THE PROBLEM

Wildfire suppression costs scale exponentially with every minute an ignition burns uncontained. When initial attack fails, agencies face protracted, multi-million-dollar events driven by two fatal limitations in legacy aerial firefighting.

The Effectiveness Deficit

Traditional aerial firefighting relies on broad, visually aimed drops that are vulnerable to wind-driven drift, limiting accuracy and the amount of suppressant reaching the target. USDA studies confirm real-world aerial retardant effectiveness as low as 50%, with USFS drop-testing showing 25% to 40%+ of payload lost to atomization, wind shear and canopy hang-up before ever reaching surface fuels.

The Availability Gap

Current aerial firefighting operations are constrained by wind, smoke and darkness. When conditions exceed operating limits, aircraft are grounded, leaving fires free to spread exactly when aerial support is needed most. These fires often start in hard-to-reach areas, increasing time to action and the danger to ground crews.

THE SOLUTION

Achieving improved efficiency requires removing these barriers: delivering accurate drops and deploying when no other asset can fly.

Prime Minute replaces unguided, visual drops with an all-condition, autonomous, stand-off suppression system: an intelligent, just-when-needed capability with fundamentally higher ROI.

TACTICAL SUPERIORITY WITH A DUAL ADVANTAGE IN ACTION

Advantage 1: Unmatched Delivery Effectiveness

Precision Delivery: Unlike unguided bulk drops delivered visually into the wind, Precision Guided Suppression Units (PGSUs) navigate autonomously to exact GPS coordinates, delivering on point in all dimensions.

Fuel Impact Optimization: Triggered autonomously just above the fuel bed, PGSUs minimize slipstream atomization and canopy loss, concentrating the full payload into an optimized ground-suppression pattern.

Granular Multi-Spot Engagement: High payload granularity allows multiple engagements per sortie. A single aircraft (e.g., C-130) can carry up to 30 PGSUs, letting an Incident Commander engage multiple spot fires or lay a flexible, non-linear chemical barrier in one flight.

Advantage 2: Superior Operational Availability

All-Weather, 24/7 Standoff Delivery: Wildfires do not pause at sunset or during Santa Ana–like winds. Cruising above adverse weather at 6,000–12,000 ft AGL, Prime Minute operates through darkness, dense smoke and mountain terrain, penetrating crosswinds up to 150 mph.

Absolute Aircrew Safety: Low-altitude contour flying in degraded visibility is aviation's highest-risk profile. Prime Minute flies missions as high-altitude cargo drops, removing crews from terrain hazards, convective heat plumes and zero-visibility smoke.



FLEET ECONOMICS

Expanding the Aviator Pool: Traditional aerial firefighting relies on a shrinking pool of highly specialized pilots. By conducting operations as high-altitude cargo drops rather than low altitude terrain attack runs, missions can be flown by standard cargo-certified transport pilots, bypassing the chronic shortage of specialized crews..

Benign Flight Profiles (Lower Fleet Maintenance): Low altitude drops severely fatigue airframes and ingest abrasive soot and hot gases into turbine engines. Flying straight-and-level at altitude provides clean-air cruising hours, drastically reducing airframe stress, unscheduled maintenance, and out-of-service downtime.

Turnkey Platform Integration (Roll-On / Roll-Off): Requires zero permanent aircraft modifications. PGSUs utilize a modular, palletized rail system compatible with standard cargo aircraft and heavy rotary assets.

Universal Suppressant Compatibility: Engineered to deliver whatever the tactical mission dictates: long-term retardants, foams, or water-enhancing gels.

THE STRATEGIC OUTCOME

Integrating Prime Minute into your aerial attack doctrine fundamentally shifts how your agency manages risk. Unrestricted availability enables immediate intervention at ignition, just-in-time deployment of containment barriers, and rapid and accurate suppression of spot fires, preventing escapes and shortening wildfire campaigns, ultimately protecting budgets by reducing reactive suppression costs, resource exhaustion, and the risk of costly megafires.

DEPLOY AN OPERATIONAL PILOT

Wildland firefighting is an escalation game. Fires are fought through availability and efficiency.

Prime Minute provides fire leadership with effective, always available, all-weather, aerial initial attack. We give Incident Commanders the capability to intervene by tactical choice.

Integrating novel capability should not require multi-year procurement cycles. We invite your agency to field-test Prime Minute through a structured operational pilot