



Project no. TSA4-CT-2005-516424

Project acronym: ERRAC SSA

Project title: European Rail Research Advisory Council

Instrument: Specific Support Action

Thematic Priority: 6.2 Sustainable Surface Transport

Final Activity report

Period covered: from 1/3/2005 to 31/12/2007

Date of preparation: 15/2/2008

Start date of project: 1/3/2005
(extension)

Duration: 34 months (10 months extension)

Project coordinator name: Giorgio Travaini

Project manager: Dennis Schut (UIC)

Project coordinator organisation name: UNIFE

Revision: final version

0 Executive Summary

The European Rail Research Advisory Council was one of the first technology platforms to be set up back in 2001 and covers research related to all types of freight and passenger rail services (long, medium and short distances, i.e. urban rail).

The ERRAC SSA project was designed to support the work of the ERRAC Advisory Council and officially was designed to run for 24 months, starting 1/3/2005 and ending 1/3/2007. An extension of the project of 10 months has been asked for and was granted by the European Commission. There was no additional funding for the extended period. The ERRAC SSA officially ended on 31/12/2007. The reporting period covers the period from 1/3/2006 until 31/12/2007

The objective of the ERRAC SSA was to support the activities of ERRAC, which are: (1) to promote rail research and innovation in a close link with investment in rail infrastructures in an enlarged Europe, (2) to co-ordinate pre-competitive research schemes by promoting collaboration and consistency between the various EU, National and industry rail research programmes, (3) to adjust and update the Strategic Rail Research Agenda (released in 2002) as well as the ERRAC RBS 2020 (Research Business Scenario 2020), and (4) to improve joint project building process within the rail sector. The goal of the ERRAC SSA is not to duplicate the efforts made by the sector during the 2002-2004 period but to go further in effectively implementing the recommendations produced by the present ERRAC Working Groups.

The main objectives for the reporting period

- The publication of ‘Rail 21 - Sustainable rail systems for a connected Europe’. This brochure was presented to the EU Research Commissioner Janez Potočnik at the UNIFE Annual Reception in Brussels on the 8th of March 2006. ‘Rail21’ sets five broad targets for the Seventh Framework Programme (2007-2013).
- The starting of the ERRAC communications WG, to set up and implement the ERRAC communications Action Plan and to organise a number of dissemination events have, among which a high-level event with members of the European parliament.
- The preparation of a study on regional railways. This sector is little known to decision-makers and its research needs are not known at all. The study concerns infrastructure and operations of the regional railways, including investigation of their research needs.
- To set up a “Coordination” Working Group, which deals with knowledge management, coordination between national research initiatives and the SRRA as well as project building, as well as an “evaluation” Working Group, which deals with listing and evaluating (almost) finalised European research projects. With this, in fact an additional objective for ERRAC was added: ‘Evaluation of effectiveness of research in terms of actual use of its results’.
- To set up working Groups to deliver the RBS update as well as the SRRA update.

Work performed and results achieved

Rail Business Scenario: Around the start of the ERRAC SSA, a working group was set up to update the RBS 2020. The working group met several times and published its final report in April 2005 (see the three documents zipped in the 1.RSB.zip file under the folder Activity_Report/Deliverables to the annexed CD-ROM).

Communication Working Group: ERRAC has put in place a comprehensive communications action plan. This action plan has been drawn up and was implemented by a dedicated ERRAC Working Group on Communication. The following achievements have been made during the reporting period:

- Establishment of the Communications Group
- Preparation of the Communications Action Plan
- Preparation of the European Parliament Information Seminar held on 12 October 2005 in Brussels which attracted nearly 100 participants
- Significant contribution of the Group to the preparation of Rail21 brochure, presented to Commissioner Potocnik in March 2006
- Preparation of a new 2006 ERRAC leaflet
- Preparation of an ERRAC poster
- Maintaining and regular updating of the public website
- Presence at international events: UITP World Congress (June 2005), Eurailspeed 2005 (November 2005).
- Significant contribution of the Communication Working Group to the preparation of Rail21 brochure, presented to Commissioner Potocnik on the 8th of March 2006 the organisation of its launch and the writing and distribution of the press release
- Publication of the Suburban and Regional Railways Landscape in Europe in October 2006
- Preparation of an ERRAC poster for Budapest
- Preparation and publication of a new ERRAC leaflet
- Preparation of an article for International Railway Journal (June edition, Montreal World Congress on Rail Research)
- Publication of the updated Strategic Rail Research Agenda in January 2007
- Organization of the launch event for the updated SRRA on 27 June 2007 and the preparation and distribution of the press release
- Maintaining and regular updating of the public website
- Presence at international events: UITP World Congress (June 2007),

Some of the important events, where ERRAC Communications WG planned to actively present ERRAC activities are: high-level event on the Technology Platforms organised by the Austrian Presidency of the EU in Vienna on 4-5 May; World Congress of Railway Research (WCRR) in Montreal in early June, Innotrans in Berlin in September 2006, Transport congress in Madrid on 16 February 2007 and the UITP World Congress on 22 May 2007

Coordination Working Group and Evaluation Working Group

During the first year of the ERRAC SSA, the project partners have proposed a modification of this work package “Research Observation Platform” that was

accepted by the ERRAC Support Group and Plenary. The modification consisted of splitting the Research Observation Platform into two separate tasks: coordination and evaluation.

- A Working Group for the coordination tasks has been established and has made substantial progress against its objectives with all tasks underway or complete. The update of the survey of member state research has been completed with all member states being contacted. The focus of this work stream was now around how best to build and coordinate project proposals. Furthermore, contacts have been made with ERANET, with national Rail Technology Platforms developing, such as the Polish National rail Technology Platform, that of The Netherlands and the DG TREN's Transport Knowledge Research Centre. These have been invited to participate in the working with the intention of building on their efforts in coordinating member state level research.
- The Working Group for the Evaluation tasks has also been established. At the first meeting a methodology was established as well as success criteria's and agreement was also reached upon on the projects to evaluate. Members of the evaluation group worked individually to find facts supporting the evaluation. At the second meeting agreement was reached on the report on the selected project for evaluation, as well as on a next cluster of projects to evaluate. The WG Evaluation, in a substantial number of meetings, reviewed and analyzed more than 12 EU Framework Program projects using a checklist, specially designed for this evaluation. This checklist is now being used within the UNIFE and other organisations to help assess the viability of future FP project proposals. Results of the work of the Evaluation Working Group have been presented on a number of occasions, such as during the ERRAC Plenary meeting, a meeting of the UIC Research Coordination Group and others. The work will be continued in the future by the members of ERRAC (the checklist could be found in the 2.Checklist.doc file under the folder Activity_Report/Deliverables to the annexed CD-ROM).

Regional Rail study: Following the success of the Light Rail and Metro study performed under ERRAC AM, UITP has been mandated by ERRAC Plenary to prepare a study on regional railways. This sector is little known to decision-makers and its research needs are not known at all.

The study concerned infrastructure and operations of the regional railways, including investigation of their research needs. A survey has been sent to over 200 local and regional operators.

The work has started in May 2005 and has continued until the end of the reporting period (the study can be found in the 3.Suburban and Regional Railways Landscape in Europe.pdf file under the folder Activity_Report/Deliverables to the annexed CD-ROM).

SRRA: One of the most important objectives of the ERRAC SSA was to update the Strategic Rail Research Agenda (SRRA) that was published in 2002. The work to reach this goal was split up into three steps:

- Around the start of the ERRAC SSA, a working group was set up to update the Railway Business Scenario (RBS) for 2020. The working group published its final report in April 2005 after a special Working Group had met 8 times to

prepare the report. The results were presented and discussed during the ERRAC Plenary meeting of May 15th 2006.

