

EURNEX of 17

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TNE3-CT-2003-506513

EURNEX

EUropean Rail research Network of EXcellence

SIXTH FRAMEWORK PROGRAMME

PRIORITY 1.6.2: SUSTAINABLE SURFACE TRANSPORT

Pole Action Plan

Pole 1 Strategy and Economics

Date of preparation: 15 April 2005

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Version: V4 (28.07.2005)

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Pole Action Plan: Pole1 Strategy and Economics

1 Objectives of the pole

- Are there amendments to be made towards the available description of the poles?

To promote research which develops and supports a business case for railways; including understanding:

- The main drivers of demand and costs
- The potentials and limitations of quality of service rendered by railways to the various market segments
- What actions from regulators and policy makers would most help in improving railway performance?

(Note that, whenever we refer to “railways” we mean the rail system as a whole, including supplier industries. When we refer to performance we include all aspects of performance, economic, environmental and social.

This is a very ambitious agenda that addresses the Pole objectives from a point of view in which it is recognised that railways in general presently are in a very difficult situation.

2.3 Organisation of research of the pole

Groups of Projects

We have already brought forward a number of research proposals, which together cover all the themes of the pole. These are listed below, with the name of the leader of the proposal. A number of these have already been submitted, to the advisory board, with the outcome shown.

Grouping of project according to the pole decision at the meeting on 06 May 2005 in Brussels. A complete list of the Pole 1 projects please find in Chapter 5 "Projects towards Business case".

Research Proposals Overall Business Case

- Rail 2050 * (FAV)
- Survival by Specialisation (FAV)
- Strategic plan for competitiveness (CERT)
- Observatory of railway performance (UPM)

Demand Passenger

- Passenger Behaviour (INRETS)
- Europe wide experience ** (Leeds)
- Intermodal links for long distance passenger * (IST)

Freight Demand

- Freight Transport Chains (INRETS)
- Europe-wide experience ** (Leeds)
- Dangerous goods by rail (CERT)

Costs and Service Quality

- Operations on Secondary Lines (DLR)
- Harmonisation and Migration Processes (DLR/UPM)
- Benchmarking of Costs (Leeds).

Regulation and Policy

- CBA of noise reduction (FAV)
- Public participation (INRETS)
- Capacity Management (TFK)
- International transport corridors (TUB)
- Setting standards (TUB)
- Evaluating alternative organisational structures * (Leeds)

* Rated Green by Advisory Board

** Rated Yellow by Advisory Board

2.4 Facilities, laboratories, simulation tools etc. available

No special facilities or laboratories are required for the work of Pole 1, although specific tools are (as listed below). This fact facilitates the existence of many more institutions in Europe that can also claim similar levels of competence and experience to the members of the Pole in some of these domains. Opening the Pole to all those institutions would destroy it because the allocation of projects within the Pole would become virtually impossible, but keeping it closed will systematically raise questions of legitimacy for direct allocation of projects to our Pole.

A number of potential suppliers can always be someone outside of the pole.

List of tools, (as example for simulation excellence”):

Short name	Tools	Remarks
FAV	LCC tool	
INRETS DEST	Data Basis, Models, travel behaviour tools	
ANSERI	STAN – transport model	Access through owner in Finland Matrix OY
IWW Uni Karlsruhe	ASTRA	Large model for system dynamics
IWW Uni Karlsruhe	VACLAV	European transport Assignment model
TFK	Data bases, demand and network modelling tools	Visum
DLR	Migration / Evaluation Tool	Ongoing development
UPM	Modelling tools	VISUM, EMME2
UNIV Leeds	Passenger and freight demand models	

(This list has to be updated by the pole member)

2.5 Pole Leadership

With the Pole 1 thematic scope being broad and differentiated and having experienced a close and trustful working relationship among the three Pole 1 Trigger they strongly recommend to keep the "powerful" shared thematic responsibility as follows:

- "Economics" C. Nash (UoLeeds)
- "Strategy / scenario analysis" J. M Viegas (IST Lisbon)
- "Strategy / roadmaps" W. H. Steinicke (FAV Berlin)

The coordination of Pole 1 (including administrative tasks) shall rotate on a bi-annual basis.

According to the important contribution of the pole 1 to overall EURNEX sustainable business case and by following the EURNEX consortium agreement it is advisable to have the first phase coordination of the pole performed by the Network Coordinator. Assuming that roadmaps for the EURNEX business case are set in about one year the coordinating leadership of pole 1 will be transferred to one of the further "equal pole leader" in the second half of 2006.

Having thoroughly balanced the needs according to pole 1 nature as well as overall Pole 1 success, importance and Council ground rules, the trigger trust that you will follow our recommendations which have to undergo approval by the EURNEX Council.

3 Collaboration opportunities

- Please indicate collaboration opportunities among pole members already identified (i.e. project database Work Package 1)

Most projects that can be identified at this stage will necessarily involve mobilisation of resources and competencies from several partners. Given the privileged access to projects that the EURNEX group is expected to enjoy, transparency and fairness of the procedures for selecting the partners for each project are critical for the sustainability of the whole group.

