

FIRE EXTINGUISHING DRONE

Next-Gen Wildfire mitigation



Aeroknite Ltd



A background image showing two firefighters in full protective gear. One firefighter in the foreground is holding a hose, and another is further back, also with a hose. They are fighting a large, intense fire that fills the right side of the frame. The scene is smoky and backlit by the flames.

OUR MISSION

To revolutionize wildfire prevention and control using cutting-edge AI-powered autonomous drone technology, saving lives, property, and natural habitats.

To leverage new advancements UAV swarming to deliver an effective fire mitigation strategy

CHALLENGES

- Wildfires are becoming more frequent and severe
- Traditional methods are often reactive and limited in reach
- Need for innovative, proactive solutions
- There is a lack of effective means of fire mitigation without puts firefighters at risk
- A lack of an easily scalable solution for larger wildfires



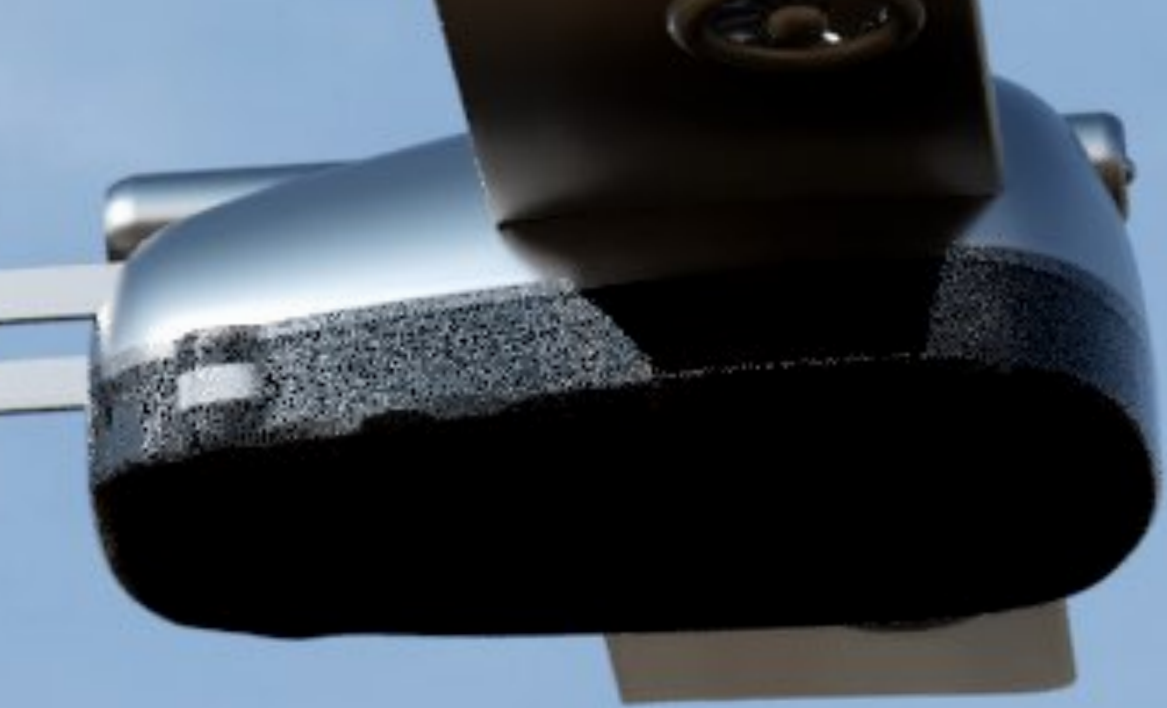
SOLUTION

A Fire-extinguishing drone system capable of instantly locating and extinguishing sudden outdoor fires. Our system allows for seamless integration with pre-existing infrastructure through designs tailored for deployment from Fire engines and fire stations

Leveraging AI, autonomous UAV swarms, and innovative solid-state extinguishing agents. Our drones predict, analyze, and combat wildfires

An advanced wildfire prediction model trained on past Wildfire data governs the deployment of drones in wildfire hotspots

Our drones add 3 major advantages to the pre-existing mitigation system: Seamless infrastructure integration, Advanced sensing through AI, and improved Fire extinguishing effectiveness.



PRODUCT OVERVIEW

Hybrid heavy-lift drone capable of VTOL and long-range flights.

Operate semi-autonomously to extinguish nearby fires using fire extinguishing balls.

The drones can carry six fire extinguishing balls and automatically reload more from the fire engines or fire station, acting as the ground station.

These balls are packed with extinguishing agents which burst when triggered by a fire fully extinguishing it.

We offer two customizable models with different designs centered around industry requirement: Fire truck deployment and Fire station deployment

ADVANCED SENSING & MITIGATION SYSTEM

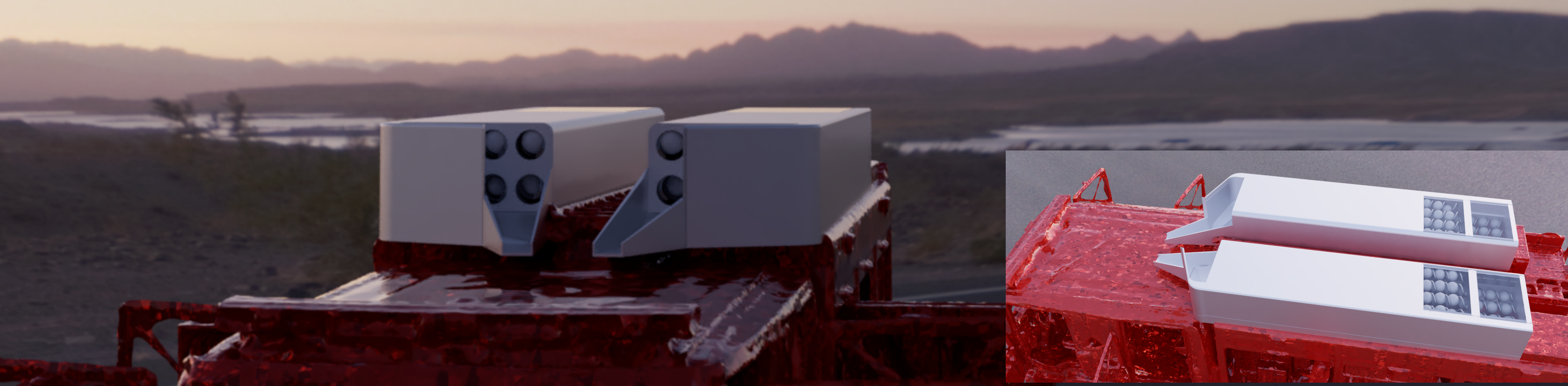
- Our drones feature an integrated multisensor system that uses satellite imagery, onboard cameras, and multiple sensors to provide firefighters with an informed view of an outdoor fire to autonomously guide how the drone extinguishes it.
- Advanced sensing is achieved using our custom AI powered wildfire prediction model trained on past wildfire data.
- A user-friendly interface provides firefighters with a summarised breakdown of key properties of the wildfire, showing real-time analysis of Fire behavior
- Our mitigation software suggests an optimized route to extinguishing the fire using the drone

