



Long-range drones to deliver emergency medication to hospitals

The "*MEDinTime*" project supported by the German Federal Ministry of Transport and Digital Infrastructure is testing the viability of the supply using unmanned aircraft systems in the Ingolstadt region.

The "*MEDinTime*" project is being funded by the Federal Ministry of Transport and Digital Infrastructure with a total of 1.07m € starting October 28th, 2020, as part of the call for proposals "Unmanned aviation applications and individual air mobility solutions".

The project consortium consists of experts from Ingolstadt Hospital, Ingolstadt University of Applied Sciences, the district of Pfaffenhofen a. d. Ilm and the Bavarian Red Cross regional office under the project management of the network coordinator Quantum-Systems GmbH.

The joint project "*MEDinTime*" concerns itself with an innovative mobility solution for a growing problem with the supply of medication to hospitals.

Clinics must stock a large selection of drugs around the clock for patient care. In addition, the rapid provision of special emergency medications must be ensured in the shortest possible time. This is usually guaranteed by appropriately equipped hospital pharmacies. Due to the distance to the nearest pharmacy and the associated transport time, even hospitals of the primary care level (I. level of care) have to keep a large stock of medication in order to be able to guarantee the supply at any time. After their expiration date, the products must be discarded. This circumstance is a considerable cost factor, not only for the hospital operator, but for the entire health care system.

In the context of the "*MEDinTime*" project, a demonstrator for the reliable and safe supply of regional hospitals with drugs by means of automatically operated drones is therefore to be developed by December 2022 and investigated during a longer test phase. For this purpose, a test track will be set up between the hospitals of Ingolstadt and Pfaffenhofen. In addition, the system should provide real-time data on the availability of drugs to be transported.

Vertically launching (VTOL) long-range drones from Quantum-Systems GmbH will serve as a basis. Unlike simple copter drones, these aircrafts can cover long distances (up to 100 km) quickly, safely and at low noise levels. Within the scope of the project, the drones will be equipped with a removable, intelligent transport box in accordance with the legal requirements for the transport of medication.

Furthermore, the project will lay the foundations for further areas of application, such as the transport of medicines to disaster areas. The fast transport of samples by air from a test center to the laboratories is also conceivable in the medium term.



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