Press Release

The HARMONY drone demonstration:

Delivering medicines in rural areas – Trikala, Greece

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People who live in rural areas and villages usually have limited access to goods. They have to travel long distances to reach the cities and purchase the goods they need. In addition, the majority of the people who live in villages (especially in Greece) are older in age and in several cases, are dependent on others (i.e., family members) to bring them the goods they need.

Against this background, the H2020 funded project HARMONY came up with the concept of using drones to deliver medicines to citizens that live in villages. The initial concept was that the drone would collect the medicines from the warehouse and deliver them to the people in need in the villages. This concept is demonstrated in Trikala, Greece.

SETTING UP THE DRONE DEMONSTRATION

In 2020, the local HARMONY partner, e-Trikala, along with the scientific support of the University of the Aegean and University College London (UCL), started the setup of the demonstration. The first step was to initiate a dialogue with the local stakeholders and the community to discuss the barriers and opportunities of this concept.

The local Association of Pharmacists collaborated closely with the HARMONY team raising several challenges - some of them regulatory- about the delivery of medicines. For example, the pharmacists have to make sure that the medicines are delivered to the person who has a prescription and that the right medicines are delivered to the right person. In addition, they have to guarantee that the medicines are not affected by weather conditions during the delivery. Given these barriers and constraints, the initial concept changed and through this co-creation process we ended up with a revised concept: in urgent situations, when a pharmacy in a village runs out of a medicine, the drone would pick it up from the warehouse and deliver it to the pharmacy in the villages; not directly to the person in need.

Although it may seem that the value of the concept has been decreased, there is still a lot of value in this concept. Under this concept, there is no need for the pharmacist or the delivery company to conduct a trip just to deliver a medicine; there is no need for the people in need to conduct a return trip to the city, or to ask their family members or friends to pick up the medicines for them. In addition, the costs and the environmental footprint are decreased as the trip that would be conducted by a car or a van, it is now conducted by an electric drone.

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At the same time, HARMONY also collaborated closely with the Hellenic Aviation Authority to secure approval for the flight paths (the routes that the drone will follow) to make sure that the drones will not put in danger the citizens. The approval, support, and guidance of the Hellenic Aviation Authority was vital for the initiation of the demonstration.

THE LAUNCH OF THE DRONES DEMONSTRATION

During the European Mobility Week 2021, on the 21st of September 2021, an event was organized to inaugurate the demonstration. Several local and national authorities participated in the event and discussed about the barriers and opportunities. The event closed with the "First flight" of the drone. The drone transferred medicines from Trikala to the pharmacy in Leptokaria village covering a distance of 2.4 km (1.2 km each way).

The first flight was carried out in the presence of the Mayor of Trikala, the executives of the Civil Aviation Service, the Association of Pharmacists of Trikala, the drone operator Altus S.A., the sponsor of the drone's insurance coverage Anytime Interamerican, the company HAM SYSTEMS that sponsored the temperature and humidity sensors in the drone's container, and e-Trikala. The project coordinator from University College London, as well as representatives from the HARMONY partners University of the Aegean and MobyX were also present.

NEXT STEPS

The first demonstration attempt started in September 2021 and it will last for two months. Three routes will be used and tested during the demonstration:

1. The Trikala – Leptokaria village that is 1.2 km (each way);

2. The Trikala – Megalo Kefalovriso that is 3.4 km (each way);

3. The Trikala Mikro Kefallovriso that is 5.7 km (each way).

The net weight that the drone will transfer is up to 1.5 kilos.

During this timeframe, data will be collected to measure a series of KPIs (Key Performance Indicators) regarding the drones operation, safety, environmental footprint, stakeholders and citizens acceptance that have been specified through the previous co-creation process. The data and the KPIs will be further analysed and assessed to propose policy recommendations and SUMP guidelines to enable such services that could contribute to the well-being of our society and especially to the well-being of vulnerable population groups.

The pilot test will be followed by the dissemination of results at a European level, as the program is part of the research and innovative programs of the European Union (Horizon 2020 and CIVITAS). The services of the above project are fully compliant with the General Data Protection Regulation (GDPR), as well as with the regulations of the Civil Aviation Authority.

