

Ask the Specialist: Optimizing BVLOS



in UAV operations.

What will be the impact of beyond visual line of sight (BVLOS) on the application of drones in the geospatial surveying profession? At 'GIM International', we received this question from one of our readers and forwarded it to Pierre-Alain Marchand, who is employed as R&D regulatory compliance manager at senseFly. The Switzerland-based company is the manufacturer of the renowned eBee and eBee X, UAVs that are commonly used by geospatial surveyors.

BVLOS operations have progressed in leaps and bounds in recent years, thanks to ongoing trials, demos and data collection that have been key in facilitating progress. As an industry, we're constantly learning and gathering more highly geoaccurate data and insight as to how we can optimize BVLOS

This process of learning has also enabled unmanned aerial vehicle (UAV or 'drone') technology itself to become more advanced. This has seen fixed-wing drones become better equipped for BVLOS operations, offering better batteries and motors and safe airframes that have been verified through rigorous impact testing. As a result, many drones now have the endurance to enable users to safely fly further and map larger areas, broadening the potential for more complex BVLOS applications and offering cost, time and operational efficiencies. This is true across the globe, where operators in more countries are seeing BVLOS becoming increasingly accessible. Last year, for instance, the national civil aviation authority of Brazil (ANAC) approved BVLOS flights to be carried out for the first time in the country's history, marking a pivotal point in Brazil's commercial drone industry.

It's clear that the more data and knowledge we have, the closer we get to establishing a robust framework and defining risk models for shaping safe, fit-for-purpose BVLOS operations. This will be key in facilitating greater public acceptance and scalability to expand the opportunities available for geospatial professionals growing their drone fleet. The next step, as we see it, is reaching a position where humans can take on a management role, rather than a piloting one, in autonomous BVLOS flight. They will be supported by more sophisticated detect and avoid systems and communication technologies to ensure safer, smoother integration with other air traffic. The drone sector has already evolved significantly in the last decade, but capturing the opportunities BVLOS presents will enable fixed-wing drone technology to truly flourish. Collecting even more data, through a continued commitment to trials and partnerships with authorizing bodies, will be integral to this and the building of regulations that support safe BVLOS operations.

The regulatory outlook is already positive; European regulations, as well as laws implemented by Transport Canada and the USA's Federal Aviation Administration (FAA), look set to move towards better accommodating BVLOS flight. I'm confident that this acceptance will be an important enabler for BVLOS operations and geospatial professionals the world over.

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