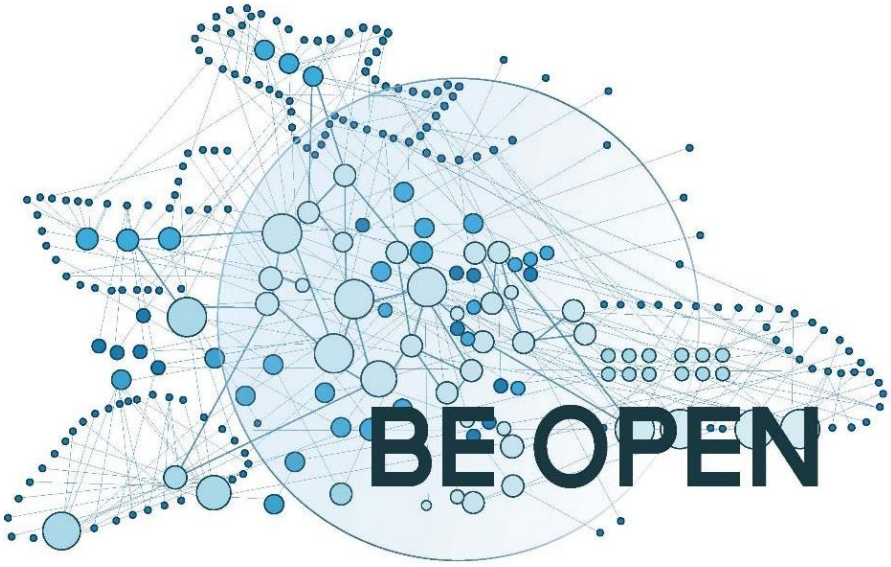

European forum and oBsErvatory for OPEN science in transport

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D3.1 TOPOS Declaration

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Abbreviations and Terminology

Abbreviations	Terminology
ACARE	Advisory Council for Aviation Research and Innovation in Europe ALICE Alliance for Logistics Innovation through Collaboration in Europe ATC Air traffic control
ALICE	Alliance for Logistics Innovation through Collaboration in Europe
CORDIS	Community Research and Development Information Service
DETRA	Developing the European Transport Research Alliance
DMPs	Data Management Plans
EATEO	European Association of Aviation Training and Education Organizations
EB	Executive Board
EC	European Commission
ECTRI	European Conference of Transport Research Institutes
EIRAC	European Intermodal Research Advisory Council
EOSC	European Open Science Cloud
ERA	European Research Area
ERANET	European Research Area Network
ERRAC	European Rail Research Advisory Council
ERTRAC	European Road Transport Research Advisory Council
ESFRI	European Strategy Forum on Research Infrastructures
ESTP	European Space Technology Platform
EURNEX	EUropean rail Research Network of EXcellence
EUTRAIN	European Transport Research Area International Cooperation Activities
FAIR	Findable, Accessible, Interoperable, Reusable
GB	Governance Board
GDPR	General Data Protection Regulation
KPIs	Key Performance Indicators
MS	Member States
RI	Research Infrastructures
RoP	Rules of Participation
SIAM	Service Integration and Management System
TOPOS	Transport Observatory/fOrum for Promoting Open Science
TRIMIS	Transport Research and Innovation Monitoring and Information System TSIs Technical Specifications for Interoperability standards
WATERBORNE TP	The European Research and Innovation Platform for WATERBORNE Industries
WEGEMT	European Association of Universities in Marine Technology
WG	Working Group

Executive summary

The objectives of the BE OPEN project are a) to create a common understanding on the practical impact of Open Science and b) to identify and put in place the mechanisms to make it a reality in transport research. As such, BE OPEN follows a two-fold action plan:

1. to engage key transport and open science-related communities in a participatory approach fostering a dialogue on Open Science (what exists, what should be done, how it should be done) among relevant stakeholders in Europe and around the world, and
2. develop a detailed roadmap for the implementation of sustainable open science modules which include key practices, infrastructures, policies and business models, all taking into account the specificities of the transport research domain, and the use and integration of existing-infrastructures and the emerging EOSC initiative.

Deliverable D3.1 is the first deliverable of WP3 "Open Access in Transport Observatory and Forum" and will feed the TOPOS Observatory and Forum development (Deliverable D3.2), which aims to promote communication and networking among stakeholders in the transport research area.

The deliverable D3.1 will contribute towards the development of new schemes for membership and governance scheme of the Transport Observatory/fOrum for Promoting Open Science (TOPOS observatory and forum) in order to implement and transition FAIR principles.
For the industry stakeholders of transport research, long-term learning with an emphasis on sustainability constitutes a necessity and as such, they will confirm their continuous engagement with scientific stakeholders. The proposed membership and governance scheme will be built upon recognizing the challenges of data-driven transport research in pursuing excellent science and granting that the vision of Open Science in transport research is an iterative process based on constant learning and mutual alignment. Hence, the proposed schemes will encompass some key elements, such as data culture and management, services and architecture and funding mechanisms. The following tasks of this WP will put "flesh to the bones" of how the above schemes will be implemented and assessed.

The deliverable D3.1 is organized in 6 chapters. The first one is an introductory chapter presenting the aim and objectives of the current deliverable, the second deals with the challenges of aligning transport research with EOSC, and the third discusses the governance structures of existing European Research Infrastructures on Transport Research. Following, Chapter 4 presents the TOPOS Governance scheme and Chapter 5 the Membership scheme. Deliverable's main conclusions and discussion are hosted in the last chapter of the current deliverable (Chapter 6).

1. Introduction

The development of the European Open Science Cloud (EOSC)was made following a number of pilot integrations of services and infrastructures that were connected under an interoperable framework, engaging a wide number of stakeholders, building trust and skills required for an open research data approach. A proper governance framework was followed to maximize operational and functional potentials of EOSC.

The core objectives of TOPOS Observatory and Forum are focused on limiting existing barriers in Open Science in Transport Research and aligning transport research with EOSC by following FAIR principles. By identifying applied development strategies, operation and services offered from existing Transport RIs and EOSC, TOPOS schemes and services aim to offer a stakeholder-driven governance with the active involvement of transport research organizations/institutions, transport infrastructures and e-infrastructures, transport research funding bodies and other relevant players(relent research communities, authorities and any other body dealing with transport-related data).

After examining the challenges for aligning transport research to EOSC approach, the TOPOS Governance scheme is presented, based on a list of recommendations under each main topic (data management, architecture, funding and key organizational and functional aspects).

Being in line with EOSC approach but enhancing it at the same time to cover existing needs, gaps and challenges in an optimum way, are among the directions followed by TOPOS Observatory and Forum to open transport research. TOPOS specific orientation to transportation follows an interoperable scheme following at the same time a multilayer perspective based on transport thematic areas, competence areas and transport modes.

2. Challenges of aligning Transport Research with EOSC

In this chapter, the main challenges of aligning Transport Research with EOSC are addressed. TOPOS Observatory and forum will play a key role in tackling these challenges and enable the available data to follow the FAIR principles. These barriers on producing open and FAIR data in Transport Research have been identified and presented in previous deliverables (Deliverable 1.2, 2.2 and 2.4) by the Transport Research key main actors. Considering main players' categories in transport research along with the Governance structure of existing European Research Infrastructures in the area, the core challenges of such an alignment are being presented and will feed forward the TOPOS governance scheme.

2.1. Main Players' Categories in Transport Research

Based on the D1.1 of the BE OPEN project, a classification of key players of all transport modes in the transport domain has been delivered by assessing activity of current technology platforms, main influential research organizations and relevant initiatives, projects and tools (i.e. ERANET projects, TRIMIS & CORDIS tools).

Considering the key players of transport, that apply for all transport modes (road, rail, water, air) including cross-modal, and the research and progress already made by relevant European Technology Platforms (i.e. ERTRAC, ERRAC, WATERBORNE ETP, EIRAC, ACARE, ESTP, ALICE) and influential organizations (i.e. ECTRI, EURNEX, EATEO, WEGEMT), innovations uptakes have been underlined. Therefore, 6 competence areas have been defined, that deal with: 1. Business Modelling, 2. Environmental aspects, 3. Legal/Regulatory framework, 4. Socio-economic framework, 5. Technological issues and 6. Transportation planning. Future Open Science services and infrastructures should consider all these competence areas in order to develop and deliver high quality services to the users.

