

Ευφυής Ερευνητική Υποδομή στη Ναυτιλία, την Εφοδιαστική Αλυσίδα, και τις Μεταφορές

Διαδικτυακό Σεμινάριο

«Τεχνικές Συλλογής και Αξιοποίησης Δεδομένων μέσω της εφαρμογής βέλτιστων πρακτικών στο έργο EN.I.R.I.S.S.T.»

21 Απριλίου 2021

Πλαίσιο ανάλυσης και απόδοση αποτελεσμάτων για την αποτίμηση των επιπτώσεων από τις μεταφορές στο οικονομικό οικοσύστημα

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Research Infrastructures' (RIs) key role in economic ecosystem

Research Infrastructures as
an essential pillar



Ecosystem striving for
scientific excellence,
transnational services,
education and skills

Research Infrastructures as
strategic investments



Research with impact that
addresses complex
societal challenges

Research Infrastructures as
knowledge and innovation hubs



Basis of European
competitiveness, with regional
impact and global outreach

Coherence between
European, national and
regional priorities



Research Infrastructures for
sustainable development and
funding

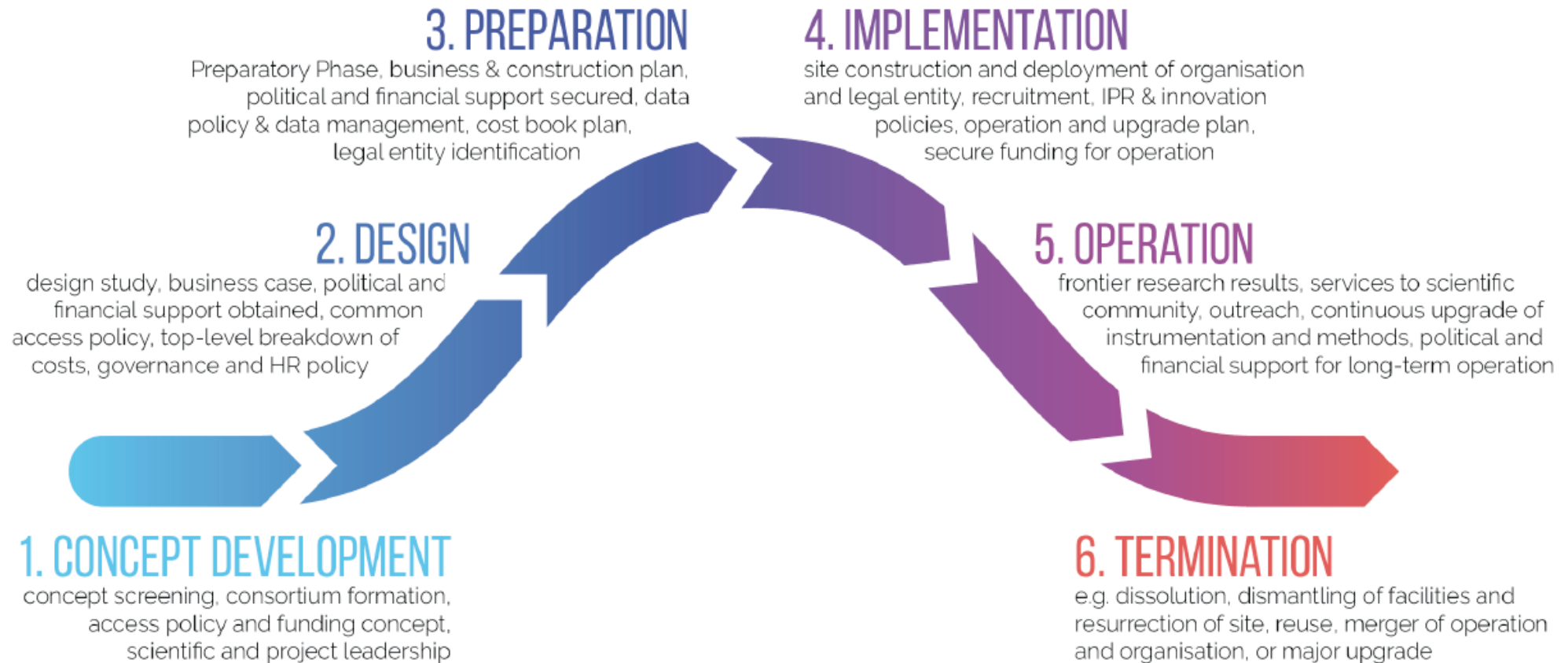
Research Infrastructure as
major promoters of Open
Science



