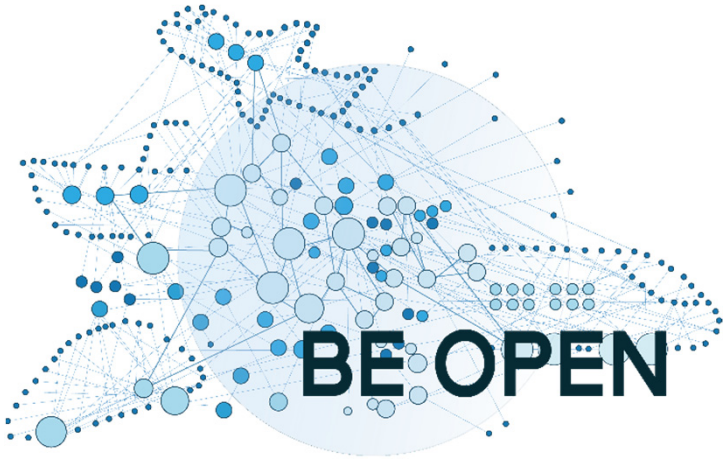


This project has received funding from
the European Union's Horizon 2020
Research and Innovation Programme
under Grant Agreement No 824323

European forum and oBsErvatory for OPEN science in transport

EuroCRIS, 2019

20.11.2019, Münster

« Open Science in transport: stakeholders involved and their areas of interest, main gaps and opportunities to overcome »

