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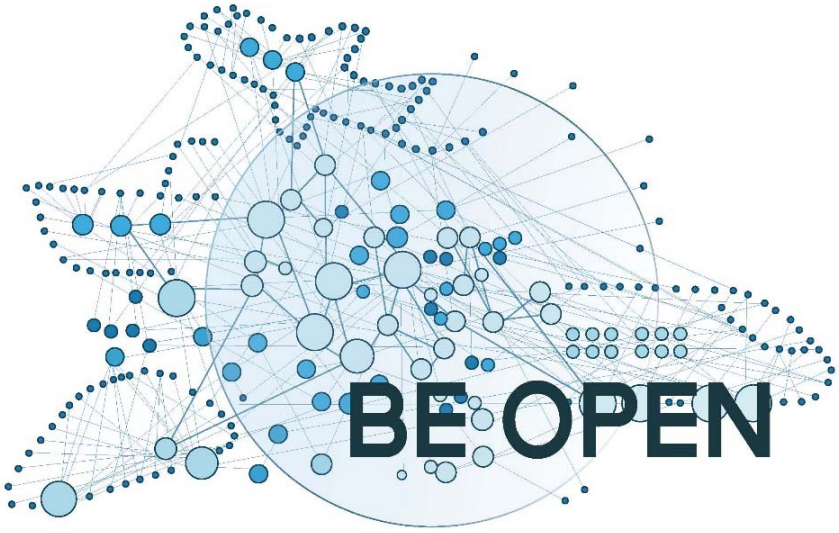

European forum and oBsErvatory for OPEN science in transport

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D6.7 Towards a unique engagement of publishing houses

Final Version

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Abbreviations and Terminology

EOSC	European Open Science Cloud
SDG	Sustainable Development Goals
TOPOS	Transport fOrum / Observatory for Promoting Open Science

Executive summary

Deliverable 6.7 – Towards a unique engagement of publishing houses- focuses on the possibilities that BE OPEN has with the publishing houses. More detailed, task 6.7 outlines a responsive engagement strategy for the European publishing houses who are issuing relevant journals or book series on transport research. This includes coordination and communication activities to inform them about the main objectives that BE OPEN can offer and how Open Access can support their general goals and overall objectives.

Desk research was done to understand the key activities that the publishing houses are leading now, their projects and future objectives. After the desk research a number of interviews with publishing houses were done with the objective of creating awareness about the activities of the project and the potential of BE OPEN, and to discuss possible future opportunities for participation. The objectives were to incite in them interest on collaboration for later involvement in the key events, to encourage collaboration and ensure that they will work directly with the BE OPEN members and, finally, to obtain feedback from transport stakeholders.

The document summarizes the key activities that the Publishing houses are doing, a map of the main publishers and what modes of transport are being covered by each one of them. It explains how some specific features from the TOPOS platform can be advantageous for the publishers and outlines possible ways of collaboration with them. Finally, it presents the perspective and commented interest of the Publishers about Open Access and Open Data.

1 Introduction

1.1 Purpose of the document

The BE OPEN project is a coordination and support action funded by the European Commission in the Horizon 2020 research and innovation program under the grant agreement No 824323. BE OPEN aims to promote Open Science in transport research and assist in regulating Open Science aspects and standardizing them. The overarching vision of BE OPEN is to create a common understanding on the practical impact of Open Science and to identify and put in place the mechanisms to make it a reality in transport research. The main objectives of the BE OPEN project are:

- To develop a framework in order to establish a common understanding of operationalizing Open Science in Transport;
- To map existing Open Science resources and see how transport research fits in.
- To facilitate an evidence-based dialogue to promote and establish Open Science in Transport;
- To provide the policy framework and guidance for Open Science implementation in transport;
- To engage a broad range of stakeholders in a participatory process for Open Science uptake.

The Deliverable 6.7 - Towards a unique engagement of publishing houses outlines a proposal for a strategy on how to engage with publishers, how to collaborate and how to cope with challenges ahead jointly.