Interconnected services
providing fair and quality
certified Open Data

European Commission, DG Research and
Innovation, June 2020

Lifecycle approach of Research Infrastructure

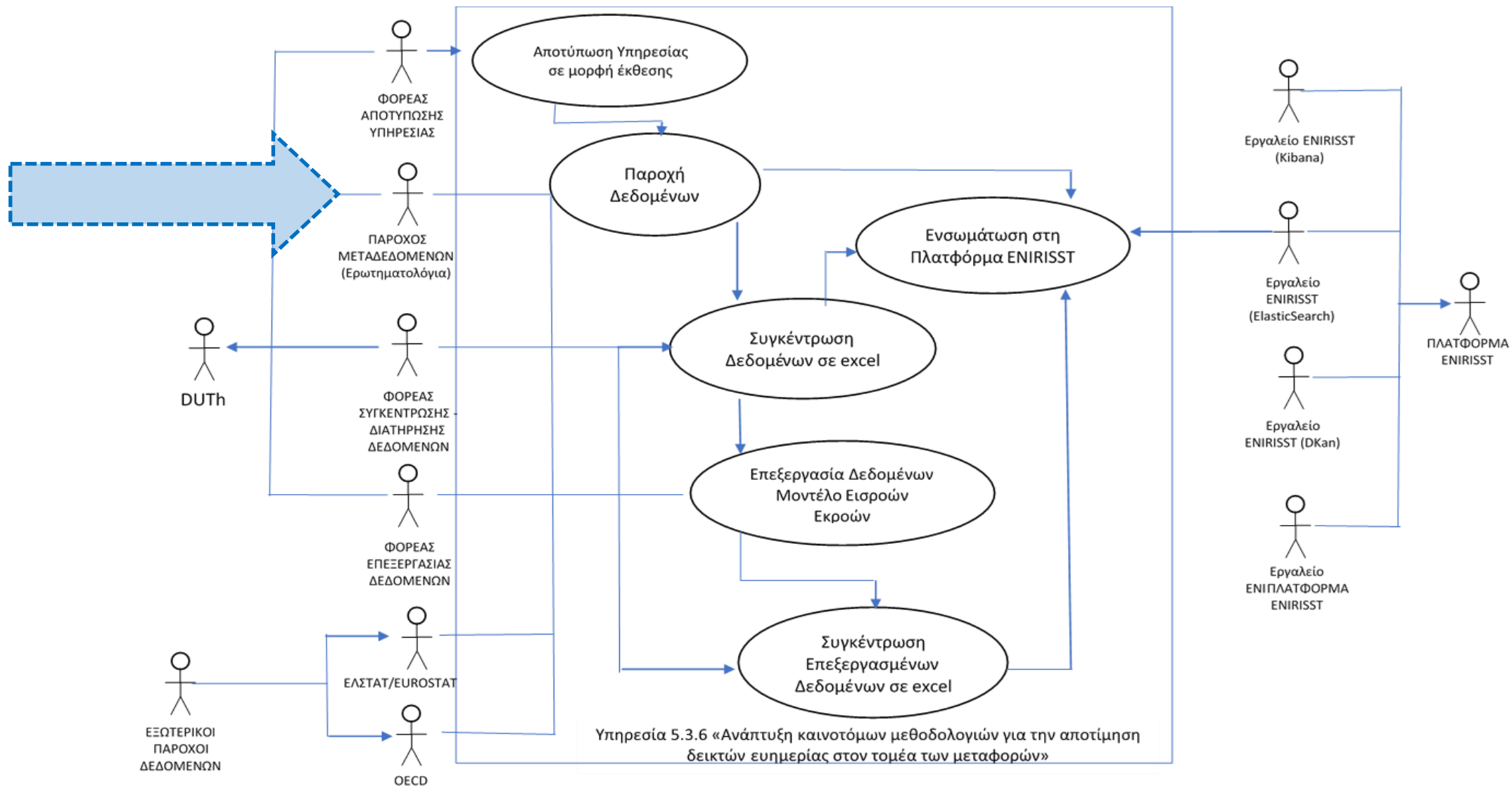


European Strategy Forum on Research Infrastructures (ESFRI), 2019

Research Infrastructure and transport enterprises management performance

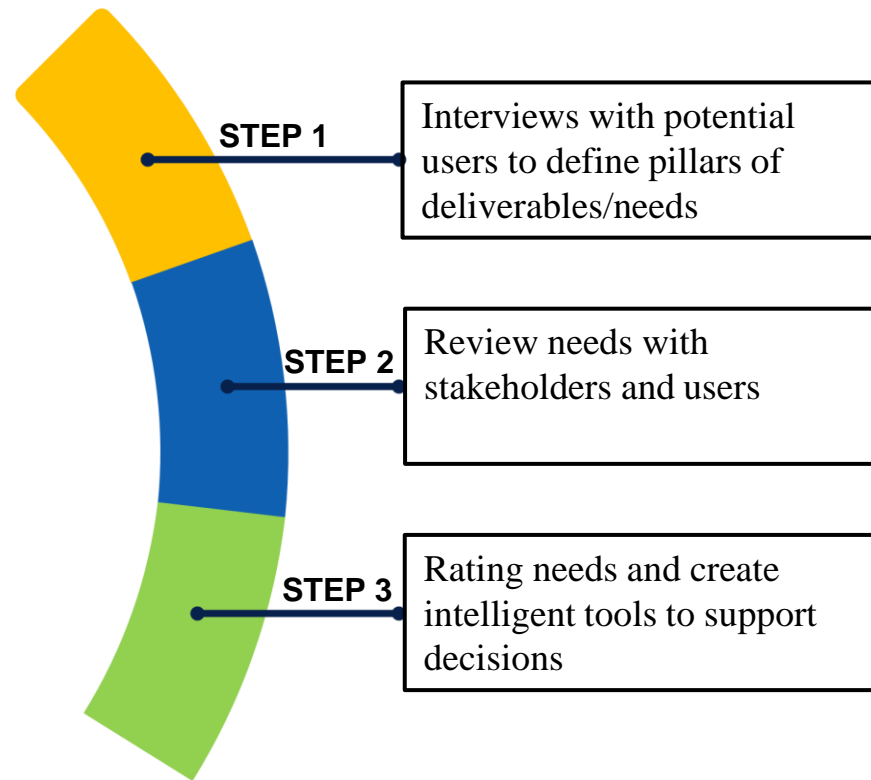
- ❖ Research Infrastructures are essential tools for transport sector ecosystem to support planning, management and decision making to meet the new conditions of the future for which the knowledge is imperfect.
- ❖ The purpose of a RI is to provide metadata to support transport sector business ecosystem (operators, authorities and organizations) to observe and monitoring up to day performance, assess internal and external risks and support decisions in planning, management and financing. The development of a RI in transport sector must adhere two primary rules:
 - The metadata must be technically correctly and produce outputs accurate enough to meet the transport system ecosystem;
 - The procedure and its results must be effectively presented (interface) according to the needs of managers and administrators so that the modelling outputs are utilized in decision making process providing advantage to transport business resiliency.

