Additional Information Document

3rd Call for Proposals
JUNE 2000

Task Descriptions

Key Action
"Sustainable Mobility and Intermodality"

Thematic Programme
"Competitive and Sustainable Growth"

5th Framework Programme

15 December 1999

INTRODUCTION

This document gives additional information concerning the specifications and objectives of all tasks foreseen in the third call for proposals of the Key Action "Sustainable Mobility and Intermodality" of the Thematic Programme "Competitive and Sustainable Growth".

All proposals submitted for this Key Action in the framework of the third periodic call *should address one of these tasks or sub-tasks* as indicated in the task description, all of which are linked with the strategy and priorities defined for this call in the work programme, as updated.

The *first three digits* of the reference number mentioned together with each task title indicates the work programme reference number. An example: 2.1.1 stands for "Socio-economic scenarios for the mobility of people and goods", subheading "Quantitative tools for decision making". The number after the slash is the sequential number of the task within one research area following the last number of the second call.

Involvement of Non-EU countries (Item 8). Entities from Associated States to the Fifth Framework Programme are always welcome to participate. The information given within this item aims at inviting more expresly consortia to involve their entities for a given task, and sometimes entities from other identified third countries.

This document can also be downloaded from the Homepage of Programme 3 on the Internet:

http://www.cordis.lu/growth

Appended to this document, you can find the list of tasks launched in the 1st call (March 1999) and in the 2nd call (December 1999).

WARNING

The Commission reserves the right to introduce changes in the task descriptions based on new and relevant information. An updated version of this document will be made available at the opening of the 3rd call.

TASK DESCRIPTIONS

3rd CALL. JUNE 2000

OVERVIEW OF TASKS
3rd CALL. JUNE 2000

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Objective 2.2 Infrastructures and their interfaces with transport means and systems

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2.2.1/14 Improvement of intermodal transport operations in terminals

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2.2.1/22 High-speed vessels: identification of requirements and impact assessment

2.2.2 Environment

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2.2.3 Safety

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2.1.1/9 Development of a European Transport policy Information System (ETIS) as a basis for transport planning and policy formulation

1. Problem description

The European Union and its Member States have a joint commitment to the principles of sustainable development in the transport sector and the European Union's Common Transport Policy (CTP) serves as a framework for achieving it. The Common Transport Policy should be supported – among other things- by the establishment of a European Transport policy Information System. ETIS will be an information system of integrated tools (decision support, modelling, presentation tools-GIS, databases, etc.) to assist policy makers at European level to analyse European transport related strategic issues.

ETIS will comprise four elements: a data element, an analytical modelling element, GIS and a final element interfacing users with the above elements.

Although research into the area of ETIS development has become a major element in the 4th FP and the 1st call of the 5th FP transport programme it has been, so far, concentrated more in the data and the analytical modelling elements of ETIS. Research concerning the critical Interface element was very limited. Research involved in the building and verifying of transport models involves the gathering of much data, including future scenarios. On the other hand assembling data is largely repeated for each model building exercise and makes the model building work expensive. If a basic common data set covering Europe were available, these problems could be much reduced.

Another problem could be the danger of separate developments in each of these areas without any clear central co-ordination. Also the needs to assess the quality of the research activities and to ensure an effective up-take of the results by the Commission and Member States are clearly apparent.

2. Task description

The following steps towards the development of ETIS should be:

- the development of the Interface element, (subtask 1),
- the development of a reference database for the modelling element (subtask 2),
- in parallel a vehicle will be established to provide the strategic direction for and assessment of this pan European research effort and to co-ordinate the different strands (subtask 3).

Subtask 1

The role of ETIS, as a reference information system, is to enhance the organisation, sharing and exploitation of existing information. It should assist transport policy makers at the European level by providing a knowledge base, focusing on core strategic European policy-relevant information. It should assist users to access, analyse and develop forecasts of and scenarios for the interactions between transport and the economy, land use, environment and society.

This task will be concentrated on the provision of suitable tools in the interface element, building on earlier work in the 4th Framework Programme.

The initial steps in this task should be:

- assessment of the tools developed during the 4th FP to establish a foundation for further development,
- identification of the user requirements,
- analysis and validation of the overall architecture,

The achievement of the ETIS aim requires the further development of the interface element, linking data sources, models and the users by the provision of suitable tools with the objective of meeting the demands of European policy makers.

This will require full co-operation with the 1st Call tasks on transport modelling which are studying the organisational arrangements needed to make transport supply, demand and network assignment models accessible for policy use. Clearly, the tools included in the ETIS interface should support this effort. The system should also support higher level customised applications and be structured to accommodate different user profiles among policy decision makers.

Subtask 2

The development of a reference database will be used to measure, explain and forecast the crucial transport system aggregates over time, namely, classical quantity indicators, prices and service level indicators, typical externalities factors. These indicators should be related to the determinants of the transport demand, various kinds of socio-economic activities, prices and service levels.

The development of the reference database for modelling has two main elements:

- Develop a re-usable methodology to generate the data set from known and available (or at least potentially so) sources (12 months).
- Apply the methodology to generate the data set (12 months).

These tasks will be undertaken in conjunction with the network of pan European modelling teams, assembled by a Thematic Network (subtask 3). None of this will be without problems but the value to the modelling community is clear - a pan European data set based on a consensus view, produced by an open methodology from identified sources. Inevitably, any individual model will require more or less data than the ones that the common set provides but the provision of any additional material will be a smaller task. The common data set with some scenarios of future development attached, once established, would have the effect of opening up the modelling market to competition from innovative and much smaller scale enterprises. These would be able to concentrate their attention on the modelling element without spending a disproportionate effort on data collection.

Subtask 3

A Thematic Network is proposed to provide the strategic direction for and assessment of this pan European research effort and to co-ordinate the different strands. For those engaged in the research effort to share views and problems among themselves.

The aim of the task is:

- Discussion and assessment of the research results from the various relevant projects in the area of "Quantitative tools for decision-making",
- To co-ordinate the work of the subtask 1 and subtask 2 dealing respectively with ETIS development and pan European modelling by
    1. Establishing a Steering Group for approving the developments emerging from the area of ETIS interface element (subtask 1)
    2. Assembling the main pan European model building teams to develop a framework for a consensus on the data needs for modelling (subtask 2)
- To facilitate the dissemination of the results of the research to the Commission Services, Member States and to others,
- To provide some technical effort to integrate results and explore technical operational implementation issues arising but not tackled within the research projects and
- To provide the corresponding administrative and technical support

Undertaking the work outlined above will involve developing activities in the following areas:

- Projects appraisal
- Initiation of ad hoc studies
- Establishing a specific steering group and network to meet the needs of the subtask 1 and subtask 2
- Establishment of a secretariat to organise the activities of the network, including dissemination

There will also be a need for concertation with the Thematic Network Task 2.1.1/5 of the 1st call on effective user access to models.

3. Expected results

Subtask 1

An analysis of the requirements for and a definition of interface element and its associated tools, developed in the 4th Framework Programme. Development of further appropriate tools for integration within the interface element of ETIS (decision support, presentation tools-GIS, database handling etc.). Co-operation with the First Call task on transport modelling to ensure that the interface can meet the demands of the modelling service it recommends.

Subtask 2

Three main outputs are expected

- A contribution to the building of a consensus view of the reference pan European transport modelling data set.
- An open methodology to generate a version of such a set from existing international and national sources
- A first compilation of the data set by applying the methodology mentioned above.

Subtask 3

The major results anticipated for the Thematic Network are :

- Assessment and co-ordination of research work in the area of "Quantitative tools for decision-making",

- An effective contribution to the work of the accompanying measures,
- Consolidation and effective dissemination of the research results,
- Recommendations on the future direction of the research,
- Co-ordination of work between the Commission and Member States and
- An up-take of the results for policy support.

All this would facilitate the establishment of ETIS as a factual basis for European transport planning and policy formulation.

4. Type of contract

Subtask 1: Accompanying Measure (up to 100% funding)
Subtask 2: Accompanying Measure (up to 100% funding)
Subtask 3: Thematic Network (up to 100% funding)

The three subtasks will be subject to different contracts.

5. Timing/Duration

Subtask 1: 3rd call (June 2000)/ 36 months
Subtask 2: 3rd call (June 2000)/ 30 months
Subtask 3: 3rd call (June 2000)/ 36 months

6. References

Communication on The Common Transport Policy, Sustainable mobility: "Perspectives for the Future (COM(1998)716 final)_Paras 36, ANNEX II, B.1"

7. Links

INFOSTAT, MESUDEMO, CONCERTO, BRIDGES, ASSEMBLING, INFREDAT, TEST, MEST, STREAMS, SCENES, MYSTIC (FP4 Transport program), Modelling tools tasks (TN, AC) 2.1.1/5 and long distance passenger task 2.1.1/1 of the 1st call 5th FP Sustainable mobility and Intermodality key action, task 2.1.2/4 "Cluster on socio-economic impact of transport investment and Policies and network effect" 2nd call 5th Sustainable mobility and Intermodality key action.

8. Involvement of non-EU countries

Accession countries will have full access to the tools developed by subtask 1.
Possible data sources in the Accession Countries could be investigated for subtask 2.
The participation of the Accession Countries in the TN (subtask 3) will be very welcome.

9. Consortium profile

Subtask 1, Subtask 2
Private commercial organisations, Universities, other research institutions, Public authorities.
Subtask 3
Small consortium able to organise and co-ordinate workshops involving several members and experts. Participants should represent Public authorities, Private commercial organisations, Universities, other research institutions.

The same consortium may apply to one or more subtasks.

2.1.1/10 Designing a database structure for in-depth road accident investigation

1. Problem description
Decision-makers in road safety primarily need both quantitative and qualitative accident information in order to identify areas where improvements in safety could be made. Road accident data, which comprise an important subset of road safety information, are required to support the development of policy measures, or technological improvements, which could prevent accidents and reduce the number and severity of their consequent casualties and property damage. Road accident data, collected by the police and registered in national databases and subsequently in the CARE Community database, is essential for the identification of problem areas and the development of new policy measures, as well as for monitoring the effectiveness of past policy measures.
National road accident statistics mostly provide an assessment of accident circumstances at an aggregated level, and more detailed ("in-depth") data are needed to analyse accident and injury causation. Such data are already collected by several teams in Europe, for a restricted number of accidents, but the number of accidents investigated is limited by the relatively high cost of detailed investigation. Since the possibility of increasing the sample size of accidents for in depth analysis is very limited, it is necessary to make the best possible use of existing information. This requires a framework to promote the exchange of data between different collection systems to see if meaningful linkages can be established which will enhance accident analysis and, in particular, accident and injury causation. The problem can be broken down into three main objectives:

- building the conditions for in-depth accident data exchange;
- demonstrate the potential of enlarged use of in-depth datasets for evaluation of selected measures (e.g. front and side impact Directives, modern restraint and airbag systems, pedestrian and (motor)cyclist protection…);
- assess the potential of smart road accident data collection tools to assist (in-depth) accident investigators and further facilitate data exchange.

2. Task description
The work will be based on existing in-depth accident and injury frameworks, defining common/compatible data, and conditions for data exchange. Based on a common framework, a prototype in-depth accident information core database will be developed, that will be used for the assessment of selected road safety measures. In parallel, the potential of smart tools for in-depth accident data collection and analysis will be assessed, and requirements for these tools will be defined.

3. Expected results
To set up and validate a dictionary of in-depth data elements with common variables and values, covering both secondary and primary safety. Add-on data elements will be defined for specific types of accident investigations. A common format and structure will also be specified to ensure compatibility of data sets.
Prototype of an in-depth accident information core database. Safety impact assessments of selected road safety policy initiatives.
Requirements for smart tools for data collection.

4. Type of contract
Accompanying Measure (up to 100% EC funding).

5. Timing / Duration
3rd Call (June 2000), duration 24-36 months.

6. References
Policy relation with the EC Road Safety Communication (Promoting Road Safety in the EU) COM(97) 131 final.

7. Links
4FP DG-Transport STAIRS project (linking national accident databases with in-depth accident data). Project could provide input to the DG-Rerearch Thematic Network on Vehicle Passive Safety. Link with the development of the CARE database, the CAREplus project, and CRASH (EU road safety information system). Link with COST Action 327 (Motorcycle Safety Helmets). Links with the EACS project (ACEA), the MAIDS project (ACEM), and similar projects.

8. Involvement of non-EU countries
As setting up EU harmonised road accident databases and information systems is an important policy issue, participation of first and second wave accession countries is particularly welcomed.

9. Consortium profile

The work will require expertise in areas such as accidentology, traumatology and vehicle technology.

2.1.2/5 Economic, environmental and social conditions for the sustainable development of transport

1. Problem description

Sustainable development has been defined by the Bruntland committee as "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs". A qualitative definition for sustainable transport is given by an OECD project: "Transportation that does not endanger public health or ecosystems and meets needs for access consistent with (a) use of renewable resources at below their rates of regeneration and (b) use of non-renewable resources at below the rates of development of renewable substitutes". The Common Transport Policy (CTP) of the EU gives also a strong emphasis to sustainable mobility.

With the continuation of current policies, transport demand, especially for air and car travel, continues to rise. Congestion is getting worse, having serious implications to urban air quality and liveability of cities. Therefore, despite the various definitions of sustainable development and mobility, it still seems unclear what sustainable development and mobility mean in practice when defining concrete transport projects and policy measures. This is due to many reasons, which lead to uncertainty on how to proceed. These include among others disagreement on the appropriate levels of environmental targets, strong interdependencies and trade-offs between environmental, economic and social sustainability implications, distribution of cost and benefits in the short vs. long run, global nature of the damage vs. need for local action, etc.

There is now an increasing acceptance of the link between the growth in greenhouse gas emissions (principally CO_2) and climate instability, and of the important part that transport contributes to the growth in emissions. There are various ways in which such emissions from transport can be contained or reduced, ranging from vehicle technologies to policies to encourage travel reduction and modal shift, but there is a need for research to take a strategic, cross-modal view in Europe, to identify cost-effective remedial packages.

2. Task description

The aim of this task is to operationalise the concepts of sustainable development and sustainable mobility in the transport sector and to define such policy measures that improve the sustainability of the transport sector, recognising the different conditions operating in the various Member States and Accession countries. The research should build on the existing vast literature on these issues.

The task will start by defining what sustainable mobility and sustainable transport could mean in practical policymaking taking into account among other trade-offs with overall sustainability as well as with economic and social issues, developments in other sectors, trade-offs between transport modes, intra- and inter-generational equity issues. Performance indicators and critical threshold points for a sustainable transport system and all the individual modes will be defined and developed. The indicators and thresholds should cover short, medium and long-term futures and be applicable at different geographical levels (urban, inter-urban, rural, peripheral, etc.) and economic contexts.

Second, the research will assess the impacts of the different elements of the Common Transport Policy, given the performance indicators and different equity concepts defined. Such transport policy measures and policy packages that enhance transport sustainability will be identified and their impacts assessed. The impact assessment should cover both efficiency and equity implications of the measures and packages. Areas where supra national vs. local decisions would be necessary will be identified.

Third, the task will determine cost-efficient measures and policy packages to reduce CO_2 emissions from transport across all modes and by market segment, taking account of their economic and social implications. The possible role of emission trading at world-wide and at EU level will also be looked at. The assessment of the measures should address the distribution of costs and benefits to different citizen groups and generations, industries and regions. The roles for local, national, European and world-wide level measures should be assessed.

Active liaison with the Thematic network on the Integration of Environment in the Transport Policy (task 2.2.2/6) is expected to ensure coherence in methodological development and approach and to allow for widest dissemination.

3. Expected results

Operational working concepts of sustainable mobility that can be used for transport policy and modal policy planning and definition. Performance measures and threshold indicators that can guide the development of transport networks at the Community (TEN-T) and other levels. Prioritisation of transport policy measures in terms of cost-efficiency in view of sustainability, using a coherent framework. Cost efficient policy actions to reduce overall, and in particular CO_2 emissions from transport.

4. Type of contract
Accompanying measure (up to 100% EC funding). Proposals may be made for each of the three parts separately or as an integrated proposal covering more than one part.

5. Timing / Duration
3rd call (June 2000), 24 months.

6. References
Communication on The Common Transport Policy, Sustainable Mobility: Perspectives for the Future (COM (1998) 716 final), paras 24, 25, 46; Communication on Transport and CO_2: Developing a Community Approach (COM/98/204 final, 31.3.1998).

7. Links
CANTIQUE, POSSUM, TRENEN, SCENES from the FP4 Transport Programme, tasks 2.1.2/3, 2.2.2/2, 2.2.2/6 from the 1st call of the FP5 key action Sustainable Mobility and Intermodality. Auto-oil II Programme, especially working group 5 on non-technical measures. Pilot studies conducted by the Committee of Government Experts on Transport Infrastructure Charging. OECD project on Environmentally Sustainable Transport (EST).

8. Involvement of non-EU countries
The participation of the Accession countries would be a benefit, especially to take into account the eventual implications of and to their different transport systems and economic structures. Given the global nature of greenhouse emissions and extensive work done also outside the EU, the involvement of e.g. US researchers could offer an added value.

9. Consortium profile
Academia and research institutes involved in research on sustainability, macro-economic and sectoral analysis, performance measurement, cost-efficiency methodologies. An also prospective departaments of large companies.

2.1.2/6 Implications of non-transport policies and societal developments on mobility

1. Problem description
Transport responds to the needs of society, and in particular business and industry. Transport policy is expected to have a direct effect on transport, however transport operations are effected by several other policies. Such influences relate to changes in fiscal policy, regional policy (e.g. land-use), cohesion, market trends, European integration and expansion etc. Also globalisation of the markets, demographic changes etc. will have an impact on how the transport sector and transport demand evolves in Europe. At the same time the introduction of new technologies and new techniques in the transport, and in other domains of the society, may lead to a change in transport demand. Technology is currently offering choices which could lead to more or perhaps less transport, while the current trend towards a European population with a higher proportion of people beyond working age presents problems and opportunities. Some particular issues are paramount in the debate on whether greater mobility means more transport – their investigation would be valuable to better define future transport needs and provision. These changes in transport demand require different reactions and solutions in respect to the formulation of transport policy to ensure that best use is made of the new opportunities. The need for, and especially the intensity of, transport policy actions might differ considerably depending on policies in other sectors of the economy or global economic developments and on each new technological development.

2. Task description
The task will seek to identify the time-based implications of non-transport sector policies and societal changes, in particular as seen through developments in business and industry on transport policy formulation. The shorter-term implications of the following issues would be investigated:

- Non-transport policy and societal changes that have implications on mobility and on transport policy formulation would be identified, analysed and assessed.
- The degree of impact of the non-transport policy and societal changes on the level mobility and in terms of transport policy formulation, and the time period when such impacts would occur would be established.
- A procedure for the continued monitoring of non-transport policies and societal changes with an influence on mobility and on transport policy formulation should be recommended.

3. Expected results
An operational assessment of how policies in non-transport sectors and societal changes affect mobility and transport policy at the single mode and transport system levels. In particular, but not exclusively, the implications on mobility in the European Union that result from developments in non-transport policy on:

- Enlargement of the European Union
- Globalisation of the economy and the increasing use of IST technologies in internal and international trade and commerce
- Decentralisation of national governments
- Energy and the Environment

4. Type of contract
Accompanying measure (up to 100% EU funding).

5. Timing / Duration
3rd call (June 2000) / 2 years.

6. References
The Common Transport Policy - Sustainable Mobility: Perspectives for the Future. (COM (1998) 716final) All paragraphs

7. Links
Task 2.1.2.5 European transport visions beyond 2020. STREAMS, SCENARIOS, SCENES, EUROMOS and POSSUM projects of the Transport Programme. Projects of the Transport Telematics sector of the Telematics Application Programme, other key actions of the Growth Programme and key actions of the Information Society Programme.

8. Third countries

Countries with Science and Technology Cooperation Agreements, and in particular Associated countries, and US and Canada.

9. Consortium Profile

Academia, research institutes, and/or others involved in policy and governmental studies in relation to transport, with support from similar organisations with non-transport policy study interests.

2.1.2/7 European transport visions beyond 2020

1. Problem description
Factors influencing the transport sector and transport policy-making are changing more and more rapidly. Transport demand is constantly increasing and favouring especially road and air modes while at the same time financial, environmental and other constraints seem to become more stringent. Methods exist and have been used to illustrate the possible transport images at around 2020, and forecasting and backcasting techniques have been employed to set out likely scenarios of the evolution of transport between now and then. From these scenarios the scope of transport policy options which could be required to achieve the 2020 images have been outlined. These prospectives will help in the reflection on which transport policies the European Union and its Member States might follow, but less is known about the longer term future beyond 2020. Such further knowledge together with related risk factors would also give a higher confidence to the possible scenarios for the period up to 2020.

2. Task description
The aim of this task is to set out with related risk factors the prospective evolution of transport over a period beyond 2020, and through this give a greater confidence to the scenarios that are available (or are still emerging) for the period up to 2020. The study would define the factors that influence transport over the period and highlight those which would have the most major effect on the earlier period up to 2020, and especially the factors that would involve transport policy. It would draw on study results from the 4th Framework Programme and from other parallel studies. The research would take advantage of the use of backcasting as now applied in the transport field, although this might not be the sole method employed. It is expected that the study, although in the transport field would take account of changes in society as a whole at the world level, as well as more particularly, at the European level, and in doing so incorporate current knowledge on societal and economic evolutionary trends. It would be expected that the development of transport and the transport economy during the second half of the 20th Century would provide a reflection on the possible factors of change which are inclined to have the most major effect. The task should also address and/or contribute to the following issues:

- achievement of the goal of sustainability in both, transport in particular, and development in general
- the evolution of transport in Europe and transport developments related to Europe on a world-wide scale
- Europe within the Community and the wider geographical definition, together with the changing situation as a result of enlargement of the Community
- technical, scientific, social and economic factors
- the development of the European Union's Common Transport Policy in the early 21st Century

3. Expected results
The study would give soundly reasoned and qualified prospective statements on transport beyond 2020, and would draw from these inferences on the period up to 2020. It would set out the major changes in transport, especially those seen as barriers where policy intervention would be of benefit, placing such changes in the context of the overall societal and economic change.

