

## Raven Robotics

# Distributed aerial inspection solution for Health, Safety and Environment (HSE) applications

### In a nutshell

This project aims to enhance Health, Safety, and Environment (HSE) inspections across various industrial settings, including construction sites, power plants, and manufacturing facilities, through persistent monitoring utilizing autonomous compact drones with self-charging and hazard detection capabilities.

### Why is our technology important?

These workplaces are typically large, congested, and dynamic, presenting substantial HSE challenges, such as workplace accidents, operational inefficiencies, and environmental issues. For instance, according to the latest statistics, there were 3347 fatal and 2.88 million non-fatal work-related accidents just in Europe. Traditional inspection methods, involving manual inspections and remotely operated robotic systems, face limitations such as high costs, operational downtime, and the requirement for specialized personnel, which diminish the frequency and quality of inspections. In addition, the use of stationary cameras poses deployment challenges and lacks versatility in terms of the spectrum and quality of data captured. Finally, scaling these inspections as the areas expand poses additional difficulties.

### The benefits of our solution

- **Safe and versatile:** Thanks to very compact and cost-effective drones that can work both indoors and outdoors, it is safe to operate even if people are around
- **Autonomous:** Equipped with advanced autonomous navigation, visual hazard detection, and self-charging capabilities, the system requires minimal human intervention.
- **Scalable:** Multiple drones can operate collaboratively to enhance the frequency and accuracy of the inspection

### Keywords

Health, Safety, and Environment (HSE), persistent inspections, drones, Micro Aerial Vehicles (MAVs), visual hazard detection, autonomous navigation and multi-robot systems

### Founding Team

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