

**TEM and TER Joint Expert Meeting**  
*6-11 October 2013, Bad Gastein/Austria*

**R E P O R T**

1. The UNECE TEM and TER Joint Expert Meeting, organized by the UN Trans-European North-South Motorway (TEM) and Trans-European Railway (TER) Projects with the support of the Austrian Federal Ministry for Transport, Innovation and Technology was held on 6 – 11 October 2013 in Bad Gastein, Austria.
2. Representatives and experts from Azerbaijan, Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Germany, Poland, Romania, Russian Federation, Serbia, Slovakia, Slovenia and Turkey as well as the UNECE representatives, TEM and TER Project Manager and the UNECE consultant took part in the workshop. The list of participants is attached to this report as its Annex 1.
3. Mr. H. Meelich, the TEM and TER Project Manager, opened the workshop and acted as its Chairman.
4. Mr. J. Kleniewski, the Polish TER National Coordinator and outgoing Chairman of the 34<sup>th</sup> session of the TER Steering Committee, presented to the TER National Coordinators the final version of the report on that session, which was by them approved.
5. Mr. G. Bessonov, the Secretary General of the International Association Coordinating Council for Transsiberian Transportation (CCTT) and candidate for the position of the TER Project Manager from January 2014, delivered his presentation, dealing with the continuation and development of the TER Project in the years to come and promoting the European integration and railway co-operation.
6. Mr. A. Zimmer, the Competitive Manager of the Rail Cargo Austria AG and candidate for the assignment as the TER Deputy Project Manager, presented his ideas with regard to the main courses of development of the Project, stressing inter alia also the solution of cross-border problems and interoperability of railways.
7. Prof. W. H. Steinecke, CEO and Secretary General of EURNEX e.V. (Germany) introduced to the meeting the Smartrail (Smart Maintenance and Analysis of Transport Infrastructure) project, aimed at reduction of replacement costs and delays and at provision of environmentally friendly maintenance solutions, to be further developed in the framework of the 2014 – 2020 Programme for Research and Innovation within the Europe 2020 strategy.

8. Mr. S. Eisenbach of the UBIMET GmbH informed the participants about the weather forecast and warning systems developed by the company. The railway weather service was founded in 2004 and includes up to 250 000 weather zones. Supporting his presentation by best practice examples, he also described the future planned activities of the company to deal inter alia with climate change, trans-border weather information, forecasts for switch points, blowing snow and ice/frost analyses using ice detection sensors.
9. Mr. P. Pospisil, the UNECE Consultant, presented the documents and information related to the 4th Meeting of the Joint TEM and TER Rail and Road/Motorway Follow-up Expert Group, namely:
  - Final Integrated Report on Comparison of the Revised TEM and TER Master Plan Backbone Networks with the EU Core Network, UNECE AGR and AGC Networks and with the Euro-Asian Transport Links;
  - 2013 Progress Report on Results of Monitoring the implementation of the TEM and TER Master Plan Revision in 2012;
  - TEM and TER Master Plan Revision Follow-up Programme of Work for 2014 and
  - TEM and TER mapping activities,which were endorsed by the participants.
10. Mr. W. Zottl, Head of Research & Development Department of the OeBB-Infrastruktur AG, described the main goals of the research strategy of the Infrastruktur AG as well as sources of its funding. At present, there are about 60 research projects regarding rail infrastructure underway or planned, among them e.g. Pilot Initiative VIF 2011, climate change effects, Blick-EK (railway crossings), transition curve Wiener Bogen, ARGOS system of train monitoring, etc.
11. Mr. K. Alexopoulos, Secretary of the Rail Secretariat of the United Nations Economic Commission for Europe, delivered the presentation on the UNECE Transport Division's activities aimed at adaptation of transport networks to the climate change. The publication, summarizing the findings of these activities and containing also the respective recommendations to Governments, would be available early in 2014
12. Mrs. M.-S. Fouvez, the Regional Adviser of the UNECE Transport Division, informed the meeting about the UNDA project on measurement and mitigation of transport sector emissions, which was started in 2011 and would terminate at the end of 2013. In its framework, the ForFITS modelling tool, capable to assist users in selection of the most effective measures to reduce CO<sub>2</sub> emissions is being developed and would be freely available to users.
13. Mr. A. Koler, Head of Department of the alpS GmbH company, provided information about the alpS Centre for Climate Change Adaptation and its activities aimed at technological and strategic adaptation to the local impacts of this change. He briefly described some of the alpS research projects, such as CCID (impact detection tool), MOREXPART (monitoring rockfall and

permafrost), HoPI (flood forecasting) and ProMM (analyses and modelling of landslides).

