

ERA-NET TRANSPORT – paving the way for joint European transport research

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1 INTRODUCTION

Spatial planning is the horizontal discipline in Europe which regulates spatial developments, on different geographical levels, particularly concerning the human basic needs and basic functions – housing, labour, leisure and transportation. The field of long term and short term challenges as well as different complementary approaches, like bottom-up and top-down approaches pose a heavy but interesting challenge for scientists, planners and civil servants who work in this field.

One of the relevant fields of research concerning spatial planning is mobility and transport research. Within the Sixth Framework Programme for Research and Technological Development (FP6) of the European Commission mobility and transport research is a major topic. Furthermore a new instrument of European research policy the ERA-NET scheme is heading towards the coordination of national research policy activities (e.g. Transport research funding programmes).

Real models – unreal world! This real ERA-NET TRANSPORT (ENT) initiative actively participates in framing the future transport and mobility research. Spatial planning will be effected by the outcome of research projects funded by future coordinated and cooperating national transport research activities between European member states over the short-term and medium-term, referring to prospective mobility research, infrastructure and vehicle technologies development or research in transport infrastructure capacity management -planning and -administration.

2 THE EUROPEAN RESEARCH AREA AND THE ERA-NET SCHEME

Europe has a long-standing tradition of excellence in research and innovation, and European research teams continue to lead progress in many fields of science and technology. However, the centres of excellence are scattered across the continent and all too often their efforts fail to add up in the absence of adequate networking and cooperation. In the past, collaborative actions have been initiated at European and Community level, but now is the time to bring our endeavours together and to build a research and innovation equivalent to the “common market” for goods and services. That structure is called the European Research Area (ERA) and is regrouping all Community supports for the better coordination of research activities and the convergence of research and innovation policies, at national and EU levels.²

The European Research Area’s core message is the need to overcome the traditional fragmentation of national research efforts in the EU through better coordination and cooperation to build a research and innovation equivalent to the “common market”. Therefore the Sixth Framework Programme for Research and Technological Development (FP6) launched a specific programme “Integrating and Strengthening the European Research Area” within the ERA-NET Scheme is financed.

The ERA-NET Scheme is about the coordination and cooperation of national and regional research programmes in Member States and Associated States, in any field research. As such it aims to bring together research programme managers at the national and regional policy level, who are either working in the Ministries or in funding agencies and are implementing programmes on behalf of the public administration. The main objective of ERA-NET is to step up the networking and foster the implementation of joint national and regional research programmes by pooling scattered human and financial resources. The idea is to improve the efficiency and effectiveness within the ERA.

3 ERA-NET TRANSPORT IN GENERAL

3.1 The policy goal

ERA-NET TRANSPORT is set up for the period 2004-2007 with the objective to strengthen the European scientific base and to support the structuring of the European Research Area within transport research. It is focusing transport research covering all transport modes, geographical scales (nationally and regionally) and thematic range of transport research.

The long-term vision, also beyond the project period, is to improve the outcome of transport research activities in terms of quality, efficiency and effectiveness. The vision behind ERA-NET TRANSPORT can be described as a coordinated and cooperative European framework for transport research policy, where regional, national and European organisations coordinate, cooperate or even integrate their activities, on a voluntary basis, in line with their respective sovereign competencies and interests.

The framework shall be designed to offer benefits to transport research programmes at the different levels, offering various possibilities for cooperation between programmes all the way to joint research programme design and mutual opening of existing programmes. The conceptual framing – the thematic areas, the policy instruments, the combination of funds and the participation of different countries – are not defined yet. Guidelines for establishing proper procedures heading towards successful joint research activities will be recommended and tested by ENT to bring forward this vision of future transport research programming in Europe. This means the opening up of national research programmes to participate in the development of a joint vision, joint procedures, joint programming and joint project management in the field of transport research.

² European Commission, http://europa.eu.int/comm/research/era/index_en.html, Dec. 2004.

3.2 The consortium

Cooperation in transport research policy in Europe is already taking place in several ways, like in the EU framework programme, and other policy networks of transport research organisations and actors that supports research cooperation.

However, the focus of ERA-NET TRANSPORT is to support and coordinate research activities between the Transport, Technology, Innovation, Science and Research Ministries and research programme management organisations of the EU member states. With its activities ENT brings together all relevant players in the field of transport research policy like public and non-public authorities, funding bodies, technology agencies and research institutions.