1.2 Objectives of the Task 6.5 "Publishing houses engagement strategies"

The objective of the task 6.5 is to elaborate a strategy for the engagement, ways for future collaboration as well as engaging with publishing houses, as a very important stakeholder of the community circle, in both, key events and dialogues. [1]

2 Methodology

The task followed a three-step approach:

Internal Analysis:

1. **Understanding the ecosystem of Publishing Houses**

- Pre-assessment of the role of publishers in the ecosystem of Open Science
- Mapping of Publishing Houses: Through a survey with relevance to the Community
- Selection

[1] BE OPEN Grant Agreement (824323 — H2020-MG-2018-2019-2020/H2020-MG-2018-SingleStage-INEA)

2. **Strategy Development:**
- Definition of Key Messages
- Strategy Proposal
- Planning the involvement

Engagement and sustainability of collaboration:

3. **Implementation**
- Involvement
- Conclusion

3 Internal Analysis

3.1 The Role of Publishing Houses in Open Science

Nowadays, almost all publishing houses, with scientific publications in Europe, offer Open Access, repositories, data analytics, policies and open licensing contracts and support for researchers to publish openly. Some also focus on the support for public funded research projects. Publishers are key to accelerating publication rates in research. Their offers had also effects back to the publishing activities: Publishing Open Access becomes more affordable and more researchers take that path instead of traditional publications.

The objective is to make books and journals more accessible to a wider and more diverse audience of researchers, to do so they have developed Open Access platforms and publishing models. Non-profit membership associations with libraries, archives, museums and websites such as sciencedirect.com are, examples of these efforts.

These initiatives intend to support the achievement of the UN Sustainable Development Goals (SDGs) by advancing global scientific collaboration and increasing the impact and reach of the books and their authors, to enable researchers to share their methods and data, to gain deeper and better insights of their results, and finally to help bring new stakeholders, including the public sector, into the conversation.

Over the last 10-15 years, publishers adapted to the changing need in research, added new business models to the traditional ones. Looking ahead, regulatory novels such as the change in Horizon Europe, the 9th research and development framework program, will trigger the movement of Open Science tremendously. Horizon Europe requires all beneficiaries to practice Open Science and publish results in Open Access formats, unless the proposals can explain, why data should be treated confidential.

For this study, it was decided, that only publishing houses applying Open Science would be approached, because the probability of engagement would be higher.

3.2 Mapping of Publishing Houses

The objective of the survey done among the consortium members was to understand which publishing houses are of interest for the members, what mode of transport is covered and if there are good direct contacts. Table 1 shows a (not complete) map of publishing houses, where members of the community

of Open Science in transport research are already collaborating with. It shows that more than half of the publishers cover almost all modes of transport (air, rail, water, road, others).

Publishing House	Transport mode covered by the publishing house with relevance to the consortium
Academic Press / Elsevier	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
American Society of Mechanical Engineers	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
Baird Publications	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☐
Bloomsbury Publishing	**Road** ☒ **Rail** ☐ **Water** ☐ **Air** ☐ **Other** ☒
Brill	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☐ **Other** ☐
Cambridge Scholars Publishing	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☐ **Other** ☒
Cambridge University Press	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
Cornell University Press	**Road** ☒ **Rail** ☐ **Water** ☐ **Air** ☐ **Other** ☒
CRC Press	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
Edward Elgar Publishing	**Road** ☒ **Rail** ☒ **Water** ☐ **Air** ☐ **Other** ☐
Elsevier	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
Emerald Publishing	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☒
GDANSK UNIV TECHNOLOGY	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☐
Harvard University Press	**Road** ☒ **Rail** ☒ **Water** ☐ **Air** ☒ **Other** ☒
Hindawi	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☒
IMO Publishing	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☐
Inderscience Publishers	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☒
Informa Maritime & Transport	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☐
INFORMS	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
International Marine Publishing Co	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☐
IOP Science	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
Lit Verlag	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☒