- Instead of moving on directly to the SRRA update, the ERRAC Support Group decided to first develop a “vision document” to set the high level targets for rail research. This ‘Rail 21’ vision document was published in March 2006. An important goal of Rail 21 was to provide input for the work programme of the commission’s 7th FP.
- The ‘SRRA update’ working group had its first meeting in February 2006. All ERRAC members as well as some people from outside the membership have been consulted in the process preparing the SRRA II. The updated Strategic Rail Research Agenda was published in May 2007 and officially presented on the 27th of June 2007.
- ERRAC brochure “Rail Research in the EU - A comparison of European public research programmes with the ERRAC SRRA 2020” with useful information about the national rail research strategies.
- Answer to the European Commission Consultation on the Green Paper on the European Research Area (ERA) – 30 August 2007
- Advise to the European Commission DG Research on the content of the 2nd Call for Proposals of FP7.

(the updated SRRA can be found in the 4.SRRA-2007.pdf file under the folder Activity_Report/Deliverables to the annexed CD-ROM).

Management

The consortium management consists in preparing with the various ERRAC members and the Specific Support Action partners the necessary consensus over the ERRAC recommendations and actions. The ERRAC project management will ensure reporting both to the partners and members but also to the scientific officer of the Commission in charge of the ERRAC Specific Support Action at RTD.

ERRAC Project Manager Mr. Klaas Hofstra was in function until 1/9/2006. He was replaced by Mr. Dennis Schut of the UIC from 2/1/2007. The Project Manager participates in the ERRAC support group meetings as well as the other meetings related to the various activities of the WG’s. Mrs. Nailia Dindarova of UNIFE acted as the ERRAC Coordinator. After her departure in July 2007 she was replaced by Mr. Giorgio Travaini of UNIFE. The ERRAC project manager together with the coordinator was in charge of the preparation of the plenary meetings together with the secretariat. They were also involved in various actions undertaken by the ERRAC Specific Support Action partners, such as promotion actions, dissemination activities, etc.

ERRAC has been very co-operative with the newly set-up technology platforms. A senior representative of ERRAC attended the meetings of the technology platforms coordinated by the European Commission. These meetings have been very fruitful in terms of establishing contacts with other technology platforms and identifying opportunities for collaboration. Furthermore, a high level ERRAC delegation consisting of Mr Ake Wennberg, Philippe Renard, Nailia Dindarova, and Klaas Hofstra was present at the European technology platform conference in Vienna.



Vienna, May 1st 2006 – Klaas Hofstra, Nailia Dindarova, Philippe Renard, Ake Wennberg

The ERRAC SSA activities have been presided by the following executive team - starting in 2006:

- Åke Wennberg (Bombardier Transportation) acting as ERRAC chairman
- Philippe Renard (SNCF), the former chairman, acting as vice-chairman
- Prof. Manuel Pereira (Technical University of Lisbon) kept his role as vice-chairmen.

The ERRAC Working Groups have been led by the following persons:

- Elke Schaezler (CER) leading the Communication Working Group
- Jonathan Ellis (Network rail) leading the Coordination Working Group
- Dan Otterborn (Bombardier Transportation) leading the Evaluation Working Group

UNIFE, UIC, CER, EIM, UITP and AEIF were the original contractors for the ERRAC SSA. AEIF has ceased to exist and since October 2005, UNIFE has taken over the AEIF tasks for the ERRAC SSA.

1 Section 1 – Project objectives and major achievements during the reporting period

1.1 General objectives and current relation to the state-of-the-art

The objective of the ERRAC SSA was to support the various activities of the European Rail Research Advisory Council and to cover research related to all types of freight and passenger rail services (long, medium and short distances, i.e. urban rail). Activities ranged from (1) to promote rail research and innovation in a close link with investment in rail infrastructures in an enlarged Europe, (2) to co-ordinate pre-competitive research schemes by promoting collaboration and consistency between the various EU, National and industry rail research programmes, (3) to adjust and update the Strategic Rail Research Agenda (released in 2002) as well as the ERRAC RBS 2020 (Research Business Scenario 2020), and (4) to improve joint project building process within the rail sector.

The goal of ERRAC SSA was not to duplicate the efforts made by the sector during the 2002-2004 period but to go further in effectively implementing the recommendations produced by the ERRAC Working Groups, including those made by the WG2 (dealing with the present research compared with the SRRRA) regarding the FP5 projects and the rail research programmes of MS. Ultimate objective of ERRAC SSA was to produce recommendations on research projects and schemes.

Specific emphasis has been put on two issues previously not considered in ERRAC activities, however of big importance because they constrain innovation: (1) the economic dimension of the innovation (migration costs of new technologies, innovation process in the rail sector compared to other industry and non-European countries) and (2) the socio-economic dimension of innovation in rail (customer acceptance, socio-cultural factors of rail transportation, impact of opening up markets, new trends in transportation market...), also called the “soft” factors of the development of the market which are the drivers of the innovation in the industry. The Evaluation Working Group dealt with these important aspects and embedded them in there evaluations and conclusions. During course of 2007, a lot of effort has been put into the more strategically thinking for the future of the European rail system. Discussions and work centered around the vision and methods of implementing the results of the SRRRAII and the design of roadmap to “manage the future”. This will be the core of the future work for ERRAC after the end of this SSA project.

1.2 Objectives for the reporting period, work performed, contractors involved and main achievements

1.2.1 ‘Rail 21’

The ERRAC Specific Support Action allowed the necessary flexibility for adaptation to meet new and emerging requirements, including the FP7 preparation. For this, ERRAC has started up an industry-wide action, leading to the publication of ‘Rail 21 - Sustainable rail systems for a connected Europe’. This brochure was presented at the

UNIFE Annual Reception in Brussels on the 8th of March 2006 to the EU Research Commissioner Janez Potočnik.



Brussels - March 8th 2006 Presentation of the Rail 21 brochure to Commissioner Potocnik

‘Rail21’ explains how, with appropriate investment, targeted European research can meet the key economic and social challenges of the European Union. Commissioner Potočnik welcomed ‘Rail21’ as a “clear demonstration of [ERRAC’s] intentions” and acknowledged the contribution of ERRAC in framing the Work Programme for the Sixth Research Framework Programme.

‘Rail21’ sets five broad targets for the Seventh Framework Programme (2007-2013):

- Promote excellence in railway operations to encourage modal shift and decongest international transport corridors;
- Develop attractive urban transport solutions that ensure sustainable urban mobility;
- Assure personal security to encourage increased use of public transport;
- Consolidate environmental gains based on the greening of rail surface transport to meet legislative and societal imperatives;
- Strengthen the worldwide competitiveness of the rail industry sector and its ability to supply cost effective products and services.

The ‘Rail 21’ publication also contains success stories, which prove that investment in rail research is repaid many times over as railways are able to offer ever better, faster, safer services to passengers and freight forwarders, leading to an improved environment, reduced congestion in cities and on motorways, as well as greater

choice for the traveller. This publication is thought to have positively influenced the contents of the European Commission's Work Program and the Call for Proposals of the 7th Framework Program.

(the Rail21 brochure can be found in the 5.Rail21.pdf file under the folder Activity_Report/Deliverables to the annexed CD-ROM).

1.2.2 Communication activities

The ERRAC communications WG has been started up during the first year of the ERRAC SSA and has been very active during the second period. A number of dissemination events have taken place, among which a high-level event with members of the European Parliament. This highly successful event took place on 12 October 2005 (the background documents of this event can be found in the folder 6.ERRAC Seminar 12.10.05 under the folder Activity_Report/Deliverables to the annexed CD-ROM).

