

# Autonomous driving and battery swapping: Teoresi and XEV bring their connected and shared car concept for the smart cities of the future to Paris

At the Paris Motor Show from 17 to 23 October 2022, the two Turin-based companies Teoresi and XEV will present an innovative smart mobility project aimed at zero emissions, zero traffic and zero accidents. The latest prototype of the YOYO electric city car offers autonomous driving as well as a quick and easy battery change - and thus represents the next big step towards connected shared mobility in the urban environment.

## On Spot together: Teoresi at the XEV stand.

The prototype will test a Smart Mobility incorporating intelligent infrastructures and services, aimed at significantly reducing emissions, traffic and accidents. To bring this to life on site, Teoresi, a Turin-based engineering company specialising in cutting-edge automotive technology, will be present at the XEV stand at the Paris Motor Show. Together, the two companies will present algorithms for autonomous driving that have been developed and tested by Teoresi for the innovative manufacturer's electric city car YOYO.

## The "protagonist": the YOYO prototype

The "protagonist" is an autonomous YOYO prototype, which has become a self-driving shared car with automatic battery change thanks to the technology developed by Teoresi. The aim of the YOYO is to offer a vehicle that moves autonomously in urban traffic and communicates with infrastructures and services - including those for charging or replacing batteries - in order to enable increasingly safe and environmentally friendly connected & shared mobility in the city.

The autonomous YOYO prototype, which will be on display in Paris on all days of the fair, was first tested in simulated environments and then on the road. For the simulation phase, Teoresi created a virtual environment at its site in Naples, southern Italy, to realistically replicate vehicle dynamics and control strategies. At the XEV stand, a touch screen will show what the simulator "sees" as the car drives. The use of autonomous driving technologies with a view to the charging process will also be demonstrated. Thanks to the dialogue with the infrastructure, the car is able to find the nearest charging station, where autonomous devices then support the battery swapping.

### Shared vision: Intelligent urban mobility

"With the presentation of this new concept for car sharing and shared mobility at the Paris Motor Show, Teoresi and XEV are presenting their innovative vision of urban mobility of the future, guided by the goals of zero emissions, zero traffic, zero accidents," says Marco Bazzani, Innovation Manager of the Teoresi Group. "On the one hand, this is about increasingly comfortable, ecological and safe mobility. On the other hand, investments in infrastructure and technology – both generally in e-mobility and specifically in the field of autonomous mobility - make a rapid further development of mobility as a service essential. The self-driving shared car is the next big step in this direction."

Lou Tik, Founder and CEO of XEV, adds: "Teoresi's vision for the future of smart mobility is aligned with that of XEV. Since XEV was founded in 2018, creating a sustainable shared future for all has been our long-term goal in developing electric cars and battery exchange technologies and services. We have now sold more than 10,000 YOYO's worldwide, as well as set up car sharing and battery exchange services in Italy, France and Germany. We are very excited about our partnership with Teoresi, which gives us access to a particularly advanced technology for autonomous driving algorithms. Combined with XEV's unique technology in electric vehicles and battery swapping, this will create the path towards truly sustainable and smart mobility."

#### **Teoresi Group**

Teoresi was founded in 1987 as an IT consultancy company. Today Teoresi Group is an international engineering services company, with offices in eight cities in Italy including Turin, Modena and Naples, and international offices in Munich, Stuttgart and Berlin as well as in Lugano (CH) and the US.

Teoresi supports companies in creating projects with cutting-edge technologies: from self-driving cars to nanotechnologies applied to the medical field. On the strength of its global engineering expertise, Teoresi Group offers design, development and technology consulting with a focus on the innovative aspects of each project challenge. It supports the customer from analysis to final product conception, from design idea to prototype, from prototype to market. Teoresi Group is one of the 10 companies selected by Amazon to collaborate on the development of new products based on Alexa voice interaction.

#### **XEV**

Making urban mobility a joy for everyone: this is the mission of XEV, an innovative all electric car manufacturer. XEV is founded in Turin in 2018 by Lou Tik who, after his career as founder and CEO of JAC Europe, decided to start a new challenge: create an ecosustainable urban mobility system which is affordable and accessible to all.

The goal was to bring accessible technologies to the automotive market that everyone can benefit from, giving rise to responsible mobility, attentive to the environmental impact and for a user experience like no others.

#### **XEV YOYO**

YOYO is the fully electric vehicle designed by XEV for the city. YOYO, with a structure to ensure the maximum protection and its compact size, has a range of 150 km and combines Italian style in its futuristic lines and 9 captivating color combinations.

YOYO offers a unique charging solution: the Battery Swapping for even greater convenience and flexibility. Within 5 minutes, YOYO can be fully charged and ready to go.

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