



**SEVENTH FRAMEWORK
PROGRAMME**
THEME 7
*Transport including
Aeronautics*



Project NEAR²

NETWORK OF EUROPEAN – ASIAN RAIL RESEARCH CAPACITIES

Coordination and Support Action
Grant Agreement No: 314254

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Online Questionnaire

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Abstract: _____ D4.1 provides a brief guide to the NEAR² online questionnaire and its contents.

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EXECUTIVE SUMMARY

One of the core outcomes of the NEAR² Project was the formulation of the 10 Concept Documents which were created following the categorization of EURNEX in Poles. In order to evaluate, enrich and finalize these documents the views of experts coming from the research community and the industry will be requested. To this end, several methods will be used with the main one being the organization of 3 workshops, one with research and two with industry experts.

Given, however, that several experts may not be able to travel and participate in the aforementioned workshops, an online questionnaire has been created to give them the opportunity to provide their opinion and expert views on the documents.

The online version of the questionnaire is available via the link www.europeasia-rail.eu.

The goal of D4.1 is to present this online questionnaire. The complete questionnaire is available in the Annex.

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1. OVERVIEW OF THE NEAR² ONLINE QUESTIONNAIRE

1.1. Aim of the online questionnaire

In the framework of WP3 of the NEAR² Project 10 Concept Documents have been formulated based on the following categorization of EURNEX in Poles:

1. Strategy and Economics
2. Operation and System Performance
3. Rolling Stock
4. Product Qualification Methods
5. Intelligent Mobility
6. Safety and Security
7. Environment and Energy Efficiency
8. Infrastructure and Signalling
9. Human Factors and Societal Aspects
10. Training and Education

Each one of them aims to identify and assess the existing Trans-Eurasian railway corridors, investigating the circumstances under which the railways could comprise a viable alternative to air and maritime transport.

These 10 Documents that have been created will be evaluated and validated by a selected group of experts coming both from the research community and from the industry, ensuring this way their examination from multiple and variable perspectives. In order to conduct the evaluation, the project partners have selected the following 3 different methods:

- *Organization of 3 workshops*, 2 in Europe and one in Asia, in which several experts will participate. During the workshops the 10 Documents are presented, while the experts are asked to complete the questionnaires dedicated to the documents that fall under their expertise.
- *Conduct of physical or phone interviews*. This method will be used in the case that specific experts express interest in the project and specifically in assessing the documents, but are not in the position to travel and participate in the workshops. In this case the questionnaires prepared for the workshops will be used, without however comprising the only tool used for the acquisition of information.
- *Development of an online questionnaire*. In the case that an expert decides to participate in the evaluation procedure, but is neither in the position to travel nor wishes to have an interview conducted, he or she will have the opportunity to evaluate the documents that fall under their expertise via the online questionnaire.

The goal of D4.1 is therefore to present this online questionnaire and its functionalities. It should be noted that the structure followed and the questionnaires included in the online version of the questionnaire are exactly the same with those used in the questionnaires distributed during the workshops and the personal interviews.

The online questionnaire may be accessed via the link www.europeasia-rail.eu.

It includes 10 sections (Working Groups), one for each Concept Document and 2 different questions for each section. These include:

- Prioritization of identified topics of interest (the respondent is asked to explain the selected prioritization, as well as to propose new topics);
- Prioritization of identified problems/issues/barriers/needs (again, the respondent is asked to explain the selected prioritization, as well as to propose new problems/issues/barriers/needs).

Prior to completing the questionnaire, the expert is requested to indicate the Working Group(s) on which they have expertise so that in subsequent steps they will be provided only with the relevant questions.

In the following section, the specific steps that need to be taken to access and complete the questionnaire are described.

1.2. Accessing and Completing the Online Questionnaire

Experts may access the questionnaire through the following link: www.europeasia-rail.eu. As shown in Figure 1 below, the Home page includes brief information on the project, as well as on the aim of the online questionnaire.