Research Infrastructure dataset framework

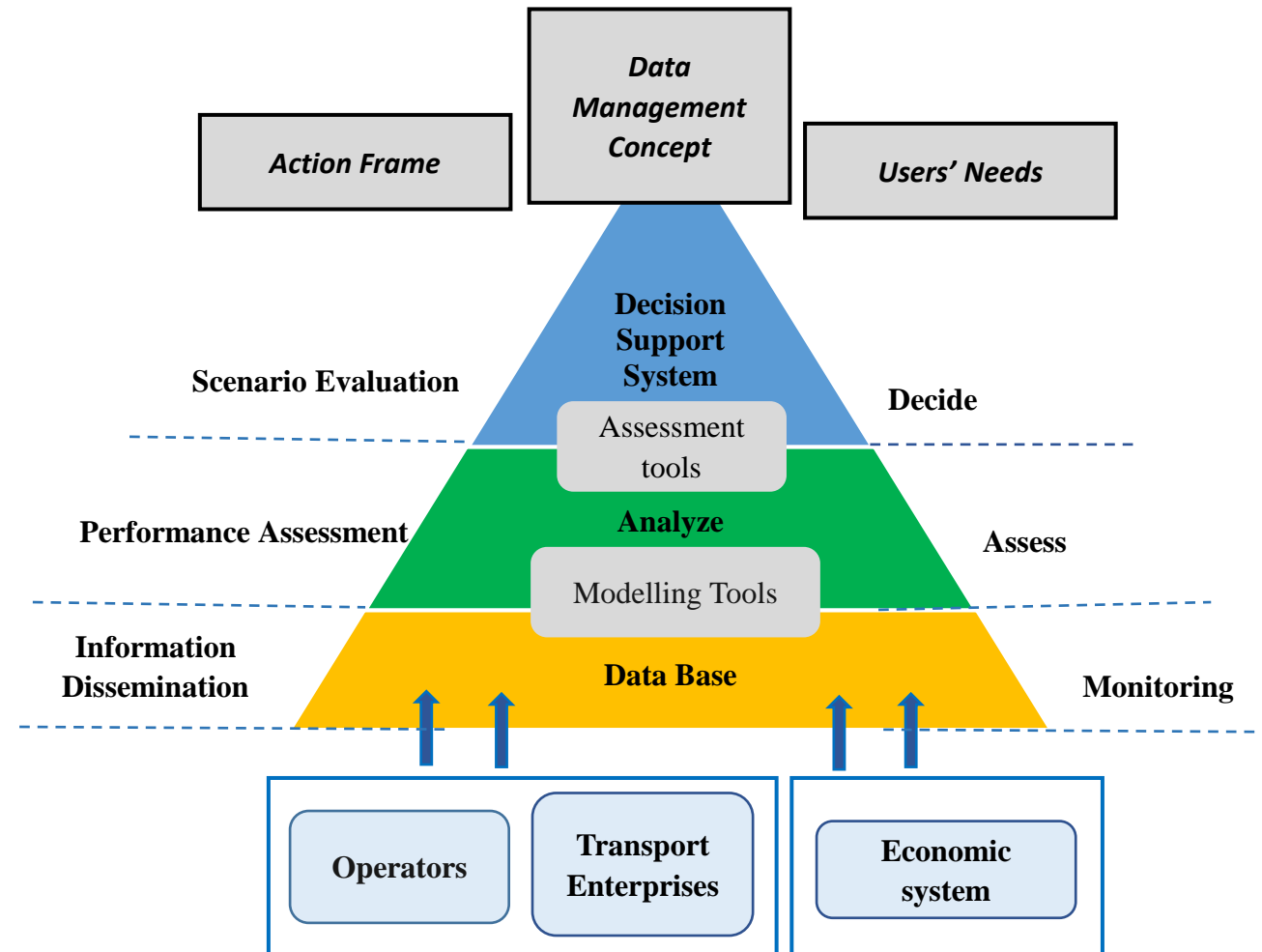


Methodology Background

Process to define the RI outputs



Data inflow and analysis levels for developing RI services



Application

- Based on the above process, a **questionnaire survey** applied in order to gather and review the potential users' needs and prospects in shipping, transport and supply chain sectors, in accordance with relevant international practices and the needs of potential users operating in Greece.
- This questionnaire survey outputs suggest several areas of developing tools and applications based on quantitative techniques of data analysis. The key questions raised are:

Regarding the RI offered services content:

- Why the analysis outputs needed?
- Who will use the offered services and what are their special requirements?
- What level of detail or aggregation is required and what is the proper time horizon?
- What data are available and will the data be sufficient to generate the needed analysis outputs (offered services)?

Regarding the RI modelling framework for providing metadata:

- How accurate and in what time frame or measurement type to be?
- Will the modelling outputs be made in time to support decision making?
- Does the outputs clearly understand how it will be used in the organization?

Application

Questionnaire collection	
Phase A	150 questionnaires
Phase B	150 questionnaires
Collection period	
Phase A	October 2019 to April 2020
Phase B	November 2019 to June 2020
Size	6 closed-ended questions and 1 open-ended question
Sampling method	Simple random sampling
Categories of respondents Institutions/ Organizations	<ul style="list-style-type: none"> - Central government - Local government - Equipment or infrastructure construction/marketing - Means of transport operation - IT services - Transport-Logistics infrastructure management - University - Research Institution - Advisor - Consultant