14. Mr. A. Laveglia of the Permanent Secretariat of the Alpine Convention, described in his presentation briefly the history of the Convention, founded by 8 countries in 1991 and having the Permanent Secretariat established in 2003. He further summarized the Convention's main tasks and achievements, namely the Climate Action Plan, approved in Evian in 2009, containing strategic framework of actions, 2004 PLANALP platform aimed at development of common strategies dealing with natural hazards and the Transport Protocol, signed in 2000 and ratified by the European Commission in 2006, which entered into force in September 2013. The Permanent Secretariat also issues regular reports on the state of the Alps.
15. Mr. G. Konzett, International Organizations Manager of Kapsch TrafficCom AG, reported on the activities of the company in the wide area of ITS. The company sees potential to fix budgetary gaps in communal road infrastructure maintenance by entitling cities and local communities to levy charges for the use of their road infrastructure. This, however, would require an international regulative framework which is not in place yet. In order to replace distortionary taxes and subsidies with fair pricing, Kapsch TrafficCom AG further supports a coherent application of the "user- and polluter pays" principles and distance-based charging for all types of vehicles
16. The representatives of Turkish State Railways (TCDD), Mr. I. Duman, the Deputy Director General, Mr. A. Kilicaslan, Deputy Head of Foreign Relation Department and Ms. H. Akgun, the Officer of this Department, provided the participants with the information about the programme of high speed rail investments in Turkey, which commenced in 2003. Two high speed lines are in operation (Ankara – Eskisehir and Eskisehir – Konya) and further three under construction (Ankara – Sivas, Bursa – Yenisehir and Ankara – Izmir). They also mentioned other very important non-high speed projects, such as Marmaray in the Istanbul area, Tbilisi (Georgia) – Kars and TCDD ferry line Samsun – Kavkaz (Russian Federation). Their presentation was supplemented by the short film produced by the TCDD.
17. Mr. A. Horhager, the former Head of JASPERS Office Vienna, dealt in his presentation on financing of infrastructure with the basic principles of funding capital investments in railways and kinds of financial funds available, such as own ones, equity-type, loans, bonds and grants/subsidies. He also briefly described the evaluation criteria for projects by type of stakeholder – financial, environmental, technical and socio-economic, illustrating their application on the example of the study of the railway line Szeged – Kikinda - Timisoara. He further informed of the requirements of the EU structural funding 2014 – 2020, in the framework of which the common strategic framework, partnership contract and operational programme for each country have to be defined. In this connection, he also presented the first example of usage of the Project Bonds, approved in July 2013 for the gas storage facility in Spain.