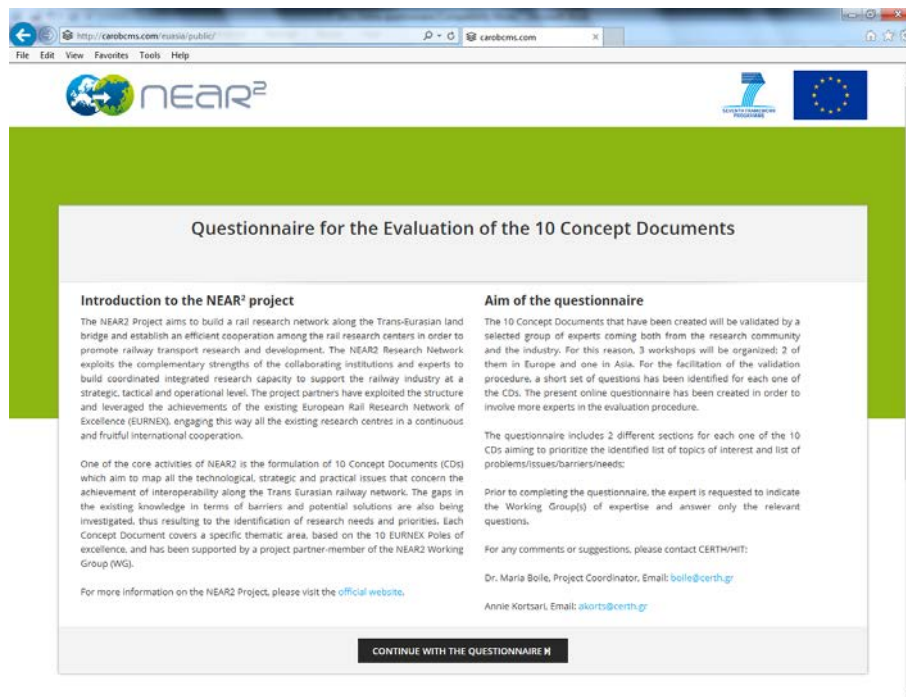
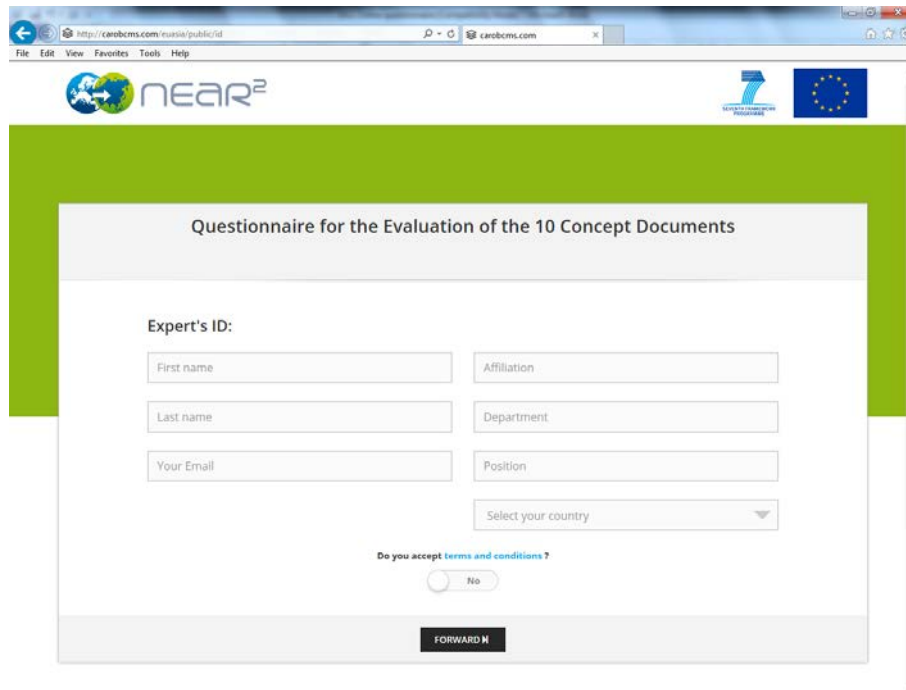


Figure 1: Home page of the NEAR² Online Questionnaire

After having read this brief initial information, the user clicks on the “continue with the questionnaire” button and is directed to the next page, in which the expert needs to fill in some personal information, as depicted in Figure 2.



The screenshot shows a web browser window with the URL <http://carebems.com/eunsia/public/id>. The page title is "Questionnaire for the Evaluation of the 10 Concept Documents". The form is titled "Expert's ID:" and contains the following fields:

- First name
- Last name
- Your Email
- Affiliation
- Department
- Position
- Select your country (dropdown menu)

Below the fields, there is a section for "Do you accept [terms and conditions](#) ?" with a radio button labeled "No". At the bottom of the form is a "FORWARD" button.

Figure 2: Expert's ID

Following, the user accepts the terms and conditions and continues with the completion of the questionnaire, by clicking on the “Forward” button.

The first step towards the completion of the questionnaire is for the expert to select the Working Groups that fall under his/her expertise. The user may select one or more WGs (all WGs may be selected) by clicking on the box at the left, as shown in Figure 3. In the case that the expert is not familiar with the content of a Working Group, a brief summary may be provided by clicking on the question mark on the right-hand-side as presented in Figure 4.