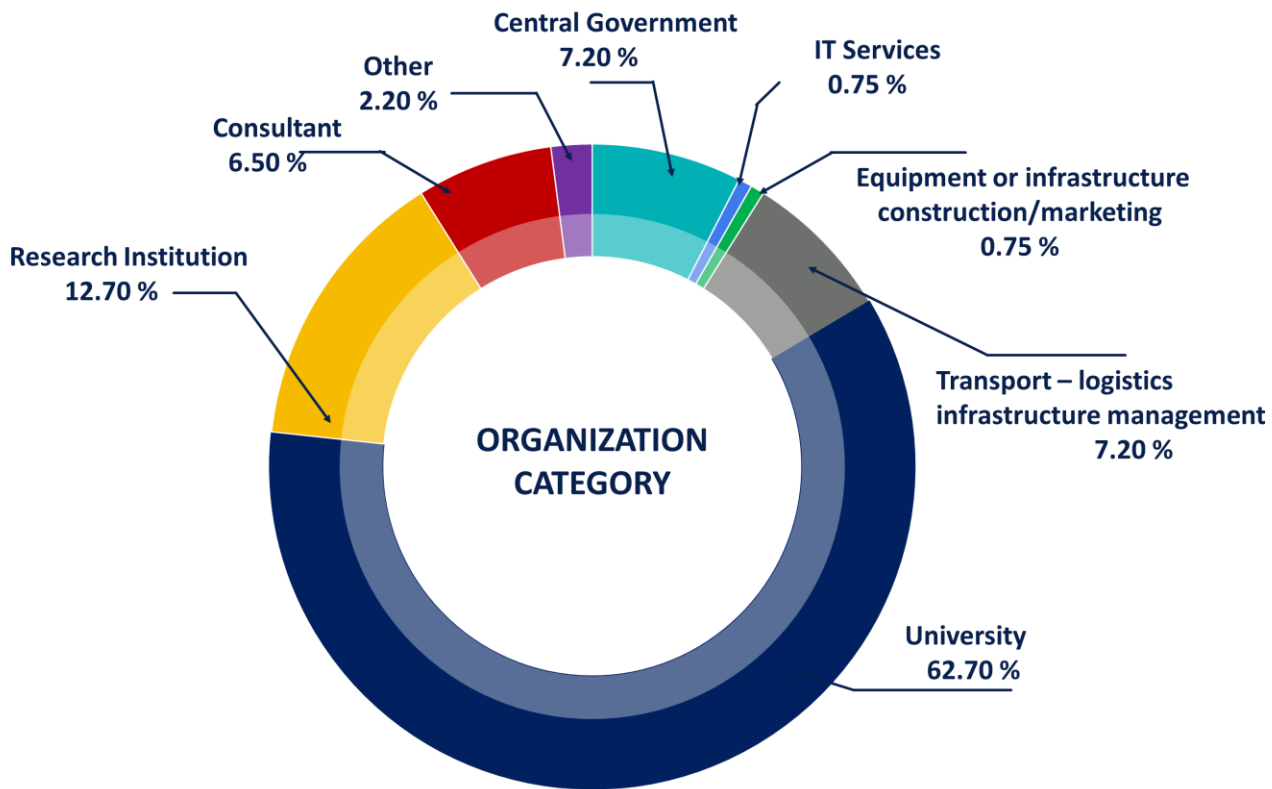
2 separate stages / phases of collection:

- with interviews (face to face questionnaire collection) with potential users (executives and researchers in the field of transport and related specialties) (Phase A)
- by sending an electronic version of the questionnaire to potential users and organizations (Phase B)

