

PROJECT

CADENZA

Advanced Capacity and Demand Management for European Network Performance Optimization

Funding: European (Horizon 2020)

Duration: Jun 2020 - Nov 2022

Status: Ongoing

Total project cost: €2,023,765

EU contribution: €1,158,124



Call for proposal: H2020-SESAR-2019-2

[CORDIS RCN : 229164](#)

Objectives:

CADENZA aims at developing a detailed trajectory broker concept for the European network, incorporating advanced demand-capacity balancing mechanisms. It builds upon the findings of the 2019 Jane's-ATC-Innovation-award-winning SESAR Exploratory Research project COCTA, as well as upon latest industry developments. The trajectory broker will balance capacity and demand through a coordinated capacity provision process and collaborative trajectory management (including a novel trajectory charging scheme).

CADENZA covers all areas of capacity provision (en-route, terminal area, and airport) as well as all temporal levels (strategic, pre-tactical and tactical). Based on previous research we expect significant improvements in cost-efficiency as well as positive impacts on other key performance indicators, especially delays.

The CADENZA concept will be thoroughly validated, using mathematical models and comprehensive real-world trajectory data. Sensitivity analysis will incorporate non-nominal conditions as well as different assumptions with respect to the overall air traffic management framework, e.g. different levels of flexibility in capacity provision. Moreover, a high degree of stakeholder involvement – including an industry expert panel and stakeholder workshops – ensures practical relevance.

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: SESAR-ER4-16-2019 Innovation in Network Management

Lead Organisation:

Univerzitet U Beogradu - Saobracajni Fakultet

Address:

Vojvode Stepe 305
11000 Belgrade
Serbia

EU Contribution: €285,263

Partner Organisations:

Eurocontrol - European Organisation For The Safety Of Air Navigation

Address:

Rue De La Fusée 96
1130 Bruxelles
Belgium

Universitat Politecnica De Catalunya**Address:**

Calle Jordi Girona 31
8034 Barcelona
Spain

Organisation Website:

<http://www.upc.edu>

EU Contribution: €283,375

Hochschule Worms**Address:**

ERENBURGERSTRASSE 19
67549 WORMS
Germany

EU Contribution: €232,531

Wissenschaftliche Hochschule Fuer Unternehmensfuehrung Otto Beisheim Hochschule**Address:**

Burgplatz 2
56179 VALLENDAR
Germany

EU Contribution: €356,955

Technologies:

Aircraft operations and safety
Trajectory Based Flight Operations

Development phase: Research/Invention

Network and traffic management systems, Other

STRIA Roadmaps: specified

Transport mode: Air transport

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

Transport policies: specified

Geo-spatial type: Infrastructure Node