications demonstrate how Technosylva's solutions drive better outcomes for fire agencies and the communities they serve.

### How does Technosylva integrate AI and real-time data to enhance wildfire risk modeling and decision-making?

AI and real-time data are at the heart of our platform, enabling us to deliver highly accurate, actionable insights. Our system performs more than one billion simulations daily, with real-time weather forecasts, fuel data, and terrain information to predict fire spread and assess potential impacts. This allows stakeholders to anticipate wildfires and prioritize resources.

For example, our platform can forecast outage severity days in advance, helping utilities pre-position crews and equipment. It also supports "what-if" scenario analysis, enabling fire agencies to evaluate the potential impacts of pending weather events and adjust strategies accordingly. By combining AI with advanced modeling, we provide a data-driven foundation for resilience planning and operational decision-making.

#### INVESTOR SPOTLIGHT



BeyondNetZero is the climate growth equity fund of General Atlantic, focused on investing in innovative growth companies that provide solutions to address climate change. With an emphasis on decarbonization, energy efficiency, resource conservation, and emissions management, BeyondNetZero aims to support businesses that have the potential to achieve and exceed net-zero emissions targets while driving sustainable growth.

“Technosylva is redefining how communities and industries confront the growing risks of climate-driven natural disasters. Its AI-powered platform combines advanced science with real-world insight to predict, mitigate, and respond to severe weather events—partnering with utilities, insurers, public agencies, and other organizations worldwide.

Alongside TA Associates, we are proud to support Technosylva's mission to mitigate environmental risks and enhance public safety—helping communities and industries better prepare for and adapt to the growing impacts of climate change.”

– Wilson Bowen, Partner, BeyondNetZero





### ***Strengthening Electrical Infrastructure for Wildfire Resilience***

- Based in Huntington Beach, California
- Led by former CTO of legacy technology
- Backed by Wellington, National Grid Partners, and Breakthrough Energy
- Raised \$85M+ in funding

TS Conductor is at the forefront of grid modernization, providing advanced power line technology designed to meet the challenges of a rapidly transitioning energy landscape. TS Conductor's high-performance conductors offer utility clients up to three times the capacity of traditional power lines, reduce energy losses by up to 50%, and enhance resilience against extreme weather and wildfires. Suitable for both new builds and retrofitting projects, TS Conductor's low-sag properties allow utilities to maximize capacity while minimizing the need for additional or taller utility poles, offering a cost-effective solution for grid upgrades.

***With Jason Huang, Co-Founder & CEO***

### **What makes TS Conductor's technology a game-changer for the grid and clean energy transmission?**

Unlike traditional Aluminum Conductor Steel-Reinforced (ACSR) power lines, which were invented over a century ago, our Aluminum Encapsulated Carbon Core (AECC) technology offers modern solutions tailored to today's needs.

ACSR power lines were introduced in 1908, and the technology has not changed materially since. Globally, the technology still represents over 95% of the utility cables.

Our conductors can triple the capacity of existing lines during peak electricity demand, making them ideal for integrating renewable energy projects and relieving grid bottlenecks. They also reduce line losses by up to 50%, improving energy efficiency and lowering costs for utilities and consumers. The low thermal sag and heat-stable aluminum also means that our conductors require fewer support beams, driving efficiencies in construction and maintenance costs.

### **How does TS Conductor enhance resilience to wildfires and extreme weather events?**

Wildfires and extreme weather events are becoming more frequent and severe, posing significant risks to power infrastructure.

Our technology enhances wildfire resilience by minimizing thermal sag, ensuring safe clearances even under intense heat. Unlike traditional ACSR conductors, which often sustain permanent damage and require replacement after fire exposure, our pre-annealed aluminum design retains its mechanical properties, reducing costly repairs and improving long-term reliability.

