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Audi wins VDA Logistics Award for automated vehicle transport

- Parking robots autonomously sort up to 2,000 cars per day
- Audi Board Member for Production Prof. Dr. Hubert Waltl: "Driverless transport systems are a key technology of the Smart Factory"

Ingolstadt / Bremen, February 15, 2017 – A prize for a pioneering achievement: Audi has won the Logistics Award for 2017 from the German Association of the Automotive Industry (VDA) in recognition of its FTS driverless vehicle transport system. The autonomously operating system has been in production operation at the Ingolstadt site since the beginning of the year. The parking robot named Ray sorts up to 2,000 cars per day for loading onto railway freight cars. This application is the only one of its kind to date in the automotive industry.

"Driverless transport systems are one of the key technologies of the Smart Factory," said Prof. Dr. Hubert Waltl, Board Member for Production and Logistics at AUDI AG. "With their flexible navigation we are improving efficiency in vehicle transport as well. FTS Ray is now in production operation at the Ingolstadt plant. We will be transferring the concept to other processes and sites." VDA President Matthias Wissmann emphasized: "Our industry thrives on innovative solutions like this. The digitalization and connection of production, and in fact of the entire value chain, is the biggest challenge for the industry. Concepts like that of the award-winner clearly demonstrate that the German automotive industry is on top here as well."

There are now twelve parking robots in use at Audi's main plant in Ingolstadt. They autonomously transport Audi models after production for railway loading. For this, one of the roughly six meter long and three meter wide robots uses laser sensors to determine the position and dimensions of a car and adjusts itself accordingly. Then the robot carefully lifts the car up to ten centimeters. A central, autonomous control system assigns a space to the robot where the robot can park it via the shortest route. Once a sufficient number of cars have accumulated for the same transport destination, a robot prepares them for loading on to the railway freight cars.

The driverless transport systems complete up to 8,000 movements per day this way, while covering about 500 kilometers (310.7 miles). They even change their own batteries: When the charge status is low, the robots promptly dock themselves onto the automated changing station and specially designed robots change out the batteries within a few minutes. The system operates reliably around the clock – on an open parking deck and at outdoor temperatures up to





minus 20 degrees Celsius *(minus 4 degrees Fahrenheit)*. It thus improves both efficiency and ergonomics for employees: They now have significantly shorter distances to walk and are exposed to fewer extreme weather conditions.

The Ray driverless transport system was created in partnership with Serva Transport Systems in Grabenstätt am Chiemsee. The parking robots are continuously being developed further – their weather resistance, for example. In the first quarter of 2017, a total of 18 parking robots are already sorting ready-to-transport cars in Audi railway loading within an area of 20,000 square meters (215,278.2 sq ft). Additional opportunities for their use in the Ingolstadt plant have already been identified.

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The Audi Group, with its brands Audi, Ducati and Lamborghini, is one of the most successful manufacturers of automobiles and motorcycles in the premium segment. It is present in more than 100 markets worldwide and produces at 16 locations in twelve countries. 100-percent subsidiaries of AUDI AG include Audi Sport GmbH (Neckarsulm), Automobili Lamborghini S.p.A. (Sant'Agata Bolognese, Italy) and Ducati Motor Holding S.p.A. (Bologna, Italy).

In 2016, the Audi Group delivered to customers about 1.871 million automobiles of the Audi brand, 3,457 sports cars of the Lamborghini brand and 55,451 motorcycles of the Ducati brand. In the 2015 financial year, AUDI AG achieved total revenue of \in 58.4 billion and an operating profit of \in 4.8 billion. At present, approximately 88,000 people work for the company all over the world, about 60,000 of them in Germany. Audi focuses on new products and sustainable technologies for the future of mobility.