

**EUSDR Priority area 1b:
To improve mobility and multimodality: rail, road and air transport**

Transport study for the Danube Region - Study of intermodal transport users' needs in the Danube Region



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Faculty of Transport and Traffic Engineering
Logistics Department



Purpose of the study

Defining recommendations and guidelines based on user needs in order to establish adequate decision making system concerning intermodal transport development in Danube Region.

In order to analyze the current situation, the study includes a questionnaire for users and service providers in intermodal transport chains. Analysis of the responses shall define their needs, conditions of everyday business realization, problems and desired state of the system functioning as well as existing quality of intermodal transport services.



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Planned activities

Forming a team and contacting experts from the Danube Region.

Defining the methodology, methods of communication and reporting.

Collection and analysis of existing documentation and facts.

Defining the questionnaires and selecting survey samples.

Survey of users and service providers (filling in the questionnaires)

Statistical analysis of questionnaires.

Expert assessment of problems and needs at the national level.

Expert opinion with recommendations and guidelines for development of IT.

Preparation of final reports and flyers.



Analysis of existing documentation and facts

- Basic characteristics of the countries:
 - area, population, gross domestic product - GDP.
- Intensity of intermodal transport:
 - regression-correlation analysis.
- Terminals of intermodal transport:
 - network density and terminal status.
- Intermodal transport in strategic documents:
 - level of importance, coverage of intermodal transport subsystems, objectives and measures defined.
- Analysis of Logistic Performance Index.
- Basic groups of intermodal transport problems.



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Result: Identification of the Danube micro regions

Danube micro region 1 (DMR-1):

Germany
Austria
Slovenia

Danube micro region 2 (DMR-2):

Czech Republic
Slovakia
Hungary
Romania
Ukraine
Moldova

Danube micro region 3 (DMR-3):

Croatia
B&H
Serbia
Montenegro
Bulgaria






Defining the questionnaires and survey samples

- Two questionnaires for each country are defined:
 - Questionnaire for intermodal transport users
 - Questionnaire for intermodal transport service providers.
- Sample survey:
 - For each country 10 to 40 major users (senders and recipients of goods - trading, manufacturing, etc.) and 10 to 40 important service providers (terminals, intermodal operators, logistic providers, railway operators, maritime agents, etc.).
- In the definition of the sample, private companies had priority.



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Questionnaire for intermodal transport users

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QUESTIONNAIRE – INTERMODAL TRANSPORT USERS

Company name _____
 Street Address, City, State _____

- Rate the level of quality of intermodal transport services in country
 Very high High Medium Low Very low
- Rate the offer of intermodal transport services in country (how well it satisfies your demand)
 Very good Adequate Poor
- How do you rate the lead time (transport and delivery time) in intermodal transport chains?
 Very short Short Medium Long Very long
- Compared to other means, how would you rate the prices of intermodal transport services?
 High Medium Low
- How well the large economic centers of the Danube Region are connected with intermodal transport chains?
 Very good Adequate Poor Very poor
- Rate the level of development of intermodal transport network and market coverage in country
 Very high High Medium Low Very low
- Rate the availability of intermodal transport services in country
 High availability Medium availability Low availability

The project is co-financed by the European Union (ERDF and IPA-II funds)

8. Rate the quality of intermodal transport services on corridors for:

	High	Medium	Low	Not in use	Nonexistent
Corridor 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corridor 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corridor 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corridor 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>




9. Rate the lead time (transport and delivery time) in intermodal transport on corridors for:

	Very short	Short	Medium	Long	Very long	Not in use	Nonexistent
Corridor 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corridor 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corridor 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corridor 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Name one or two missing links of intermodal transport with economic centers in the Danube Region

11. Specify the place for loading/unloading of intermodal transport units (containers, swap bodies, etc.)
 At company's premises mainly
 It depends: at company's premises or at nearby terminal
 At nearby terminal

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12. What are the main obstacles of intermodal transport development and realization in country?