4. Type of contract
Accompanying Measure (up to 100% EU funding)

5. Timing/Duration
3rd call (June 2000) / 24 months

6. References
Studies of the 4th Framework Programme.
Publications of the Commission's Prospective Cellule.
The Common Transport Policy - Sustainable Mobility: Perspectives for the Future. (COM (1998) 716final)

- All issues in the main text

1998-2000 actions

- General relation to these actions

2000-2004 actions

- Sustainable mobility to 2010 and beyond: a global evaluation of the CTP as a framework for sustainable mobility. (under A. General)
- Significant elements of:

B. Improving efficiency and competitiveness
C. Improving quality
D. Improving external effectiveness

7. Links
Task 2.1.1.2 Implications of non-transport policies and societal developments on mobility. Related Key Actions of the 5th Framework Programme, especially those of the Information Society Programme, the City of Tomorrow and other Key Actions with predictive elements. 4th Framework Transport Programme projects POSSUM, SCENARIOS, STREAMS, SCENES and EUROMOS,

8. Involvement of non-EU countries
European countries outside the European Union and Accession Countries.
Other third countries.

9. Consortium Profile
Academia, research institutions and/or others involved in forward policy issues. Input from business and industrial concerns is expected.

2.2.1/8 Potential of intermodal transport for modal shift

1. Problem description
A shift from road transport to other modes of transport is considered to be one of the main policy instruments for the EU and national governments. By transferring freight from road to rail and water transport road congestion can be reduced and the accessibility of industrial areas improved. A modal shift can also contribute to the reduction of environmental pollution and an improvement of traffic safety. However, until this moment a substantial modal shift has not occurred, since road transport is still showing the largest growth figures compared to the other transport modes. Shippers are still choosing road transport for its low price, flexibility and reliability. Nevertheless, the increase in road congestion and the changing attitude towards environmental problems is making shippers more aware of the possibilities of other transport modes. But a clear insight in the potentials for a modal shift is lacking so far. Until now, many initiatives to improve intermodal transport were focused on the supply side (e/g railway operators, terminal and intermodal transport operators). But the most important decision-makers in freight transport are the shippers and logistics service providers. For obtaining a better insight in the potentials and to realise a really substantial modal shift, it is therefore crucial to concentrate on the demand side. It is very useful to analyse the potentials for a modal shift on the scale of individual companies. When insight in the freight flows which can be transported by intermodal transport has been acquired and awareness of the potentials for intermodal transport has been created for the decision makers, the transfer from road to rail and water transport as well as the actual implementation of new services are a logical consequence. Experiences in this field in one of the EU member states have already resulted in a substantial modal shift.

2. Task description
The final objective of this task is to obtain insight in the potentials for a modal shift from road transport towards other transport modes, taking the demand side as a starting point. In order to achieve this objective, insight in the freight flows that could be transported by intermodal transport on the company-level is required. The aim is to demonstrate on the company level the possibilities for a modal shift. Existing scanning methodologies that have been developed for this purpose have to be analysed, adapted and implemented on a European scale. The most promising results of the scans can be demonstrated in pilot projects, where at the company level cargo is shifted from road to rail and water transport, taking costs, delivery times and customer requirements into account. Demonstrating successful scanning methodologies can also result in standardised scanning procedures. This will facilitate shippers and logistics service providers in Europe, thus removing barriers for a real modal shift.

The task should address the following issues:

- Overview of decision making processes and actors in transport
- Analysis of instruments and tools for realising a modal shift
- Selection of successful methodologies and pilot projects
- Implementation of scans on a company level
- Demonstration of modal shift in pilot projects
- Assessment of the results

A large sample of companies of different sectors and of different European Member States have to be associated in this endeavour.

3. Expected results
The project will provide a realistic view on the potentials for a modal shift. The expected results is the development of methodologies and their validation that will enable the Commission and national governments to stimulate intermodal transport in a fair and cost-effective way. The dissemination of results of the project towards shippers and other decision-making actors will consist of practical tools for scanning potentials and implementing new intermodal transport services.

4. Type of contract
RTD project (up to 50% EU funding)

5. Timing
3rd Call (June 2000) - Duration: 24 months

6. References

Communication on the Common Transport Policy, Sustainable Mobility: Perspective for the future (COM(1998) 716 final)
Communication on "Intermodality and Intermodal Freight Transport in the EU" (COM(97) 243 final).
Communication on the progress of the implementation of the action programme of the Communication on Intermodality (COM(1999) 519 final).
Communication on "The development of Short Sea Shipping in Europe: A Dynamic Alternative in a Sustainable Transport Chain" (COM(99) 317 final)

7. Links

Concerted Action in logistics (LOGICAT)
TRILOG Study (OECD)
EMOS project

8. Involvement of non EU-Countries

Participation of Accession Countries where appropriate.

9. Consortium profile

Research organisations, consultants, industries, shippers, transport operators.

2.1.3/3 Thematic Network on common issues of transport research concerning European and North American Countries.

1. Problem description
While transport issues exist in Europe and in North America for which common research issues can be identified, there is currently limited opportunity for pooling experience. Even where the origins of the research and the expected deployment conditions of such issues are dissimilar, there will be benefit from an ongoing arrangement for mutual discussion. An open Thematic Network could provide such an opportunity.

2. Task description
A Thematic Network comprising members drawn from European Member States and also from principally the United States and Canada would identify the research in progress, the policy aims to which the research is related, and would draw on these aspects to explore the added value to be derived from a common research approach. The Thematic Network would also set out further research needs in the areas concerned as suggestions for the next stages in the research cycle - whether this would lie in additional research or towards implementation.
The expected working method would involve meetings of the Thematic Network in the form of seminars and workshops, and would also utilise extensively the advantages of Internet and e-mail communication such as virtual meetings to gain the maximum value from widely separated participants (both members and experts) in the Thematic Network.
The principal issues, for which there could be a common research interest, would include:

- the transport innovation process
- intermodal transport and supply chain management
- the transport system
- strategic research (including enabling research and modelling)
- transport and the environment
- public transport (transit)
- other areas, to be specified, where common interest research would provide added-value.

3. Expected results
The Thematic Network would set out the full scope of work in progress in the areas of concern and would advise on any added value to be drawn from the combination of the research outputs. As a second output the Thematic Network would identify the possible next stages to be considered by the responsible authorities in each of the areas of concern.

4. Type of contract
Thematic Network (up to 100% funding)

5. Timing / Duration
3rd call (June 2000), 36 months

6. References
The Common Transport Policy - Sustainable Mobility: Perspectives for the Future. (COM (1998) 716final).
The EU/US Science and Technology Cooperation Agreement
The EU/Canada Science and Technology Cooperation Agreement

7. Links
All projects in Sustainable Mobility & Intermodality Key Action, related transport research in European, and North American research programmes.

8. Involvement of non-EU countries
Participants from the transport research communities in the CEEC/CIS countries and from North American countries are invited to take part in this Thematic Network.

9. Consortium Profile
A small core consortium providing the skills of organisation, dissemination, project management particularly active in the transport research arena would be welcomed. The Thematic Network members would be typically mainstream specialists in the areas of interest working in Europe and/or North America,

and experts would be drawn from the wider community of interests which have an impact on transport and mobility. Involvement of key scientific organisations from Europe and North America is required.

2.1.3/4 Economic instruments, regulation and physical measures for achieving transport policy objectives

1. Problem description
In practical policy making regulation and physical measures have been far more common means than economic instruments to manage traffic and ensure that the desired effects of transport policy objectives are reached. The main purpose of using economic instruments, such as user charging and taxation, has been revenue raising either for transport investments (e.g. tolled motorways) or for more general purposes (e.g. fuel tax). There are no doubt many cases where substituting or complementing regulation and physical measures with economic measures, such as pricing, could lead to more efficient and equitable outcomes. The implications of gradually shifting from a more command-and-control type of approach towards a more market oriented one have rarely been looked at.

On the other hand, it is likely that complete reliance on economic instruments would not meet broader equity and even efficiency objectives of a society. Some research has shown that efficient pricing might put a disproportionate burden on less well-off households, excluding them from a minimum level of mobility. It is also often claimed that there is a need to provide good alternatives - public transport, walking and cycling facilities – for those car users who are priced off. Yet, other research shows that hypothecation of transport pricing revenues to the sector is likely to be inefficient and that the expected benefits of more efficient pricing might be lost. The need and ways to complement or substitute theoretically optimal pricing measures with other policy instruments has been little addressed in research.

Urban parking policy can, in some cases, be a good example of combining both economic (parking charge) and regulatory instruments (maximum length of stay, exemptions to residents) to address contradictory objectives at a city level. The lessons learnt in view of a wider transport pricing policy have not, however, been drawn.

2. Task description
The aim of the task is to develop a theoretically sound framework for defining combinations of economic instruments, regulatory and physical measures in reaching the broad aims set by transport and other relevant policies. Also the need and ease of enforcement of the measures should be addressed. The task will cover all modes, both passenger and freight transport and inter-urban and urban contexts. More specifically, the following issues should be addressed:

- Given transport (and other relevant) policy objectives, what are the efficiency and other implications of using economic instruments, regulatory and physical measures in combination or in isolation? Does addressing one policy objective with a specific measure induce spillovers on the achievement of other objectives?
- The role of slot allocation in air and railways in relation to economic instruments. How do automated highways fit in the picture? Congestion pricing vs. slot allocation or ramp metering.
- Urban transport pricing schemes that take into account the needs of and equity between residents, commuters and other travellers.
- Definition of an efficient and equitable parking policy – from practical applications in cities to a coherent theory.
- Internalisation of the negative externalities of international, especially air and maritime, transport that are competing in the global markets.
- The role of subsidies for public transport and/or commuting, employer paid parking, etc. in transport. The relationship between transport pricing and general taxation.

3. Expected results
Analysis and assessment of the relationship between economic instruments, regulatory and physical measures enabling policy-makers to achieve a better balance between different, often conflicting objectives. Concrete suggestions for complementing transport pricing with regulation and physical measures and vice versa.

4. Type of contract
Accompanying measure (up to 100% EC funding)

5. Timing / Duration
Third call / 36 months.

6. References
White paper on Fair Payment for Infrastructure Use: a Phased Approach to a Common Transport Infrastructure Charging Framework in the EU (COM/98/466 final 22.07.19998); Communication on the Common Transport Policy, Sustainable Mobility: Perspectives for the Future (COM(1998) 716 final), various references especially 15, 42, 10 on Fair and Efficient Pricing; High Level Group on Infrastructure Charging.

7. Links
AFFORD, COST342, PATS, PETS, PRIMA, TRENEN from the FP4 Transport Programme, tasks 2.1.1/2, 2.3.1/8, 2.3.1/9 from the 1st call and tasks 2.1.1/3 from the 2nd call of the FP5 key action Sustainable Mobility and Intermodality.

8. Involvement of non-EU countries
The efficiency of the instruments could be expected to be considerably different in different countries depending on the economic context, existing mix of instruments, strategic policy objectives etc. The inclusion of Accession Countries is strongly recommended.

9. Consortium profile
Academia and research institutes involved in research on definition and practical implementation of marginal costs pricing, regulation, impact measurement and assessment.

2.1.3/5 Thematic network on local and regional public transport

1. Problem description
Major changes are taking place in local and regional public transport in Europe, for instance in the fields of market development, organisational and financial frameworks, infrastructure and technology. As indicated in the Communication 'Developing the Citizens' Network', the European Commission promotes these developments through the provision of appropriate initiatives at European level.

The ongoing changes have an impact on all four groups of key players: public transport operators, authorities, suppliers of transport means and systems, and users. The objective of this thematic network is to establish an effective tool for consolidation of project results, consensus building, networking and dissemination at European level. It should offer a clear added value to the activities undertaken by the relevant individual projects of this key action and other key actions, and at national, regional and local level.

2. Task description
In order to be successful, there should be a focus in the work of the thematic network on a limited number of priority domains in the field of local and regional public transport, such as:

- security of travellers and of staff,
- intelligent transport systems (ITS),
- markets, transport services and rolling stock,
- seamless intermodal networks.

The approach should wide, multidisciplinary and should incorporate transport, environmental, energy, economic and social aspects for all relevant modes of public transport.

The structure of the thematic network should consist of two layers: a general plenary level, and a level of working groups, each of them dealing with one of the domains. The aim of the working groups is to prepare technical input to the plenary meetings.

The network should have an administrative-technical secretariat for the management of the project. The work of the secretariat includes the reimbursement of participants to the plenary meetings and working group meetings. In addition to the administrative-technical support described above, some limited additional technical work could be required to explore issues not addressed yet in research and/or to prepare specific RTD input for policy initiatives. This will be decided on an ad-hoc basis during the lifetime of the project.

The secretariat should also facilitate the dissemination of the results of the activities undertaken by the thematic network, as well as by relevant projects at EU, national, regional and local level. This dissemination should take place at the level of the EU Member States and the Accession Countries and dissemination materials should be prepared in at least five major EU languages. Major emphasis should be put on the use of the internet. Synergies with, or a continuation of existing dissemination instruments could be envisaged.

It is envisaged that during the lifetime of the project approximately four plenary meetings will be organised, involving network members from Member State governments and Accession Countries, project co-ordinators, representatives from transport operators and transport authorities, industry and users. The working groups should be limited in size and should also meet approximately four times during the lifetime of the project

3. Expected results
The thematic network should support the implementation of the Citizens' Network initiative. It is envisaged that, for the priority domains selected, the thematic network will contribute to the consolidation and validation of project results, consensus building, and domain-based networking and dissemination. A certain level of flexibility should be anticipated in order to adapt to future developments in the field of policy-making and research, for instance by exploring issues not addressed yet in research and/or to prepare specific RTD input for policy initiatives.

In practical terms, the work-plan of the thematic network should include the preparation of synthesis documents, the organisation of meetings to discuss these papers and the organisation of dissemination initiatives to disseminate the project's results and the practices identified during the projects.

4. Type of contract

Thematic network (up to 100% EU funding).

5. Timing / Duration

3rd call (June 2000), the foreseen duration is 36 months.

6. References

Communication 'Developing the Citizen's Network', COM (1998) 431 final.

7. Links

There is a link with a substantial number of past and ongoing projects undertaken in several FP5 key actions, including Sustainable Mobility and Intermodality and Economic and Efficient Energy, other Community programmes and activities undertaken at local/regional/national level. For dissemination activities there could be a link with ELTIS, the European Local Transport Information Service. See www.eltis.org for more details. Please note that in the field of ITS the thematic network should focus on non-technical aspects, in order to match the work undertaken by the key action Systems and Services for the Citizen.

8. Involvement of non-EU countries

The participation of members from Accession Countries in the thematic network is envisaged. In the framework of the Council decision concerning the conclusion of the Agreement for scientific and technological co-operation between the European Community and the Government of the United States of America (OJ L284, 22.10.98 page 35), and based upon the proposal made, the European Commission might investigate to support co-ordination with a parallel project in the US.

9. Consortium profile

The consortium that will set up the administrative-technical secretariat should be small in size and the proposal must demonstrate the capacity of the secretariat to steer high level technical discussions and undertake high profile dissemination initiatives. Proposals for membership of the thematic network plenary committee and the working groups should be part of the proposal, but the final decision on the membership will be taken jointly between the project and the European Commission during the initial phase of the project. The members should include representatives from authorities, public transport operators, industry, users and researchers and the proposal should prove the commitments from recognised experts and international organisations in the field.

2.1.3/6 Best practices in decision-taking on local and regional transport schemes

1. Problem description
The Communication 'Developing the Citizen's Network' highlights the need to make local and regional transport systems more sustainable and to shift away from an excessive dependence on the private car. One important objective is to win public support for policies that encourage the use of alternatives to private car. This task deals with the question how changes in the design and operation of local and regional transport systems and services can be implemented more effectively and successfully by improved decision making procedures. Particular attention should be paid to the role of public participation and information processes.

2. Task description
The work undertaken under this task should therefore focus on identifying and evaluating best practices as well as to identify solutions to overcome the barriers in local/regional transport policy decision taking, and spread this information and knowledge Europe-wide. If necessary, promising innovative tools that have been identified during the project could be assessed through a limited number of case studies in different geographical contexts.
The objective of this task is to improve the understanding of barriers in decision taking on local/regional transport measures as well as to identify solutions to overcome the barriers. Good practices should be identified Europe-wide and analysed. This covers not only more general level transport plans, such as an integrated transport plan, but also practical localised measures such as the development of a small infrastructure project or of public transport corridor plan.
Attention should for instance be paid to institutional and organisational models, the impacts on human and financial resources, outreach activities, timing, participatory procedures and community involvement. Conditions that support changes in the attitudes of politicians, representative groups and citizens should be analysed. Means to improve argumentation and to ensure a full appreciation of all social, economic and environmental benefits captured by transport measures, including for instance impacts on personal security, employment and health, should be analysed.
A detailed and cross-site assessment of a limited number of promising innovative approaches to decision taking in different geographical contexts could be undertaken through case studies.

3. Expected results
The main users of the project results are local/regional authorities, but the results will also be of interest to transport operators and researchers. It is therefore expected that a coherent and practical set of best practices (including references to sources) and recommendations will be prepared in the form of a best practice handbook. This handbook, and the other relevant project output such as the case studies, should be widely disseminated. In addition, a methodology for analysing barriers in decision taking in local/regional transport should be developed, and knowledge should be gathered on the factors for success in decision taking.

4. Type of contract
RTD project (up to 50% EU funding)

5. Timing / Duration
3rd call (June 2000), the foreseen duration of the project is 30 months

6. References
Communication 'Developing the Citizen's Network', COM (1998) 431 final.

7. Links
There could be a link with past (ISOTOPE, QUATTRO) and ongoing activities studying the changing roles and activities of key players in local public transport (a new FP5 first call project is under preparation), and with activities on urban governance undertaken by the City of Tomorrow key action.

8. Involvement of non-EU countries
Participation by two or three partners from Accession Countries could be envisaged.

9. Consortium profile
The work should involve participants from authorities, operators and researchers.

2.1.3/7 Designing local transport policy to integrate freight transport

1. Problem description
Traffic due to goods movement (freight and shopping) can occupy up to 25% of the urban road space. Studies indicate that freight traffic produces a very high share in the total transport emissions in urban areas. Other negative effects of freight traffic include noise and visual intrusion. As a result, local authorities increasingly impose stringent traffic regulations (for instance vehicle size and time access restrictions) on freight traffic, which is perceived by the citizens as a very effective measure to improve the quality of life.

The costs of freight delivery in urban areas can be estimated as high as 50% of the total door-to-door transport cost. A wide range of actors undertake freight delivery ranging from professional carriers, own account transport companies to local companies. More stringent traffic regulations have a strong influence on the transport costs, with the risk of unwanted relocation of commercial activities over the city.

There is therefore a need for new solutions to rationalise the movement of goods in urban areas in order to reconcile the need for efficient urban goods delivery and the preservation of quality of life. At the moment, commercial traffic with light duty vehicles is almost entirely excluded from the national and EU-legislation on freight transport (for instance in the field of access to the market and access to the profession).

2. Task description
The objective of this task is twofold: (1) to provide guidance to local authorities on how freight transport can be taken into account in the design and implementation of local transport plans and (2) to study the need for and the feasibility of introducing a European framework to professionalise the market of urban delivery. Local transport plans can for instance include measures related to traffic and parking regulation, logistics and telematics, urban distribution licence schemes, partnerships between local authorities and businesses, and clean vehicle and logistics technologies. Strategies to professionalise the market of urban delivery can include measures linked to operator registration, quality certification, driver qualification etc. Research should also include the following:

- comparative assessment of existing models to quantify and characterise urban logistic chains and associated traffic, and the establishment of a European typology of goods flows in cities,
- analysis of the potential of strategies to rationalise goods movements in cities like home delivery services, commercial town planning, solutions for historic city centres,
- analysis of the critical success factors for new partnerships between businesses and public authorities including a review of competition implications of city logistics, analysis of the potential role of public transport services and infrastructures in urban freight transport,
- a review of the organisation of the urban freight transport markets in Europe and recommendations for the associated national and local legislation.

3. Expected results
The outcome of the project is targeting on one hand local authorities and businesses and on the other hand national and European public authorities. It is expected that the following output will be produced:

- European review and typology of the type of goods movement and associated flows, and modelling tools.
- Guidelines for local authorities on how to integrate freight transport in local transport plans and guide to good practices for businesses.
- European review of the market of urban delivery and possible measures to professionalise it, including recommendations related to the associated EU legislation.

4. Type of contract
RTD project (up to 50% EU funding)

5. Timing / Duration
3rd call (June 2000), the foreseen duration is 24 months.

6. References
To be added.

7. Links

The project will be elaborated, managed and disseminated in direct link with the FP5 Thematic Network on the movement of goods in urban areas (BESTUFF). Activities under this task can use the results from FP4 Transport programme projects and COST (LEAN, REFORM, IDIOMA, COST 321, etc.).