In high-wind conditions, our trapezoidal wire design and compact profile reduce wind drag by up to 40%. This reduces tension loads on supporting structures, enhancing overall system stability. By addressing these risks at the design level, TS Conductor provides utilities with infrastructure that is inherently more resilient to extreme conditions.

### **Can you share an example of how TS Conductor's technology is already making an impact?**

Our technology is deployed by utilities across North America, including Montana-Dakota Utilities Company (MDU), Arizona Public Service (APS), and Tennessee Valley Authority (TVA). In a reconductoring project, our conductors replaced legacy ACSR lines, tripling line capacity and enabling renewable energy integration without new infrastructure.

In wildfire-prone regions, utilities are using our conductors to minimize thermal sag and maintain performance during extreme heat, helping prevent outages and reduce maintenance costs. These applications highlight the transformative impact of TS Conductor's solutions on grid resilience and capacity.

### **What role does TS Conductor play in accelerating the deployment of renewable energy?**

The energy transition requires a grid capable of integrating large-scale renewable energy projects, and TS Conductor is helping utilities achieve this quickly and affordably. Our conductors are ideal for reconductoring projects, where existing power lines are upgraded without the need for new towers or infrastructure. This allows utilities to triple grid capacity in a fraction of the time and cost required for traditional upgrades.

For new build projects, our low-sag properties reduce

capital expenditures by enabling the use of fewer and shorter towers. This not only speeds up project timelines but also minimizes environmental impacts. Additionally, our technology aligns with regulatory developments like FERC Order No. 1920, which mandates the consideration of grid-enhancing technologies in long-term planning. By providing a proven, scalable solution, TS Conductor is unlocking the potential of renewable energy while addressing the urgent need for grid modernization.

**TS Conductor recently raised \$60 million in funding. How will this investment support the company's growth and impact?**

The \$60 million funding round, led by Wellington Management and supported by investors like Breakthrough Energy Ventures and National Grid Partners, is a major milestone for TS Conductor. This capital will enable us to scale our operations to meet surging demand for our high-performance conductors.

A significant portion of the funding will go toward opening a second production facility east of the Mississippi River, complementing our existing ISO-certified facility in Southern California. This expansion will allow us to increase production capacity and reduce lead times for utilities across North America. Additionally, the funding will support ongoing innovation, ensuring that our technology continues to address the evolving needs of the energy sector. TS Conductor is well-positioned to drive grid modernization and accelerate the transition to a clean energy future.

## INVESTOR SPOTLIGHT

### WELLINGTON MANAGEMENT®

Wellington Management is a global investment manager with over \$1Tn in assets under management. Its Private Investing platform manages more than US\$9.7bn in assets under management across venture capital, private credit, and real estate. Through its private climate strategy, Wellington invests in growth-stage companies developing climate solutions, accelerating the deployment of proven digital and tech-enabled solutions.

*“At Wellington, we dedicate significant time to understanding adaptation and resilience, identifying businesses that deliver market-driven solutions that aim to solve customer pain points—a persistent theme amid an evolving climate landscape.”*

*TS Conductor is uniquely positioned to benefit from two significant tailwinds: the need to manage the impact of AI-driven load growth on the grid and the urgent necessity to harden electrical infrastructure against extreme storms and to prevent wildfires. These dual drivers highlight an important role TS Conductor plays in advancing grid modernization and climate resilience.”*

**– Greg Wasserman, Head of Private Climate Investing, Wellington**





## WATER

According to the United Nations, 2.2 billion people globally lack access to safely managed drinking water services,<sup>23</sup> and by 2050, global water demand is expected to rise as much as 50%.<sup>24</sup> While drought and over-extraction are intensifying water stress in certain regions, other areas simultaneously face the opposite extreme—flooding that is now estimated to cost between \$179.8 billion and \$496 billion annually.<sup>25</sup> This widening volatility of too little water in some places and too much in others is reshaping how utilities, insurers, and municipalities plan for resilience. Tools like water quality monitoring, leakage detection, flood forecasting, and water circularity solutions are increasingly essential in this era of water instability.