Some other disseminations events have been: in 2005 at the UITP World Congress; in 2006 the Rail21 vision presentation in March; the Austrian National event in May (the ETP event in Vienna); World Congress of Railway Research (WCRR) in Montreal in early June, Innotrans in Berlin in September; the Global View workshop in Moscow in June 2007, the meeting of the FP7 Transport program in Madrid, Committee and the meeting of ERA-NET Transport as well as on many other occasions.

Another big event happened in 2007 with the SRRA update presentation to Mr. Siegler, Director DG RTD, European Commission. (the background documents of these events can be found in the folder 8.Other_comm under the folder Activity_Report/Deliverables to the annexed CD-ROM).

A Communication action plan was developed in 2005 and updated in 2006 and it can be found in the 7.ERRAC Comms Group_Action Plan file under the folder Activity_Report/Deliverables to the annexed CD-ROM.



ERRAC Seminar of 12/10/05



ERRAC SSA update presentation 2007

For a full progress report on this work package, see paragraph 2.2

1.2.3 Regional Rail study

Following the success of the Light Rail and Metro study performed under ERRAC AM, UITP has been mandated by ERRAC Plenary to prepare a study on regional railways. This sector is little known to decision-makers and its research needs are not known at all.

The study concerns infrastructure and operations of the regional railways, including investigation of their research needs. A survey has been sent to over 200 local and regional operators.

The work has started in May 2005 and was completed in October 2006 with the publication of the report “Suburban and Regional Railways Landscape in Europe”.

1.2.4 Rail Research in the EU – part 2

During 2007, work has been carried out by the UIC assisted by the members of ERRAC to update the 2004 ERRAC brochure “Rail Research in the EU - A comparison of European public research programmes with the ERRAC SRRA 2020”. It contains useful information about the national rail research strategies. Unfortunately there was no budget available for a printed version of this considerable work. Therefore the report has been published on the internet at the following address:

<http://errac.uic.asso.fr>

1.2.5 European Commissions Green Paper on ERA

On 30 August 2007, ERRAC officially responded towards the European Commission with the publication of their “Answer to the European Commission Consultation on the Green Paper on the European Research Area (ERA)”.

(the position paper can be found in the 9.ERRAC_ERAgreenpaper.pdf file under the folder Activity_Report/Deliverables to the annexed CD-ROM).

1.2.6 Coordination and evaluation activities

The activities of Work package 3 “research observation platform” have been slightly modified (with agreement of all partners and the plenary meeting) and split up over two ERRAC Working Groups. The first, the “coordination” Working Group dealt with knowledge management, coordination between national research initiatives and the SRRA as well as project building.

The second, the “evaluation” Working Group dealt with listing and evaluating (almost) finalised European research projects. This in order to be able to monitor the results of European Rail research of the last years, but also in order to find critical factors for success and failure of research. With this, in fact an additional objective for ERRAC was added: ‘Evaluation of effectiveness of research in terms of actual use of its results’.

For a full progress report on this work package, see paragraph 2.3

1.2.7 SRRA update activities

The SRRA update Working Group had its first meeting in February 2006 and completed its work with the publication in May 2007 of the SRRA II. It was officially presented to the “outside world” on 27 June 2007.



Brussels, June 27th 2007 – Presentation of the updated SRRA – Mr. Wennberg, Mr Siegler

For a full progress report on this work package, see paragraph 2.4

1.2.8 ERRAC's advise on the contents of the FP7 Transport Annual Work Program and Call for Proposals.

In March 2007, upon the request of the European Commission DG Research Director for Transport, ERRAC officially reacted with a letter containing the rail stakeholders common research needs and the request to include them in the 2nd call for Proposals of the FP7. Many of the proposed priorities were taken on board. The research priorities as proposed by ERRAC towards to European Commission were naturally based on all previous work carried out by ERRAC, such as the Vision 2020 and its Technical Annex, the Rail Business Scenario and the Strategic rail Research Agenda as well as the updated version of the last named documents.

ERRAC's 'Vision for the Future of Rail in 2020', as restated in the recently updated Strategic Rail Research Agenda 2020, identified seven key research priority areas. Coordinated advances in these areas would not only ensure that rail remains at the heart of Europe's transport system over the next decades, but that rail increases its contribution to the European transport system by providing seamless and integrated passenger services and door-to-door freight services, as well as efficient metropolitan and urban mass-transport.

ERRAC described in its first Railway Business Scenario based on two assumptions or aims for the future:

- Rail doubling its share of both the freight and passenger markets by 2020, and
- Rail tripling its freight and passenger market volumes in 2020 as compared with 2000.

The revised SRRA which was presented by the ERRAC SSA project in 2007 identified the 7 research clusters and the key technologies that need to be developed to turn this vision into reality. These were:

- 1. Intelligent Mobility**
- 2. Energy and Environment**
- 3. Personal Security**
- 4. Test, Homologation and Safety**
- 5. Competitiveness and enabling technologies**
- 6. Strategy and Economics**
- 7. Infrastructure**

During the course of 2007, following the presentation of the revised SRRA and the work undertaken in order to be able to advise the Director for Transport on the stakeholders' research needs for the 2nd Call for proposal, the need became clear to address this process with a strategic approach. This paved the way towards a plan for implementation of the Vision 2020 and the SRRA and work began to organise the activities of "roadmapping" the future of rail transport and the research needed. The result was the formation of the future ERRAC ROADMAP project, addressing the 7 priorities of the revised SRRA and translating them into the five 'activities' reflecting the strategic and policy challenges facing Europe, as defined by the Commission for the FP7 "Transport" theme.

- the **greening** of surface transport,
- encouraging modal shift and **decongesting** transport corridors,
- ensuring **sustainable urban transport**,
- improving **safety and security**,
- **strengthening competitiveness**



European Rail Research Advisory Council

SRRRA updated research priorities areas

		Intelligent mobility	Energy and environment	Personal security	Test, homologation and security	Competitiveness & enabling technologies	Strategy and economics	Infrastructure
FP7 research Activities	<i>The greening of surface transport</i>		■					
	<i>Encouraging modal shift and decongesting transport corridors</i>	■						■
	<i>Ensuring sustainable urban transport</i>	■						
	<i>Improving Safety & Security</i>			■	■			■
	<i>Strengthening Competitiveness</i>	■				■	■	

Matrix structure for the creation of the ERRAC-Roadmaps, some explanatory examples

1

The revised SRRRA Priorities and the future ERRAC-ROADMAP Work Packages

The ERRAC priorities for the FP7 2nd call can be found in the folder 10.Contribution FP7 under the folder Activity_Report/Deliverables to the annexed CD-ROM.

1.2.9 Contractors

Partic. Role*	Partic. No.	Participant name	Participant short name	Country	Date enter project	Date exit project
CO	1	Association of the European Railway industries	UNIFE	Belgium	01/03/2005	31/12/2007
CR	2	International Union of the Railways	UIC	France	01/03/2005	31/12/2007
CR	3	Community of European Railways	CER	Belgium	01/03/2005	31/12/2007
CR	4	European Infrastructure Managers	EIM	Belgium	01/03/2005	31/12/2007
CR	5	International Association	UITP	Belgium	01/03/2005	31/12/2007

		of Public Transport				
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*CO = Coordinator
CR = Contractor

As the original project partner AEIF had ceased to exist (October 2005), the UNIFE has taken over the AEIF workload for the ERRAC SSA by providing in cooperation with the UIC the ERRAC project manager.

1.2.10 New ERRAC executive team

The ERRAC SSA activities have also coincided with the installation of a new executive team because the term of the previous presidency came to end before the year 2005

- Åke Wennberg (Bombardier Transportation) became the new ERRAC chairman
- Philippe Renard (SNCF), the former chairman, stayed in the executive team, as vice-chairman
- Prof. Manuel Pereira (Technical University of Lisbon) kept his role as vice-chairman.

