

OSCAR in a nutshell

The OSCAR project has addressed the current perception, acceptance, and implementation of Open Science in the field of European Aeronautics and Air Transport (AAT) research and in those fields where European AAT research issues interact with, e.g. other transport modes and technology exchange.

OSCAR aimed at paving the way towards Open Science in European aviation research by a detailed analysis of the landscape and by developing, validating, and promoting a suitable Open Science Concept. Furthermore, the OSCAR team worked towards:

- Setting up a community of transport research organisations willing to work on the basis of an agreed Open Science Code of Conduct.
- Creating a solid knowledge base on the implementation of Open Science approaches in transport research, and in particular on current constraints and bottlenecks in this field.
- Leading to improved efficiency, quality and integrity and, when relevant, interdisciplinarity of transport research, speeding up the path from research to innovation and promoting citizens' engagement in the scientific process.



The Team



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Open Science Aeronautic & Air Transport Research

“...pave the way towards Open Science..”



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Information & Opinion gathering

WP2

WP2 aimed at capturing the current extend that Open Science principles are applicable in the AAT Research performed in Europe. Task 2.1 aimed to identify the spectrum of Aviation stakeholders and set-up communication channels. T2.2 aimed at mapping the landscape of Open Science in AAT research through surveys and interviews on the existing practices and expectations. The latter revealed that both, the researchers and the management of Research Establishments and Academia, are in favour of implementing Open Science. On the other side, the industrial sector seems more reluctant, thus further efforts as well as appropriate clarifications, tools and political arrangements would be needed for convincing them for the benefits of Open Science. T2.3 dealt with the analysis of established Consortium Agreement Models. The analysis showed that the most relevant issues considered in the CAMs are: **1.** Intellectual Property, **2.** Open Source Software, **3.** Open Data, **4.** Ethics and responsibility. T2.4 aimed at the identification and adaption of suitable tools to facilitate the implementation of Open Science. The results revealed that the exploitation of existing platforms dedicated to Aviation would appreciably boost the implementation of Open Science in Aviation.

Achievements

WP3

The main objective of WP3 was to identify national, European and international partners in the AAT field and, through the organization of forums, workshops and other events, to exchange ideas and best practices on Open Science principles. A twofold approach was followed:

- i) Hold a series of virtual interviews with relevant European projects;
- ii) Organise a conference on Open Science led by a renowned expert in this field that would allow to improve the level of knowledge of researchers on Open Science.

To identify international partners, the OSCAR partners capitalized on their contacts in IFAR and identified several key members for sharing their expertise and best practices on Open Science, through interviews.

The different points of views between the stakeholders of AAT Research and those of Transport in general, were analysed through a survey, which revealed that they share much more similarities than differences in the perception of Open Science. In both fields, confidentiality is the main obstacle for the implementation of Open Science. A joint strategy could therefore be implemented in the AAT and other transport areas.

By participating in numerous relevant events, the OSCAR team has been able to achieve its objectives, namely to exchange ideas and share best practices for operationalising Open Science principles in transport research.

The OSCAR Code of Conduct

In WP4, we developed one of the first Code of Conduct (Code) of its kind: an Open Science Code for European research projects. The OSCAR Open Science Code is short and easy to use. A practical implementation guide on how to use it in European research projects has also been created. Additionally, a maintenance workflow and update pattern for the Code has been provided, that takes into account the specific requirements of the European policy making workflows.

The OSCAR Code is a hybrid rule-based, aspirational Code with focus on clear principles. It was developed in a hybrid bottom-up, top-down approach. Its use can improve European AAT research projects by accelerating innovation cycles and regain trust. Moreover, extensive theoretical and ethical background information on Open Science and Codes has been provided, including intellectual property, the European legal framework, benefits of Open Science and FAQ. This information enables the AAT community to ethically interpret and practically implement not only the OSCAR Code, but Open Science and other Codes of Conduct in general in their research projects.