McGraw-Hill Education - Europe	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☒
MDPI	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
Metropolitan Books	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☒
MIT Press	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
Open university Press / Mc Graw Hill	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
Palgrave Macmillan	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☒
Pergamon Press	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
Portobello Books Ltd	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
Purdue University Press	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
River Publishers	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☒
Routledge / Taylors & Francis Group	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
SAGE Journal	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
Ships and Offshore Structures	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☐
Springer	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
THE PENNSYLVANIA STATE UNIVERSITY PRESS	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☒
The Royal Institution of Naval Architects Publications	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☐
The Society of Naval Architects and Marine Engineers Publications	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☐
TU Delft	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
University of California Press	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
University of Cantabria	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☐
University of South Florida	**Road** ☒ **Rail** ☒ **Water** ☐ **Air** ☐ **Other** ☐
University of Toronto Press	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒
Weilbach	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☐
Wiley-Blackwell / John Wiley & Sons	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☒ **Other** ☒

Witherby Seamanship International	**Road** ☐ **Rail** ☐ **Water** ☒ **Air** ☐ **Other** ☐
World Society for transport and land use research	**Road** ☒ **Rail** ☒ **Water** ☒ **Air** ☐ **Other** ☐

Table 1 map of publishing houses

3.3 Selection

The publishers were analyzed in terms of:

- Spectrum of transport modes covered
- Open Science activities
- Quality of direct contacts (e.g. contacts within the consortium to employees with strategic impact)

For the strategy development, Springer, Elsevier and SAGE Publishing are part of the pioneers in Open Access and have a large market share. Collaborating with these, would mean to work with potential early adopters of new innovative platforms, such as TOPOS.

4 Strategy Development

4.1 Definition of Key Messages

Challenging to the strategy developments are that larger publishing houses:

- have their own platforms and repositories
- use the platforms for foresight of new topics/trends in disciplines
- have quality measures
- worked out complex algorithms to analyst meta data and provide optimal search functionality

Concluding from this, to make them aware of the TOPOS initiative and win them for collaboration and endorsement, unique features have to be communicated. The tasks identified the following key message:

- **TOPOS Gateway (platform):**
  Publishers can connect to the European Transport Research Community to monitor trends and developments as well as to exchange potentials and challenges on Open Access/Open Data in Transport Research with researchers.
- **TOPOS Observatory for Organizations:**
  Publishers can run tests/trails for innovative media formats to validate them.
- **TOPOS Forum:**
  Provision and exchange of information on trends in transport research to evaluate future relevant areas for Open Access publications.

4.2 Possible Collaboration

The following ways for collaboration were worked out:

Connect to the Community: Exchange on challenges and solutions on Open Access/Open Data in Transport Research with researchers through the TOPOS Forum.

Foresight of Topics: Monitor current topic developments and identify new topic niches for the future in transport research.

Sandboxing: Run tests/trials for innovative media formats with the community in order to improve them before the launch.

Quality Assurance: Navigation through the content can be simplified through independent ranking systems.

Co-Creation: Ideate together to improve the functionality, tools and user-centric design of TOPOS Observatory and Forum. For instance: Develop further the OpenAIRE Research Graph with OpenAIRE.

4.3 Planning the Involvement

Take part in key events:

It was important to introduce publishers to the project, to do so they were invited to key events where an exchange on challenges and opportunities could take place. The stakeholders could get in direct contact to publishers (e.g. at the first BE OPEN event "Open Science in Transport" with Chris Pringle, Elsevier, on the 2nd BE OPEN Event "Open Science in transport: Challenges and opportunities in a COVID-19 Era with Rosie Cann, SAGE Publishing; and on the BE OPEN Final Event, with Angelina Wagner, Springer NYC).

Involvement in dialogues:
In joint dialogues with the three publishers, the following topics should be covered:

- Exchange on the potential collaboration and challenges and opportunities
- Identify business cases (it is difficult at this point)
- Inform them about insights from the community and European Commission on Open Science developments and policies

5 Implementation

5.1 Format of the exchanges

Planning the involvement was delayed due to COVID-19. In the end, two of the three identified publishing houses agreed to participate in video calls with Jakob Michelmann and Gereon Meyer of VDI/VDE-IT, namely Elsevier and Springer. On 18 June 2021, a call was held with Chris Pringle, Executive Publisher Transportation Journals of Elsevier (UK), and on 24 June 2021, a second call was held with Angelina Wagner, Journal Development Manager Mathematics, Physical and Applied Sciences of

Springer Nature (U.S.A.) and with Jana Palinkas, Associate Publisher with Springer Heidelberg (Germany).