- Terminals (lack of terminals and poor connection between them, low capacity, old technology, etc.)
- Infrastructure (incomplete and types of transport are poorly connected)
- Intermodal transport units (insufficient number of containers/swap bodies/semi-trailer...)
- Longer lead time
- Organization (lack of intermodal transport lines)
- Information (users are informed poorly, it is impossible to track the shipment)
- Regulations (lack of regulations, extensive amount of paperwork, procedures)
- Intermodal operators (lack of operators, inadequate offer of services)
- Investments (insufficient financial investments in intermodal transport)

13. What are the main benefits from using intermodal transport services?

- Inclusion in international goods flows and markets
- Lower transport and manipulation costs
- Shorter lead time duration
- Full and high level service quality
- Reliability of service
- Transport safety
- Higher level of goods protection
- Lower environment pollution level

14. Please add any further comments or suggestions about the problems or development of intermodal transport in the country and/or the Danube Region

Thank you for taking the time to complete our questionnaire. Your input is important to us and we value your comments and contribution.




Please, click on the button "Submit" to verify and send Your answers.

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Questionnaire for service providers

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QUESTIONNAIRE – INTERMODAL TRANSPORT PROVIDERS

Company name _____
 Street Address, City, State _____

1. Rate the potential of intermodal transport market in the Danube Region

Very high	High	Medium	Low	Very low
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Rate the level of development of intermodal transport system in country

Very high	High	Medium	Low	Very low
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Rate the level of development and connectivity of transport infrastructure needed for development of intermodal transport system in country

Very good	Adequate	Poor	Very poor
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Rate the level of development of network of intermodal terminals and market coverage in country




Very high	High	Medium	Low	Very low
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. How well the large economic centers of the Danube Region are connected with intermodal transport chains?

Very good	Adequate	Poor	Very poor
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Rate the competition presence in intermodal transport in country

Strong	Average	Weak
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Rate the quality of intermodal transport system in:

	Very high	High	Medium	Low	Very low
Danube region	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Country	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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8. Rate the quality of intermodal transport services on corridors to:

	High	Medium	Low	Not in use	Nonexistent
Corridor 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corridor 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corridor 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corridor 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Rate the lead time (transport and delivery time) in intermodal transport on corridors to:

	Very short	Short	Medium	Long	Very long	Not in use	Nonexistent
Corridor 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corridor 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corridor 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corridor 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Name one or two missing links of intermodal transport with economic centers in the Danube Region

11. Specify the place for loading/unloading of intermodal transport units (containers, swap bodies)
 - At company's premises mainly
 - It depends: at company's premises or at nearby terminal
 - At nearby terminal
12. Rate the level of use of different intermodal transport technologies in country




	High	Medium	Low	Not in use
Container technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Piggyback/huckepack technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bimodal (semi-rail) technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ro-Ro technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
River-Sea (LASH) technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Questionnaire for service providers

13. Please name an example of good intermodal transport chain practice (write key points: place of loading, terminal of origin, transit terminal, terminal of destination, place of unloading)

14. As an example of good practice, especially stands out

<input type="checkbox"/> Lead time	<input type="checkbox"/> Technology
<input type="checkbox"/> Reliability	<input type="checkbox"/> Container track and trace and IT solutions
<input type="checkbox"/> Costs	<input type="checkbox"/> Services offered within chain
<input type="checkbox"/> Organization, connection	<input type="checkbox"/> _____




15. What are the main obstacles of intermodal transport development and realization in country?

Terminals (lack of terminals and poor connection between them; low capacity; etc.)
 Infrastructure (incomplete and types of transport are poorly connected)
 Intermodal transport units (insufficient number of containers/swap bodies/semi-trailer...)
 Rate of use of technologies (Piggyback/truckpack, Ro-Ro, etc.)
 Transport means (lack of freight wagons and vessels for container conveyance)
 Organization (lack of intermodal transport lines)
 Regulations (lack of regulatory documents on both national and international level, extensive amount of paperwork)
 Stimulating measures (lack of measures stimulating intermodal transport development)
 Investments (insufficient financial investments in intermodal transport)

16. What are the main benefits from using intermodal transport services?

Inclusion in international goods flows and markets
 Lower transport and manipulation costs
 Shorter lead time
 Full and high level service quality
 Reliability of service
 Transport safety
 Higher level of goods protection
 Lower environment pollution level

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17. Please specify top five priorities needed for intermodal transport development in country

1. _____

2. _____

3. _____

4. _____

5. _____

18. Please add any further comments or suggestions about the problems or development of intermodal transport in the country and/or the Danube Region

Thank you for taking the time to complete our questionnaire. Your input is important to us and we value your comments and contribution.

