



Open ScienCe Aeronautic & Air Transport Research

## OSCAR Intro & First Findings V.1.0.0

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- OSCAR Fact Sheet
- Challenges
- Approach



Call: H2020 - 2018 Mobility for Growth



Topic: MG-04-02-2018 - Building Open Science platforms in transport research

Specific Challenge:

The rapid development of **digital technologies** and new collaborative tools are the basis of an on-going transformation and opening up of science and research, referred to as Open science.

Expected impact:

Actions are expected to lead to setting up a community of transport research organisations willing to work on the basis of a commonly agreed Open Science Code of Conduct.



### Current situation:

Need to mobilise resources in transport research in order to address **global challenges** in a more efficient way than today

### Main goal:

To initiate and to deliver an OS concept suitable to the European AAT research environment

... meaning ...

- An analysis of the current OS situation in the European aviation sector
- An OS concept promoted and known in the European aviation sector
- A balance between OS approaches and IPR requirements
- Implementation guidance by means of a Code of Conduct
- Validation of the OS approach in selected test projects



## OSCAR - Open Science Aeronautic & Air Transport Research

### The OSCAR Team

7 partners:

- 1 HES (University of Patras)
- 3 REC (Fraunhofer, INCAS, ONERA)
- 2 SME (EASN-TIS, Thelsys)
- 1 IND (SAFRAN)

5 countries:

Belgium, France, Germany, Greece, Romania

Duration: 2019-01-01 to 2021-06-30

Budget: 1,553,711 €

### Background

- FP6 SCRATCH (support to SMEs)
- FP7 CooperatEUS (collaboration EU-US)
- FP7+ SUNJET (collaboration EU-JP)
- H2020 RADIANT
- wide experience in European AAT research since the 1990s, including RIA, IA, CSA, and Clean Sky

Grant Agreement 824 350

## Open Science Challenges in Aviation Research:

- Legal, technical, cultural, behavioural issues to be solved such as reuse rights, licenses, mindset of sharing etc.
- Open Access and Open Data mechanics are not yet fully understood by the R&D community – supporting and enabling activities must be fostered
- Every discipline and sector has different framework conditions – individual approaches are necessary
- RTOs have very specific needs and perspectives to implement Open Science  
OSCAR's devise: „AS OPEN AS POSSIBLE AND AS CLOSED AS NECESSARY!“

## **Open Science Landscape in Aviation:**

- Aeronautics industry (production and MRO): tendency to protect IPR interests
  - Decades of experience of collaborative research
  - Difficult trade-off between OS and IPR protection
- Air transport industry (operation; carriers and infrastructure): comparably small number of technological IPR → better applicability of OS approaches
- Researchers: dependent on the scientific exploitation of research results
- Peculiarities of usage and production of knowledge in aviation
- Technology transfer and aviation constraints
- Dual dimension of data – private resource or public good?

## **Open Science in Surface Transport:**

- Complementary project BE OPEN (GA 824323)

## Dimensions

### Process

- How are research results created, what are the research methods, which tasks are involved?
- Which part of the research process can be opened?

### Output

- How can research results be reused and made available for economy, society and science?
- What kind of research results can be made open and how?



