Open science in road safety

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Together with:
George Yannis
The BeOpen project

- **Title of the project:**
  European forum and oBsErvatory for OPEN science in transport

- **Partners:**
  17 participants and 9 third parties

- **Duration of the project:**
  30 months (January 2019 – June 2021)

- **Framework Programme:**
  Horizon 2020 - The EU Union Framework Programme for Research and Innovation – Mobility for Growth

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Background

- **Open Science** is a new approach to the scientific process, aiming to provide accessibility to all levels of research community and society, increase integrity and reproducibility of research.
- The rapid growth of digital technologies and new collaborative tools enable the vision of Open Science.
- In the EU, the **European Open Science Cloud (EOSC)** has initiated as a single point of access to all European research data, data services, tools and standards.
- Within this context, there is a need for promoting Open Science within the transport research community.
BeOpen Methodology

- Develop a framework of common understanding.
- Develop an inventory of Open Science resources (research outcomes, services and research data infrastructures) related to all transport modes.
- Set up the TOPOS Observatory and Forum, that will act as an evidence-based, community driven sharing of knowledge and experiences.
- Develop a “Code of Conduct” to provide the legal and ethical guidance needed to operationalize Open Science principles.
- Formulate a set of guidelines for decision making and planning.
TOPOS Forum and Observatory

- **TOPOS** will contribute to creating a solid knowledge base on the implementation of Open Science approach in transport research.

- **TOPOS** will contain two components:
  - **TOPOS forum**, which will capture the common practices of data stewardship in transport research.
  - **TOPOS observatory**, which gathers all research results (publications, data, software) related to transport research in Europe.

- The aim of **TOPOS** is to empower research and industry communities to develop Open Science solutions following the EOSC principles and under a commonly agreed Code of Conduct.
Open Road Safety Information Systems (1/2)

Road Safety Observatories

- ERSO, European Road Safety Observatory
- OISEVI, Ibero-American Observatory
- African Road Safety Observatory
- Dacota, EC Project – Knowledge Centre
- NRSO – NTUA Road Safety Observatory
Open Road Safety Information Systems (2/2)

Road Safety Decision Support Systems

- SafeFITS, UNECE-Global Road Safety Model
- SafetyCube, EU Road Safety DSS
- iRAP, Road Safety ToolKit
- PRACT, CEDR
- PIARC, WRA Road Safety Manual
- US NHTSA/FHWA CMF Clearinghouse
- AustRoads Road Safety Engineering Toolkit
During the last years, several Open Road Safety Information Systems have been developed, adding significant value to the quest for safer roads worldwide.

The more developed Information Systems are associated with countries and regions with higher road safety performance and are a direct sign of advanced road safety culture.

Road Safety Information Systems are key management tools for developing road safety capacity and engaging stakeholders (not only for providing scientific evidence but also for monitoring efforts).

Making road safety research results more accessible contributes to better and more efficient science and provides greater evaluation by the scientific community.
Future Challenges

- Open Science could increase the current great potential of Road Safety Systems with:
  - more data and knowledge
  - broader geographical coverage

- Global impact could be optimized through:
  - a network of open science road safety systems
  - standardisation of data, processes and systems
  - evidence-based & customized best practice guidelines

- “As open as possible and as closed as necessary”: issues of personal data protection, confidentiality, IPR concerns etc. should be tackled.
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