

Concept flying car gears up for the skies

Shown for the first time at the Geneva International Motor Show, the Pop.Up, a collaboration between Airbus and Italian automotive design house Italdesign, is said to be the first modular, fully electric, zero emission concept vehicle system designed to relieve traffic congestion in crowded megacities.

Pop.Up envisages a modular system for multimodal transportation that makes use of both ground and airspace.



The feasible concept is the result of Italdesign and Airbus' joint reflection on how to address the mobility challenges of megacities achievable for a majority, which has become one of the most pressing issues for commuters in megacities worldwide.

With traffic congestion projected to hugely increase by 2030, the companies decided to combine their engineering expertise to tackle how to best achieve a sustainable, modular, multimodal urban mobility system, giving rise to the concept.

Layers

There are three layers to the system. The first is an artificial intelligence platform that, based on its user knowledge, manages the travel complexity offering alternative usage scenarios and assuring a seamless travel experience. The second is a vehicle shaped as a passenger capsule designed to be coupled with two different and independent electric propelled modules (the ground module and the air module).

Other public means of transportation (e.g. trains or hyperloops) could also integrate the capsule as it has an interface module that dialogues with users in a virtual environment.

The two companies say that the system aims to give time back to commuters through a flexible, shared and adaptable new way of moving within cities introducing a new user-focused transportation system concept.

The vehicle combines the flexibility of a small two-seater ground vehicle with the freedom and speed of a vertical take-off and landing (VTOL) air vehicle, thus bridging the automotive and aerospace domains.

How it works

The way it all works is fairly simple: passengers plan their journey and book a trip via an app. The system suggests the best transport solution according to user knowledge, timing, traffic congestion, costs and ride sharing demands, joining either the air or ground module or other means of transportation to the passenger capsule, and following passengers' preferences.

At the heart of the concept is a capsule. This hi-tech, monocoque carbon fibre cocoon measures 2.6m long, 1.4m high and 1.5m wide. The capsule transforms itself into a city car by coupling to the ground module, which features a carbon fibre chassis and is battery powered.



For megacity journeys, the capsule disconnects from the ground module and is carried by a 5m x 4.4m air module propelled by eight counter-rotating rotors. In this configuration, Pop.Up becomes a self-piloted air vehicle, taking advantage of the third dimension to get from A to B while avoiding traffic congestion on the ground.

Once passengers reach their destination, the air and ground modules with the capsule autonomously return to dedicated recharge stations.

Thanks to the possibility of combining the capsule with other means of public transportation, the Pop.Up offers a seamless travel experience. The user can stay for the entire journey in the same capsule without switching between different travel modes and enjoy the commute, with real-time interaction between the capsule and the surrounding urban environment and communities.

"Adding the third dimension to seamless multimodal transportation networks will without a doubt improve the way we live and how we get from A to B," says Mathias Thomsen, GM for urban air mobility at Airbus.

"Successfully designing and implementing solutions that will work in the air and on the ground requires a joint reflection on

the part of aerospace and automotive sectors, alongside collaboration with local government bodies for infrastructure and regulatory frameworks."

Wider ecosystem

Says Italdesign CEO Jrg Astalosch: "Today, automobiles are part of a much wider ecosystem: if you want to design the urban vehicle of the future, the traditional car cannot alone be the solution for megacities, you also have to think about sustainable and intelligent infrastructure, apps, integration, power systems, urban planning, social aspects, and so on. In the coming years ground transportation will move to the next level and from being shared, connected and autonomous it will go multimodal and moving into the third dimension".

At this stage, the [Pop.Up](#) is just a concept, but one that goes beyond the idea of the simple pod. Of course, there is a view that one day not only will our streets be full of pods, but the air above them too.

Source: Business Day

For more, visit: <https://www.bizcommunity.com>