

## The driverless tractor, other devices from Mahindra's cabinet of curiosities

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The idea of the Blue Lab is to 'just let the imagination go wild', says Mahindra's executive director Pawan Goenka.

A two-wheeler that can turn into a three-wheeler or four-wheeler on demand and a sentient car that can assess the driver's mood—these are some of the ideas that have come out of Mahindra and Mahindra Ltd's secretive Blue Lab.

Mahindra has always been open to new ideas. It is India's only maker of electric cars and is developing a home-made luxury car under the Pininfarina brand.

According to Pawan Goenka, executive director of Mahindra and Mahindra, the company's Aero concept showcased at the 2016 Auto Expo was one such idea that came out of the Blue Lab.

Aero showcases Mahindra's XUV 500 sports utility vehicle in the format of a coupe—a term largely associated with luxury brands—and turned a lot of heads. Mahindra's experiments and innovations extend beyond the Blue Lab. One such is an autonomous tractor, Goenka said (but more on that in a bit).

First, the Blue Lab.

Started in April 2015, the lab takes the form of an institutionalized and scheduled brainstorming session. It hosts a community of innovators and meets thrice a year with the objective of creating a physical proof of concept of some of the ideas.

Goenka describes the physical forms that are the logical denouement of the ideas as devices, not vehicles as one would expect him to.

The idea is to “just let the imagination go wild”, said Goenka. For instance, one brief given to the innovators was to “develop a device, not for commuting or adventure, but leisure”.

Members of the Blue Lab include Frenchman Alain Giraud, who has spent 40 years in innovation at Renault SA, ending his association with the Carlos Ghosn-led company as director of Renault LCI (Cooperative Innovation Laboratory) and the father of Twizy, an electric car; Jean-Luc Thuliez of Switzerland, a serial innovator and founder and chief executive of Domteknika (an engineering company), Aventor Motorsport and Softcar, which develops high-technology electric vehicle prototypes; Lee Keshav, a racing driver and former design head at Hike messenger; and Latika Neelakantan, a semiologist and qualitative researcher with expertise in cultural anthropology and ethnography.

Exciting as the idea of a sentient vehicle is, it is driverless ones that have captured human imagination. Earlier this week, the US released guidelines for self-driving cars.

Mahindra, India’s largest tractor maker, has understandably focused on a driverless tractor.

There are three stages in the development of such a tractor, Goenka explained. The first is to see how the driver of such a vehicle (or user of such a device) can be directed by technology; the second is to develop a vehicle that pretty much drives itself, although it has a driver (just in case); and the third is to create an entirely autonomous tractor that drives itself and has no driver.

Mahindra has readied two prototypes (one for each of the two stages) that Goenka reviewed last week at the Mahindra Research Valley (MRV) in Chennai.

“We are seriously looking at it. I was in MRV two days ago and I saw prototypes of two of these three things that I talked about, but from a first prototype to production is a long march. So, we will work on it. It is too early to say whether we launch it in one year or six years. But work is going on,” he added.

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