



*SEVENTH FRAMEWORK  
PROGRAMME  
THEME 7  
Transport including  
Aeronautics*



## **Project NEAR<sup>2</sup>**

### **NETWORK OF EUROPEAN – ASIAN RAIL RESEARCH CAPACITIES**

Coordination and Support Action  
Grant Agreement No: 314254

#### Deliverable D2.3

## **Online Inventory on Capabilities and Competencies**

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Version: \_\_\_\_\_ Final

Date: \_\_\_\_\_ April 2013

Dissemination level: \_\_\_\_ Public

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## PROJECT INFORMATION

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## PROJECT PARTNERS

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No	Name	Short name	Country
1 (coordinator)	Centre of Research and Technology Hellas / Hellenic Institute of Transport	CERTH/HIT	Greece
2	EURNEX e.V.	EURNEX	Germany
3	TECHNISCHE UNIVERSITAT BERLIN	TUB	Germany
4	CESKE VYSOKE UCENI TECHNICKE V PRAZE	CVUT	Czech Republic
5	VILNIAUS GEDIMINO TECHNIKOS UNIVERSITETAS	VGTU	Lithuania
6	Moscow State University of Railway Engineering	MIIT	Russian Federation
7	A-TRANS LLC	A-TRANS	Russian Federation
8	Petersburg State Transport University	PSTU	Russian Federation
9	TONGJI UNIVERSITY	IRRT	China (People's Republic of)
10	EIRC Consulting Private Limited	EIRC	India
11	State Higher Educational Establishment Donetsk Railway Transport Institute of Ukrainian State Academy of Railway Transport	DRTI	Ukraine
12	INSTYTUT KOLEJNICTWA	IK	Poland
13	TRAINOSE METAFORES-METAFORIKES YPIRESIES EPIVATON KAI FORTIOU AE	TRAINOSE	Greece

## DOCUMENT PROFILE

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Abstract: \_\_\_\_\_ D2.3 provides a brief introduction to the online inventory on capabilities and competencies created in the framework of the NEAR2 Project.

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## **EXECUTIVE SUMMARY**

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One of the main goals of the project is to establish a Rail Research Network along the Trans Eurasian Land Bridge. The aim of this Network will be to engage all interested parties, countries and stakeholders, but most importantly the rail research community in a cooperation relevant to railway transport.

The Online Inventory on Capabilities and Competencies presents briefly the Institutions along the Trans-Eurasian Land Bridge that have been contacted and recruited in order to become members of the Network.

The goal of the present document is to briefly present the scope and content of this Online Inventory. The Inventory is currently hosted at the official website of the project, which is accessible through the url [www.near2-project.gr](http://www.near2-project.gr).

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# **1. OVERVIEW OF THE ONLINE INVENTORY**

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## **1.1. The NEAR<sup>2</sup> Rail Research Network**

One of the main goals of the NEAR<sup>2</sup> Project is to build a rail research network along the Trans-Eurasian land bridge and to establish an efficient cooperation among the rail research centers in order to promote railway transport research and development. The NEAR<sup>2</sup> Research Network will exploit 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. NEAR<sup>2</sup> will establish a unique, international (with a special focus along the Trans-Eurasian land bridge), interdisciplinary research capacity with the goal of contributing in advancing a major sector of the regional economy, as well as broadening the knowledge basis of the railway research sector.

In this respect, the Online Inventory of Capabilities and Competencies, presents briefly the Institutions along the Trans-Eurasian Land Bridge that have been contacted and recruited in order to become members of the Network. These institutions have completed a specific questionnaire, providing information on topics of interest, past projects in which they have been involved, as well as their future research priorities and directions. For more information please refer to D2.2 “Data Collection Report”.

The NEAR<sup>2</sup> Network exploits the structure and leverages the achievements of the existing European Rail Research Network of Excellence (EURNEX), along the Trans-Eurasian land bridge. For this reason, the data that was collected from the various institutions that were contacted were categorized in 10 Working Groups, following the categorization of EURNEX in Poles. These WGs are the following:

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 Signaling
9. Human Factors
10. Training and Education

In Figure 1 that follows, the first page of the Online Inventory is shown:



Home | Project | Consortium | Events | Publications | Links | Contact | Workspace | **NEAR<sup>2</sup> Network**

The NEAR<sup>2</sup> project is co-financed by European Commission Directorate General for Research & Innovation as part of the 7th Framework Programme

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[NEAR<sup>2</sup> Network](#)

### The NEAR<sup>2</sup> Network of Rail Research Centres

The ultimate goal of the NEAR<sup>2</sup> Project is to develop a Rail Research Network along the Trans-Eurasian land bridge, drawing knowledge and expertise from leading institutions and researchers from both continents. The aim of this Network will be to examine issues such as new technologies, interoperability solutions and optimized operations, and to assess market needs. NEAR<sup>2</sup> will establish a unique, international, interdisciplinary research capacity with the goal of contributing in advancing a major sector of the regions' economy, as well as broaden the knowledge basis of the railway research and practice. The Project will capitalize upon the existing structure and leverage the achievements of the existing European Rail Research Network, EURNEX, and build upon the reservoir of expertise of the project partners. The Network aims to become the resource arm of the relevant industry. The NEAR<sup>2</sup> Network of Rail Research Centers includes institutions classified in **Working Groups** based on their expertise and according to the 10 EURNEX Poles of Excellence.