In these exchanges, VDI/VDE-IT first presented results of the BE OPEN project and recent political developments promoting Open Science in Europe. Then they entered into the discussion which covered the meaning of Open Science to publishing houses (and vice versa), the requirements to implement Open Sciences practices globally, the innovation potential of Open Science for transport research and some practical issues of Open Science such as quality assurance, navigation through contents, etc.

5.2 Results of the exchanges

The exchanges with the publishing houses gave insights on key questions as follows:

- **What meaning has the publisher for Open Science and what meaning has Open Science to the publisher?**
  - For all publishing houses, Open Science has become very important. This was not always a case, but has accelerated in view of changing requirements by public funders, research institutes and universities as well as academic communities.
  - Publishing houses can gain insights on the development of topics, trends and research networks through their own data analytics.
  - They can provide better and faster services through dedicated payment models for researchers.
  - They do not see themselves as big data provider, though Open Access may be the main offer to Open Science from publishing houses.
  - They take in a big role in supporting and navigating authors through the vast of possibilities and contracts for Open Access and Open Publications
- **Which requirements/framework conditions have to be fulfilled to implement more Open Science practices in Europe/globally?**
  - Clear standards for Open Data are needed to allow interoperability between data bases.
  - Many researchers don't have enough time to conduct Open Science e.g. in terms of consistent and good data management. That is why, researchers need to be better trained and equipped with skills and resources. Following this, the entire Open Science endeavor could gain higher quality outputs.
  - Open file formats should be improved and standardized globally.
  - The infrastructure should work in line with EU ambition, especially if more Open Access is required in funded research and development initiatives.
- **What challenges and opportunities do you foresee specifically for transport research/the transport sector through Open Science?**
  - Publishers recommend that more impacts should be researched through accompanying research to gain insights in new market niches and potentials.
  - Citizen Science is a lot of effort, the data quality is different. That is why, scientists need to receive better guidance.

  - Transport is a very broad field with a vast variety of data sources of different quality and purpose; Open Science best practices may help to give direction on how to create added value from sharing data.

- **How do you evaluate the innovation potentials of the transport sector through Open Science?**
  - Open Science can help to develop standards for complex transport systems as need for automated driving for example.
  - Open Science can help to transfer solutions from one region to another.
  - Due to the high competition in transport, most results are confidential for good reason – thus a balance of sharing and protection has to be found.

- **How could the quality of Open Data and Open Publications be assured and the user supported, e.g. on the repository?**
  - Through high quality Meta data provision and the selection of the right identifiers, Open Publications can be found more easily.

The publishers did not comment in further depth on the possible ways of collaboration (see chapter 4.2). However, they let know, that they look forward to a continuous exchange beyond the project, namely by giving conditions for exchanges between TOPOS developers and their technical Open Science and data specialists, if wished.

6 Conclusions

As a result of the engagement, it became obvious that publishers acknowledge the Open Science approach, provide a portfolio of Open Access, offer data repository and endorse the project while they also admit that their business models require a balance of sharing and protection of data as reflected in the various publishing contract options. They confirm that they are developing into Big Data owners but still rather see their business case in providing access to elaborated research content. Particularly in transport research as a field covering a number of basic disciplines like engineering and social sciences, the formats and purposes of data are highly diverse, challenging the understanding of good data quality. Understanding that Open Science requires transparency in the research raw data, they would thus prefer this raw data to be managed within the academic institutions and communities. They clearly see a need for the public authorities to provide guidance, standards and infrastructures for data handling, particularly if Open Science becomes mandatory for publicly funded research work. It may be too early to clarify principles for this. However, the publishing houses would be willing to connect the BE OPEN partners and stakeholders to their technical departments to further discuss detailed measures and ways of cooperation.