Please, click on the button "Submit" to verify and send Your answers.

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Surveying users and service providers

- Questionnaires are sent to over 800 e-mail addresses.
- Poor response to the poll:
 - A request for completing the questionnaire was sent several times - the result was not satisfactory.
 - The presence of members of the project team at several professional, business conferences, and with the aim of animating companies, had a limited result (about 15 completed questionnaires).
 - Most of the completed questionnaires are the result of personal contacts (more than half of the questionnaire).
 - Limited support from the members of SG PAb1) - Ukraine and Moldova.



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Result: 147 completed questionnaires

- Postponing the deadline for the completion of the study.
- The interview ended on April 20, 2018:
 - 71 by the user,
 - 76 by the service provider.
- The number of completed questionnaires varies by country, mostly due to personal contacts of project team members.



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COUNTRY	USERS	PROVIDERS	SUM
Austria	4	4	8
Bosnia & Herzegovina	10	6	16
Bulgaria	4	5	9
Croatia	5	8	13
Czech Republic	4	5	9
Germany	4	5	9
Hungary	4	5	9
Moldova	2	2	4
Montenegro	6	6	12
Romania	5	5	10
Serbia	13	11	24
Slovakia	4	6	10
Slovenia	5	7	12
Ukraine	1	1	2
Total	71	76	147

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Statistical analysis of questionnaires

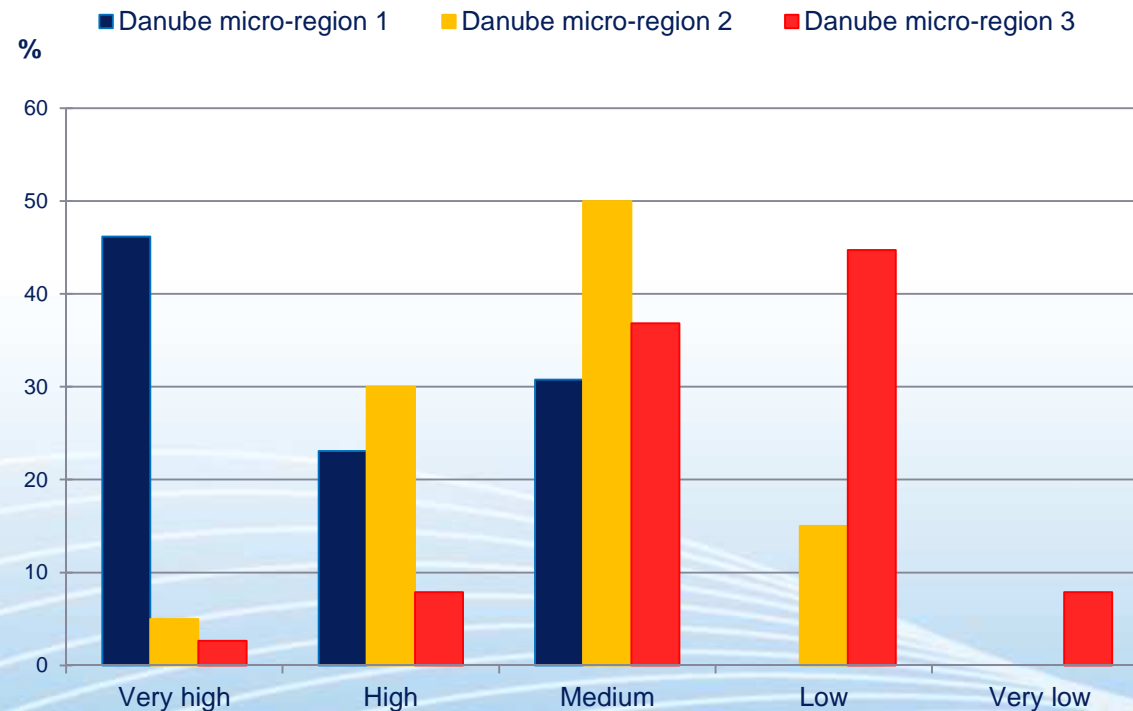
- Statistical analysis of responses:
 - national level
 - level of the micro region
 - level of the Danube region
- Comparative analysis and overall assessment