Kristel Palts, DLR

BE OPEN

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 824323

Duration: 30 months

Start Date: 01-01-2019

Call: H2020-MG-2018-SingleStage-INEA

Type of Action: Coordination and Support Action

GA Number: 824323

Overall Budget: € 1,997,283.75

EU Contribution: € 1,997,283.75

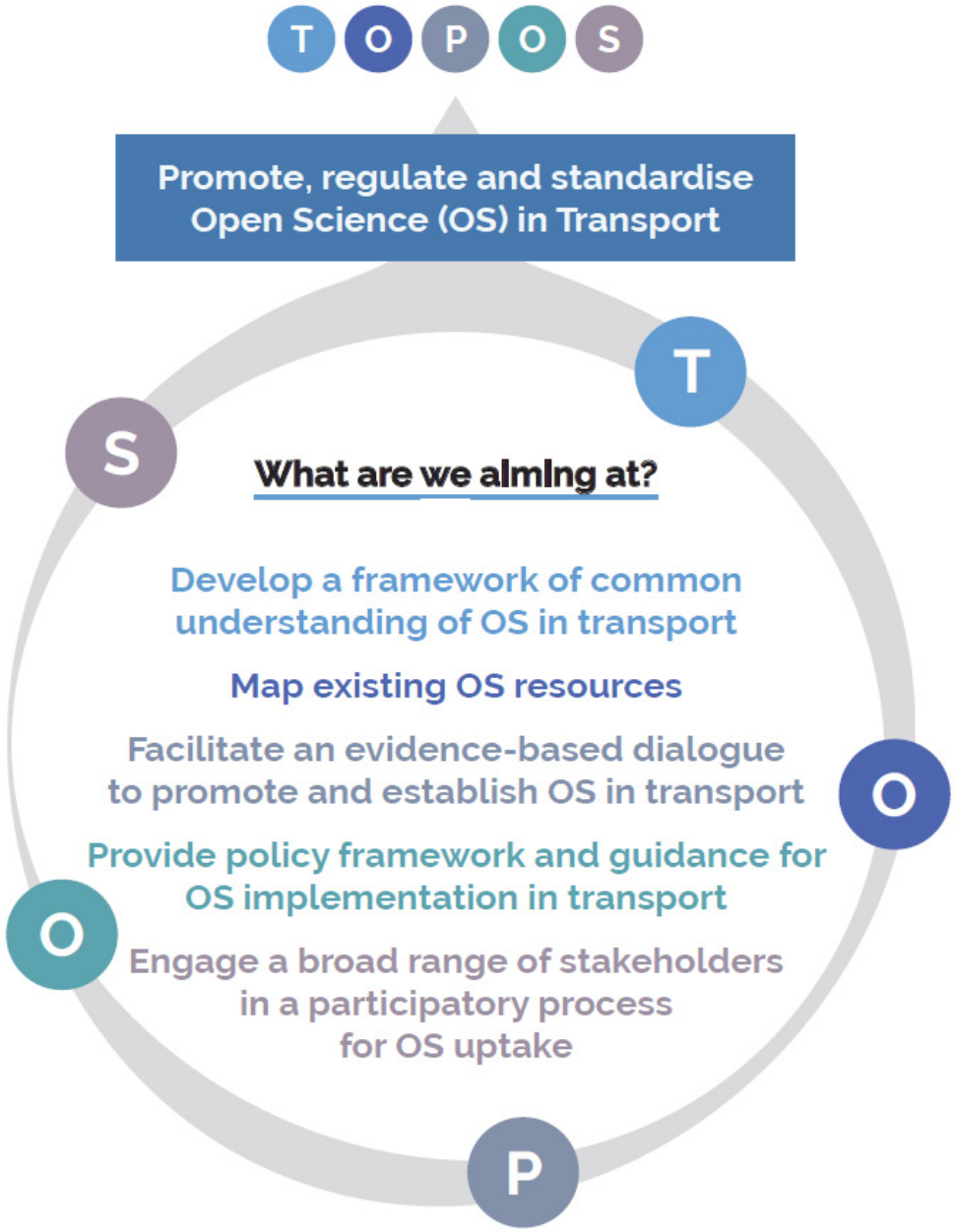
BE OPEN partners

- ✔ 17 partners
- ✔ 8 third parties
- ✔ 8 Work Packages
- ✔ 32 Deliverables

(Third Parties)

BE OPEN Objectives:

- to **promote Open Science** in **transport research**
- assist in **regulating and standardizing**
- create a **common understanding**
- **identify and put in place the mechanisms**
- Transport Observatory / fOrum for Promoting Open Science.



EXPECTED IMPACTS (1/2)

01

TOPOS forum and observatory tool will contribute to creating a **solid knowledge base on the implementation of Open Science** approach in transport research

02

Governance and new operational/business models will be developed for enhancing Open Science by describing the rationale of how to create and capture value in economic and social context

03

The **European Code of Conduct on Open Science in transport** will be developed proposing recommendations and proper guidelines that allow setting up a community of transport research organizations

EXPECTED IMPACTS (2/2)