2.2. Main challenges

The main challenges for aligning transport research with EOSC, have been presented in Deliverables D1.2 and D2.4. These challenges deal mainly with the need to make all transport research data available in an open format among all different stakeholders.

Seven categories of governance related challenges have been identified (Deliverable D1.2) dealing with:

1. **Fragmented data and large variety of stakeholders:** Available research data are being stored in different repositories & platforms and in different types and formats, making it difficult to combine and use datasets from different sources.
2. **Enhancing data security and privacy principles**: storing sensitive data in a cloud requires proper security and privacy protocols.
3. **Funding:** funding opportunities should be created and relevant resources need to be found, availing all stakeholders' participation and supporting TOPOS operational needs with the necessary infrastructures for data interoperability and openness.

4. **Technological challenges:** Technological solutions should be established to ensure data interoperability, hosting of large datasets for a long time, having reliable archive systems, platforms and tools able to read the data.
5. **Ensuring data quality:** Standardizing activities and processes are necessary to ensure high quality of data, supporting different stakeholders to use/re-use and analyze data, building trust among users. Detailed and informative processes and protocols should be followed by both data suppliers and users.
6. **Lack of skilled experts:** Skilled experts with miscellaneous experience in the field of analytics together with the understanding of the best use of data sets should be recruited to add value to the research data.
7. **Legal challenges:** Mapping and dealing with legal and ethical issues at national, transnational and European level is very important and therefore it is really critical to set up a mechanism to observe that all relevant regulations are being followed.

3. Governance structure of existing European Research Infrastructures on Transport Research

3.1. ESFRI – European Strategy Forum on Research Infrastructures

The European Strategy Forum on Research Infrastructures (ESFRI) is a strategic tool that aims at supporting and benchmarking the quality and activities of European scientists under multilateral initiatives on RI, supporting policy-making in European infrastructure research, by delivering concrete advice for RI in Europe. Therefore, it supports the development of a common vision and strategy on RI in Europe[1].

Regarding the ESFRI governance structure, the key actors are the: Chair, Members, Executive Board and Executive Secretariat.

ESFRI members are senior science policy-making experts from the Member States, nominated by their Minister, having policy-making influence in their countries. ESFRI Chair is appointed among the ESFRI delegates. The Executive Board is composed by the Chair and a number of Delegates selected by consensus. The ESFRI Secretariat comes from by the European Commission to assist the operation of the Forum.

Following, there are three categories of Working Groups in ESFRI, each divided to a number of sub-working groups:

1. **The Strategy Working Group** (relevant sub-working groups: 1.1 Energy, 1.2 Health and Food, 1.3 Environment, 1.4 Social and Cultural Innovation, 1.5 Physical Sciences and Engineering, 1.6 Data, Computing and Digital Research Infrastructures)
2. **The Implementation Group** (relevant sub-working group: 2.1 Implementation) and
3. **The Ad-Hoc Working Group** (relevant sub-working groups: 3.1 Innovation, 3.2 e-Infrastructures, 3.3 Long-term Sustainability, 3.4 Neutron Landscape, 3.5 Monitoring).

3.2. DETRA – Developing the European Transport Research Alliance

The project 'Developing the European Transport Research Alliance (DETRA)'aimed at strengthening the European Research Area (ERA) in transport addressing climate change, energy, water and food, public health, ageing societies and globalization challenges.

In terms of the DETRA project, an online catalogue was developed, with more than 340 transport-related RIs, including both hard (physical) and soft (libraries, databases, models) RIs. Regarding transport modes, this catalogue focuses on surface transport modes but includes as well waterborne and air transport.

[1] *www.esfri.eu*

Project recommendations highlighted the need for world-class RIs investment, cooperation between countries and common databases and RIs along with cooperation of highly qualified researchers and experts. The need to establish an open research catalogue for transport infrastructure research was also underlined.

To ensure cooperation and knowledge sharing among all involved stakeholders and parties, and at the same time to properly disseminate research results, DETRA partners underlined the need to ensure international cooperation and support their members in order to increase their efficiency.

Considering both internal and external communication strategies and following existing approaches for knowledge sharing, DETRA partners concluded on three axis for optimal knowledge sharing: 1. Determination of the target audiences and tailoring knowledge sharing approach to meet their preferences, 2. Definition of the type and the way to present the "message" and 3. Choosing proper tools to communicate it.

A Stakeholders Forum was organized in terms of the project to define ways on how to properly share knowledge with external stakeholders, concluding to a list of recommendations dealing with: incentives creation, common databases development, rewarding members for supporting a knowledge-sharing approach, removing current obstacles and setting up common tools for knowledge sharing among key European Transport Research organizations.

3.3. EUTRAIN – European Transport Research Area International Cooperation Activities

The European Transport Research Area International Cooperation Activities (EUTRAIN) Study, focused on the transport RIs and potential for scientific collaboration in USA, Japan, Tunisia, Egypt, Ukraine, China, Russia, India, Australia and South Africa. Again, the limited data availability of RIs data was highlighted among the main findings of the study.

High quality RI was considered as a source of creativity and innovation, that could strongly support scientific collaboration, raise quality of research results and saving money, offering researchers an appropriate environment to exchange and share knowledge and lift their results and findings to the next level. Interconnected research infrastructure being accessible for all researchers were identified among the Grand Challenges of the study.

3.4. Findings towards developing a common strategy on Research Infrastructure

Based on the brief review of existing European Research Infrastructures (ESFRI, DETRA and EUTRAIN), high quality interconnected RI is required to ensure scientific collaboration. Therefore, relevant RIs investments should be made at national and European level, to establish cooperation between counties, organizations and researchers. Common databases should be built under a shared and open approach.

To underline the need of a common strategy on RI in Europe and at the same time to identify current conditions and needs on the use of open data, software and infrastructures in the transport domain, BE OPEN partners conducted a survey, collecting feedback from 240 organizations and 51 research institutes from the transport sector [2].

Findings from this survey proved that most of the participant organizations/institutes have available open research infrastructures (laboratories, computing systems, databases and models), while 57% of them share their infrastructures with other parties, both in terms of common research activities/projects and networking activities. One of the important findings from this survey was that 74% of them also use infrastructure from other organizations, proving that, although the majority of them host their own infrastructure, they also need additional types of infrastructures to operate properly. This use of other institutes infrastructure is a common way of operation in the transportation sector (for the transport planning sector the percentage is 85 % and for the technological transport research is 73 %).

Concluding, the need to establish an open research catalogue for transport infrastructure research seems crucial.

4. TOPOS Governance scheme

4.1. Framework for common understanding of Open Science in the Transport Research

Based on the identified challenges (presented in subchapter 2.2), and based on the Deliverables D1.2 and D2.4, the proposed framework of common understanding of Open Science in the transport research addresses seven topics:

1. Policy: concerns the legal/regulatory framework, requiring the active involvement of policy makers and public authorities, affecting transport and research networks and actors and ensuring transparency, which is a key feature of Open Science.

2. Guidelines: Explicit and well-defined guidelines for data and metadata harmonization are required to ensure interoperability of datasets. Guidelines should cover description of data generation and processed measures used, performance indicators, time and location segments and associated values, storage/usage and other requirements (i.e. ethical, funding), quality aspects etc.

3. Data protection and security: Clear data protection rules and security and cyber-security protocols, in line with legal/frameworks, for both sensitive (personal and proprietary) and non-sensitive data, are necessary to build trust and encourage stakeholders to use TOPOS.

4. Training: Introducing proper training and educational programs for open science data handling and usage is necessary in order for all involved parties to be qualified with the necessary skills and knowledge.

5. Support and research services: to provide support to Open Science users the implementation of the Roadmap for the European Science Cloud is critical, supporting transport operators and actors enhance their cooperation and interoperability among their data repositories.

6. Financial support: To benefit from the large datasets that require high financial resources, the datasets should be made available for data re-use. Taking advantage of research funding agencies that implement mechanisms and requirements that need to be complied with so that one may receive funding for research and bringing ideas faster to the market, having lower development costs, may significantly support the financial approach of TOPOS.

