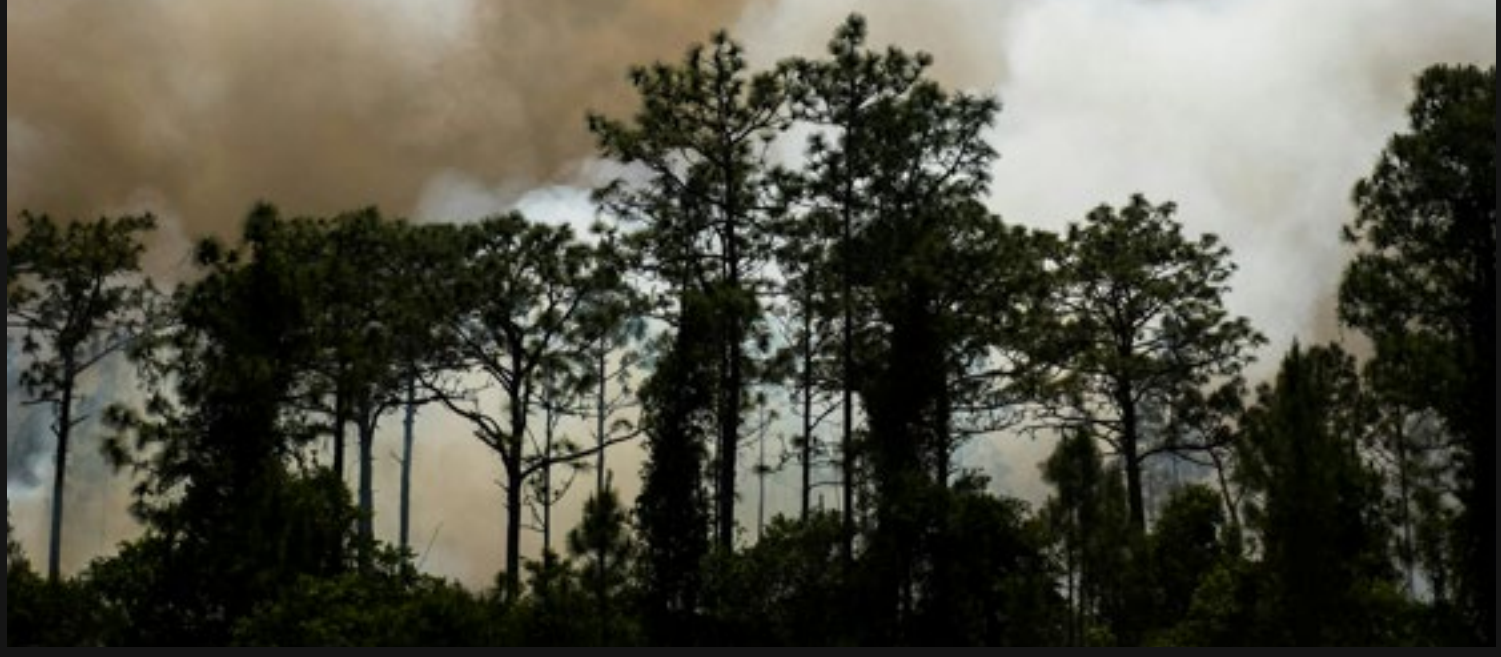
XPRIZE WILDFIRE | PG&E | GORDON AND BETTY MOORE FOUNDATION

END DESTRUCTIVE WILDFIRES



SEMIFINALIST TEAMS BOOK 2025

AUTONOMOUS WILDFIRE RESPONSE

JULY 2025

THIS IS WHAT 21ST-CENTURY CLIMATE RESILIENCE LOOKS LIKE: BOLD IDEAS, TESTED RIGOROUSLY, AND DEPLOYED AT A PLANETARY SCALE.

- Dr. Catherine Ball, PhD | XPRIZE Wildfire Advisory Board Member

PRIZE OVERVIEW

Around the world, wildfires are increasing in intensity, frequency, and destruction, and innovation to detect and manage wildfire events has not kept pace with the mounting challenges. Often, wildfires start in hard-to-reach areas and are fueled by climate change-related extreme weather events, such as severe droughts, extreme winds, and heatwaves. As more people move into wildfire-prone areas, the risk of ignition and impacts on human life and infrastructure increase tremendously. Current detection and delivery of resources are often too slow, insufficiently coordinated, and not precise enough, leading to delayed responses and risk of wildfires becoming destructive.

XPRIZE Wildfire is a 4-year, $11 million competition incentivizing the innovation of firefighting technologies that will end destructive wildfires so that humanity and beneficial wildfire can safely co-exist. The prize aims to transform current wildfire management approaches through the development of new technologies that can rapidly and accurately detect, characterize, and respond to wildfires before they become destructive.

The $5M Autonomous Wildfire Response Track will transform how fires are managed and fought. The winning team will have 10 minutes to autonomously detect and suppress a high-risk fire in a 1000 km2, environmentally challenging area, leaving any decoy fires untouched.

Additionally, the **$1 million Lockheed Martin Accurate Detection & Intelligence Bonus Prize** will be awarded to one or more eligible teams participating in the Autonomous Wildfire Response track whose competition entries successfully demonstrate accurate, precise, and rapid detection.

These innovations seek a 4x gain in current best practices— shortening the time between detection and rapid response to inform management practices and minimize negative impacts.

Contact the XPRIZE Wildfire team at wildfire@xprize.org

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ACKNOWLEDGEMENTS

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Learn more about our Sponsors.

JUDGES

An esteemed, independent panel of judges—comprising wildland firefighters, technical experts, and wildfire researchers—evaluates team performance at each milestone of the competition. Selected through a rigorous vetting process, the judges bring deep expertise in areas like fire science, remote sensing, autonomous systems, and emergency response.