Given that the promotion of the use of drones for the transport of pharmaceutical material is expected to bring multiple benefits at national and European level, we believe that the activities we carry out within the project will have a positive impact on health, social inclusion, protecting the environment, improving urban mobility and promoting entrepreneurship.

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You can follow Harmony on LinkedIn and Twitter to keep updated with its next developments.

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Project Factsheet

Duration:	1 June 2019 - 30 November 2022
Total cost:	7 649 645,25€
EC contribution:	7 430 894,50€
Coordinator:	University College London
Partners:	TECHNISCHE UNIVERSITEIT DELFT, PANEPISTIMIO AIGAIOU, UNIVERSITY OF WOLVERHAMPTON, INSTITUTE OF COMMUNICATION AND COMPUTER SYSTEMS, AIMSUN SL, TRT TRASPORTI E TERRITORIO SRL, ENIDE SOLUTIONS SL, SIGNIFICANCE BV, AIRBUS DEFENCE AND SPACE GMBH, ARRIVAL LTD, NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO, MOBY X SOFTWARE LIMITED, ASSOCIAZIONE URBAN LAB, GRIFF AVIATION AS, OXFORDSHIRE COUNTY COUNCIL, ANAPTYXIAKI ETAIREIA DIMOU TRIKKAION ANAPTYXIAKI ANONYMI ETAIREIA OTA - E-TRIKALA AE, COMUNE DI TORINO, GEMEENTE ROTTERDAM, ORGANISMOS ASTIKON SYGKOINONION ATHINON AE, GORNOSLASKO-ZAGLEBIOWSKA METROPOLIA