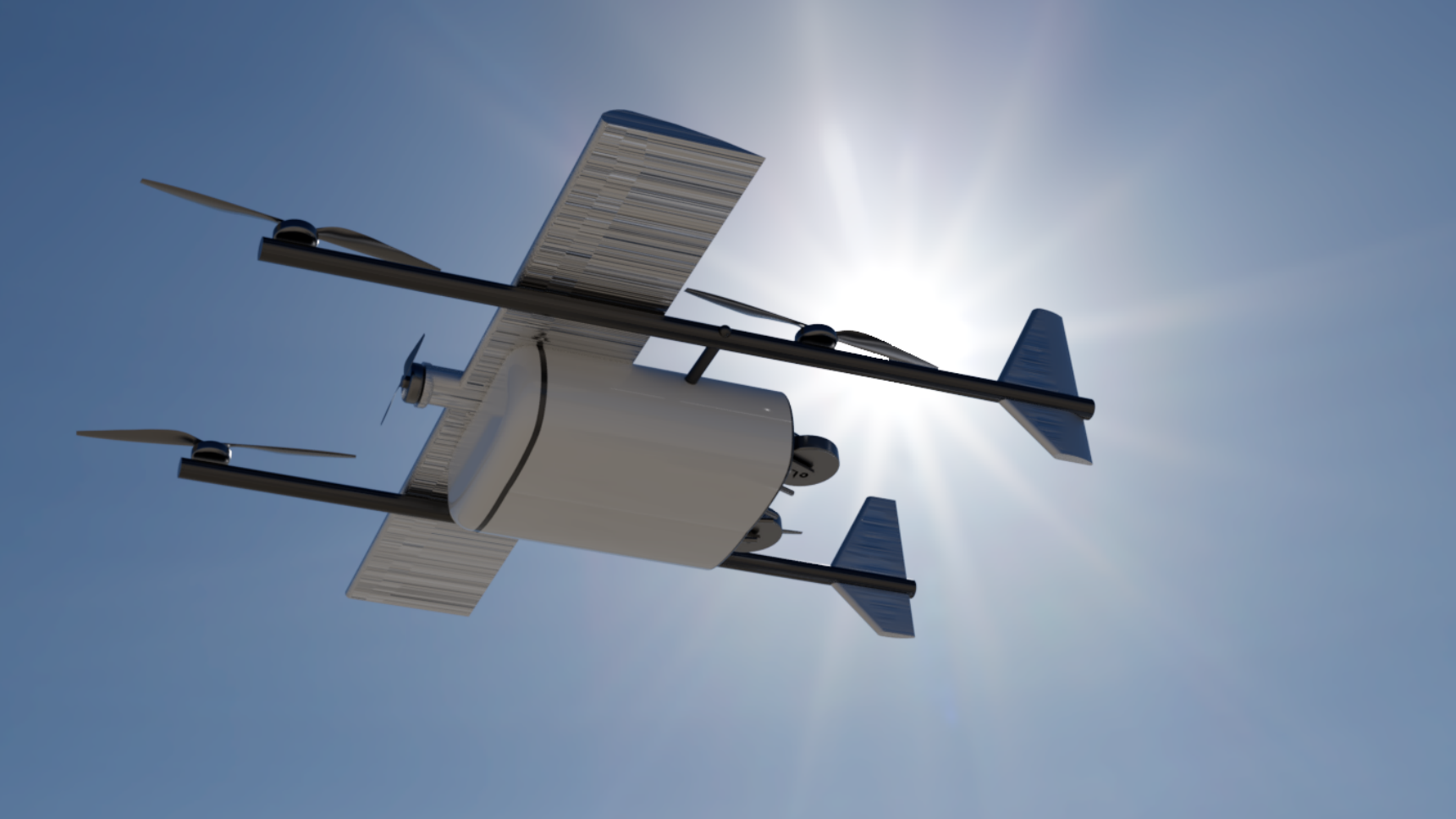


MODEL A

FIRE ENGINE DEPLOYMENT

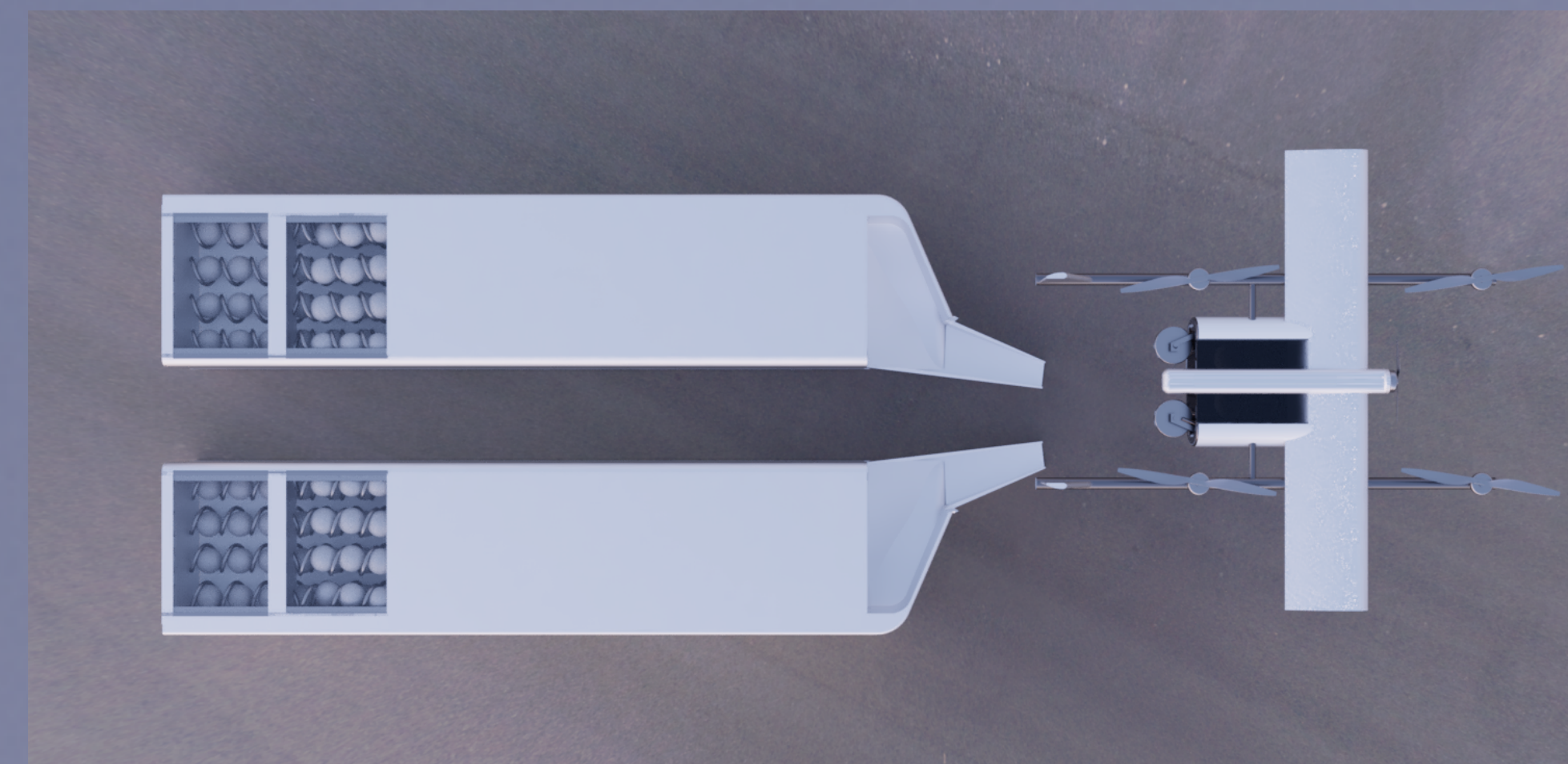
This model is designed to complement existing fire truck operations, providing a rapid response solution to fires. This quick-assembly version allows for immediate deployment. A truck-mounted reload system automatically refills the drone with extinguishing balls, allowing for multiple flight deployments without manual reload

