ITALDESIGN AND AIRBUS UNVEIL POP.UP
A TRAILBLAZING MODULAR GROUND AND AIR PASSENGER CONCEPT VEHICLE SYSTEM

- **World-premiered in Geneva on March 7th 2017**
- **Aerospace and automotive industries unite to draw up a shared vision for seamless, multi-modal, fully electric urban mobility**
- **Urban transportation is moving into the third dimension, exploring city skies to contribute to relieving congested roads and reducing emissions**
- **The modular concept includes a capsule that connects to either a ground or air module, and can be integrated into other means of transportation**
- **An Artificial Intelligence platform will manage the trips offering passengers multiple optimized choices of transport combinations to match their travel preferences**
- **Passengers will interact with the multimodal transportation system through a simple app**
- **Passengers can relax and enjoy their journey thanks to a self-piloted system for both ground and air transportation**

Geneva, 7 March 2017 – During the 87th Geneva International Motor Show, Italdesign and Airbus world-premiered Pop.Up, 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 multi-modal transportation that makes full 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 and multimodal urban mobility system - giving rise to the Pop.Up concept.

Pop.Up System consists of a three layers concept:

- an Artificial Intelligence platform that, based on its user knowledge, manages the travel complexity offering alternative usage scenarios and assuring a seamless travel experience;
- 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 Pop.Up capsule;
- an interface module that dialogues with users in a fully virtual environment.;

The Pop.Up 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 Pop.Up 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.

Pop.Up's *modus operandi* is simple: passengers plan their journey and book their trip via an easy-to-use app. The system automatically suggests the best transport solution - according to user knowledge, timing, traffic congestion, costs, ridesharing demands - joining either the air or ground module or other means of transportation to the passenger capsule, and following passengers' preferences and needs.

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

For megacity journeys with high congested traffic, the capsule disconnects from the ground module and is carried by a 5 by 4.4 metre air module propelled by eight counter-rotating rotors. In this configuration, Pop.Up becomes a urban self-piloted air vehicle, taking advantage of the third dimension to get from A to B efficiently whilst 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 to wait for their next customers.

Thanks to the possibility of combining the capsule also 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 worrying about switching between different travel modes and enjoy the entire commute time, with real time interaction between the capsule and the surrounding urban environment and communities.

Aerospace leader Airbus is harnessing its expertise to actively develop a number of radical concepts that will contribute to relieving urban congestion. "Adding the third dimension to seamless multi-modal transportation networks will without a doubt improve the way we live and how we get from A to B," said Mathias Thomsen, General Manager for Urban Air Mobility at Airbus, on the occasion of the unveil. "Successfully designing and implementing solutions that will work both in the air and on the ground requires a joint reflection on the part of both aerospace and automotive sectors, alongside collaboration with local government bodies for infrastructure and regulatory frameworks. Italdesign, with its long track record of exceptional vehicle design was an exciting partner for Airbus for this unique concept project."

"Italdesign is a service company, created to provide services and mobility solutions to interested parties worldwide. It is deeply rooted in our DNA to search for future state-of-the-art solutions," said Italdesign CEO Jörg Astalosch. "Today, automobiles are part of a much wider eco-system: 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 next years ground transportation will move to the next level and from being shared, connected and autonomous it will also go multimodal and moving into the third dimension" continued Astalosch. "We found in Airbus, the leader in aerospace, the perfect partner who shares this modern vision for the future of megacities to develop a sustainable multi-modal vision of megacity transportation," he concluded.

About Italdesign

Italdesign is a service company providing design, engineering and production for the transportation industry, through to final testing and type-approval and support into Start of Production and the design of complete business models. Italdesign is based in Moncalieri and today has premises of more than 50.000 sq.m., a full-scale design and engineering campus and a cutting edge development and prototyping centre. It has 1000 employees in Italy, Spain and abroad. Italdesign offers its services to all interested parties worldwide. In 2017 Italdesign launched as additional business unit to design, develop and produce ultra-limited vehicles for all automotive constructors worldwide. In 2016 and 2017, Italdesign was awarded Top Employer certification in Italy.
More information on: www.italdesign.it

About Airbus

Airbus is a global leader in aeronautics, space and related services. In 2016, it generated revenues of € 67 billion and employed a workforce of around 134,000. Airbus offers the most comprehensive range of passenger airliners from 100 to more than 600 seats. Airbus is also a European leader providing tanker, combat, transport and mission aircraft, as well as Europe's number one space enterprise and the world's second largest space business. In helicopters, Airbus provides the most efficient civil and military rotorcraft solutions worldwide.

For professionals TV broadcasters: interviews in English with Italdesign CEO Jörg Astalosch , Mathias Thomsen Airbus General Manager for Urban Air Mobility and stock-shots available on http://www.airbus.com/broadcastroom *and on* Airbusgroup.com/popup
See more on http://airbus-xo.com

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POP.UP TECHNICAL SPECIFICATION

AIR MODULE

DIMENSIONS			
	Length	mm.	4403
	Height	mm.	847
	Width	mm.	5000
	Rotors	n.	4+4
	Propeller diameter	mm.	1780

POWERTRAIN		
	Power train	Electric
	Motors	8
	Total power	136 kW
	Motor power (each motor) (MCP)	17 kW
	Range (without payload)	100 km
	Charging time	15 minutes
	Empty weight ratio (EW/GW)	43.90 %
	Total battery(ies) energy / capacity	70.0 kWh
	Disc Loading	30.4 kg/m^2
	Tip Speed	150 m/s
Air Mode		
	Number of passengers	2
	Vehicle maximum gross weight	600 kg

PERFORMANCE	Top Speed (stand-alone module)	100 km/h

GROUND MODULE

DIMENSIONS			
	Length	Mm	3115
	Height	Mm	681
	Width (front/rear)	Mm	1848/ 1900
	Front overhang	Mm	581
	Rear overhang	Mm	534
	Kerb weight	Kg	200

PERFORMANCE	Top speed	km/h	100

POWERTRAIN		
	Powertrain	Electric
	Motorwheels	2 (Rear)
	Total Power	60 kW
	Range	130 km
	Charging time	15 Minutes
	Total battery(ies) energy / capacity	15 kWh

CAPSULE

DIMENSIONS			
	Length	mm	2647
	Height	mm	1415
	Width	mm	1540
	Number of Passenger		2
	Kerb weight	kg	200