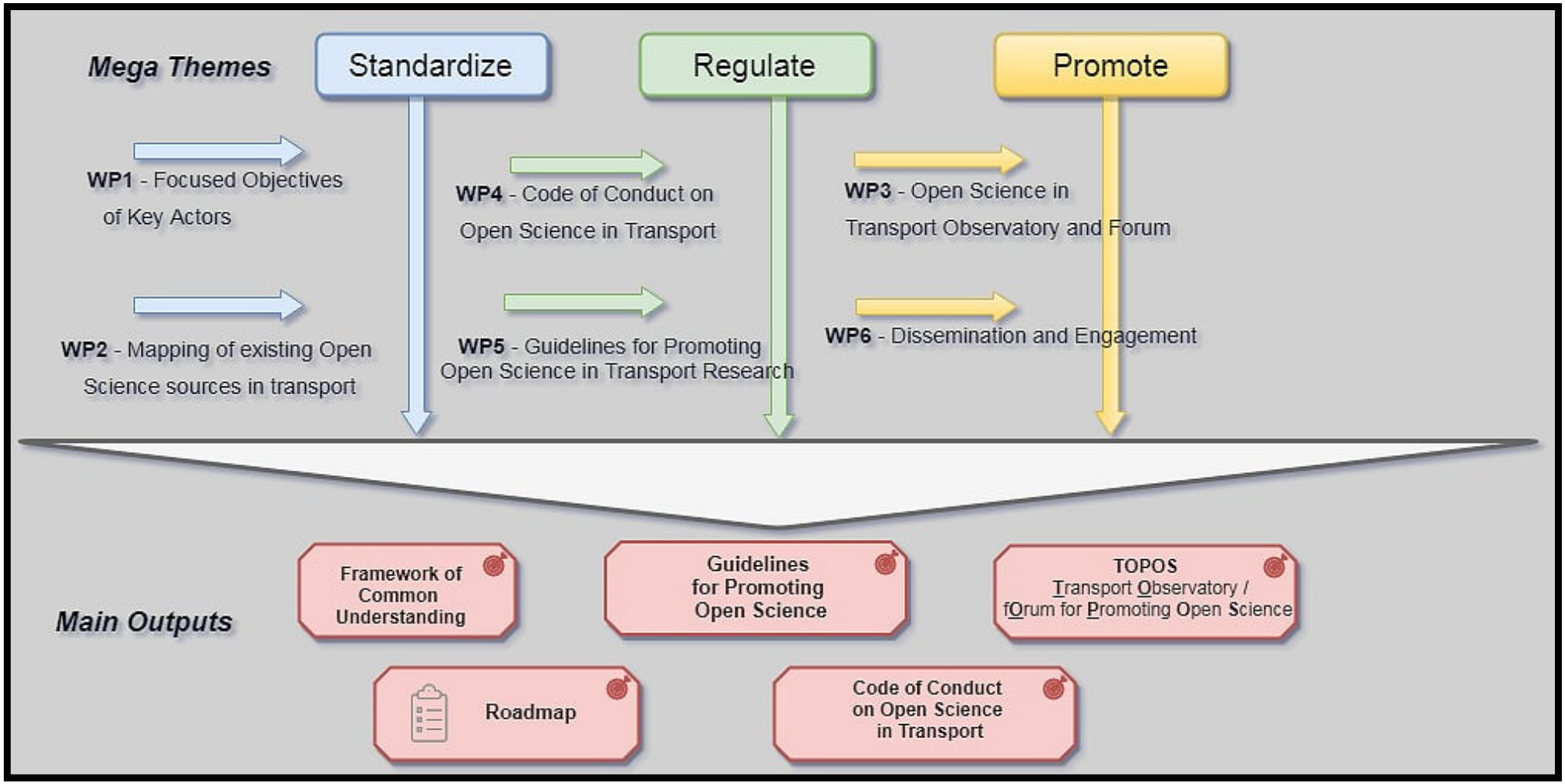
04

Awareness and visibility (authorities, Industrial and SMEs Associations in Transport, Publishing Companies, and the various European Technology Platforms, and strong media coverage) will be created

05

International stakeholders will be engaged in mutual learning and sharing experiences

MEGA THEMES


Mega Themes
Standardize
Regulate
Promote
WP1 - Focused Objectives of Key Actors
WP2 - Mapping of existing Open Science sources in transport
WP4 - Code of Conduct on Open Science in Transport
WP5 - Guidelines for Promoting Open Science in Transport Research
WP3 - Open Science in Transport Observatory and Forum
WP6 - Dissemination and Engagement
Main Outputs
Framework of Common Understanding
Guidelines for Promoting Open Science
TOPOS Transport Observatory / fOrum for Promoting Open Science
Roadmap
Code of Conduct on Open Science in Transport

WP 1 Focused Objectives of Key Actors

- Task 1.1 Clustering of Key Actors
- Task 1.2 Open Scince Framework, terminology and instruments
- Task 1.3 Stakeholders needs and objectives

T1.1 Analysis of main actors involved

6 competence areas

- Business Modelling area
- Environmental area
- Legal/Regulatory area
- Socio-economic area
- Technological area
- Transport planning area

Research of scientific resources

- Original research data
- Operational data directly related to research
- Data from published transport research

Analysis of three main actors' categories

- Industry
- Research
- Public authorities

Main findings (6)