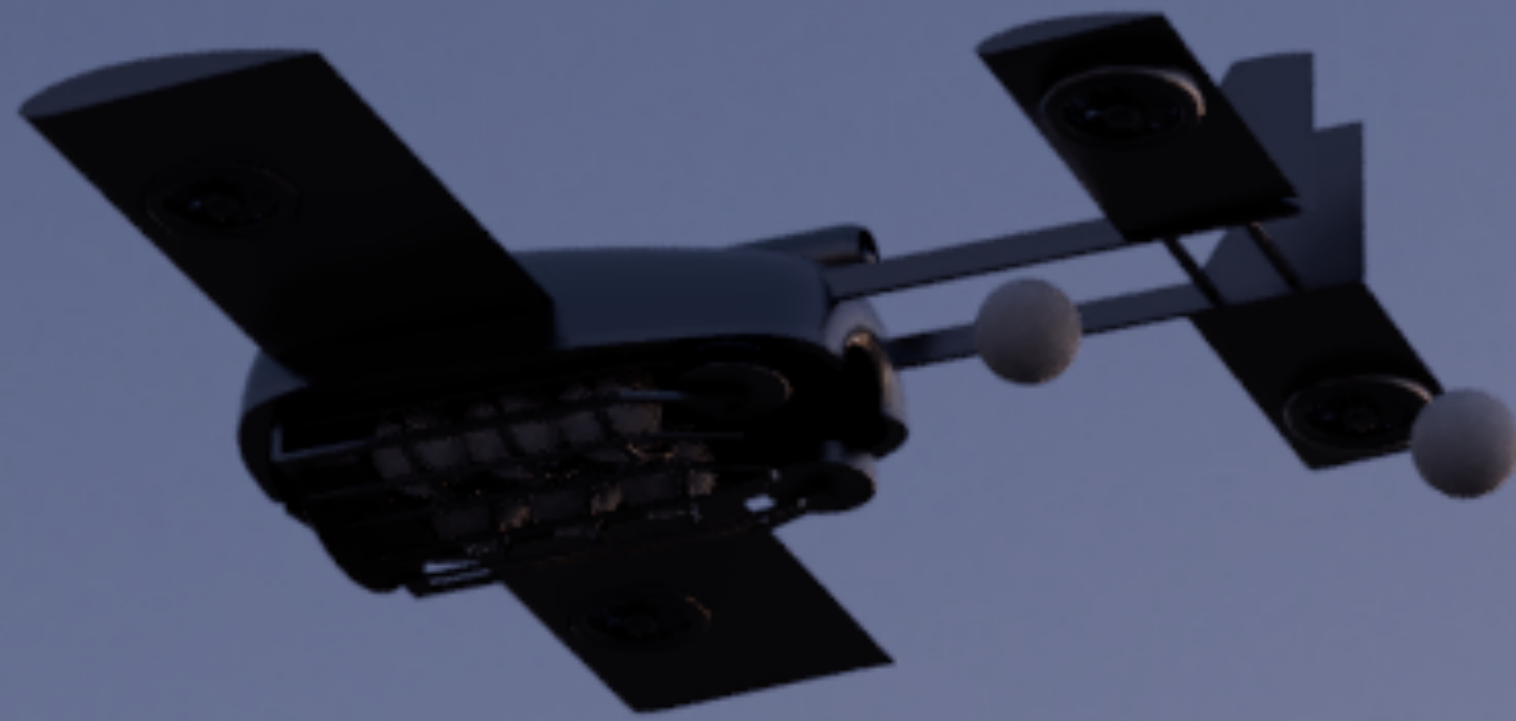




BENEFITS

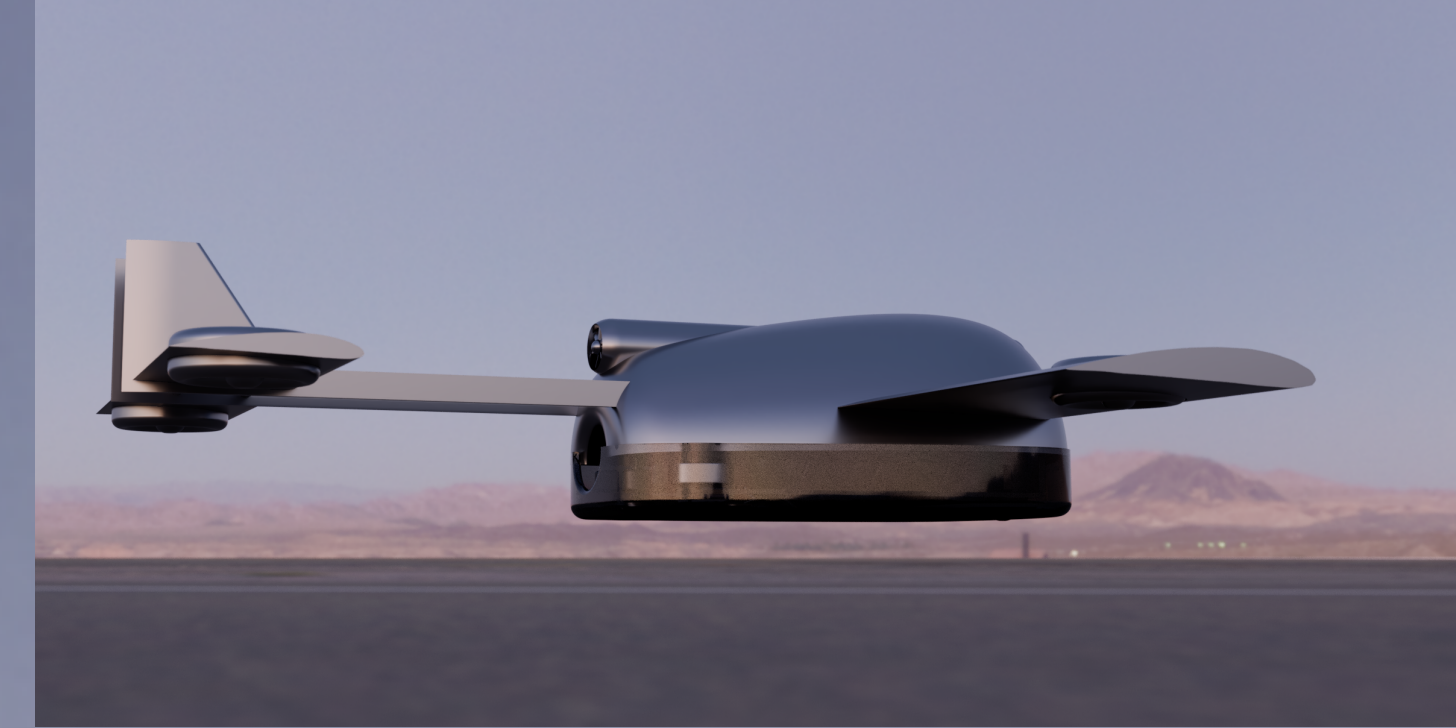
- Access hard-to-reach places
- Enhanced situational awareness
- Seamless integration with current infrastructure
- Improved safety for firefighters
- Enhanced data-gathering capability
- Face Response time





MODEL B

FIRE STATION DEPLOYMENT



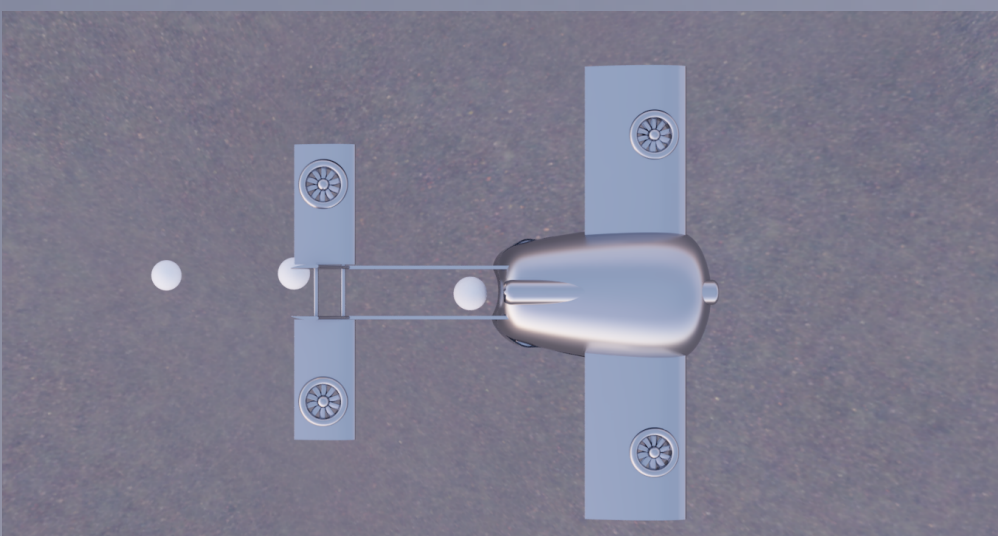
This model is designed for areas prone to wildfires and can house up to 10 extinguishing balls. Drones are stationed at firehouses and autonomously launched when a fire is reported or predicted using our wildfire AI prediction software.

This version is capable of longer-range flight BLOS to patrol high-risk areas, an integrated system of onboard sensors and real-time satellite data provides an advanced sensing system.

AI provides an optimized mitigation path that the drones follow for effective fire mitigation.