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Result: Level of micro region

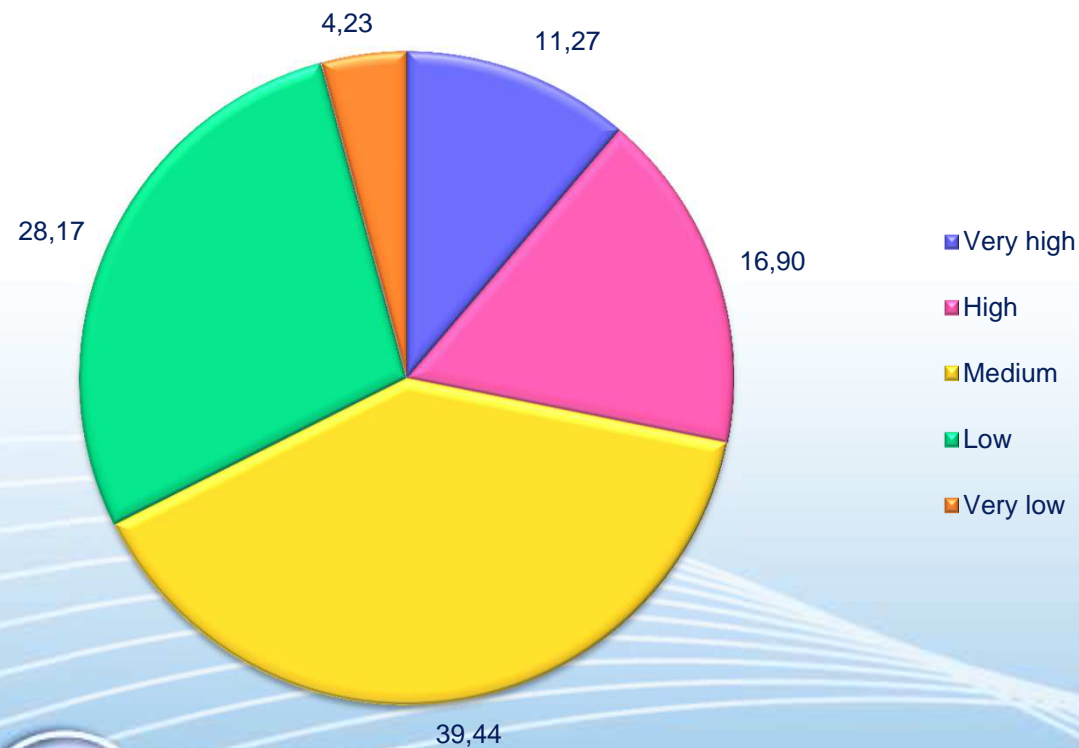
Assessment of intermodal transport quality - service users



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Result: Level of Danube region