At every stage, they review materials and test results, scoring each solution against criteria defined in the Competition Guidelines and Rules & Regulations. They are tasked with identifying the most promising technologies to detect and suppress destructive wildfires safely, quickly, and autonomously. Their decisions are final and grounded in fairness, scientific rigor, and real-world relevance.

Meet the Judging Panel.

ADVISORY BOARD

The XPRIZE Wildfire Advisory Board is a global group of experts spanning wildfire science, climate resilience, emergency management, Indigenous knowledge, conservation, and advanced technologies. These thought leaders play a critical role in shaping the prize, helping to guide and support the competition to ensure real-world relevance and impact.

Meet the Advisory Board.

*XPRIZE Wildfire would also like to offer special thanks to our **partners**, who have lent their invaluable expertise and support to XPRIZE Wildfire and the competing teams. Your generous guidance has made an incredible impact on XPRIZE and our mission, and we are deeply appreciative of your ongoing commitment to helping us end destructive wildfires.*

XPRIZE WILDFIRE | PG&E | GORDON AND BETTY MOORE FOUNDATION

WILDFIRE

AUTONOMOUS WILDFIRE RESPONSE SEMIFINALIST TEAMS

AUTONOMOUS WILDFIRE RESPONSE

JULY 2025

COMPANY OVERVIEW

TEAM / COMPANY NAME
AeroWatch

LOCATION
Barcelona, Spain

FUNDRAISING DETAILS

CONSORTIUM
Avy, BCN Drone Center, CATUAV, CTTC, Flare Bright, Flying Objects, Gotonomi, Near Space Labs, Pau Costa Foundation, Robotto, Skycharge, Swift Aeronautics, Viasat, Videosoft, Volant

COMMERCIAL STAGE
Prototype System Verified

INVESTMENT STAGE
N/A

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AEROWATCH

COMPANY DESCRIPTION

The AeroWatch team is an international consortium promoted by BCN Drone Center and CTTC, both with over a decade of experience in developing innovative solutions for first responders. The goal is to bring together diverse perspectives to enable the effective deployment and scalability of these technologies. Our consortium members offer commercial solutions already in use for emergency response, which we are now integrating into a system-of-systems approach. This integrated solution is currently being developed and validated as part of the XPRIZE Wildfire Challenge.

CORE INNOVATION

AeroWatch is developed with a comprehensive approach, addressing all four key phases of wildfire management: forecasting (identifying areas with the highest risk of ignition), early detection, autonomous suppression, and—if autonomous efforts fail—real-time data support for emergency response teams. The system's key innovation lies in its unified interface, which provides emergency managers with all relevant information in one place and enables effective coordination of all available robotic resources.

CORE TEAM MEMBERS

- Avy: VTOL UAS with vertiport, equipped with high-resolution RGB and thermal cameras for surveillance and detection.
- BCN Drone Center: UAS Test Site and Training School.
- CATUAV: UAS engineering company with expertise in system-of-systems integration and deployment.
- CTTC: Specialists in combining multi-mode/multi-source geospatial data with AI algorithms.
- Flare Bright: Navigation in GNSS-denied and complex environments.
- Flying Objects: IP mesh communications and advanced payloads.
- Gotonomi: Satcom hardware for drones.
- Near Space Labs: Earth observation data via stratospheric robotic balloons.
- Pau Costa Foundation: Fire ecology specialists and liaison with first responders.
- Robotto: Fire detection and tracking algorithms.
- Skycharge: Autonomous modular vertiports with self-charging capabilities.
- Swift Aeronautics: UAS firefighting OEM.
- Viasat: Satcom service provider.
- Videosoft: Video compression for communications-limited environments.
- Volant: Flight plan optimization and detect-and-avoid solutions.

COMPANY OVERVIEW

TEAM / COMPANY NAME
Agni

LOCATION
Dresden, Germany

FUNDRAISING DETAILS

CONSORTIUM
TRID Systems and the Technical University of Applied Sciences Wildau (TH Wildau), Harald Müller Metall-Sonderfertigung GmbH, Meshmerize

COMMERCIAL STAGE
Integrated pilot system demonstrated

INVESTMENT STAGE
Pre-seed

trid-systems.com/agni/

AGNI

COMPANY DESCRIPTION

Team Agni brings together the know-how of TRID Systems and the Technical University of Applied Sciences Wildau (TH Wildau). Team Agni focuses on autonomous UAV systems and data analysis, while TH Wildau provides expertise in designing, manufacturing, and integrating UAVs. Their system comprises two types of autonomous UAVs working in a coordinated swarm. The first type includes fuel-powered jets designed to cover vast areas. These are equipped with RGB and infrared cameras, coupled with AI for fast and precise detection of smoke, fires, and other environmental factors. The second type consists of large copters capable of carrying substantial loads, such as water, for direct delivery to the detected fires.

Team Agni is also supported by Harald Müller Metall-Sonderfertigung GmbH and Meshmerize.

CORE INNOVATION

Team Agni integrates a fully autonomous solution in monitoring, decision-making, and dispatching UAVs (both jets and copters) across a 1,000 km2 area with the use of multi-agent coordination, dynamic path planning, and real-time data exchange to handle unpredictable wildfire growth under challenging terrain and weather. By partnering with leading developers, the consortium is at the forefront of groundbreaking initiatives, such as the development of a swarm of multicopters capable of delivering 35 liters of fire suppression each. This pioneering technology holds significant potential to improve firefighting capabilities and reduce the impact of wildfires.