1.2.11 ERRAC Members

- During the second SSA period, some minor changes have occurred in the ERRAC membership. As an Annex to this report you will find the listing of the membership as it was near the end of the project.

ERRAC now had 45 members, each of them representing one of the major European rail research stakeholders: manufacturers, operators, infrastructure managers, the European Commission, EU Member States, academics and users' groups. ERRAC covers all forms of rail transport: from conventional, high speed and freight applications to urban and regional services.

The ERRAC Members list and contacts can be found in the file 11.ERRAC-2 membership list.xls under the folder Activity_Report/Deliverables to the annexed CD-ROM.

1.2.12 EURNEX

The relations between EURNEX and ERRAC during this reporting period have been ably handled by ERRAC's vice-president professor Manuel Pereira. On behalf of EURNEX he provided important contributions for the SRRA update activities. This way, not only the EURNEX know-how is integrated into the SRRA, but also a broader basis for dissemination and implementation of the SRRA is created.

UNIFE supported the Platform in fostering the relation and gave the support to the Chairman to participate to the EURNEX Advisory Board in November 2006. EURNEX was included in the ERRAC Plenary as an Observer (the background documents can be found in the file 15. EURNEX under the folder Activity_Report/Deliverables to the annexed CD-ROM).

Furthermore, the EURNEX coordinator has attended the ERRAC plenary meetings as an observer.

2 Section 2 – Work package progress of the period

2.1 WP 1 – Project Management

See Section 3

2.2 WP2 - Dissemination

The objectives of this work package were:

- (1) To disseminate to the rail research community in an appropriate form the results of ERRAC's work
- (2) To communicate more widely to different stakeholders (research community in general, European institutions, national parliaments, transport actors etc.) and to inform about the role of ERRAC and the working results
- (3) To stimulate innovation transfer into the investment plans of railway companies and infrastructure managers.

The Communications Working Group has taken over the responsibility for the dissemination activities which have already been established within the ERRAC AM project (website managed by UNIFE, brochures managed by UNIFE, ERRAC presence at transport events managed by all partners). However, the scope of dissemination activities has been extended during ERRAC SSA.

ERRAC has put in place a comprehensive communications action plan. This action plan was implemented by a dedicated ERRAC Working Group on Communication. This Working Group was composed of the representatives of the associations, which formally have the observer status in ERRAC and which in practice facilitated various ERRAC activities (UIC, UNIFE, CER, UITP, EIM). The active participation of these associations has assured effective channels of communication to a variety of companies and bodies that are not directly members of ERRAC. These associations regularly reported on ERRAC activities to their members via various technical committees, newsletters, annual reports, conferences and workshops. Apart from these individual channels of regular communication the associations also co-ordinated ERRAC presentations at the various events, such as international conferences and exhibitions with a common ERRAC stand, publications, poster and presentations.

Some of the important events, where ERRAC Communications WG plans to actively present ERRAC activities are the following: high-level event on the Technology Platforms organised by the Austrian government in Vienna, World Congress of Railway Research (WCRR) in Montreal in early June, Innotrans in Berlin in September 2006, the Global View workshop in Moscow in June 2007, the meeting of the FP7 Transport program, Committee and the meeting of ERA-NET Transport as well as on many other occasions. One of the last dissemination action took place in late 2007, when the results of the second study "Rail Research in the EU" (part 2) was promoted on the UIC website.

The following achievements have been made during the reporting period:

- Establishment of the Communications Group
- Preparation of the Communications Action Plan (it can be found in the 7.ERRAC Comms Group_Action Plan folder under the folder Activity_Report/Deliverables to the annexed CD-ROM.)
- Preparation of the European Parliament Information Seminar held on 12 October 2005 in Brussels which attracted nearly 100 participants
- Significant contribution of the Group to the preparation of Rail21 brochure, presented to Commissioner Potocnik in March 2006
- Preparation of a new 2006 ERRAC leaflet
- Preparation of an ERRAC poster
- Maintaining and regular updating of the public website
- Presence at international events: UITP World Congress (June 2005), Eurailspeed 2005 (November 2005).
- Significant contribution of the Group to the preparation of Rail21 brochure, presented to Commissioner Potočnik in March 2006
- Preparation of a new 2006 ERRAC leaflet
- Preparation of an ERRAC poster
- Maintaining and regular updating of the public website
- Publication and presentation of the ERRAC SRRA II in May & June 2007
- Publication on the UIC website of the results of the second study “Rail Research in the EU” (part 2).



Brussels, June 27th 2007 – Presentation of the updated SRRA – Mr. Wennberg, Mr Siegler, Mr Irwin

The preparation of certain deliverables (notably the two remaining Workshops and Newsletter publication) had been slightly delayed. The ERRAC leaflet issued in early 2006 was in fact equivalent to an ERRAC newsletter. The second – delayed – workshop was to be replaced by a gathering of the ERRAC Plenary where the main

deliverables of the ERRAC SSA were to be presented and discussed, among others the results of the second “Rail Research in the Member States” studies. (the background documents of the ERRAC Plenaries can be found in the folder 16.ERRAC_Plenaries under the folder Activity_Report/Deliverables to the annexed CD-ROM).

During the UNIFE Annual Reception in Brussels on the 8th of March 2006 the Rail21 brochure was presented to the EU Research Commissioner Janez Potočnik. (see report and photo at section 1.2.1) (the background documents can be found in the folder 8.Other_comm under the folder Activity_Report/Deliverables to the annexed CD-ROM).

The second UNIFE organised workshop has been the SRRRA update presentation in June 2007 where Mr. Andras Siegler participated as well as a significant number of journalist and stakeholders (the background documents can be found in the folder 18.SRRRA II under the folder Activity_Report/Deliverables to the annexed CD-ROM). The secretariat also provided several background documents of the platform and its work during the 7th Framework Programme day in Madrid with UNIFE participation (the presentation can be found in the file 14.UNIFE_ERRAC Presentation Madrid 16.02.07.ppt under the folder Activity_Report/Deliverables to the annexed CD-ROM).

ERRAC was represented at the UITP World Congress and distributed several dissemination material to raise the awareness of the platform. (background documents can be found in the folder 8.Other_comm under the folder Activity_Report/Deliverables to the annexed CD-ROM).

At the UITP Helsinki Congress gave to occasion to Mr. Wennberg, the ERRAC Chairman to further disseminate the Platform, after the UNIFE event (the presentation made by the chairman can be found in the file 12.UITP Helsinki Congress - 22.05.07_AWennberg.ppt under the folder Activity_Report/Deliverables to the annexed CD-ROM).

CER contributed to the Communication action plan and started an action towards the journalists and set up a database together with UNIFE help. Some articles printed in magazine following this action to raise the public participation and awareness were kept, but the most important document produced for the platform has been the exhaustive list of journalist contact relevant for ERRAC. CER together with UNIFE also coordinated the press releases for the SRRRA update and the role of ERRAC. (the list, some articles and press release can be found in the file 13.raise awareness under the folder Activity_Report/Deliverables to the annexed CD-ROM).

However, as the project was running over-time and short on budget – the ERRAC SSA project was prolonged with 10 months – the planned second workshop, which had been prepared and planned to take place at the offices of DG Research on 7 November 2007, was cancelled by the Commission due to the unexpected unavailability of the Director for Transport, Mr Siegler. Shortly after this planned event, the project officially ended. The results of the update of the Rail Research in the Member States comparison study was published on the web. This event eventually took places after the ERRAC SSA project had officially ended, on 6 March 2008.

