

COMING UP FOR AIR

Flying taxis have long been part of our science-fiction future, but now it seems their time has finally come, says **Paul Sillers**

Dodging potholes, navigating around roadworks, and keeping a lookout for other, less proficient drivers are just a few of the pleasures of urban driving. That's if you can get going in the first place. Specialist transportation analyst INRIX recently published its 2017 Global Traffic Scorecard, which used big data to assess the economic impact of road traffic congestion in 1,360 cities across 38 countries. Los Angeles topped the list of the world's most gridlocked cities, with drivers spending 102 hours annually in traffic jams during peak periods. LA was followed by Moscow and New York (tied at 91 hours), São Paulo (86 hours) and San Francisco (79 hours). London was tenth on the list at 74 hours.

The financial upshot of all this number-crunching? INRIX reckons the average annual cost of wasted fuel and lost productivity time to London's drivers stagnating in the capital's jams is £2,430.

So imagine if, instead of dawdling along at 5mph – the average rush-hour speed in Central London – you could whizz across town at 75mph? That's the pace of CityAirbus, a battery-powered air vehicle able to vertically take off and land, and designed, says its maker Airbus, “to carry up to four passengers over congested megacities to important destinations such as airports or train stations in a fast, affordable and environmentally friendly way”.

It's part of a raft of Airbus eVTOL (electric vertical take-off and landing) initiatives focused on the creation of quiet and emission-free urban flying machines – often colloquially referred to as flying taxis. The planemaker's other related projects include the AI-controlled Vahana being developed by A³, Airbus' Silicon Valley outpost, and Pop.Up,

a modular flying car concept jointly developed with automotive designers Italdesign.

The CityAirbus programme started under wraps with feasibility studies in 2015, followed by component testing the following year. Last October Airbus revealed that its demonstrator vehicle had passed a significant propulsion testing stage with the first full-scale trial of the propeller-and-duct system, powered by Siemens electrical propulsion units.

“We now have a better understanding of the performance of CityAirbus' innovative electric propulsion system, which we will continue to mature through rigorous testing while beginning the assembly of the full-scale CityAirbus flight demonstrator,” says Marius Bebesel, CityAirbus chief engineer.

In December, Airbus reached another important milestone with the completion and ‘power on’ of the ‘iron bird’ ground test facility in Taufkirchen, Germany. This enables the verification of the entire electric propulsion system of CityAirbus, developed by Airbus's E-Aircraft Systems unit.

Next steps in the programme will be the testing of the fully integrated drivetrain, with eight propellers and eight specially designed Siemens SP200D drivetrains, which have an exceptional torque to weight ratio, according to the manufacturer. If all goes to plan, flight tests of CityAirbus will start later this year, leading to certification and eventual service entry by 2023. ■

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