8. Involvement of non-EU countries
No particular requirement.

9. Consortium profile
The consortium should include local authorities, freight transport operators and research and training organisations that have access to data from all the EU Member States, from Accession Countries. A particular attention will be paid to the capacity to disseminate the results to local authorities.

2.2.1/13 Improvement of intermodal freight terminal operations at border crossing terminals including CEECs

1. Problem description
The enlargement of the EU and the corresponding development of the Trans European Transport Networks (TEN-T) towards Central and Eastern European Countries (CEECs) are crucial elements for the coming years, particularly in relation to the further development of the European economy and the consequent increase in the trade of goods. Numerous bottlenecks and constraints in the transport to and from the Accession Countries and the other CEECs exist. Within the EU territories similar problems still remain to be solved notably on the crossing of natural obstacles (Alps, Pyrenees). One of the most remarkable consequences of this situation is that most of the freight traffic between East and West Europe is going by road creating environmental burdens and congestion.

For example, terminals at border crossing are one of the links between the countries' transport networks. This is where most of the problem of interoperability occur: different administrative and documentation procedures, different information and communication systems, different working languages, customs procedures, different technical systems for the transfer of ITUs and for the terminal organisation.

In addition the link to Russia's network is limited because of a different rail gauge.
This is also the case between the Iberian Peninsula and France or in the crossing of the Alps where the connection between the different networks is also strongly limited by natural barriers.

All these inefficiencies are creating high terminal operating costs, congestion at peak times and generally limit the use of intermodal transport. Rail capacity exists but most of the times its use is limited by these inefficiencies and bottlenecks.

The objective of this task is therefore to improve the interoperability of the transport networks at terminals at border crossing (within the EU and towards third countries) in order to overcome technical and operational barriers.

2. Task description
The task is divided in two parts.
Subtask 1:
Firstly, research should analyse the current problems in terminals at borders (especially EU and CEECs), develop focused solutions and then give recommendations for long-term improvements. The following elements should be included:

- to develop intermodal management procedures for terminal operators, customs, terminal managers and transport users, to reduce the burden of border control inefficiencies for intermodal services;
- to improve access where the rail gauge differs and more generally technical controls by railways. The intermodal aspects related to this issue should be considered. For example special terminals are situated at the interface between Central European standard rail gauge and Russia rail wide gauge network, and various techniques to overcome this interchange exist and must be looked after.
- to provide recommendations and solutions for reducing customs waiting time, increase security, harmonise regulations, and to develop additional functions to accommodate certain borders crossing terminals (such as re-groupment, customs clearance, etc.)

Special attention should be given to veterinary and phytosanitary controls (to limit or prevent time delays at borders and investigation of the possibility to allow these controls in certain terminals.

A first case study should focus on the border between EU an Accession Countries (and other CEECs)

As a second case study, the spanish-french border should be analysed in detail. The 2 existing terminals have a limited capacity and most of the traffic to and from the Iberian Peninsula is going by truck. The possibilities and the limits for the improvement of these terminals or the creation of a new terminal should be evaluated. Different technical, organisational and economic solutions should be evaluated.

A third case study should be developed focusing on the role of the border terminals in the alpine crossing.

Subtask 2:
Secondly, the demonstration of some of the most promising concepts or scenarios developed in subtask 1 should be validated. The demonstration should be carried-out on selected test sites/terminals with a high potential for dissemination in order to have results that can be used in other similar situations in the EU and in CEECs.

3. Expected results
Subtask 1:
Recommendations for the harmonisation of information between countries at borders (administrative and documentation procedures)
Development of dedicated solutions to improve borders crossings between the EU and CEECs and inside the EU.

Subtask 2:
Demonstration and validation of efficient solutions on dedicated test sites to improve border crossing.

The target group is freight forwarders, transport and terminal operators, customs authorities, policy makers, and fraud prevention agencies.

4. Type of contract
Combined project (RTD+DEMO, up to 50% EU funding).
The whole task should be covered by a single proposal.

5. Timing
3rd Call (June 2000) – Duration: 36 months (subtask 1: 18 months, subtask 2: 18 months)

6. References
Communication on the Common Transport Policy, Sustainable Mobility: Perspective for the future (COM (1998) 716 final)
Preliminary work done with CEEC representatives (RETRAEST), Final report of January 1999

7. Links
Thematic Network on Terminals / Transfer points (EU-TP)
FP4 projects : PLATFORM, EUFRANET, IMPULSE, IQ, APRICOT
PHARE Multi-Country Transport Programme

8. Involvement of non EU-Countries
Participation of Accession Countries and other CEECs or eastern countries, Switzerland.

9. Consortium profile
Research institutes, consultants, representative of policy makers (national-regional), customs and main transport actors involved in the subject for the research part. Industry, intermodal operators, terminal operators, customs, railways, port authorities for the demonstration part. International organisations for dissemination aspects.

2.2.1/14 Improvement of intermodal transport operations in terminals

1. Problem Description
Intermodal freight transport in Europe today seems unable to meet the increasingly complex logistics requirements of an economy operating in a competitive and global market. Transfers between modes generally create too many friction costs and do not allow sufficient scope for offering added value services in the door-to-door chain. However, terminal costs should not be reduced in isolation, in disregard of the overall constraints of the transport chain. The terminal has, for example, to respect the schedules of trains and ships, in 24 hr. operations, and handle road site cargo at hours which reflect commercial (transport user) demand. Furthermore, the terminal is not an end in itself, but only an interface. Its sole economic utility is the combination of modes to benefit from their inherent advantages, despite their possible incompatibilities.

The points of transfer between modes are the weakest links in the current intermodal transport system and a major generator of friction costs. One reason is the lack, or inadequacy of technical interoperability between modes and loading units. Another is that present-day terminals, which are usually marked by a combination of heavy engineering and manual processes, are not managed efficiently with appropriate telematics support. In order to minimise the risk of a break in the intermodal chain, operators increasingly set up their own dedicated terminals. Although this increases their control, it also raises the cost of the door-to-door transport service to the user, particularly when there is no optimal utilisation of capacity.

An optimal transfer between modes will contribute to a better use of all infrastructures across the different modes which is becoming an imperative move towards sustainable mobility, particularly in view of the projected growth of freight transport.

Based on the work already developed in previous RTD projects, the present task aims at further improving transfer operations across all modes and at optimising intermodal door-to-door chains making intermodal transport services more attractive and efficient through demonstration projects.

2. Task Description
The present task is a cluster of subtasks devoted to the improvement of operations and quality of the services offered in intermodal freight terminals, freight villages and transfer centres. Subtask 1 focuses on the quality of inland terminals mainly rail/road and freight villages. Subtask 2 investigates the opportunities for the integration of intermodal terminals in ports and inland ports. Subtask 3 concentrates on the use of information technologies for terminal management purposes.

Subtask 1: Improvement of operations in rail/road terminals and/or freight villages and their integration in intermodal transport chains.

Common to almost all major terminals is that they are at times overloaded and congested, that they have problems of inadequate rail and road access and than they are not generally able to generate an adequate financial return on total outlays involved. In the face of delays, congestion, costs, and lack of information, users (forwarders, operators and truckers) may consider terminals as a barrier to, rather than a facilitation of, intermodal operations. Moreover, projects exist for automated and semi-automated terminals, but these have not yet demonstrated operational maturity. The development of modular automated terminals must permit integration into an open-access network of intermodal operations, including various types of load unit, handle higher volumes of traffic than present sites, and demonstrate substantial cost reduction. The terminal and its associated operations represent a substantial part of the direct and indirect costs of a through road-rail-road intermodal move, and take the form of fixed costs independent of the length of haul. Improvements in this area will therefore have a disproportionately important favourable impact upon the overall competitiveness of intermodal operations, and as such should be investigated.

In this context, it has to be stressed that there is also a clear need for user friendly, low cost, small inland terminals. Such terminals are needed to enhance the efficiency of intermodal transport and raise its attractiveness.

Within the present framework, quality and performance criteria for terminal operations and strategies for a more efficient and cost-effective transhipment and terminal management should be defined and demonstrated.

The following elements to be considered:
- development and demonstration of new concepts for the improvement of rail/road terminals and/or freight villages operations
- demonstration and integration of existing results concerning new technologies and concepts for the improvement of rail/road terminal operations

In particular a special attention should be paid to the following items:
- Solutions for terminal operations at peak times (management of slots);
- Solutions to improve capacity at low cost, the issue of terminal capacity and economic limits should also be considered
- Solutions to the problem of marshalling yards and terminals (creation of synergies; new layouts etc.); gateway / transit terminals
- Solutions to the problems related to long waiting times and overall scheduling of terminal activities;
- Integration of value added services in the terminal / freight villages areas.

Subtask 2: Improvement of Intermodal transport operations in ports and inland ports and their integration in intermodal transport chains.

The increasing transport flows of containerised goods arriving and departing from European ports nowadays need to be analysed from a sustainable mobility and cost efficiency point of view in order to optimise the door-to-door transport chain associated to these growing flows. Based on the high seaside flow situation, there is a strong economic requirement to improve transhipment capacity and operations in seaports. Port terminals often require adaptation to provide an interface between land and coastal shipping modes that will enable them in the future to increase their crucial role in the logistic chain for intra-European trade.

In particular, the impact of larger container ships will influence inland transport and feeder demands, and infrastructure needs. Studies available on this subject (e.g. on the ports of Hamburg and Rotterdam) suggest that a tendency to further concentrate in a hub and spoke systems, as may arise with carrier-managed shuttle trains, will make considerable overall and peak demands on network operations as well as on inland terminal capacity, when coupled with the cargo concentrations caused by these new ships. The contrast between US practise, where a train can clear 400 TEU from a ship, and the European equivalent trainload of 90 TEU, suggests an acute capacity problem. Since container ships of +5,000 TEU are being ordered, and their first impact is to be expected in the near future, the problem of the handling of these flows is becoming of a strategic importance. Research into infrastructure planning to integrate intermodal terminals in sea and inland ports, must take these developments into account.

Inland waterway terminals, in specific geographical areas and for specific type of goods, are also playing more and more an active role in the optimisation of door-to-door intermodal transport chains. Increasing traffic flows are of potential interest for a modal shift on inland waterway vessels. Sea and inland navigation are also linked in transport chains for traffic to and from big European ports in feeder services, as stated in the Commission Communication on Short Sea Shipping, research should help the integration of SSS and sea river shipping into intermodal chains. In this context, concepts need to be elaborated to improve these specific operations in port's intermodal terminals.
The aim of the present subtask is therefore to improve the role of the ports and inland ports in the intermodal transport chain.

The following elements should be included in the research and demonstration activities:
Organisation and management of transfer points in ports, transhipment operations, associated logistic activities, integration of hinterland seaport concepts, connection at all levels with the transport networks etc.

With a view of improving the integration of inland waterways services into door-to-door intermodal transport chains, it becomes essential to further investigate and demonstrate new concepts, new technologies and organisational methods to improve terminal operations involving inland waterways.

In particular a special attention should be paid to the following items:
- Concepts for a low cost terminal system in sea and inland ports and guidelines for its implementation.

- Innovations in transhipment technologies and organisational systems for terminals in sea and inland ports.
- The optimal layout and operation of tri-modal terminals (rail/road/barge) and added value services should also be considered.
- Concepts for improved processes in value added logistics for intermodal terminals in sea and inland ports
- Infrastructure planning.
- Public private partnership for financing traffic centres in sea and inland ports

Subtask 3: Integration of information technologies (IT) within freight centres for terminal management purposes.

A proper management of intermodal operations in terminals is crucial for the supply of high quality services. The use and integration of IT technologies for the rationalisation and optimisation of terminal operations and for a high quality of information exchange and availability, is an essential element for the realisation of a reliable and performant management system. Functionalities such as the identification of vehicles, loading units and cargo, or the advance information for "disposition" purposes are often not available on an intermodal basis or, even if developed they have not been tested and validated by the transport actors in real situations.

The present subtask focuses on internal management systems to monitor, manage and control intermodal terminal operations in Freight villages, sea and inland ports, freight centres and transhipment yards involving the integration of all modes. The aim is to involve all actors in the chain and to take into account the interaction between terminal operators, consignors and consignees.

The main objective is the implementation of innovative IT systems to improve terminal efficiency and productivity. Based on existing results, research and field trials should focus on the introduction of new technologies and organisational methods to improve intermodal operations.

The following elements should be considered in the analysis:
- Development of dedicated but interoperable concepts in relation to terminal size, type of flows, type of mode concerned, type of operators concerned, etc..
- Procedures of gate automation for improved access, check-in/check-out operations, use of smart cards etc.
- Development and test of low cost innovative solutions for quick implementation.

3. Expected results

Subtask 1:

Assessment and demonstration of innovative solutions for the improvement of intermodal terminals operations.

Guidelines and recommendations for the development and implementation of new solutions for terminal's operations.

Test on real environment of specific methods, transport equipment and other tools adapted for the quality improvement of terminal operations

Test and validation of existing research project's results in the field

Subtask 2:

Clear overview of the potential and limits for the integration of intermodal terminals in sea and inland ports.

Recommendations on technical, organisational and operational standardised solutions to enhance intermodal terminal operations in sea and inland ports

Real scale demonstration of the major findings to serve as a basis for a wide application in Europe.

Subtask 3:

Development and demonstration of a comprehensive, user friendly, modular cost effective management system for intermodal transport operations in terminals.

The target group is: Terminal owners, intermodal terminal operators, Freight forwarders, shippers, industry and transport operators including small road transport hauliers. Environmental, infrastructure, regulatory and implementation aspects will be important for policy makers at different levels.

Proposals should, ideally, contain demonstrators in several locations from different countries.

4. Type of contract
Subtask 1, 2 and 3: Combined projects (RTD + DEMO, up to 50% EU funding). Each subtask may be subject of a separate proposal.

5. Timing
3rd Call (June 2000) - duration: 36 months

6. References
Communication on the Common Transport Policy, Sustainable Mobility: Perspective for the future (COM (1998) 716 final).
Communication on "Intermodality and Intermodal Freight Transport in the EU" (COM(97) 243 final).
Communication on the progress of the implementation of the action programme of the Communication on Intermodality (COM (1999) 519 final).
Communication on "The development of Short Sea Shipping in Europe: A Dynamic Alternative in a Sustainable Transport Chain" (COM(1999) 317 final)
Green Paper on Sea Ports and Maritime Infrastructure.

7. Links
Thematic Network on terminals and transfer points (EU-TP)
FP4 projects: IQ, IMPULSE, TERMINET, FREIA, PLATFORM, PRECISE -IT, FV-2000, APRICOT, IRIS, ASAPP, EUROBORDER, INTERPORT, IPSI.
Thematic Network on intermodal information and communication systems from the 1st call FP5 Sustainable Mobility and Intermodality Key Action.

8. Involvement of non EU-Countries
As appropriate

9. Consortium profile
Research institutes, consultants, representative of policy makers (national-regional), Terminal owners, main terminals actors involved in the subject for the research part. Industry, intermodal operators, terminal operators, freight forwarders and shippers for the demonstration part. International organisations for dissemination aspects.

2.2.1/15 Assessment of the availability of intermodal transport means and suitable infrastructure in CEECs to implement co-operation on Trans-European intermodal transport between EU and CEECs

1. Problem Description
The optimal and rational development of Trans-European Transport Networks towards Pan-European Transport Networks, requires an efficient and strong integration among the different infrastructures, systems, means and equipment of transport. During the preliminary works done with CEEC representatives in the field of research (RETRAEST), especially the works of the RETRAEST's group for intermodal transport, a number of obstacles to the use of intermodal transport in Central and Eastern Europe and in the interconnection with the Trans-European Transport Network have been identified. These include the lack of a coherent network of modes, the lack of technical interoperability between and within modes, a variety of regulations and standards for transport means, lack of data-interchange and procedures, uneven levels of performance and service quality between modes, different levels of liability and a lack of information about intermodal services.

Implementing an intermodal transport system with a Pan-European dimension requires an intensive co-operation in research in view to co-ordinate development of transport policy at European, national and regional level. The Moscow workshop of April 1997, developed within the RETRAEST work, indicated that enhanced co-operation in Research and Technological Development should aim at transferring knowledge to CEECs on the organisation and technology associated with intermodal transport, in the context of the wider logistical framework. The identification of problems and their solutions, concerning the interconnection East-West, the follow-up of this identification and the participation of CEECs in EU RTD programmes either with education and training, common research, transfer of technologies and/or pilot projects have been evaluated as fundamental issues.

The objectives of the present task are to assess the situation of intermodal transport means, systems and suitable infrastructure availability in CEECs to implement co-operation on Trans-European intermodal transport between EU and CEECs.

2. Task Description
The present task is the first step of four key strategies to provide the necessary impetus to the development and the integration of Trans-European intermodal transport between EU and CEECs.
The four strategies are focusing on common research for understanding intermodal transport with a pan-European dimension; common research for a pan-European strategy for infrastructure: Trans-European transport networks and nodes; common research for a pan-European strategy for interoperability; common research for a pan-European strategy for implementing the Information Society in the intermodal transport sector, in particular logistic.

To enhance the development of intermodal transport in Central and Eastern European Countries it is important to analyse the present situation, the structure, the needs and the constraints on the various issues related to efficient and interoperable intermodal transport.

The assessment of the conditions and the analysis of the availability of the required means in Central and Eastern European countries for Trans-European intermodal transport should consider the following issues:

Use of unconditionally recommended international conventions for rights, duties, responsibilities, documents: CIM-COTIF, RIV, TIR, RID, ADR, CMR, IMDG, IATA Dangerous Goods Regulations, FIATA SDT, The Hamburg Rules, IATA Resolution 833, Warsaw Convention, FBL, INCOTERMS etc.
Use of ISO 9000 quality standards for forwarders.
Sufficient suitable quality rail, road, navigational, air transport networks: TransEuropean Rail Freight Freeways (TERFF), specifications for networks, service facilities required, network management systems.
Sufficient suitable quality terminals: conception of terminals, terminal management and operation, information systems, means for development of logistics and regional distribution centres.
Sufficient suitable quality communication networks: existing communication networks for intermodal transport, model plans for communication centres, requirements for use of EDI-EDIFACT.
Sufficient suitable quality vehicles: specifications for vehicles, recommended vehicle types.
Sufficient suitable quality of intermodal transport units (ITU): specifications for ITU, existing organisations for use of ITU.

Extension of the Trans-European Combined Transport Network and Terminals Network on the CEECs interface territory: identification of bottlenecks, opportunities and limits for the interoperability and interconnectivity of the different intermodal networks.

An accompanying measure is proposed to develop this analysis as a joint survey in Central and Eastern European countries. This action will enable to evaluate the existing white spots and gaps at Pan-European, European and National levels and to develop a practical program towards solving the bottlenecks in a joint approach both regional/national and on a Pan-European CEECs/EU scale.

3. Expected results
State of the art for intermodal transport research and development in the CEECs
Proposals of reference scenario for a Pan-European Network of intermodal transport services.
Inventory of bottlenecks for the development of East-West interoperable intermodal transport.
Assessment of the needs in terms of infrastructures, means, systems and equipment for the development of efficient intermodal transport chains at Pan European level.
Preparation of consistent solutions to the major identified bottlenecks.
Dissemination of the results through dedicated workshops.

4. Type of contract
Accompanying Measure (up to 100% EU funding)

5. Timing
3rd Call (June 2000) – Duration: 18 months

6. References
Communication on the Common Transport Policy, Sustainable Mobility : Perspective for the future (COM(1998) 716 final)
Preliminary work done with CEEC representatives (RETRAEST), Final report of January 1999
Helsinki conference

7. Links
FP4 projects: IQ, IMPULSE, SCANDINET, APRICOT
TEDIM programme, PHARE and TACIS activities
PHARE Multi-Country Transport Programme (MCTP) : Study on the need for a common pool of combined transport equipment
PHARE MCTP : Extension of TERFF to CEECs
PHARE / TINA (Transport Infrastructure Needs Assessment): Final report of October 1999
Acquis communautaire

8. Involvement of non EU-Countries
Accession Countries and other CEECs

9. Consortium profile
Consultants and research institutes with a strong experience in the task subject. National and regional authorities, intermodal transport operators, terminal operators, railways, forwarders for the part on the market needs. International organisations and other relevant bodies for the dissemination part.

2.2.1/16 Strengthening the interoperability in intermodal transport chains at the level of equipment, infrastructure and transport means

1. Problem Description
When looking at the transport corridors (high and low density) in Europe, it appears that a coherent network of modes and interconnections between the modes is lacking. Missing stretches of infrastructure within one mode or missing links between modes, however small they might be, can prevent seamless intermodal chains. They impose additional transfer and friction costs on operators. They can also prevent an efficient dispersion of large volumes into smaller ones, e.g. on intercontinental or long-distance transport. Intermodal transport is as strong as the weakest link in the transport chain. Therefore, the lack of interoperability within some modes poses significant problems. Technical specifications for transport means are often regulated differently by country and by mode, which also raises questions of interoperability. In addition, individual operators have a tendency to acquire the rolling stock and/or vehicles, which suit their operation and choice of loading units. Dealing with a variety of vehicle types for different operators is a source of congestion at terminals and causes inefficiency. Different measurements for transport means and infrastructure lower the levels of interoperability between different modes as well, for example between air and rail cargo.

The wide variation of loading unit dimensions across modes is another factor that reduces interoperability between modes. The incompatibility of the transport equipment for road, rail, short sea and inland waterway traffic raises transfer and handling costs and necessitates cumbersome transhipment techniques. If left unchanged, the growing complexity of the logistics requirements, and the projected growth in international trade, will reinforce the tendency of transport units to diverge. The use of specialised loading units will increase the occurrence of their empty returns.