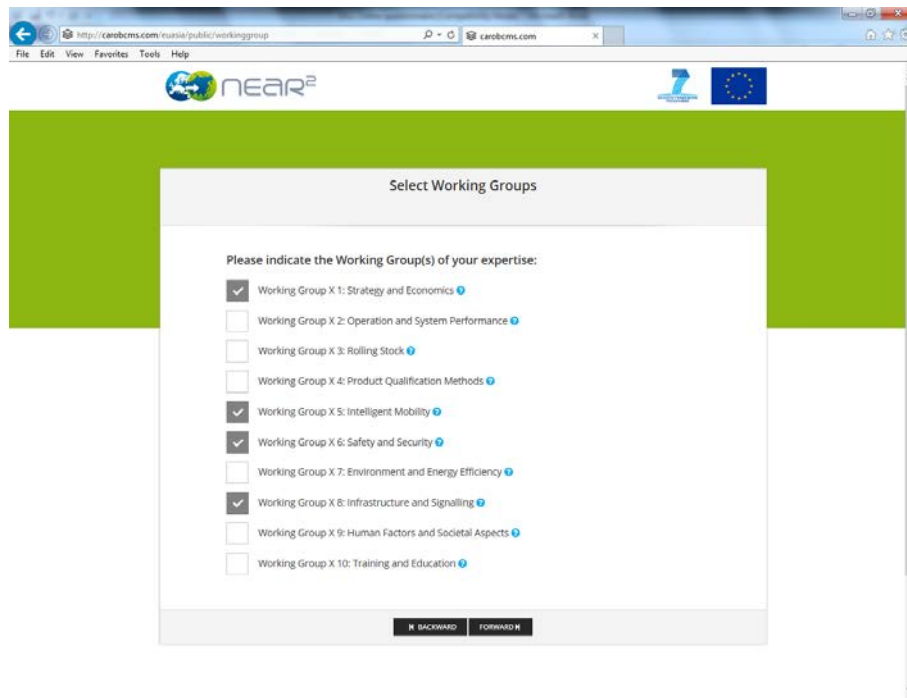


Figure 3: Selection of one or more Working Groups

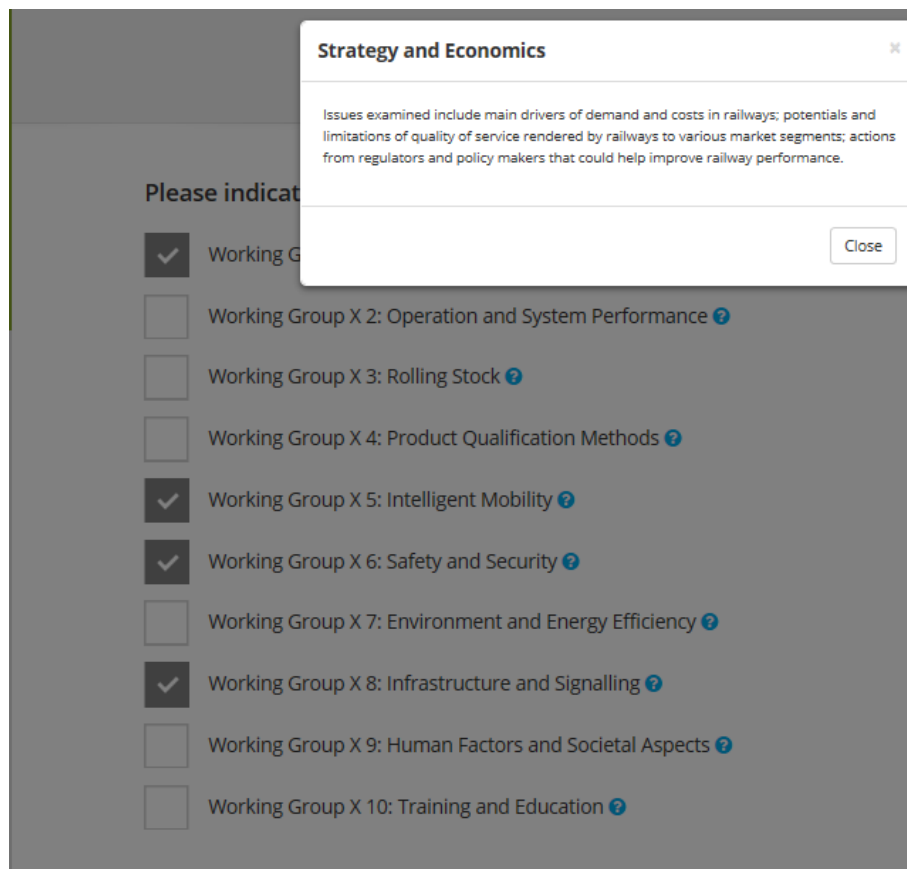
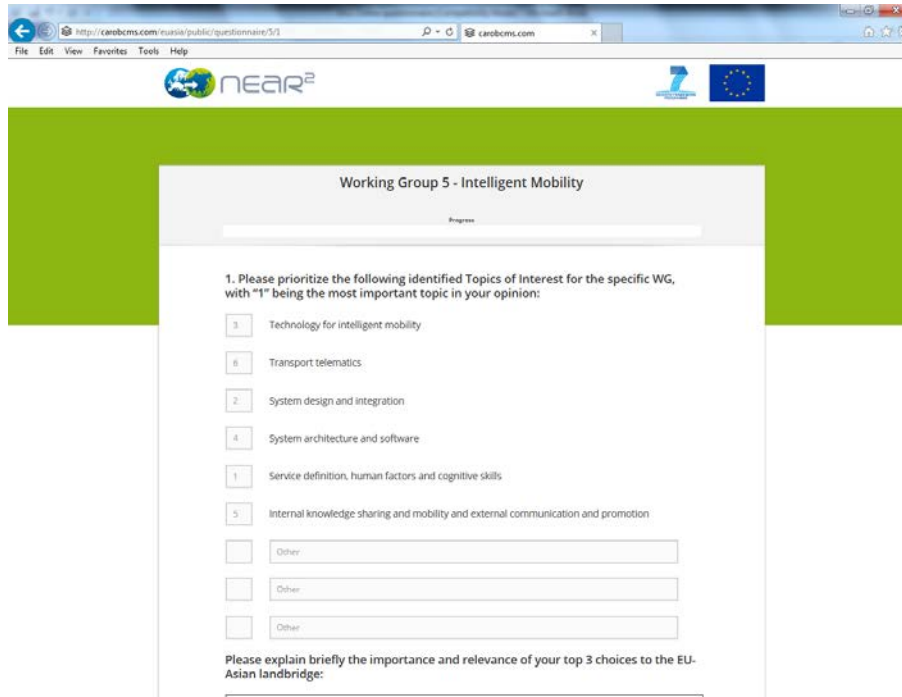


Figure 4: Brief summary of WG1 presented by clicking on the question mark

After the selection of the WGs of interest, the expert is presented with the questions regarding only these WGs. As shown in Figure 5, the first question for each WG requests the user to prioritize the identified topics of interest. The user is asked to insert the priority numbers by double clicking in the box at the left.