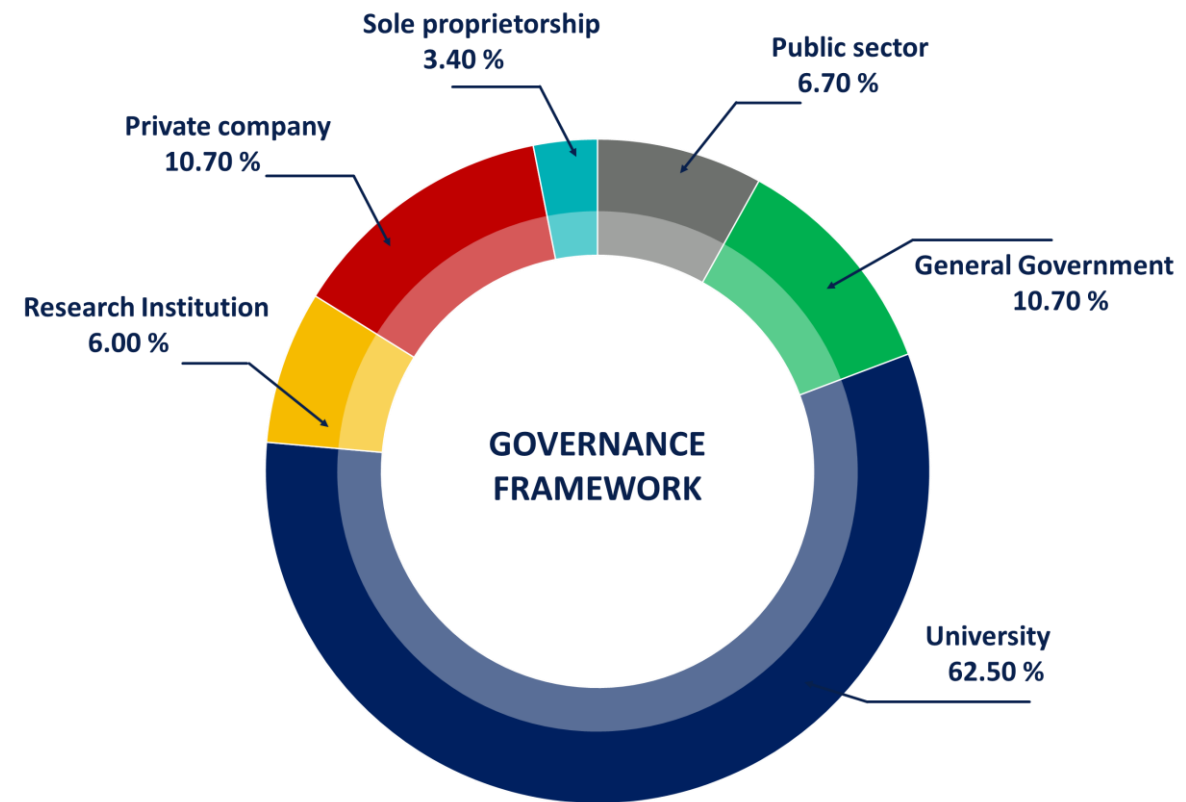


Survey preliminary results

Institution/Organization Category



Institution/Organization Governance Framework



Survey preliminary results

Evaluation of the institution/organization needs meeting by EN.I.R.I.S.S.T proposed services

Institution/Organization Needs	Rating (%)					Average
	1	2	3	4	5	
Strategic planning	2.23	2.23	14.93	41.04	44.78	3.66
Transport trends and prices monitoring	2.23	2.99	10.45	47.01	42.54	3.67
Fleet management	23.88	23.00	28.36	8.21	20.15	2.40
Financial management	9.70	15.67	23.13	16.42	41.04	3.18
Human resources management	10.45	15.67	35.82	10.44	33.58	2.99
Business plan development	3.73	32.08	13.43	20.89	35.82	3.09
Financing scenarios development	1.49	14.18	15.67	42.53	30.58	3.33
Development of new services for users / passengers / market						2.92
	15.67	9.70	27.61	21.64	29.10	
Competition monitoring	14.18	9.70	14.17	30.59	36.57	3.18
Development / Implementation of new investment plans						3.44
	2.99	8.96	17.92	38.81	36.57	
Management Support - Corporate Governance	4.48	23.00	28.36	17.91	30.58	3.00
Corporate performance monitoring	34.32	4.47	24.63	24.63	16.42	2.48

1 Insignificant 5 Very important

Conclusions

- ❖ Transport infrastructure, which includes physical networks, terminals and intermodal nodes, information systems, as well as refueling and electrical supply networks, is necessary for the safe, secure operation of road, rail, civil aviation, inland waterways and shipping and is crucial to the European Union's (EU) economic growth and social development.
- ❖ In order to address current socio-economic challenges within an ever-changing complex and competitive environment, the transport sector requires new technological developments. Research Infrastructures play a key role in the advancement of knowledge and technology and provide an important link in the innovation chain.
- ❖ The research outputs based on the results of a questionnaire survey addressed to transport and logistics sector, providing results about the real needs for data analytics, event observation, cost-benefit analysis, market trends and forecasting, for a variety of potential users in supply chain business ecosystem.
- ❖ The results are essential for managers, planners and decision makers towards business intelligence and development of intelligent and innovative research infrastructures in transport sector.

Σας ευχαριστώ πολύ!

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