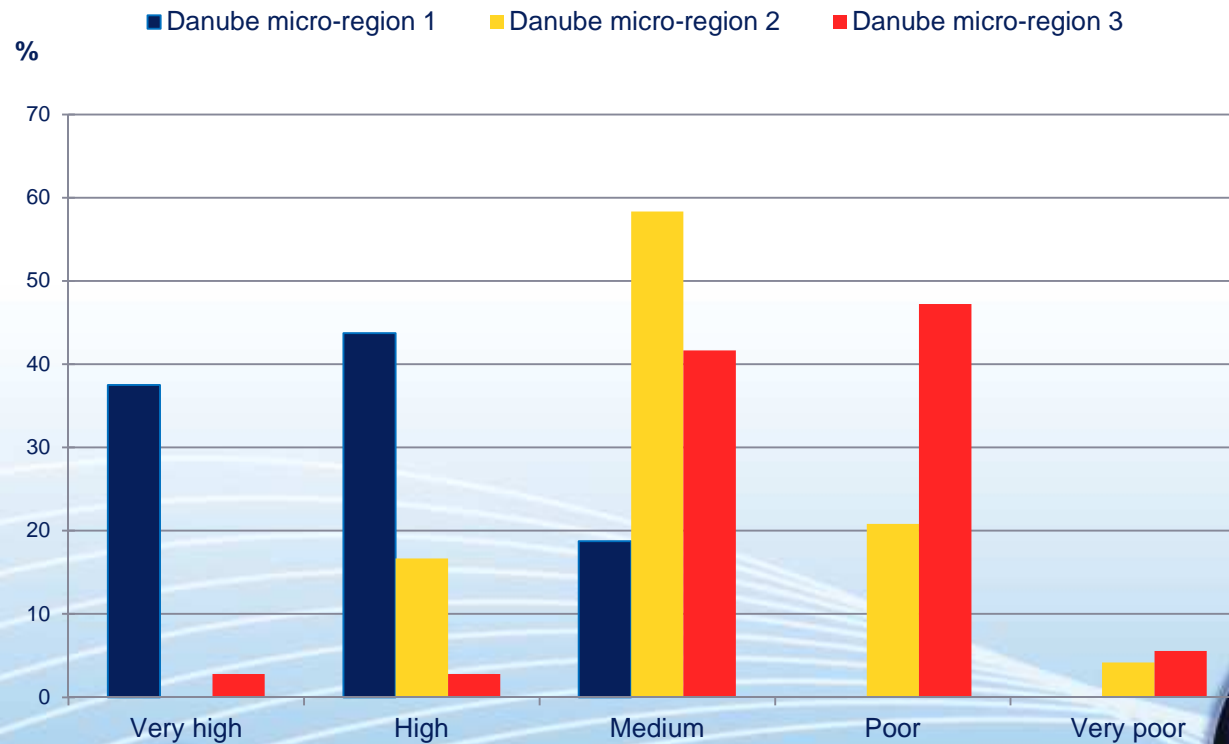
Assessment of intermodal transport quality - service users



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Result: Level of micro region

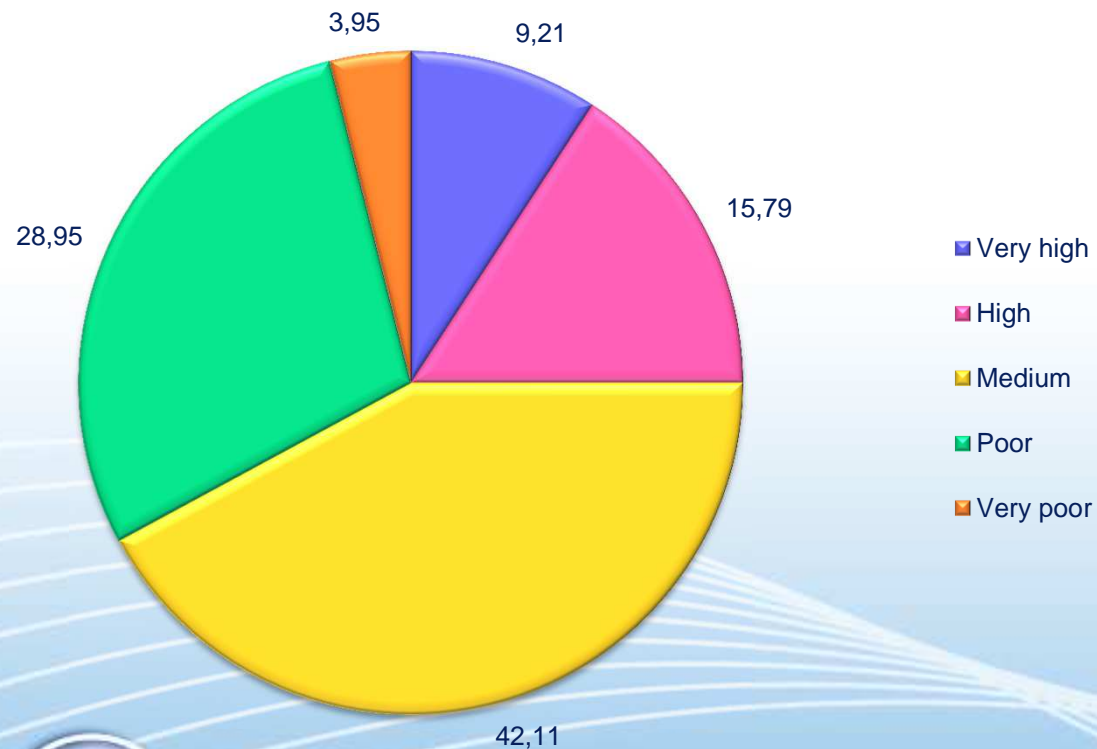
Assessment of intermodal transport quality - service providers