Pole 1 (Strategy and Economics) is a horizontal pole in which collaboration with other poles is crucial. An initial idea of the possibilities is given in the following matrix.

Cross pole Activities

Pole	Strategy and economics	Operation and system performance	Rolling stock	Product qualification methods	Intelligent mobility	Safety and security	Environment and energy efficiency	Infrastructure and signalling	Human factors	Training and Education
Scenarios	x	X	X		X	X	X	X	X	
Demand										
- Passenger	x	X	X		X			X		
- Freight	x	X	X		X			X		
Costs	x	X	X			X	X	X		
Appraisal	x	X	X			X	X	X	X	
Regulation	x	X	X	X		X	X	X	X	X
Poling	x	X	X	X	X	X	X	X	X	X
Finance	x	X	X			X		X		

4 Projects towards Business Case

Project approaches and ideas, incl.

- Short description of objectives and expected results
 - Pole members to be involved
 - Expected necessary partners from the rail sector (supply industry & operators)
 - Need for cross-pole collaboration?
 - Timing and estimated budget
 - Financing the elaboration of project proposals?
 - Preparation steps to implement the project
 - Please make use of the Acquisition table template attached also
- Pole contribution to EURNEX business case*
- Concept for a sustainable pole contribution, compatible to other poles
 - Sustainable business case with projects and partnerships with industry for technology transfer as a contribution to EURNEX business plan

The list of projects that can be elaborated on the basis of the suggestions received from Pole members (see annex) reasonably covers the main objectives of the Pole, and thus represents a good working basis for our work plan in the first 2 or 3 years at least.

Some additional information would be required, as not all submissions contain all the information required, and some of them could also be easily merged. This seems to be easily achievable in a distributed work process, involving all Pole members under guidance from the Leader.

4.1 Projects according Work package 5 identification (Second Group of Projects) and project proposals

Objective A: Costs & Demand			
	<ul style="list-style-type: none"> - Technologies - Energy efficiency - Benchmarking - Strategies and Visions 		
<i>Proj. n°</i>	<i>Project title</i>	<i>Pole 1 partners involved (leading partner: bold)</i>	<i>Remarks</i>
32	Europe-wide experience of forecasting rail demand	Univ. Leeds , TU Berlin, TFK	
33	European benchmarking of railway costs	Univ. Leeds , TFK	Identify interested operators first

2	New economic approaches for railway operations on secondary lines	DLR	Might be rather subject of pole 2 "Operation and system performance" => to be checked with pole 2
4	ERRAC Scenario "Rail 2050 – the vision"	FAV	
3	Costs benefits analysis of noise reduction measures	FAV	Proposal <u>CERTH/HIT</u> after meeting: distinction between urban and suburban trains, intercity trains and high speed trains
5	Survival of the rail system by specialisation	FAV	
9	Energy needs and key performance indicators (KPI) definition	TFK	Approach towards actual IP on rail energy efficiency (therefore no action for Advisory Board and 7 FP)
10	Integrated energy efficiency approach	TFK	Approach towards actual IP on rail energy efficiency (therefore no action for Advisory Board and 7 FP)
34	Project regarding: a strategic, transversal approach for increasing competitiveness of railways and Develop the economic rational	CERTH/HIT	Proposal should be further elaborated
35	Project regarding: the economic rational and business instruments that are necessary to launch that process and sustain its results	CERTH/HIT	Proposal should be further elaborated

Objective B: Rail Quality of Service			
<ul style="list-style-type: none"> - Freight services - Long distance passenger rail transport - Intermodality 			
<i>Proj. n°</i>	<i>Project title</i>	<i>Pole 1 partners involved (leading partner: bold)</i>	<i>Remarks</i>
47	Strategic evaluation of market potential of railways in a small number of freight transport segments and subsequent action plan	IST, DLR , INRETS, TFK	Incl. Project idea n°15
45	Improving operation productivity of rail freight transport	IST, CERTH/HIT , TU Berlin	Project idea n°10 "Organisation and management of intermodal freight transport corridors" (TU Berlin) to be incorporated
46	Information and organisation of intermodal links at a destination for long distance passenger transport by rail	IST, INRETS, CERTH/HIT, TFK	Project must involve demonstrator/tangible hardware
57	Master plan for the transportation of dangerous goods by rail in Europe	CERTH/HIT	Project sketch received on/after 06 May meeting
55	The reconstruction of freight rail transport chains door to door and knowledge of market behaviour	INRETS , TFK, DLR, IST, CERTH/HIT	Project sketch received after 06 May meeting
56	Improving knowledge on passenger rail mobility behaviour and policy response	INRETS , TFK, TUB, IST, HIT, UNIV Leeds	Project sketch received after 06 May meeting
53	EURNEX observatory of railways performance	UPM , TFK	Project sketch received after 06 May meeting
	To improve interoperability of rail freight operations between RU:s and IM`s of EU, Russian Federation, another CIS countries, China and on Intermodal links to the ports of Japan, Republic of Korea and another countries South East Asia.	ANSERI	No sketch available