CORE TEAM MEMBERS

- Niclas Trelle (TRID Systems)
- Robert Rathmann (TRID Systems)
- Marius Matzke (TRID Systems)
- Lars Muth (TH Wildau)

COMPANY OVERVIEW

TEAM / COMPANY NAME
Anduril

LOCATION
Costa Mesa, CA, USA

FUNDRAISING DETAILS

CONSORTIUM
(Not specified)

COMMERCIAL STAGE
Prototype System Verified

INVESTMENT STAGE
Series G

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ANDURIL

COMPANY DESCRIPTION

Anduril is a defense technology company founded in 2017, combining Silicon Valley talent with veteran experience to develop software-defined solutions for critical missions. With over 6,000 employees in offices worldwide, Anduril is at the forefront of designing software and hardware solutions that merge autonomy with commercial technologies. The company is dedicated to R&D, rapidly deploying AI/ML capabilities, and has established a track record of delivering integrated solutions in operational settings.

The Anduril team is focused on deploying the Lattice OS core—a platform harnessing sensor fusion and workflow automation. This group is adept in data-driven operations, MLOps, and secure computing, leveraging commercial tech against real-world challenges. Open to partnerships, Anduril aims to contribute Lattice OS to the XPRIZE Wildfire challenge, offering an AI-enabled, open platform that promotes rapid prototyping, prevents data lock-in, and facilitates third-party innovation for dynamic command and control solutions.

CORE INNOVATION

Anduril's solution integrates advanced AI and machine learning through a software-defined, hardware-enabled approach. The Lattice software platform uses advanced algorithms, machine learning, and computer vision to process real-time data from a network of integrated sensors and devices. This enables predictive modeling and automated wildfire response. Sentry Towers, equipped with state-of-the-art sensors and AI analytics, continuously monitor for early signs of wildfires and provide real-time alerts and precise location information. Ghost-X enhances detection and provides early suppression capability through aerial reconnaissance, delivering close-up situational awareness and reducing false positives. Lattice OS's open architecture promotes rapid prototyping, prevents vendor and data lock-in, and supports third-party innovation and enterprise-wide iteration.

CORE TEAM MEMBERS

- Palmer Luckey: Founder of Anduril
- Burhan Mustafa: TRS Division Lead
- Deji Gbade-Alabi: Project Lead
- Kevin Christensen: ATR Software Lead
- Rohit Gajawada: Tower Perception Software Lead
- Dohun Jeong: Robotic SW Lead
- Aidan Fay: Mechanical Suppression Lead
- Taha Shamshudin: Test and Evaluation Lead

COMPANY OVERVIEW

TEAM / COMPANY NAME
Crossfire

LOCATION
College Park, MD, USA

FUNDRAISING DETAILS

CONSORTIUM
University of Maryland Department of Engineering, University of Maryland College of Mathematics and Natural Sciences, Maryland Robotics Center, Maryland Fire and Rescue Institute, UMD UAS Research and Operations Center, UMD MATRIX Lab

COMMERCIAL STAGE
Prototype System Verified

INVESTMENT STAGE
Pre-seed

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CROSSFIRE

COMPANY DESCRIPTION

Headquartered at the University of Maryland, College Park, Team Crossfire was formed in 2023 as a multi-departmental collaboration between the UMD Aerospace and Fire Protection Engineering departments, xFoundry, the MATRIX Lab, and the UROC.

Our core mission is to develop a scalable, autonomous UAV system that rapidly detects, localizes, and suppresses incipient wildfires. Our framework utilizes scout UAVs for wide-area surveillance and specialized “Firejumper” UAVs for precision suppression, leveraging an advanced AI-driven fusion of thermal and RGB data to ensure high accuracy and eliminate false positives.

Key milestones include the development of our core operational framework, the ‘Fire Process Chain,’ which integrates autonomous detection, localization, and suppression. This framework was validated by a successful end-to-end field test in March 2025. This live-fire demonstration proved our system’s ability to autonomously detect and localize fires using fused sensor data and accurately deliver a suppressant payload, establishing the real-world viability of our technology.

CORE INNOVATION

Crossfire’s primary advantage stems from a unique integration of expertise. The team combines leaders in UAV robotics with fire science authorities from the University of Maryland’s Fire Protection Engineering department, one of only three such departments in the United States offering graduate education in this field, embedding deep scientific knowledge into the design process. This collaboration is strengthened by a partnership with the Maryland Fire and Rescue Institute, which provides an invaluable proving ground: testing and refining the technology against real, controlled fires, ensuring the solution is effective in the field.

This foundation of practical science allows Crossfire to build a complete and intelligent autonomous response system. Instead of focusing on a single task, the team deploys specialized “Scout” UAVs for wide-area detection and “Firejumper” UAVs for targeted suppression. By fusing thermal and visual sensor data, the system reliably identifies genuine threats while ignoring false alarms. To suppress fires, “Firejumpers” use a proprietary payload to create an effective air-burst of suppressant. Designed to be scalable, this validated system offers a comprehensive and practical innovation in wildfire management.

CORE TEAM MEMBERS

The Crossfire team is built on a unique blend of academic leadership and operational expertise. Technical direction is jointly provided by authorities from the Aerospace Engineering and Fire Protection Engineering (FPE) departments. This leadership includes a national expert in the control of autonomous robotic and drone systems and the department chair of UMD’s FPE program, as well as experts in wildland-urban interface fire detection and simulation.

Core system development is driven by a dedicated graduate and undergraduate research team. The University’s UAS Research and Operations Center provides critical flight operations, systems integration, and piloting expertise, while xFoundry guides commercialization and funding strategy. This multidisciplinary structure grounds the team’s advanced technological development in practical fire science and real-world operational capability, forming a direct pipeline from foundational research to field-ready application.