Working Group 5 - Intelligent Mobility

Progress

1. Please prioritize the following identified Topics of Interest for the specific WG, with "1" being the most important topic in your opinion:

- Technology for intelligent mobility
- Transport telematics
- System design and integration
- System architecture and software
- Service definition, human factors and cognitive skills
- Internal knowledge sharing and mobility and external communication and promotion
- Other
- Other
- Other

Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

Figure 5: Prioritization of the identified topics of interest for WG5

The user also is given the opportunity to insert up to 3 more topics of interest that have not been included already.

Then, it is requested from the respondent to explain the top 3 choices made, using the open boxes to write down the explanations, as depicted in Figure 6 below:

Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

The specific topic is very important for the Trans-Eurasian railway network because....]

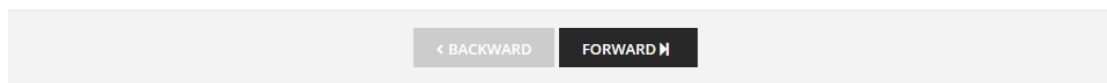


Figure 6: Explanation of the top 3 priorities made by the expert

Similarly, the following step taken includes the prioritization of the identified problems/issues/barriers/needs (Figure 7) that have been identified by the partners in relation to the specific WG.

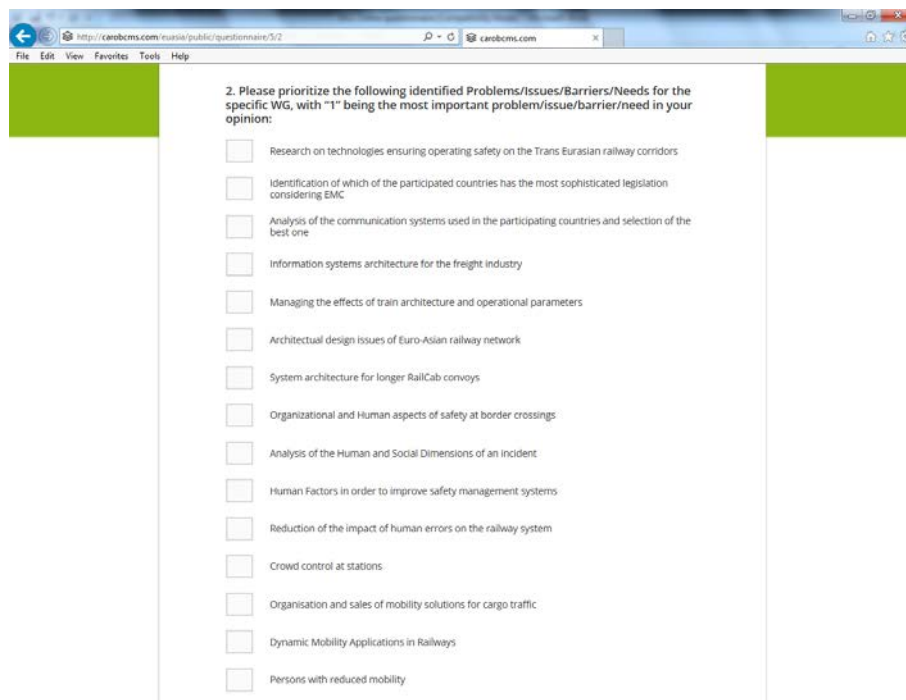


Figure 7: Prioritization of the identified problems/issues/barriers/needs for WG5

As in the case of the topics of interest, the user is once again given the opportunity to identify further problems/issues/barriers/needs and is finally requested to explain the top 3 choices made.

The aforementioned procedure is followed for all WGs that have been selected by the user. The questionnaire is finalized once the expert has completed all the questions for all WGs selected, as presented in Figure 8 below:

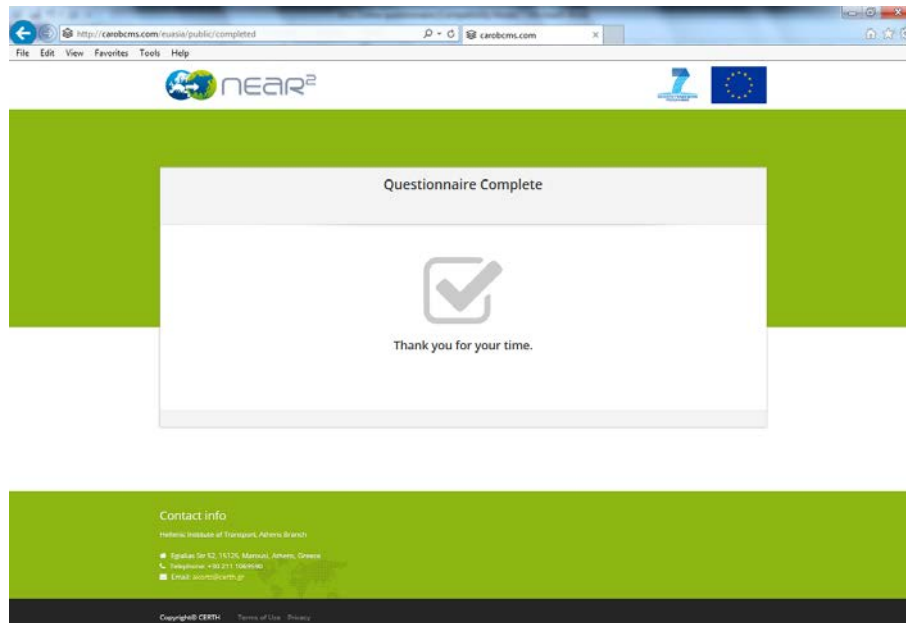


Figure 8: Final page of questionnaire

The full questionnaire is provided in the Annex of the present document.

1.3. Roles and Responsibilities

- Online questionnaire development and administration: CERTH/HIT
- Online questionnaire information and contributions: All Partners
- Date (Online questionnaire running): February 2014.

ANNEX

Introduction to the NEAR² project

The NEAR² Project aims to build a rail research network along the Trans-Eurasian land bridge and establish an efficient cooperation among the rail research centers in order to promote railway transport research and development. The NEAR² Research Network exploits the complementary strengths of the collaborating institutions and experts to build coordinated integrated research capacity to support the railway industry at a strategic, tactical and operational level. The project partners have exploited the structure and leveraged the achievements of the existing European Rail Research Network of Excellence (EURNEX), engaging this way all the existing research centres in a continuous and fruitful international cooperation.

One of the core activities of NEAR² is the formulation of 10 Concept Documents (CDs) which aim to map all the technological, strategic and practical issues that concern the achievement of interoperability along the Trans Eurasian railway network. The gaps in the existing knowledge in terms of barriers and potential solutions are also being investigated, thus resulting to the identification of research needs and priorities. Each Concept Document covers a specific thematic area, based on the 10 EURNEX Poles of excellence, and has been supported by a project partner-member of the NEAR² Working Group (WG).

For more information on the NEAR² Project, please visit the official website via www.near2-project.eu.

Aim of the questionnaire

The 10 Concept Documents that have been created will be validated by a selected group of experts coming both from the research community and the industry. For this reason, 3 workshops will be organized; 2 of them in Europe and one in Asia. For the facilitation of the validation procedure, a short set of questions has been identified for each one of the CDs. The present online questionnaire has been created in order to involve more experts in the evaluation procedure.

The questionnaire includes 2 different sections for each one of the 10 CDs aiming to prioritize the identified list of topics of interest and list of problems/issues/barriers/needs;

Prior to completing the questionnaire, the expert is requested to indicate the Working Group(s) of expertise and answer only the relevant questions. Experts coming from the research community are expected to prioritize research priorities, while experts from the industry are expected to prioritize and assess industry needs.

For any comments or suggestions, please contact CERTH/HIT:

Dr. Maria Boile Project Coordinator Email: boile@certh.gr	Annie Kortsari Email: akorts@certh.gr
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Expert's ID

Name	
Surname	
Affiliation	
Department	
Position	
Country of origin	
Email	

Please indicate the Working Group(s) of your expertise:

Working Group 1 – Strategy and Economics: Issues examined include main drivers of demand and costs in railways; potentials and limitations of quality of service rendered by railways to various market segments; actions from regulators and policy makers that could help improve railway performance.

Working Group 2 – Operation and System Performance: Specific areas looked are: stakeholders' requirements; interoperability; functional analysis and designing of system architecture and components relationships; modeling and simulation; operation planning and management; capacity management and optimization.

Working Group 3 – Rolling Stock: Specific objectives include: improving the performance and the attractiveness of passenger and freight vehicles; maintaining and enhancing safety and reliability; provide scientific and technical foundation for innovative solutions and supporting the establishment of new standards for rolling stock.

Working Group 4 – Product Qualification Methods: The objective is to improve the effectiveness of testing and modeling and to develop product qualification methods for new techniques and technologies supporting the implementation of TSIs throughout the enlarged Europe.

Working Group 5 – Intelligent Mobility: Specific objectives of the WG include: information systems (passenger, freight, remote diagnostics, predictive maintenance, and traffic management), ticketing and payment/refund systems, security (systems and users), and railway system management.

Working Group 6 – Safety and Security: The objectives are to monitor safety, develop new technologies and to promote safe and secure systems of operation that reduce risks with diminishing costs.

Working Group 7 – Environment and Energy Efficiency: Specific objectives include: energy consumption and saving in electrified and diesel traction systems; electromagnetic pollution; noise and vibration not only on board but also on ground; influence of weather conditions on railway operation; water and air pollution.

Working Group 8 – Infrastructure and Signalling: Specific objectives include: improving the performance and the attractiveness of passenger and freight vehicles; maintaining and enhancing safety and reliability; provide scientific and technical foundation for innovative solutions and supporting the establishment of new standards for rolling stock.

Working Group 9 – Human Factors and Societal Aspects: Focuses on understanding the roles, capabilities and needs of all stakeholders in the rail system. It addresses human behavior in rail transport, looking at the "human dimension" on micro and macro level.