Table: Deliverables List WP 2

Del. no.	Deliverable name	Date due	Actual/Forecast delivery date	Lead contractor
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2.1	Communications Plan	Month 1	Month 4	CER
2.2	Workshop 1	Month 12	Month 18	UITP
2.3	Workshop 2	Month 18	tbc	UNIFE
2.4	Information Seminar	Month 6	Month 8	UNIFE
2.5	Report on actions taken to raise public participation and awareness	Month 24	Month 24	CER

Table: Milestones List

Milest one no.	Milestone name	Date due	Actual/Forecast delivery date	Lead contractor
M1	Establishment of the Communications Group	Month 1	Month 1	CER
M6	First ERRAC information and debate workshop (EP Seminar – 12 October 2005)	Month 6	Month 8	CER
M12	Second ERRAC Workshop	Month 12	Month 18	UITP
M18	Second ERRAC Workshop	Month 18	tbc	Tbc = plenary
M24	Report on the results of WP2 activities	Month 24	Month 24	CER

Work package 3: Pre-Competitive Research Observation Platform

During the first year of the ERRAC SSA, the project partners have proposed a modification of this work package that was accepted by the ERRAC Support Group and Plenary. The modification consisted of splitting the Research Observation Platform into two separate Working Groups: Coordination WG and Evaluation WG.

The Coordination Working Group

It included member state representatives from 2 member states, research providers (academia) and research commissioners together with railway operators, infrastructure managers and suppliers from 5 countries.

The working group has made substantial progress against its objectives with all tasks underway or complete. All outstanding tasks have been finished within the timeframe of the SRRA funding.

A summary of progress is:

The update of the survey of member state research has commenced with all member states being contacted. Progress has been made from last year's survey in that a contact has been established with Belgium, which did not participate in the last survey. This will make the new survey a more comprehensive one. A number of Member states have presented details of their rail research programmes to the Working Group. The update of the survey has been finished in the latter months of 2007.

Contact has been made with ERANET and the Transport Knowledge Research Centre. These have been invited to participate in the working with the intention of building on their efforts in coordinating member state level research.

The Working Group discussed the issue of ERRAC endorsing research proposals as a means of co-ordinating research. This was rejected as ERRAC members could be anticipated to be on all large research projects and there was therefore an issue surrounding the objectivity of ERRAC in endorsing its own members' research proposals. The focus of this work stream is now around how best to build and coordinate project proposals. This has formed the basis of discussion at the last working group.

Upon concluding their work, the Coordination Working group has issued a statement titled: "The Health of Rail Research in Europe - An Opinion of ERRAC". This was presented and discussed during the meetings of the Coordination Group as well as the Support Group. (the report can be found in the file 17.WGCoordinationConclusions.doc under the folder Activity_Report/Deliverables to the annexed CD-ROM).

As well as setting the strategic agenda for research the Coordination Working Group has surveyed the rail research ongoing in the individual Member States and for the

first time published details of this. A clear view of the work ongoing in Member States, at a European level in the Framework Programmes and in academia, via EURNEX, is now available. This shows that the sum of research work ongoing in Europe does indeed yield full coverage of the SRRA, but that this is in an uncoordinated manner and individual players are often unaware of the activities of others or the results of past research.

The value of coordination is to avoid duplication or absence of research in fields covering the SRRA. Duplication can be avoided by making others aware of the research that is already underway or been done in the past. Equally, by making all aware of consortia that are forming to bid for Framework 7 research funds, synergies and critical mass can be created in consortia by having all relevant researchers involved. This is particularly important in the large Integrated Projects.

ERRAC believes that the role of coordination will become increasingly important as the FP7 and national research programmes are enacted. Funding for research is limited as is the ability of the rail sector to actually conduct research. For this reason the sharing of public research results is needed so that research results can be rapidly implemented and new research projects built upon the existing research to generate further new knowledge and opportunities.

The primary instrument for coordination is the goodwill of those involved. This is primarily achieved through making coordination of research a voluntary activity so that players are not forced into divulging commercially sensitive research initiatives and that players are not forced to adopt a single research agenda; as it should be recognised that geographical, climatic and historical differences between railways do not necessarily lead to a single all encompassing objective for research.

Various specific instruments exist for coordination:

EURNEX – coordinates and facilitates academic cooperation

ERANET Transport – fosters cooperation and coordination of Member State research

UIC research coordination group – information sharing among operators

UNIFE research group – information sharing and coordination among the major European suppliers

UITP – sharing information and coordinating research activities among urban as well as suburban and regional transport operators

The nature of Framework research programmes is that members of each coordination instrument are needed for a successful consortium. While it is felt that a further coordinating body to sit above all of these bodies is not necessary it is felt that ERRAC does have a role in making known the research ideas and potential consortia at an early stage so that individual companies and organisations have an opportunity to join and influence the scope of work if necessary.

ERRAC “owns” the strategic rail research agenda, which is the primary roadmap for the future of European railways. The proactive role that ERRAC should have in this regard is to monitor the extent of the research being undertaken in the Framework 7 programme to ensure that the roadmap to 2020 is being achieved. Recommendations

regarding how the scope of future calls need to be adjusted to achieve the SRRA should be issued periodically in order that the ERRAC vision for 2020 is realised.

The working group produced the Endorsement guidelines supported by UNIFE. Unfortunately the version 1 was presented to the Support Group and the Plenary but the Commission and the stakeholders decided that the endorsement was not an appropriate activity for ERRAC, particularly, in view of the potential lack of objectivity. The Plenary of the 15th of May stopped further activities.

Although in June 2007 ERRAC discussed again to the Commission to find a possible way to reintroduce the endorsement concept in the platform (the background documents, guidelines, minutes of the Plenary and agenda of the meeting with Mr. Siegler in June 2007 can be found in the folder 20.endorsement under the folder Activity_Report/Deliverables to the annexed CD-ROM).

The Joint Railway Research Programmes coordinators which would have took benefit from the endorsement letter did not took place as originally planned (because the Commission and the ERRAC Plenary stopped this activity) but further ground was set to create the next step activity of the platform: the creation of a new project to build consensus without endorsement but in agreement by the sector stakeholders. The ERRAC Stakeholders Meeting took place in October 2007 and the work for the ERRAC Managing the future started (the agenda and the initial documents can be found in the folder 21.ERRACstakeholdersMeeting under the folder Activity_Report/Deliverables to the annexed CD-ROM).

Evaluation Working Group

The Evaluation Working Group had also been established during the first year of the ERRAC SSA and has been very active until after the end of the project. Its work will be continued. At the first meeting a methodology was established as well as success criteria's. Using these criteria over 12 FP projects have been analysed and evaluated and scored towards the criteria. Members of the evaluation group worked individually to find facts supporting the evaluation. The overview of the results of the evaluations has been presented to a number of the "industry's" bodies, such as the UIC's Research Coordination Group, some of the UNIFE internal groups and of course the ERRAC Plenary meeting. (the checklist can be found in the 2.Checklist.doc file under the folder Activity_Report/Deliverables to the annexed CD-ROM).

The evaluation work never stopped and more than 30 projects have been today evaluated to understand the success or not in delivering a market uptake (the entire evaluated project including those after the end of the funded project and the Evaluation Report can be found in the 2.Checklist.doc file under the folder Activity_Report/Deliverables to the annexed CD-ROM).

A definition of the market uptake has been agreed as follow:

Strong market uptake

Clear evidence of use of products, processes, dissemination of knowledge, tools etc. in several countries/products

Need for additional projects but only in complementary areas.