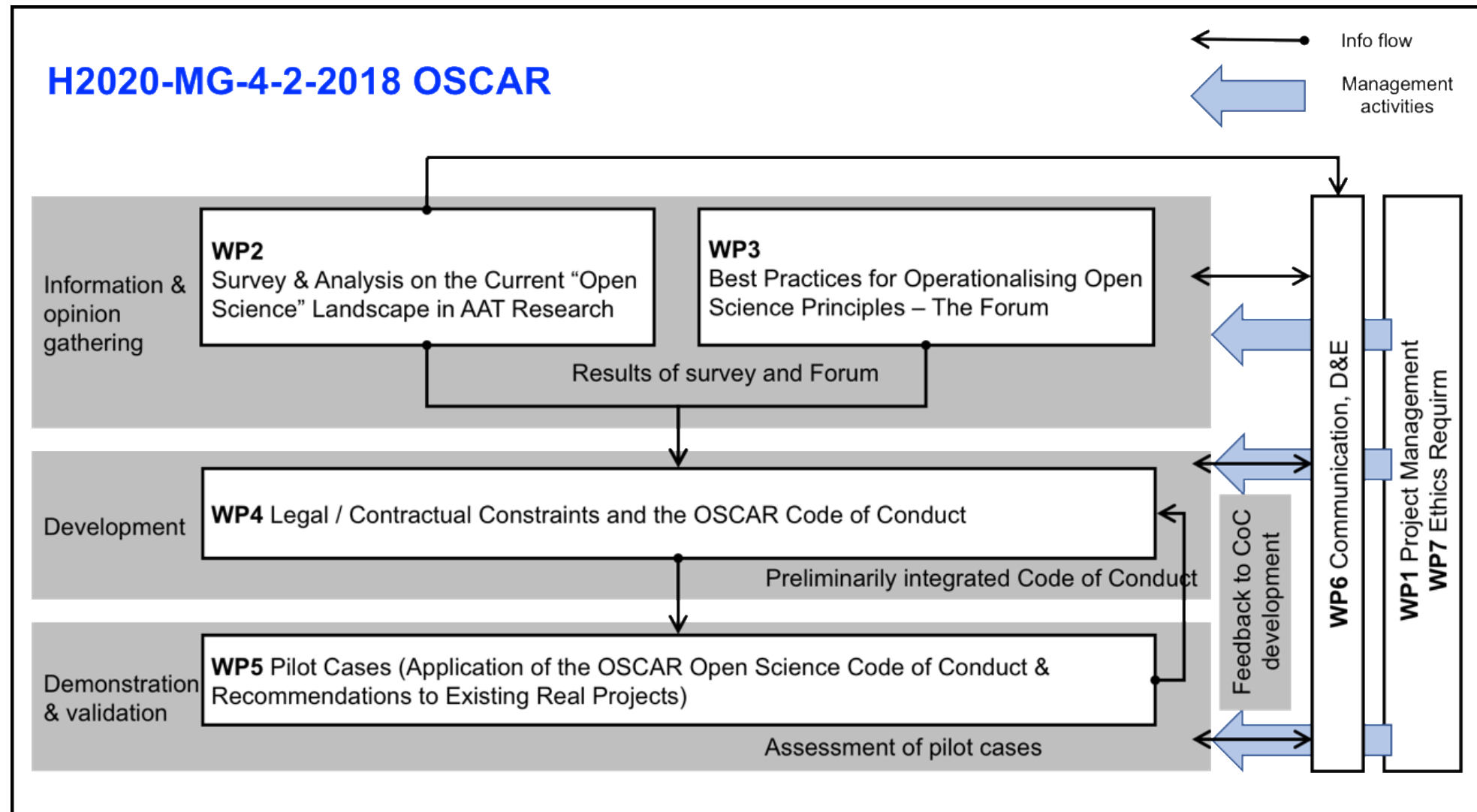
## Dimensions

### Strategy / Culture

- Which persons are involved? Who is responsible?
- Cultural shift to opening up research results (different to the behaviour of the past)

### Infrastructure

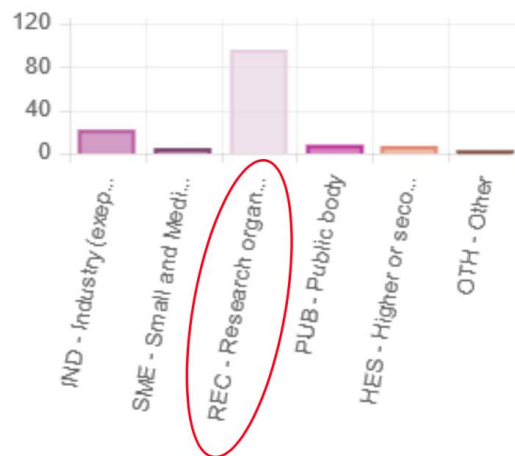
- Establish technical basis for Open Science
- Develop services for scientists



