



Overview

RESPONSE will support pilots' incapacitation transition monitoring and deliver an air-to-ground integration Single Pilot Operations (SiPO) Concept of Operations (CONOPS) to enhance safe return-to-land procedures. This includes introducing the role of air-to-ground digital assistants to minimize the changes required when transitioning from dual-pilot operations to SiPO, including dealing with pilot incapacitation scenarios in the flight deck. The project will deliver improved physiological assessment methods to detect pilot incapacitation early on, in order to prevent degradation of human performance. The implementation of this technology will also impact ATC operators' tasks and the role of human autonomy and AI teaming to support workload reduction.

Objectives



Delivering improved physiological assessment methods to detect pilots' transitions from an attentive to incapacitated state with functional near infrared spectroscopy and electroencephalography sensors and an eye-tracking camera system.



Integrating an air-to-ground digital assistant to enhance task delegation between airborne and ground teams, enabling greater automation and streamlined coordination.

Benefits



Capacity



Cost
Efficiency



Operational
Efficiency



Environment



Safety