Information on all the Institutions, members of the NEAR<sup>2</sup> Network is available in the [D2.2 "Data Collection Report"](#)

#### THE 10 WORKING GROUPS

Pole	Topic
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

**Figure 1:** The NEAR<sup>2</sup> Online Inventory on Capabilities and Competencies

## 1.2. Structure of the Online Inventory

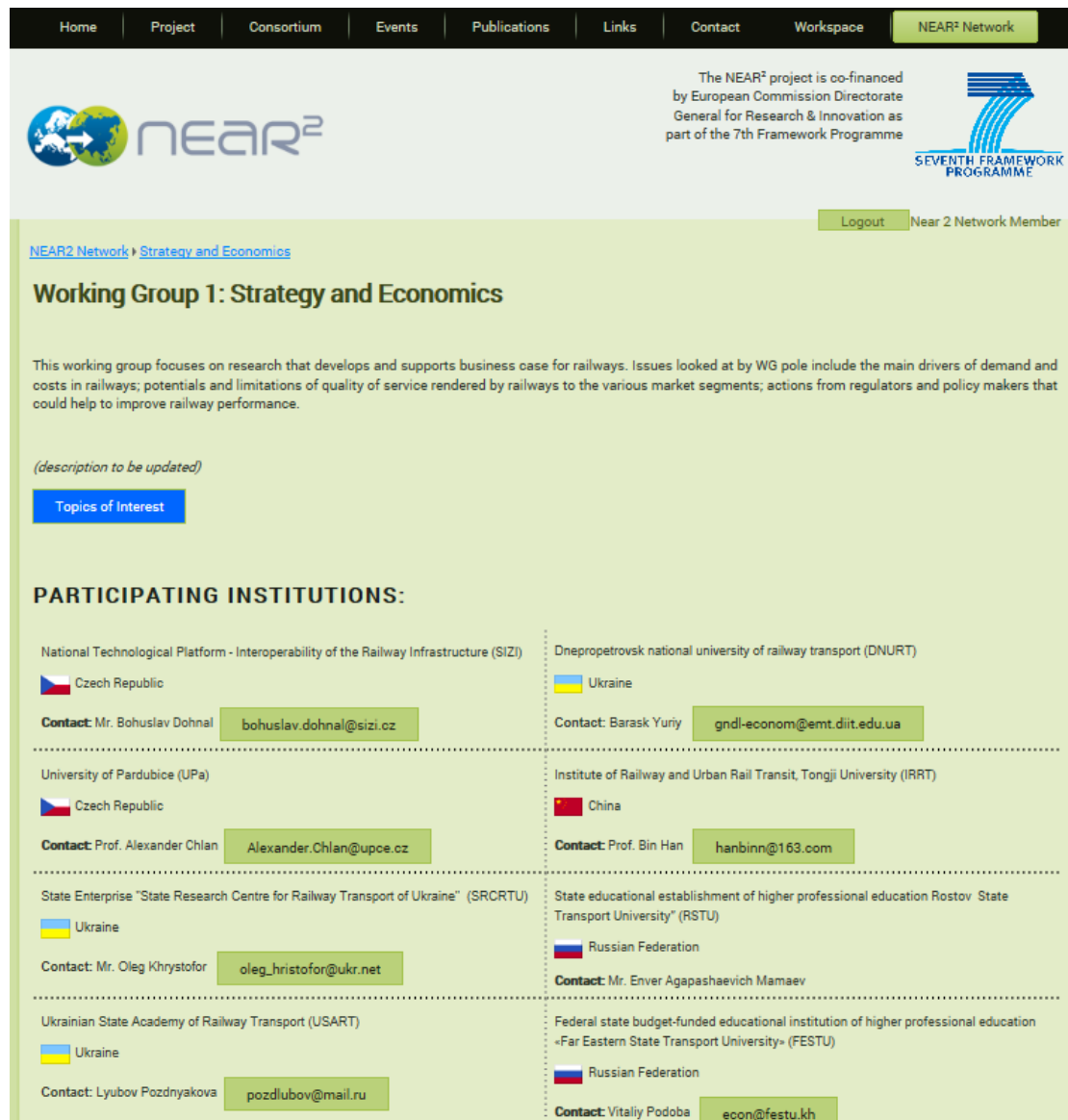
The Online Inventory is currently hosted at the NEAR<sup>2</sup> website. In order to access it, the user needs to enter the website ([www.near2-project.eu](http://www.near2-project.eu)) and click on the relevant tab (NEAR<sup>2</sup> Network). Given that currently the Inventory is under construction, the rest of the pages, apart from the Home Page, are password protected. Only the project partners are currently granted access to all the available information.