### *Unlocking Water Reuse for Toughest Streams*

- Based in Woburn, Massachusetts
- Installed at 50+ industrial sites globally
- Backed by Evok Innovations, DCVC, and BHP
- Raised \$101M+ in funding

ZwitterCo's solutions drive water reclamation and strengthen operational resilience to climate-induced water stress. Utilizing patented zwitterionic chemistry, its membranes resist organic fouling, allowing industries to treat previously untreatable wastewater. ZwitterCo serves clients across sectors such as food and beverage, agriculture, oil and gas, and manufacturing, helping achieve sustainable water reuse and meet stringent regulatory standards.

*With Alex Rappaport, Co-Founder & CEO*

### **How does ZwitterCo's technology enable industries to treat wastewater streams that were previously considered untreatable?**

Unlike conventional hydrophobic membranes that adhere to oils and clog easily, our zwitterionic membranes are extremely hydrophilic (i.e., "water-loving") and form a water shield that prevents contaminants from sticking. This is achieved because zwitterionic molecules maintain an inherent positive and negative charge, so they have a salt-like attraction to water. The result is a fouling-resistant membrane that can handle even the most challenging wastewater streams, such as landfill leachate, food processing effluents, and oil and gas wastewater.

Traditional membrane technologies, while well-understood and cost-effective, have a narrow operating window and are highly susceptible to fouling, particularly when dealing with complex wastewater streams containing oils, proteins, and other organic contaminants. These contaminants clog traditional membranes, making wastewater reuse impractical and forcing industries to rely on increasingly scarce freshwater resources.

### **How do you see ZwitterCo's solutions evolving in the future to address emerging water challenges caused by climate change?**

Climate change is disrupting the natural water cycle, leading to more frequent droughts, water variability, and regional shortages.

As we expand globally, we are investing in new membrane processes that unlock water reuse in industries and regions where it was previously impossible. For instance, our Expedition SF membranes can transform wastewater into a resource for irrigation or industrial use, even in water-stressed areas like South Africa. By continuing to innovate, we aim to secure a sustainable water future for industries and communities worldwide.

Climate change challenges are compounded by the rising water demands of industries critical to the low-carbon transition, such as renewable energy, hydrogen production, and critical mineral recovery.

At ZwitterCo, we see our technology playing a pivotal role in building resilience against these challenges.

### **Can you share a specific case study where ZwitterCo's technology has significantly improved water reuse or operational efficiency for a client?**

One of the most compelling examples of ZwitterCo's impact comes from a bioprocessing manufacturer operating in a water-stressed region. This client faced significant challenges in managing their fermentation wastewater, which was not only difficult to treat but also limited their ability to expand production due to water scarcity. By integrating ZwitterCo's membrane technology, the manufacturer was able to recycle 80% of their fermentation wastewater. This breakthrough allowed them to significantly reduce their dependence on freshwater resources, enabling the company to expand production of a sustainable protein product without increasing their environmental footprint.

### **What role does ZwitterCo play in helping industries navigate tightening water regulations?**

Our membranes enable industries to achieve higher levels of water reuse, reduce discharge volumes, and meet stringent effluent quality standards. By enabling cost-effective water reuse, ZwitterCo helps industries future-proof their operations against the risk of water scarcity as well as impending regulatory risks.

Governments worldwide are implementing stricter water regulations to address scarcity and pollution, which puts pressure on industries to adopt sustainable water management practices. For example, regions like the European Union are passing regulations strengthening the rigor of wastewater discharge.



This is particularly important for sectors like agriculture and food and beverage manufacturing, where water is both a critical input and a potential source of regulatory scrutiny.

**ZwitterCo recently closed a \$58.4 million Series B funding round. How will this funding accelerate your mission and scale the impact of your technology?**

The Series B funding, led by Evok Innovations and supported by DCVC, BHP, and others, is a testament to the urgency of the water crisis and the value of our technology. This capital will enable us to rapidly scale our operations, advance our technology platform, and expand our global footprint.