COMPANY OVERVIEW

TEAM / COMPANY NAME
Data Blanket

LOCATION
Bellevue, WA, USA

FUNDRAISING DETAILS

CONSORTIUM
Data Blanket

COMMERCIAL STAGE
Commercial Design

INVESTMENT STAGE
Pre-seed

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DATA BLANKET

COMPANY DESCRIPTION

Data Blanket, headquartered in Bellevue, Washington, launched in March 2022. The team's core mission is to harness advanced AI and autonomous drone technology to support firefighters and first responders, providing real-time situational awareness and engagement over wildfires and other dangerous environments to save lives and protect communities.

Key milestones to date (all as of mid-2025):

- Secured over $4 million in early funding, including backing from Bill Gates's Breakthrough Energy Ventures and Innovation Endeavors.
- Developed a fully autonomous drone swarm system ("Air Force-in-a-Box") equipped with thermal and RGB sensors, 5G/Wi-Fi communications, and AI-powered computer vision to detect fire, smoke, and people.
- Completed successful field deployments in Southern California, earning praise from fire chiefs for unmatched accuracy, robustness, and speed of deployment.
- FAA approved for beyond-visual-line-of-sight and unrestricted UAV operations, and one-to-many swarm operations, allowing a single part 107 operator to fly multi-drone swarms.

CORE INNOVATION

Data Blanket's unique value for XPRIZE Wildfire lies in its rapidly deployable, autonomous drone swarm system—available directly to Incident Commanders (IC) or prepositioned remotely in high-risk areas for immediate deployment upon fire detection or reporting. Unlike traditional, manual wildfire response reliant on delayed aerial and ground resources, Data Blanket offers real-time AI-powered, surveillance and precise suppression through an integrated, autonomous fleet.

When fire is reported or autonomously detected, coordinated drone swarms launch instantly, swiftly identifying fire perimeters, accurately mapping the spread, and relaying actionable intelligence directly to the IC. Simultaneously, specialized suppression drones autonomously intervene with targeted precision, containing fires at the earliest possible stage, dramatically reducing escalation potential.

This approach significantly reduces response times, mitigates human risk, and limits environmental and economic damage. By providing responders with unparalleled early-stage situational awareness and immediate intervention capabilities—whether deployed on demand or strategically prepositioned—Data Blanket transforms wildfire response from reactive management into proactive, predictive mitigation, substantially outperforming conventional firefighting methods in terms of efficiency, safety, and scalability.

CORE TEAM MEMBERS

- Guy Zoler- PI: SW & Robotics integration. 20 years of experience in instrumentation and software engineering.
- Dr. Eyal Ofek: Leading Researcher in Computer Vision and Human Computer Interaction.
- Charles Droff: UI/UX lead. Over 15 years of experience as a code developer, designing and developing applications and user experience in different industries.
- Shay Ben-Avi: Lead Integration Eng. SW & HW integration and led strategic tech initiatives as a CTO and CIO in various companies.
- Paul Yollin: Swarm management & Algorithms lead. Automation SW and algorithms development in different industries.
- Yair Katz: COO & Program Manager. Army Intelligence Special Ops. strategic operations and intelligence.
- Omer Bar-Yohay: CEO. A serial entrepreneur previously founded and managed Eviation Aircraft, which developed the first all-electric commuter aircraft.
- Gur Kimchi: Chief Architect. Substantial roles at Microsoft and Amazon. Led the Amazon Air Prime drone delivery initiative to FAA certification.

COMPANY OVERVIEW

TEAM / COMPANY NAME
DRYAD

LOCATION
Eberswalde, Germany

FUNDRAISING DETAILS

CONSORTIUM
Dryad Networks GmbH

COMMERCIAL STAGE
UAV: Prototype System Verified; Sensors: Full Commercial Deployment

INVESTMENT STAGE
Series B

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DRYAD

COMPANY DESCRIPTION

Dryad is an environmental IoT startup founded in 2020, based in Berlin. Its mission is to develop technologies that protect people, wildlife and infrastructure from destructive wildfires. The fully industrialized Dryad Silvanet system includes AI-enabled and solar-powered gas sensors to detect wildfires as early as the smouldering phase and relay data and alerts over a solar-powered mesh network infrastructure embedded in the forest. Paired with the already demonstrated Silvaguard reconnaissance UAV and suppression UAVs, Dryad offers a comprehensive solution aiming to detect, locate, and extinguish wildfires within minutes from ignition.

CORE INNOVATION

Silvanet is a large-scale, distributed sensor network designed for ultra-early wildfire detection and continuous health monitoring of forests, featuring a central analytics and alerting platform. The wireless sensors are solar-powered, detecting forest fires with embedded AI using gas sensors and measuring temperature, humidity and air pressure. Silvanet detects fires in minutes from ignition, as early as the smoldering phase. By providing such drastically improved reaction times, the response of the autonomous Silvaguard reconnaissance and suppression drones is quick and effective. The Silvaguard reconnaissance drone launches from its solar-powered hangar and precisely locates and confirms the fire detected by the Silvanet sensor system. In a final phase, the Silvaguard suppression drone is launched to drop a liquid payload on the fire before it spreads.

CORE TEAM MEMBERS

- Pedro Silva: CTO Dryad Networks GmbH
- Moa Ziegler: Senior Software Developer
- Pierce Dias Carlson: Project Lead

COMPANY OVERVIEW

TEAM / COMPANY NAME
Ember Flash Aerospace

LOCATION
Santa Cruz, CA, USA

FUNDRAISING DETAILS

CONSORTIUM
Ember Flash Aerospace

COMMERCIAL STAGE
N/A

INVESTMENT STAGE
Seed round

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EMBER FLASH AEROSPACE

COMPANY DESCRIPTION

Ember Flash develops advanced unmanned air systems and integrates data analytics and decision-making tools to enhance situational awareness for disaster response. Ember Flash Aerospace was formed to bring new technologies to the frontline of wildfire mitigation and response. The team is constituted of a community-driven group of technical experts, business leaders, and first responders who are intimately aware of the impact that disasters and wildfires have on communities—and the challenges responders face in effectively managing them.