7. **Dissemination of Open Science in transport research:** Bringing different stakeholders from different modes of transport together in the maximum possible extent is the main dissemination target. A detailed and well-established dissemination plan should be introduced and followed to properly disseminate TOPOS to the maximum possible audience of interested parties/individuals.

4.2. Introduction to TOPOS Governance scheme

Considering the common understanding framework and the EOSC Governance Scheme, TOPOS Governance Scheme has been developed towards addressing transport research key actors, thematic groups, competence areas, external stakeholders and the existing framework of Open Science in Transport Research (Deliverable 1.2) in order to cover **development** and **operation** aspects.

Focusing on creating a long-term sustainable transport research infrastructure in Europe, TOPOS has adapted to a flexible governance model, which is able to support representatively, proportionality, accountability, inclusiveness and transparency of operation and services offered.

TOPOS Governance scheme will focus on the following axes:

- Data culture and management
- Services architecture and deployment
- Funding opportunities
- Aspects of EOSC Governance scheme
- Legal issues

TOPOS governance will follow as well the European Strategy Forum on Research Infrastructures (ESFRI) having ESFRI Forum involved in its stakeholders. The proposed Governance Scheme will adopt the European Interoperability Framework considering the four dimensions for interoperability in legal, organizational, semantic and technical issues.

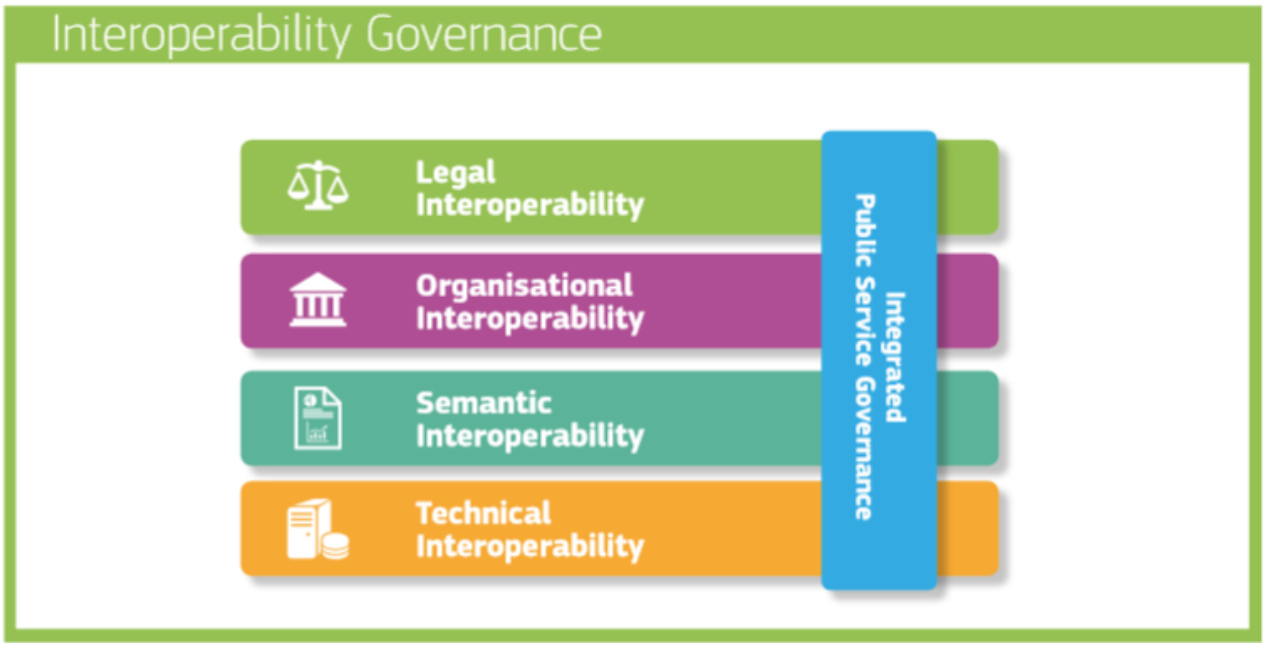

Figure 1 Interoperability model Source: EC (2017) New European Interoperability Framework

4.3. Data Culture & Management

The European Open Science Cloud (EOSC) aims at giving Europe a global lead in scientific data infrastructures, to ensure that European scientists reap the full benefits of data-driven science. Practically, TOPOS will follow the same approach in transport-oriented research, following a common culture of data stewardship, in order for transport research data to be available during the research but as well as being available to interested parties. Cultural change in that view, deals with enabling long-term reuse of data for science and innovation purposes. For sure, proper Data Management should be defined and followed. Therefore, Data Management Plans (DMPs) will be developed, obligating all research activities that deal with data collection to conform with DMPs rules.

TOPOS data will follow the FAIR approach, being Findable, Accessible, Interoperable and Reusable. Therefore, design and implementation of the TOPOS Governance will be built upon FAIR principles for data collection, handling, storage and usage, under advanced computing, federated identity provisioning, authentication and authorization. Inclusive stakeholder participation is needed (e.g. researchers representing different transport scientific disciplines, EU Member States and the European Commission) in order to set up and apply FAIR principles. Stakeholders will therefore be engaged following an engagement strategy that will be developed or based on specific arrangements/frameworks that will be developed among involved parties (institutions, countries etc.).

4.4. Services architecture & deployment

TOPOS services architecture and deployment will be developed on the basis of EOSC, considering a list of data infrastructure commons and serving at the same time the needs of transport scientists. Considering existing resources across national data centers and European transport research infrastructures, service provision will follow a local-to-central approach (i.e. local nodes will be connected to European nodes). Users will support defining main common functionalities needed by their community, based on a continuous dialogue that will be offered, building trust and agreements among all involved parties (users, service providers etc.).

TOPOS architecture will be developed considering a three level thematic approach, based on: a) thematic areas for transport research (i.e. transport infrastructure resilience, transportation planning/modelling, transport economics etc.), b)transportation modes (i.e. road, rail, air, water), and c) competence areas (as defined in D1.1) or other thematic areas decided by the transport research key stakeholders.

TOPOS hub system will follow the Service Integration and Management System (SIAM), offering advanced computation and data services.

4.5. Funding opportunities

TOPOS environment for the scientific community will avail a number of funding opportunities. These opportunities will follow the "co-creation" approach and will deal with funding of transportation related studies, data usage and model development, meta-analyses, use cases development and research activities that support TOPOS Working Groups interests and TOPOS in practice.

Mixed funding schemes will be explored to cover needs for transport research based on TOPOS data, including post-EU funding opportunities and other sources of funds.

4.6. Aspects of EOSC Governance scheme

EOSC includes more than 300 data centers in 50 countries, and therefore its structure guarantees great support from the contributions of these centers to the definition of its policies, ensuring interoperability among suppliers from 50 counties.

Based on the European Commission Staff Working Document Implementation Roadmap for the European Open Science Cloud, EOSC development is governed by three bodies:

1. **EOSC Governance Board:** Consists of representatives from the Member States and the Commission that supervise the EOSC implementation ensuring its effective operation and management.
2. **EOSC Executive Board:** Consists of representatives from research and e-infrastructures communities with the aim to ensure implementation and accountability of the EOSC.
3. **EOSC Stakeholder Forum:** Consists of representatives from a wider range of actors that provide their opinions, input and recommendations in order to further support EOSC mechanisms.

This governance structure is comprised of representatives from across the user and provider community as well as representatives from EU Member States and the European Commission.

Additionally, there are 6 Working Groups (architecture, FAIR, landscape, RoP, skills and training and sustainability) involved in the EOSC Governance structure aiming to ensure a community-sourced approach to current EOSC challenges.

EOSC Governance bodies interact with each other, as presented in Figure 2.