We are strategically investing in international markets, with plans to establish partnerships and standardize solutions for industries like food and beverage, agriculture, and power generation. Additionally, the funding will support the commissioning of new facilities and the development of next-generation membranes to tackle even more complex water challenges. By scaling our impact, we aim to help industries reduce water treatment costs, improve operational efficiency, and build resilience against climate-induced water stress.

## INVESTOR SPOTLIGHT



Founded in 2016, Evok Innovations was created to scale transformative energy technologies in collaboration with heavy industry. With a largely strategic LP base made up of top players in heavy industry, Evok invests in early- to mid-stage companies developing deeptech solutions in four areas: energy, critical minerals, industrial optimization, and adaptation & resilience.

*“At Evok, we look for companies that combine cutting-edge technology with a clear path to industrial impact, and ZwitterCo is a perfect example of this. Water is the foundation of so many critical processes, from manufacturing to mineral processing.*

*ZwitterCo’s ability to handle the most complex wastewater streams and turn them into reusable resources is a breakthrough for industries facing both regulatory pressures and resource constraints. This is the kind of innovation that not only addresses today’s challenges but also creates long-term resilience.”*

**– Naynika Chaubey, Partner, Evok Innovations**

# FLOODBASE

## *Powering Flood Resilience with Real-Time Data*

- Based in New York, NY
- Enables 10,000+ insurance policies and has been used in 30+ countries
- Backed by Burnt Island Ventures, Collaborative Fund, and Lowercarbon Capital
- Raised \$20M+ in funding

Floodbase is redefining flood risk management through its AI-driven platform, which combines cutting-edge satellite technology, computer vision, and historical flood data to deliver continuous, near real-time flood monitoring. Floodbase's solutions enable parametric insurance payouts within days of a flood event, empowering businesses, governments, and communities to recover swiftly and build resilience against future disasters.

## *With Bessie Schwarz, Co-Founder & CEO*

### **What inspired the creation of Floodbase, and how did you identify the need for a new category of parametric flood insurance?**

Flooding is the most common and costly natural disaster worldwide, yet 83% of flood losses remain uninsured.<sup>26</sup> This staggering statistic highlights a massive protection gap that leaves communities, businesses, and even entire economies vulnerable to financial devastation. The traditional insurance model, which often focuses on direct property damage, fails to address the broader economic losses caused by floods, such as lost tax revenue, business interruption, and disaster response costs. Payouts can often take months or even years to process, leaving communities and businesses in financial limbo when they are most vulnerable.

Floodbase was born out of a need to address these challenges. Initially funded by Google AI, we developed a revolutionary approach to flood analytics, leveraging satellites, ground sensors, and computer vision to continuously map flooding at high resolution. The parametric insurance model provides rapid payouts based on the magnitude of flooding objectively measured by Floodbase, offering a flexible financial safety net for previously uninsurable risks. This innovation ensures that communities and businesses can recover quickly and build resilience against future flood events.

### **How does Floodbase provide near real-time flood data, and what challenges did you face in developing this capability?**

Our platform combines AI with a variety of satellite data streams, including optical, radar, and infrared imagery, to create a continuous, near real-time map of flooding across the globe. Using computer vision, we analyze every pixel to detect water presence, stitching together data from multiple satellite types to ensure seamless coverage. This process is enhanced by decades of historical flood data, which we use to infer gaps in the real-time data stream.

One of the biggest hurdles was managing the sheer volume of data—terabytes of imagery requiring advanced algorithms for efficient, accurate processing. This challenge led to the development of proprietary ML algorithms capable of near real-time analysis. Additionally, integrating diverse data sources like optical, radar, and infrared imagery required innovation to ensure seamless coverage and reliable flood detection, even under complex conditions such as cloud cover or varying resolutions.

