

PROJECT

## FMPMet

# Meteorological uncertainty management for Flow Management Positions

**Funding:** European (Horizon 2020)

**Duration:** May 2020 - Oct 2022

**Status:** Ongoing

**Total project cost:** €849,000

**EU contribution:** €849,000



**Call for proposal:** H2020-SESAR-2019-2

[CORDIS RCN : 228228](#)

### Objectives:

This project addresses the topic “Environment and Meteorology for ATM”. The framework for this project is the integration of meteorological forecast uncertainty information into the decision-making process for Flow Management Position (FMP).

FMP is an operational position located in Area Control Centres (ACC) which serves as an interface between Air Traffic Control (ATC) and the Network Manager (NM) Operations Centre. FMP monitors the level of traffic in ATC sectors, adjusts the value of capacity in view of unexpected events, and coordinates possible traffic flow measures with the ACC Supervisor and the NM when an excess of demand over capacity is detected. The presence of storms challenges ATC: it makes the sector demand not easy to predict and increases the complexity, thus reducing the sector capacity.

The overall objective of FMP-Met is to provide the FMP with an intuitive and interpretable probabilistic assessment of the impact of convective weather on the operations, up to 8 hours in advance, coming from the combination of the probabilistic sector demand, complexity and capacity reduction, to allow better-informed decision making. FMP-Met has the following specific objectives: Tailor multi-scale, multi-source convective weather information for FMP application; forecast multi-sector demand and complexity under convective weather; translate convective weather forecasts into predictions of reduced airspace capacity; and produce guidelines on the use of probabilistic forecasts for FMP application.

The expected impact of this project is the enhancement of ATM efficiency by improving decision making in traffic flow management under convective weather. The provision of a trustworthy forecast of the future sector demand and of a reliable estimation of the impact of the convective weather in the sector capacity will support the FMP in taking anticipated, appropriate, and timely tactical flow measures, which as a consequence will lead to a reduction of delays.

### 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-ER4-05-2019 Environment and Meteorology for ATM

### Lead Organisation:

**Universidad De Sevilla**

**Address:**

Calle S. Fernando 4  
41004 Sevilla

Spain

**EU Contribution:** €189,000

### Partner Organisations:

#### Linköpings Universitet

**Address:**

Hus Origo Campus Valla  
581 83 LINKÖPING  
Sweden

**Organisation Website:**

<http://www.liu.se>

**EU Contribution:** €86,000

#### Austro Control Österreichische Gesellschaft Fur Zivilluftfahrt Mbh

**Address:**

WAGRAMER STRASSE 19  
1220 WIEN  
Austria

**EU Contribution:** €70,000

#### Paris Lodron Universität Salzburg

**Address:**

Kapitelgasse 4 - 6  
5020 SALZBURG  
Austria

**Organisation Website:**

<http://www.uni-salzburg.at>

**EU Contribution:** €82,000

#### Croatia Control, Croatian Air Navigation Services Ltd

**Address:**

RUDOLFA FIZIRA 2  
10410 VELIKA GORICA  
Croatia

**EU Contribution:** €70,000

#### Agencia Estatal De Meteorologia

**Address:**

CALLE LEONARDO PRIETO CASTRO 8  
28040 Madrid  
Spain

**Organisation Website:**

<http://www.aemet.es>

**EU Contribution:** €70,000

#### Sveuciliste U Zagrebu Fakultet Prometnih Znanosti

**Address:**

Vukeliceva 4  
10000 Zagreb  
Croatia

**EU Contribution:** €86,000

**Universidad Carlos iii De Madrid**

**Address:**

Calle Madrid  
28903 Getafe (Madrid)  
Spain

**Organisation Website:**

<http://www.uc3m.es>

**EU Contribution:** €98,000

**Meteosolutions Gmbh**

**Address:**

WILHELMINENSTRASSE 2  
64283 DARMSTADT  
Germany

**EU Contribution:** €98,000

**Technologies:**

Aircraft operations and safety  
Big data analytics for management of ATM  
systems

**Development phase:** Research/Invention

**STRIA Roadmaps:** Network and traffic management systems

**Transport mode:** Air transport

**Transport sectors:** Passenger transport, Freight transport

**Transport policies:** Digitalisation

**Geo-spatial type:** Infrastructure Node