Transport planning area

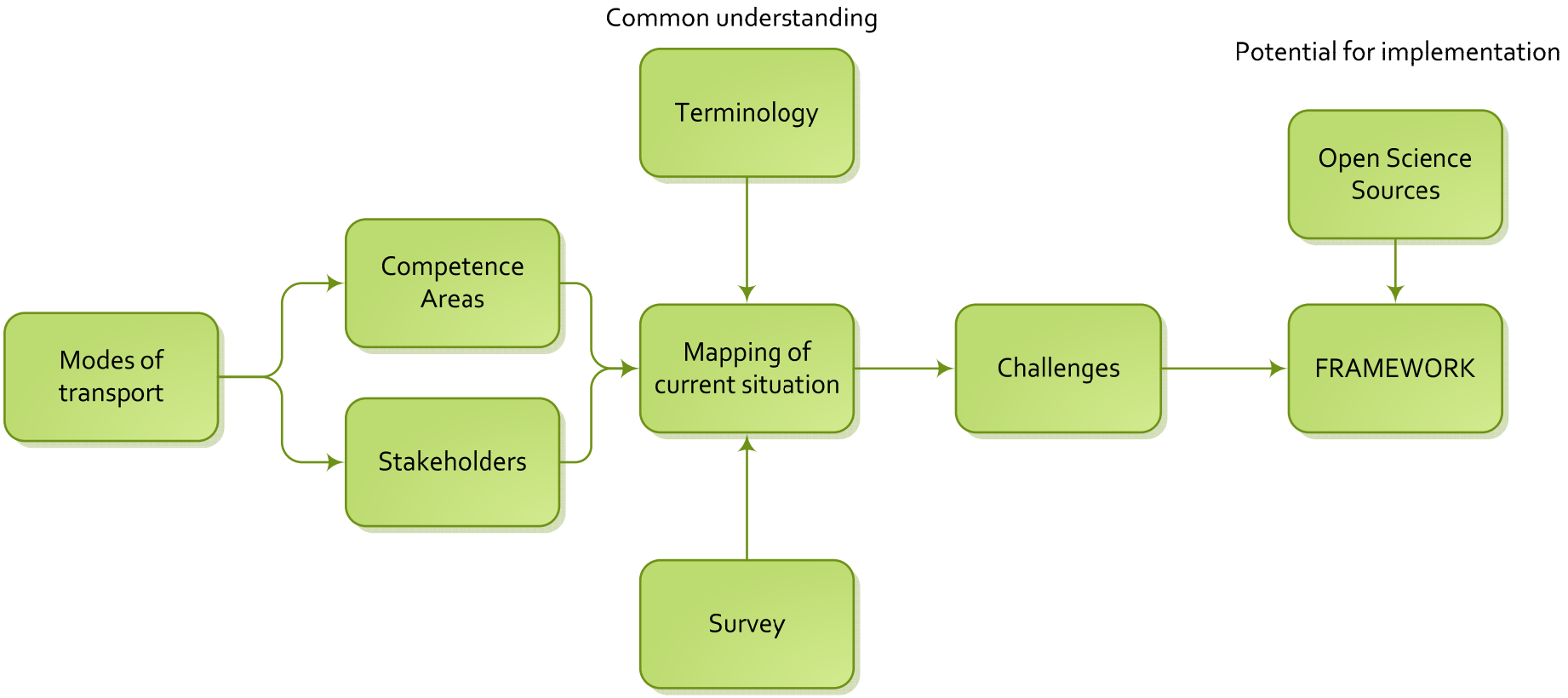
Most influencing actors	Research question trends	
	From:	Towards:
• Public authorities • Transport networks • Policy makers	• Traffic congestion • Emissions reduction and safety increase	• Accessibility • Smart city planning • Network efficiency • Interoperability within modes • Integrated and resilient transport systems • Risk analysis and management

T1.2 Open Science framework, terminology and instruments

- **Connect transport modes, stakeholders and competence areas** to extrapolate the main challenges to be addressed by the framework structure

- List Open Science **main challenges**, analyses transport sector **stakeholders experience** and **proposes a framework**