18. Ms. L. Kuznetsova, Head of Division of International Cooperation Department of JSC "Russian Railways" informed the participants about the programme of construction of a network of Ultra-High Speed rail lines in Russian Federation. This programme envisages the construction of 4 200 km of lines having a design speed of 350 – 400 km/h. In addition to the Moscow – St. Petersburg line, it contains also the 770 km long Moscow-Nizhny Novgorod – Kazan stretch, reducing the travel time from more than 14 hours to 3 hours 30 minutes. This project represents the biggest construction order in Russian history. The line is expected to be constructed in 4 years and be put in operation in 2018.
19. Mr. Mucahit Arman, Turkish TEM National Coordinator and Head of Strategic Development Department of the General Directorate of Turkish Highways, presented the general overview of the road network of the country, the total length of which amounts to 65 611 km, out of which 2 244 km represent motorways. Road infrastructure investments increased from 0.4% of GDP in 2003 to about 0.9% in 2011. He further described the main road infrastructure projects under construction: Istanbul – Izmir motorway (421 km, 6.3 billion USD), North Marmara motoway incl. the 3<sup>rd</sup> Istanbul/Bosphorus Strait suspension bridge (95 km, 2.5 bill. USD) and the Sabuncubeli tunnel near Izmir. In 2023, the total length of the motorway network in Turkey will increase to 7 827 km and the length of dual carriageway roads will reach 36 827 km.
20. Mr. R. Moser, Head of Strategy, International Relations and Innovation department of ASFINAG (Autobahnen- und Schnellstrassen- Finanzierungs- Aktiengesellschaft), introduced this stock company, fully owned by the Republic of Austria and responsible for construction, maintenance, operation and traffic management of motorways of the country, measuring 2 178 km. The company is fully financed by tolls, which represent the stable revenue source. In 2012, the net profit of the company reached EUR 417 million and its strategy for the future is aimed at keeping a balance between increasing costs and revenues. The present construction projects include the A5 motoway section Schrick – Poysbrunn (25 km, 320 mill. EUR, to be opened in 2017), S10 expressway section Unterweikersdorf – Freistadt Nord (22 km, 690 mill. EUR, 2015) and second tube of the Karawanken tunnel (5 km, 239 mill. EUR, 2019). The average cost of motorway construction in rural areas amounts to about EUR 10 – 25 mill./km, in cities and agglomerations to EUR 60 – 80 mill./km.
21. Mr. G. Hrebicek, President of iconvienna, the European Business & Investment Forum, reported on the activities of the Forum, which is involved inter alia in East-West co-operation (Conference on Infrastructure, Summit on Innovation and Smart Cities) and which organized the 9th European Business and Investment Forum in Vienna in April 2013, which event was also documented by a short film presentation. The 10th Forum will be held again in Vienna on 9 – 11 April 2014.
22. Mr. E. Petteln, CEO of the Dexwet International AG, provided the participants with the information about the company and its filter innovation

technology for rail infrastructure. Dexwet International was founded in 2002 and consolidated as a marketing company in 2011. The innovated filters produced are highly flexible, fully recyclable and effective (absorbing more than 95% of macro-, micro- and nano-dusts). The company also produces ATM, office, pharma and gaming machines.

23. Mr. W. Leindecker, Head of Division of the Kapsch TrafficCom AG, introduced 4 business areas of the Division – public operators, railways, public transport and machine networks. With respect to the railway telematics field, he drew the attention of the participants to the most interesting applications, such as wagon monitoring solutions, monitoring of switch heating, geofence alert and parking lot management.
24. Mr. Th. Höckner, Head of Asset Management of the OeBB-Infrastruktur AG, informed the meeting about 3 business objects of the Business Unit Energy i.e. the traction power supply, energy supply of operational facilities and energy services. The OeBB-Infrastruktur Energie - Asset Services owns eight 16.7Hz hydroplants and two 50Hz plants. Austrian railways are very energy efficient compared to the road and air transport, seek further innovations and are ready to share their knowledge with the other European railways.
25. Mr. D. Brunnengraber, Chairman of Management Board/CEO of the Symeo GmbH, provided the information of the company's Position Detection and Data Transfer for Railbound and Free Ranging Vehicles system, which could serve not the trains only, but also trucks, containers, locomotives and public transport. The system uses for position measurements the Global Navigation Satellite System as well as Local Positioning Radar indoors and can be also used for measuring railways' energy consumption.
26. Mr. E. Possegger, Business Area Leader of Terminal Service Austria (TSA) of the OeBB-Infrastruktur AG, operating 8 intermodal container terminals handling about 740 000 containers/year, explained the functioning of the simple GPS-based system of containers' identification and location. The next development steps of the TSA would include an improvement of existing terminals' infrastructure, improvements of terminal management systems and optimization of terminal processes, based on positioning information.
27. As an integral part of the meeting, the technical visit to the OeBB hydroelectric power systems in Stubachtal including the excursion to Uttendorf/Weisssee Rudolfshuette, inspection of the Powerstation Enzingerboden and of the Tauernmoos water supply dam, took place.
28. At the end of the meeting, Ms. A. Rossler, the Deputy Governor of the County of Salzburg, responsible inter alia for the territory planning, protection of environment, nature and national parks, expressed her pleasure of hosting the meeting in the County and greatly appreciated the high professional level of presentations delivered.

29. The Polish representative, Mr. J. Kleniewski, speaking on behalf of all the participants in the meeting, expressed their special gratitude to the Austrian Federal Ministry for Transport, Innovation and Technology, to the County of Salzburg and to the TEM and TER Project Manager, Mr. H. Meelich, for hosting the meeting as well as for its outstanding organization.

Annex: 1