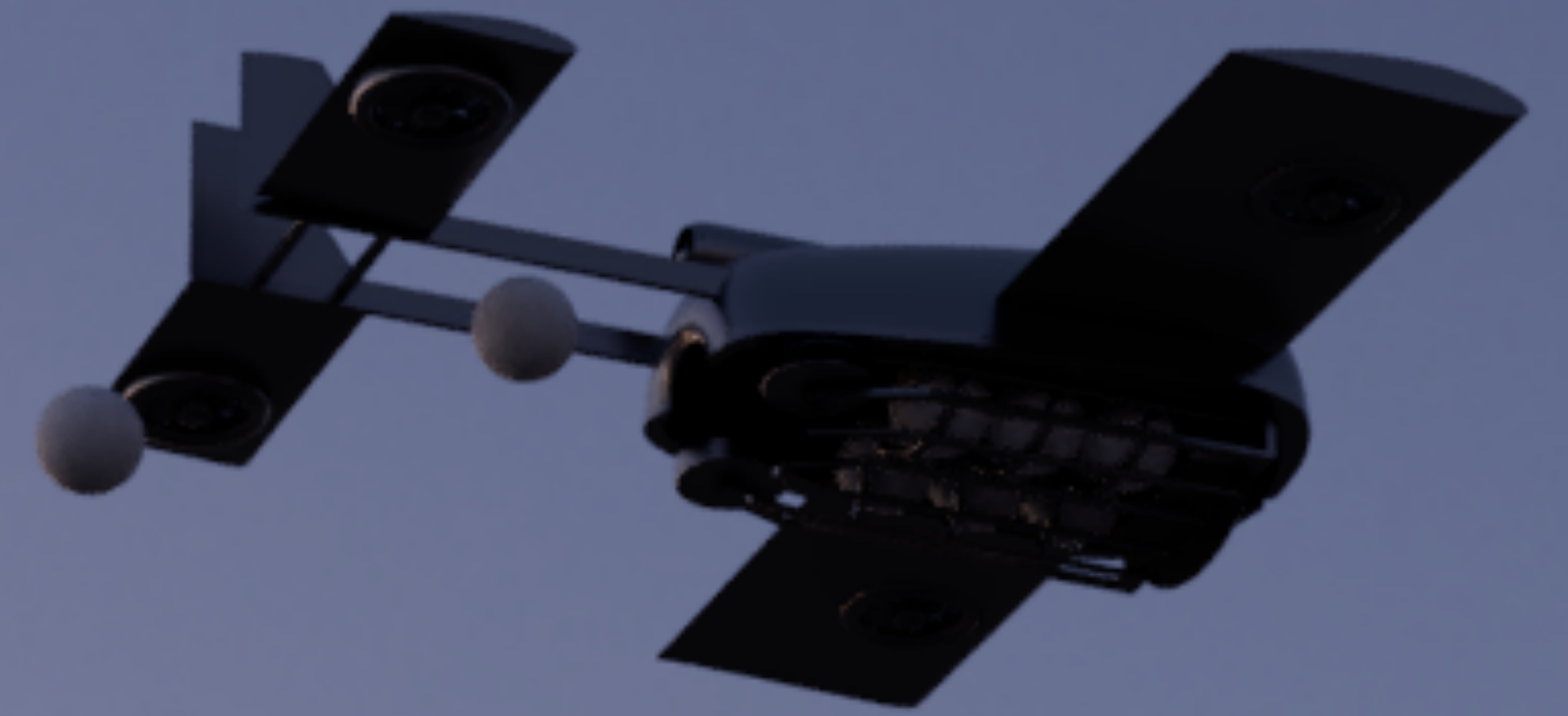
Swarm capability during larger wildfires

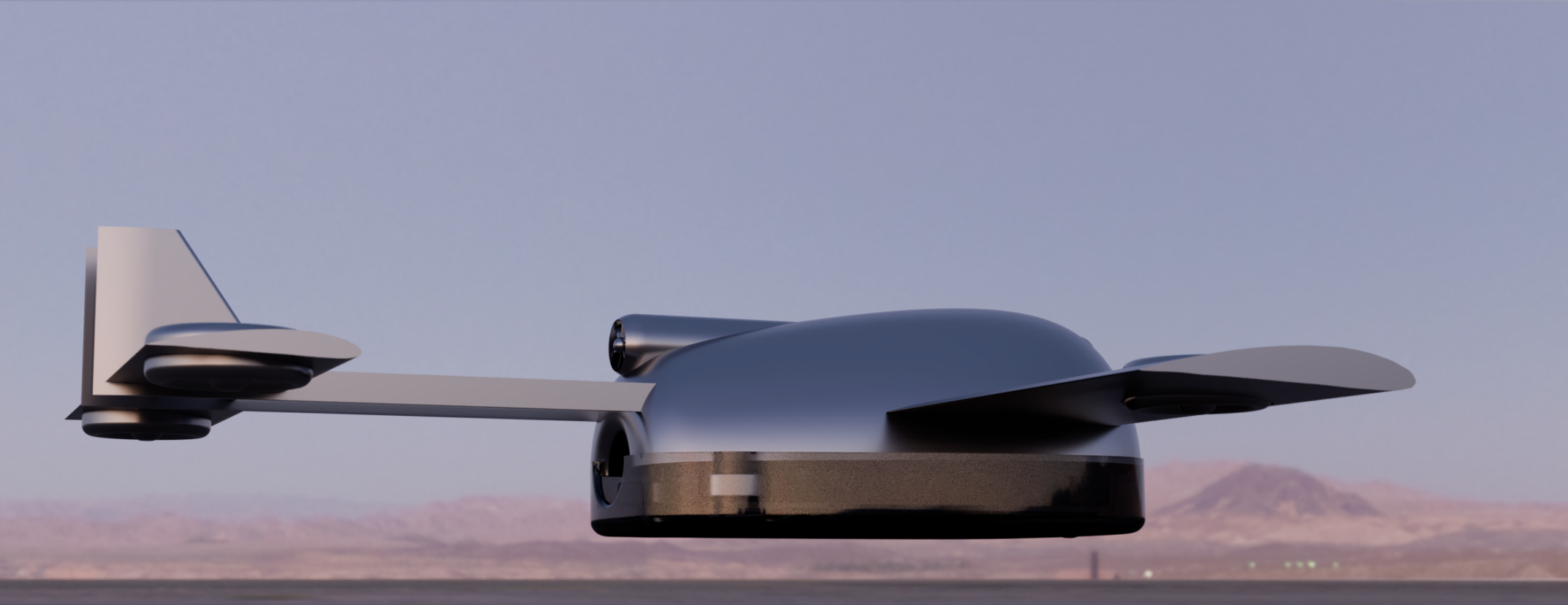