### **Can you share a specific case study where Floodbase's technology has significantly improved resilience for a community or organization?**

One of the most impactful examples of our work is with the city of Fremont, California. Fremont is a mid-sized town prone to flooding, and its traditional flood insurance policies had significant limitations. In 2023, the city experienced significant flood damage in multiple areas but did not receive any insurance payouts, as its policy only covered the police station, which remained unaffected by the flooding.

Fremont's risk manager decided to switch to a Floodbase-powered parametric insurance policy. By drawing a boundary around the city and setting a flood threshold, Fremont ensured that any severe flooding within its borders that crosses this threshold would trigger an immediate payout. This innovative approach provided the city with rapid financial support for disaster response and recovery, and impacts across their entire portfolio of buildings, eliminating the delays and uncertainties of traditional insurance. The success has set a precedent for municipalities seeking to protect their communities and finances from the growing threat of floods.

### **How has Floodbase's approach to partnerships and client collaboration driven its success in addressing the global flood protection gap?**

Partnerships and client collaboration are at the core of Floodbase's mission to close the global flood protection

gap. We've built strong relationships with leading insurers, reinsurers, governments, and organizations to ensure our solutions are widely accessible and impactful. For example, we've partnered with Swiss Re, Liberty Mutual Re, and AXA Climate to design and implement innovative parametric flood insurance solutions. These collaborations have enabled us to support over 10,000 flood insurance policies across 40+ countries, covering risks that were previously uninsurable.

In the public sector, our partnership with FEMA has been groundbreaking. We collaborated to create a national flood

intelligence system that delivers continuous, near real-time flood monitoring to support disaster response efforts. During hurricane seasons, FEMA utilizes Floodbase to monitor over 500,000 square miles, significantly improving situational awareness and enhancing their ability to respond effectively to emergencies.

By aligning with key partners and tailoring solutions to meet diverse client needs, we're not only advancing flood risk management but also enabling communities and businesses to recover faster and build long-term resilience.

## INVESTOR SPOTLIGHT



Burnt Island Ventures is a venture capital firm dedicated exclusively to funding early-stage water innovation. Burnt Island identifies, funds, and scales breakthrough technologies addressing critical challenges in water treatment, distribution, monitoring, and climate resilience.

“Burnt Island Ventures looks for founders with deep, niche expertise in their industry, a sharp focus on solving specific customer pain points, the ability to build comprehensive business solutions, and a thoughtful approach to navigating the water sector.

*Bessie Schwarz and the team at Floodbase exemplify these qualities. With a profound understanding of flood risk and resilience, they've built a groundbreaking platform that delivers actionable insights to governments, insurers, and businesses. Their leadership and vision are driving innovative solutions to one of the world's most pressing water challenges, making Floodbase a perfect partner for Burnt Island Ventures.”*

– Tom Ferguson, Founder & Managing Partner, Burnt Island Ventures



## BUILT ENVIRONMENT

As climate change accelerates, the physical assets that underpin the urban environment, such as buildings, roads, bridges, and utility systems, face increasing disruption and stress. With buildings responsible for 31% of US greenhouse gas emissions, the sector remains a priority for both decarbonization and climate risk management.<sup>27</sup> This dual challenge of reducing emissions and hardening assets is defining how investors and infrastructure owners are thinking about the sector. Solutions like resilient construction materials, infrastructure digital twins, retrofitting technologies, and asset analytics and management can help future proof the built environment and unlock adaptation alpha creation.





### ***Advancing Energy Efficiency and Resilience in Construction***

- Based in BC, Canada
- North America's first Passive House-certified window design
- Canada's first manufacturer of best-in-class wildfire resistant windows
- Backed by MKB, Canada Growth Fund, and Blue Earth Capital

Cascadia Windows & Doors is a leader in high-performance fiberglass window and door systems. With a mission to reduce the environmental footprint of construction, Cascadia's solutions support net-zero building goals while addressing systemic challenges like extreme temperatures and wildfire risks. The company's innovative products deliver industry-leading thermal efficiency, durability, and wildfire resistance.

