

luxaviation X

Luxaviation Celebrates Successful First Year Operating Drones



One of Europe's leading business aviation operators has been operating drones on a vineyard, and is expanding.

Drones may not be large but their potential impact is huge. That's not just an optimistic claim for Luxaviation Group. As well as being one of the world's biggest private jet and helicopter operators, the company is now celebrating the successful first year of a project to spray vineyards using drones.

Having launched the project through Luxaviation Drones in July 2019, working with wine producer Domaine L&R Kox, the activities now cover the entire Luxembourgish wine region. There are now seven winemakers involved in the project, with another 10 having set dates for next season after attending flights.

The company is also planning to expand Luxaviation Drones further, for example extending the services to the cross-border regions with Germany.

Through the data-driven agri- and viticulture drone service provided, winemakers can achieve more accurate and efficient spraying than using helicopters, as well as minimised noise pollution.

Protecting vines from disease, spraying organic phytosanitary (plant health) products, is critical for winemakers.

Christophe Lapierre, president of Luxaviation's services division, says: "This smarter and more sustainable approach to viticulture will provide winemakers with an instant competitive advantage over companies relying on conventional helicopter usage. We're impressed by the willingness of winemakers to contribute to the enhancement of the service and invest in unmanned aircraft."



Luxaviation chief executive officer Patrick Hansen adds: "For spraying vineyards, drones are easier to organise and deploy than helicopters. Since the pilots can fly the drones close to the ground, we can provide winemakers with great accuracy and flexibility.

"By some estimates, winemakers may be able to reduce phytosanitary products sprayed by 50-to-60 percent rather than helicopters or trucks, which equates to reduced costs and lower environmental impact. Drones are also particularly efficient for steep slopes, and for small surfaces in fragmented vineyard regions."

From Medicine to Farming

Beyond viticulture, using drones for video, where applications can range from media productions to law enforcement surveillance, is already an area that is growing quickly for Luxaviation. Site inspections and photogrammetry (using photography to establish measurements in surveying and mapping) are regular requests too.



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Of course Luxaviation is not alone in exploring the applications of drones. Exciting, pioneering projects globally are finding new services to offer every day.

Drones are literally saving lives delivering vital supplies to rural medical centres in places such as Rwanda in central Africa. Farmers across the world can use drones to monitor the productivity of their crops, avoiding long ground journeys or expensive helicopter missions across hundreds or thousands of acres of land. Ranchers, similarly, can survey their cattle using drones, which could be especially important during a dangerous event such as a flood.

These few examples cover just a small part of the drone picture. The list of possible applications goes on and on.

Fast and Agile

Drones can soar over terrain that would be hugely challenging to cross on the ground, cutting hours from

delivery time by road, especially in remote regions where infrastructure is poor. And in these times of social distancing and COVID-19, drones' ability to make deliveries with little or no human interaction is invaluable.

Adding AI for Efficiency, and Leveraging Data

There is still room for progress in the global use of drones and improvements are happening all the time. Manually reviewing drone footage, for example, might be a project that takes days. The process of detecting, extracting and analysing usable data can be laborious. But automating that process, perhaps with artificial intelligence (AI) technology, might help the user reduce that work to minutes, quickly and accurately maximising the value of the data gathered by the drones.

Nevertheless, having precise sets of data unlocks huge potential in many applications in first steps, and agility and flexibility of drones is a catalyst to new developments for most industry segments, and AI will enhance it further

Providing Industry Insights

Of course Luxaviation is committed to supporting emerging technologies. Drones and vertical take-off and landing (VTOL) aircraft are no exception. "Just as we believe in maintaining the highest certification standards in manned fixed- and rotary-wing services, we are working with civil aviation authorities to enhance the operations capacity, certification standards and (pilot) training procedures for drone and VTOL operations. From regulations to safety quality management, we can help close knowledge gaps in this nascent industry," said the company.

"Similarly, we've entered into a partnership to support first some drone start-ups developing new applications in operations and cargo, and we are also building long term partnerships with eVTOL OEMs to set paths for projected development and go to market."

Passenger Drones Evolving Fast

The development of passenger-carrying drones is thrilling too. Industry figures indicate over 250+ electric VTOL aircraft concepts are in development, from major manufacturers to start-ups. Pilotless passenger aircraft could revolutionise urban commutes.

We're not in the world of science fiction anymore. When aviation giants such as Airbus and Boeing are investing in unmanned passenger aircraft, there's clearly long-term commercial potential out there. Coronavirus may have disrupted all the world's plans but hopes are still high for commercial eVTOL operations starting in around 2023.

Talking of COVID-19 raises another point. There's already evidence vulnerable passengers will forever fly privately now because they understandably don't want the risks of moving through a crowded airport or aircraft again. By extension, those passengers will find autonomous flight, without even needing to interact with a pilot, very appealing.

Large or small, whether carrying passengers or spraying a vineyard, drones in all their forms have a big future and Luxaviation is doing its best to play its part.

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