

Emerging Air Taxis

An air taxi is a small commercial aircraft which makes short flights on demand. In 2001 air taxi operations were promoted by NASA and aerospace industry study on the potential Small Aircraft Transportation System (SATS) and the rise of light-jet aircraft manufacturing. While integrating autonomous features in modern vehicles, leading auto companies are exploring the future of urban mobility in the aviation industry.

The emerging concept of air taxis reflects the dramatic transformation that is underway in the automotive industry. Air taxis are evolving as a whole new class of automobiles that is poised to metamorphose the future of mobility. This is triggering automakers to foray into the urban air mobility (UAM). The vertical takeoff and landing (VTOL) technology is significant in evolution of air taxis [1].

Aircraft that take off and land vertically with rotors or horizontal propellers like drones use more energy than conventional aircraft whose lift is provided by wings. Drones with propellers are less efficient than helicopters with large rotors. The poor energy density of batteries compared to hydrocarbon fuels limits the range and endurance of the electrically powered aircraft. Although the ratio of the mass of payload and fuel (or battery) to the total aircraft mass for the drone is not that different from the same ratio for a Boeing 747, the range and time in the air is very much less [2].

VTOL Aviation, India (Fig. 1), Lilium showed in Fig. 2 [3], Volocopter, ImagineAir, Propair, Skymax, Airstream Jets, Uber, CityAirbus, Toyoto, BAE Systems and Joby Aviation are the active workers on the Air Taxi technology.

References

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3. www.lilium.com/newsroom



Fig.1 VTOL



Fig.2 Lilium