Medium market uptake

Some evidence of use of products, processes, limited dissemination of knowledge, tools etc. in a few countries/products

Follow up project may be necessary

In the coming years it is possible that the result is going to be used more frequently if not forgotten

Weak market uptake

No known use of products, processes, dissemination of knowledge, tools etc. have been identified anywhere

No follow up project is needed unless the reason for the market uptake failure is clearly understood and removed.

Note1:

Products, processes, dissemination of knowledge, tools are stand alone elements and have equal weighting in the evaluation process.

Table: Deliverables List WP3

Del. no.	Deliverable name	Date due	Actual/Forecast delivery date	Lead contractor
D3.1*	Update of the brochure 'Rail Research in the EU'	Month 12	Month 18	UIC
D3.2*	Report on endorsement	Month 18	Month 18	UNIFE
D3.3*	First conference of Joint Railway Research Programmes coordinators	Month 12	Month 18	UNIFE
D3.4*	Evaluation report	Month 24	Month 24	UNIFE
D3.5*	Report on the health of rail research	Month 24	Month 24	UNIFE

* Deliverable added/modified by the ERRAC Plenary

Table: Milestones List WP3

Milestone no.	Milestone name	Date due	Actual/Forecast delivery date	Lead contractor
M3.1*	Sending out request to all MS to update their part of the brochure 'Rail Research in the EU'	Month 8	Month 8	UNIFE
M3.2*	Discussions on endorsement in the SG/Plenary	Month 12	Month 12-16	UNIFE
M3.3*	First conference of Joint Railway Research Programmes coordinators	Month 12	Month 18	UNIFE
M3.4*	Fixing an agreed evaluation methodology	Month 12	Month 12-16	UNIFE

Milestone added/modified by the ERRAC Plenary

2.3 Work package 4 – SRRA

One of the most important objectives of the ERRAC SSA was to update the Strategic Rail Research Agenda (SRRA) that was published in 2002. The work to reach this goal was split up into three steps:

- The update of the Railway Business Scenario (RBS), (published April 2005)
- Rail 21
- The update of the SRRA

2.3.1 Rail 21

Instead of moving on directly to the SRRA update, the ERRAC Support Group decided to first develop a "vision document" to set the high level targets for rail research. This vision document was published in March 2006. An important goal of Rail 21 was to provide input for the work programme of the commission's 7th FP. See also paragraph 1.2.1.

2.3.2 SRRA update

The ‘SRRA update’ working group had its first meeting in February 2006. The SRRA working group met roughly once a month. During the end of the process, a workshop was held at the premises of the European Commission DG Research where the different revised priorities were tackled and discussed and per priority a dedicated group of experts drafted contributions to the final SRRA report. The process was coordinated by Mr. Andrew Foster of Bombardier and published their final report, the updated SRRA II in May 2007. It was officially presented on June 27th 2007.

Table: Deliverables List WP 4

Del. no.	Deliverable name	Date due	Actual/Forecast delivery date	Lead contractor
D4.1	An overview of technological development and research supporting SRRA roadmaps	Month 14	Month 17	UIC
D4.2	The updated RBS	Month 6	Month 4	UIC
D4.3	The proposal for a new framework for the updated SRRA	Month 12	Month 14	UIC
D4.4	The updated SRRA	Month 24	Month 20	UNIFE

Table: Milestones List WP 4

Milestone no.	Milestone name	Date due	Actual/Forecast delivery date	Lead contractor
M4.1	An overview of technological development and research supporting SRRA roadmaps	Month 14	Month 17	UIC
M4.2	The updated RBS	Month 6	Month 4	UIC
M4.3	The proposal for a new framework for the updated SRRA	Month 12	Month 14	UIC
M4.4	The updated SRRA	Month 24	Month 20	UIC

A time-line was set out made for a number of meetings and a workshop to arrive to the updated version of the SRRA. The proposal for a new framework as well as the updated RBS can be found in the folder 18.SRRA II under the folder Activity_Report/Deliverables to the annexed CD-ROM).

The updated SRRA can be found in the 4.SRRA-2007.pdf file under the folder Activity_Report/Deliverables to the annexed CD-ROM.

Also a document was prepared to serve as a basis for the process of updating. (See Annex 2).

Section 3 – Consortium management

3.1 Contractors

One of the contractors, AEIF, has ceased its activities during the course of 2005. Its activities for ERRAC were taken over by UNIFE. The project management responsibilities were taken over by UIC supported by UNIFE.

3.2 Project timetable and status

3.2.1 WP 1: Management

During the reporting period, the plenary and support group meetings have taken place as foreseen. The working group meetings have taken place at monthly or two-monthly intervals. The SSA partner meetings are only scheduled when the need arises, which has been twice during the reporting period; once for the takeover of the project management from AEIF by the UIC and once for the installation of the working groups.

3.2.2 WP 2: Dissemination

During the reporting period, several WP meetings have taken place. The ERRAC website has been continuously updated. The Action Plan for Communications has been devised and its implementation has been followed up during the course of the project. Every possible opportunity to promote the work of ERRAC has been taken up in 2006 and 2007. As a result of the agreed rotating leadership, in October 2005, UITP took over from CER the leadership of the Communications Group for a period of one year, followed by the final stint lead by the CER.

3.2.3 WP 3: Observation

The Work Package on pre-competitive research observation has been split up into coordination and evaluation activities. For both activities a Working Group has been established and both Working Groups have been very active.

- The work on the update of the brochure ‘Rail research in the EU’ has been carried out and has been finished in late 2007.
- A first report on endorsement activities was given to the ERRAC Support Group and Plenary.
- An intermediate report on the evaluation activities was given to the ERRAC Support Group and Plenary. Furthermore the work of the Evaluation Working Group has been presented outside the ERRAC structures, such as during UIC and UNIFE internal working groups. Good use has been made of the results.

3.2.4 WP 4: SRRA

- The Rail 21 vision document was published in March 2006.
- The SRRA update has finished and the SRRA II has been published in May 2007. It was officially presented to “the world” on June 27th 2007 during an official event held in one of Brussels prestigious hotels.

3.2.5 Timetable

The above is summarised in the following bar chart:

WP Name	Realised				Foreseen			
	I	II	III	IV	I	II	III	IV
1 Management								
1.1 Preparation plenaries	■	■	■	■				
1.2 preparation SG	■	■	■	■				
1.3 Terms Reports								
1.4 SSA partner reports	■	■	■	■				
1.5 WG meeting minutes	■	■	■	■				
2 Dissemination								
2.1 Communication group&plan	■							
2.2 Seminars			■				■	
2.3 EU Parliament			■					
2.4 Report								■
3 Co-ordination and Evaluation								
3.1 Brochure update				■	■	■	■	■
3.2 Report on endorsement				■	■			
3.3 Evaluation report				■				■
3.4 Report on health of research								■
4 SRRA								
4.1 Technological development	■	■	■	■	■	■		
4.2 Updated RBS	■							
4.3 Rail 21			■	■				
4.4 Draft SRRA						■		
4.5 Final SRRA							■	

3.3 Coordination activities

In order to avoid misunderstandings caused by the frequent use of the word “coordination”. The different coordination activities going on within ERRAC are listed below.

3.3.1 Coordination within ERRAC

The consortium management consisted in preparing with the various ERRAC members and the Specific Support Action partners the necessary consensus over the ERRAC recommendations and actions. The ERRAC project management always has ensured the reporting both to the partners and members and to the scientific officer of the Commission in charge of the ERRAC Specific Support Action at DG Research.

The Project Manager participated in the ERRAC Support Group meetings as well as the other meetings related to the various activities of the WG’s. Together with the ERRAC Coordinator, he was involved in the preparation of the plenary and other meetings. Both the Manager and the coordinator were part of the various actions undertaken by the ERRAC Specific Support Action partners, such as promotion actions, dissemination activities, etc.