The aim of the present task is to provide solutions for improving interoperability between transport modes, transport equipment and loading units with a view of enhancing intermodal door-to-door solutions on European and Pan-European transport corridors.

2. Task Description
The present task is divided in two parts. The first part deals with the interoperability between transport modes and interoperability in network operations when nodal points are concerned. The second part of the task focuses specifically on interoperability aspects related to intermodal transport units (ITUs).

Subtask 1:
The objective is to analyse the existing limits and bottlenecks affecting the interoperability between transport modes and the interoperability in network operations when a nodal point is concerned, from a technical and operational point of view at the level of the infrastructure. The present task aims at providing consistent and cost effective solutions to existing problems in this field and at demonstrating the main results on selected corridors.

The following elements should also be integrated in the project:

Coastal vessels and ferries, and the facilities which they require, are increasingly seen as part of intra-European transport chains, as feeder ships have long been integrated into deep-sea liner services. Incompatibilities between inland transport modes and efficient sea transport require special consideration to achieve full interoperability. Within this framework, innovative low cost concepts for the integration of Short Sea Shipping and inland waterways services into intermodal transport chains should be investigated, elaborated and demonstrated.
Loading gauges, terminal access, different bridge heights and Signalling systems

Subtask 2:
The objective is to analyse the existing bottlenecks, provide consistent and cost effective solutions and demonstrate the main results on selected test sites, to problems affecting the interoperability between intermodal transport units, means and transfer equipment from a technical and operational point of view. Incompatibilities between sea and inland transport swap-bodies and containers, and efficient sea transport and inland transport services integrating door-to-door intermodal chains, require special consideration to achieve full interoperability.

Required standards, stackable units, trailers, integration of ITUs for fast ships and Ro-Ro, ITUs and conformity with pallets, ITUs and conformity with pallets and new generation of barges are some of the issues that need to be addressed in the present subtask.

A specific concept should be established and demonstrated for the integration of stackable swap-bodies in intermodal door-to-door chains covering all modes and the EU territory with links to Accession Countries and other CEECs.

3. Expected results
Subtask 1:
A map of problems and bottlenecks for the interoperability between different modes of transport when intermodal transport chains are concerned.
Integration of the results of projects developed in FP4: APRICOT, IMPULSE, FV-2000, IMPREND, OSIRIS.
Development of dedicated solutions for the improvement of interoperability between transport modes.
Demonstration of these solutions on selected corridors

Subtask 2:
A map of problems and bottlenecks for the interoperability of intermodal transport units when intermodal transport is concerned.
Integration of the results of projects developed in FP4: UTI-NORM
Development of dedicated solutions for the improvement of interoperability for Intermodal transport Units.
Demonstration of these solutions on selected test sites
Development of dedicated solutions for the integration of stackable swap-bodies for door-to-door intermodal transport operations. Demonstration of these solutions

The target group is: Policy makers, standardisation bodies, Industry, transport operators intermodal transport users, shippers

4. Type of contract
Subtask 1: RTD project (up to 50% EU funding)
Subtask 2: combined project (RTD + DEMO, up to 50% EU funding)

Each subtask may be subject of a separate proposal

5. Timing
Subtask 1 and 2: 3rd Call (June 2000) – Duration: 24 months

6. References
Communication on the Common Transport Policy, Sustainable Mobility: Perspective for the future (COM (1998) 716 Final)
Communication on the Intermodality and intermodal freight transport in the EU (COM (1997) 243 Final)

7. Links
FP4 projects: APRICOT, IMPULSE, FV 2000, IMPREND, OSIRIS, UTI-NORM, ASAPP, SHIFTING CARGO

8. Involvement of non EU-Countries
Accession Countries and other CEECs, Mediterranean countries

9. Consortium profile
Research institutes, consultants, and main transport actors involved in the subject for the research part. Industry, intermodal operators for the demonstration part. International organisations for dissemination aspects.

2.2.1/17 Optimising railway network development

1. Problem description
Investments in new and upgraded railway network and support infrastructure should normally last 50 years or more, although in some cases for support infrastructure only 20 years. It typically takes many years from decision to implementation. In order to ensure the right investments, to set priorities, and to identify bottlenecks on national and international level at the earliest possible stage, there is a need to support the European railways and infrastructure authorities with improved planning tools, which in addition to the historic data and trends used today, also to a larger extent should be based on more comprehensive and reliable forecasts and scenarios. The greatest potential areas for improvement of the performance of the railway system are in the layout and technical standards of the network, and in the way in which operational separation of slow and fast traffic is achieved. The results of this task in combination with other tasks on improved maintenance methods and improved management of capacity and resources will contribute to significant increases in capacity (measured as the possible ton-km or passenger-km throughput on a given railway line during peak hours) and significant reduction of unit costs (measured as costs per ton-km or passenger-km). The challenge is to achieve the ambitious targets in the Task Force "Trains and Railway Systems of the Future" for railway infrastructure, namely 40% increases in capacity and 50 % reduction of costs without affecting the safety level.

2. Task description
The work to be undertaken will be divided into three subtasks, which all should be covered in a single proposal:

Subtask 1. "Toolbox" for rail network development and assessment of potential bottlenecks.
The starting point is the forecasts and scenarios for passenger and freight transport demand resulting from strategic research in FP4 and FP5. This subtask should focus on developing the interfaces between these scenarios/forecasts and state-of-the-art railway capacity modelling tools, and on validating the use of these for decision support in the areas of infrastructure investment, bottleneck identification, and possibly also with respect to environmental issues.

Subtask 2. Solutions aimed at achieving cost reductions and/or capacity improvements at corridor or network level.
Assessment of the potential for cost reductions and/or capacity increases by extended use of dedicated networks, or by other co-ordinated improvements at corridor or network level. This may include such concepts as network division related to operational use (e.g. as in the German "Netz 21"), use of higher gradients for dedicated passenger lines in order to avoid the additional costs associated with tunnels, and improved standards for corridors used for freight traffic (e.g. increased axle loads, increased loading/structure gauge for freight trains and increased maximum length and maximum weight of freight trains). Establish some case studies for instance by covering some of the Member State initiatives in this area with the aim of extending these initiatives to a European corridor or European network level, e.g. in "high productivity freight corridors" for Alpine corridors and/or rail links to large sea ports based on the recommendations from the EUFRANET and INTELFRET projects.

Subtask 3. Optimal infrastructure solutions for high-speed tilting trains and their operation in mixed traffic conditions with slower freight trains.
Establishment of improved tools and methodologies for comparing traditional straight high-speed lines with upgraded (or maybe even new-built lines) specially prepared for tilting trains. The comparison should include travel time, infrastructure investments and operating/maintenance costs, and the tools and methodologies should be validated on a few case studies. The work should also look into possible improvements in the infrastructure layout and standards in order to achieve the best possible performance in mixed traffic conditions with both high-speed tilting trains and slower freight trains sharing the same line.

3. Expected results
The work in subtask 1 should lead to a user friendly toolbox, which has been validated in a limited number of case studies. The use of the developed tools for rail network development on a larger scale for the European network will not be done in this task, but will probably be part of the normal TEN revisions. It is expected that the tools also will be suitable for infrastructure investment decisions in the Member States for

railway lines outside the TENs. The work in subtasks 2 and 3 should aim at producing handbooks, computer tools and case studies for the different possibilities for upgrading/improving to railways.

4. Type of contract
RTD project (up to 50 % EU funding).

5. Timing / Duration
3rd call (June 2000) / 24 months.

6. References
Communication on "The Common Transport Policy, Sustainable Mobility: Perspectives of the Future", COM (1998) 716 final:
Para 10: White Paper "A strategy for revitalising the Community's railways" COM (1996) 421 final, Trans-European Rail Freight Freeways; Para 13: Trans-European Transport-Networks; Para 40: Review of guidelines for TEN-T; Para 47: Alpine Transport; Annex I: Railway Infrastructure Package COM (1998) 480, Communication on interoperability of conventional rail; Annex II: Review and revisions of the TEN guidelines; Framework for harmonised technical standards for railways.

7. Links
FP4 Transport Programme projects: EUFRANET, LIBERAIL, EUROPE-TRIP.
FP5 Thematic Networks on "Maintenance and Management of Railway Infrastructure" (1st call) and "Trans Alpine Crossings" (2nd call).

8. Involvement of non-EU countries
Switzerland organizations and others are welcomed.

9. Consortium profile
Railway infrastructure managers and planners, specialists in computer modelling, industry (construction and maintenance expertise), universities and research institutes as appropriate. The active involvement of authorities/decision makers, infrastructure managers and users for corridors covered in the case studies is strongly recommended.

2.2.1/18 Road infrastructure materials

1. Problem description
The materials used in road pavements and other structures, together with the method of application in the surface, base and sub-base layers, play a very large part in determining the cost, operational life, safety and environmental effect of the pavement or structure all over Europe. Improvements to materials will therefore have a resultant positive effect, and the main objectives of this task are to address two main issues in these areas.
The first objective is to identify materials, and their uses, which will satisfy the functional, safety and environmental requirements relevant to different types of road pavement.
The second objective is to develop high durability materials for the maintenance of other road structures, such as bridges, tunnels, embankments, culverts and retaining walls.

2. Task description
Specification and development of materials, and their uses, for satisfying functional, safety and environmental requirements and, in particular, the development of materials to meet conventional or performance-based specifications. Of significant importance will be the identification of the potential for using recycled materials.
Development of techniques and procedures for using recycled or other alternative materials in road pavements. Of particular importance will be the development, and selective demonstration of methods for using industrial by-products and waste.
Specification and development of cost-effective, high durability materials, and methods for their use in the maintenance of such structures as bridges, tunnels, embankments, culverts and retaining walls. A balanced approach should be made, as a result of analysing the existing inventory of structures in EEA and selected Central European countries, and of making consequent decisions on the highest priority problems to be addressed. The aim should be to ensure the efficient, enduring and safe performance of these types of structure.
Research in this area typically brings together national expertise under one umbrella, striving to identify and spread best practice.

3. Expected results
An innovative, detailed specification of materials, and their uses, for satisfying the functional, safety and environmental requirements of different types of road pavement.
Techniques and procedures for using recycled materials in road pavements.
An innovative, detailed specification of cost-effective, high durability materials, and methods for use in the maintenance of highway structures.
Updated inventory and assessment of highway structures in EEA and selected Central European countries.

4. Type of contract
RTD project (up to 50% EC funding).

5. Timing / Duration
3rd call (June 2000), duration approximately 36 months.

6. References
RETRAEST (Transport R&D Co-operation with Central and Easter European Countries) Multi-Annual R&D Programme.

7. Links
ALT-MAT, COURAGE and POLMIT Transport RTD Projects. COST Actions 337 and 345. Link with Thematic Network on Cost/Benefit and Cost-Effectiveness Assessment Tools for Road Safety/Environment Measures.

8. Involvement of non-EU-countries
Participation from CEECs is welcomed.

9. Consortium profile
Expertise required from materials engineering, environmental engineering, soil mechanics and hydrology.

2.2.1/19 Integration of passenger terminals in intermodal transport networks

1. Problem description
Efficient passenger interchanges are an essential pre-requisite to improve the attractiveness and intermodal integration of public transport, air transport, the private car and non-motorised modes and for short, medium and long distance trips.
The Commission Communication 'Developing the Citizen's Network' has emphasised the need to improve quality and integration, in order to develop seamless door-to-door transport solutions. The objective is to ensure a continuity of quality at all stages of the intermodal transport chain by removing bottlenecks. Moreover, transport policy-making at all levels pays an increasing attention to the role of high quality passenger terminals as an interface between the trans-European Transport Network (TEN-T) and local and regional transport networks.
The aim of the task is to develop a harmonised set of European quality criteria for passenger terminals in order to ensure continuity of quality along door-to-door transport chains with a special emphasis on the links between long distance and short distance networks. Where this is considered to be necessary these criteria could also integrate quality criteria for terminal access. The project results should be prepared in such a way that they could be used as input for European standardisation work undertaken by the relevant bodies.

2. Task description
Research should start with developing a European typology of passenger's terminals against modes, type of areas, capacity, etc. Based upon this typology, the research under this task should develop a methodology and criteria to analyse the contribution of terminal quality, terminal location and terminal access to achieving the objectives of the trans-European Transport Network, with a particular emphasis on rail and airport terminals.
In the field of terminal planning, research should identify, analyse and recommend best practices in tools for terminal location choice and terminal development with particular attention to local environmental, social and economic impacts and community involvement in terminal development.
As far as the operation of terminals is concerned, research should identify, analyse and recommend best practices to minimise the perceived 'breaks' in the transport chain at terminals and their access. The specific problems of historic terminal buildings should be taken into account. The state-of-the-art in user flow management (for instance crowd management systems) should be identified and analysed.
Finally, a harmonised set of European passenger terminal quality indicators should be developed and best practices identified. Relevant aspects could for instance include accessibility, capacity, safety and security, travel information, payment, luggage, signage, etc.

3. Expected results
It is expected that the following outputs will be produced:
- a European typology of passenger's terminals against modes, type of areas, capacity etc.,
- methodologies and criteria to analyse the contribution of rail and air terminal quality, efficiency, location and access to achieving the objectives of the TEN-T,
- a harmonised set of European passenger terminal quality indicators, taking into account the need to ensure continuous quality in the transport chain,
- guidelines on and a best practice guide on high speed rail and air terminals, including terminal location, terminal access, terminal development and operation, user flow management and cost-benefit evaluations.

The task outcome is of particular relevance for public and private parties involved in TEN-T and terminal development, transport operators, researchers and users.

4. Type of contract
RTD project (up to 50% EU funding).

5. Timing / Duration
3rd call (June 2000), the foreseen duration for the project is 24 months.

6. References
Communication 'Developing the Citizen's Network', COM (1998) 431 final.

7. Links
Work undertaken under this task should build upon the outcome of the MIMIC, PIRATE, GUIDE, HSR-COMET, CATRIV, SWITCH, EUROSIL and CARISMA-Transport projects, which have previously been run under the Transport RTD Programme, as well as the COST 335 project. In addition the project should take into account the results of policy studies on passenger transport network design/terminal location that have been undertaken at national, regional, local and European level.

8. Involvement of non-EU countries
The participation of one or two partners from Accession Countries in the consortium could be envisaged, ensuring collection of information and dissemination to these countries.

9. Consortium profile
It is anticipated that the core of the consortium will exist of researchers with experience in terminal development and quality indicators, and that policy makers from all levels will be strongly involved in steering the project.

Task 2.2.1/20 Arrival/Departure/Ground Movement Integration for Air Transport Operations

1. Problem description
Current practices in major international airports show that operations are processed through different personnel using different tools. The continuous growth in air transport demand could only be supported by the full co-ordination between the en-route ATM systems and the airport planning operations. Consequently the operations relevant to arrival, departure and ground movement need to be developed and integrated.

Many tools have been developed for arrival or for departure planning, there is a need for the assessment of the potential benefits within a co-ordinated planning function to facilitate the implementation.

In order to avoid the multiplicity of operational procedures at each individual airport, which would have a potentially adverse effect on efficiency and safety, a harmonised approach at the European level has to be developed.

2. Task description
The objective of the task is to propose to a candidate airport a first operational integration of existing tools for arrival and departure planning management, together with those derived from the planning and routing function of the ground movement concept.

In this context, a full scale integration of the management and planning system at an airport should be experimentally implemented under real operating conditions.

3. Expected results
The results from the operational assessment of the co-ordination between arrival, ground movement, and departure, will provide a quantifiable measure of the benefits in terms of the safety, capacity and efficiency of the system.

4. Type of contract
RTD project (up to 50% EU funding).

5. Timing / Duration
3rd call (June 2000), 2 year duration.

6. References
Communication on The Common Transport Policy, Sustainable mobility: Perspectives for the Future (COM (1998) 716 final) *Paras 12,13,30,46,49*

7. Links
Airports related projects from ECARDA (DG-Transport, DG-Research and DG-Information Society) particularly DEFAMM operational tests ARAMIS, DA VINCI, 2.3.1/2, 2.2.1/6, , and Eurocontrol studies

8. Involvement of non EU-countries
As appropriate

9. Consortium profile
Airport Authorities, service providers, airlines, research centres, manufacturers

2.2.1/21 Enhancement of port operations and management to improve Quality Shipping

1. Problem description
Ports play an important role in waterborne logistics, as key transport service providers in a highly competitive global business, as the nodal point linking the waterborne with land-based transport modes and as transhipment centres for increasing feeder activities. Efficient port resource planning, management and operation require in-depth knowledge of transport patterns and trade flows. It also requires a greatly improved knowledge of the economic importance of transport in general and of shipping and port operations in particular as well as of the principal emerging technological developments. Ports need to be both cost-effective and innovative, and must be able to guarantee safe and high quality operations and services, which compare favourably with those in other industrial sectors. The work should address the needs of different types of ports such as sea, sea-river or inland waterway ports.

2. Task description
From a macro-economic perspective, the work should determine methods to predict, assess, monitor and analyse global economic and technological developments, and trends in international transport and shipping markets as well as reliable and comparable port data and statistics with particular attention to the effects of the future EU enlargement.

At a more detailed level, the work should provide the basis for a better understanding of the physical flows in ports and terminals and of the ways in which they match with information flows and vice versa. This requires the mapping of actual cargo throughputs/flows as well as the depiction of related information flows. Port processes should be assessed, and a common terminology developed, in order to achieve an improved basis for the re-engineering of port operations and management. Decision support tools should be generated which will enable ports to better manage and plan their capacity, resources and internal logistics at all levels.

In order to further enhance the efficiency and safety of port operations, the work should address the ship/port interface, in particular the loading/unloading and mooring/un-mooring processes, with a view to efficiently accommodating different types of vessels (e.g. high speed craft, ro-ro vessels). This should involve the user-based conceptual design of equipment and the operational integration of new technologies, e.g. for cargo handling (including the determination of loading indicators and methods for the measurement of quality and quantity of loads), lashing and automated mooring systems. The work should also assess the impact of different types of vessels and their operational methods on port/terminal/berth layout and vice versa. The work conducted should include both an overall socio-economic impact assessment as well as cost benefit analysis. RTD should further address enhanced cost-effective training methods such as simulator-based training, using technologies such as virtual reality, of straddle carrier or crane drivers.

3. Expected results
- Decision support tools
- Market observation tools
- Tools for technology assesment/forecast
- Conceptual design of automated solutions
- Port/terminal/berth layout
- Cargo load indicators
- Training methods
- Cost-benefit analysis
- Socio-economic impact analysis

The overall objective of this task is to provide support tools which will enable ports to enhance the efficiency of their operations and to optimise the planning, management and use of their resources, in order to provide cost-effective, safe and high quality services, thereby strengthening their global competitive position.

4. Type of contract
RTD Project (up to 50% EU funding)

5. Timing / Duration

3rd Call (June 2000) / 36 months

6. Reference
White paper on the "Common Transport Policy Action Programme" (COM (95) 302)
Communication on "The development of short sea shipping in Europe: Perspectives and challenges" (COM (95) 317),
Green Paper on "Seaports and Maritime Infrastructure (1997),
Communication on "The development of short sea shipping in Europe: A dynamic alternative in a sustainable transport chain – 2nd Progress Report" (COM (1999) 317)

7. Links
Concerted Action on Short Sea Shipping. Projects such as Euroborder, Ipsi, Sphere, Intraseas (FP4 Transport Programme).

8. Involvement of non-EU countries
As appropriate.

9. Consortium profile
The different areas addressed in the task description may be subject of one single proposal or of separate proposals. However, different expertise might be required, which should be reflected in the consortium composition and structure (e.g. cluster approach). The consortium should reflect a balanced composition between research institutions and laboratories, industrial key stakeholders (e.g. ports, shippers, shipping companies, equipment manufacturers, stevedorer, etc.), training institutions, and decision makers dealing with policy or other related matters.

2.2.1/22 High-speed vessels: Identification of requirements and impact assessment

1. Problem description

High-speed vessels are playing an increasingly important role in the maritime world. Until today, they have been mainly deployed in passenger and ro-ro ferry traffic, with sizes and speeds, which are constantly increasing. Innovative concepts for maritime transport, such as 'ultra high-speed vessels' are under development and will soon be introduced into the market. The potential use of high-speed vessels for the transport of cargo for short sea shipping purposes, as an alternative to land-based transport modes, has not yet been properly exploited. Higher speeds and improved efficiency in short sea services have the potential to contribute significantly to European transport. Recent developments also point towards the opportunity for deployment of high-speed vessels on transatlantic shipping and other long-distance routes.

In terms of impact assessment in the maritime infrastructure another emerging development that may impact heavily is the concept of super-sized ships, e.g. so-called 'town ships', which can be used as floating hospitals etc.

The objective of this task is to identify the associated requirements and resulting new concepts relating to navigation, operation, human resources and logistics applications, as well as to assess the socio-economic and environmental impact in order to obtain the efficient, safe and environmentally-friendly integration of new vessel types into transport operations.

2. Task description

To achieve the objectives described above, the work should focus on the impact assessment of high-speed vessel types on safety, navigation, the environment and transport organisation, as well as on the mitigation of any identified problems.

There is e.g. no agreement at international level, at present, on whether the existing collision regulations (COLREG) need to be adapted to take account of the speed and/or manoeuvring characteristics of high-speed craft. Consequently, current navigational practice is sometimes perceived to be in conflict with COLREG. The work should seek to establish currently accepted navigation practice with respect to different types of high-speed vessel, it should assess whether there is a conflict with existing regulations and should determine whether the regulation should be altered, or indicate where current practice should be adapted to meet the existing regulations. It should further identify any required changes to operational procedures, design of equipment as well as to education and training.