***With Mike Battistel, Co-Founder & President***

### **What inspired the founding of Cascadia, and how has the company evolved since 2008?**

Cascadia was founded by a group of building envelope specialists in response to the lack of commercial grade window options that could enable buildings to meet the growing demand for energy efficiency and durable buildings. Recognizing fiberglass as the optimal window frame material because of its durability, low conductivity, and strength, we founded Cascadia to create high-performance fiberglass solutions for all building types including high-rise applications, revolutionizing available window performance levels.

Since then, we've developed products to meet Canada's net-zero energy-ready goals, including North America's first Passive House-certified window, the world's first fiberglass window wall, and the Cascadia Clip®, which reduces thermal bridging in cladding systems. We also became the first Canadian window manufacturer to meet California's wildfire standard test, reinforcing our commitment to sustainability and resilience in the face of growing climate risks.

### **Who are Cascadia's primary customers, and what is the value-add of your products?**

Our primary customers include long-term building owners such as multi-unit residential HOAs, landlords, hospitals, schools, and dormitories. These clients prioritize durability and lifecycle performance to avoid the high cost and disruption of replacing vinyl- or aluminum-framed windows every 20-40 years at the end of their lifespan. An entirely new envelope of windows can cost as much as the building itself.

Cascadia's fiberglass windows, with a lifespan of up to 80 years, offer a cost-effective, sustainable alternative. They resist corrosion, rot, UV degradation, and extreme temperatures, maintaining structural integrity over decades. Additionally, they improve thermal insulation by up to 250%, enhancing tenant comfort and reducing energy costs. These financial savings for our customers translate to less waste and lower emissions from the built environment.

### **How has your company responded to the growing demand for wildfire-resistant building materials, and what role do wildfire standards and insurance industry trends play in your innovation strategy?**

When we learned about the California Wildfire Standard, we immediately saw an opportunity to innovate. Windows are often the most vulnerable point in buildings during wildfires, so our Technical Director, Michael Bousfield, led efforts to develop solutions that meet this standard. We became the first Canadian window manufacturer to successfully meet the California Wildfire Standard test.

Insurance underwriters, who have traditionally focused on roofs and siding, are now asking about windows when assessing wildfire risk. We anticipate wildfire-resistant materials, including windows, will play a larger role in determining premiums. This shift represents a significant opportunity as demand for resilient building materials grows.

### **How does Cascadia's partnership with LuxWall enhance the performance of its products in extreme weather conditions?**

Our partnership with LuxWall integrates their vacuum-insulated glass technology into our fiberglass window frames, creating a groundbreaking window system with a thermal performance, 40% higher than traditional fiberglass windows.

This enables buildings in extreme climates to increase window surface areas without compromising energy efficiency. The enhanced insulation ensures superior performance in both extreme heat and cold, reducing energy consumption and operational costs while meeting stringent energy codes and net-zero building standards.

### What makes Cascadia an attractive investment for climate-focused investors?

Cascadia aligns perfectly with the priorities of climate-focused investors like MKB, the Canada Growth Fund, and Blue Earth Capital. These investors recognize that buildings account for a significant portion of global greenhouse gas emissions, with windows often being the weakest link in energy performance. Our fiberglass systems directly address this challenge, helping to decarbonize the built environment.

The market opportunity is immense. In the U.S., approximately 60% of commercial buildings were built before 1990, meaning a large share of windows are now several decades old and nearing the end of their lifespan.<sup>28</sup> Tailwinds from stricter energy codes, rising energy costs, and growing demand for insurance-smart and wildfire-resistant windows further highlight the importance of our solutions. Our products provide a durable, cost-effective, and sustainable path to decarbonizing buildings.