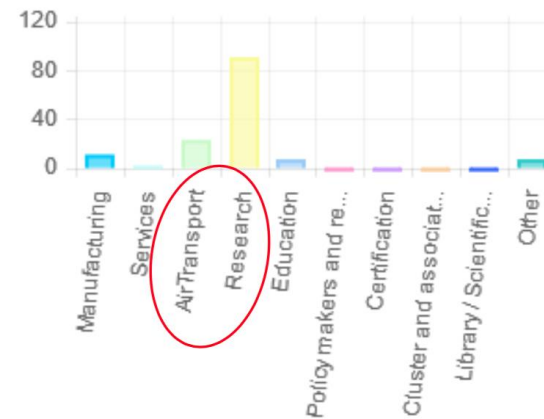
## First results / Mini Survey

- Less than ten FP7 and H2020 AAT projects linked to OS beyond OA
- 258 mini surveys evaluated
- Responses mainly from research organisations
- Medium familiarity with and importance of Open Science
- “Buzz Words” Open Access, Open Data, Open Source
- Demand for time, support, appropriate web platforms
- Language is a relevant barrier / challenge!

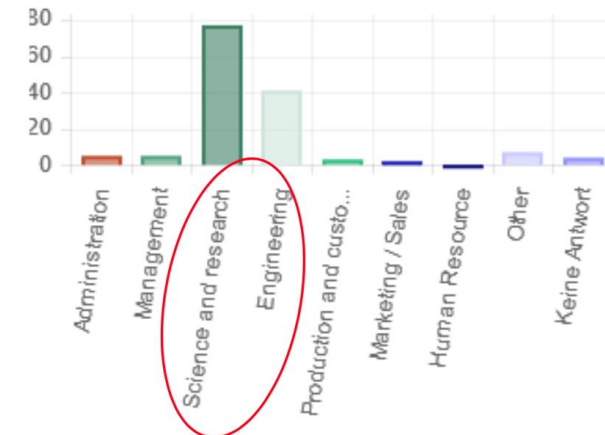
11. Organisation Type



12. Category



13. Please select the professional field in which you are active.



- 1) Open Access: Recognition from the academic world since most major publishers are not open access.
- 2) Open Data: A policy at my institution
- 3) No fees required to publish

Open Science is pushed by Europe without taking into account the bad impact of the unbalanced situation worldwide. Reciprocity is a crucial point for Open Science but this requirement is not taken into account at the appropriate level. Open science will cause harm to European aerospace and defence research because of the high level of world competitiveness. This survey does not try to have a view on the dangerous aspects of Open Science.

Open Science should not limit Intellectual Property

Due to Business competition of major aircraft manufacturer it's important to keep research experience confidential.

Monetary support to publish my work on open access scientific journals

Open-source software is getting integrated in more and more important workflows, but its core still relies on a limited number of contributors. How to encourage and organize contributions is a difficult question.

In the same way that technology watch takes time to access, understand and sort the data, the sharing of data takes time for industry for providing only relevant data without IP issues.

Il est inadmissible de faire des sondages qui ne sont pas dans la langue officielle du pays !

Variety and pace of emergence of OA journals makes it difficult to judge credibility, value, and relevance to publish there... at sometimes very high APC costs

It is necessary to end the domination on the market of the main scientific editors .

Today, the review process is the only way to have research recognised as secure and sure. The development of many platforms associated to open access papers is a solution to make papers available but it still lacks the need for a full review process before the paper is published. I consider that there is a place for an open-access journal with a full, standard peer-review process driven by the EC. The very same situation could be applied to courses...

Confidentiality of proprietary data is often an issue

Looking forward to a platform to share experiences and create new connections.

When, as me, you work on military subject, it is always difficult to know what can be classified as OPEN SCIENCE



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THANK YOU FOR YOUR ATTENTION

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