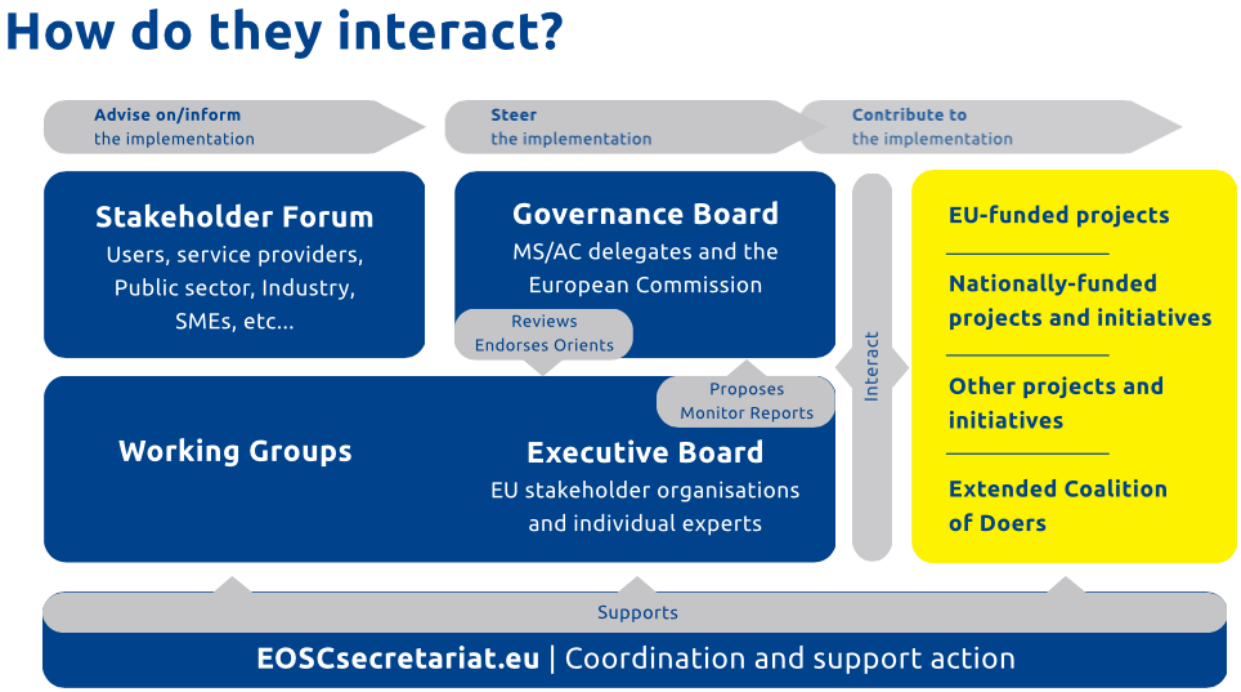

Figure 2 EOSC governance bodies interactions [2]

4.7. Legal issues

TOPOS should respect all legal and ethical issues coming from both its operation and data handling aspects and legal/ethical regulations that apply at national, regional, and European level. Data safety and security issues, handling of sensitive data, ethical issues, access and storage protocols, security and cyber-security requirements, should all be addressed. TOPOS should be in line with all relevant regulations, requirements and protocols, ensuring a continued monitoring and following all legal updates. Legal issues are very critical for TOPOS operation and services and all related risks will be carefully and timely monitored and eliminated with proper mitigation strategies.

4.8. Key elements of TOPOS Governance scheme and relevant recommendations

Key elements of TOPOS governance scheme follow the core element of EOSC governance and a list of additional elements that cover existing gaps and take advantage of existing opportunities to further develop a coherent and complete and at the same time flexible and able to adopt in future challenges governance framework. Therefore, key elements for TOPOS Governance scheme and relevant recommendations are presented below.

TOPOS Governance is established under 4 steps:

A. TOPOS Governance model development, inspired by existing models, being at the same time in line with TOPOS ecosystem and involving all transport-related actors and influencers, towards its sustainable vision.

[2] *Source: https://www.eoscsecretariat.eu/eosc-governance*

B. EC having the support of TOPOS pilots, prepares initial documents to be further elaborated by the Governance framework in its initial phase, such as the draft Rules for Participation and draft shared resources.
C. TOPOS Governance framework is formally established as an agreement of the Member States, adopting the initial strategy and work plan. TOPOS Board is set up and following the Executive Board and the Working Groups are also being established. TOPOS governance further elaborates on ECs initial plans and work.
D. TOPOS financing goals and orientation are being planned, based on funding mechanisms between MS and EC, leading to scale economies that ensure sustainability of shared data, services and operations.

TOPOS Governance Scheme key elements include:

TOPOS Governance model: a strong and flexible model to support sustainable transportation research infrastructure in Europe, following the rules of representativity, proportionality, inclusiveness, transparency, accountability and trust.

TOPOS Governance framework: organized under three layers: institutional, operational and advisory.

TOPOS Executive Board (EB) and Coordination framework: with monitoring and advisory role the Executive Board will coordinate stakeholders and ensure proper implementation of programming, business model and financing related issues. The Coordination framework will set the measures of readiness in delivering the EOSC main functionalities, supporting EB actions.

TOPOS funding and sustainability: Co-funding mechanisms with mixed revenue streams will be established supporting long-term capacity and sustainability for transport research data.

TOPOS continuous development covering global research achievements: TOPOS will reach global partners and top researchers to cover transport research advancements globally by top experts, increasing its value of open transport research data, widening its network and nodes, based on the Stakeholder forum support.

Considering these elements along with the analysis presented in this chapter, a list of TOPOS governance-related recommendations is being presented below.

Data Related Recommendations:

1. Establishment of a FAIR Data Action Plan
2. Adaptation of the European Interoperability Framework
3. Development of a data standards catalogue
4. Conformation with all legal frameworks that apply for data usability and reusability, by screening existing legislations and take advantage of opportunities for data harmonization on

applicable legal frameworks (e.g. GDPR, copyright-related laws, etc.), which will be addressed in WP4 deliverables
5. Design of TOPOS Data Action Plan for all TOPOS data, data-related algorithms and tools, protocols, etc., including data guidelines and recommendations
6. Consultation with relevant stakeholders and development of a Data oriented Expert Group
7. Development of a certification scheme for FAIR transport data infrastructures
8. Develop and communicate incentives and rewards for data and resources sharing

TOPOS Board (of Member States, Associated countries & EC) Related Recommendations:

1. Development of the TOPOS roadmap and strategies, setting specific criteria per action
2. Monitoring TOPOS achievements, considering a list of KPIs (defined in future Deliverable 5.2)
3. Coordination and Cooperation with relevant initiatives and actors
4. Establishment of a top expert committee for searching suitable candidates for TOPOS Executive Board
5. Effective supervision of the implementation of TOPOS
6. Support long term sustainability actions and decisions

TOPOS Stakeholders Forum Related Recommendations:

1. Be open to all stakeholders involved in transport research data management
2. Support and advice the TOPOS Executive Board through active involvement and regular meetings

TOPOS Executive Board (European stakeholder organizations from Europe and beyond), Stakeholder Forum and Working Groups related recommendations:

1. Screening and mapping needs per thematic area, transport mode, transport-related challenges
2. Connect with relevant initiatives and collaborate with them
3. Identification of risks and design of mitigation actions
4. Assistance on TOPOS coordination and advice on strategies and implementation
5. Meeting goals, being proactive and effective

TOPOS Communications & Engagement Related Recommendations:

1. Development of a sound and consistent communication strategy targeting a wide audience in Europe and beyond
2. Taking advantage of existing communications channels to reach scale
3. Development of the TOPOS brand
4. Engage stakeholders to continuously support and disseminate TOPOS Communication strategies, being in line with them and properly advising on updates/adjustments needed.

5.TOPOS Membership Scheme

It has been decided that two main groups of users; **Individuals researchers and Organisations** should have different approach on the Observatory functionality according to their different needs. Therefore, the TOPOS Observatory for Organisations has been based on the OpenAIRE platform in contrast to the TOPOS Observatory for Individuals which has been based on the Scipedia platform **Error! Reference source not found.Error! Reference source not found.**[444**Error! Reference source not found.Error! Reference source not found.**].
The membership schemes of the European Open Science Cloud (EOSC) has been taken under consideration on the conclusion of the TOPOS Membership Scheme. Annex A contains the EOSC final Membership Scheme together with a short description of each entity.

5.1 Categories of Members

Research has been undertaken in BEOPEN Deliverable 2.4, on the Users area of Open Science in European Transport Research. The research concluded to two main user groups, the Organisations and the Individuals groups.