The work should address specific environmental problems caused by high-speed operations such as erosion, wash and swell, identify and assess remedial solutions. The work should further address the evaluation of the potential contribution of high-speed craft and related transport concepts to overall transport efficiency and the associated economic impacts. The work to be conducted should be based on methodologies such as formal safety assessment, risk analysis, simulation, modelling and comparative analyses. The work should aim at providing recommendations for the safe, efficient and environmentally friendly development and introduction of high-speed craft and high-speed transport concepts. Specific attention should also be given to human resources issues and to the human-machine interface in particular.

The increasing deployment of high-speed vessels leads also to new requirements in the area of passenger comfort which take into account the relationships between sea state, acceleration, vibration, etc. The work should address the identification and assessment of remedial solutions to these problems.

In addition to the work on high-speed vessels, and taking into account associated infrastructure requirements, a first assessment of the impact and viability of other vessel concepts, such as super-sized ships and longer distance high-speed crafts should be carried out. Following an initial assessment of the most potentially beneficial new concepts, their viability should be assessed in terms of efficiency, safety and effect on the environment. Technical developments such as the Russian 'ekranoplane' could provide interesting input.

3. Expected results

- Identification of the potential of new vessel concepts

- Assessment of the impact on navigation and safety
- Specification of revised navigational requirements for different types of high-speed craft
- Assessment of the regulatory framework
- Specification of operational procedures
- Determination of actions necessary to mitigate environmental problems resulting from fast vessel operations
- Identification of impact on passenger comfort and of mitigation solutions
- Assessment of other types of vessels, such as super-sized ships and longer distance high speed craft

The integration of the concepts, procedures and scenarios will result in common European user requirements that will be used as a basis for the development of international standards.

4. Type of contract
RTD project (up to 50 % EU funding)

5. Timing / Duration
3rd Call (June 2000) / 36 months

6. Reference
The on-going work at IMO (International Maritime Organisation) should be taken into account, with a particular view to the International Code of Safety for High Speed Craft (HSC Code), the International Regulations for Preventing Collisions at Sea (COLREG) and the International Convention for the Safety of Life at Sea (SOLAS).

7. Links
FASS, EMMA, Concerted Action SSS, Concerted Action FSEA (FP4 Transport Programme), SEABUS-HYDAER (FP4 Brite-Euram)

8. Involvement of non-EU countries
As appropriate.

9. Consortium profile
The different areas in the task description may be subject of one single proposal or of separate proposals. However, different expertise might be required, which should be reflected in the consortium composition and structure (e.g. cluster approach). The consortium should reflect a balanced composition between research institutions and laboratories, industrial key stakeholders (e.g. shipping companies, ship equipment manufacturers, shipbuilding industry), and decision makers dealing with policy pr other related issues (maritime administrations, classification societies).

2.2.2/8 Vehicle/tyre/road noise abatement measures

1. Problem description
Noise emitted directly from road vehicles, and also that resulting from their contact with the road surface, is a significant problem in a large number of localised areas throughout Europe. As a result, different types of legislation and guidance have been set in place, which determine the maximum acceptable limits for noise emissions. The direct noise emitted by vehicles can largely be addressed by changes in vehicle design, while the noise resulting from contact with the road surface must be addressed by a combination of road and tyre design.
The main objective of this task is to identify requirements for specific levels of noise reduction, particularly from the vehicle road interface, and to develop methods of reducing the generation, propagation, and hence the impact, of noise from road traffic. The objective is to maintain or raise the present levels of road safety.

2. Task description
Generation of a method of classification of pavement textures for existing or planned road pavement types in terms of actual or potential noise generation, for use in functional specifications, manufacturing quality and localised application processes.
Development of procedures that allow the costs and benefits of noise mitigation measures to be assessed, including the definition of methods of implementation.
Specification of methods of controlling noise generation by improved highway design, including pavement surfaces, bridge expansion joints, artificial barriers and earthworks. Innovative technologies and technical developments should be taken into account.

3. Expected results
Method of classification for road pavements and their textures in terms of noise generation.
Cost-benefit assessment procedure for noise mitigation measures.
Specification of noise control methods.

4. Type of contract
RTD project (up to 50% EC funding).

5. Timing / Duration
3rd Call (June 2000), duration approximately 36 months.

6. References
Pavements for noise measurements in type the approval procedure of road vehicles (EC-R92/23/EEC).

7. Links
COST Action 334 (Effects of SingleWide Tyres and Dual Tyres), and additional link with Thematic Network on Cost/Benefit and Cost-Effectiveness Assessment Tools for Road Safety/Environment Measures.

8. Involvement of non-EU-countries
As appropriate.

9. Consortium profile
Expertise required from pavement engineering, vehicle and tyre technology, acoustics, and economics.

2.2.2/9 Thematic network on the integration of environment in the transport policy

1. Problem description
The integration of environmental protection requirements in the definition and implementation of the Common Transport Policy has become a requirement since the Amsterdam treaty. The European Council at Cardiff asked the Transport Council and the Commission to develop a strategy to meet this requirement. Several actions have now been initiated to support the corresponding Commission's work with a view to integrate environmental concerns in all the phases of public policies and decision making. It includes, among others, the setting up of common indicators to monitor at a European level the impacts of transport policies on the environment[1], the production and dissemination of guidelines for the strategic environment assessment of transport infrastructure[2], and the funding of various transport research activities related to environment.

In a context where environmental sciences are progressing rapidly, there is the need to further develop, and to build consensus around, the corresponding indicators, data sets and methods. The aim of the thematic network is therefore to provide a forum where the national and international scientific institutes and administrations involved in the above-mentioned activities are encouraged to exchange information, to harmonize their methods, to gather and pool their data, and to build common consensus.

The thematic network will focus on a limited number of domains covering at least :

- indicators for monitoring the impacts of transport policies on the environment,
- strategic environmental assessment of transport infrastructure,
- transport environmental costs,
- noise from land transport,
- others

2. Task description
The thematic network is composed of a technical and administrative secretariat and of members. The members must be independent and scientific institutes of repute dealing with transport and environment, public bodies involved into monitoring the impact of transport on environment and bodies providing guidance to evaluate the environmental impacts of transport. The technical and administrative secretariat will be in charge of conducting networking activities, namely structuring the network, developing its membership, organising workshops, and dissemination activities. Moreover it will be responsible for ensuring the technical secretariat of separate working groups to be established for each individual domain.

- Each working group will review the state-of-the-art, consolidate the results of research projects, prioritize research gaps, and formulate policy recommendations where appropriate. The results will be embedded into synthesis papers.
- Regarding the indicators, the work will build on and support the development of the Transport and Environment Reporting Mechanism being (TERM) established jointly by the Commission and the European Environmental Agency (EEA). A close link with other international activities, in particular in OECD is required.
- Regarding the strategic environmental assessment of transport infrastructure, the work will be to review and enhance existing related Commission technical guidelines in the light of scientific progress made in this area and to examing the possible application to the Trans European Transport Network (TEN-T). It requires thematic network members with recognized expertise in the field of strategic environmental assessment. Extensive consultations with member states will be necessary. The production of high quality standard reports targeting practitioners is expected.
- Regarding the transport environmental costs, the scope includes air pollution, climate change, noise and other less known environmental impacts like soil and water pollution, severance effects, visual intrusion etc.
- Regarding noise from land transport, a particular attention will be paid to the cost and effectiveness of the various measures and techniques developed and studied in the various Community funded projects.

[1] Transport and Environment reporting mechanism (TERM) indicator based report - forthcoming
[2] In particular the Manual on Strategic Environmental Assessment of Transport Infrastructure Plans, EC, February 1999. Available from DG Transport.

- The other domain that might require the establishment of a dedicated working group will be decided on an ad-hoc basis in the course of the project. It could cover differing issues like waste and disposal or severance effects.

The detailed work programme of the thematic network will be reviewed at mid-course in the light of the evolving new research and policy agendas. Flexibility is therefore required in the approach.

3. Expected results
The work of the thematic network will provide the following outputs:
- Synthesis papers
- Enhancement of existing guidelines for the strategic environmental assessment of transport infrastructure.
- Advice on research policies and selected policy issues
- Input to TERM

4. Type of contract
Thematic Network (up to 100% EU funding)

5. Timing / Duration
3rd call (June 2000), the foreseen duration is 24 months.

6. References
The Common Transport Policy: Sustainable Mobility: Perspective for the Future (COM(1998)716 final) para 24, 25. A strategy for integrating environment into EU policies (COM(1998) 333 final).

7. Links
International activities performed by EEA and OECD. Information on TERM can be found on http://themes.eea.eu.int/theme.php/activities/transport. COMMUTE, INTERNAT, POSSUM under the FP4 Transport RTD Programme. 1st call FP5 task 2.2.2/5 on Tools and strategies for reduced source noise and vibrations from trains. 1st call FP5 task 2.1.1/3 on a Thematic Network on policy and project evaluation methodologies. 1st call FP5 task 2.1.1/2 on transport network accounts and marginal costs in relation to fair payment for infrastructure use. Pilot studies conducted by the Committee of Government experts on Transport Infrastructure Charging. 3rd call FP5 task 2.1.2/3 on Economic, environmental and social conditions and mobility decision choices for the sustainable development of transport. 3rd call FP5 task 2.2.2/1 on Vehicle/tyre/road noise abatement measures. 3rd call FP5 task 2.2.2/5 on reducing the impact of noise and emissions from ground transport in urban areas.

8. Involvement of non-EU countries
Participation of thematic network members from Accession Countries is particularly encouraged.

9. Consortium profile
The consortium is composed of a limited number of partners competent to address each of the various domains covered by the Thematic Network and with the relevant management skills for such a large network. Proposals must include a list of, and commitments from, a minimum number of members that are recognised transport and environment research organisations or public bodies involved in monitoring the environmental impacts of transport and providing guidance for environmental assessment. The secretariat must demonstrate its capacity to steer high level scientific discussions on the differing issues addressed by the thematic network. The key criteria for the selection of the consortium will be the excellence of the research organisations involved in the network. NGOs are also welcome as member of the thematic network.

2.2.2/10 Reducing the impact of noise and emissions from land transport in urban areas

1. Problem description

Local transport systems, including private cars, light and heavy duty vehicles, rail, metro and tram systems, for passenger and freight transport, have impacts on the physical environment, on the human and on the built-up environment. The effects that lead to most concerns are the effects on the air quality and the associated implications on health, the noise annoyance, and the global pollution like climate change. Other effects on the quality of life such as the consumption of urban space and the severance of communities and social segregation also raise concerns but are however not directly addressed by this task.

Regarding air quality, European and national air quality legislation require to establish regional air pollution abatement plans, including contingency plans in case of pollution threshold exceedance, or to evaluate the contribution of local transport plans to air quality targets. In the context of the Community strategy to reduce air pollution emissions from motor vehicles[2], the Commission has been required to estimate the effects on air quality of non-technical measures, most of them being implemented at local level. Research has shown that transport measures like for instance traffic calming with the purpose of improving traffic safety or efficiency may have negative impacts on air quality, if not designed carefully.

Regarding noise and vibration, the reinforcing national and European legislation on ambient noise are pushing local authorities to implement more stringent noise abatement plans, with as a result a multiplication of differing noise night, week-end or other traffic bans.

Local plans can include a wide range of transport measures that can influence transport demand (transport volume), modal choice, vehicle ownership and fleet composition, mobility and driver behaviour (distribution of trips over time, speed, vehicle kinematics etc.) and therefore air quality. Regarding noise, measures like speed control and infrastructure (pavement and mitigation) measures can also have an influence.

2. Task description

The task provides a framework to address two objectives. Proposals addressing individual parts of the task are eligible and will be clustered within the overall project if successful. The overall project will include the establishment of a European scientific group, composed of high level experts, and in charge of directing the following research work:

- First to evaluate the cost and effectiveness of measures to reduce the impact of noise from transport. A particular attention will be paid to make the inventory of the existing noise related traffic bans, and to assess their effects on transport and on the perceived noise. Other local measures like speed policies, infrastructure measures, or more innovative measures to reduce the annoyance of noise from transport, their costs and their effectiveness will also be reviewed and modelled. The results will be embedded in a set of guidelines addressed to local authorities on how to evaluate the noise impacts from local transport and to design and implement noise abatement plans. The work will build on, and the approach compatible with, the on-going work of the Commission to prepare possible proposals for legislation in the field of ambient noise.

- Second to evaluate the impact of transport measures on emissions and air quality. Development of guidelines and common recommendations for the establishment and monitoring of integrated local transport plans aiming at improving air quality or reducing emissions. It will include the development of catalogues to design individual transport planning measures with reduced impacts on air quality. The work can also include the integration and validation of tools for the short-term evaluation, prediction, and monitoring of the effects of transport on air quality.

The two streams of work will pay a particular attention to economic assessment and the use of transport economics models is encouraged. In addition to usual transport requirements, the guidelines and recommendations shall be compatible with other environmental objectives like the consumption of urban space and the severance of communities. The consortium will ensure the technical and administrative secretariat of the above-mentioned European scientific group. The members of the group will be jointly designated by the consortium and the Commission and selected from organisations advising national and local governments on air quality, noise and urban transport.

3. Expected results

[2] Directive 98/69 on measures to reduce air pollution from motor vehicles

First the results will be disseminated to local authorities and professionals under the form of methodological manual, guides to good practices and training workshops. In addition, other existing Commission instruments can be used for the dissemination. Second the results will be used in the European policy debates to adapt, implement, or specify the transport aspects of the existing or in preparation Community legislation on air quality, on ambient noise, and on the environmental assessment of certain plans and programmes. Recommendations by the project will therefore have to reflect a wide consensus and to be applicable in various national and local contexts.

4. Type of contract
RTD project (up to 50% EU funding)

5. Timing / Duration
3rd call (June 2000), foreseen duration of the project: 30 months

6. References
Communication 'Developing the Citizen's Network', COM (1998) 431 final, section 2.3.1
EU Directive 98/69 on measures to reduce air pollution from motor vehicles, article 3

7. Links
Auto-Oil Programme, in particular the WG5 on non-technical measures. CANTIQUE, COMMUTE, MEET, ESTEEM, STEEDS under the FP4 Transport RTD Programme and Joule. COST 616. 1st call FP5 task on a Thematic Network on Transport Modelling and exploration Tools and 3rd call FP5 task 2.2.2/6 on a Thematic Network on the integration of environment in the transport policy. 3rd call FP5 task 2.1.2/3 on Economic, environmental and social conditions and mobility decision choices for the sustainable development of transport.

8. Involvement of non EU-countries
Where aproppiate.

9. Consortium profile
The consortium should include high level scientific expertise in noise and emission modelling, as well as economic and transport planning expertise.

2.2.2/11 Assessment of environmentally friendly operations for dangerous goods in ports and other terminals

1. Problem description
Public and private awareness in relation to environmental issues is continuously increasing. At the same time, environmental sustainability is becoming an increasingly important factor in both private and public sector planning. The sustainable integration of ports and terminals into their 'environment' requires a good understanding of the environmental impact of port and terminal-related activities.

2. Task description
The work should assess the environmental impact of port and terminal-related activities and identify and validate appropriate cost-effective tools. It should develop and validate environmental management and information systems, which include and manage information on the environmental risks and impacts, which result from port and terminal operations, as well as suggest appropriate remedial actions.

It should address the development and validation of technical concepts, which minimise the negative environmental impact of port and terminal-related operations (e.g. associated dust or noise emissions as well as contaminated soil and water) on their immediate hinterland in order to improve in particular the overall port/urban relationship.

It should further develop and validate decision support systems for infrastructure planning (investment and implementation decisions) using risk analysis-based methodologies in order to minimise the environmental impact of infrastructure decisions.

The work should comprise the conceptual development and validation of technical solutions to waste management, reception, separation and recycling problems and their integration into environmental management and information systems.

The work should support the quest for excellence approach that many port communities are trying to develop in relation to the quality of their operations and should also contribute to a harmonised European approach to environmentally friendly operations in ports.

The work should be complemented by an assessment of the implications of any new developments on legislation and environmental policy as well as on requirements for environmental training aiming at increased awareness and skills. It should foster bottom-up industrial initiatives in order to develop common standards and best practices in relation to environmental 'behaviour'.

3. Expected results
- Environmental management and information systems
- Decision support tools for infrastructure planning etc.
- Technical solutions mitigating direct environmental impacts from port/terminal operations
- Solutions for waste management
- Assessment of the impact on the regulatory framework
- Cost-benefit analysis
- Training schemes

RTD in this area should establish and further develop the basis for pro-active industrial bottom-up initiatives in order to support the provision of high quality and environmentally friendly port and terminal operations.

4. Type of contract
RTD project (up to 50% EU funding)

5. Timing / Duration
3rd Call (June 2000) / 30 - 36 months

6 Reference
Common Transport Policy: Sustainable Mobility: Perspective for the Future (COM(1998)716 final), Habitat Directive

Green Paper on "Seaports and Maritime Infrastructure (1997),
Communication on "The development of short sea shipping in Europe: A dynamic alternative in a sustainable transport chain – 2nd Progress Report" (COM (1999) 317)

7. Links
Emarc, Eco (FP4 Transport Programme)

8. Involvement of non-EU countries
As appropriate

9. Consortium profile
The different areas addressed in the task description may be subject of one single proposal or of separate proposals. However, different expertise might be required, which should be reflected in the consortium composition and structure (e.g. cluster approach). The consortium should reflect a balanced composition between research institutions and laboratories, industrial key stakeholders (e.g. ports, service provider), and decision-makers dealing with policy or related matters (maritime administrations, classification societies) as well as any other environmental interests.

2.2.3/10 Thematic network on cost/benefit and cost/effectiveness assessment tools for road safety measures

1. Problem description
In order to justify decisions, on which policy measures can be taken, policy makers need tools to assess the benefits and costs, or the cost-effectiveness of the alternative measures.
This task seeks to develop a framework for practical methods and tools for use by policy makers to assess cost/benefits and cost-effectiveness of a wide range of safety and environment measures, such as technical measures, enforcement, training and education, publicity campaigns, etc. The framework to be developed will be based on cost/benefit and/or cost-effectiveness analyses to be performed in related RTD projects in the various modes of transport.

2. Task description
This activity will draw together experience and tools for cost/benefit and cost-effectiveness assessment in related 5FP road safety research projects, as well as expertise from national road safety programmes. Based on the experiences gained in each of these projects, a framework will be synthesised for a structural, routine assessment for road safety and environmental measures. Together with a user reference group, the network will identify methodological and practical problems in the application of assessment tools, and investigate ways to overcome these problems. A secretariat will have to carry out the administrative support for the Thematic Network. Specific attention will be devoted to the problem that often the costs for the implementation of road safety measures are not borne by the groups that benefit for these measures.
Main focus will be on road safety measures, but wherever appropriate, also environmental measures can be taken into account, with specific attention to combined safety and environmental benefits and costs.
Selected national and EU safety measures will have to be assessed on their impacts, costs and benefits and/or cost-effectiveness.

3. Expected results
Joint conclusions, based on experience gathered in related 5FP and relevant national research and implementation projects.
A common framework as well as practical tools for cost/benefit and cost-effectiveness assessment.
A dictionary of cost/benefits or cost-effectiveness of various national and EU-level road safety measures.

4. Type of contract
Thematic Network (up to 100% EU funding).

5. Timing / Duration
3rd call (June 2000), duration 36-48 months

6. References
First call tasks 2.2.2/3, 2.2.3/6, 2.2.3/7, 2.2.5/2 and 2.3.1./6 of Key Action 2 (Sustainable Mobility and Intermodality). Furthermore relevant tasks under future calls in this Key Action.
Policy link with Road Safety Communication COM(97) 131 final. Policy relation with the EC Road Safety Communication (Promoting Road Safety in the EU) COM(97) 131 final, and pending progress reports that will follow from this communication.

7. Links
DG-Transport/B3 study entitled "Development of a Cost-Benefit Method to Assess the Impact of Road Safety Measures in the European Union". Link with FP4 GADGET, PROMISING and ESCAPE project.

8. Involvement of non-EU-countries
Applicant states' involvement is welcomed, and also other third countries participation (such as United States of America, Canada and Australia) whenever in conformity with EU policies and interest.

9. Consortium profile
Road safety and economics expertise.

Task 2.2.3/11 Impact assessment of procedures and technologies to increase air transport system capacity and safety, and reduce environmental impact

1. Problem description
With the continuing growth in air transport and the increasing public awareness, and reducing tolerance of noise generated by aircraft operations in and around airports, there is a need to take positive measures to minimise the environmental impact of such operations. Many European airports are faced by the conflicting problems of increasing airport capacity to meet the ever growing operational demand, and the increasing pressure from the general public to curb aircraft operations to reduce environmental impact, particularly noise and emissions.
Air transport in Europe is suffering significant congestion, due to a lack of capacity in the Air Traffic Management and Airports systems. Significant effort is already being applied to increase the capacity of both the ATM system and airports. However, this increase in capacity has to be matched by a reduction in environmental impact per flight, if we are to achieve a sustainable air transport system. To achieve the contradictory objectives of increasing capacity and reducing environmental impact, new operational procedures and supporting technologies will need to be introduced, which could have significant impact on safety.

