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**ATM Innovative RPAS Integration for Coastguard Applications (AIRICA).**

The AIRICA project will demonstrate the application of Remotely Piloted Aircraft Systems (RPAS) for coastguard activities, in non-segregated airspace.

The use of RPAS for coastguard operations rather than manned aircraft introduces several challenges, which will be addressed during the demonstration. Typically the envisioned coastguard tasks involve flights Beyond Visual Line Of Sight (BVLOS). This requires the Remotely Piloted Aircraft to be equipped with on-board Detect And Avoid (DAA) capabilities. Detection and separation will be based on active Mode S interrogation and received ADS-B signals. A complete transponder DAA system will be implemented and tested. The system used originates from the EXPLORER project.

While operating the RPAS on a mission, different airspace environments will be encountered. After take-off from De Kooy airport (Den Helder, The Netherlands), the RPAS will fly towards the targeted area, perform its mission (for instance a Search and Rescue mission) and fly back to De Kooy. During this mission, the RPAS crosses several different classes of airspace. To prevent interference with other traffic at the airport, use can be made of a Simultaneous Non-Interfering (SNI) concept.

To facilitate the tasks of the air traffic controller, a system will be used providing the controller detailed live information on the waypoint route navigation as being performed by the RPAS.

By executing a realistic coastguard operation the AIRICA Project will aid in closing the operational and technical gaps regarding integration of more complex RPAS operations into non-segregated airspace.