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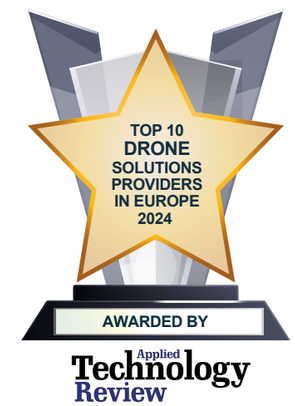
AIRlabs



The annual listing of 10 companies in Europe that are at the forefront of providing Drone solutions and impacting the marketplace

A One-Stop Shop for Drone Innovation and Development

AIRlabs Austria is a leading innovation laboratory for unmanned aerial vehicles, funded by the Austrian Ministry for Climate Action, positioning itself as a one-stop shop for drone innovation. Located in Graz and with four test facilities in Austria, the company offers comprehensive support along the entire value chain, encompassing research and development (R&D), testing and validation, as well as integration and certification of aerial vehicles.

The company provides a unique testing infrastructure, including a multi-site concept that covers multiple terrains, such as alpine, wooded, and urban environments, for testing under various conditions. AIRlabs' infrastructure, along with a team of highly specialised scientists and technicians helps customers secure necessary permissions and flight planning, as well as identify suitable partners for their innovation projects.

"We offer support in infrastructure along the entire value chain—from R&D to testing and certification," says Roswitha Wiedenhofer-Bornemann, Managing Director at AIRlabs. The company has collaborated with Austro Control and BMK to develop airspaces in various locations nationwide. AIRlabs manages and isolates airspaces that are solely dedicated to drone testing. This distinctive approach establishes a secure testing environment that reduces the potential for collisions with other aircraft, elevating overall safety throughout testing procedures.


Christoph Brunner, Managing Director

Committed to advancing drone innovation, the firm operates on a structured framework of six levels, each tailored to address specific technology readiness levels (TRLs). At operating level 1, AIRlabs focuses on the foundational aspects of unmanned aerial systems (UAS) R&D. This stage delivers a comprehensive suite of engineering and simulation services that are housed within cutting-edge research infrastructures. From conceptualising thematic test scenarios to modelling, simulating and visualising various elements, including single and multi-UAV flights, avoidance routines and addressing icing challenges, the company covers it all.

In operating level 2, the company emphasises practical testing for unmanned aviation systems. This phase leverages a diverse range of large-scale infrastructures that facilitate the seamless execution of realistic test scenarios. Operating levels 3 and 4 extend into small and large flight areas within civil Restricted/Temporary Segregated Areas (R/TSA). These zones provide a platform to test UAS under authentic conditions, including the intricacies of challenging alpine environments.


Roswitha Wiedenhofer-Bornemann, Managing Director

In addition, operating levels 5 and 6 are specialised for applications in urban airspaces and other specific operational environments, such as flying over critical infrastructure. This comprehensive approach ensures a thorough exploration of UAS across real-world scenarios, solidifying AIRlabs' commitment to driving innovation in the field.

The firm is also involved in various fields of application in the drone sector, including logistics and transport, agriculture and forestry, maintenance and servicing, SAR (search and rescue), mobility, monitoring, and photography and video.

Within the UAS, prevailing technical challenges like drones' flight duration capability and the capacity of accumulators and batteries prove to be major impediments for clients. AIRlabs offers R&D services, aiding clients in overcoming these barriers. Simultaneously, the firm tackles regulatory challenges concerning permissions granted to customers, requisite training requirements and essential safety backup measures.

AIRlabs has solidified its position among small-sized companies with a robust entrepreneurial approach. While these enterprises may not be significant holdings, they aspire to advance in a rapidly growing market, requiring assistance in innovation and research. The company addresses this need by providing them with a collaborative and supportive network, fostering mutual aid for entrepreneurship and innovation.

> **We offer support in infrastructure along the entire value chain—from R&D to testing and certification**

In one instance, AIRlabs participated in a joint exercise with the medical professionals and assistants of the Austrian Red Cross regarding the search and rescue application of drone technology. The firm partnered with the telecom communication group A1, which expanded a real-time 5G network. The company successfully utilised the 5G networks for real-time data delivery by leveraging drones, particularly in emergency training and rescue operations.

A frontrunner in the UAS sector, AIRlabs showcases its strong presence through strategic collaborations with renowned entities, such as Schiebel Elektronische Geräte GmbH, Riegl Laser Management Systems GmbH, A1 Telekom Austria AG and University of Applied Sciences, FH JOANNEUM. The driving force behind its achievements lies in the expertise of its dedicated team, comprising specialised scientists and technicians, who play a major role in translating the company's vision of comprehensive drone technology into reality. The firm follows a holistic approach to help clients effortlessly convert their drone concepts into innovative solutions.