
LOOKING TO THE SKIES

DRONES

DRONES ARE IN THE NEWS AS BIG GROUPS AND START-UPS ALIKE COMPETE AND/OR JOIN FORCES TO LAUNCH FLYING TAXIS FOR CITIES. WHETHER AND WHEN THEY WILL TAKE OFF IS ANYONE'S GUESS. LESS «THE FIFTH ELEMENT», MORE HERE AND NOW, THE RAILWAYS ARE ALREADY USING UNMANNED AERIAL VEHICLES (UAV) FOR MAINTENANCE AND SURVEILLANCE PURPOSES.



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In a 2016 white paper, Uber presented uberAIR, its vision of a flying cab system – 'to create efficient cities with less congestion and cleaner air'. Its Elevate programme, launched the same year, has been working over the past 24 months to build a network of all-electric, vertical take-off and landing (VTOL) aircraft powered by distributed electric propulsion.

Most recently, the ride hailing giant unveiled its design models (May 2018) and announced the creation of its first research and

development hub outside of North America, the Advanced Technologies Center in Paris, France: 'Over the next five years, we'll be investing €20 million into developing new technologies and capabilities to move our [Elevate] vision forward. This begins with building artificial intelligence and airspace management systems to support uberAIR at scale, which will be key to achieving our goal of demonstration flights in Dallas, Los Angeles, and a third, international city by 2020.'



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Airbus in the picture

Also two years ago, Airbus launched Vahana, a programme led by the group's A³ innovation lab in California. Since then, its team has been working to develop a taxi-drone capable of carrying passengers over cities to avoid traffic jams. This has led to the Vahana, a single-passenger, self-piloted electric VTOL vehicle, which completed its maiden test flight in Oregon, US, in January 2018.

In 2017/2018 came Pop.Up, a modular and autonomous car/drone concept for several passengers, developed by the group with Italian design firm Italdesign. Premiered at the Geneva International Motor Show in March 2018, the futuristic prototype system – boldly billed as ‘an electric vehicle that can travel on land and in the air to relieve congestion in tomorrow’s megacities’ – stole the show later in June, at Transports Publics 2018 in Paris.

In the skies of Dubai

In Dubai, flying taxis form part of the Roads and Transport Authority's (RTA) drive to develop self-driving transport. The city conducted its first test of a drone taxi service in February 2017. The two-seater, 18-rotor unpowered craft, designed by German firm Volocopter, completed a five-minute flight.

Volocopter co-founder Alex Zosel 'expects its first full air taxi systems with dozens of Volo-Hubs [stations] and Volo-Ports [landing/take-off pads] to be in place within the next 10 years, capable of flying 100,000 passengers an hour to their desired destination.'

In July 2018, at the Farnborough International Airshow, Rolls Royce unveiled its plans for an Electric Vertical Take Off and Landing (eVTOL) plane concept

Fly rail

For the railways, UAVs are a tool for improving their efficiency and operations, for saving time and money. Using these flying eyes overcomes the issue of track possession (interrupting passenger services to inspect the infrastructure), enables valuable data collection, and avoids putting workers at potential risk.

Since its official launch in January 2017, Altametric, the dedicated drone subsidiary of SNCF Réseau (French rail network manager) has been steadily scaling up. Given the 30,000km reach of France's network, the lion's share of its work is dedicated to its mother company – essentially carrying out surveillance (bridges, tracks, vegetation), and security (degradation) missions. Yet the team is also offering its services for clients, both at home and abroad, such as other infrastructure managers (electricity) and coming from other industries, e.g. aeronautics.



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