

UAV SERVICES FOR COMMERCIAL OPERATIONS**MDA's UAV Service is broadening airborne options for commercial operations.**

MDA is working with commercial customers to develop key applications to which Unmanned Aerial Vehicles (UAVs) are well suited. These areas include oil and gas survey and monitoring requirements, forestry management, and insurance underwriting and claims management. All share the common requirement for surveillance capabilities over large areas and/or long timeframes, and all benefit from the development of image archives with data exploitation and automated change detection.

UAVs are ideal for acquiring imagery over dangerous environments such as forest fires, where long-endurance missions can keep an eye in the sky without risking human flight crews. Flying regular missions along oil and gas pipelines eliminates repetitive, costly tasks, while creating a valuable data archive that can be analyzed by computer to automatically detect minute changes. Insurance underwriters can use similar analysis tools to mitigate risk.

UAVs provide a platform for a range of sensors and instruments that directly support the operational and business requirements of customers working in these sectors.

MDA's UAV Service is located in Suffield, Alberta and provides a state-of-the-art R&D and training facility for the application and advancement of UAVs.

An international leader in aerospace, remote sensing, and information solutions, MDA is committed to bringing UAV-based services to commercial sectors of the economy. These systems are cost-effective, safe, and highly versatile alternatives to traditional aerial image acquisition and monitoring techniques. MDA's heritage in advanced information systems enhances the value of acquired data to generate meaningful, real-time answers to commercial users. UAVs make sense, reduce risk, and contribute to better management decisions.

Oil and Gas Sector Applications

Canada is home to several hundred thousand kilometres of oil and gas pipelines, many of them spanning inhospitable terrain. Ensuring that right-of-ways are clear, and that environmental protection requirements are met means a great deal of repetitive flight time is logged each year inspecting the length of each line.



UAVs are well suited to pipeline monitoring because they eliminate the requirement for owned or leased aerial surveys, and traditional visual analysis of image data. UAVs can fly for more than 24 hours per mission, at altitudes up to 32,000 feet, acquiring optical and infrared imagery. Over time, archived image data provides a rich resource for automated change detection, where computers analyze, detect, and report changes in vegetation, encroachment, and the pipeline structure itself. UAVs help pipeline operators meet their survey needs while better protecting the environment.

Forestry Applications

Fighting wildfires effectively requires rapid decisions and a highly efficient management team. Understanding changing conditions, and safely deploying equipment and personnel demand near real time situational awareness.



UAVs are versatile alternatives over conventional piloted aircraft in forest fire scenarios. Dense smoke does not affect their operation, eliminating risk to air crews. Optical and infrared sensors provide accurate 24-hour monitoring capabilities, with real-time data downlinks to command centres on site, and to headquarters offices on regional levels. Overlaid with wind and weather information, UAV imagery heightens awareness of what will happen next. Forest monitoring, fire fighting, and post-fire damage assessments are all made easier and safer with UAVs. Archived image data allows for automated change detection and post-mission analysis that feed back into better forest management and improved fire fighting techniques.

Insurance Applications

Adequately monitoring agriculture for crop insurance purposes presents a number of challenges and costs that can result in higher premiums for farmers and cut into bottom line performance for carriers. Timely, accurate reporting of crop status is necessary to accurately underwrite policies and assess claims.

UAVs can be used to fly entire agricultural regions on a scheduled basis, or rapidly deployed to collect current information from a specific locale. Current imagery and automated analysis tools reduce labour costs spent manually reviewing crop conditions, allowing for more rapid, accurate conclusions, decisions, and settlements. Archived image data is a useful tool for studying empirical data, and tracking changes over time.



A service dedicated to the exploration and exploitation of UAV services by commercial users around the world.

FOR MORE INFORMATION

For more information on how UAVs can directly address your commercial application requirements, please contact us at:

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