CT develops Ecomovil'23: Cleaner, safer, and more efficient urban transportation

Starting in 2035, the European Union will ban the sale of new gasoline and diesel cars. This decision has accelerated change across the entire automotive industry, forcing a complete rethink of what vehicles of the future should be. And it goes far beyond just electrifying engines—it's about creating solutions that are sustainable, but also safe, efficient, and truly adapted to everyday needs.

That's the goal behind **Ecomovil'23**, an R&D project developed in collaboration with **CT Engineering, UNVI Carroceros, Endurance, and ADN**. It is part of **PERTE-VEC**, a strategic initiative supported by the Spanish Government to accelerate the digital and ecological transformation of the automotive sector and adapt it to the new mobility ecosystem.

The project focuses on a type of vehicle that is playing an increasingly important role in cities: **light, fully electric, and connected vehicles for urban passenger transport**. Ecomovil'23 aims to develop technologies that enhance operational efficiency, improve safety, and enable smarter maintenance—all powered by advanced data analytics.

As the technological lead, CT Engineering has spearheaded the design of an architecture capable of collecting and processing large volumes of data generated by sensors installed throughout the vehicle. This real-world data, combined with synthetic data generated via graphics engines, is used to create **digital twins** of key mechanical components—batteries, electric motors, tires, braking systems, climate control, and more. These virtual models allow for **real-time monitoring of vehicle condition and the use of predictive maintenance techniques to anticipate potential failures.** The result: increased reliability, reduced downtime, and optimized resource and energy usage.

One of the most innovative aspects of the project is its focus on the driver. Using specialized sensors and algorithms, the team is developing **technology that can assess the physical and cognitive state of the driver in real time**, detecting signs of fatigue, stress, or distraction.

This type of insight is key to enhancing safety and adapting the vehicle's behavior to the user. In addition, the project includes the development of **cognitive training programs** to help drivers better manage high-pressure or mentally demanding situations—common in congested urban environments.

Ecomovil'23 is a clear example of how digital innovation can address the challenges of modern electric mobility. It's not just about changing the powertrain, but about redefining the vehicle as an **intelligent platform**—one that can learn, adapt, and deliver better experiences.

For CT Engineering, participating in Ecomovil'23 clearly demonstrates its commitment to developing technological solutions that drive the transition toward cleaner, safer, and more

efficient mobility. Through data-driven engineering, digital twin development, and a strong emphasis on driver safety, CT is actively contributing to a smarter, more sustainable, and people-centered transportation model.

About CT

CT is a leading engineering company throughout the complete product lifecycle. For more than 35 years, our mission has been to provide innovative services and technological solutions that help our clients be more effective and competitive. Today, CT´s success is driven by 2.000+ engineers in seven countries providing end-to-end expert support to leading customers in the aeronautical, space, naval, automotive, railway, energy and industrial plant sectors. www.ctengineeringgroup.com

For more information:

Ignacio Abbad
Head of Marketing and Communications
The CT Engineering Group
Tel. +34 646 368 996
ignacio.abbad@ctengineeringgroup.com
www.ctengineeringgroup.com

Gabriela Martín Rodríguez
Internal and Corporate Communications
The CT Engineering Group
Tél. + 34 618 073 329
gabriela.martin@ctengineeringgroup.com
www.ctengineeringgroup.com