#### INVESTOR SPOTLIGHT

# MKB

MKB is a North American private investment firm specializing in growth-stage companies driving the energy transition. Focused on clean energy, mobility, the built environment, and industrials, MKB provides long-term growth capital to accelerate decarbonization.

“Cascadia sits squarely within our strategy to scale solutions that decarbonize the built environment and strengthen climate resilience. Energy price volatility, tightening efficiency standards, and increasing climate-driven risks are reshaping how buildings are designed and upgraded. Cascadia’s high-performance fiberglass fenestration technology addresses these pressures directly by improving thermal performance, reducing operating costs for owners, and enhancing durability in demanding environments.

We are excited to support Cascadia as they expand across new markets in North America.”

– Chanel Damphousse, Partner, MKB

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1. <https://www.ipcc.ch/report/ar6/wg2/chapter/annex-ii/>
2. <https://www.moodys.com/web/en/us/insights/insurance/los-angeles-wildfires-implications-for-casualty-insurers.html>
3. <https://www.aon.com/en/insights/reports/climate-and-catastrophe-report>
4. <https://www.aon.com/en/insights/reports/climate-and-catastrophe-report>
5. <https://www.moodys.com/web/en/us/insights/physical-transition-risk/catastrophic-events-in-an-uncertain-future-a-pending-41-trillion-bill-for-businesses-and-governments-to-resolve.html>
6. <https://www.zurich.com/media/magazine/2022/there-could-be-1-2-billion-climate-refugees-by-2050-here-s-what-you-need-to-know>
7. <https://www.aon.com/en/insights/reports/climate-and-catastrophe-report>
8. <https://www.aon.com/en/insights/reports/climate-and-catastrophe-report>
9. <https://www.bcg.com/publications/2025/investment-opportunities-in-climate-a-and-r>
10. <https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2025/>
11. <https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2025/>
12. <https://www.msci-institute.com/themes/climate/harnessing-ai-to-make-climate-adaptation-investable/>
13. <https://www.mckinsey.com/capabilities/sustainability/our-insights/climate-resilience-technology-an-inflection-point-for-new-investment>
14. <https://www.pwc.com/gx/en/issues/esg/climate-tech-investment-adaptation-ai.html#chapter4>
15. <https://img1.wsimg.com/blobby/go/66c2ce28-dc91-4dc1-a0e1-a47d9ecd17d/downloads/CRISP%202024%20-%20Climate%20Resilience%20Investments%20in.pdf?ver=1710424705295>
16. <https://www.spglobal.com/sustainable/en/insights/special-editorial/cerawee-physical-risk>
17. <https://www.tomorrow.io/blog/tomorrow-io-tomorrownow-org-and-one-acre-fund-boost-kenyan-farmers-yields-by-12/>
18. <https://www.jec.senate.gov/public/index.cfm/democrats/reports?id=E31AF93E-34C7-4C35-A416-533FF796369B>
19. <https://www.climatecentral.org/climate-matters/surging-weather-related-power-outages>
20. <https://www.sdcexec.com/safety-security/risk-compliance/article/22445364/resilinc-weatherproofing-supply-chains-against-climate-risk>
21. <https://neptuneflood.com/research/primary-residential-market-analysis/>
22. <https://www.iii.org/article/facts-about-flood-insurance>
23. <https://news.un.org/en/story/2019/06/1040701>
24. <https://www.dni.gov/index.php/gt2040-home/gt2040-deeper-looks/future-of-water>
25. <https://www.jec.senate.gov/public/index.cfm/democrats/issue-briefs?ID=276AFFB8-7F15-4F16-BFE8-56C16D32BF26>
26. <https://www.forbes.com/video/af70a949-2f3c-4627-91be-d6b03bcd55da/83-of-flood-related-losses-are-uninsured-flood-base-is-changing-that/>
27. <https://www.epa.gov/ghgemissions/commercial-and-residential-sector-emissions>
28. <https://www.eia.gov/consumption/commercial/data/2018/bc/pdf/b8.pdf>

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