CORE INNOVATION

Ember Flash's solution relies on four core components coined the Vigilant System a solution that can be deployed fully autonomously. The system is comprised of Vigilant Detect sensors for detection, Vigilant Phoenix UAS for monitoring, Vigilant Raptor UAS for suppression, and Vigilant Core as the central data management system for the network. This approach is tailored to autonomously detect, respond, and suppress an incipient wildfire within 10 minutes over 1000km2. With a multilayered approach in four core areas—sensors, processing, system training, and redundancies—each focus allows the team to increase safety and accountability through all detection, monitoring, and suppression stages, improving overall system reliability and safety. These systems allow for the Vigilant System to adapt in real-time to decide appropriately how to handle any contingency safely and efficiently.

CORE TEAM MEMBERS

- Joseph Norris: Risk Management and Business Strategy Expert
- Dr. Lee Kohlman: Lead Aeronautics Engineer & AI/Machine Learning Expert
- Dr. Mike Laufer: Quality Assurance and Engineering Lead
- Mike Saad: Global Partnerships and Government Contracts Expert
- Max McClenahan: Hardware Systems & Senior Mechanical Engineer
- Zach Ackemann: Operations Director
- Brian Barbe: Senior Software Engineer
- James Henrikson: Fire Marshal (ret.) and Marketing Strategist
- Tom Calvert: Battalion Chief (ret.), Policy and Air Operations Expert
- Steve Lindsey: Deputy Fire Chief and Strategy Leader
- Paul Faraone: UAS Pilot, and Technical Specialist

COMPANY OVERVIEW

TEAM / COMPANY NAME
Fire Foresight

LOCATION
Hobart, Tasmania, AU

FUNDRAISING DETAILS

CONSORTIUM
Indicium Dynamics, Taz Drone Solutions, RoboticsCats, Little Place Labs

COMMERCIAL STAGE
Full Commercial Deployment

INVESTMENT STAGE
Series A

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FIRE FORESIGHT

COMPANY DESCRIPTION

Fire Foresight is headquartered in Hobart, Tasmania, Australia, and was launched in 2023. Its core mission is to revolutionize early wildfire detection and response using advanced AI, real-time sensor networks, and integrated situational awareness tools. The team aims to provide communities, utilities, and land managers with timely, actionable information to prevent catastrophic fire impacts.

Key milestones:

- 2023: Launched a pilot network in Tasmania across 10 sites; detected 1,500+ fires during a five-month proof of concept.
- 2024: Formed joint ventures with global technology and research partners; joined the XPRIZE Wildfire competition.
- 2024/25: Scaled to a 24/7 commercial monitoring service; integrated new environmental sensors, lightning awareness, and drone investigation.
- Ongoing: Expanding coverage across Australia and North America, with operational services in 11 countries.

CORE INNOVATION

Fire Foresight stands out by combining real-time AI-driven smoke and thermal detection with environmental sensors, satellite data, and advanced geospatial analysis in one integrated platform. Unlike traditional static cameras or manual lookout towers, the system autonomously detects fires at the smallest possible scale, pinpoints their exact location, and instantly alerts responders, saving precious time. A triage team operates 24/7 to verify detections, reducing false positives and ensuring actionable intelligence. Integration with digital twins and customer workflows turns raw data into situational awareness and predictive insights, transforming passive monitoring into proactive, dynamic fire risk management. The modular design can scale from small sites to vast landscapes and even satellite monitoring. By merging AI, IoT, and human oversight, Fire Foresight fundamentally shifts wildfire management from reactive firefighting to early intervention and prevention, providing a smarter, faster, and safer approach.

CORE TEAM MEMBERS

- Rob Vernon: CEO with experience building technology and engineering companies focused on developing unique intellectual property to protect people, place, and planet.
- Mike Ross: Founder of Indicium Dynamics and head of data, technology, and integration, specializing in real-time data, big data, and IoT.
- Andrew Davies: Founder of Taz Drone Solutions and head of autonomous flight and suppression, focused on enhancing safety and efficiency through drone and robotics solutions.
- Andre Cheung: Founder of RoboticsCats and head of computer vision, connecting AI, wildfire science, cameras, cloud computing, cybersecurity, and mobile technology.
- Bosco Lai: Founder of Little Place Labs and head of earth observation, pioneering advanced edge computing and AI/ML in space for near-real-time insights.

COMPANY OVERVIEW

TEAM / COMPANY NAME
FireSwarm Solutions

LOCATION
Squamish, BC, Canada

FUNDRAISING DETAILS

CONSORTIUM
FireSwarm Solutions, Solaris Suborbital, Trident Sensing

COMMERCIAL STAGE
Integrated Pilot System Demonstrated

INVESTMENT STAGE
Pre-seed

Lois Connor
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www.fireswarmsolutions.com

FIRESWARM SOLUTIONS

COMPANY DESCRIPTION

FireSwarm Solutions is based in Squamish, BC, Canada. The company was launched in 2023, following the worst wildfire season Canada has experienced thus far, with a mission to protect values at risk through the use of heavy-lift drone swarms deployed locally for nighttime response, aiming to protect high-risk communities and high-value industrial critical assets. FireSwarm Solutions has executed pilot projects with municipal fire departments, and the launch customer has received an SFOC, allowing the ThunderWasp to operate in Canada. System integration between FireSwarm software and the ThunderWasp is scheduled to occur in early July 2025.