Working Group 10 – Training and Education: Specific objectives include: short training courses; international PhD and Master programs; a European University of Railway; promotion of interdisciplinary contacts; permanent forum for prospective studies; exchange and dissemination of knowledge out of research project results and publications; use of results in education programs and training courses.

Please make sure to answer questions only for the Working Groups of your expertise.

Working Group 1 – Strategy and Economics

1. Please prioritize the following identified Topics of Interest for the specific WG, with “1” being the most important topic in your opinion:

- Analysis of impact factors on freight demand;
- Study of the characteristics of freight demand along the Trans Eurasian railway corridor;
- Impact of modern logistics on freight demand;
- Market segmentation of freight demand;
- Creation of freight demand forecast models;
- Appraisal of the economic impact of transportation costs;
- Analysis of the structure of transit cargos;
- Economic appraisal of profit redistribution possibilities between the cargo owner and the transportation company;
- Identification of associated costs of transportation within the Trans European-Asian Corridor;
- European and Asian transport policies related to the Trans Eurasian railway transport;
- Economic appraisal of financial results of activities within the Trans Eurasian railway Corridor;
- Other.....
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- Other.....
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- Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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2. Please prioritize the following identified Problems/Issues/Barriers/Needs for the specific WG, with “1” being the most important problem/issue/barrier/need in your opinion:

- Exhaustive study on the regulating laws that apply in the two continents.
- Identification of the most important freight railway corridors connecting Asia to Europe and identification of regulating laws applied in each one of the major crossing countries.
- Identification of existing problems in the connection, caused by the different regulating situation in the Europe and Asia.
- Formulation of an Action Plan for the complete deregulation of the railways in the countries of interest.
- Identification of potential problems (if any) caused by the different structures of the railway companies in EU and Asia.
- Identification of potential solutions to overcome the barriers caused by these problems.
- Discussions on the potential harmonization of the structure used by railway companies in the two continents.
- Harmonization of the various current legislative frameworks applied at the borders of the various countries – Establishment of bilateral agreements.
- Recording and evaluation of technologies/practices that are used on an international

level for the improvement/tackling of border crossing problems in regards with the railways.

Identification of new technologies and practices for the optimization of railway related and non-railway related activities undertaken in border stations.

Investigation and analysis of the crossing procedures imposed at the borders of the various countries of the EU-Asian corridors at an entrepreneur and operational level.

Other.....
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Other.....
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Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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Working Group 2 – Operation and System Performance

1. Please prioritize the following identified Topics of Interest for the specific WG, with “1” being the most important topic in your opinion:

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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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2. Please prioritize the following identified Problems/Issues/Barriers/Needs for the specific WG, with “1” being the most important problem/issue/barrier/need in your opinion:

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Working Group 3 – Rolling Stock

1. Please prioritize the following identified Topics of Interest for the specific WG, with “1” being the most important topic in your opinion:

- Heavy load bogies;
- Vehicle dynamics;
- Power supply;
- Traction system;
- Braking system;
- Freight wagons;
- Motive power;
- Train communication network and control;
- Gauge;
- Automatic coupling;
- Next generation of train control;
- On-board navigation;
- Other.....
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- Other.....
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- Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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2. Please prioritize the following identified Problems/Issues/Barriers/Needs for the specific WG, with “1” being the most important problem/issue/barrier/need in your opinion:

- Investigation of vehicle dynamics performance evaluation criteria;

- Longitudinal Impact of the Heavy Load Trains;

- Materials and techniques about automatic coupling and its cracks and fatigue life research;

- Function requirements specification, system requirements specification and key technologies about next generation of train control;

- Research application on-board for GLONASS or BDS satellite communication system;

- Electrical power source of freight car;

- Research train braking mode and the feasibility of the target deceleration control analysis;

Other.....
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Other.....
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Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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Working Group 4 – Product Qualification Methods

1. Please prioritize the following identified Topics of Interest for the specific WG, with “1” being the most important topic in your opinion:

- Intercontinental transport policy;
- Increasing role of intermodal freight transport;
- Implementation of the ICT measures;
- Harmonization and standardization as keys to efficiency
- Cross acceptance – a “bridge” to interoperability
- Other.....
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- Other.....
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- Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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2. Please prioritize the following identified Problems/Issues/Barriers/Needs for the specific WG, with “1” being the most important problem/issue/barrier/need in your opinion:

- Definition of particular lines and the network constituting the transcontinental transportation connections’ system.
- Analysis of all legal conditions which have to be fulfilled for the creation of transport corridors and the suggestions of necessary harmonization of binding law.
- Cost estimation in order to put into operation the transport corridors’ system and their particular parts.
- Consideration of all additional conditions and activities required for initiation of the transportation in Trans Eurasian corridors.
- Business models’ development including the analysis of their pros and cons using standard SWOT methods for the whole life cycle.
- Rehabilitation and modernization of existing parts of the network and corridors as well as building of some missing connections.
- Identification of the conditions influencing easier passing through borders of transport corridor states.
- Development and establishment of unified and transparent tariff of access to the transport infrastructure.
- Harmonization of the transport supporting telecommunication and data processing services covering the whole “door to door” transport process.
- Cross-acceptance of the equipment, services and solutions including unified, homogenous certification rules.
- Promotion system of innovative transport solutions, best practice sharing and all activities focused on transport cost reduction, improvements, greening and reduction of energy consumption.

