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Local Motors Prepares for Serial Production of 3D Printed Smart Vehicles

Marketing Director Carlo Iacovini Anticipates the Company's Strategy for European Expansion of its Ollie 3D Printed Autonomous Vehicle Fleet

Local Motors surprised the world when it presented the first vehicle with a fully 3D printed body and it shocked the world showing that this was not just a marketing stunt but the beginning of a radical change in the way vehicles are manufactured. The company's unique approaches in terms of collaborative, smart (and eventually distributed) manufacturing of smart vehicles are all coming together in the Ollie projects, the company's first autonomous vehicle which will be produced in two versions: serially manufactured car with printed parts or fully customizable and fully 3D printed.

His experience at CRP Group, the leading 3D printing service and composite SLS material manufacturer that also produced Energica (the first commercially available electric superbike), made Carlo Iacovini the ideal figure to support Local Motors expansion in Europe. The project Carlo Iacovini is working on is very far reaching. He discussed some of the main aspects which will be presented in detail and shared at the upcoming IN(3D)USTRY congress in an effort to move AM adoption forward in the automotive segment.

"Local Motors arrived in Europe about two years ago, with the goal to have products that would be available on the European market," Iacovini explains. "The Strati and RallyFighter, however, were not ideal for European regulations. The Ollie project – he continues – was born from a challenge which asked the Local Motors community to envision the future of mobility in Berlin: an autonomous, electric vehicle that could carry up to 12 people (8 plus the backup driver in Europe) and could be summoned on-demand through an app like Uber."

This challenge led to the first two prototypes: one built in the US and one built in Europe, which also evolved into two separate research groups. The European prototype is housed at the Euref Campus, a scientific research center focusing on mobility. The campus also hosts Innoserv, which is the Deutsche Bahn division for all that concerns mobility innovation and experimentation.

"Last November we launched a pilot project at Euref, together with the German Ministry of Transports – says Iacovini. The project sees our Ollie drive autonomously through the campus carrying workers, guests, visitors and also gathering tons of information and data for further development. In the meantime the market began to take form..."

Today the demand for projects based on autonomous vehicles in the USA, Europe, Australia and the Middle East is huge. Not just for long distances and private cars but for last mile connections and transportation within private structures such as universities, shopping centers or airports.

"Ollie has thus become the highest priority project at Local Motors and it is shaping the manufacturing research behind it," Iacovini says. "It needs to be industrialized and validated for production as a commercial unit. This means it has to satisfy all automotive requirements and the highest levels for autonomous drive."

Local Motors is facing huge demand. The first ten units will be considered as beta versions that can be progressively upgraded in terms of software and even – through 3D printing – hardware. Today Ollie already has a high number of final components which are 3D printed using Cincinnati Incorporated's unique BAAM technology. These are parts made in composite carbo fiber in an ABS matrix. The BAAM system can produce very large parts very quickly, melting pellets of material instead of filaments to further cut costs. These parts include the wheel covers, several interior components including the seats, and many parts of the internal structure. Where necessary the parts are subsequently finished and covered with materials to improve aesthetics and comfort. Local Motors recently completed a new version of the Ollie which is almost entirely 3D printed.

"Our goal at Local Motors is to combine Ollie's development with mobility innovation," Iacovini explains. "We now have a product that can meet all mobility requirements. So we are going to develop that vehicle all types of services but at the same time we are also going to use it to progress automotive manufacturing technology and processes, which means extensive development in terms of adopting 3D printing."

This will lead to the two different Ollie versions: an industrialized model which will be more accessible and will be available in higher production numbers and the fully customizable versions which will be more expensive and largely 3D printed on demand. In order to make this happen Local Motors – which is still a relatively small startup – is going to collaborate and share ideas with the entire automotive industry, which is exactly what the company expects to find at IN(3D)USTRY.

"We don't want to just test 3D printing and use it for prototyping. We want to fully integrate it into our production process for final parts. We want to share our findings with other automotive manufacturers and also work with them on the development of new materials, applications and solutions." So far Local Motors has always proved skeptics wrong. The company's presentation at IN(3D)USTRY next October will certainly not disappoint.

About IN(3D)USTRY

Organized by Fira de Barcelona, IN(3D)USTRY From Needs to Solutions is the global hub that brings together every year all the players shaping the advanced and additive manufacturing ecosystem to foster the technological improvement of these innovative systems. It will be held from October 3 to 5 at Fira de Barcelona's Gran Via venue.

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