

PROJECT

ADAPT

Advanced prediction models for flexible trajectory-based operations

Funding: European (Horizon 2020)

Duration: Jan 2018 - Dec 2019

Status: Complete

Total project cost: €997,250

EU contribution: €997,250



Call for proposal: H2020-SESAR-2016-2

[CORDIS RCN : 213200](#)

Objectives:

The ADAPT project proposes strategic models to predict the volume, flexibility and complexity of traffic demand considering both individual flights and network infrastructure (i.e. sectors and airports).

These models are conducive to trajectory-based operations and are expected to provide benefits for all stakeholders: air navigation service providers could adjust their service provision, while airspace users would know in advance how much flexibility around the agreed trajectories they have to efficiently adjust the execution of their operations.

At the strategic level, the impact of early flight information sharing on the identification of potential network bottlenecks and the degree of flexibility of all flights will be determined. At the tactical level, the extent to which strategically assessed pre-departure and en-route flight flexibility mitigates actual network congestion, will be evaluated.

To this end, novel models and metrics will be used to quantify potential traffic congestion and flight flexibility. The identified critical elements (i.e., sectors, airports, and flights) will be a starting point for possible resource allocation adjustment scenarios (e.g. adding capacity, introducing pricing mechanisms to alleviate demand-capacity imbalances at the strategic level, speed corrections at the tactical level) for enhanced ATM performance.

In order to demonstrate the operational advantages (e.g. reduced operational costs) of the use of ADAPT models, they will be tested and validated through several scenarios.

A key element of a project is a continuous consultation process through the establishment and close collaboration with an Advisory Board, composed of interested stakeholders.

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)

Lead Organisation:

Universita Degli Studi Di Trieste

Address:

Piazzale Europa 1
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Italy

EU Contribution: €212,375

Partner Organisations:

Deep Blue Srl

Address:

Via Ennio Quirino Visconti 8
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EU Contribution: €140,000

The University Of Westminster Lbg

Address:

Regent Street 309
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United Kingdom

EU Contribution: €220,750

Universita Degli Studi Di Palermo

Address:

Piazza Marina 61
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EU Contribution: €191,313

Technische Universiteit Delft

Address:

.
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Netherlands

EU Contribution: €232,813

Technologies:

Information systems
Air traffic management systems

Development phase: Validation

STRIA Roadmaps: Network and traffic management systems

Transport mode: Air transport

Transport sectors: Passenger transport, Freight transport

Geo-spatial type: Other