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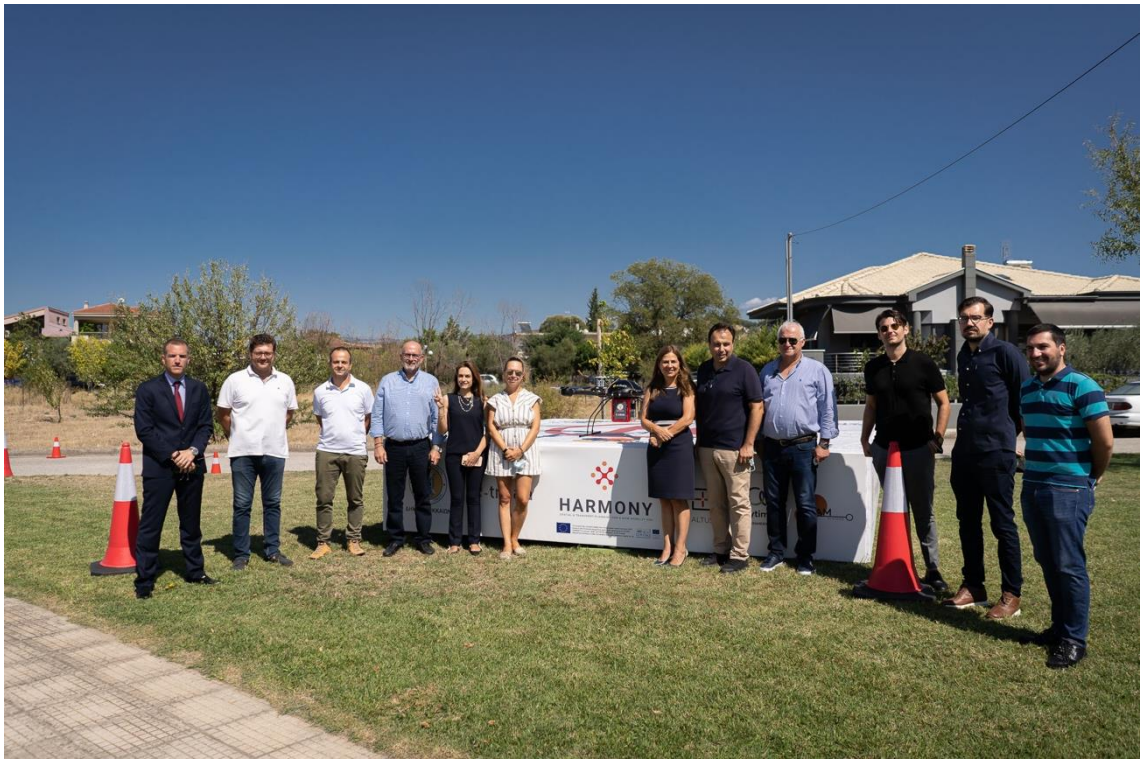
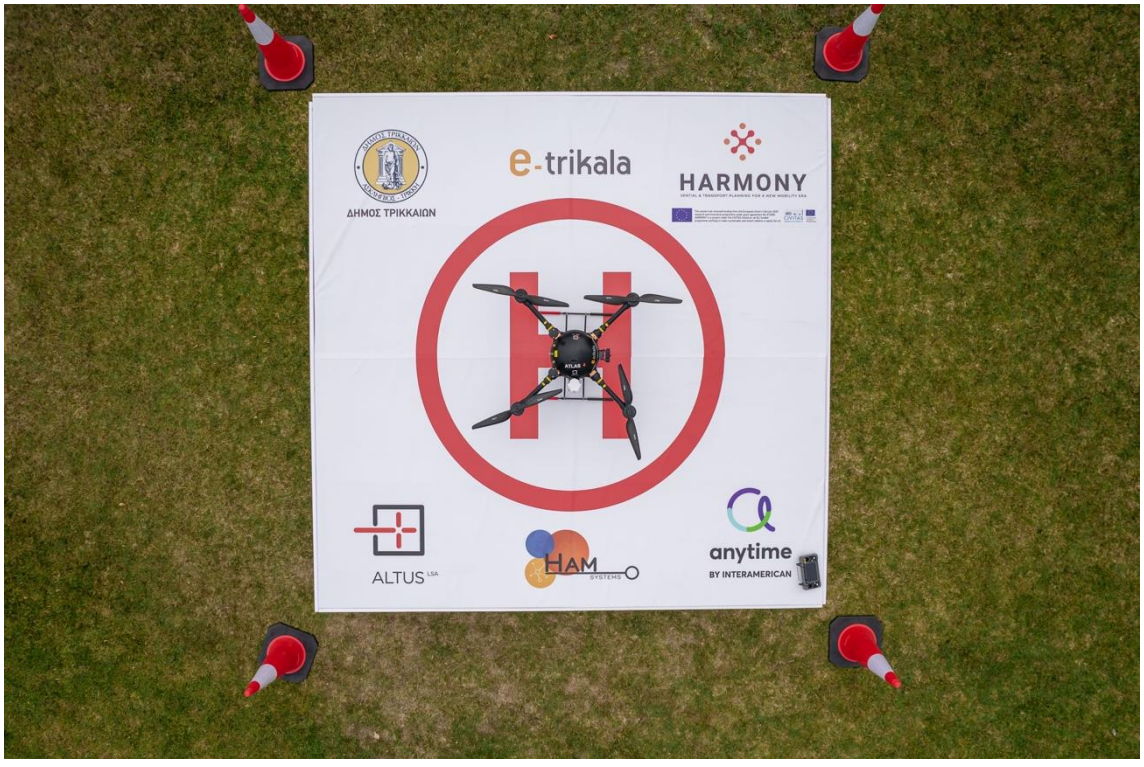


