

# UAM technical solutions - Lilium

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**Yves YEMSI**

*Chief Operating Officer, Lilium*



**Luigi RICCI MORETTI**

*Chief Engineer, Lilium*

## Short bios

**Yves Yemsi** oversees the execution of the Program development of the Lilium Jet and the implementation of Production and Supply Chain Management capabilities meeting Aerospace Quality standards. Since he joined Lilium 3 years ago, Yves has contributed to define and implement the Program Development Plan for the Lilium Jet, the implementation of an Intellectual Property strategy and the recruitment and onboarding of key leaders with proven track records in the Aerospace industry. Yves is also involved in the efforts to establish a roadmap for Battery Cells selection, testing, qualification and certification with FAA and EASA.

Before joining Lilium, Yves spent the last 17 years at Airbus developing the most stringent standards in Quality and Supply Chain Operations and continues to do the same at Lilium today.

With 20 years' experience leading teams in rotorcraft design at Piasecki Aircraft Corporation and AgustaWestland, **Luigi Ricci Moretti** worked on ground-breaking R&D projects involving product development, certification and delivery.

## Abstract

Lilium has built an aerospace company with over 800 employees, from 58+ nationalities. Lilium successfully completed in April 2022 its second Design Organization Approval (DOA) audit with EASA, confirming that Lilium is following the rigorous design processes agreed with the regulator.

Lilium's anticipated aircraft – the Lilium Jet, aims to achieve an anticipated physical range of 250km, an anticipated operational range of 175km, a low noise profile, and commercial aviation safety level. At the beginning of 2022, Lilium began the next phase of flight testing in Spain with our 5th generation technology demonstrator, Phoenix 2. At the ATLAS Flight Test Center, Lilium is extending the flight envelope through full transition and high-speed flights. In June 2022, Phoenix 2 achieved main wing transition – a major milestone.

Lilium has been working with partners to develop a high-performance aviation battery system for our jets centered on the two key drivers necessary to achieve our mission: performance and scale, while working towards anticipated certification requirements. Lilium has progressed in filing patents to protect intellectual property, and independent 3rd party testing of its target cell technology has been completed. Based on the test results from Energy Assurance, Lilium's selected cell from its partner, ZenLabs, is able to support the stated power during the entire discharge at each tested SOC. The cell is able to

support a high specific power of 2500 W/kg even down to 20% SOC. Translating this to the aircraft, Lilium expects these cells to be able to deliver the following performance for the Lilium Jet: (i) the required power for takeoff (hover), cruise and landing; (ii) a projected Physical Range of 250km, assuming short duration vertical take-off and landing, at Operational Empty Weight; and (iii) a projected Operational Range of ~175km assuming a vertical takeoff at Maximum Take-Off Weight and vertical landing (45 seconds duration) such that ~20% state of charge remains following the landing.

Lilium is closely cooperating with EASA, to progress towards Type Certification. EASA's approach is proving highly constructive. Lilium received its EASA certification basis (CRI A-01) for the Lilium Jet, an equivalent milestone to the FAA's G-1 issue paper, in 2020. Lilium is now working with EASA towards the next major milestone, agreement of the certification program, which includes Means of Compliance for demonstrating that our aircraft conforms with stated certification requirements. Earlier this year, our teams submitted a full set of Means of Compliance proposals to EASA. Our next steps are to agree on the certification program with EASA, which we aim to complete by the end of 2022.

*All statements in this abstract other than statements of historical fact are forward-looking statements. These forward-looking statements are based on management's current opinions, expectations, and assumptions regarding future events, and involve risks and uncertainties that may cause actual results to differ materially from those stated, including the risks discussed under the heading "Risk Factors" in the Lilium's Annual Report on Form 20-F for the year ended December 31, 2021 filed with the U.S. SEC as well as other factors described in Lilium's SEC filings. Lilium undertakes no obligation to update or revise any forward-looking statement contained in this abstract, except as otherwise required by law.*