The project manager together with the coordinator ensured that the completion of activities and provision of deliverables were in accordance with the ERRAC

requirements. This included the allocation of tasks within the ERRAC project, the conduct of regular progress meetings and the provision of meeting reports.

3.3.2 Coordination between ERRAC and MS research

See paragraph 2.3

3.3.3 Coordination between technology platforms

ERRAC was one of the first technology platforms to be set up back in 2001. Since then a lot of newly Research Councils have been established. ERRAC has been very co-operative with these newly set-up platforms. A senior representative of ERRAC attended the meetings of the technology platforms coordinated by the European Commission such as ERTRAC, MANIFUTURE (Technology Platform working on the innovative manufacturing processes), ECTP (European Construction Technology Platform) for which a reference group has been set up within ERRAC co-ordinated by UIC. These meetings have been very fruitful in terms of establishing contacts with other technology platforms and identifying opportunities for collaboration.

ERRAC has also been in contact with the Chairman of EIRAC in view of the EIRAC's efforts to co-ordinate a common strategy among the different European Transport Research Advisory Councils.

ERRAC was also represented during a number of European Technology Platform Conferences, organised by the European Commission, where representatives of most ETP's spoke of their experiences and cooperation with other ETP's. At the same time, the representatives of the ETP's were updated of the activities and plans of the European Commission. These ETP's are still being seen as a very important instrument within the ERA.

There have also been contacts between ERRAC representatives and representatives of several National Rail Technology Platforms which have been formed during this reporting period. Presentations on ERRAC and its activities have been done for the Netherlands Rail Technology Platform as well as elsewhere.

The outcomes of the contacts of the contacts with other ETP's and of these ETP leader conferences have been presented at the ERRAC Support Group and Plenary meetings.

EURFORUM (European Research Forum for Urban Mobility): Information on this project has been provided by UITP to the ERRAC Support Group. UITP is leading this Coordination Action aiming at defining research priorities for the urban transport sector – in line with ERRAC findings as far as urban rail is concerned.

3.3.4 Coordination between ERRAC and EURNEX

See paragraph 1.2.12

ANNEX 1: 2007 membership overview

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Annex2

Conclusions of the SRRA vs Member States research programmes.

Comparing the country fact sheets to the SRRA, a number of conclusions can be drawn. These conclusions will be divided into two sections, one concerning the structure of the national research programmes and one concerning their contents, compared to the contents of the SRRA. The first section mainly looks at the way the programmes are set up and assesses whether they are influenced by the SRRA. The second section looks at whether the contents of the national programmes match with each other and with those of the SRRA.

Structure

The general observations made during the analysis are the following (see also Annex 9):

- All programmes are pre-competitive, cost-shared and open to all stakeholders, including academics. In general, authorities are anxious to promote innovation and encourage synergies between SMEs, academics, big firms and other stakeholders.
- Two programmes focus specifically on rail research (Austria and, to a lesser extent, Germany); the others are mainly dealing with transportation issues in general.
- The practicalities, the provisions, the way of submission and the expected outcomes of the National programmes vary from one country to another. This fragmentation is related to the structure of research and the financing of research in each EU member state.
- The budget of the programmes is difficult to assess because they are not all focused on rail. In addition, the support (type and volume) allocated to each projects is very different from one country to another for various reasons (type of the programme, budget available). On top of that, the national programmes have varying time scales.

National programmes are generally to some extent influenced by EU policies (i.e.: White Paper on transportation and other documents, normative activities, decision of the Council) and by the RTD work programme regarding research in transportation systems in Europe. Concerning the link to the SRRA, there are only few countries that make specific reference to the SRRA in their national programmes. However, most of the countries do seem to be attracted by the funding under the 7th Framework programme, since they encourage the national stakeholders to submit proposals in the FP7 calls.

Contents

At a first glance, it appears that there are many differences between the national research programmes, concerning their structure, but also concerning the contents. If German-French co-operation on some topics is

excluded, there is no relationship between the National Programmes of member states, although both Austria-Sweden and Sweden-UK have started to explore and initiate joint projects for cooperative research. In general it looks as if programmes were designed without any consultations between the National governments.

However, probably the most important issue in this type of comparison is the problem of wording, i.e. sometimes different words are used for more or less the same thing, or more or less the same word is used for different things. Taking this into account and looking into the programmes and the SRRA in a bit more detailed way, two analyses have been done: The first concerning the coverage of the SRRA by the national programmes (see Annex 10) and the second concerning the similarities between the national programmes, as well as the coverage of these issues by the SRRA (see Annex 11).

This second analysis yields the following key subjects that can actually be found in virtually all national programmes (of course some other, more country specific issues can be found as well, e.g. increased axle loads for the Nordic countries):

- Seamless passenger transport, reduced travel times, comfort, social safety
- Environmental issues, mainly energy efficiency and noise
- Reliability, availability, maintainability and safety of infrastructure
- Optimised use of infrastructure, capacity, traffic control
- Improvement of freight transport, logistics and intermodality
- Safety, mainly level crossings and command/control

In comparing this to the SRRA, two ways of thinking are possible:

1. These issues cover a large part of the SRRA clusters and the research areas.
2. The SRRA covers some of these issues clearly; most of the others are covered, but prioritised differently or hidden in other wording.

Both ways are equally correct and both views indicate that the implementation of the SRRA might be going in the right direction. This is a positive sign, but it is not good enough. The SRRA and the National Programmes should have a very firm link between them, not only coincidentally, because most of the subjects match, but also in the structure of the documents and –more important– in the way the subjects and visions are worked out towards concrete actions (e.g. is increased capacity of infrastructure realised by traffic management or by construction technologies?).

It may take some time to realise a true common approach to the future of European rail and to the research that has to realise this future. However, if this time will not be taken and the national programmes and the SRRA will not match, this implies the risk that each specific country or organisation will keep on understanding the objectives in its own way, which leads to many partners working together in the same programme, but each towards a different goal.

Recent history within the 6th Framework Programme has shown that this risk is not an imaginary one.

Recommendations

Part of the SRRA should be rethought, looking at the similarities between the national research programmes (see Annex 11). If a specific item is recognised as important in many of the national programmes, it probably should also be an important item in the SRRA.

On the other hand, the public authorities should redesign their national programmes to better comply with both the SRRA themes and with the wording of ERRAC.

The analysis also made clear that the SRRA should come forward with one clear list of items instead of the current different lists (strategic research priorities, strategic targets, targets for the business scenario, research clusters and priority themes).

To promote co-operation and implementation of the SRRA at European level a recommendation is made to promote forums and other kind of exchanges between the European rail research stakeholders. This is the only way to create a critical mass for rail research in Europe.

An example is that some countries are promoting social sciences in their national programmes: understanding mobility, cost/benefit analysis, economic modelling, forecasting and assessment, customer behaviour and attractiveness of train, new transport schemes, etc. The German programme, for instance, discourages projects that are only “technology driven” and not taking into account the socio-economic aspects. ERRAC may wish to introduce more socio-economic aspects in its SRRA.

An example is that the cluster “Interoperability” is generally not well covered by the considered member state programmes (this may be related to the fact that this is recognised as an issue that does not address a specific need within a single member state or that is coordinated at the EU level and funded by the EU).

3 Conclusions

4 Comparing the fact sheets to each other

When comparing the country fact sheets, it is interesting to see that there are some general differences between the former EU 15 and the 8 new member states with a railway system. The most striking difference being that the volume of the railway freight transport in Central and Eastern Europe has dropped to one third of the level in the 80's, due to the change of regime, the transformation of the structure of industry and the break-up of the Eastern economic relations.