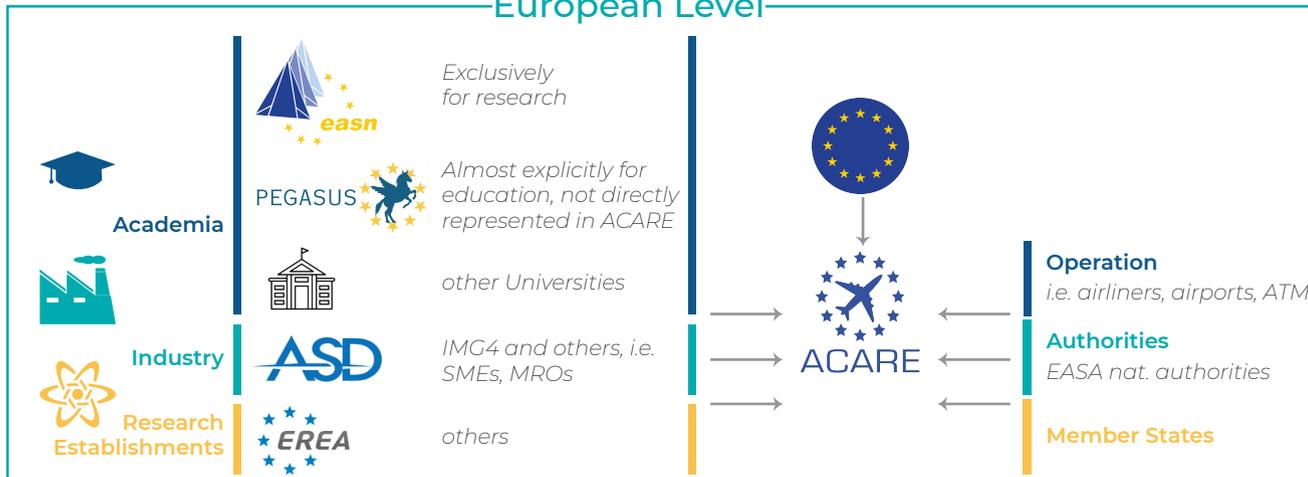
Demonstration & validation

Within WP5, demonstration and validation of the OSCAR Open Science Code was performed by simulating its application on ongoing European projects, duly selected as pilot cases. In particular, the impact of the Code on the project's implementation was examined (IPR issues, publications & other dissemination activities) and input for potential modifications and fine adjustment of the developed Code was provided.

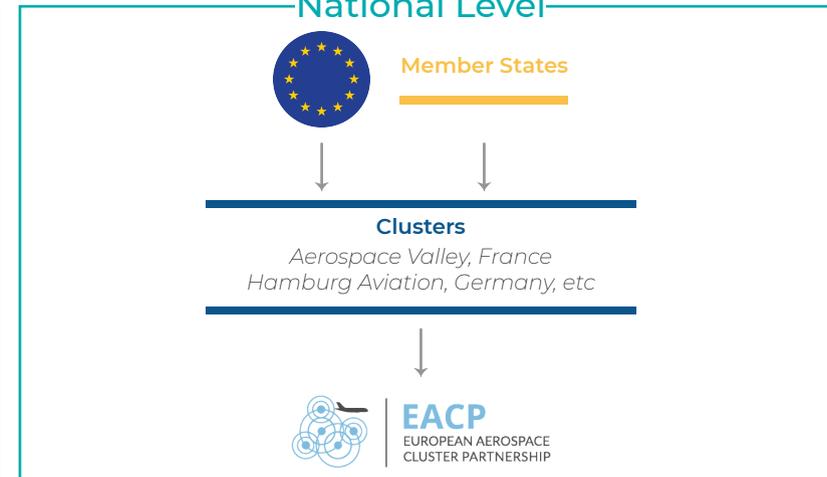
The Code was tested on 3 types of projects: IA, RIA and CSA. It was revealed that Open Science is not well implemented and this may be due to factors such as lack of promotion of Open Science, lack of flexibility of rules applicable to Open Science to publications and research data and a reluctance by defaults from stakeholders.

In addition, a set of recommendations for updating and finalizing the Code has been provided, taking into consideration fears and expectations of the AAT Community. Lastly, conclusions on the assessment of the final version of the Code in pilot cases have been extracted.

European Level



National Level



WP4

WP5