Once the Inventory has been finalized, all the information will be made available to all interested parties.

In order to proceed to the next pages, the user needs to click on the Working Group of interest. Once the relevant WG has been accessed the following information is available:

- Brief description of the Working Group
- Participating Institutions: A list of the institutions with relevant experience in the specific Working Group is provided, along with a contact person and his or her email.
- Topics of interest per institution in relation to the specific Working Group.

In Figure 2 and in Figure 3 that follow, the introductory page of Working Group 1 and the table with the topics of interest are provided respectively:



Home | Project | Consortium | Events | Publications | Links | Contact | Workspace | **NEAR<sup>2</sup> Network**

The NEAR<sup>2</sup> project is co-financed by European Commission Directorate General for Research & Innovation as part of the 7th Framework Programme

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[NEAR<sup>2</sup> Network](#) > [Strategy and Economics](#)









## Working Group 1: Strategy and Economics

This working group focuses on research that develops and supports business case for railways. Issues looked at by WG pole include the main drivers of demand and costs in railways; potentials and limitations of quality of service rendered by railways to the various market segments; actions from regulators and policy makers that could help to improve railway performance.

*(description to be updated)*

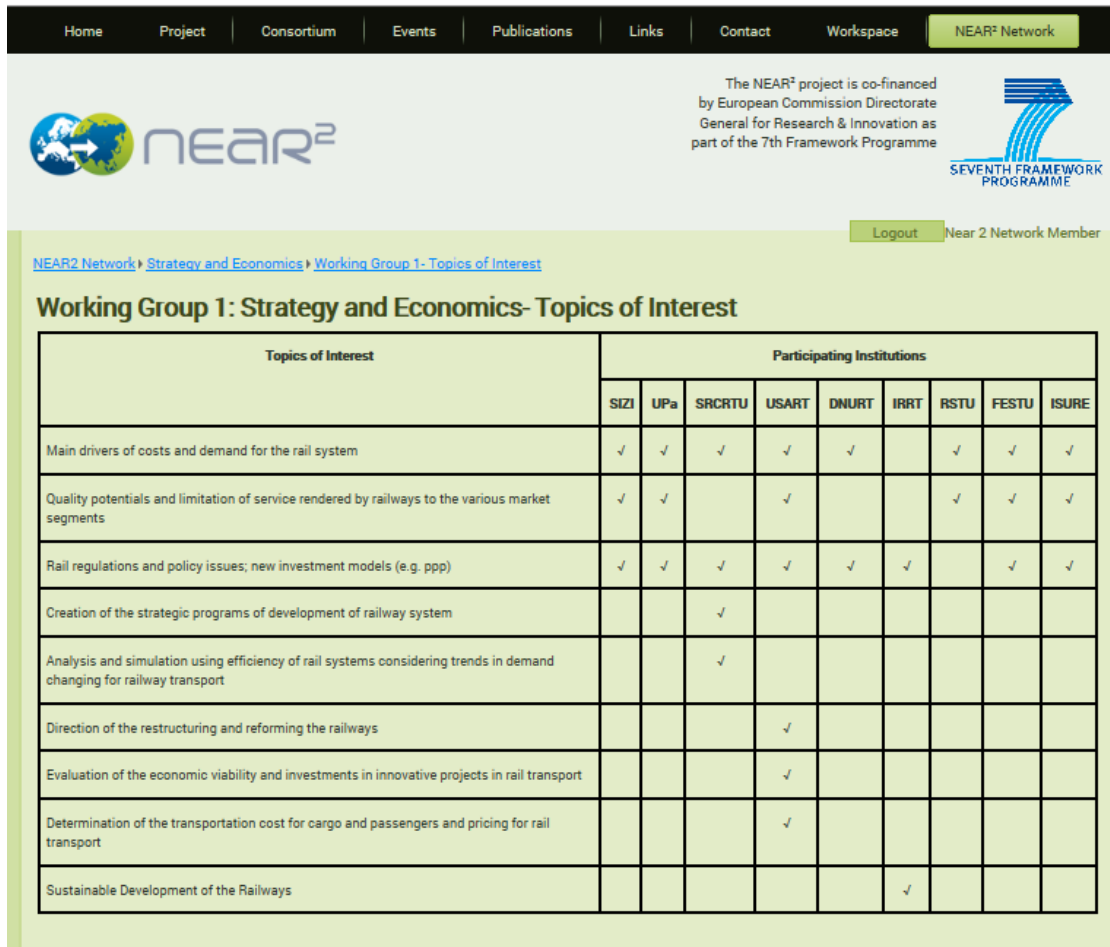
[Topics of Interest](#)