The Organisations group represents the Industry, the Research Community and the Society as can be seen in Figure 3.

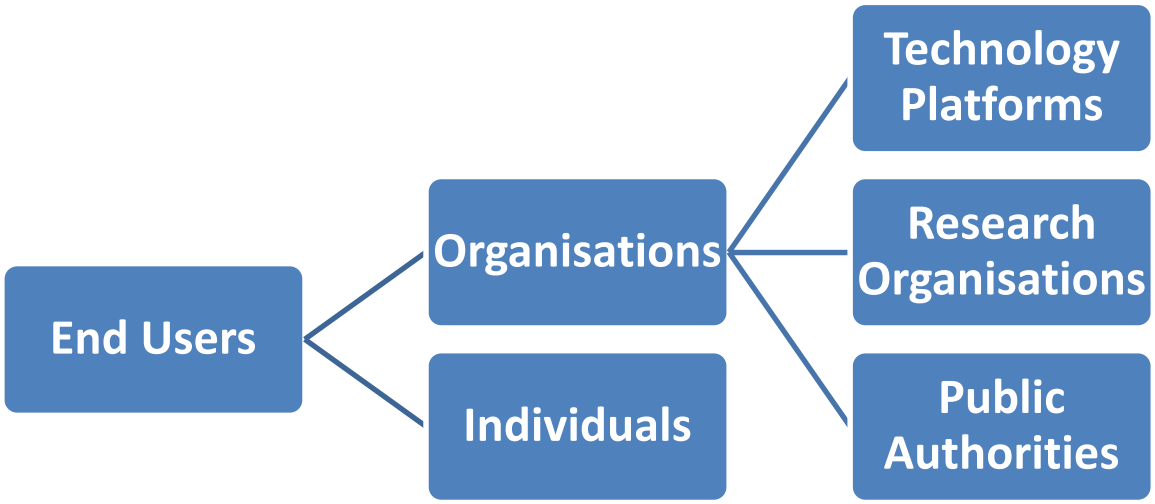

Figure 3 End Users Categories

5.1.1. Categories of Members in TOPOS Observatory - Organisations

The TOPOS Observatory for Organisations is realized with an Open Research Gateway for Transport Research based on the content available in the OpenAIRE Research Graph. It will serve the three categories of Organisations identified in D2.4:

- Technology platforms like institutional, thematic repositories, data archives and disciplinary web sites
- Research Organisations, public and private, like research centers, universities, small and medium enterprises that participate in research activities, and research projects.
- Public authorities like national and international research funding organisations.

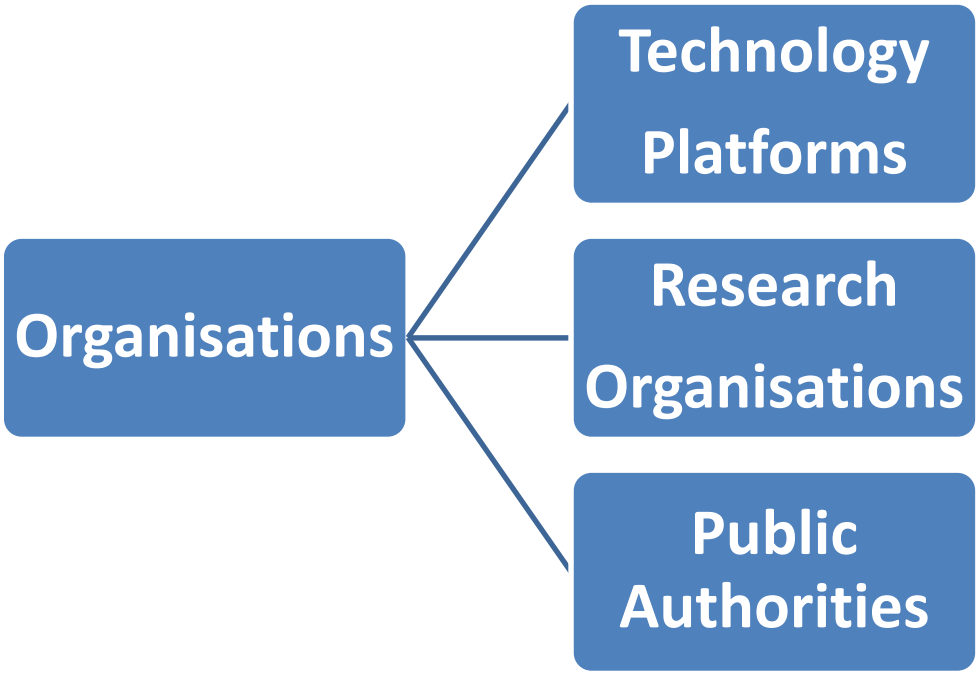

Figure 4 Organisations end users

5.1.2. Categories of Members in TOPOS Observatory - Individuals

Scipedia, as the platform of the Individual TOPOS Observatory, is an open professional network where professors, students, scientists, researchers and professionals in science and technology can share and access knowledge, expertise and the outcome of their work.

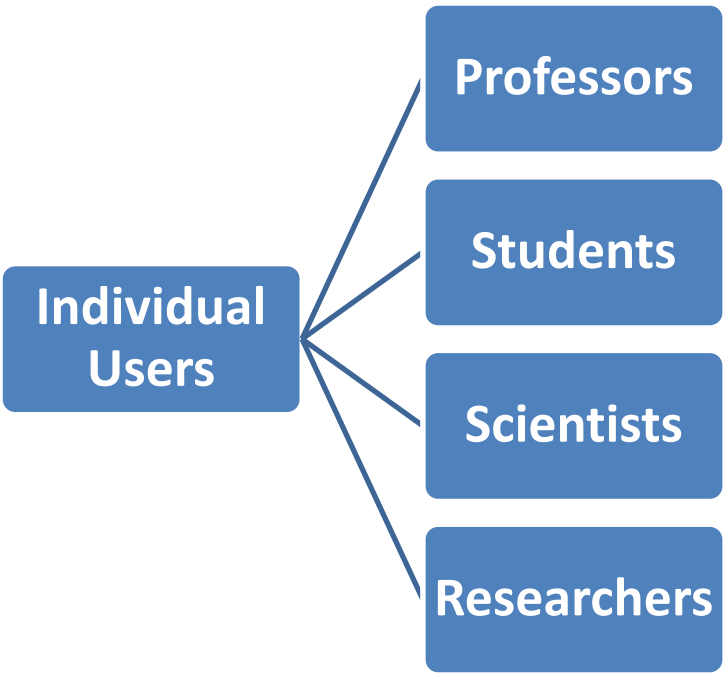

Figure 5 Individual end users

5.1.3. Categories of Members in TOPOS Forum - Organisations and Individuals

The content of TOPOS Forum will follow the membership scheme of the TOPOS Observatory. This means that the content of the forum will be divided in two main areas – topics. These are the Organisations' topic and the Individuals topic under which the corresponding end users will post appropriate content.

The TOPOS Forum content management membership scheme (administrator, moderators, etc.) is out of the scope of this deliverable and will be covered in Deliverable D3.2 – TOPOS Development.

5.2. Roles of Members

The roles of the members should be clear to ensure a positive contribution to the research communities (Individuals or Organisations). Research has been undertaken and the EOSC results have been taken under consideration on the members' roles determination. Annex B contains the member roles that have concluded in the EOCS project.

5.2.1. Roles of Members - Organisations

The TOPOS Observatory for organisations offers a set of tools to support the implementation and monitoring of Open Science practices in the domain of transport research. The access to the observatory does not require login, although some of the functionality is available only to logged-in users. The following table lists the available functionality.