Some other issues indicated by the countries concerned are:

- In the past years, investments in the development of railway transport were below the European average, the majority of the inhabitants expect the national government to develop the road network.
- The profitability of railway transport is, in general, low, due to the low price level and a lower efficiency.
- On average, there is an overcapacity in infrastructure, although some bottlenecks can be identified.
- The tracks are in bad technical condition, and there are significant speed limitations.
- The rolling stock is over age and out-of-date, and cannot satisfy the demands of the market.

This of course has its implications on the arguments behind the research activities (i.e. survival, reorganisation and trying to keep the market vs. development, investments and growth). It also causes problems concerning, for example, noise legislation and TSI development. On the other hand, despite the issues mentioned, the modal split of the transport shows a much more favourable picture than in Western Europe. Especially for the freight transport in a number of the new member states, where not only the modal split, but also the economical situation looks very favourable.

In the end, the research activities may show a lot of similarity. The most important similarity being the urgency of the reduction of railway system costs. Innovations should be implemented to increase efficiency and reduce costs, while realising quality standards that meet the public and commercial needs (these may be lower or higher than the actual standards). Cost reduction is necessary now, either to free capital for new investments (EU 15) or to ensure survival (for most of the 8 new member states with a railway system).

5 Comparing the fact sheets to the SRRA

In comparing all country fact sheets to the SRRA a number of important conclusions can be drawn, these conclusions will be divided into two sections:

- The structure of the national research activities; looking at the way the programmes are set up and assessing whether the SRRA has been taken into consideration or not.
- The contents of the national research activities; looking whether the contents of the national programmes match with each other and with those of the SRRA

Structure

The general observations made during the analysis are the following (see also Annex 1):

- All research programmes are pre-competitive, cost-shared and open to all stakeholders, including academics. In general, authorities are anxious to promote innovation and encourage synergies between SMEs, academics, big firms and other stakeholders.
- Two programmes focus specifically on rail research (Austria, Germany); the others are mainly dealing with transportation issues in general.
- The practicalities, the provisions, the way of submission and the expected outcomes of the National programmes vary from one country to another. This fragmentation is related to the structure of research and the financing of research in each EU member state.
- The budget of the programmes is difficult to assess because they are not all focused on rail. In addition, the support (type and volume) allocated to each projects is very different from one country to another for various reasons (type of the programme, budget available).

National programmes are generally to some extent influenced by EU policies (i.e.: White Paper on transportation and other documents, normative activities, decision of the council) and by the RTD work programme regarding research in transportation systems in Europe. Concerning the link to the SRRA, there are only very few countries that make specific reference to the SRRA in their national programmes; these are also the more recent programmes (Spain, Austria). Most of the countries do seem to be attracted by the funding under the EU Framework Programmes, since they encourage the national stakeholders to submit proposals in these calls.

Contents

It is clear that there are many differences between the national research programmes, concerning their structure, but also concerning the content. If German-French, Austria-Sweden and UK-Sweden and Baltic co-operation on some topics is excluded, there is no relationship between the National programmes of member states.

A very important issue in this type of analysis is the problem of wording, i.e. sometimes different words are used for more or less the same thing, or vice versa. Taking this into account and looking into the national research activities and the SRRA in a bit more detail, three analyses have been done: The first concerning the coverage of the SRRA by the national activities (see Annex 2), the second concerning the similarities between the national activities (see Annex 3) and the third concerning the coverage of these issues by the SRRA.

The second analysis yields a number of key subjects that can actually be found in virtually all national programmes (of course, some other more locally specific issues can be found as well, e.g. increased axle loads for the Nordic countries)

- Seamless transport, reduced travel times, comfort, social safety

- Environmental issues, mainly energy efficiency and noise
- Reliability, availability, maintainability and safety (RAMS) of infrastructure, including life-cycle costs
- Optimised use of infrastructure, capacity, traffic control
- Improvement of freight transport, logistics and intermodality
- Safety, Level crossings, Command and Control

The third analysis, comparing these EU-wide common issues to the SRRR shows that more than half of these issues are generally well and clearly covered. This might indicate that the implementation of the SRRR might be going in the right direction. This is a good sign, but it is not good enough. Still almost half of the common issues are generally not well, or not clearly, covered by the SRRR; they may be prioritised differently or hidden in other wording.

	Generally well / not well covered by the SRRR	Which section?	Examples of Keywords from National Programmes
Seamless passenger transport	well	intelligent mobility, research area A and C2	Through ticketing, Chipcard
Reduced travel times	not well	partly in intelligent mobility, research area A	Increased speeds
Comfort	well	mostly in Intelligent Mobility	Stations, Toilets on trains, Cleanliness
Social safety	well	safety and security, research area C	Vandalism, Station safety
Environment: Energy efficiency	well	environment, research area C	Green train
Environment: Noise	well	environment, research area A	Curve Squeal, Brake Screech
RAMS of infrastructure	well	mostly in innovative materials	Maintenance technologies, Reliability
including life cycle costs	not well	not substantially covered	Economic efficiency of infrastructure
Optimised use of Infrastructure	not well	partly in intelligent mobility, research area B1	Slot allocation, system performance
Improvement of Freight Transport	well	interoperability, research area B and Intelligent Mobility	New Concepts
Logistics	well	mostly in Intelligent Mobility, research area B2	Urban Logistics
Intermodality	not well	partly in Intelligent Mobility, research area C1	Seamless freight transport
Safety: Level Crossings	not well	not covered	Trespass, Accessibility
Safety: Command/control	well	interoperability, research areas A and D	ERTMS level 3

The SRRR and the national research programmes and activities should have a very firm link between them, not only coincidentally, because most of the subjects match, but also in the structure of the documents and –more important– in the way the subjects and visions are worked out towards concrete actions (e.g. is increased capacity of infrastructure realised by traffic management or by construction technologies?).

This is essential in order to realise a true common approach to the future of European rail and to avoid the risk that specific countries or organisations will understand the objectives in their own way, which may lead to many partners working together, but each towards a different goal. A number of experiences with EU Framework Programmes have shown that this risk is not an imaginary one.

Recommendations

<p>Part of the SRRA should be rethought, looking at the similarities between the national research programmes (see Annex 3). If a specific item is recognised as important in many of the national programmes, it probably should also be an important item in the SRRA.</p>	<p>On the other hand, the should use the SRRA as a kind of umbrella, to which their research activities will be linked, in order to realise synergies and have a better base for funding requests.</p>
<p>With reference to the actual national developments (as for instance laid down in the position papers), the two most important points in this respect are the life cycle costs of the railway system and the optimised use of the infrastructure.</p>	<p>An essential point in this link is to use the wording of ERRAC in all national programmes. This way, it will become easier and more useful to coordinate the national and the EU research activities.</p>
<p>The SRRA should come forward with one clear list of issues instead of the current different lists (strategic research priorities, strategic targets, targets for the business scenario, research clusters and priority themes). The common points between the national programmes should serve as a reference for this.</p>	<p>The SRRA should be and stay a stable document after the changes proposed. ERRAC should focus on dissemination, observation and implementation, for instance through forums and other kinds of exchanges between stakeholders.</p>
<p>Some countries are promoting social sciences in their national programmes: understanding mobility, forecasting and assessing customer behaviour, image of the railway, new transport schemes, etc. Some programmes even discourage projects that are only “technology driven” and not taking into account the socio-economic aspects. ERRAC may wish to introduce more socio-economic aspects in its SRRA.</p>	<p>The clusters “Interoperability” and “Innovative materials” are generally not well covered by a significant number of member states. Interoperability may be seen as an activity coordinated and funded by the EU. Innovative materials may be seen as basic research, whereas most countries seem to tend more towards applied research.</p>