



## PRESS RELEASE

### **Solaris and Poznań University of Technology work on advanced driver assistance system**

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**In cooperation with Poznań University of Technology Solaris is developing an advanced system of assistance for drivers of city buses, mostly electric ones. In the past few weeks, project tests were run in front of the Municipal Stadium in Poznań thanks to which the electric bus will be able to precisely show the driver how to dock the pantograph under a charging station.**

Devised jointly by engineers of Solaris and of the Poznań University of Technology, the system will facilitate the performance of simple and complex manoeuvres, such as driving forward and backward or parking, but it will also constitute an invaluable support when carrying out precise movements, for instance docking the pantograph to the charging station, which may prove challenging in the case of articulated vehicles. The goal of the project is to improve the safety of passengers and drivers of buses in city traffic. Moreover, it will help operators with manoeuvres on bus depot premises. The new system will also ensure optimal energy consumption by the vehicles.

In the past few weeks, the authors of the project dubbed ADAS (*Advanced Driver Assistance System*) performed tests in front of the Municipal Stadium in Poznań. The tests allowed to optimise the driver assistance system used in the Solaris bus. For research purposes, the Solaris R&D Department designed and installed a mobile pantograph charging mast set up on the square in front of the stadium. The firm also supplied a bus featuring the system designed and supplied by the Poznań University of Technology. Thanks to the advanced device, the bus is capable of recognising a charging mast, and consequently, it will be able to precisely show the driver where to dock the pantograph under the charging station.

Thanks to the software which the consortium is developing the vehicle will concurrently self-locate and create a map of the surroundings, in order to identify other road users on that map. What is more, the system is based on a neural network which enables the system to recognize specified objects in various weather conditions. Data transmitted from the ADAS sensors will be analysed so as to best use and fine-tune the operation of the software. The tests will also allow to check the operation of algorithms during the docking of vehicles under a station and to optimise their values.

“The Poznań University of Technology has been our long-standing partner for the development of drive technology and of various types of systems constituting the equipment of our buses. Thanks to our close collaboration, we are able to give our customers improved, more modern solutions, essential in the everyday use of vehicles. This project will considerably ease the daily work of bus drivers, and it will allow them to perform precise, but above all safe, manoeuvres,” says Michał Piłkuła, Director for Bus Development at Solaris Bus & Coach S.A.

The tested system is ultimately intended for electric vehicles. The project “Advanced driver assistance system for precise manoeuvres of non-articulated and articulated city buses” (project acronym ADAS) is subsidised under Measure 4.2: “Sectoral R+D programmes” of the Operational Programme Smart Growth 2014-2020, co-financed by the European Regional Development Fund (ERDF) (POIR.04.01.02-00-0081/17).

## **Additional information**

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### **About our company**

Solaris Bus & Coach sp. z o.o. is a leading producer of city and intercity buses in Europe. It focuses on the development of low-emission and zero-emission vehicles, i. e. electric and hydrogen buses as well as trolleybuses. Over 25,000 Solaris vehicles have been delivered so far and they ply the streets in 850 towns and cities across 33 countries located throughout Europe as well as beyond it. Solaris is part of the Spanish CAF Group (Construcciones y Auxiliar de Ferrocarriles) S.A. From conception, to the design and manufacturing phases, all Solaris buses are produced in Poland. All activities undertaken by the company are in line with its mission, which is reflected in the brand's promise: to change the image of public transport. Solaris also actively partners with public transport operators and provides them with comprehensive support in their transition to zero-emission mobility. Solaris products have been repeatedly awarded for quality and innovation. The Urbino 18 hydrogen bus has won the prestigious 'Bus of the Year 2025' title.