2. Task description
The objective of this task is, in the longer term, to determine the appropriate balance between an acceptable level of safety, increased capacity and reduced environmental impact of both noise and emissions on, or around, airports.
In the shorter term, building on the results of the feasibility work of the SOURDINE project in the 4th FP, the objective is to validate the Noise Abatement Procedures and associated tools that are able to provide a significant improvement in the environmental impact of aircraft operations with an acceptable level of safety, whilst improving the efficiency and capacity of the airport operation.

To meet the longer term objective it will be necessary to:
- Determine the new (more radical) operational scenarios, procedures and supporting technologies that could be introduced to increase ATM and Airport capacity and to reduce environmental impact, both noise and emissions.
- Assess, through modelling and simulation (including full flight simulators) technical, operational and certification constraints and requirements arising from the implementation of these procedures, including effect on crew/controller workload and the needs for accompanying technological developments.
- Identify the need for, and characteristics of, additional safety nets to both the pilot and controller to achieve an acceptable level of safety.

For the shorter term:
Starting from the preliminary noise abatement procedures, the RTD will assess and validate, through modelling and simulation, up to operational testing the environmental impact benefits.

The above work may require the development of new, or improvement of existing, noise prediction and assessment models.

3. Expected results
It should provide validated recommendations for design, operational and certification changes in the longer term to achieve a suitable balance taking account of the interaction between safety, efficiency, capacity and environmental benefits.
It should validate the operational feasibility and benefits that can be achieved through the implementation of new noise abatement procedures in the short term.

4. Type of contract
RTD project (up to 50% EU funding)

5. Timing / Duration
3rd call (June 2000), 3 year duration.

6. References

Communication on The Common Transport Policy, Sustainable mobility: Perspectives for the Future (COM (1998) 716 final) *Paras 18,19,23,49*

7. Links
Tasks 2.3.1/18, Sourdine project from FP4 Transport RTD Programme.

8. Involvement of non-EU countries
As appropriate

9. Consortium profile
Regulatory authorities, research agencies, manufacturing and operating industries, pilots, controllers

Task 2.2.3/12 Emergency evacuation of Very Large Transport Aircraft

1. Problem description
A solution to accommodate the growth of air traffic and airport congestion is the development of Very Large Transport Aircraft (VLTA). Research and even preliminary design proposals are being developed in different countries, especially in Europe.
One of the main concerns that poses a challenge to aircraft manufacturers, certification authorities as well as airlines is the emergency evacuation of such planes in the event of a survivable crash or serious.
Existing certification requirements and tests have been designed and adapted for aircraft with single or double aisle configuration and, at the most, limited double decks. The VLTA concept covers different configurations which are being researched and for which the actual certification procedures might not be adapted. These configurations are either the full double deck aircraft, or the flying wing concept/the blended wing body. The number of passengers involved is such for VLTA (600 to 900) that carrying out traditional evacuation certification tests could not be easily feasible and safe. Moreover, the development of evacuation software is just beginning and for certification purposes, analysis and modelling might not be sufficient.
In addition, these new concepts pose a human challenge to the cabin crew who have to manage the evacuation as well as to manage the crowd behaviour itself both inside and outside of the aeroplane in an emergency situation.

2. Task description
To determine the problems linked with the evolution of the cabin for the VLTA regarding the emergency evacuation taking account of double decks and wide cabins (more than three aisles) for different evacuation scenarios (cabin arrangements, routes, use of internal stairs). Specific regulation requirements should be evaluated in regard to their efficiency to ensure a suitably quick evacuation. (uniform distribution of exits, distance between two exits, number and type of exits, visibility of exits and exit signs, indication of available [opened] exits, use of slides,...).
To review the use of analysis, supported by relevant small-scale evacuation tests, and evacuation modelling software.
To propose additions to the cabin crew training and procedures syllabus in order to be able to manage the evacuation of VLTA under the different scenarios identified.

3. Expected results
Assessment of the safety concerns for emergency evacuation of Very Large Transport Aircraft and the development of appropriate recommendations for certification and operation.

4. Type of contract
Accompanying measure (up to 100% EU funding)

5. Timing / Duration
3rd call (June 2000), 1 year duration.

6. References
Communication on The Common Transport Policy, Sustainable mobility: Perspectives for the Future (COM (1998) 716 final) *Paras: 19,20,21,30,33,45,48*

7. Links
European Commissions Study on passenger survivability and evacuation in transport.

8. Involvement of non-EU countries
As appropriate

9. Consortium profile
Regulatory authorities, research agencies, manufacturing and operating industries**.**

Task 2.2.3/13 Increased aircraft passenger survivability through the application of automotive design philosophies

1. Problem description
Over the last 30 years, considerable progress has been made by the automotive industry to improve occupant protection in the event of an accident. This progress has been the result of a combination of legislation, certification, systems and design, and has been developed through the analysis of a statistically large sample of accidents. In contrast, improvements in passenger protection in aircraft during the same period (other than flammability) have been slight. In general, the level of passenger protection inside an aircraft produced today, can be compared with that of a car from the 1960's. The lack of progress in this area has been due, in part, to the very small number of aircraft accidents, and a consequent lack of statistical information, and serious public or political pressure.

2. Task description
The objective of this task is to exploit the progress made in the automobile area, in improving passenger protection and hence survivability, and demonstrate the feasibility of applying the design methodologies and technologies to passenger aircraft. The result should enable the industry and regulatory authorities to make decisions to improve aircraft passenger protection on the basis of technical feasibility and cost/benefit analysis.

3. Expected results
Review of representative aircraft design approach to passenger protection to establish the current 'state of the art' in air transport.
A comparison with the current 'state of the art' in the automobile industry.
Assess the feasibility of applying automobile design approach and technologies in a representative aircraft interior.
Determine the 'survivability improvement' and associated costs of implementing such an approach in an aircraft and the subsequent impact on operating costs.
Demonstrate, through 'mock-ups' how such and approach could be applied to an aircraft.

4. Type of contract
Accompanying measure (up to 100% EU funding)

5. Timing / Duration
3rd call (June 2000), 2 year duration.

6. References
Communication on The Common Transport Policy, Sustainable mobility: Perspectives for the Future (COM (1998) 716 final) *Paras: 19,20,21,30,33,45,48*

7. Links
DYNASAFE project – IMT programme

8. Involvement of non-EU countries
United States

9. Consortium profile
Regulatory authorities, research agencies, manufacturing and operating industries

2.2.5/7 Improved accessibility between station platforms and trains for heavy rail

1. Problem description
One of the weak points in accessibility to trains is the platform to train interface. The platform based solutions for disabled passengers and catering services, which are currently in use in Europe, have several disadvantages. For example, operation of the equipment normally requires the "just-in-time" presence of railway personnel, who sometimes sustain injuries as a consequence of operating the equipment. Moreover, operating platform based equipment frequently infringes the provisions in the Manual Handling of Loads Directive (90/26). The objective of this task is, in accordance with the recommendations of COST 335, to develop modular onboard train equipment, which can be operated without the presence of railway personnel. The equipment should provide improved accessibility between the platform and the train for disabled and elderly people and other passengers with reduced mobility, catering operations, bicycles, express freight, parcels, and luggage. The focus should be on adapting prototype onboard train equipment for retrofitting of the existing fleet of long distance trains (high speed, international, intercity and regional) in order to overcome the problems associated with differences in platform heights and stations on rail curves. A closely related problem is giving sufficient information to passengers, in advance of the train's arrival, that they can position themselves on the platform close to where the required facilities will be found.

2. Task description
The work to be undertaken will be divided into four sub-tasks, which all should be covered in a single proposal:

Subtask 1. Feasibility study on the development options for onboard equipment for retrofitting of existing long distance rolling stock.
Feasibility study on the possible applications and associated restrictions that can be foreseen due to the many different types of existing rolling stock and due to differences in Member State safety regulations. The study should also include a definition of reliability, availability and maintainability requirements as well as the targets for costs and allowed stopping time at stations.

Subtask 2. Adaptation of prototype(s) and validation in real life situations
Adaptation of prototype onboard equipment for several different types of existing rolling stock. Validation of the onboard equipment in (one or two) real life situations, using existing rolling stock in a user environment.

Subtask 3. Preparation of the safety cases for approval of the onboard equipment and the related operational procedures.
Preparation of the safety cases for approval of the onboard equipment and the related operational procedures in individual Member States. This subtask should prepare the general components in the selected safety cases, taking into account Member State regulations for the opening and closing of doors and train departure. It should include more detailed discussions with the safety authorities in a small number of Member States.

Subtask 4. Advance information on the location of facilities
Develop cost-efficient means whereby passengers can be informed, before the arrival of the train, where the facilities that they need on the train are to be found so that they can move to the optimum position on the platform. A particular focus should be put on language and reading problems and the use of pictograms rather than text messages.

3. Expected results
Subtask 1 should provide the background information for retrofitting of existing rolling stock with prototype onboard equipment. It should also provide input for a new redesigned door module and rolling stock, which subsequently could be developed and prototyped in co-operation with the Land Transport Key Action. Subtask 2 should result in full scale validation of prototype onboard equipment on different types of existing long distance trains, where also the safety approval has been dealt with (in at least two different Member States). Subtask 3 should result in a toolbox for adapting the equipment to the different types of existing rolling stock, and a general risk analysis to be used for the safety cases in individual Member States. Subtask 4 should provide proposals for an additional (or, preferably, an extension of existing) information system for passengers.

4. Type of contract
RTD project (up to 50 % EU funding).

5. Timing / Duration
3rd call (June 2000) / 24 months.

6. References
Communication on "The Common Transport Policy, Sustainable Mobility: Perspectives of the Future", COM (1998) 716 final:
Para 10: White Paper "A strategy for revitalising the Community's railways" COM (1996) 421 final; Para 29: Communication "Developing the Citizen's network; Para 48: Quality of transport services; Annex I: Interoperability in the high-speed rail system (Directive 96/48), Communication on interoperability of conventional rail.

7. Links
FP4 Transport Programme projects: COST 335, PRORATA.

8. Involvement of non-EU countries
Canadian entities are welcome.

9. Consortium profile
Railway infrastructure and information system managers, industry (manufacturers of handling equipment, door modules and vehicles) and research establishments

2.3.1/13 Demonstration of an integrated management and communication system for door-to-door intermodal freight transport operations

N.B. Close co-ordination with the proposals addressing this issue and resulting from June 2000 call of the Information Society Technologies Programme (Key Action I-5.1) will be ensured.

1. Problem description

The integration of information technologies in intermodal door-to-door systems is vital to make better use of existing capacity and infrastructure. As a first step to accomplish this aim, interoperability between the different modes and the integration between transport and other services, especially in the communication field, should be established. This can only be accomplished if the available technical tools are reliable, accepted by the market and supported by an enabling political, legal and organisational framework. One of the key elements in this process is the availability of information. Intermodal operations have multiple users and layers of responsibility and information need. Those who generate data are not necessarily those who benefit primarily from its use. Management of the data and ensuring its availability throughout the chain, as opposed to the present discontinuous situation, is a strategic and economic issue.

The absence of systematic networks of data interchange has led to a progressive growth of modal systems or dedicated intermodal systems. These may enhance short-term local performance but result in substantial duplication of data, discontinuity, incompatibility, and an inability to exchange data with other present and future partners. There is not yet an effective information chain suitable for serving the needs of transport users and the participants in the intermodal transport operations. Information is often treated separately, within each mode or by each operator. This results in commercial and operational weakness. This is why together with harmonisation actions, research of solutions for interconnection through interfaces between existing systems should be pursued in order to achieve open interoperability between information systems and services.

Moreover, more and more supply chains have a global span and transport, accounting for on average 30% of the logistics costs, is becoming a critical element in the framework of lean supply chain management. With the availability of Internet and the increasing volume of e-commerce transactions, transport users require a one-stop shop for all transport actions (pre and post-contract). Such an interface will have to provide a single source for information and brokerage to the users.

Concretely, transport telematic applications should help to provide means and methods for appropriate management and control within and between the transport modes, to define and shape an information network between transport modes for overall management and control. This to accomplish data transfer within the system and to and from other services and to operate information services adapted to the needs of the intermodal transport users. The present state of the use of telematic applications in intermodal traffic and operations is unsatisfactory for most participants and users. It is therefore needed to demonstrate and implement in the transport market a global management and communication system for door-to-door intermodal transport operations. The need is to focus on demand driven rather then supply driven tools and systems.

2. Task description

The present task aims at the demonstration of an integrated and global management system for door-to-door intermodal transport operations.

The task is divided in 3 parts. The first one concerns the integration in the transport system of an innovative and cost effective communication and exchange of information system for added value services in the door-to-door intermodal freight transport chain and pre and post transport transactions. The second subtask focuses on tracing and tracking for the establishment of a European door-to-door intermodal freight transport monitoring system for loading units, goods and transport equipment. The third one looks at future solutions and at their practical application in the transport market, for the automation of processes, the development of “smart” transport equipment and loading units improving the quality of intermodal transport operations.

Subtask 1: Improved communication and information exchange in intermodal door- to-door transport chains

The lack of information transmission relevant to the entire integrated chain is not only apparent to operators and users as a source of costs and service quality deficiencies.

Information exchange illustrates most clearly a source of weakness for a coherent management of intermodal services. Information generated and managed by one mode alone does not appear sufficient for this purpose. Coherent information is required at various levels: the commercial transaction with buyer and seller of goods, the physical consignment and delivery of the goods, the management of the load unit, booking and reservations, the transfer of the load unit and goods between modes, the commercial relation between the intermodal operator and each mode (quotations, invoicing, payments), quality management of the performance of each mode, cost efficiency and performance at transfer points.

The objective of the present subtask is to improve the real-time information exchange and the communication for all actors involved in the intermodal door-to-door chain.
The subtask consist of research followed by demonstrations on the following items:
Demonstration of the integration of existing open systems architectures allowing an open access to information for all actors in the transport chain and a seamless exchange of compatible information and data for planning and management purposes. This includes elements such as the integration of Internet and other similar systems, one stop services for shippers, paperless transport, the electronic co-ordination of time-tables and capacities (stock exchange functions).
Harmonisation of intermodal communication protocols to improve the communication between various actors in the transport chain should be researched. This includes data exchange across modes taking into account the administrative differences between individual transport modes and enabling co-operative freight management.
Improvement of information and data exchange between customers and service providers in particular aiming at a better integration of production and distribution systems;
Establishment of an intermodal transport information service centre for freight customers. (travel agency for freight consignments)
Demonstration of a seamless point-to-point transport information system allowing for transactions. Such a system should be built around a data collection node(s). Data collection should start at the earliest event in the supply chain and should end at the latest event. It will allow also for the development of value added services. The system and services should inter-alia include:
- Load matching;
- Pre- and post-contract transactions;
- Simulation.

The pilot will base on existing technologies and propose solutions for their integration. A comprehensive demonstration showing the feasibility of such a global freight information system should be organised. Ideally, this demonstrator should focus on one industry sector, such as automotive or electronics, and should provide end-to-end services for European and non-European stakeholders (suppliers, manufacturers and distributors).

Subtask 2: Establishment of an integrated European door-to-door intermodal freight transport monitoring system for loading units, goods and transport equipment

The use of existing information infrastructures fixed or mobile as short range communications to determine and communicate the position of consignments can substantially enhance the tracking and tracing of cargo across modes. However, despite the readiness of technical solutions, the exploitation of the possibilities offered by these technologies is mostly limited at this stage to modal-based systems. It is essential now, to continue the research on the integration of existing systems and technologies for the creation of interoperable tracking and tracing systems in intermodal transport. The lack of freight movements monitoring relevant to the entire intermodal chain, and within terminals, is not only apparent to operators and users, but also a source of costs and service quality deficiencies. For example, most of the European terminal operators experience late or incomplete information resulting in a delay in operations. It has been proved, that, when intermodal tracking and tracing and communications are available substantial reductions in waiting times can be achieved.

The objective of the present subtask is to demonstrate an integrated monitoring system for door-to-door intermodal transport operations covering all modes and applicable to the entire European territory. In particular the following elements should be considered:

Taking into account the relevant market parties, a global system integrating the positioning, communication and identification functions should be defined. The issues covered should include standardisation requirements (message formats and type of information transmitted), the choice of the

information to exchange in relation to consignments monitoring needs, the choice of transmission means (frequencies, bandwidths, and infrastructure) and the system's financing on an intermodal basis (cost allocation). The proposed system should be simple open and cost effective.

Demonstration of the technical and financial viability of advanced value added monitoring services in the door-to-door intermodal freight transport chain. Advanced information systems should be integrated and applied in the door-to-door intermodal freight transport chain, including location of transport means and ITUs, tracing and tracking of goods and transport equipment, and vision identification techniques.

Subtask 3: Future solutions and 'Smart' intermodal transport equipment for the automation of processes in door-to-door intermodal transport operations.

The present subtask focuses on the research of solutions and at their practical application in the transport market, for the automation of processes, the development of "Smart" transport equipment and loading units suitable to improve the quality of intermodal transport operations and to facilitate the automation of processes.

The specific objective is therefore to improve the transport chain efficiency through automation of processes, and optimisation of the interoperability between different types of equipment and modes.
The work should consist of research into existing and future solution for technologies to be demonstrated.
A cost-benefit analysis of the different systems and proposals should be carried out with the help of scenarios.
Field trials should be carried out to prepare the implementation of the best-proposed solutions.

3. Expected results
The 3 subtasks will contribute to the establishment and demonstration of an innovative management system for door-to-door intermodal transport operations.

In order to facilitate the management and control of the transport chain from door to door, the information and management systems will cover several modes and will be open to any interested service provider through open systems . These systems will provide the end-user with real time information on possibilities for intermodal transport as well as the status of their consignments and pre and post transport transactions.
An optimal co-ordination between operators in the same transport chain will be established.
The systems will allow a high degree of forward planning and offer further opportunities for integrating transport to the management of the full supply chain.

The integration of use of telematic in door-to-door intermodal chains, combining informatics and telecommunications, will increase the importance of customer oriented transport services which provide automated interfaces between the order of goods, transport management, invoicing and payments.
Future solutions for the automation of intermodal transport processes will be presented. 'Smart' intermodal equipment will be investigated, assessed and demonstrated.

The target group is: Intermodal transport operators, modal carriers, shippers, forwarders, industry, policy makers, transport users.

4. Type of contract
Subtask 1, 2, 3, Combined projects (RTD+demo up to 50% EU funding)
Each subtask may be subject of one separate proposal

5. Timing / Duration
3rd call (June 2000), 3 years duration

6. References
COM (1999) 519 Final
COM (1997) 243 Final

7. Links

CESAR, PISCES, X-MODALL, OCTOPUS, INTRARTIP, PRECISE-IT, INTERPORT, EUROBORDER, TRACAR, WISDOM, COREM, SURFF, MULTITRACK, COMETA, ARTEMIS, FLEETMAP, LOGIN, SITS, VITC, INFOLOG/MARTRANS . THEMIS (thematic Network on intermodal traffic management and information and communication systems)

8. Involvement of non EU-Countries
Not at this stage

9. Consortium profile
The participants to this task should be the representatives of the industry, the transport operators involved in intermodal chains and the transport users.

2.3.1/14 Requirements for urban train control systems

1. Problem description
Many urban rail systems have over the last thirty years been equipped with driving, operations and maintenance assistance systems covering centralised control & supervision, automatic train protection, automatic train operations and, more recently, driverless operations. The main suppliers have developed individual systems for information processing and for communication between trains and control centres, and each operator mainly uses products built in his own country. Since almost 10 years, railway suppliers have made, with the support of European Union, important efforts on meeting the needs for interoperability of railway networks. Within the scope of various ERTMS projects, operators and suppliers have defined specifications for train control command systems, and corresponding devices have been developed and tested. The ERTMS is as part of the planned directive on interoperability of conventional rail about to be extended towards the conventional rail network. The objective of this task is to provide recommendations for how the ERTMS system concept and specific technologies can be transferred to urban rail, in order to improve the interoperability between regional heavy rail systems and urban rail systems, and in order to ensure a higher degree of open system standards and a possibility for gradual change towards harmonised systems in order to support the European market and reduce Life Cycle Costs (LCC) of the systems.

2. Task description
Establish the specific requirements for urban train control command systems and compare these with the existing or currently developed ERTMS functions and devices in order to analyse the differences and the needs for adaptation. Define a new concept of train control command systems for urban rail systems, which probably will be less sophisticated and less expensive than ERTMS in order to meet the specific urban transport requirements. The work should include an analysis and comparison between ERTMS functions and components and the similar functions and components of a sufficiently large sample of existing rail traffic management systems for urban rail networks. The new concept should be conceived in a way that allow to build upon the already existing specific features of urban transport operators, and it should propose an appropriate degree of harmonised standards (e.g. for interfaces).

3. Expected results
It is expected that this task will provide two different results. Firstly, a draft of the functional requirements specifications (FRS) for urban train control command systems covering all the different types of urban rail (metro, tram/light rail, tram-train), which takes into account the specific features and needs of urban rail transport operators. Secondly, recommendations with regard to which parts of the system requirements specifications (SRS) from ERTMS that can be transferred directly, and an identification of needs for additional technical development work and validation/demonstration activities. The results should serve as a starting point for a consensus building e.g. under the structures of the European mass transit initiative, MARIE. It is important to note that no new technology development is envisaged in this task, but that the task - depending on the recommendations made - can be followed up by technology development and validation activities in the Key Action “System and Services for the Citizen” in the IST programme.

4. Type of contract
RTD project (up to 50 % EU funding).

5. Timing / Duration
3rd call (June 2000) / 18 months.

6. References
Communication on “The Common Transport Policy, Sustainable Mobility: Perspectives of the Future”, COM (1998) 716 final:
Para 10: White Paper “A strategy for revitalising the Community’s railways” COM (1996) 421 final; Para 13: Trans-European Transport-Networks; Para 40: Review of guidelines for TEN-T; Annex I: Communication on interoperability of conventional rail; Annex II: Review and revisions of the TEN guidelines, Framework for harmonised technical standards for railways.

