

PROJECT

## REPS

# Real Life Environment with Pilot State Monitoring Systems

**Funding:** European (Horizon 2020)

**Duration:** Jan 2021 - Dec 2022

**Status:** Ongoing

**Total project cost:** €941,750

**EU contribution:** €799,475



**Call for proposal:** H2020-CS2-CFP11-2020-01

[CORDIS RCN : 232518](#)

### Background & policy context:

Airline pilots today consider a variety of information sources to ensure a comprehensive flight preparation and a safe flight operation. In times of an increasingly complex working environment, the workload for pilots increases permanently. The likelihood of miscalculations as a consequence of poorly prepared information is increasing there as well.

### Objectives:

This project aims to validate Pilot State Monitoring system in the cockpit which is able to provide crucial feedback of the pilot state to yield faster decision making, reduce the probability of pilot errors and enhance the fatigue risk management.

### Methodology:

The project will collect operational data and experience during nominal operations for both short and long-haul flights. It will support the development of associate concept of operations. This concept will address envisioned use cases, identify benefits, operational constraints, risks and mitigation strategies and evaluate possible future use of the system from end users such as airlines, aircraft operators and training centres.

The REPS project team consists of three partners with acknowledged expertise in the aviation domain. Air Traffic Management processes and technologies with special focus on support systems for cockpit-crews are core competencies of the Institute of Flight Guidance at TU Braunschweig. TU Braunschweig will lead the consortium. The second partner, Deep Blue SRL, has a good and acknowledged track record in research on human factors as well as in validation and evaluation activities. The third partner is a start-up called CACTUSpartners GmbH. CACTUS has been founded in 2019 by two active airline pilots with consulting background and two scientists to combine operational airline expertise with scientific knowledge in all aviation domains. The partners will sub-contract Etihad Airways as airline to install and test the pilot state monitoring devices.

### Parent Programmes:

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

**Institute type:** Public institution

**Institute name:** European Commission

**Funding type:** Public (EU)

**Other programmes:** JTI-CS2-2020-CFP11-LPA-03-19 Concept for Pilot State Monitoring system operation in commercial aviation

### Lead Organisation:

**Technische Universitaet Braunschweig**

**Address:**

Pockelsstrasse  
38106 Braunschweig  
Germany

**Organisation Website:**

<http://www.tu-braunschweig.de>

**EU Contribution:** €467,500

**Partner Organisations:****Deep Blue Srl****Address:**

Via Ennio Quirino Visconti 8  
193 Roma  
Italy

**EU Contribution:** €199,150

**Cactuspartners Gmbh****Address:**

HERMANN BLENK STRASSE 22 A  
38108 BRAUNSCHWEIG  
Germany

**EU Contribution:** €132,825

**Technologies:**

Cabin and cockpit design  
Cockpit-based technologies for improved pilot workflow

**Development phase:** Validation

Network and traffic management systems, Other

**STRIA Roadmaps:** specified

**Transport mode:** Air transport

**Transport sectors:** Passenger transport, Freight transport  
Societal/Economic issues,

**Transport policies:** Safety/Security

**Geo-spatial type:** Other