Other.....
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Other.....
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Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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Working Group 5 – Intelligent Mobility

1. Please prioritize the following identified Topics of Interest for the specific WG, with “1” being the most important topic in your opinion:

- Technology for intelligent mobility;
- Transport telematics;
- System design and integration;
- System architecture and software;
- Service definition, human factors and cognitive skills;
- Internal knowledge sharing and mobility and external communication and promotion;
- Other.....
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- Other.....
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- Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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2. Please prioritize the following identified Problems/Issues/Barriers/Needs for the specific WG, with “1” being the most important problem/issue/barrier/need in your opinion:

- Research on technologies ensuring operating safety on the Trans Eurasian railway corridors.
- Identification of which of the participated countries has the most sophisticated legislation considering EMC.
- Analysis of the communication systems used in the participating countries and selection of the best one.
- Information systems architecture for the freight industry.
- Managing the effects of train architecture and operational parameters.
- Architectural design issues of Euro-Asian railway network.
- System architecture for longer RailCab convoys.
- Organizational and Human aspects of safety at border crossings.
- Analysis of the Human and Social Dimensions of an incident.
- Human Factors in order to improve safety management systems.
- Reduction of the impact of human errors on the railway system.
- Crowd control at stations.
- Organisation and sales of mobility solutions for cargo traffic.
- Dynamic Mobility Applications in Railways.
- Persons with reduced mobility.
- Improved punctuality for passengers through better, quicker communication between driver and signaller.
- Problems of analogue communications systems.
- Wi-Fi on trains.

Complex terrain, poor radio environment, and fast train speed are some of the problems associated with railway mobile communication.

Other.....
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Other.....
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Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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Working Group 6 – Safety and Security

1. Please prioritize the following identified Topics of Interest for the specific WG, with “1” being the most important topic in your opinion:

Rail safety & security systems of European and Asian countries;

Safety certification and authorization in the Europe-Asia Railways;

Technical aspects of railway safety in trans-Eurasian land bridge;

Other.....
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Other.....
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Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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2. Please prioritize the following identified Problems/Issues/Barriers/Needs for the specific WG, with “1” being the most important problem/issue/barrier/need in your opinion:

- Evaluation of the interoperability and safety in the Trans-Eurasian railway corridors, both in terms of existing and newly created.
- Harmonisation of the technical solutions due the rail safety and security.
- Harmonisation/ adjustment of standards/ specifications/ regulations/ rules for rail safety and security, traffic risk assessment and track installations design, dimensioning and construction
- Definition of certification to access the railway infrastructure of different countries.
- Feasibility studies on the various acceptable solutions for the rail certification procedure.
- Description of harmonising/ validation of rail vehicle authorisation.
- Investigation and implementation of Common Safety Methods for traffic safety risk control along the whole Trans Eurasian railway connection.
- Identification of the main elements of the various railway safety policies systems in Europe-Asia countries and comparison in order to analyse the compatibility and harmonisation.
- Assurance of a common railway safety and security policy.
- Implementation of rolling-stock maintenance quality monitoring in all the corridors taking into account railway Traffic Safety Indexes.
- Creation of Common Safety Methods for traffic safety risk control along the whole Eurasian railway connection.
- Formation of common rail safety policy along the European-Asian land-bridge.
- Evaluation of safety and security stage along existing Trans Eurasian railway corridors.
- Feasibility studies on the various alternative solutions for implementation of procedures of rail infrastructure certification and vehicle authorisation.
- Establishment of a common way to estimate/ measure the quantitative impact of the certification on the design, constructional and operational elements of a railway infrastructure.
- Other.....
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Other.....
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Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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Working Group 7 – Environment and Energy Efficiency

1. Please prioritize the following identified Topics of Interest for the specific WG, with “1” being the most important topic in your opinion:

- Energy consumption and energy efficiency of diesel and electrified traction systems;
- Noise and vibration on board and on the ground;
- Influence of weather conditions on railway operation;
- Control of the greenhouse gas emissions on railway transport;
- Comparison of ecological and energy aspects of freight traffic across the Trans-Eurasian land bridge;
- Energy and resource conserving technologies on railway transport;
- Other.....
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- Other.....
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- Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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2. Please prioritize the following identified Problems/Issues/Barriers/Needs for the specific WG, with “1” being the most important problem/issue/barrier/need in your opinion:

Measuring of the level of noise emissions of freight trains that are routed along the Euro-Asia railway corridors;

Establishment of a single legal framework for the noise and vibration emission limits (sound limits in stations and sound limits for wagons’ and engines’ crossing);

Definition of technical specifications for “noise interoperability” for new rail vehicles;

Definition of “noise technical specifications” for rail vehicles that are currently in operation;

Development of a programme for the retrofitting of existing rolling stock;

Searching for new technologies that could reduce railway noise and vibrations;

Other.....
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Other.....
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Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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D4.1: Online Questionnaire

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Working Group 8 – Infrastructure and Signaling

1. Please prioritize the following identified Topics of Interest for the specific WG, with “1” being the most important topic in your opinion:

- Maximum Axle Load;
- Maximum train length;
- Track gauge;
- Maximum train speed;
- Track capacity;
- Rolling stock stating and dynamic gauge;
- Traction system;
- Signalling system;
- Maintenance;
- Other.....
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- Other.....
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- Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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2. Please prioritize the following identified Problems/Issues/Barriers/Needs for the specific WG, with “1” being the most important problem/issue/barrier/need in your opinion:

Block trains of axle-load equal or less than the minimum permitted axle-load along a connection due to incompatibility of axle loads between countries and between segments in the same country.