CORE INNOVATION

FireSwarm Solution is building the wildfire defense system of the future—an autonomous, drone-agnostic aerial fire suppression platform designed to detect and extinguish fires, even at night and during low visibility, when it's too dangerous or difficult for a safe response. This first-of-its-kind, end-to-end system integrates all stages of aerial wildfire response: detection, localization, and direct suppression. Bambi Buckets, capable of releasing up to 90 gallons per drop, relentlessly deliver suppressant to extinguish incipient fires quickly and efficiently. A high-altitude long endurance (HALE) drone by Solaris Suborbital provides persistent fire detection and relays early warnings to Exo Drone's high-speed overwatch drone, equipped with a Trident Tactical Fire Remote Sensing (TACFI-RS) infrared sponsor sensor that detects, characterizes, and tracks the fire. That drone delivers precise fire localization data to FireSwarm Solution's swarm technology, which uses proprietary algorithms to generate navigation commands for ACC Innovation's ultra-heavy-lift suppression drones. These drones then execute autonomous, coordinated suppression missions based on real-time intelligence. Built for integration into existing firefighting operations, FireSwarm Solution's platform enhances—not replaces—the work of wildfire agencies and Indigenous fire stewards. With regulatory breakthroughs, strong partnerships, and operational testing with real-world customers underway, FireSwarm's solution offers a real, highly scalable leap forward in wildfire response.

CORE TEAM MEMBERS

- Alex Deslauriers: Founder / CEO, FireSwarm Solutions
- David Thanh: Founder / COO, FireSwarm Solutions
- Melanie Bitner: Founder / CMO, FireSwarm Solutions
- Daniel Doulton: CEO, Solaris Suborbital
- Steve Pollard: CEO, Trident Sensing
- Jean-François Pominville: Executive Manager, Exo Drone
- Benoit Germain: Founder, Exo Drone
- Max Drougge and Claes Drougge: ACC Innovations
- Chris Gillen: Business Development
- Russ Halliday: Head of Product
- Katherine Baer: Operations Coordinator
- Lois Connor: XPRIZE Project Manager
- Jacob Lagercrantz: Director, Technical Solutions
- Paul Buxton-Carr: Head of Wildfire Operations

COMPANY OVERVIEW

TEAM / COMPANY NAME
FlameJackets

LOCATION
Atlanta, GA, USA

FUNDRAISING DETAILS

CONSORTIUM
The Georgia Institute of Technology, Cobra AERO

COMMERCIAL STAGE
Prototype System Verified

INVESTMENT STAGE
Pre-seed

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FLAMEJACKETS

COMPANY DESCRIPTION

FlameJackets operates at the Georgia Institute of Technology with additional testing at Cobra AERO in Michigan since September 2023. Georgia Tech ranks #1 in the US for research spending among institutions without a medical school, and all engineering programs are ranked in the top 10 by US News. The team has completed key deliverables, such as demonstration of heavy payload lift (24 lb payload, 50 lbs total), payload carrier design and automation, route planning and automated piloting, sensor evaluations and gimbal, neural network fire detection using optical imaging, false positive elimination algorithms, and engine mounting with electrical interface.

CORE INNOVATION

FlameJackets uses a phased technology development approach, allowing for iterative learning and testing. Phase I consists of a single multirotor prototype with gas-electric hybrid propulsion (50 lb payload). Phase II will deploy coordinated, semi-autonomous multirotor swarms. Phase III will develop airspeeds and payloads capable of extinguishing high-risk fires, including a swarm of fixed-wing detection drones and 20-40 hybrid-propelled suppression drones. This scalable approach allows the solution to be applied to any size area, maintaining constant drone density per area.

CORE TEAM MEMBERS

- Mike Tinskey: Professor of the Practice | Program Director - Formerly the Global Director of Electrification at Ford Motor Company.
- Jacob Evans: PhD Student, pilot, drone operator | Chief Engineer - Oversees System of Systems team, focusing on tactics for autonomous wildfire suppression.
- Bryan Kintish: Master's Student | Project Manager - Oversees sub-teams and works on hybrid propulsion.
- Reese Jednorozec: Undergraduate Student | Software Lead - Leads software systems development.
- Other members: Dr. Dmitri Mavris, Dr. Burak Bagdatli, Dr. Shreyas Kousik, Bryan Cochran, Zach Burkhardt, and over 40 undergraduates and graduate students at Georgia Tech.

COMPANY OVERVIEW

TEAM / COMPANY NAME
FLARE-X

LOCATION
USA / UK

FUNDRAISING DETAILS

CONSORTIUM
University of Texas at Austin, University of Southampton, University of Edinburgh, Texas A&M Forest Service, AIVE AI Systems

COMMERCIAL STAGE
Integrated Pilot System Demonstrated

INVESTMENT STAGE

Pre-seed

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FLARE-X

COMPANY DESCRIPTION

FLARE-X launched in October 2023 as a partnership between the University of Texas at Austin and the University of Southampton and has since expanded to include the University of Edinburgh and Texas A&M Forest Service, as well as spinning up AIVE AI Systems to commercialize the solution. The core mission is to revolutionize rapid response to active wildfires with intelligent drone fleets. The team brings together leading minds from top research institutions across geophysics, fire science, aerospace engineering, robotics, and AI. To date, they have developed and demonstrated core capabilities of their end-to-end solution and secured initial industry investment.