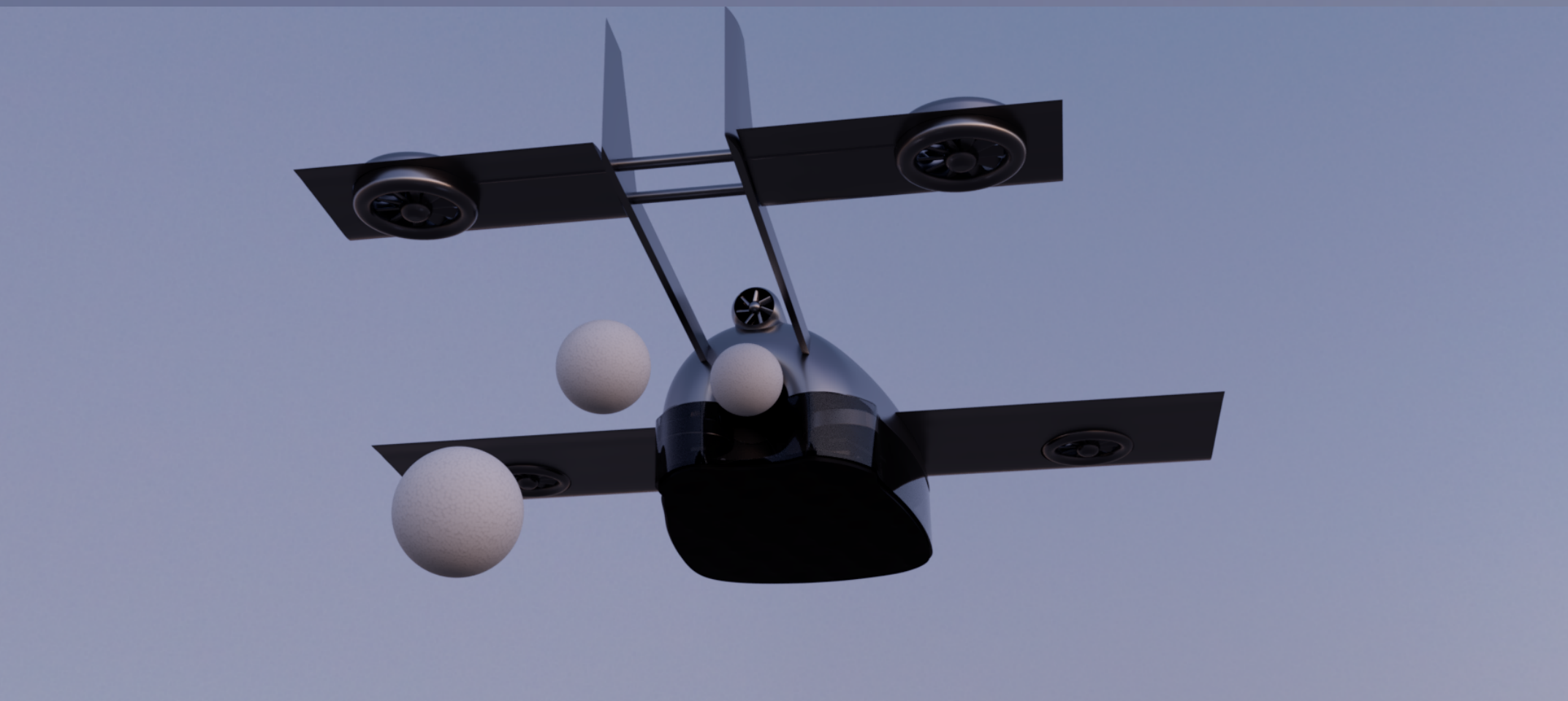
A fire station-based automatic reload mechanism ensures continuous operation of all drones



