RAIN AND SIKORSKY COLLABORATE TO ADVANCE RAPID RESPONSE CAPABILITIES FOR AERIAL WILDLAND FIREFIGHTING

News / Manufacturer



Rain and Sikorsky announced a collaboration to explore how Sikorsky MATRIX autonomy suite operating with Rain's Wildfire Mission Autonomy System can launch uncrewed helicopters to drop water on wildfires within minutes of detection. This collaborative effort will use Rain's Wildfire Mission Autonomy System to upload mission commands to Sikorsky's Optionally Piloted BLACK HAWK helicopter with no crew on board for the fastest response time.

Rain CEO Maxwell Brodie, commented: "Combining Sikorsky's demonstrated mature vehicle autonomy system with Rain's early response capability will show how an uncrewed BLACK HAWKor FIREHAWK helicopter can quickly take off, fly to a suspected ignition, and drop water to suppress a wildfire in its incipient stage with no human onboard. Ultimately, Rain envisions equipping fire agencies with the capability to strategically position a future fleet of firefighting aircraft capable of receiving and carrying out mission commands."

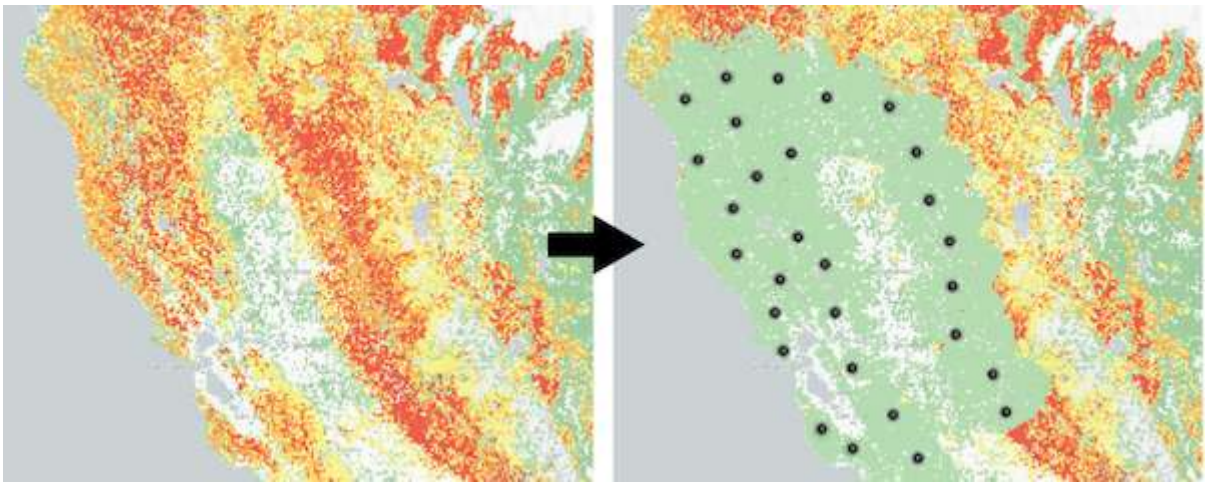
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Brodie pointed to research showing that a 15-minute reduction in wildfire response times could generate $3.5 to $8.2 billion in economic benefits annually for the state of California alone. Developed for more than a dozen years by Sikorsky Innovations, an advanced engineering group within Sikorsky, the MATRIX system combines a platform-agnostic software and hardware suite, including sensors, to ensure an aircraft flown with reduced crew or uninhabited can fly reliably and safely in low-level and obstacle-rich terrain. Even with no humans on board, an aircraft with the MATRIX system does not require a remote pilot or ground controller to command the mission via datalink, nor waypoints to navigate.

Igor Cherepinsky, Sikorsky Innovations director, said: “MATRIX executes a full mission plan by taking into account mission goals and constraints, aircraft performance, obstacles, weather, and topography. The system is fully integrated with the flight controls, allowing the aircraft to fly with high levels of autonomy in all environmental conditions. MATRIX is just one example, our predictive Firefighting Intelligence capabilities being another, of how Lockheed Martin is integrating 21st Century Security technology to help first responders fight wildfires faster and more effectively.”

Rain integrates with early wildfire detection networks to rapidly dispatch autonomous aircraft. Onboard the aircraft, the Rain Wildfire Mission Autonomy System identifies and locates wildfire, develops a suppression strategy, and plans flight path and drop timing to enable on-target delivery of suppressant. Throughout operations, the Wildfire Mission Autonomy System shares intelligence and plans, providing firefighters with situational awareness and oversight of the mission to ensure safety and coordination.

Rain and Sikorsky’s collaboration will demonstrate autonomous capabilities to enable firefighting helicopters to be pre-positioned in remote locations according to wildfire risk. Operating uncrewed, and deployable 24/7, the integrated offering would provide fire agencies the ability to rapidly respond to ignitions in hard-to-access regions in varied terrain, supporting fire agencies with new tools in their mission to prevent catastrophic wildfires in the areas they serve.



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