Function category	Function description	Target users	Requires login	Comments
Explore	Search and discover research products of any type in the field of transport research	Research organizations Public authorities	No	
Deposit	Find the repositories and Zenodo communities used by researchers in the field of transport research	Research organizations	No	
Open Science Monitor	View statistics on Open Science practices such as Open Access publications and datasets, links between research outputs	Research organizations Public Authorities	No	Curators of the Transport Research Gateway can decide which charts and stats are publicly visible
Report	Get the list of research outcomes funded by a given project	Research organizations Public authorities	No	Only projects integrated in OpenAIRE are supported. Currently, projects funded by 20 national and international funders, worldwide
Report	Get the list of research outcomes of an organization	Research organizations	No	Go to the landing page of an organization and download the list of its research outputs (all or by funder).
Check publication impact	See the publications impact thanks to the integration with BIP!Finder[3]	Research organizations Public authorities	No	
Develop	Use the OpenAIRE APIs or the dumps of the OpenAIRE Research Graph to build domain-specific services	Technology platforms	No	Access to API on the BETA infrastructure has limited access. Unlimited access is granted on the production API
Link	Add missing research products in the TOPOS Observatory	Research organizations Public authorities Technology platforms	Yes	Add missing products by looking for them in OpenAIRE, Crossref, Datacite, and ORCID. Services can use the Zenodo API to automatically deposit

[3] https://bip.imis.athena-innovation.gr/

				research products, get a DOI, and let the corresponding metadata transparently land into the TOPOS
Link	Link a research result to its funding project	Research organizations Public authorities Technology platforms	Yes	Update a record in OpenAIRE with a link to a project via the Open Research Gateway (manually) or Zenodo (programmatically)
Link	Link a research result to a related research product	Research organizations Technology platforms	Yes	Update a record in OpenAIRE with a link to another research result via the Open Research Gateway (manually) or Zenodo (programmatically)
Provide	Provide metadata about research projects for inclusion in OpenAIRE	Public authorities	No	Contact the OpenAIRE team to include research projects in the OpenAIRE Research Graph and the TOPOS
Provide	Provide metadata about research products	Technology platforms	Yes	Login to the OpenAIRE Content Provider Dashboard and export metadata according to the OpenAIRE guidelines for their inclusion into the OpenAIRE Research graph and the TOPOS

Table 1 List of available Organisations' functionality

5.2.2. Roles of Members - Individuals

Scipedia is focused on individual users from the science and technology areas that are looking for sharing information. These users can have different roles and permissions depending on their status:

Unregistered (not logged in) or Anonymous users

An unlogged or anonymous (profile pending verification) user can browse Scipedia contents and read all Scipedia publications and discussion pages.

Guest users

A guest user is a verified user registered with a personal email (e.g. "gmail.com"). Guest users can still browse Scipedia contents, read all Scipedia publications and discussion pages, and add comments on published papers.

Registered users

Registered users are entitled to use the main features of the platform, including creating and publishing documents and datasets, asking questions, answering, reviewing articles and suggesting edits, etc.

Function category	Function description	Target users	Requires login	Comments
Explore	Search and discover research products of any type in the field of transport research	Professors Students Scientist Researchers	No	
Discuss	Add comments on published documents and datasets	Professors Students Scientist Researchers	Yes	
Provide	Provide metadata or contents	Professors Students Scientist Researchers	Yes	Including creating collections, documents, asking questions, answering, reviewing articles and suggesting edits, etc.
Provide	Provide metadata or datasets	Professors Students Scientist Researchers	Yes	Including creating collections, metadata and datasets links
Provide	Provide metadata and contents about research projects for inclusion in TOPOS	Professors Students Scientist Researchers	Professors Students Scientist Researchers	Contact the Scipedia team to create a project profile and include it in the TOPOS microsite
Link	Link a research result to its funding project	Professors Students Scientist Researchers	Yes	Login to request project profile curator to link a research result to its funding project

Table 2 List of available Individuals functionality

5.3. Policy of Use

A website which interacts with its users should include a “terms and conditions” page where it describes the data processing methodology and the users’ privacy. These terms and conditions are

not open to negotiation. For this reason, the EU has set rules to protect users against unfair terms and trading conditions.

As it has already been mentioned, the TOPOS Observatory has been divided in two main areas, the Organisations and the Individuals area. Therefore, there are rules that govern the interaction of the Organisations with the TOPOS Observatory and other that govern the interaction of the Individuals with the TOPOS Observatory.

5.3.1. Policy of Use - Organisations

OpenAIRE is an open service infrastructure whose assets may vary during its lifetime in order to add/update functionalities or add/provide content. Examples are the additions of re3data, OpenDOAR, DOAJ or funder databases to collect content or the interoperation with SYGMA Cordis Portal and other databases and registries to deliver content. If such dynamicity is one of the most powerful features of the OpenAIRE infrastructure, to achieve its full potential, sustainability, and in respect of European legislation, it has to be constrained by precise rules and an established vision.

The OpenAIRE Infrastructure Policy Board (IPB) is a body in charge of establishing the policies ruling the infrastructure ecosystem over time in terms of: (i) terms required by extra services to be included in the infrastructure ecosystem (e.g. QoS), (ii) terms required by new content providers to be aggregated in the information space (e.g. OpenAIRE guidelines, SLAs), (iii) OpenAIRE content acquisition policies defining the range/typology of content that will be included in the information space and relative Terms of Agreement, (iv) Service Level Agreements, and (iv) the IPR issues related with reuse of OpenAIRE data and services (e.g. license, “credit and citation policy”).

The OpenAIRE policy has been described in D9.2 – Infrastructure Policies of the project. It includes compliance to GDPR, citation policy, acceptable use policies, infrastructure participation policies and service level agreements.

A copy of the Acceptable Use Policy can be found in Annex C.

5.3.2. Policy of Use - Individuals

Scipedia is a means of dissemination of scientific and technical knowledge that incorporates elements of scientific journals. Scipedia guarantees immediate (without embargo) free access to the published documents.

Scipedia is free content that anyone can read (i.e. no fees are required to read the published articles), use and distribute in accordance with the content license. Scipedia users must respect copyright laws, and never plagiarize from sources. Borrowing non-free media is sometimes allowed as fair use.

Scipedia users should treat each other with respect and civility. Users should act in good faith and assume good faith on the part of others. Should conflicts arise, they should be discussed calmly on the appropriate forum pages.

Scipedia will respect the standard principles of transparency and good practice for scientific publications.

More information about Scipedia policies and guidelines [5] can be found in Annex D.

6. Conclusions and Discussion

This deliverable comes to address TOPOS Governance and Membership schemes, including a list of recommendations to be adopted during the TOPOS development phase. Being the first deliverable of WP3 “Open Access in Transport Observatory and Forum”, it provides input to the D3.2 “TOPOS development”.

Existing barriers in Open Science in Transport Research have been addressed with a focus to align existing FAIR data production in transport research with EOSC. In this context, TOPOS governance and membership schemes were proposed and relevant recommendations have been presented. Following these recommendations, TOPOS will ensure its development meets its goals and objectives towards sustainability. TOPOS stakeholders’ involvement and membership scheme have been also presented in terms of this deliverable, guiding next actions and the development phase.

TOPOS operation requires a clear framework for system specifications implementation, standards and processes to be followed, interfaces towards interoperability and proper data and infrastructure sharing across transport providers and involved parties. All these aspects, actions and frameworks have been discussed in terms of the current deliverable, providing insights and guidance for the initiatives’ next steps and actions.

To properly deal with all these aspects, the TOPOS education and training strategy should be established and followed, to ensure proper use of the observatory and its services.

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ANNEXES

Annex A

The European Open Science Cloud (EOSC) can be seen as a catalyst to ensure the delivery of a membership scheme that will comply with the BEOPEN project needs.

According to the D2.2 – Draft Governance Framework of the EOSCpilot project, a range of different end users has been established. These end users would participate in and would benefit from EOSC or provide benefits to EOSC. The key end users identified with the EOSC community can be seen below.

