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SIMPLY CLEVER

PRESS RELEASE

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Stocktaking from the air: ŠKODA AUTO tests autonomous drone in logistics

- › An autonomous drone is assisting with stocktaking by detecting and counting containers
- › Collaboration between ŠKODA AUTO and Czech drone specialists Robodrone
- › Highly complex LIDAR technology used to accurately measure distance and speed
- › Testing phase running since May – use of drones in regular operations is planned for the medium term

Mladá Boleslav, 26 October 2018 – ŠKODA AUTO is pressing ahead with the implementation of technologies in line with Industry 4.0 principles: at its Mladá Boleslav plant, the Czech car manufacturer is currently testing a drone that can identify and count containers outside the factory from the air. The drone is a result of collaboration between the ŠKODA brand's logistics department and the Czech company Robodrone, and is paving the way to implementing drone-assisted stocktaking in everyday operations in future.

Michael Oeljeklaus, ŠKODA AUTO Board Member for Production and Logistics, stressed, "We are continuously working on improving the efficiency of our everyday production processes and making work easier for our employees. Drones assist with and speed up the stocktaking process. As a key pillar of our 2025 Strategy, such processes will take place completely automatically in everyday operations in future."

With its six rotors, the drone based on Robodrone's 'Kingfisher' model can fly up to 20 km/h and can carry a load of up to 5 kg. During the current testing phase, it fully autonomously records the number of empty containers outside a factory hall in Mladá Boleslav three times per day. The data are then automatically transferred to the IT systems at ŠKODA AUTO's logistics department, where they can be processed.

As GPS is not precise enough to determine the locations of the containers, the drone is equipped with LIDAR (light detection and ranging) technology to accurately measure speed and distance. A LIDAR sensor captures up to 300,000 images per second. The drone navigates using a 3D map, which is created based on this technology. Simultaneously it detects and counts the equipment containers all thanks to algorithms.

Up until now, this kind of technology was not available on the market – ŠKODA AUTO therefore developed the algorithms specifically for this application in collaboration with Czech company Robodrone Industries. In total, the car manufacturer invested around 200,000 euros in this technological innovation.

Test operations have been running since May. In the medium term, the drone will be seamlessly integrated into regular operations – in the second development phase, the 'Kingfisher' will get its own 'nest': the battery-powered device will then be able to autonomously navigate to a charging station. This will also be equipped with a weather station which will provide the drone with information about the weather at short notice.



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Further information:

Tomáš Kotera
Head of Corporate Communications
tomas.kotera@skoda-auto.cz
T +420 326 811 773

Kamila Biddle
Spokesperson for Production, HR and
Sustainability
kamila.biddle@skoda-auto.cz
T +420 730 862 599

Media video and images:



Video: Stocktaking from the air – ŠKODA AUTO tests autonomous drone in logistics

ŠKODA AUTO is testing a drone that, by using state-of-the-art LIDAR sensors, can identify empty containers, count them and then automatically transfer the data to the logistics department's IT systems.

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Source: ŠKODA AUTO

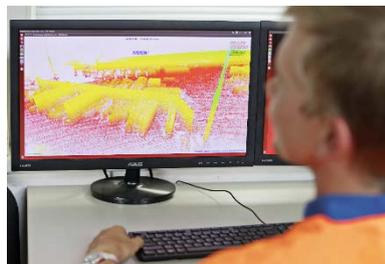


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Source: ŠKODA AUTO

ŠKODA AUTO

- › was founded during the pioneering days of the automobile in 1895, making it one of the longest-established car companies in the world.
- › currently offers its customers eight passenger-car series: the CITIGO, FABIA, RAPID, OCTAVIA, KAROQ, KODIAQ, as well as the KAMIQ (in China) and the SUPERB.
- › delivered more than 1.2 million vehicles to customers around the world in 2017.
- › has been a part of Volkswagen Group since 1991. Volkswagen Group is one of the most successful vehicle manufacturers in the world. In association with the Group, ŠKODA AUTO independently develops and manufactures vehicles, as well as components such as engines and transmissions.
- › operates at three locations in the Czech Republic; manufactures in China, Russia, Slovakia, Algeria and India mainly through Group partnerships, as well as in Ukraine and Kazakhstan with local partners.
- › employs over 35,000 people globally and is active in more than 100 markets.
- › is pressing ahead with the transformation from a traditional car manufacturer to the 'Simply Clever company for the best mobility solutions' as part of the ŠKODA 2025 Strategy.

ŠKODA Media Services

media@skoda-auto.cz



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