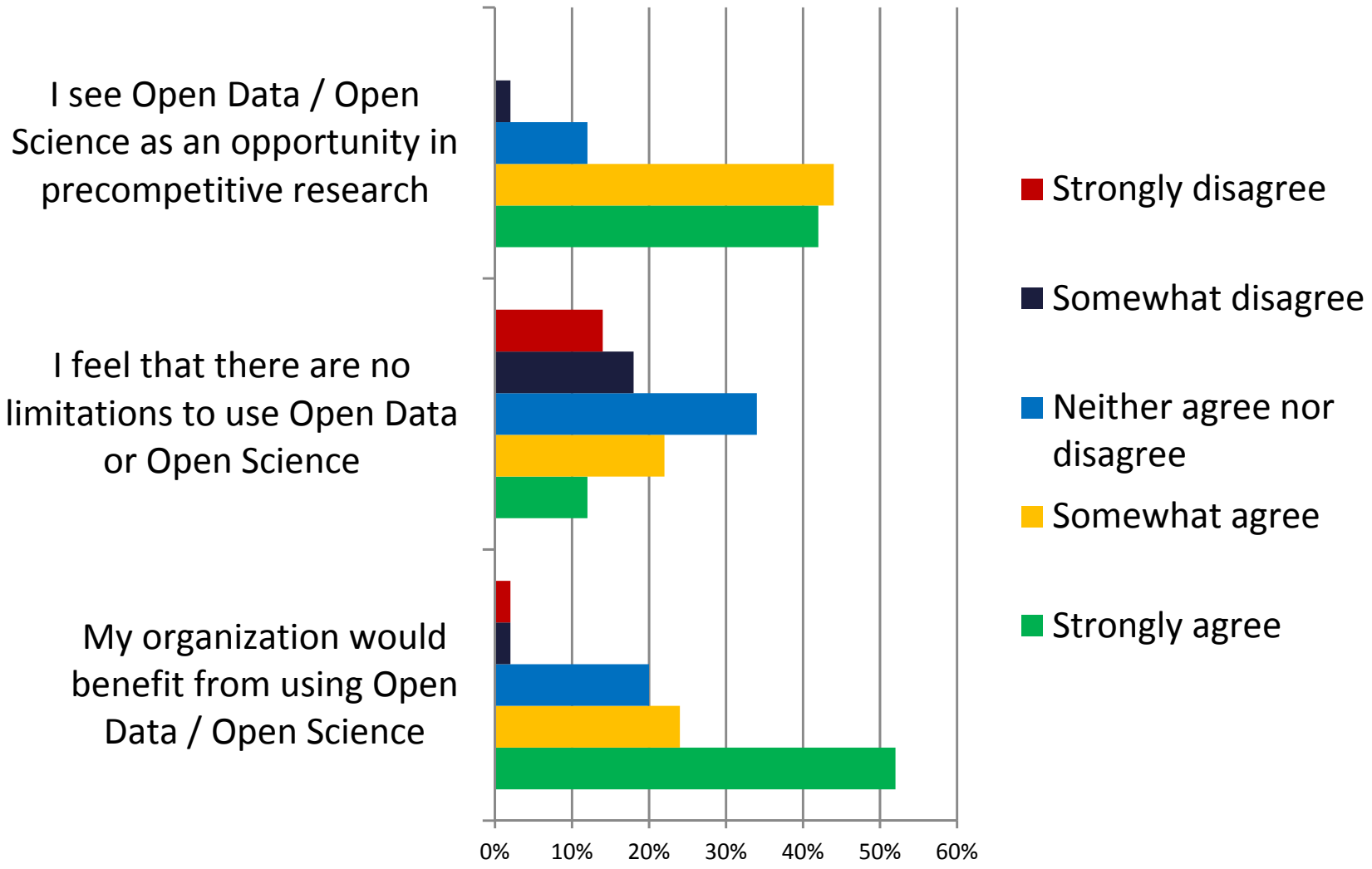
Approach


Common understanding
Potential for implementation
Terminology
Open Science Sources
Competence Areas
Modes of transport
Mapping of current situation
Challenges
FRAMEWORK
Stakeholders
Survey

Interrelation of Stakeholders

Competence area	Primary stakeholder	Secondary stakeholders
Legal/ Regulatory	Policy makers, public authorities Transport networks, commercial transport & logistics	Research centres, universities
Technological	Research centres, universities Commercial transport, logistics industry Transport network, policy makers	Transport network, policy makers
Transport planning	Public authorities, transport networks, policy makers	Commercial transport & logistics Research centres & universities.
Business modelling	Policy maker, public authority, transport networks, Commercial transport & logistics	Research centres & universities
Socio-economic	Public authorities, commercial transport, logistics & transport network	Transport network
Environmental	Research centres & universities Public authorities, commercial transport, logistics & policy makers	NGOs & community organizations Citizens