7. Links
FP4 Transport Programme projects: ERTMS, MORANE.
FP5 RTD project “Integration of local and regional rail, incl. cross border aspects” (1st call).

8. Involvement of non-EU countries

9. Consortium profile

Urban transport operators and authorities (covering all different types of urban rail such as metro, tram/light rail, tram-train), railway supply industry, universities, consultants and research institutes as appropriate.

2.3.1/15 Specification and assessment of data collection and communication strategies for road traffic data management and traffic information systems

1. Problem description
While traffic situations on motorways are often relatively well known, information on real time traffic situations on the secondary feeder network is still very limited despite these roads often being heavily used in their own right or used by drivers to divert from congested motorways and other roads. As also road operators, by their traffic management systems, requires to divert traffic from congested roads, they need to better know how the actual traffic is on the network they wish to use as a complement. The objective of the present task is to establish strategies for data collection in real time area wide traffic management and information systems, which allow a more efficient use of both motorways and the secondary road network, without additional safety risks.

2. Task description
The present project will develop, demonstrate and assess strategies for the establishment of real time data collection for traffic management and information systems, for use by network managers at regional level, which can make use of existing and newly developed means of data collected both at road side (magnetic loops, video, traffic light control systems etc) and by mobile means (for example floating cars). Data from these sources will need to be adapted for use at different decision making levels. Additional data sources from both public and private institutions should be used, provided that they match pre-defined quality requirements (e.g. consistency). Work should identify the best way for the co-operation of different disciplines, organisations and technologies to increase the overall quality, marketability and cost-effectiveness of the information provided, i.e. ownership of data, payment for data. In this context it is of importance to assess and evaluate which technology fits best which transport policy need.

3. Expected results
Assessment of strategies for cost-effective means of data collection especially adapted for secondary road networks.
Guidelines and practical tools (handbook) for defining the optimum number, types and locations of data collection equipment for a given part of the secondary road network.
Recommendations on organisational solutions for efficient data-exchange and use.

4. Type of contract
RTD project (up to 50% EC funding).

5. Timing / Duration
3rd call (June 2000), duration approximately 36 months.

6. References
Common Transport Policy Action Programme: 'Towards 2000 and beyond', Development of Pan-European transport networks; Framework for the development of Road Transport Telematics guidelines, Final Report of the High-Level Group on public-private partnership financing of Trans-European Transport Network projects (document VII/321/97 of May 1997), Community Strategy and Framework for the Deployment of Road Transport Telematics in Europe.

7. Links
Follow-up to the TASTe project. Work will build on the DG Information Society ANIMATE project and the WELL-TIMED study, which formed part of it. Links with on-going TEN-T-projects (Trans European Network for Transport) such as VIKING, CORVETTE, SERTI et al.

8. Involvement of non-EU-countries
As appropriate.

9. Consortium profile
Participation from public and private road operators on national, regional and local level is essential.

2.3.1/16 Road Speed Management Methods Assessment.

1. Problem description
In-appropriate speed is one of the major causes for road accidents, both in urban areas, on highways and motorways and in rural areas. There are traditional ways of trying to solve this road safety problem as well as new means, such as different kind of driver support systems. The problem is how to adapt the speed to road environment and actual speed limits as well as to actual traffic and weather conditions.
Speed management of road traffic is increasingly important both for general traffic management purposes (particularly for managing congestion), road safety and environmental concerns. Several different tools have been developed, or are currently under development, covering traffic management tools (e.g. speed management by Variable Message Signs, or speed enforcement), autonomous in-vehicle devices (autonomous speed limiters or (intelligent) cruise control), adaptive and interactive in-vehicle devices (e.g. intelligent speed adapters) as well as new ways of adapting the infrastructure to be more self-explaining or with physical obstacles. But in the end, it is the driver behaviour component that determines the success of these devices in terms of benefits: safety benefits, network effects (traffic flow distribution and vehicle speed characteristics in a road network), and emission of noise and pollutants.
The main objective of this task is not to develop new ways of control or enforcement. The main focus will be on voluntary use of the new technology, with the liability still in the hands of the driver. A certain focus would be on speed management in urban areas where vulnerable road users are in close contact with vehicles.

2. Task description
Assessment of effects of various types of intelligent speed adaptation tools on driver behaviour through experimental research (e.g. by means of simulations and/or real-world experiments).
Assessment of various network effects (e.g. traffic flows, noise and pollution) of different types of speed management measures including on-board devices and road signs.
Investigation of acceptability aspects of speed management measures and tools by different categories of road users.

3. Expected Results
Cost-benefit and cost-effectiveness figures which show how to best use new ways of road speed management.
Implementation strategies for different types of speed management tools and solutions for different parts of the road network and for different categories of users.

4. Type of contract
Combined project (RTD + DEMO, up to 50% EC funding).

5. Timing / Duration
3rd call (June 2000), duration 36 months

6. References
Policy relation with the EC Road Safety Communication (Promoting Road Safety in the EU) COM(97) 131 final.

7. Links
4FP research and demonstration projects such as ARROWS, MASTER, DUMAS, SAFESTAR and ESCAPE.

8. Involvement of non-EU-countries
As appropriate.

9. Consortium profile
Expertise will be required from social science (traffic psychology), and traffic engineering, added with practical experience and feedback from road operators, enforcement agencies, and road user representatives. Economics expertise for cost/benefit or cost-effectiveness assessment. It is of importance that countries involved in the work represent various safety patterns.

Task 2.3.1/17 Operational Platform for a European ATM system in the medium term timeframe (2005-2010)

1. Problem description

European air transport is increasingly suffering from significant delays. The current Air Traffic Management Systems in Europe are unable to meet the ever increasing traffic demand. Improvements in the existing systems will not be sufficient, and the introduction of the next generation European Air Traffic Management system must be speeded up to provide a significant capacity increase from 2005 onwards. To enable the necessary technical and political decisions to be taken, a properly validated concept has to be presented, which quantifies the expected performance in terms of capacity, efficiency and safety. Large-scale, real-time tests and trials to validate the concept need to be carried out to provide this evidence, which will facilitate further pre-operational trials and ultimately implementation.

2. Task description

This task has the objective to initialise the Operational Platform for the ground segment based on previous work. It will continue the development and usage of the European validation environment to validate a coherent Gate-to-Gate ATM system for the medium term (2005-2010). The task shall integrate and perform test trials of the candidate ATM components, Communication Navigation Surveillance (CNS) enablers and operational procedures suitable for validation in order to gain confidence in that the proposed solutions could cope with the forecast traffic growth in terms of capacity, efficiency, safety and cost. Supporting technologies suited to serve all phases of flight and perform multi- service functions should be given priority over technologies specially developed for a specific service, where this is possible. This ground based ATM operational trials platform will be complementary to the airborne ATM technology platform being developed in the Aeronautics Key Action

The task is divided into two sub-tasks each focusing on its special area in order to form the Operational Platform.

Sub-task 1: **European Air Traffic Management Concept and Scenario Consolidation for 2005-2010**

This sub-task is to complement the previous work done in the field of concept breakdown for validation purposes and to verify (possibly through fast-time simulation) and fill in gaps needed for the validation activities to be done in subtask 2, below.

Sub-task 2**: Validation of the future European Air Traffic Management System for the medium timeframe (2005-2010)**

This sub-task will in practice use the ATM Operational Platform and, through the connection with the Technical Platforms developed in FP5, to integrate and make validation activities to ultimately demonstrate a full gate to gate ATM via a staged integration and trials process.

Phase 1: The Planning, Consolidation, Preparation and Validation of the ATM en-route segment
This phase will complement the candidate ATM component selection and the integration work for the validation environment in order to achieve full ATM en-route component capability. Then to select and connect the necessary candidate CNS enablers to the validation environment and to define the operational procedures for investigation. Finally, to plan and prepare for the validation exercises and to execute validation trials for evaluation.

Phase 2: The Planning, Preparation, Integration and Validation of the ATM En-route/TMA segments
This phase will plan, prepare and integrate the validation environment with ATM/TMA component capability. If necessary, to up-date and connect additional CNS enablers to the validation environment, refine the operational procedures for investigation and to execute validation trials for evaluation.

Phase 3: The Planning, Preparation, Integration and Validation of the ATM En-route/TMA/ A-SMGCS segments to form a Gate-to-Gate ATM system
This phase shall plan, prepare and integrate the validation environment with total Gate-to-Gate ATM/CNS capability. If necessary, to up-date and connect additional CNS enablers to the validation environment, refine the operational procedures for investigation and to execute validation trials for evaluation.

3. Expected results

Consolidated ATM concept for the subsequent validation
Compilation of the exercise plans
Integration and validation of the ATM components
Progressive integration and validation of CNS enablers with the ATM components to form an ATM gate-to-gate system
Execution of large-scale real-time trials and evaluation at each integration step.

4. Type of contract
Sub-task 1 : RTD project (up to 50% EU funding)
Sub-task 2 : Combined project (RTD+DEMO, up to 50% EU funding)
The whole task should be subject of one single proposal

5. Timing / Duration
3rd call (June 2000) Sub-task 1 - 1 year duration; sub-task 2 - 4 year duration.

6. References
Communication on The Common Transport Policy, Sustainable mobility: Perspectives for the Future (COM (1998) 716 final) *Paras: 13,30,39,41,49*

7. Links
All 'ATM and Airports' tasks Safety/Environment tasks, DG-Research/DG-Information Society tasks (AFAS and M-AFAS), TEN-T Projects CAVA, AVENUE TORCH, EVAS, OPTAS A and B, SAMS

8. Involvement of non-EU countries
As appropriate. Involvement of Russian entities is encouraged.

9. Consortium profile
Manufacturing industry, service providers, research agencies, operating industry

Task 2.3.1/18 Advanced airport approach procedures implementation

1. Problem description
Advances in technology and the refinement of new concepts have brought to maturity a number of different operational procedures for the improvement of air traffic flow efficiency. Ways to implement advanced procedures should be exploited and tested on a trial basis with the direct involvement of civil aviation authorities in order to provide the basis for final acceptance by the Member States.

2. Task description
Following the criteria contained in the Procedures for Air Navigation Services- Aircraft Operations PANS-OPS), and making use of new technologies as well as of new concepts, the task comprises the implementation of particular types of instrument approach procedures in order to obtain capacity benefits. Different types of aerodromes should be selected and should be used as test sites for the new operations.

3. Expected results
Assessment of benefits brought by a number of different operational procedures when applied to selected different kinds of aerodromes.
The results must show the transferability of the procedures to other aerodromes with similar characteristics.

4. Type of contract
RTD project (up to 50% funding)

5. Timing / Duration
3rd call (June 2000), 2 year duration

6. References
Communication on The Common Transport Policy, Sustainable mobility: Perspectives for the Future (COM (1998) 716 final) *Paras 12,13,30,46,49*

7. Links
Airports related projects from ECARDA (DG-Transport, DG-Research and DG-Information Society) particularly DEFAMM operational tests, 2.3.1/2, 2.2.1/6, ICAO PANS-OPS, and Eurocontrol studies

8. Involvement of non-EU countries
As appropriate

9. Consortium profile
Airport Authorities, service providers, airlines, research centres, manufacturers

2.3.1/19 Operational Platform for River Information Services (RIS)

1. Problem description
The formulation and further specification of the concept of 'River Information Services (RIS)' was initially addressed under FP4. This work which was undertaken by key industrial stakeholders, Member States administrations and research organisations, established the baseline for a conceptual transition from traffic to transport management services in the area of inland navigation.

The overall objective of the 'RIS concept' is to provide management services, which reduce risks for safety and environment while maximising the efficiency of transport operations. This will involve the provision of enhanced information for navigational purposes and also for fleet, resource and cargo management.

The optimisation of 'RIS' requires the further enhancement of the concept by assessing the integration of added value services and emerging technologies, and by assessing further harmonisation issues such as Inland ECDIS as well as ensuring the user-friendly integration of information onboard inland vessels with a view to improve transport safety and efficiency. Strategies for the exploitation and further expansion of the 'RIS concept', which take into account the future enlargement of the EU should be envisaged.

2. Task description
The work in this area should identify shortcomings in the development of the RIS concept and also in the evolution from traffic to transport management services. It should further enhance the concept by integrating and validating existing technologies and their applications as well as added value services in operational transport scenarios. The work has to be based on a common definition of data as well as on harmonised procedures and interfaces. The work should include the generation of enhanced prediction models for estimated times of arrival as well as ensure the maintenance of standards (e.g. for Inland ECDIS) as elaborated under the Concerted Action in Inland Navigation. The results generated in the related concerted actions/thematic networks should be used as the baseline for all integration, demonstration and validation efforts.

Links with other concepts such as Vessel Traffic Management and Information Services (VTMIS) and supply chain management concepts should be established, assessed and validated in operational transport scenarios and based on a common interface between different types of information and management systems. Again the work in the related concerted actions/thematic networks should be taken into account.

Another missing link in the 'RIS' chain is the demonstration and validation of the user-friendly and cost-effective (low-cost solutions) integration of all available information and communication onboard the vessel in 'one single unit' taking into account the results of FP4 projects such as RINAC. This will involve the rationalisation of stand-alone instruments and displays, the improvement of the human-machine interface, better communication facilities, automation of routine tasks etc. thus leading to improvements in safety and efficiency. The work should be undertaken with a particular view to compatibility between sea-going and river vessels and the different regulatory framework. Particular attention should be paid to the impact of changes on the human element, and also to emerging education and training requirements.

The 'RIS' concept as generated by the different projects and concerted action in FP4 represents an industrial bottom-up approach with strong support from national and European decision-makers and administrations. This has put European industry in a strong position in terms of knowledge and technology. Strategies for the exploitation and further expansion of the 'RIS' concept in view of the future enlargement of the EU should be envisaged.

3. Expected results
- Demonstration and validation of an enhanced 'RIS' concept against operational transport scenarios
- Validation of technologies, their applications and added value services in operational transport scenarios
- Additional information requirements for efficient transport management
- Enhanced interfaces with other information and management service concepts
- Validation of advanced ship control systems
- Cost-benefit analysis
- Organisational, financial and regulatory framework
- Strategies for the involvement of third countries

The overall objective is to provide a framework for enhanced information and management services which aims at the reduction of risks in relation to safety and the environment, while improving the efficiency of transport operations, which serves public and private demands and which helps to promote a cost-effective modal shift, from land-based transport modes to waterborne transport.

4. Type of contract
Combined project (RTD + Demo, up to 50% EU funding) and Accompanying Measure (up to 100% funding)

5. Timing / Duration
3rd Call (June 2000) / 30 – 36 months

6. References
Common Transport Policy: Sustainable Mobility: Perspective for the Future (COM(1998)716 final)
Communication on "The development of short sea shipping in Europe: A dynamic alternative in a sustainable transport chain – 2nd Progress Report" (COM (1999) 317,
Council Directive 82/714/EEC of 4 October 1982 laying down technical requirements for inland waterway vessels

7. Links
Concerted Action on Inland Navigation**,** in particular Member States Working Group on 'Inland ECDIS'. Concerted Action on VTMIS. Projects such as INDRIS, RINAC, VTMIS-Net (FP4 Transport Programme). Central Rhine Commission, Danube Commission, PIANC.

8. Involvement of non-EU countries
Active participation of Associated Countries is encouraged.

9. Consortium profile
It is recommended that the different areas in the task description should be subject to one single proposal. However, different expertise might be required, which should be reflected in the consortium composition and structure (e.g. cluster approach). The consortium should reflect a balanced composition between research institutions and laboratories, industrial key stakeholders (e.g. inland shipping companies, inland ports, service provider, shippers, transport operators, logistic service provider, other transport modes), decision makers dealing with policy or related matters (inland waterway authorities, administrations).

2.3.2/9 Door-to-door services for less than container load (LCL) and small consignments

1. Problem description
The requirements of industrial processes in general and of transport in particular have changed drastically in the last 10 years: higher competition, shorter production processes and product life cycles, just in time delivery, are few examples. Given the current economic trend towards globalisation and internationalisation, companies find it increasingly difficult to manage the entire supply chain on their own at reasonable costs. Shipments are becoming smaller but more numerous. Small consignments and the LCL flows are taking an increasing part in the total goods transport in the European Union. In 1996 the turnover of small consignment, express services and parcels was of around 25 BECUs only in Europe. Moreover, an 8% yearly growth is expected to the year 2000 bringing the turnover to 34 BECUs at the beginning of the next millennium. Express services and non-containerised goods have been in the past traditionally regarded as not propitious for intermodal transport, but due to increasing environment pressure, the awareness is rising that the future lies in the development of new integrated door-to-door intermodal transport chains. Given the prevailing use of uni-modal transport at this time, substantial initiatives are required in order to support the growing utilisation of intermodal transport in new and strategic market segments. The present task address the integration of LCL and small consignment into intermodal door-to–door transport chains in the European Union.

2. Task description
The present task aims at analysing identifying and testing intermodal transport solutions for LCL and small consignment transport in door to door intermodal chains considering all modes in European territory.

Within the framework of the present task, a specific analysis of the market should be done. The market potential for intermodal transport should be identified and modelled.

Limits, bottlenecks and opportunities for the development of new intermodal services for LCL and small consignments should be identified at economical, technical operational and political level.

The viability of intermodal transport for small consignments and express services should be assessed and demonstrated on specific transport relations, market segments and intermodal corridors.
In particular, the following elements should be considered:

Operational aspects dealing with door to door transport of LCL and small consignments with a particular emphasis on quality of the service and transport costs.
Optimisation of modern stuffing and stripping procedures for loading units used in intermodal transport (study of logistic aspects and requirements).
Study and demonstration of all aspects relating to the use of small containers and other loading units in intermodal transport.
The groupage function (forwarders) should be considered
The rationalisation of flows (bundling) should be considered.
Aspects like cargo identification, warehouse logistics, automation, and co-ordinated timetables should be addressed.
Handling and dispatch procedures in road transport should be analysed to integrate rail and other modes to develop value added services.
The use of specific transport equipment and vehicles should be analysed and tested
The potential of using passenger's related services should be examined.

3. Expected results
Assessment of intermodal transport market potential for LCL and small consignments.
Assessment and demonstration of door to door intermodal transport solutions for specific LCL and small consignment transport demand
Guidelines and recommendations for the development of intermodal transport services for small consignments and LCL.
Test on real environment of specific transport equipment and vehicles adapted for intermodal transport of LCL and small consignment

The target group is: intermodal transport operators, industries, logistic managers, transport planners, freight forwarders, policy makers, shippers.

4. Type of contract
Combined Project (RTD + DEMO, up to 50% EU funding)

5. Timing / Duration
3rd Call (June 2000) – duration: 24 months

6. References
COM (1999) 519 Final
COM (1997) 243 Final

7. Links
FP4 projects : TERMINET, SCANDINET, LOGIQ, FV2OOO, Rolling-Shelf
TRILOG Study, Cost 339, Studies on Logistics
Thematic Networks on Terminals / Transfer Points (EUTP) and on "City Logistics", Concerted Action on Logistics (LOGICAT).

8. Involvement of non EU-Countries
As appropriate

9. Consortium profile
Research institutes, consultants, intermodal transport operators, logistics experts and main transport actors involved in the subject for the research part. Industries, intermodal operators, logistic companies for the demonstration part.

2.3.2/10 Fast cargo trains in cross-border traffic

1. Problem description
The market for transportation of time critical goods, express goods and mail is likely to increase significantly in the coming years. It is the aim of this task to investigate and demonstrate the potential for the operation of these types of freight transport on railways using a mix of the high-speed rail network, other "passenger" lines, and freight lines. The aim is to demonstrate how railways can contribute to replace some of the road freight traffic in general as well as the flights and "trucking flights" in the air freight system. It is expected that fast cargo train services can assist in dealing with congestion in the major airports and in the road network, and that it can contribute to a reduction in the growth of CO_2 emissions from the transport sector. The FP4 projects AFTEI (air freight integration in intermodal transport) and HISPEEDMIX (use of high-speed rail network for freight) have made feasibility studies, which for the rail part led to the conclusion that air freight in itself will not contain sufficient freight volumes to justify the operation of trains. Therefore solutions will have to build on other types of freight such as express goods, mail, time constrained transports (e.g. components and sub-assemblies between car manufacturer's factories in different parts of Europe), and possibly in combination with air freight when justified. Regular fast cargo services on railways can best be integrated with rail passenger services because these are sufficiently reliable, whereas less regular services best could be done by some type of modular and flexible freight charter trains.

2. Task description
The work to be undertaken will be divided into three sub-tasks, which all should be covered in a single proposal:

Subtask 1. Further development of the operational concepts:
Develop the fast cargo train concept and the functional requirements for the rolling stock based on the recommendations from the HISPEEDMIX and AFTEI projects. This probably will include two types of operational concepts/rolling stock. The first type would be for integrating the high-speed passenger services with freight services, for instance by adding a freight module (like TGV FRET) to an ordinary high speed passenger train or by using 2-level high-speed trains. The other type could be a modular train operating at max speeds of 160-200 km/h, which has axle loads, braking performance, traction etc. suitable for operation on as much as possible of the European rail networks, including regular overnight services and charter train services. The basis could be something like the Express Shuttle trains in Germany or a new type of train based on the possibilities opened by the developments in the INTELFRET project.

