UAM technical solutions - **Airbus Helicopters**

Joerg P. MUELLER

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Short bio

Dr. Joerg P. Mueller is leading Airbus' Urban Air Mobility (UAM) organisation. In this role, he is in charge of building UAM solutions with the objective of ultimately bringing a competitive offer to market. He builds on the experience from various positions within Airbus' Urban Air Mobility that he held since its foundation, the most recent being the Head of Programs & Strategy and Deputy Head of UAM.

Previously, Joerg worked in Airbus' Strategy department on projects related to breakthrough innovation, value chain positioning, post-merger integration, and large-scale company transformation. Furthermore, he worked in the engineering department on aeroelastic flight test analyses and certification of the A380 In Airbus' Flight Physics department.

Before joining Airbus, he was a consultant at McKinsey & Company where he focused on operational and strategic business challenges for major players in the high-tech industry and beyond.

Joerg holds a PhD for his research performed at Airbus Helicopters on closed-loop control of the whirl flutter instability on tilt-rotor aircraft. He conducted aerospace engineering studies at the University of Stuttgart, at Caltech in Pasadena, California, and at UPS/ISAE-SUPAERO in Toulouse, France.

Abstract

Urban Air Mobility is at the juncture where the ever growing societal need for efficient and sustainable transport meets new solutions provided by emerging technology. Progress in electrical propulsion is a key enabler to UAM, along with technologies for autonomous flight, or mobile connectivity that will provide all-new service offerings.

We are currently developing the CityAirbus NextGen prototype that is using the knowledge from previous vehicle demonstrators, the helicopter transport service VOOM, and our work around city integration and unmanned traffic management. Its performance is optimized for a market spot in and around urban areas. We are currently in the detailed design phase and all major component partners have been contracted. It uses an indeginous aircraft architecture of minimized technical complexity and therefore a simplified path to certification and simpler and cheaper operations. The new eVTOL architecture and the new mission profiles call for new approaches to safety of the vehicles in their operational environment.

From medical services to connecting remote areas to existing networks, CityAirbus NextGen will be able to perform essential missions alongside helicopters, and bring added value to our communities' journeys. eVTOLs are driving the future of vertical flight and the technologies and capabilities that are developed will benefit Airbus' product portfolio at large on its way to sustainable, emission free flights.

UAM is much broader than just a flying vehicle: it needs to be accepted by society and seamlessly integrated into our urban environments. It requires infrastructure on the ground, an adapted airspace management, and an efficient integration with complementary means of transport. With our strong international footprint and our global network of partners, we are taking a holistic, tailored and mission-driven approach to what the future of urban mobility will look like in the next decade.