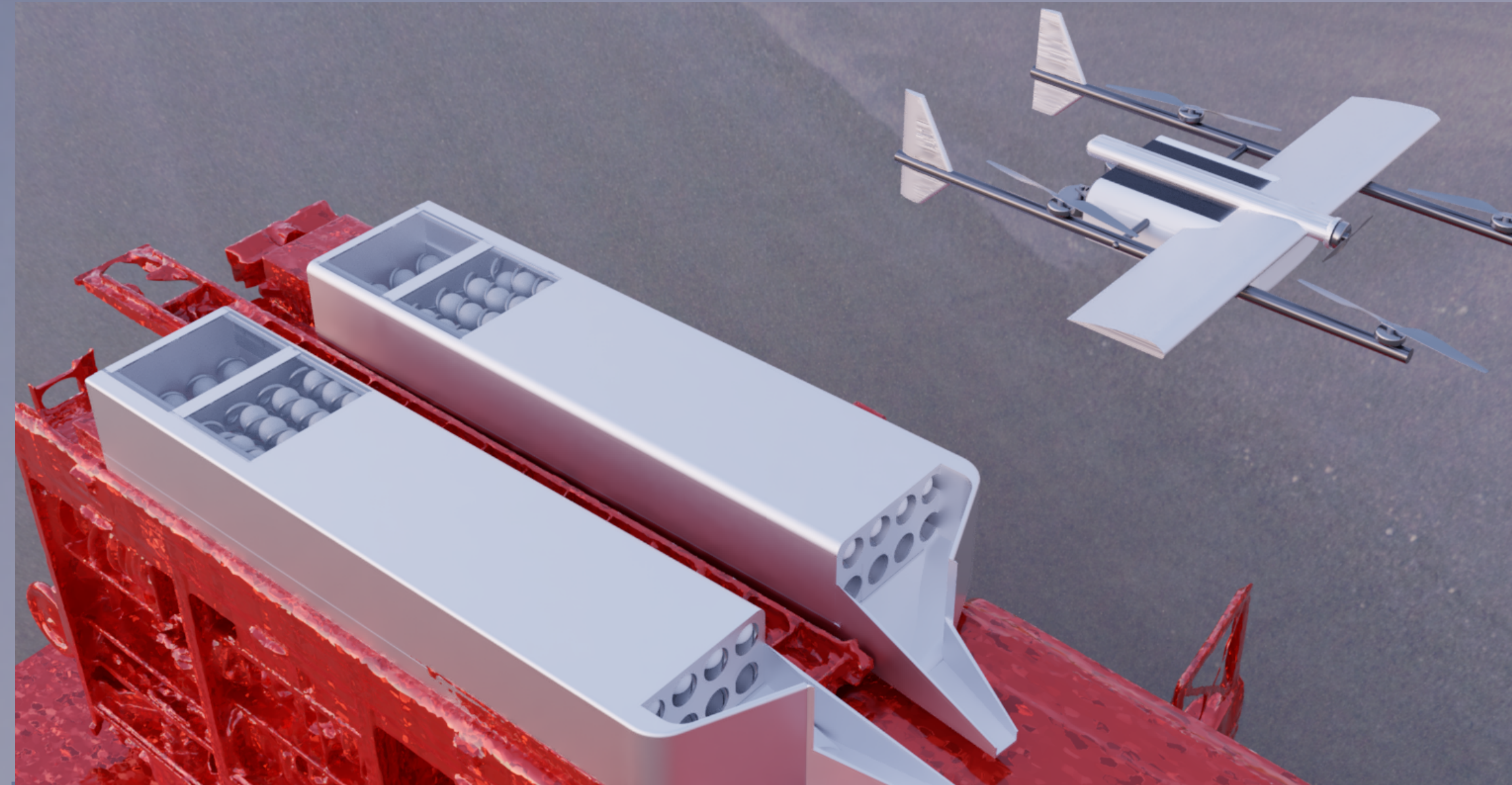
BENEFITS

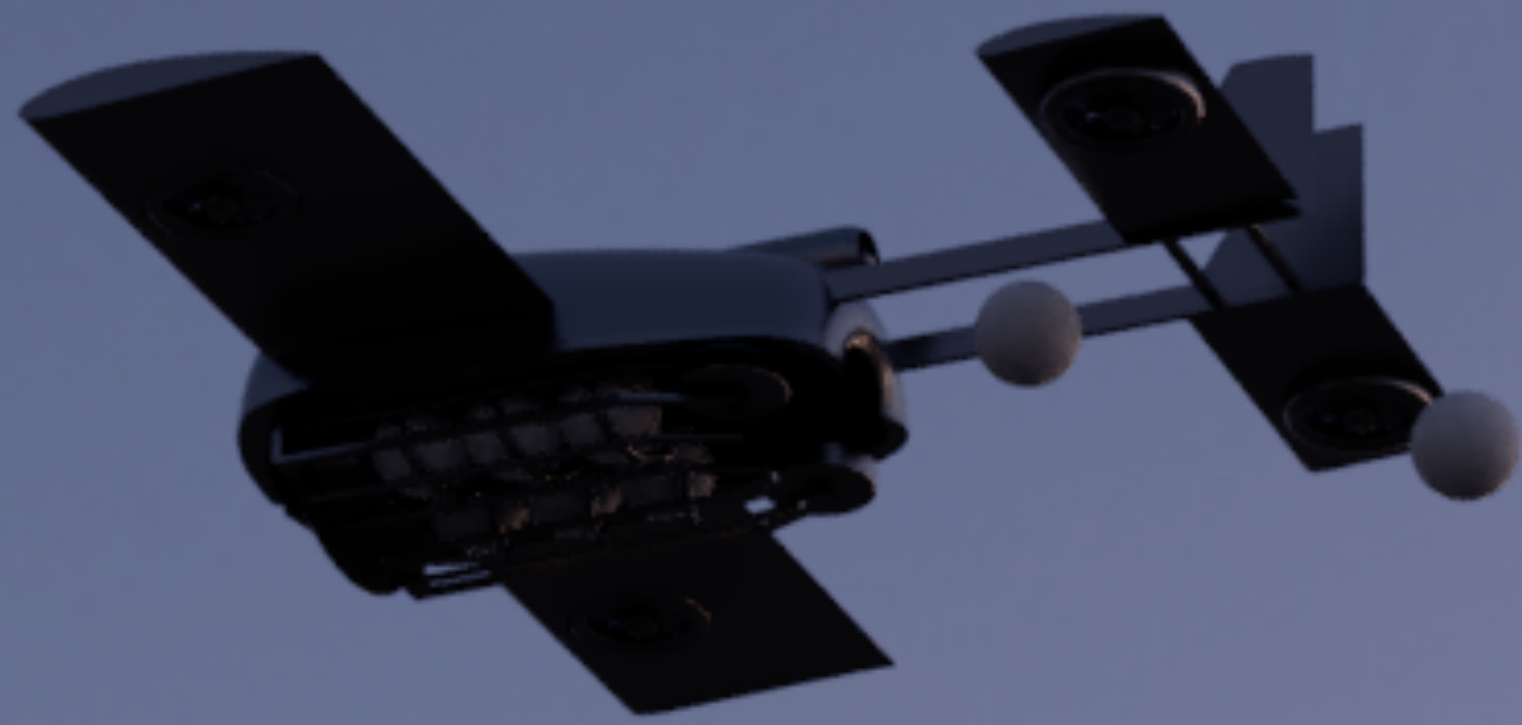
- Proactive Fire mitigation
- 24/7 monitoring of high-risk areas
- Reduced operational cost compared to current methods
- Rapid response to fire outbreaks
- Effective fire suppression