Block trains of length equal or less than the minimum permitted length along a connection due to incompatibility of train lengths.

Different track gauges comprising the main barrier to interoperability.

Increased travel time due to different permitted speed along the various segments of a corridor.

Saturated track capacity – increase in track capacity considered necessary.

Reduced speed due to different rolling stock static and dynamic gauge.

Interoperability issues arising from different traction systems along a specific corridor.

Interoperability issues arising from different signalling systems along a specific corridor.

Insurance of a common track maintenance policy.

Other.....
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Other.....
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Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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Working Group 9 – Human Factors and Societal Aspects

1. Please prioritize the following identified Topics of Interest for the specific WG, with “1” being the most important topic in your opinion:

- Human-machine interaction;
- Workloads and workflows;
- Interaction with 3rd-parties’ personnel;
- Communication across borders – language barriers;
- Handling of external influences (weather conditions, custom procedures, other delays, theft and other security risks);
- Staff working conditions;
- Specific challenges arising from long distance transport;
- Current forms of international collaboration (e.g. operations, tariffs, technical standards, policy coordination);
- Typology of stakeholders and allocation of roles between them;
- Policy traditions and “styles” of interaction across borders (e.g. impact of general cross-border relations, experiences in other sectors, formal/informal expert communities);
- Importance of rail in national politics;
- Societal attitudes to rail;
- Other.....
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- Other.....
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- Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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2. Please prioritize the following identified Problems/Issues/Barriers for the specific WG, with “1” being the most important problem/issue/barrier in your opinion:

- Establishment of human resources needs along the corridors considering the aging workforce, changing qualifications and depopulation of certain regions.
- Analysis of logistics chains in Euro-Asian transport regarding their processes of establishment and operation.
- Development and testing of new work arrangements and facilities for uninterrupted long-haul operations.
- Possibilities for reducing the need for location-specific knowledge and information.
- Possibilities for harmonizing man-machine interfaces in particular for driving staff, following on from the idea of the “European Drivers Desk”.
- Comparison of the main technical and organizational characteristics of the rail systems for which closer collaboration is envisaged.
- Knowledge of the physical and technical working environment (routes and marshalling yards).
- Establishment of a common knowledge among staff
- Support measures for staff in case of difficulties

- Strong institutional collaboration between companies to support staff across borders
- Political tension and conflicting interests between countries
- Review of past experiences with international collaboration along the corridors and national policy traditions.
- Establishment of expectations towards rail transport in the countries involved, identification of common interests and possible areas of conflict.
- Formulation of a vision (targeted level of service quality, capacity etc) for rail transport in Europe and in the region.
- Regulations on health and safety at work
- Institutional arrangements dealing with cross-border mobility
- Fragmentation of stakeholders and heterogeneity of transport markets
- Other.....
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- Other.....
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- Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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Working Group 10 – Training and Education

1. Please prioritize the following identified Topics of Interest for the specific WG, with “1” being the most important topic in your opinion:

- Comparison of European and Asian rail education systems;
- Harmonization of rail educational standards of Europe and Asia;
- Rail e-learning (in Europe and Asia);
- Using web-technologies and simulators in rail education;
- Gender aspects of rail education;
- Rail labor market (in Europe and Asia);
- Rail clusters (rail educational clusters);
- Development of cooperation between universities and rail industry;
- Creating Eurasian University of railway (network university);
- Harmonization of standards in the development of training courses and e-courses;
- Differences in rail competences needs in Europe and Asia
- Other.....
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- Other.....
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- Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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2. Please prioritize the following identified Problems/Issues/Barriers for the specific WG, with “1” being the most important problem/issue/barrier in your opinion:

- Need for unification/harmonisation of rail education and training standards along Trans-Eurasian railway corridor.
- To define a common EU qualification standard for rail staff and for trainers.
- Support initiatives to develop Dual programmes and Double degree programmes on rail education/training.
- Continue rail system comparisons between Europe and Asia with emphasis on development of a set of metrics along Eurasian land bridge.
- Develop strategies (or roadmaps) for industry on how to develop university/industry collaboration.
- Development of the concept of elimination of gender inequality in the system of rail education and training.
- Support initiatives to create educational web resources in the field of rail transport.
- Running a single virtual rail university to implement the tasks of distance training along Trans-Asian land bridge.
- Support academic mobility of students and researchers between the universities along the Trans-Asian land bridge.
- Development of new rail educational technologies;

Formulation of an action plan for the formation of rail research/educational clusters and networks for support of the development high speed railway connecting between Europe and Asia.

Analysis and evaluation of the existing European and Asian rail education capacities;

Formulation of the strategy (roadmap) for reforming rail labor market in the conditions of rapid development new railway corridors and high speed connection between Europe and Asia;

Implementation of a high standard of rail education between Europe and Asia

Other.....
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Other.....
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Other.....
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Please explain briefly the importance and relevance of your top 3 choices to the EU-Asian landbridge:

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