Researchers	The European Open Science Cloud (EOSC) will offer Europe's researchers and science and technology professionals a virtual environment to store, share and reuse the large volumes of information generated by the big data revolution. EOSC, as a functional embodiment of the European Cloud Initiative, will support data-driven innovation and contribute to the creation of a Digital Single Market in Europe. Science and industry will obviously benefit from these developments.
Service Providers	Service Providers are the heart of EOSC's value proposition Service Providers functioning nationally or at a larger scale, with commercial, non-profit or public status, can have 2 roles in the EOSC: builders or providers.
Research Producing Organisations, Academic Institutions and Research Libraries	Research producing organisations, Academic Institutions and Research Libraries will be the core users of the European Open Science Cloud. Research libraries, archives, academic institutions, university departments and, generally, organisations that are significantly involved in promoting, supporting and enabling research-production activities, play an essential role in the research and scholarship ecosystem.
Learned Societies, Research Communities, Scientific and Professional Associations	Learned societies, research communities, scientific and professional associations are key allies to build, use and promote the EOSC.
Enterprise	Enterprises relate to the EOSC in multiple ways. EOSC's target group is categorized into a wide range of categories such as Small

	and Medium sized (SMEs), large enterprises, dynamic European start-ups and entrepreneurs-to-be, researchers, developers, deployers, providers, distributors, etc. Additionally, many sectors can benefit or contribute to the EOSC, for example healthcare, transportation, energy, manufacturing, education, analytics, etc.
Research Infrastructures	The notion of Research Infrastructures refers both to traditional large physical installations, as well as to distributed facilities which "include networked resources and skill / capacity building initiatives. These resources use advances in information and communications technology and the big data revolution to underpin new collaborative methods of research". Research infrastructures may be based at a single location, distributed across several sites and organisations, or provided via online platforms. Europe hosts several large-scale research infrastructures operating across national boundaries. Research Infrastructures are the base on which the future federated EOSC will be built. They provide several types of services to the EOSC, including data services and expertise. Research infrastructures are often very experienced in providing cloud services to researchers, and as such, are key players in the specification and the set-up of the EOSC. Close cooperation with other research infrastructures and e-Infrastructures within the EOSC will increase the capability of research infrastructures to combine and integrate data and resources in a common environment.
E-infrastructures, VREs and other pertinent H2020 projects	E-Infrastructures, VREs and other H2020 projects are key building blocks of the European Open Science Cloud The EC Digital Single Market refers to E-Infrastructures as ways of addressing needs of European researchers for digital services in terms of networking, computing and data management. They foster the emergence of Open Science and support the circulation of knowledge in Europe online and therefore constitute an essential building block for the European Research Area. A Virtual Research Environment (VRE) is a community of practice, an organisation and a bundle of services which supports researchers by providing access to shared documents tools and resources they need during a research project. Some examples of VREs are EVER-EST, a VRE for research on Earth-science, and VRE4EIC, supporting a multi-disciplinary approach to research on climate change and energy sustainability.
General Public	EOSC project will create a cross-border and multi-disciplinary open innovation environment with the aim of delivering its benefits to the final citizen as well. Democratization of science and open

	access to scientific data are indirectly providing their beneficial results to civil society. The activities and achievements of the EOSC and open science initiatives need to be linked with the everyday challenges, that citizens are sensitive to, such as public investments, new services and new job opportunities.
National, Regional or Local Government Agencies	Public authorities and government agencies, specifically in their capacity as organisations performing monitoring activities and using research, shall be able to fully exploit the possibilities around Big Data as EOSC will allow them to move, share and reuse data seamlessly across European borders, among institutions and analytical facilities and between different research and data disciplines.
Research Funding Bodies	Research funding bodies are key stakeholders for the development of the EOSC. In recognition of this, they were among the first to be involved in extensive discussions with the European Commission's High-Level Expert Group in 2016 with a view to contribute to the initial recommendations on the realization of the EOSC. Several bodies at the European level make research grants available to researchers regardless of their nationality or field of research. This includes programmes supported by the EU under the Research and Innovation Framework programmes – including for example the direct actions of the Joint Research Centre, or the Marie Skłodowska-Curie Actions or the actions managed by the European Research Council. Other European funding programmes are managed by the European Science Foundation, the European University Institute, the European Association of National Metrology Institutes (EURAMET), etc. Many European countries have one or more national agencies responsible for research, science and/or technology development. The policies and mandates of these agencies will inevitably be different from country to country, but they are essential drivers of Open Science and it is vital for the EOSC to engage in a common platform with these stakeholders.

Table 1: EOSC Stakeholders

Adopted from EOSCpilot D2.2 - Draft GovernanceFramework

Annex B

EOSC Primary Stakeholder Roles

Primary Role	Description	Typical Stakeholders
Provider	Provides services, data or other resources (e.g. scientific instruments, training) into EOSC	e-Infrastructures Service Providers Enterprise Academic Institutions and Research Libraries Research Infrastructures Outputs from VRE, and Other H2020 Projects
Consumer	Will make use of services, data, or other resources from EOSC	Learned Societies, Research Communities, Scientific and Professional Associations Research Infrastructures Research Producing Organisation e-Infrastructures, VRE, and Other H2020 Projects Academic Institutions and Research Libraries Enterprise General Public
Decision-makers	Will be involved in the strategic direction, compliance and funding of EOSC	National, Regional or Local Government Agencies Research Funding Bodies

EOSC Supplementary Stakeholder Roles

Supplementary Role	Description	Relationship to Primary Roles
Intermediary	Many stakeholders (including e-infrastructures, research infrastructures, VREs etc.) will consume services from some providers to provide value added services to other consumers.	Member of both Provider and Consumer roles.
Funder	Provides funding for research on a local, national or international level.	Sub-role within Decision-makers.
Policy-makers	Regulates policy at a local, national or regional level.	Sub-role within Decision-makers.

Annex C

Acceptable Use Policy

GDPR

OpenAIRE services collect personal information about the users and content providers. The collected information includes, but not exclusively, names, organizations, country of origins or residence, telephone, contact information like email, social site contacts and website. Log information, including information provided by Users or Services via the applications/APIs running on the Site shall be processed for administrative, operational, accounting, monitoring and security purposes only and according to the GDPR. OpenAIRE undertakes to process personal data according to the principles of GDPR (article 5 of the GDPR) and ensure that users and content providers may exercise their rights.

According to the Ethical Report produced by the OpenAIRE Ethics advisor Gloria Origgi, OpenAIRE shall:

- **Guarantee the protection of privacy for all the stakeholders** (researchers, participants to experiments, general audience) in compliance with the GDPR guidelines: "Whereas they must, whatever the nationality or residence of natural persons, respect their fundamental rights and freedoms, notably the right to privacy, and contribute to economic and social progress, trade expansion and the well-being of individuals" (PRIVACY/CONFIDENTIALITY)
- **Protect the rights of data providers** by complying with the evolution of data copyright regulations in Europe. (DATA GOVERNANCE)

As highlighted in the Ethic Report, as a research organization, OpenAIRE may avoid many restrictions on processing data. According to article 89 of the GDPR: "Where personal data are processed for scientific or historical research purposes or statistical purposes, Union or Member State law may provide for derogations". However, the following elements of GDPR impact on OpenAIRE policies and must be addressed by the OpenAIRE infrastructure: right to be forgotten (opt-out options) and anonymity provisions.

For the use of the OpenAIRE Usage Statistics Service, repository managers must install a plugin that intercepts usage data (e.g. download, view). The plugin features embedded anonymization according to the GDPR.

At any time, the user can decide to unregister his/her data. All user's requests are immediately accepted and operated by the OpenAIRE Infrastructure. The option to delete the account is clearly visible in the OpenAIRE portal in the login form and, after login, in the "Contact Info" page of the User.
Zenodo-specific policies are published at http://about.zenodo.org/policies/.

Infrastructure Acceptable Use Policy

By registering in the OpenAIRE Infrastructure any User shall be deemed to accept these conditions of use:

- The User shall not use the OpenAIRE Infrastructure for any unlawful purpose and not (attempt to) breach or circumvent any administrative or security controls.
- The User shall respect intellectual property and confidentiality agreements.
- The User shall protect its access credentials (e.g. private keys or passwords).

- The User shall immediately report any known or suspected security breach or misuse of the OpenAIRE Infrastructure or access credentials to the incident reporting locations specified by the OpenAIRE Infrastructure.
- Use of the OpenAIRE Infrastructure is at User's risk. There is no guarantee that the OpenAIRE Infrastructure will be available at any time or that it will suit any purpose.
- Logged information is used for administrative, operational, accounting, monitoring and security purposes only.
- Resource Providers are entitled to regulate, suspend or terminate the User access, within their domain of authority, and the User shall immediately comply with their instructions.
- The User is liable for the consequences of violating any of these conditions of use.