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Result: Level of Danube region

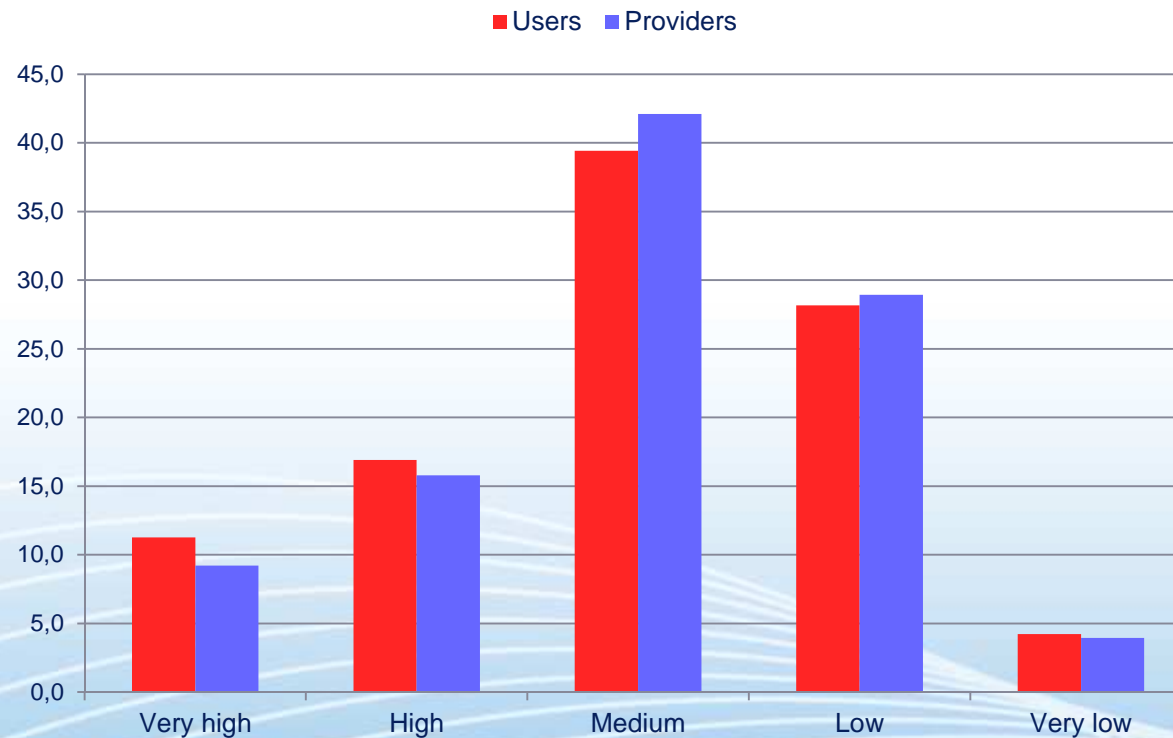
Assessment of intermodal transport quality - service providers



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Result: Comparative analysis - level of Danube region

Assessment of intermodal transport quality – users and service providers



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Activities in preparation

Expert assessment of problems and needs at the national level.

Expert opinion with recommendations and guidelines for development of IT.

Preparation of final reports and flyers.



Thank you for your attention!!!

Team leader:

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