CORE INNOVATION

FLARE-X aims to tackle the challenge of fast detection and suppression using a fleet of low-cost, high-performance drones. Powered by HRI-based AI algorithms, the system delivers real-time situational awareness and precision-guided payload drops, dramatically accelerating response times and improving outcomes. The solution involves three main stages: dynamic pre-fire risk mapping; active fire detection, monitoring, and verification; and fire suppression.

CORE TEAM MEMBERS

- Luis Sentis: human-centered robotics, autonomous systems, and human-robot interaction.
- Mohammad Soorati: human-swarm interaction, and trustworthy autonomous systems.
- James Thompso: remote sensing and geospatial techniques, terrestrial thermodynamics, and wildfire behavior.
- Greg Zwernemann: manned and unmanned aircraft systems development.
- Jayant Siroh: smart material sensors, aerodynamics and structural dynamics, and rotary-wing aeroelasticity.
- Zakary Campbell-Lochrie: combustion and fire behavior, physical processes controlling flame spread.
- Christian Claudel: distributed parameter systems, cyberphysical systems monitoring, and wireless sensor networks.
- Klaus-Peter Zauner: chemistry, electronics, microfluidics, and computer science.
- Adela Ben-Yakar: ultrafast laser microsurgery, nonlinear imaging, endoscopy, high-speed nonlinear microscopy.
- Jake Caskey: Texas A&M Forest Service UAS Program Coordinator.
- Buster Robinson: Texas A&M Forest Service Incident Aviation Operations.
- Gareth Roberts: validating active fire and Fire Radiative Power retrievals using measurements and models.
- Julian Leyland: remote environmental sensing, and UAVs, USVs and autonomy in geoscience.
- Ashley Matheny: measurements and numerical modeling of disturbances and influence on feedback.

COMPANY OVERVIEW

TEAM / COMPANY NAME
Pyr-Stop

LOCATION
Bristol, UK

FUNDRAISING DETAILS

CONSORTIUM
Pyr-Stop, Probotek

COMMERCIAL STAGE
Prototype System Verified

INVESTMENT STAGE
Pre-seed

Efthimios Glimis
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PYR-STOP

COMPANY DESCRIPTION

The Pyr-Stop team came together in 2023 with a singular mission: to end the devastation caused by wildfires through fast, intelligent, and autonomous response systems. Headquartered in Bristol, UK, Pyr-Stop was built on the belief that with the right technology, wildfires can be detected early and extinguished before they escalate. The team has completed feasibility assessments, simulated performance against fire models, developed autonomous mission capabilities, and targeted extinguishant release on a scaled-down platform. They have partnered with Probotek to achieve a truly end-to-end solution, from detection to response.

CORE INNOVATION

Pyr-Stop aims to fulfill the XPRIZE Wildfire competition requirements such as rapid response, constant availability, and reduced risk to pilots and firefighters. The team offers a cost-competitive and scalable solution with the potential for global proliferation in all regions in need of such technology.

CORE TEAM MEMBERS

- Efthimios Glimis: Aerospace & Mechanical Engineering
- George Delaportas: Image Processing & Detection
- Andronikos Stamatoglou: Electrical Engineering
- Panagioths Apostolopoulos: Image Processing & Detection
- Ilias Christopoulos: Software & Control
- Konstantinos Vogiatzoglou: Fire Behavior Specialist

COMPANY OVERVIEW

TEAM / COMPANY NAME
RAINDROPS

LOCATION
Trondheim, Norway

FUNDRAISING DETAILS

CONSORTIUM
Norwegian University of Science and Technology; Brigham Young University

COMMERCIAL STAGE
Prototype System Verified

INVESTMENT STAGE
Pre-seed

Konstantinos Alexis, NTNU
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Randy Beard, BYU
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RAINDROPS

COMPANY DESCRIPTION

A student-led collaboration between the Norwegian University of Science and Technology (NTNU, Norway) and Brigham Young University (BYU, USA), RAINDROPS envisions a solution that combines two classes of UAS, namely those tasked with observation and fire detection and those tasked with fire suppression, for a system-of-systems approach to enable scalable wildfire response across geographical environments.

CORE INNOVATION

The solution operates as a coordinated system-of-systems with the human-on-the-loop. It includes a set of high-altitude observation UAS tasked

to monitor the area of interest and provide fire detection and localization information. The key driving factors in the design are scalability and affordability. RAINDROPS offers a scalable and accessible solution that is well-suited to the needs and budgets of fire management agencies and other stakeholders.

CORE TEAM MEMBERS

Norwegian University of Science and Technology:

- Prof. Dr. Kostas Alexis
- Prof. Dr. Tor Arne Johansen
- 1 x Senior Researcher
- 1 x Pilot and Engineer
- 5 x Master's students (graduate level)

Brigham Young University

- Prof. Dr. Randy Beard
- Prof. Dr. Tim McLain
- 14 x senior engineering students

COMPANY OVERVIEW

TEAM / COMPANY NAME
Wildfire Quest

LOCATION
San Jose, CA, USA

FUNDRAISING DETAILS

CONSORTIUM
Valley Christian High School

COMMERCIAL STAGE
Prototype System Verified

INVESTMENT STAGE
Pre-seed

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WILDFIRE QUEST

COMPANY DESCRIPTION

Based in the heart of Silicon Valley, Team Wildfire Quest is comprised of students from Valley Christian High School (VCHS) who share a passion for solving the global issue of wildfires. As the fifth VCHS team to enter an XPRIZE competition, Wildfire Quest is determined to follow and surpass the trail blazed by past teams, including Ocean Quest, winners of the $800,000 NOAA Bonus Prize and the youngest XPRIZE Finalists in history. Wildfire Quest has made it its goal to efficiently and effectively put out wildfires while also protecting the communities and wildlife around them. Since the team's founding, Wildfire Quest has successfully developed a prototype solution under the guidance of industry professionals, including team advisors, potential company partners, fire department chiefs, and other relevant experts.

