



August 2017

CATER Newsletter Nr. 5

CATER: Air Transport Time-Efficiency

EU FP7 Coordination & Support Action

Editorial

It is with great pleasure that I introduce you to this edition of the CATER Newsletter in which we provide a flavor of some of the latest activities in the project. CATER is now in its final stage and the last iteration of documents are being completed, representing the latest and most complete assessment of projects, technologies, and funding opportunities in the air-travel time efficiency domain.

More specifically, completing a 4-years iterative analysis, the project has produced the final and most comprehensive assessment of European projects in the time efficiency domain, covering the FP6 to H2020 timeframe and highlighting the innovation trends and changes relating to all phases of the Door-to-Door journey.

Accordingly, the latest and final exploration of funding opportunities is now also being completed, including National as well as European projects and extending over the next three years. This groundwork will lead to the release (over the summer period) of the gap analysis and final recommendations documents, which represent the lasting results from the CATER project, intended to guide future work and strategies related to this theme.

I am pleased to inform that you will have the opportunity to learn about this work and these results in the CATER final event, which is being organized to take place on 19th September 2017 in Madrid.

I therefore take the opportunity of this newsletter to welcome all those interested in the time efficiency domain to join us at this event, which will represent the occasion to present and discuss together latest developments and trends.

Stay tuned for this final and most exciting lap of the Cater project!

Giuliano d'Auria (CATER Project Coordinator)

Current CATER Activities

CATER (Coordinating Air transport Time Efficiency Research) is a 48-month coordination project designed as a research and innovation observatory and policy advisory center.

CATER delivers reports and recommendations and conducts annual reviews of the state of the art of R&I, identifies gaps in the innovation and technology landscape, and bottlenecks to innovation - and formulates strategic recommendations to address these.

CATER Project Deliveries

CATER has released the final deliverable about Funding Opportunities in Time Efficiency, where a deep-dive into 2018-2020 main funding programmes tackling Time Efficiency and Mobility has been completed. Other final delivery documents will be delivered by October 2017, including the final recommendations to the EC.

CATER Final Workshop

The CATER team will hold its **final Workshop** on **19th of September 2017**, at ISDEFE premises in **Madrid, Spain** (venue address: calle Beatriz de Bobadilla 3). This workshop, titled “**Time Efficiency in Aviation: Trends and Evolution of R&D initiatives**” will present CATER work, results, and recommendations.

Note that an **ACARE WG1 meeting** will take place in the afternoon of the same day at the same premises.

Besides CATER presentations made by all CATER partners, the workshop will also include external talks:

- one by an ACARE representative on ACARE's mission and achievements
- one by a DataSet2050 representative to present this project.

The agenda of the workshop is reproduced here to the left, and the CATER team encourages your participation.



09:30 - 09:50	Introduction to CATER – Overview of objectives and exploitable heritage Giuliano D'Auria Leonardo
09:50 - 10:20	ACARE's mission and achievement explained ACARE representative
10:20 - 10:30	Presentation on the DataSet2050 project DataSet2050 representative
10:30 - 10:55	The CATER door-to-door model Enno Geissler ICTS
10:55 - 11:10	Coffee Break
11:10 - 11:35	CATER Assessment of past and ongoing EC-funded projects ALTRAN representative
11:35 - 12:15	Gap identification and analysis (Joint Presentation) <ul style="list-style-type: none">• Main trends and barriers in Time Efficiency Giuliano D'Auria Leonardo• One breath – How much can we do to optimise airport resource in improving time efficiency? Toni Baceanu Transilvania Târgu Mureş International Airport• Next funded research and new projects: what's new in H2020 and are things improving? Marco Molica Colella CTECH
12:15 - 13:00	CATER way forward: Recommendations Romain Kervarc ONERA

Related events

Note that the CATER workshop will take place the day before the next DataSet2050 door-to-door EU mobility workshop:

Are you interested and/or doing research in the field of passenger transportation and European mobility? Are you interested and willing to improve current door-to-door passenger experience and metrics? Are we close to the 4 hour door-to-door European objective? Come and join the second www.dataset2050.com workshop on Google Campus Madrid, next 20 September!