The consortium originally consisted of 11 partners from 9 European countries, but actually, after the first enlargement procedure at the beginning of 2005, it comprises 13 partners from 11 countries. These are namely Austria (The Austrian Federal Ministry for Transport, Innovation and Technology (bmvit), Unit III/17 - Mobility and Transport Technologies), Belgium (The Federal Public Planning Service Science Policy), Finland (The Ministry of Transport and Communications), France (The Ministry of infrastructure, transport, housing, tourism, and the sea (METLTM/DRAST) and Institut des sciences et des techniques de l'équipement et de l'environnement pour le développement (ISTED)), Germany (The Federal Ministry of Education and Research (BMBF) and TÜV-Akademie Rheinland GmbH), Netherlands (The Ministry of Transport, Public Works and Water Management), Norway (The Ministry of Transport and Communications), Sweden (The Swedish Agency for Innovations Systems (VINNOVA)), United Kingdom (The Department for Transport), Poland (The Ministry of Scientific Research and Information Technology) and Denmark (The Ministry of Transport).

The pre-requisite for participation for the partners was the existence of national transport research programmes or for the new member states existing transport research activities. In the case of Austria it is the transport research and transport technology research programme "Intelligent Transport Systems and Services (IV2S)", which is planned for the time period of 2002-2006. This national programme is donated with about 35.000 T€ and divided into three sub-programmes, namely the A3-programme (Austrian Advanced Automotive Technology), the I2-programme (Intelligent Infrastructure) and the ISB-programme (Innovative System Railway). A3 aims to improve the competitiveness of the automotive supply industry by the promotion of cooperative research and development projects and to create new knowledge towards zero-emission vehicle technology. I2 aims to support Austrian enterprises in the development and testing of system-integrated transport Telematics applications. The range of projects goes from intelligent transport systems (ITS) to transport related intelligent infrastructure projects. ISB aims to increase the efficiency and attractiveness of strategically important fields in the railway sector of Austria. Due to these transport research related and development funding programmes Austria has the possibility to structure the future coordination and cooperation models, guidelines and procedures as well as topics very actively. The future impacts of the ERA will be noticeable firstly on the national transport related research scene and industry and secondly on the regional, national or European choices of location, for example of the automotive, rail or Telematics industry or supplying industry and SME's. Furthermore IV2S has a strong focus on mobility and transport research financing in the above mentioned sub-programmes, not only R&D, but also research studies concerning problem solutions for specific topics in transport.

4 STATE OF THE ART OF THE DIFFERENT WORK PACKAGES

ENT consists of 6 work packages which are separated by the different tasks which are the "development of model procedures and rules", the "identification of areas for cooperation", the "implementation of coordination and cooperation mechanisms", the "dissemination" of results, the "coordination of network activities" and the "contract and consortium management".

4.1.1 Development of model procedures and rules (WP1)

The aim of this work package is to create a framework for joint European transport research policy. It will provide analyses of different national transport research programmes and set up criteria for cooperation which will lead to guidelines for possible cooperation mechanisms between national or regional transport research programmes. The unit Mobility and Transport Technology (Abt. III/17) of the bmvit is responsible for this first work package. The work package leader is Dr. Andreas Dorda.

As a first overview WP1 drafted a report³ of actual patterns and mechanism of cooperation in national transport research policy concerning especially political and institutional activities. It consists of two main parts, firstly the country descriptions of Austria, Belgium, Denmark, Estonia, Finland, France, Germany, the Netherlands, Norway, Poland, Sweden and the United Kingdom, in terms of a comparative benchmarking, and secondly the collection of key-player diagrams, which show the major national key-players involved in the several described transport research programmes.

For this overview the model of the policy circle is used as a structural element. The applied policy circle describes three main periods and outlines six stages in a circular policy process:

1. *Policy formulation* (= policy description and policy determination).
2. *Policy realisation* (= policy implementation and policy dissemination).
3. *Policy learning* (= policy evaluation and policy monitoring).

The period of *policy formulation* is significant for setting direction and for policy orientation. At the policy description stage, e.g. visions, political agendas and overall political goals are set up, while at the policy determination stage detailed target setting and strategic planning is conducted.

³ Kropf H., Seibt C.: 2004.

In the *policy realisation* period the implementation of research programmes and the dissemination of the research outcomes is central. At the policy implementation stage e.g. research programming modalities and research topics are defined and funding models and budgets are negotiated. At the policy dissemination stage research results should be published and distributed in a comprehensive knowledge transfer and a wide information diffusion process.