Participants of the HARMONY Pilot, 21/09/2021



The drone on the HARMONY platform, 21/09/2021

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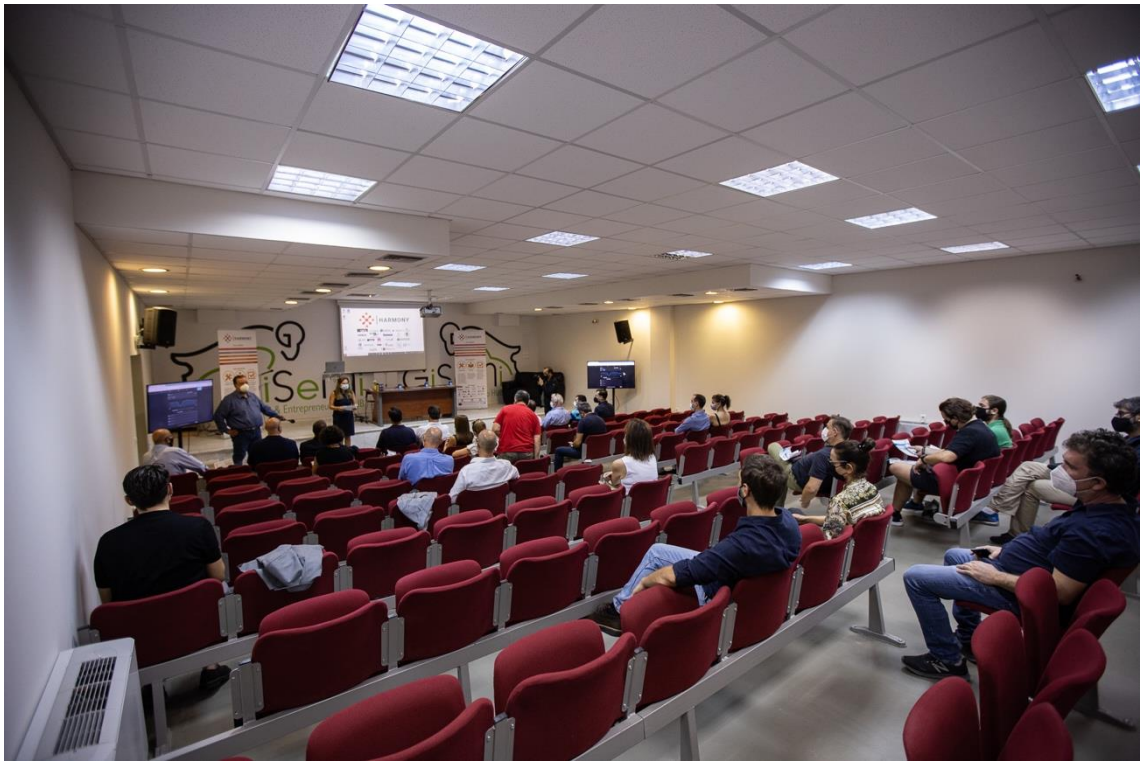
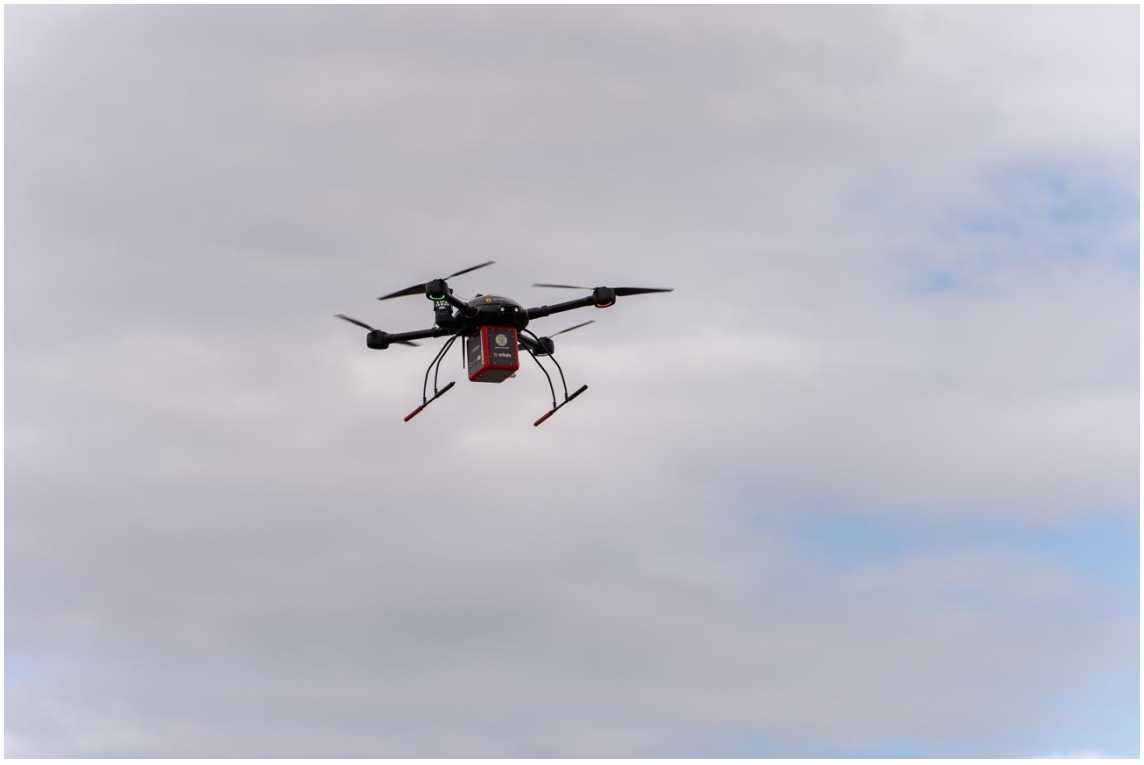