Survey – Stakeholder-centered Study

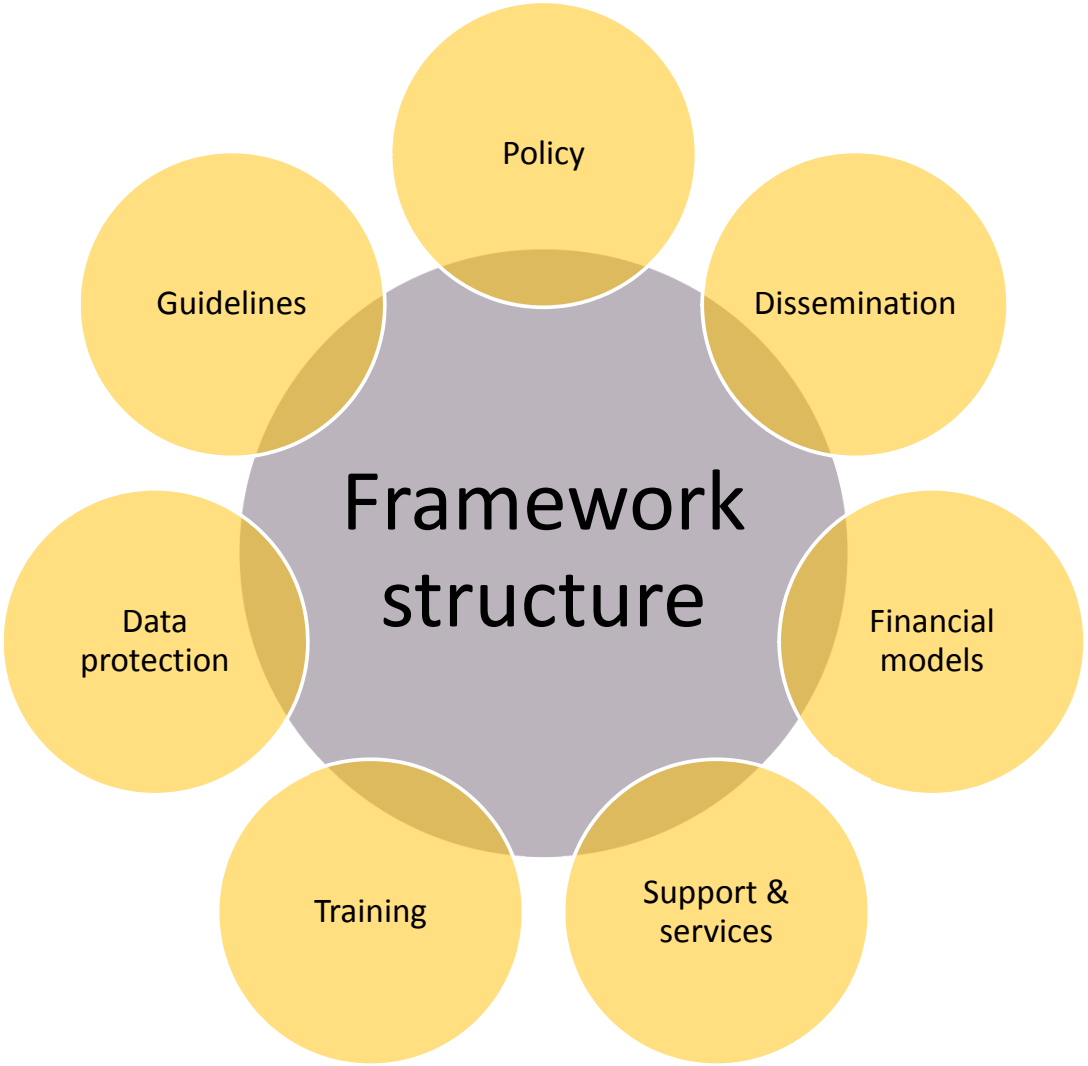


Challenges

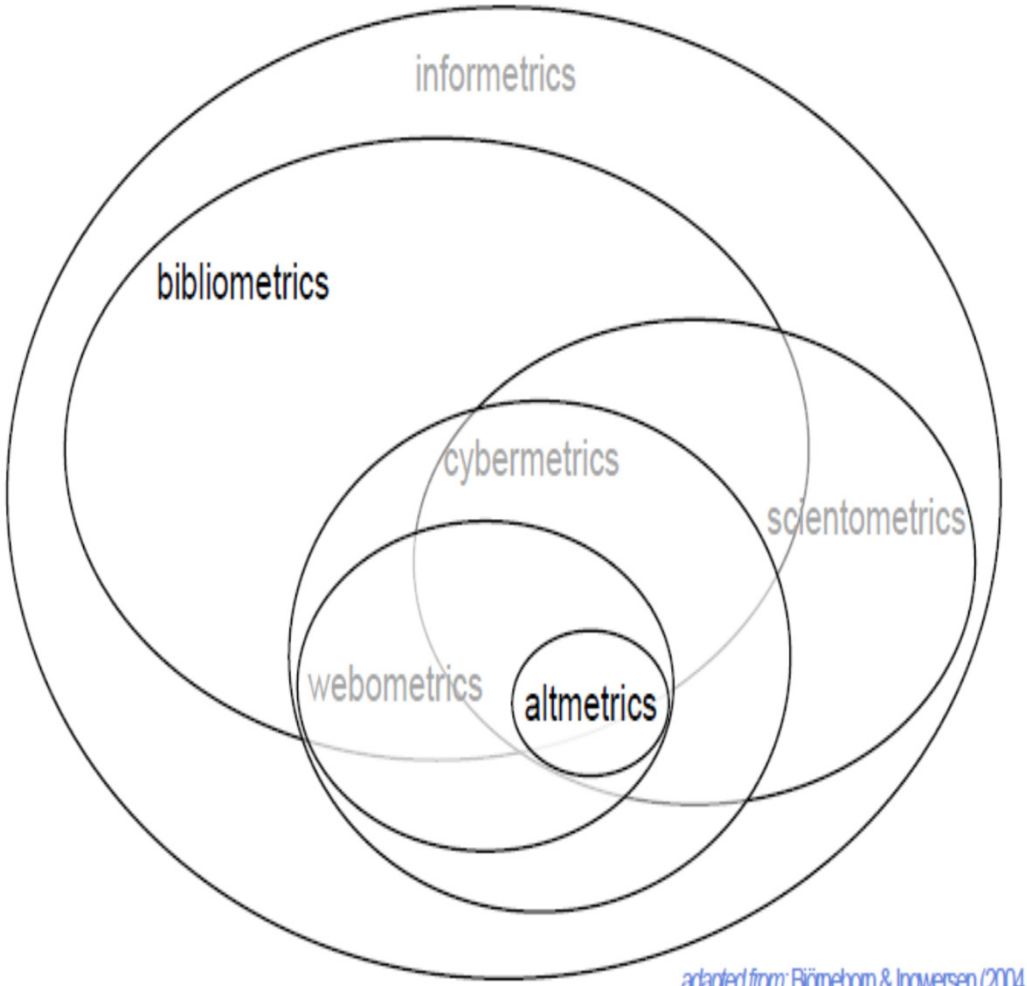
- Data **fragmentation, large datasets** and lack of data **quality** and **security**
- Lack of:
  - technological framework (standards, etc.)
  - skilled experts
- Large variety of stakeholders, privacy principles
- Legal framework is insufficient

→ Establish **common understanding** among all stakeholders
→ Provide a common **technical framework**
→ develop appropriate **funding mechanisms**

Framework


Policy
Guidelines
Dissemination
Framework structure
Data protection
Financial models
Training
Support & services

Metrics



adapted from: Björneborn & Ingwersen (2004, p. 1217)

- Metrics help us to **identify the areas** where **changes** need to be done
  - Altimetrics – research indicators based on social media
  - Bibliometrics – citation and content analyses
- Need for Next Generation Metrics
  - Refelcting transparency, diversity and reflexivity

Challenges & Opportunities

Identified Challenge	Framework Topics	Opportunities
Fragmented data & large variety of stakeholders:	Policy and Guidelines, Dissemination of Open Science in transport research data	Research Data Alliance (RDA)/ RDA Europe 4 Transport fOrum/ Observatory for Promoting Open Science - TOPOS Implementation Roadmap for the European Science Cloud – Communication European Cloud FREYA V-Advance
Data quality	Explicit guidelines	EU ODP EUROSTAT FAIR European Commission Open Research Publishing Platform TRIMIS
Enhancing data security & privacy	Data protection and security	Cyber security framework EOSCPilot

Challenges & Opportunities

Identified Challenge	Framework Topics	Opportunities
Technological challenge	Support and research services	Transport Research Cloud (TRC) eInfraCentral Next generation repository FREYA EOSC-Hub OpenAIRE-Advanced GO-BUILD – coordinating FAIR technology
Lack of skilled experts	Training requirements	GO-Train, European Skills and Qualifications Matrix for Open Science. FOSTER Plus
Legal challenges	Policy	Policy development to create common understanding EOSCPilot Open Science Policy Platform V-Advance GO CHANGE
Funding	Financial schemes	EC initiative to support Open Science

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beopen-project.eu

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beopenprojecteu@gmail.com

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