Users may submit two kinds of information to the OpenAIRE infrastructure: *personal sign in information or claims*, intended as assertions of associations between research products (publications, datasets, software, other products) and between research products and research projects or research communities. By submitting content to the OpenAIRE Infrastructure any authorized User shall be deemed to accept these conditions of use:

- **GDPR's opt out for OpenAIRE users:** At any time, the User can decide to unregister his/her data. All user's requests are accepted and operated by OpenAIRE Infrastructure within one business day.
- The ownership of any **intellectual property rights** is not in any way transferred to the OpenAIRE Infrastructure. In short, what belongs to a User remains exclusively of that User.
- The **User remains responsible** for any misuse of the data by other Infrastructure Users.
- The OpenAIRE Infrastructure can **reproduce, modify, and generate derivative** works from the content it stores
- The OpenAIRE Infrastructure will not otherwise move or distribute user's data for any purpose, except when required to do so by law.
- The OpenAIRE Infrastructure is not responsible for the data uploaded and hosted by the infrastructure.
- The OpenAIRE Infrastructure will not be responsible for any issue regulating intellectual property rights infringement or illegal use of User's data.
- The OpenAIRE Infrastructure will make reasonable efforts to ensure that data are persisted. In the event of hardware or software failures caused by failures to a hard drive or power supply, the OpenAIRE Infrastructure will make reasonable attempts to restore the user's data. No guarantee whatsoever is provided on the success of any User's data recovery.

Acceptable Use Policy

By accessing OpenAIRE services deployed into the OpenAIRE Infrastructure any User shall be deemed to accept these conditions of use:

- Any authorized User can use content in any circumstance and for all usage, reproduce the data, modify the data, and make derivative data based upon the original data, communicate to the public, including the right to reproduce or display the data or copies thereof to the public and perform publicly, as the case maybe, the data.

- Any authorized User cannot in any circumstance and for any usage redistribute the data or copies thereof, lend and rent the data or copies thereof, sub-license rights in the data or copies thereof, unless otherwise authorized by the OpenAIRE infrastructure.
- Metadata license is CC-BY: the metadata records returned by the services can be freely re-used by commercial and non-commercial partners under CC-BY license, hence as long as OpenAIRE is acknowledged as content provider.

- If the OpenAIRE Infrastructure reasonably believes any of the User Content violates the law, infringes or misappropriates the rights of any third party, the User of the Prohibited Content will be notified and requested that such content be removed from the OpenAIRE Services or access to it be disabled. If a User does not remove or disable access to the Prohibited Content within 2 business days of our notice, the OpenAIRE Infrastructure may remove or disable access to the Prohibited Content or suspend its access to the OpenAIRE Services.
- Users will reasonably cooperate with OpenAIRE Infrastructure to identify the source of any problem with the OpenAIRE Services that may be attributable to Users Content or any end user materials that the User control.

OpenAIRE API's

The OpenAIRE APIs provide access to a graph of interlinked metadata records and to a corpus of article PDFs. While metadata records are accessible as CC-BY, access to PDFs may only take place on request and is subject to restrictions based on the content providers.
If Users create technology that works with OpenAIRE API Services, they must comply with the current technical documentation applicable to the used OpenAIRE Services available at http://develop.openaire.eu. Any authorized User shall be deemed to the specific rate limits of the used service as specified below. Rate limits might be changed by the OpenAIRE IPB at any time. Changes will be published in the documentation page of the relative services.

Any authorized User shall be deemed to the specific rate limits of the used service as specified below. Rate limits might be changed by the OpenAIRE IPB at any time. Changes will be published in the documentation page of the relative services.

GENERIC API RATE LIMITS
For updates, please check http://develop.openaire.eu
- no more than 30 concurrent connections from single IP to any APIs
- no more than 67 concurrent requests in total

HTTP API RATE LIMITS
For updates, please check http://develop.openaire.eu/api.html
- no more than 37 concurrent requests in total (max 30 per single IP);-
- no more than 15 requests/second (in total, not per IP). If this limit is reached, requests will be delayed.

ScholeXplorer

For updates on terms of use, please check http://scholexplorer.openaire.eu/#/api
REST APIs: ScholeXplorer's REST APIs are free-to-use (no sign-up needed) by any third-party service. Note that the service limits each query to around 10,000 paged results (pages are by default of length 100 and can be navigated via resumption token). For unlimited access to the APIs please contact the service administrators.
Metadata license is CC-BY: Scholix metadata records returned by the service can be freely re-used by commercial and non-commercial partners under CC-BY license, hence as long as OpenAIRE ScholeXplorer is acknowledged as content provider.

Zenodo

Users of Zenodo shall be deemed to accept the conditions available on the Zenodo website at http://about.zenodo.org/terms/:
The Zenodo service ("Zenodo") is offered by CERN as part of its mission to make available the results of its work.
Use of Zenodo, both the uploading and downloading of data, denotes agreement with the following terms:

- Zenodo is a research data repository for the preservation and making available of research, educational and informational content. Access to Zenodo's content is open to all, for non-military purposes only.
- Content may be uploaded free of charge by those without ready access to an organized data centre.
- The uploader shall ensure that their content is suitable for open dissemination, and that it complies with these terms and applicable laws, including, but not limited to, privacy, data protection and intellectual property rights.
- All content is provided "as-is". Users of content ("Users") shall respect applicable license conditions. Download and use of content from Zenodo does not transfer any intellectual property rights in the content to the User.
- Users are exclusively responsible for their use of content, and shall hold CERN free and harmless in connection with their download and/or use.
- CERN reserves the right, without notice, at its sole discretion and without liability, (i) to alter or delete inappropriate content, and (ii) to restrict or remove User access where it considers that use of Zenodo interferes with its operations or violates these Terms of Use or applicable laws.
- Unless specified otherwise, Zenodo metadata may be freely reused under the CC0 waiver. Bulk downloading of email addresses taken from Zenodo is not allowed.
- These Terms of Use are subject to change by CERN at any time and without notice, other than through posting the updated Terms of Use on the Zenodo website.

For more, please read *D9.2 - Infrastructure Policies*
Last updated on 24 June 2020.

Annex D

Scipedia policies and guidelines

Scipedia operates on six fundamental principles:

- Scipedia is a means of dissemination of scientific and technical knowledge that incorporates elements of scientific journals. Scipedia guarantees immediate (without embargo) free access to the published documents.
- Scipedia publishing services are provided for free (i.e. no open access fees are payable by the authors).
- Scipedia is free content that anyone can read (i.e. no fees are required to read the published articles) use and distribute in accordance with the content license. Scipedia users must respect copyright laws, and never plagiarize from sources. Borrowing non-free media is sometimes allowed as fair use.
- Scipedia strives to maintain high-quality content, based on collaborative review and discussion of the published documents.
- Scipedia users should treat each other with respect and civility. Users should act in good faith, and assume good faith on the part of others. Should conflicts arise, they should be discussed calmly on the appropriate forum pages.
- Scipedia will respect the standard principles of transparency and good practice for scientific publications.

Scipedia's policies and guidelines are developed by the community to clarify these principles and describe the best way to apply them. Essentially, policies explain and describe standards that all users should normally follow, while guidelines are meant to outline best practices for following those standards in specific contexts. Policies and guidelines should always be applied using reason and common sense. Scipedia will have specific discussion fora for policies and guidelines.
Scipedia is hosted and operated by Scipedia S.L., which implements Scipedia's policies and reserves certain legal rights.

Open Access basics

Open Access (OA) refers to online research outputs that are free of all restrictions on access and free of many restrictions on use. OA is fast becoming the norm in the dissemination of research outputs.
Scipedia embraces OA as a means to fulfill its mission. Scipedia offers free content so that the published papers and other public documents are available under the Creative Commons BY-NC-SA license. This means that Scipedia content can be distributed and linked in accordance with the provisions of this license. Exceptionally, a document or publication in Scipedia may have a more restrictive OA license. Please confirm the conditions of the license in the document page before transforming, or building upon the material Scipedia must not incorporate materials that violate the rights of their authors or works with a licensing scheme incompatible with the Scipedia scheme.

No fees, no embargo period, open access

Scipedia offers an innovative platform providing free publishing and open access services to disseminate the results of the scientific and technical work. This means that:

- No fee is payable as a publishing cost
- No embargo period is applicable to the published work
- Free public and immediate access is granted to the published article

Accessed on 15 May 2020.