



The ESA Business Incubation Centre (BIC) Portugal opened in November 2014 and is managed by the University of Coimbra's Instituto Pedro Nunes (IPN), in collaboration with Science and Technology Park at University of Porto and DNA Cascais. Local partners include the University of Coimbra, Comissão de Coordenação e Desenvolvimento da Região Centro (CCDRC), Portugal Ventures, FNABA, DNA Cascais, the University of Porto and several polytechnic institutes. The three ESA BIC Portugal host offices are located in Coimbra at IPN, in Porto at the Science and Technology Park of University of Porto, and in Cascais (near Lisbon) at DNA Cascais. Over the first five years, the ESA BIC Portugal will support 30 Portuguese start-up companies, providing a financial incentive along business and technical support, creating at least 240 local high-tech jobs. In total, the start-ups will receive €1.5 million as seed incentive and be able to tap into an additional €7 million in support.

Connect Robotics

Connect Robotics enable the use of Drones for deliveries



Connect Robotics

Website

Founded in 2015 by

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Incubation period

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space solutions

About Connect Robotics

Connect Robotics are enabling a high number of drones to flight coordinated and without conflicts, by working on both ends of the system: on the central UTM (Unmanned aerial systems Traffic Management) to generate the paths and manage the traffic in real time; and in the collision avoidance algorithms inside the autopilot.

This is the foundation for autonomous flight BLOS (beyond line of sight) without conflicts and collision, supporting transport application.

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The challenge

Connect Robotics mission is to enable the use of Drones for deliveries by developing an all in one solution that pilot and manage small UAVs for autonomous flights BLOS. For a high number of drones to flight coordinates and without conflicts we are developing an auto-pilot with collision avoidance capabilities and a central UTM (Unmanned aerial systems Traffic Management).

We want to empower logistic operators and postal service companies with a system that offers quick deliveries with low cost, to improve the service level.

The solution

Connect robotics solution consist of:

- The UTM, which will generate flight plans, create aerial corridors, manage traffic in real time to avoid overlaps and keep record of flight paths. All made using FIWARE, and will be available for other companies via license fee.
- The auto-pilot, which has sensor fusion to detect obstacles and it runs on an Android device, to have computational and communication capabilities.

We will use the Galileo GNSS to improve the location accuracy, as well as analyse navigation methodology, data gathering and communication protocols used by special mission controllers.