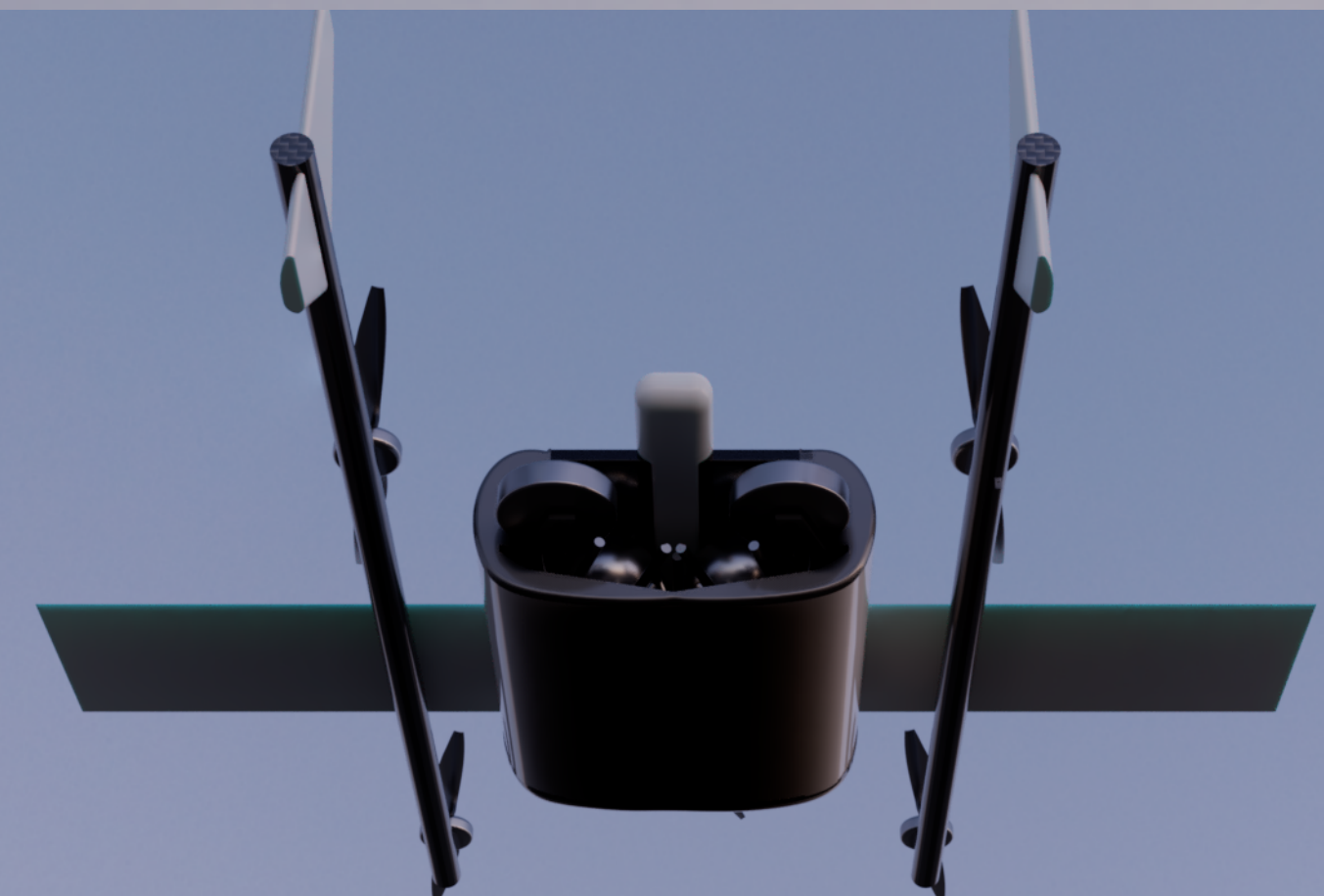
MODEL COMPARISON



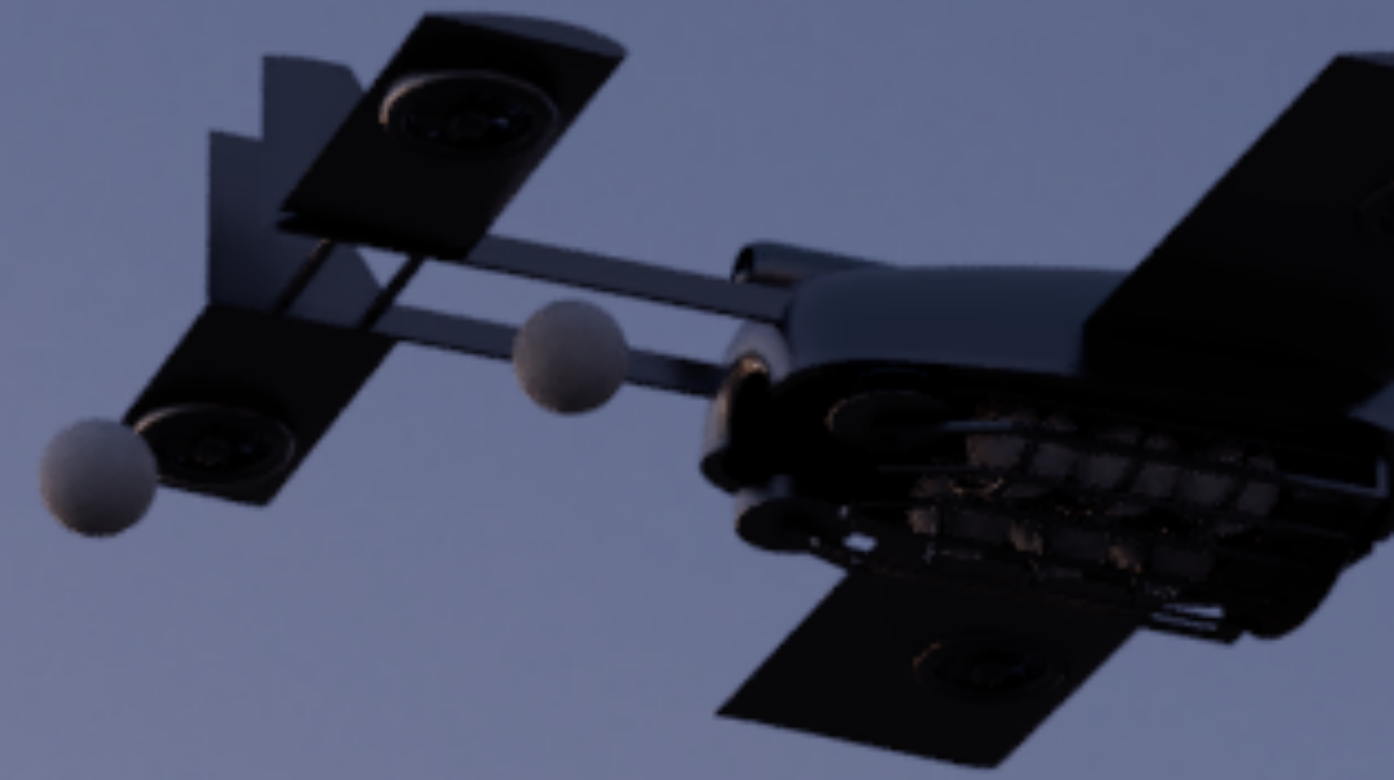


KEY ADVANTAGES OF OUR TECHNOLOGY

- Autonomous Operation
- Predictive AI model
- Real-time fire data
- Solid-state Extinguishing Agents
- Customizable solutions
- Cost Effective



SALES PACKAGES



Implementation packages	Included Components	Key Features	Pricing
Basic Package	Fire extinguishing drone model A + Manual Reload	<ul style="list-style-type: none">- Drone priced at £11,000- Live video feeds for precise targeting- Autonomous mitigation	£11,000
Advanced Package	Fire extinguishing drone model A + Automatic Reload B system + AI-powered sensing	<ul style="list-style-type: none">- Fire truck reloading system- AI-based predictive fire model- Integrated sensor system and thermal imaging	£25,000 - £35,000
Premium Autonomous Package	Fire extinguishing drone model B + Automatic Reload B system + AI-powered sensing	<ul style="list-style-type: none">- Drone priced at £20,000- Fully autonomous deployment- BLOS technology for remote areas- AI-powered predictive model	£50,000 - £70,000



IMPLEMENTATION

- Comprehensive training for Fire Department personnel
- 24/7 Technical Support
- Regular Software updates and AI model improvements
- Ongoing Supply and support for Fire extinguishing balls
- Modular system allowing for tailored solutions to fit different use cases
- Early POC available for progressive scalability