Participants in the GiSeMi Hub conference room, 21/09/2021



The HARMONY drone flying, 21/09/2021

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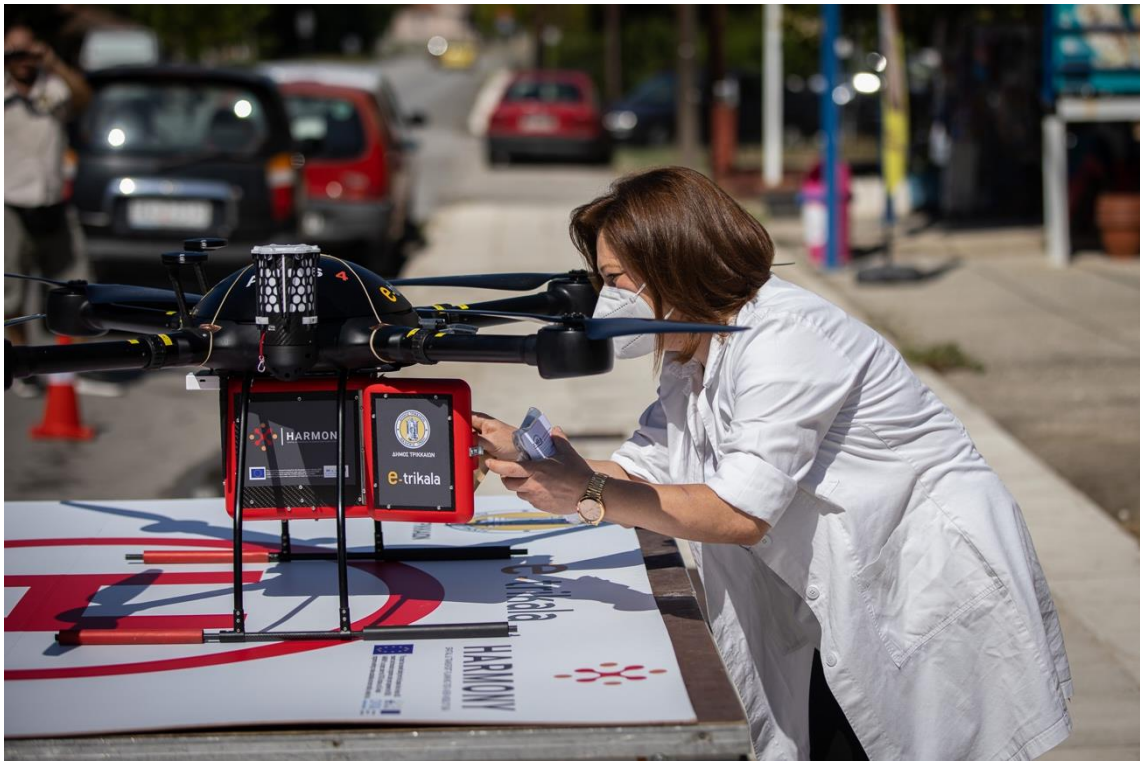

The pharmacist receiving the medicine at Leptokarya, 21/09/2021

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