The *policy learning* period refers to the fact, that policy processes are non-deterministic but complex. At the policy evaluation stage research programme and project results are assessed concerning the program or project objectives. Or at the policy monitoring stage, policy performance and societal aspects are assessed along the process. The outcomes are addressed to the policy formulation period.

The competencies of the ministries and funding organisations are lined out and the formal and informal cooperation procedures are described. For example at the policy formulation period mainly the ministries are in charge involving several stakeholders from diverse institutions in “new modes of governance” while in the policy implementation and dissemination stage (=policy realisation) in most European countries funding bodies and research agencies play a major role, although the ministries hold the main responsibility. The dissemination stage does nearly not exist in the most member states. The policy learning period refers to the idea of a reflexive policy process which passes back experiences and results from the ongoing policy initiatives to the development of future policy activities.

4.1.2 Identification of areas for cooperation (WP2)

The second work package has to develop a shared perspective for European transport research and has to identify the research topics for cooperation and integration. Therefore trends in the demand for transport research in the longer term and possible areas for cooperation are identified in the first report⁴. The Dutch colleagues from the Ministry of Transport, Public Works and Water Management and the Transport Research Centre (AVV) are in charge of this work package.

The “transnational transport research roadmap” identified 6 possible research areas for cooperation, which are based on analysis of 235 available transport research programmes. These areas have been separated into 48 specific fields. These six areas for transport research are identified in a negotiation process in the ENT consortium. The identified major areas are namely “Economic benefits through integration, interoperability and intermodality”; “Efficiency improvements through transport and infrastructure management”; “Efficiency improvements through intelligent transport systems”; “Economic benefits through pricing and taxation”; “Environmental improvements through vehicle technology” and “Safety and security improvements through transport and infrastructure management”.

Based on these consultation and the first results of a Delphi survey concerning transport research technologies, further analyses, explorative workshops and policy seminars will be carried out and organised.

4.1.3 Implementation of coordination and cooperation mechanisms (WP3)

The main aim of this work package is to set the conditions and to provide the support for the implementation of coordination and cooperation activities. The guidelines, procedures and criteria provided by WP1 and the identified transport research areas and reports provided by WP2 are the bases for the implementation of joint activities for trans-national transport research programmes. In targeted workshops (TWS) the most promising research topics will be determined heading towards joint activities. The first research cooperation topic was based on workshop results of the *European Platform for Transport Research (EPTR)*, which organised several workshops among programme managers and policy makers in 2003 and 2004. The first chosen research topic was “ITS and reliability of passenger transport”, which will lead to the first joint activities in European transport research.

5 JOINT ACTIVITIES OF NATIONAL TRANSPORT RESEARCH POLICIES

ERA-NET TRANSPORT deals with the entire transport research policy circle. That means it deals with the strategic policy level, the programme development and implementation level and the project level in transport research.

On each stage of the transport research policy circle cooperation is actual possible. ENT specifically focuses on the policy implementation stage (transport research programming process). For appropriate coordination activities at the policy implementation stage five levels of cooperation are identified.

The 5 levels of cooperation are:

Exchange of information (knowledge exchange) on policy objectives and goals as well as research programmes and projects, research results are exchanged openly (e.g. at conferences, workshops or via the Internet), as well as information on programme structures and programming mechanisms.

Joint project definition and clustering, the projects remain independent and financed by national sources, but common goals and a common approach are defined in order to integrate the project results.

Joint projects, joining the activities in one project with one management and one budget.

Joint programme implementation, National programmes or part of such are coordinated in time and modalities. The outcome can be joint projects or pure national projects. All researchers are funded from their own country.

Joint programming, research areas, modalities and a financing model are established among the participating countries. A joint call is carried out and the best research proposals will be financed

Due to the fact of diverse national transport research policies and research funding systems in Europe many barriers (legal, financial, administrative etc.) may and will occur and have to be taken seriously into consideration defining criteria for trans-national transport

⁴ Halbesma S.: 2004.

research. The formulation of these criteria will need detailed preparation heading towards acceptable guidelines. ERA-NET TRANSPORT defined the highest level of cooperation – as the ultimate ambition – namely the creation of multi-lateral transport research funding programmes with joint calls, joint evaluation procedures and a common funding budget by the end of the five year period.

For further information regarding ERA-NET TRANSPORT please visit the webpage www.transport-era.net.

6 SOURCES

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