CORE INNOVATION

Wildfire Quest serves to revolutionize wildfire responses by combining affordability, autonomy, and precision into a modular system that prioritizes accessibility and scalability. The system utilizes paired infrared camera towers for triangulation, while a proprietary C-REST drone path-planning algorithm enables suppression drones to navigate dynamic obstacles without pilot intervention, ensuring accurate fire detection and suppression.

Wildfire Quest's solution is designed to be self-sustaining, with each base station operated on solar energy. These stations are weatherproof and also feature a docking system that automatically refills the drone's suppressant foam. The hardware and software integration ensures easy accessibility and expansion for wildfire prevention, as users can easily add base stations and towers to connect to the network for greater scalability.

By incorporating machine learning, drone coordination through QuestUTM, and an expandable foam suppression system, Wildfire Quest's solution can not only detect and extinguish fires rapidly but also continuously adapt and respond with minimal human intervention.

CORE TEAM MEMBERS

Wildfire Quest's core team is comprised of twelve passionate and talented students: Jaylyn Chong, Jacob Moses, Olivia Ahn, Felicia Guo, Yul Sung, Arissa Cao, Vishnu Parthasarathy, Dhriti Vaghela, Megha Arora, Nived Sudhakar, and Keshav Satagopan — with each student playing a critical role in the teams' solution's development and execution. With the support of recent alumni Aarna Nair and Omkar Tasgaonkar, who plan to continue to contribute as advisors. Spearheading the Wildfire Quest team are several industry experts, including Danny Kim, Nathaniel Grady, and Emeka Okekeocha, providing the educational and technical experience necessary to support the team. Additionally, Wildfire Quest is under the guidance of VCHS' R&D contractors: Bill Mania (Software), Cory Duce (Electrical), and Stephen Huber (Hardware), offering further guidance and mentorship for the team.

COMPANY OVERVIEW

TEAM / COMPANY NAME
Aura/Windracers

LOCATION
Southampton, UK

FUNDRAISING DETAILS

CONSORTIUM
University of Bristol, University of Sheffield, Lancashire Fire and Rescue Services

COMMERCIAL STAGE
Integrated Pilot System Demonstrated

INVESTMENT STAGE
Pre-seed

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AURA/WINDRACERS ENVIRONMENTAL

COMPANY DESCRIPTION

Team AURA brings together a consortium of the University of Bristol, University of Sheffield and Lancashire Fire and Rescue Services, all based in the United Kingdom. The team has been working together through various projects since 2022, with the mission of developing new technology that can improve firefighters' capabilities when it comes to handling wildfires. The core mission is to implement swarms of uncrewed aerial vehicles (UAVs) to automate and improve monitoring of wildfire-prone areas and use these UAVs to perform early detection of wildfires and suppress them before they grow out of control. The team has achieved significant success in demonstrating the capabilities of each subsystem, with documented results in control and coordination of swarms of UAVs, using AI-based computer vision algorithms for detecting wildfires as well as performing aerial suppression of fire.

CORE INNOVATION

AURA's solution is unique in utilizing low-cost, scalable, plug-and-play, AI-powered swarm deployments of off-the-shelf firefighting hardware, where each agent operates as part of a coordinated multi-agent drone swarm. Each drone is a fully independent unit capable of performing visual detection of wildfires and communicates with a human command center that coordinates with and controls each agent in the swarm. Team AURA also makes use of heavy-lift drones that carry a suppression payload and deliver fire retardant to the detected wildfire spot. These heavy-lift drones are also equipped with thermal cameras that will verify and validate the detection from the vision system. Each of the drones that we use in our swarm-based detection and suppression system is off-the-shelf and commercially available allowing scalability to large numbers. The team's approach makes use of AI-based computer vision systems that are based on open-sourced machine learning frameworks and trained on open-sourced datasets. Commercially available hardware and open-sourced software allow us to scale up or scale down our systems as and when needed, without too many changes in the system architecture.

CORE TEAM MEMBERS

- Prof. Sabine Hauert: Team Lead (University of Bristol), Professor of Swarm Engineering - Swarm engineering, Robotics, Autonomous systems
- Prof. Tom Richardson: Drone Operations (University of Bristol) - Professor of Aerial Robotics - Aerial Robotics, Autonomous systems, Field robotics
- Dr. Georgios Tzoumas: Swarm System Engineer (University of Bristol), Research Associate - Autonomous systems, Swarm engineering, UAV-based firefighting technologies
- Mr. Yinan Shi: Drone Engineer (University of Bristol), Research Associate - Swarm engineering, Algorithmic design, UAV-based firefighting technologies
- Mr. Kilian Meier: Drone Engineer (University of Bristol), Research Associate - UAV deployment, Multi-agent systems, User interface design
- Prof. Lyudmila Mihaylova: Computer Vision Lead (University of Sheffield), Professor of Signal Processing and Control - Autonomous systems, Machine learning, Computer vision
- Mr. Aditya Mahendra Shrikhande: Computer Vision Engineer (University of Sheffield), Research Associate - Autonomous systems, Machine learning, Computer vision
- Mr. Tim Murrell: Firefighting Advisor and Expert (Lancashire Fire and Rescue Service), Drone Manager - Firefighting techniques, Drone use for search and rescue, Emergency response

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END DESTRUCTIVE WILDFIRES

SEMIFINALIST TEAMS BOOK 2025

Contact the XPRIZE Wildfire team at wildfire@xprize.org

Join the movement XPRIZE.org/wildfire

AUTONOMOUS WILDFIRE RESPONSE

JULY 2025