PROJECT

IMHOTEP

Integrated Multimodal Airport Operations for Efficient Passenger Flow Management

Funding: European (Horizon 2020)

Duration: Jun 2020 - Nov 2022

Status: Ongoing

Total project cost: €1,999,805

EU contribution: €1,999,805

Call for proposal: H2020-SESAR-2019-2

CORDIS RCN : 228458

Objectives:

The airport of the future is expected to become a multimodal connection platform, creating the conditions for travellers to reach their destination by the most efficient and sustainable combination of modes and allowing the airport and its surrounding region to make a better use of their resources. The goal of IMHOTEP is to develop a concept of operations and a set of data analysis methods, predictive models and decision support tools that allow information sharing, common situational awareness and real-time collaborative decision-making between airports and ground transport stakeholders. The specific objectives of the project are the following:

1. Propose a concept of operations for the extension of airport collaborative decision-making to ground transport stakeholders, including local transport authorities, traffic agencies, transport operators and mobility service providers.
2. Develop new data collection, analysis and fusion methods able to provide a comprehensive view of the door-to-door passenger trajectory through the coherent integration of different types of high resolution passenger movement data collected from personal mobile devices and digital sensors.
3. Develop predictive models and decision support tools able to anticipate the evolution of an airport's passenger flows within the day of operations and assess the operational impact on both airport processes and the ground transport system, with the aim of enabling real-time collaborative decision-making between airports and ground transport stakeholders and enhanced passenger information services.
4. Validate the proposed concept and the newly developed methods and tools through a set of case studies conducted in direct collaboration with airports, local transport authorities and transport operators. The case studies will cover two airports with heterogeneous characteristics and serving different markets, namely the Palma de Mallorca and the London City airports.

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-ER4-13-2019 Innovation in Airport Operations

Lead Organisation:

Nommon Solutions And Technologies Sl

Address:
CALLE CLAUDIO COELLO 124 - PLANTA 4A TRASERA
28006 MADRID
Spain

EU Contribution: €495,988

Partner Organisations:

Ingenieria De Sistemas Para La Defensa De Espana Sa-Sme Mp

Address:
Calle Beatriz De Bobadilla 3
28040 Madrid
Spain

EU Contribution: €141,625

Empresa Municipal De Transports Urbans De Palma De Mallorca S.a

Address:
Josep Anselm Clavé 5
ES07002 Palma de Mallorca
Spain

EU Contribution: €51,788

London City Airport Limited

Address:
CITY AVIATION HOUSE, ROYAL DOCKS
LONDON
E16 2PB
United Kingdom

EU Contribution: €38,368

Aimsun SL

Address:
RONDA UNIVERSITAT 22 ESC B PLANTA AT
08007 BARCELONA
Spain

EU Contribution: €327,875

Stichting Hogeschool Van Amsterdam

Address:
WIBAUTSTRAAT 3 B COLLEGE VAN BESTUUR
1091 GH AMSTERDAM
Netherlands

Organisation Website:
http://www.hva.nl

EU Contribution: €315,375

Cranfield University

Address:
College Road
CRANFIELD - BEDFORDSHIRE
MK43 0AL
United Kingdom

Organisation Website:

EU Contribution: €254,125

Aena S.m.e. Sa

Address:
CALLE PEONIAS 12
28042 MADRID
Spain

EU Contribution: €51,788

Technische Universitaet Dresden

Address:
Helmholtzstrasse 10
1069 Dresden
Germany

Organisation Website:
http://www.tu-dresden.de/

EU Contribution: €322,875

Technologies:

Aircraft operations and safety
Air Traffic Flow and Capacity Management (ATFCM) decision support tool

Development phase: Research/Invention

STRIA Roadmaps: Network and traffic management systems

Transport mode: Air transport

Transport sectors: Passenger transport

Transport policies: Societal/Economic issues

Geo-spatial type: Infrastructure Node