

# ALX Systems has developed a prototype drone charging station

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**ALX Systems develops software for autonomous drones (UAVs) in the fields of defence, aviation and civil engineering. The drones are deployed to monitor risk zones or to verify infrastructure.**

These autonomous (unmanned) devices must be able to take off and land in a secure zone and charge optimally without external assistance. ALX decided to develop a station where the drones can take off, land and charge, to guarantee their operation on any type of terrain, with no human intervention required.

As part of a CWality project, ALX Systems approached Sirris for advice on their project to develop a prototype station, taking into account operating conditions, production costs and the optimisation of mechanical principles to enable the drone to take off and land safely.



**From concept to prototype**

Experts at the Sirris Product Development Hub conducted an detailed analysis of the technical requirements listed by ALX. Before embarking on their research, the Hub conducted an in-depth study on potential solutions that are available on the market. They then selected a mechanical concept to open and close the station.

The Product Development Hub engineers and developers proposed innovative concepts for the deployment of the take-off and landing zone for the drone, as well as for the connection with the charging station. ALX Systems decided to patent various concepts, following a patent study by the IP cell at Sirris.

The station remains in constant communication with a central system developed by ALX Systems to manage all the connected components: the drone, charging station, weather station, proximity sensor, etc.

The project objective was quickly achieved: Sirris succeeded in delivering an operational prototype to ALX Systems, which in turn tested it under real-world conditions. The prototype will form the basis for the industrialization of the charging station in the future.

## Authors



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