



HORSE DEVELOPS FIRST IN-HOUSE TRANSMISSION TECHNOLOGY FOR MICROMOBILITY PROJECT

- HORSE has developed a new transmission technology for urban mobility microcar initiative with Portugal's CEiiA - Centre of Engineering and Product Development
- 'Reducer' transmission the first entirely new, in-house product fully designed and built by HORSE
- Capacity to produce up to 20,000 units per annum in the future.
- HORSE is a division of Horse Powertrain, a global leader in hybrid and combustion powertrain solutions across 17 plants and 5 R&D centres

[HORSE](#), a division of Horse Powertrain and a leader in innovative and low emissions powertrain systems, has collaborated with Portugal's Centre of Engineering and Product Development ([CEiiA](#)) to design and develop a new transmission technology for light vehicles, as this market is growing very fast towards 2030.

The new 'reducer' transmission is the first of a new generation of technologies that have been designed, developed and built in-house by HORSE.

HORSE will deliver the initial prototypes of this technology from its Aveiro production facility. Each will be fitted to an L7e-class microcar – a light vehicle designed for a new mobility service to accelerate carbon neutrality in cities. This will be developed and tested by CEiiA in a preproduction series, with approval targeted during the first half of 2025.

CEiiA's new light vehicle project is being developed as part of the organisation's ongoing mission to develop and scale new products and services to enable carbon neutral urban mobility. The value chain for the microcar will be based in Portugal, with the involvement of global players to enable delivery. The vehicle follows previous micromobility projects, including Buddy in 2008 and the Toyota APM presented at the 2024 Paris Olympics.

Full-scale production of the new transmission component could start as early as the second half of 2025, with as many as 20,000 units delivered from the Portugal plant as urban-mobility solutions scale up. Plans are for integration of the gearbox into the light vehicle design with performance testing by December of 2025.

Patrice Haettel, Chief Executive at HORSE, said: *"This new offering is a first for HORSE – the first technology that the team has completely designed, developed, and manufactured in-house – a watershed moment for the brand. There is no single solution to solving the global challenges of decarbonisation or urban mobility, and we see this technology as one of the many in-house products that help to answer these challenges. Together, HORSE and CEiiA are making an important contribution to the overall challenge of delivering affordable and sustainable urban mobility at scale."*

Municipal micromobility at scale

CEiiA is spearheading the development of its new urban microcar solution, in partnership with leading automotive companies. Designed for the use in dense urban areas, the first public trial for the new L7e vehicle will take place in several cities in Portugal. Following its targeted approval date of the second half of 2025, it will offer an accessible transit solution across the city.



This initiative aims to be a model for other cities around the world, with CEiiA planning to scale the vehicle for mass use in the coming years. HORSE is already researching other micromobility projects around the world that could make use of the gearbox reducer developed for this project.

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About Horse Powertrain

Horse Powertrain consists of two divisions, Aurobay and HORSE. It is a worldwide leader in hybrid and combustion powertrain solutions. Headquartered in London, UK, the company employs 19,000 people globally across 17 plants and five R&D centres. Horse Powertrain Limited was officially created on 31 May 2024, with ownership split equally between Renault Group and Geely.

About HORSE

HORSE is a global supplier of innovative powertrain solutions. It believes that there is no one-size-fits-all solution to sustainable mobility and so is investing in technologies which will support the automotive industry, and other sectors requiring power generation, in their transition to a sustainable future. With decades of industrial know-how, HORSE develops, produces and supplies highly efficient full-hybrid, plug-in hybrid and internal combustion powertrains, and cutting-edge technologies (engines, gearboxes, full-hybrid and plug-in hybrid systems, and batteries).

HORSE employs over 9,000 people in seven countries, it is headquartered in Madrid, Spain and has eight manufacturing plants and three R&D centres around the world (Argentina, in Córdoba; Brazil in Curitiba; Chile in Los Andes; Portugal in Aveiro; Romania in Bucharest, Mioveni and Titu; Spain in Seville and Valladolid, and Turkiye in Bursa in partnership with Oyak).

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About CEiiA

CEiiA is a Portuguese engineering and product development center with headquarters in Porto (Portugal) that conceives, develops and productizes new products and services for a more sustainable society. It works by bridging together industry and universities in high-tech sectors such as mobility, aeronautics, and space.

In mobility, CEiiA develops and produces new products and services, exploring the opportunity to accelerate carbon neutrality in cities. The work in this area has been evolving from automotive development to electric mobility and mobility-as-a-service. Today using a sustainability-as-a-service model, we focus on developing new technologies that enable the creation of new services and business models towards carbon neutral cities.

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