

Drone vs. On-Site Surveys

A thorough roof and facility evaluation is the foundation of any long-term asset strategy. At Mantis Innovation, we use multiple survey methods to ensure you receive accurate, high-quality data for confident decision-making.

Our data-driven approach ensures the right repair work happens at the right time, supported by predictive analytics and budget forecasting that maximize asset life and minimize total cost of ownership. Organizations can leverage **on-site surveys** or **drone-based surveys** or a **hybrid approach**—each offering unique advantages based on asset type, access, and project goals. The comparison below outlines key differences to help determine the most effective approach for your portfolio.

EVALUATION CRITERIA	DRONES	ON-SITE
Viable for Roofs	● Yes	● Yes
Viable for Pavement	● Yes	● Yes
Viable for HVAC	● Limited detail for RTUs	● Yes
Speed of Data Capture	● Very fast; covers large areas quickly but may miss complex issues	● Slower due to manual inspection; but more detailed and precise
Cost	● Generally lower, especially for large or complex sites	● Higher due to labor and time required
Due Diligence Support	● Yes	● Yes
Scheduling Requirements & PM Burden	● Easy scheduling with minimal staff, though FAA restrictions near airports and weather conditions can pose challenges	● Requires coordination; more resilient to weather or surprise issues
Design & Bid Conversion	● Possible but may need on-site core information	● Fully capable with detailed insights and samples
Moisture Analysis (Roofs) IR Scans	● Possible with thermal drones. Extra costs: 2x or 3x a non-thermal flight	● Standard and more precise
Defect Identification	● Surface-level only; limited with complex or hidden defects	● Detailed seam, drainage, and defect review
LSI (Life-Safety Issues) Identification	● Catches obvious damage; may miss deeper issues	● More comprehensive; includes root-cause observations
RAMP/PAMP Conversion	● Improving slowly via APIs	● Fast and accurate integration with Perform®
Report Detail	● Moderate detail	● High detail with actionable insight
Inventory Capture	● Good for visuals	● Even better with physical verification
Defect Depths	● Not measurable	● Accurately measured via physical checks
Steep Slopes or Tile Roofs	● Easily accessible	● Risky or inaccessible for inspectors
Preventative Maintenance	● Not possible	● Often performed during visit (e.g., debris removal)
Leak Investigation	● Not possible	● Often performed during visits. CQA
Warranty Compliance Requirements	● Not included unless approved	● Required by many manufacturers to comply
High ERSL (End-of-Remaining-Service-Life) Assets, Sites, Sections	● Moderate insight	● More accurate and site-specific

About Mantis Innovation

At Mantis Innovation, unlocking efficiencies is our driving force. We specialize in energy efficiency, energy procurement, and facilities management solutions. Our tailored strategies help you optimize operations, minimize costs, streamline processes, and elevate performance. Our expertise allows us to thoroughly assess your facility operations, identify areas for improvement, and craft long-term strategies for sustainable success. By enhancing energy management and implementing effective practices, we help you navigate budgetary risks and improve operational planning. Together, we ensure your organization operates at its peak potential while setting new standards of excellence in your industry.