Objective C: Regulation and Policy issues			
<ul style="list-style-type: none"> - Capacity management - Harmonisation, standardisation, interoperability - Structural organisation - Social participation 			
<i>Proj. n°</i>	<i>Project title</i>	<i>Pole 1 partners involved (leading partner: bold)</i>	<i>Remarks</i>
31	Evaluating alternative railway structure	Univ. Leeds , TFK, TU Berlin, IST, UP Madrid	Project ideas n° 14 "Capacity management: Benchmarking of practices" (TFK) and n° 7 "Dissemination of information of cases of success" (UP Madrid) to be incorporated <u>Comment CERTH/HIT after meeting:</u> For project idea 14 (which should be incorporated in n°1) it is important to integrate the finalization of common methodology for calculation of track capacity that will be applicable for all EU countries for capacity management/allocation issues.
14	Setting standards for European Railways	TU Berlin , UP Madrid, DLR, CERTH/HIT	<ul style="list-style-type: none"> - Project idea n° 8 "Optimization of Railway harmonisation and migration processes" (UP Madrid and DLR) to be incorporated - CERTH/HIT is also interesting to participate
7	Alternative proposal from UPM Optimization of Railways harmonisation and migration processes	TU Berlin, UP Madrid, DLR, CERTH/HIT (leadership: tbn)	Project idea n° 9 "Setting standards for European Railways" to be incorporated CERTH/HIT is also interesting to participate

54	General social public participation in transport policy setting	INRETS, UPM, IST, TFK	Project sketch received after 06 May meeting
12	Capacity management	TFK, DLR	
13	Intermodal transport: Benchmarking of practices	TFK	
15	Organisation and Management of International Transport Corridors	TUB	
79	PPP, separating of big infrastructure projects	UNIKA	
78	Optimising the time frame and finance of international corridors	UNIKA	

4.2 Participation at Framework Programme 7

Pole 1 is taking over a leading role within the establishment of EURNEX as a technology platform within the Framework Programme 7. EURNEX will push and execute rail research in-line with ERRAC SRRRA 2020. EURNEX contributes to a joint European rail vision for passenger and freight transport in close cooperation with the European railway stakeholders.

The Pole will concentrate on participating by:

- Identification of long term projects for FP7
- Include suggestions
- Establish a relation of trust with ERRAC
- Using ERRAC to get budgets from EC, Member States or of members of ERRAC

5 Other actions supporting the establishment of the pole

- E.g. periodic seminar / conference to support pole's visibility and business
- Scientific service towards the rail sector supporting pole's durable business

Establishing the Pole corresponds to developing our own business case. This is more difficult than elaborating a list of interesting projects for the next few years, and in effect corresponds to establishing in the community of potential clients of our studies the perception of our special, permanent added-value for them as suppliers of sophisticated studies that help them lead the policies and the companies towards a healthier railway sector.

This has to be done, first and foremost, by a high level of quality and punctuality of the studies that we produce for them in the first rounds, establishing a reputation of reliable partners. But it will be made very difficult by the tradition of secrecy that cuts across the sector, with great difficulties of access to relevant economic data, and the systematic use of the same domestic consultants (who thus become easily captured by their clients). As mentioned above, there are multiple consultancies in Europe who can claim identical levels of competence to some Pole members, at least in some of the issues dealt with in this Pole, but not an organised framework of excellence within EURNEX overall pole competencies

The most promising strategy seems to be to establish a multidisciplinary approach within EURNEX with a strong relation of trust with ERRAC – an international institution with no direct interference from National governments and a natural practice of transparency - with regular meetings for the definitions of work plans (i.e. lists of projects of international interest) for the following time period, and subsequent allocation of the corresponding work to Pole manners in a fair and transparent way. Depending on the level of confidentiality required by those projects, the corresponding results could be presented in an annual conference, open to all ERRAC members. Of course, the direct financial supporters of the projects would have already received more complete and detailed reports.

Preparation for those regular meetings, in which action plans are proposed and discussed, must be very careful. It is through that process that we have to show our advanced foresight and the capacity to identify the most important and urgent problems for the full development and sustainability of the business case of railways, and with it our justification for keeping on being the trusted partner of ERRAC.

It could be interesting also, in this way, to create an independent “Observatory of rail performance” a European level, financed with European budget (or, if it’s not possible, financed for national Transport Ministries in each country or Railways associations). This kind of work requires different associations for the operators and for the infrastructures administrations, but not now for the regulators and other railways entities. EURNEX OBSERVATORY could be independent and successful because the high level of information that its members could have.

Furthermore pole 1 is the “strategy supporting unit” for EURNEX together with the NoE manager/coordinator for the other poles

6 Pole development and Milestone planning

Next steps

- Further development of projects
- Completion of competency matrix
- Planning of future activities
- Integration with other poles (e.g. energy efficiency, freight)