Free registration and further info at: www.dataset2050.com

DATASET2050 is the Coordination and Support Action (CSA) funded by European Commission under H2020 - GA640353. The CSA is coordinated by Innaxis, with Eurocontrol, University of Westminster and Bauhaus Luftfahrt as partners and an advisory board composed of key mobility European entities. DATASET2050 tackles the EU door-to-door trips with at least one air-transport segment. DATASET2050 provides metrics on the different phases (door-kerb-gate-gate-kerb-door) and compare them with strategic agendas goals, and particularly with the 4-hours-door-to-door challenge of the Flightpath 2050.

CATER Dissemination



CATER will once again participate in the upcoming **7th EASN Conference on “Innovation in European Aeronautics Research”**. The event will be held at the Conference Centre of the Institute of Aviation in **Warsaw, Poland** from **26-29 September 2017**. CATER will present its major final findings, produced recommendations and achievements. Moreover, CATER will have the opportunity to collaborate, interact and exchange useful information and lessons learnt with representatives of several other relevant “Support Actions for Coordinating Research in the Field of Aeronautics & Air Transport” including its “sister” projects (CAPPADOCIA, OPTICS and FORUM-AE) as well as other CSAs such as RINGO, RADIANT, etc. [Click here for more info.](#)

Booklet on career opportunities offered within the aviation sector

Targeting to the younger generation of Europeans who are interested in pursuing studies and careers in aviation, a comprehensive online booklet has been prepared in the frame of the CATER project, presenting the various career paths, one can follow within the aviation sector. The aviation industry provides hundreds of different job tracks and opportunities. Whether one prefers a ground-based position or something in the air, working with the public or in an office, the aviation sector offers numerous career paths -from airline jobs and pilot careers to jobs at airports and with ground support operations. You can read and download the electronic booklet [here](#).



New technologies

In past annual recommendations, CATER evidenced strong modelling needs to address time efficiency issue. Hence, as part of technology watch, CATER has studied several research papers presenting technology that could be of use in this context, among which the two following:

Hybrid simulation for large-scale multimodal transportation

Gregor Lämmel, Mohcine Chraïbi, Arnel Ulrich Kemloh Wagoum, & Bernhard Steffen. Hybrid Multimodal and Intermodal Transport Simulation – Case Study on Large-Scale Evacuation Planning. In *Transportation Research Record* 2561:1–8, 2016 [DOI: 10.3141/2561-01]

The lack of suitable simulation framework for intermodal transportation is an important issue. Transport simulation models exist on multiple scales, mostly to address emergency situations. In general, the finer the spatiotemporal resolution, the more precise are the interactions captured between travelers, but the computational burden increases. One way to increase the computational speed while retaining sufficient precision to

Passenger flow modelling in airports

Sultan Alodhai, Robert L. Burdett, Prasad KDV. Yarlagadda. Framework for airport outbound passenger flow modelling. In *Procedia Engineering* 174:1100–1109, 2017

[DOI: 10.1016/j.proeng.2017.01.263]

This paper focusses upon passenger flow issues within airport terminals and includes all activities occurring between curbside and boarding. To improve passenger flow and associated planning activities, a simulation framework is developed using Discrete-Event Simulation (DES). The DES is built using ExtendSim V9.2 simulator software from *Imagine That*. The model can be used to evaluate

make a reliable prognosis is to combine models of different scale in a hybrid manner, in which a finer model is applied where needed and a coarser model where plausible. This paper discusses an application of a hybrid simulation approach in the context of a large-scale multimodal and intermodal evacuation scenario. It is a promising approach to address all aspects of the door-to-door model.

the efficiency of the outbound operational processes including check-in, security screening, immigration & custom and boarding. It can also assist management to identify potential bottlenecks in the system. The main input of the model is the flight schedule. A case study of the Brisbane international airport was analysed.



CATER Expert Consultation

CATER has launched its final online expert consultation survey and invite R&I experts in air transport to complete the following questionnaire (which should not take more than 15 minutes):

<http://www.easn-tis.com/cater/>



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