### PARTICIPATING INSTITUTIONS:

<p>National Technological Platform - Interoperability of the Railway Infrastructure (SIZI)</p> <p> Czech Republic</p> <p>Contact: Mr. Bohuslav Dohnal <a href="mailto:bohuslav.dohnal@sizi.cz">bohuslav.dohnal@sizi.cz</a></p>	<p>Dnepropetrovsk national university of railway transport (DNURT)</p> <p> Ukraine</p> <p>Contact: Barask Yuriy <a href="mailto:gnd-econom@emt.diit.edu.ua">gnd-econom@emt.diit.edu.ua</a></p>
<p>University of Pardubice (UPa)</p> <p> Czech Republic</p> <p>Contact: Prof. Alexander Chlan <a href="mailto:Alexander.Chlan@upce.cz">Alexander.Chlan@upce.cz</a></p>	<p>Institute of Railway and Urban Rail Transit, Tongji University (IRRT)</p> <p> China</p> <p>Contact: Prof. Bin Han <a href="mailto:hanbinn@163.com">hanbinn@163.com</a></p>
<p>State Enterprise "State Research Centre for Railway Transport of Ukraine" (SRCRTU)</p> <p> Ukraine</p> <p>Contact: Mr. Oleg Khrystofor <a href="mailto:oleg_hristofor@ukr.net">oleg_hristofor@ukr.net</a></p>	<p>State educational establishment of higher professional education Rostov State Transport University" (RSTU)</p> <p> Russian Federation</p> <p>Contact: Mr. Enver Agapashaevich Mamaev</p>
<p>Ukrainian State Academy of Railway Transport (USART)</p> <p> Ukraine</p> <p>Contact: Lyubov Pozdnyakova <a href="mailto:pozdlubov@mail.ru">pozdlubov@mail.ru</a></p>	<p>Federal state budget-funded educational institution of higher professional education "Far Eastern State Transport University" (FESTU)</p> <p> Russian Federation</p> <p>Contact: Vitaliy Podoba <a href="mailto:econ@festu.kh">econ@festu.kh</a></p>

**Figure 2:** Introductory page of Working Group 1: Strategy and Economics”





The screenshot shows the NEAR2 Network website interface. At the top, there is a navigation menu with links: Home, Project, Consortium, Events, Publications, Links, Contact, Workspace, and NEAR<sup>2</sup> Network. Below the navigation, the NEAR<sup>2</sup> logo is displayed on the left, and text on the right states: "The NEAR<sup>2</sup> project is co-financed by European Commission Directorate General for Research & Innovation as part of the 7th Framework Programme". To the right of this text is the logo for the SEVENTH FRAMEWORK PROGRAMME. A "Logout" button and "Near 2 Network Member" text are visible in the top right corner.

The main content area is titled "Working Group 1: Strategy and Economics- Topics of Interest". Below this title is a table with the following structure:

Topics of Interest	Participating Institutions								
	SIZI	UPa	SRCRTU	USART	DNURT	IRRT	RSTU	FESTU	ISURE
Main drivers of costs and demand for the rail system	✓	✓	✓	✓	✓		✓	✓	✓
Quality potentials and limitation of service rendered by railways to the various market segments	✓	✓		✓			✓	✓	✓
Rail regulations and policy issues; new investment models (e.g. ppp)	✓	✓	✓	✓	✓	✓		✓	✓
Creation of the strategic programs of development of railway system			✓						
Analysis and simulation using efficiency of rail systems considering trends in demand changing for railway transport			✓						
Direction of the restructuring and reforming the railways				✓					
Evaluation of the economic viability and investments in innovative projects in rail transport				✓					
Determination of the transportation cost for cargo and passengers and pricing for rail transport				✓					
Sustainable Development of the Railways						✓			

Figure 3: Topics of Interest for Working Group 1

### 1.3. Membership

The institutions that have completed the questionnaire and have been included in the Online Inventory are potential members of the NEAR<sup>2</sup> Network.

The institutions that are suitable candidates to become members of the Network will follow the EURNEX procedures, meaning that their accession to the Network will be discussed during the EURNEX Advisory Board meeting and will be finally approved by the EURNEX Assembly.

Currently, information on 18 Institutions from 6 different countries (Russian Federation, China, India, Ukraine, Czech Republic and Lithuania) is provided through the inventory.

## **1.4. Roles and Responsibilities**

- NEAR<sup>2</sup> Network manager: CERTH/HIT
- Network Information and Contributions: All partners
- Date (inventory started running): March 2013
- Date (web-site updating): From March 2013 until the end of the Project.