Subtask 2. Solve the identified railway specific problems for access to the foreseen European network of operations of fast cargo trains:
Propose new railway infrastructure maintenance concepts and seek agreements with the relevant infrastructure managers in order to allow for train operations in the evenings and at night on the dedicated high-speed railway lines. Define the criteria and seek agreements with the relevant infrastructure managers in order to allow slower speed trains to operate on the dedicated high-speed railway lines. Find solutions for the path allocation for charter trains and other non regular trains on the "passenger" network.

Subtask 3. Demonstrate the fast cargo train concept in cross-border traffic:
Demonstrate the fast cargo train concept on the "passenger" network (high-speed lines and up-graded lines). The demonstration should either be based on existing rolling stock or on new developments (for instance from the Land Transport and Marine Technologies Key Action or from Member State development activities). Containers, tracking and tracing, and handling equipment to be used in the demonstration should be what currently is used in the existing air freight (air/road) system or what is currently being developed in intermodal projects.

3. Expected results
Subtask 1 should lead to reports, computer presentations etc., which define and visualise the operational concepts and specify the functional requirement specifications for the rolling stock. Subtask 2 should lead to reports and case studies that can be used in the future policy making. Subtask 3 should lead to a physical demonstrator to validate the technical feasibility of the fast cargo train concept, and provide data for an evaluation of the potential commercial feasibility of fast cargo train services.

4. Type of contract

Combined (RTD+DEMO up to 50% EU funding).

5. Timing / Duration
3rd call (June 2000) / 24 months (if small demonstration part) or 36 months (if significant demonstration part).

6. References
Communication on "The Common Transport Policy, Sustainable Mobility: Perspectives of the Future", COM (1998) 716 final:
Para 10: White Paper "A strategy for revitalising the Community's railways" COM (1996) 421 final, Trans-European Rail Freight Freeways; Para 13: Trans-European Transport-Networks; Para 14: Communication on Intermodal Freight Transport COM (1997) 243; Para 40: Review of guidelines for TEN-T; Para 47: Alpine Transport; Annex I: Railway Infrastructure Package COM (1998) 480, Interoperability in the high-speed rail system (Directive 96/48), Communication on interoperability of conventional rail; Annex II: Review and revisions of the TEN guidelines; Framework for harmonised technical standards for railways.

7. Links
FP4 Transport Programme projects: HISPEEDMIX, AFTEI, EUFRANET, INTELFRET.
FP5 Thematic Networks on "Rail Freight Services" and "Freight Terminals" (1st call).
FP5 RTD project "Integration of air freight in the intermodal transport chain" (2nd call)

8. Involvement of non-EU countries
Switzerland and Associated Staes organitations are welcome.

9. Consortium profile
Railways (operators and infrastructure managers), equipment supply industry (rolling stock and freight handling equipment), research establishments, big users (the express industry, car manufacturers etc.), air freight stakeholders (airports, operators etc.).

Task 2.3.2/11 Intermediate mass transport: innovative bus/tram concepts

1. Problem description

Mass transport systems rely in most cities on bus, tram, light rail and metro networks. Each of these solutions has its market segments, advantages and drawbacks. For example, bus networks are flexible and low cost but with a low capacity and a more difficult integration in dense urban fabrics, a poor image etc. Tram, metro and conventional light rail systems have a high capacity but require heavy and long-term investments and lack flexibility.

Research has shown that intermediate mass transport systems based upon innovative bus/tram concepts can potentially fill the gap between the bus and rail based systems and combine the advantages of lower infrastructure costs, flexibility in operation and investment planning as well as high capacity and service quality. Several systems are currently being developed, tested or already implemented in Europe.

Local authorities and transport operators interested in implementing such systems must however cope with several barriers: the diversity of technological options, the lack of comprehensive evaluation frameworks (for instance in terms of operations, life cycle costs and benefits, network planning, and safety) and the lack of regulations adapted to systems being neither bus based, nor tram based.

The aim of the task is to provide these authorities and operators with tools to better overcome these barriers. The objectives are to develop at a European level a set of common performance criteria, evaluation methods and recommendations on technical and operational regulations for the planning and operation of intermediate transport systems in various local and national contexts.

2. Task description

The work will include:

- A definition phase to further conduct market analysis, including identifications of the aspects competing and complementary with conventional bus and tram systems, analysis of gaps in transport supply services, specification of user requirements (local authorities, transport operators, passengers), covering both infrastructure and rolling stock.
- Development of common performance criteria and systems functionality on vehicles, infrastructure, interfaces, and network and the various phases of the project, namely construction, operation, network development, and dismantling.
- Development of a common evaluation methodology, including life cycle cost, quality of service, passenger and resident perception, environmental and energy aspects and all the above mentioned aspects. Validation of the methodology against existing experiments.
- Identification of common standardisation and regulatory safety requirements, for instance on vehicle, system operation and driver training, identification of other regulatory requirements or hindrances by local and national regulations to the implementation of 'intermediate' transport systems.

The project will set up a European advisory group that will involve users representatives, namely local authorities, transport operators, and passengers covering a wide European geographical area, beyond the consortium. The group will be responsible for the directions of the project. No new technology development is envisaged. Priority will be given to proposals proving an easy access to existing large-scale demonstrations financed by local, regional, national programmes and/or other key actions. Performance criteria and the evaluation methodology will be flexible enough to apply to different technological solutions.

3. Expected results

The results of this task will be embedded in guidelines to authorities in charge of procuring and implementing mass transport systems, and possibly standardisation and regulatory bodies at local, national and European level. Results will also benefit the vehicle production and infrastructure building industry.

The following specific output is expected:

- passenger transport market study,
- specification of a set of common performance criteria and functional specifications of intermediate transport systems,
- evaluation methodology and comparative assessment of systems,
- guidelines to operators and local authorities for public procurement,
- recommendations on regulatory requirements, in particular on safety and type-approval procedures.

4. Type of contract

RTD project (up to 50% EU contribution).

5. Timing / Duration
3rd call (June 2000), the foreseen duration of the project is 36 months.

6. References
Communication on Developing the Citizen's Network (COM (1998) 431 final), section 2.3.5.
Communication on The Common Transport Policy: Sustainable Mobility: Perspective for the Future (COM(1998)716 final) para 29, Annex II

7. Links
All the above aspects should use and build upon existing guidelines for project evaluation, in particular from the projects MAESTRO and UTOPIA under the FP4 Transport RTD Programme. Activities under this task might be co-ordinated with activities undertaken by the key action Economic and Efficient Energy (possibly supporting demonstrations).

8. Involvement of non-EU countries
As appropriate

9. Consortium profile
The consortium should include public transport operators, and should associate local authorities. Rolling stock manufacturers and other relevant stakeholders should also be represented in the consortium.

Task 2.3.2/12 Integrated mobility services in low-density rural areas

1. Problem description
As indicated in the Communication 'Developing the Citizen's Network', in many rural areas a vicious circle has developed in which growing car use and falling demand for public transport reinforce each other. There are now many rural and peripheral regions in Europe where car reliance is almost complete and alternatives to car-use are severely limited or even non-existent.
There are examples of good practices in maintaining mobility in these areas, some of them involve good land use planning or mobility management schemes. Others rely on integrating and making a flexible use of public and voluntary sector transport services such as postal delivery, social services, tourism, health care and education. The aim of this task is to study innovative approaches in rural transport through improving the supply of well-integrated transport services in order to maintain and improve quality of life in rural communities.

2. Task description
The work under this task involves (1) analysis of the financial, legal and organisational barriers to, as well as the opportunities for developing well-integrated rural transport systems, including those resulting from a greater integration between different types of public transport and voluntary transport services, (2) after careful examination of opportunities and barriers, development and demonstration of innovative transport solutions (3) analysis of the mobility, social, economic, and environmental impacts of these solutions. Issues that specifically should be taken into account in this task are the role of voluntary initiatives, physical accessibility, the role of telematics services, design of well-integrated transport networks and services including aspects of intermodality, location-planning of centres for social activity, shopping and health services, tourism opportunities, rehabilitation of closed-down rail services, and delivery of goods. The proposed project combines RTD aspects with demonstration activities. Where appropriate, these demonstrations should only use existing technology and they should build upon politically led initiatives.

3. Expected results
It is expected that this task will produce a number of coherent recommendations based upon concrete project results, intended for broad use by authorities, operators of transport services and voluntary groups. In addition, the results will also be of interest to researchers. The following specific technical results are expected:
- a framework for identifying and analysing the barriers
- a framework for the (final) selection, the design and implementation of the demonstrations
- a methodology for cross-site impact assessment and evaluation of the demonstrations

Please note that proposals for this task should fully focus on the mobility problems in low-density rural areas and not in urban and sub-urban areas. Task focuses on passenger transport but, if relevant, freight transport aspects can be brought in.

4. Type of contract
Combined project (RTD+DEMO, up to 50% EU funding)

5. Timing / Duration
June 2000, foreseen duration: 36 months

6. References
Communication 'Developing the Citizen's Network', COM (1998) 431 final.

7. Links
There is a strong link with the FP4 Transport RTD Programme VIRGIL project. There is a possible link with the FP4 SONERAIL project and with relevant activities at national/regional/local level. For the development of the methodology for cross-site impact assessment and evaluation of the demonstrations the results of the MAESTRO project have to be taken into account. No new technology development is envisaged, the work should build upon the technologies that have been/are being developed in the key action Systems and Services for the Citizen.

8. Involvement of non-EU countries
The participation of one or two partners from Accession Countries could be envisaged, involving demonstration activities and ensuring dissemination to these countries.

9. Consortium profile
The consortium should involve authorities, operators and researchers and should also ensure the active involvement of users.

2.3.2/13 Non technical issues linked to cross-border intermodal traveller information, reservation and ticketing services complimentary to rail journeys

1. Problem description
The action programme 'The Common Transport Policy – Sustainable Mobility: Perspectives for the Future' states that consumer interests in improved transport quality should be pursued through actions to improve traveller-services complimentary to rail journeys.
The aim of this task is to facilitate, through the preparation of policy recommendations, the development of full cross-border European intermodal information, reservation and ticketing services. A first step in this direction has been made through the project EU-Spirit, which will run until the end of the year 2000. The technological development and validation of value added services in the field of integrated information, payment and ticketing is one of the priorities of the key action Systems and Services for the Citizen.
Work under this specific task should run in parallel with these technological developments. It should fully concentrate on the systematic analysis of institutional, financial and organisational barriers in the development and deployment of cross-border intermodal information, reservation and ticketing services complimentary to rail journeys, integrating relevant connecting modes.

2. Task description
The first part of the work under this task should start with an analysis of recent developments in the provision of value added rail-linked transport related services at national and European level, which should be as wide as possible in the modes addressed and the services included. Key players and key owners of information need to be identified, as well as the relevant financial, institutional and organisational frameworks at different levels. A distinction between static and real-time information should be made.
The second part of this task deals specifically with intermodal information, reservation and ticketing services complementary to railway journeys. Non-technical barriers in development and for deployment should be identified. Full cross-border solutions should be identified which are at least at the quality level of the best national solutions.
A key success factor in developing these services will be that relevant data are made available at minimal cost, in an unbiased form and at reasonable moments in time to services providers, either public or private. Market developments and market potentials should be analysed. On the basis of the barriers identified, if necessary policy recommendations could be made for follow up initiatives to ensure availability of unbiased and harmonised data.

3. Expected results
It is expected that the following outputs will be produced:
- an overview of recent developments in the provision of cross-border intermodal information, reservation and ticketing services complementary to rail journeys
- a map of 'key' players and owners of relevant data, as well as details on the availability and quality of data
- an overview of existing institutional, financial and organisational barriers and proposed solutions to overcome them
- if necessary recommendations for (further) policy development and technological development.

The task outcome is of particular relevance for transport operators, providers of value added services and for authorities at different levels.

4. Type of contract
RTD project (up to 50% EU contribution)

5. Timing / Duration
3rd call (June 2000), the foreseen duration of the project is 24 months.

6. References
Communication 'The Common Transport Policy – Sustainable Mobility: Perspectives for the Future', COM (1998) 716 final.

7. Links
It is important to note that work focusing on information, reservation and ticketing services at purely national/regional/local level is outside the scope of this task. In addition, no new technology development is envisaged, the work should build upon the technologies that have been/are being developed in the key

action Systems and Services for the Citizen. The project selected will be run in close co-operation with this key action. The results from the EU-Spirit project and other relevant projects undertaken at national/regional/local and European level should be taken into account.

8. Involvement of non-EU countries
As appropriate

9. Consortium profile
The consortium should involve authorities, transport operators and researchers involved in traveller-services and should pay particular attention to ensuring good access to practical experiences and knowledge from service providers.

2.3.2/14 Thematic network on the development of European strategies to promote short sea shipping, sea-river and inland navigation

1. Problem description
In support of a more balanced use of the overall transport system, the enhanced efficiency and availability of waterborne transport should ensure a shift in freight transport from land to water and facilitate combined transport solutions. The objective is to maximise the use of waterborne transport in the overall transport chain by providing safe, efficient and high quality services.

This requires common European strategies and efforts by both industrial key stakeholders and policy makers. In FP4, the Concerted Actions on Short Sea Shipping and Inland Navigation have proved to be positive instruments to support enhanced transparency, co-ordination and the development of a common understanding of problems and of strategies to meet the challenges. The Thematic Network should support future bottom-up efforts to develop concepts and strategies for an increased modal shift in a pro-active way, providing a platform for industrial and Member States co-operation.

2. Task description
Taking into account the peculiarities of short sea shipping on the one hand and inland navigation on the other, there is a strong option for either a) two Thematic Networks, from a managerial point of view totally separated, and common sessions at certain milestones or for specific topics in questions or b) one Thematic Network with different reference, user and working groups.

The Thematic Network(s) should foster a large active participation of key industrial stakeholders and Member States. The Thematic Network(s) should provide a platform for the development of common strategies for the promotion of waterborne transport, which would imply an improved integration of short sea shipping and inland navigation at their natural interface - the port; as well as the optimisation of the overall transport chain.

A technical secretariat should provide the administrative support to the co-ordination work of the Thematic Network(s). The technical secretariat should represent a sufficient size and should reflect the multi-disciplinary requirements and complexity of the subject. The Thematic Network(s) should meet on a regular basis, it should be as well open for additional participants. In addition, the relevant RTD projects should be clustered under the umbrella of the Thematic Network(s) according to given objectives. The Thematic Network(s) should closely follow up developments in 'transport research policy' on a national, European and Pan-European level.

The Thematic Network(s) should provide the flexibility to establish specific working groups in order to address issues which are of common concern. Arrangements should be made to allow for the support of a number of small-scale integrative studies in order to develop a common approach to these subjects. One of the areas of common concern should be 'Statistics'. The work should address the identification of traffic flows between regions in Europe (port-to-port and door-to-door) as well as the creation of reliable distance matrices for converting tonnes into tonne-kilometres in SSS.

Another area should be the environmental performance of SSS and inland navigation and the need for tools to measure the environmental effects of transport in door-to-door chains (containing a short sea shipping or inland navigation leg) in comparison to single-mode transport. The work should develop and validate in case studies environmental key performance indicators which allow the comparison of the environmental impact of waterborne transport with other transport modes for different kinds of effects (emission, noise etc.)

The Thematic Network should help to bridge the gap between RTD and industry and to increase the industrial awareness of activities in the RTD field. Vice versa, it would be beneficial to researchers and Member States to learn about practical applications in industry (e.g. best practices), in this sense the Thematic Network should serve as a constant exchange and discussion platform.

Specific tasks should be the definition of common user requirements, the development of common strategies, the co-ordination between national, EU and industrial research, the monitoring and assessment of RTD projects against real market needs, dissemination activities, identification of working, user as well

as reference groups, support to technology assessment and forecast as well as support to technology transfer.

3. Expected results

- Promotion of networks
- Enhanced transparency
- Co-ordination of national, European and industrial RTD
- Clustering RTD activities
- Development of indicators for comparative environmental impact assessment
- Technology forecast and assessment
- Mapping of RTD projects against real user needs
- Enhanced awareness
- Organisation of workshops and other dissemination activities

4. Type of contract

Thematic Network, Accompanying Measure (both up to 100% EU funding)

5. Timing / Duration

3rd Call (June 2000) / 36 months

6. Reference

Common Transport Policy: Sustainable Mobility: Perspective for the Future (COM(1998)716 final), Communication on "The development of short sea shipping in Europe: Perspectives and challenges" (COM (95) 317),
Green Paper on "Seaports and Maritime Infrastructure (1997),
Communication on "The development of short sea shipping in Europe: A dynamic alternative in a sustainable transport chain – 2nd Progress Report" (COM (1999) 317

7. Links

Concerted actions on Short Sea Shipping and Inland Navigation. Projects such as Bopcom, Marnet, Ipsi, Indris, 3Snet, Meet, Commute, Trends (FP4 Transport Programme)

8. Involvement of non-EU countries

As appropriate

9. Consortium profile

The different areas in the task description may be subject of one proposal or of separate proposals. However, different expertise might be required, which should be reflected in the consortium composition and structure. The consortium/consortia proposed should represent the technical secretariat of the Thematic Network, providing the administrative support to the co-ordination work of the Thematic Network(s). Therefore, the size of the consortium/consortia should be limited to a reasonable number of partners and should reflect the multi-disciplinary requirements and complexity of the subject. All other interested parties will become Members or part of one of the other possible reference groups.

2.3.2/15 Optimised waterborne operations in support of a European Northern Dimension. Operational Platform

1. Problem description
Waterborne transport operations in the Northern regions of Europe (shipping, inland navigation as well as port operations) are often severely hampered by extreme weather and ice conditions. When promoting short sea shipping, inland navigation and sea-river operations regular and non-interrupted services need to be ensured by technical and operational measures. The setting up of potential new trading routes such as the Northern Sea Route in view of a 'Northern Dimension' is another increasingly important subject.

Initiatives such as the full-scale demonstration EU project ARCDEV and the Norwegian-led INSROP study programme clearly demonstrated that in the short term only the Western part of the Northern Sea Route offers immediate potential for the international shipping industry. The biggest potential in fact lies in the huge energy resources in Northern Siberia, where over 30% of the world oil and 25% of the world gas reserves are located.

It has been successfully demonstrated that, technically, the energy resources can be reached with maritime transportation even under heavy weather and ice conditions, but that the level of cost with current technology is still too high to establish an economical viable transport route and to be competitive. It is evident that maritime transportation like any other involves environmental risks, which is of much larger importance in a more sensitive area like the Arctic region. Therefore, high operational standards need to be established and ensured.

2. Task description
The overall objective of the task is to foster co-operation in scientific and technical fields between EU, Russia and other third countries on both an academic and industrial level and to achieve an operational platform for waterborne transport operations in extreme conditions. In addition, the work should provide the basis for the necessary co-operation and co-ordination efforts in order to establish the legal, administrative and organisational framework for the future development of the Northern Sea Route.

The work should identify requirements and mitigating solutions for waterborne operations under extreme conditions such as ice-infested waters. It should assess, integrate and validate further the use of modern technologies for navigating and routing in ice-infested waters (including visualisation and forecasting), it should further adapt remote service and maintenance systems to 'extreme' geographic regions.

Another important area of work should be the assessment of needs in relation to the logistical chain. Initiatives such as TEDIM should be taken into account. ICT (Information and communication technologies) solutions and the impact of trends such as e-commerce should be assessed and adequate measures/solutions should be proposed. In the same line the role of traffic management services (VTMIS/RIS) needs to be assessed and accordingly adapted in order to enhance waterborne transport operations in these difficult geographical regions.

The infrastructural requirements need to be addressed. Therefore the work should define the user requirements for the conceptual design of ships as well as loading/unloading facilities and technologies.

Particular attention has to be paid to any environmental concern. Therefore, it is indispensable to establish a sound environmental-friendly framework using quantitative risk and environmental impact assessment and identifying high operational standards for waterborne transport operations in this environmental very sensitive area.

3. Expected results
- Co-operation and co-ordination platform
- Integration and assessment of different concepts and technologies in an operational transport chain

- Definition of the requirements for a fully-fledged operational 'Northern Sea Route' logistical chain
- Validation of enhanced tools for ice information, visualisation, and forecasting
- Assessment and adaptation of traffic management services and navigational and routing aids
- Training of the human element to operate and manage the infrastructure necessary to support the strategic objectives

- Technology assessment and forecast
- Science watch
- Geo-strategic assessment
- Integrated resource management of the area/environment
- Environmental impact assessment and risk analysis
- Recommendations for operational standards (Code of Conduct)
- Conceptual vessel design
- Conceptual design of loading/unloading facilities
- Legal, administrative and organisational framework

4. Type of contract
Combined project (RTD + Demo, up to 50% EU funding) + Accompanying Measure (up to 100% funding)

5. Timing / Duration
3rd Call (June 2000)/ 30-36 months

6. Reference
Communication on "The development of short sea shipping in Europe: Perspectives and challenges" (COM (95) 317),
Communication on "The development of short sea shipping in Europe: A dynamic alternative in a sustainable transport chain – 2nd Progress Report" (COM (1999) 317)

7. Links
Projects such as Arcdev, Bopcom, Ipsi, Ice Routes, VTMIS-Net (FP4 Transport Programme).

8. Involvement of non-EU countries
As appropriate, in particular participation of Russia is encouraged.

9. Consortium profile
The different areas in the task description may be subject of one single proposal or of separate proposals. However, different expertise might be required, which should be reflected in the consortium composition and structure (e.g. cluster approach). The consortium should reflect a balanced composition between research institutions and laboratories, industrial key stakeholders (e.g. shipping companies, shipbuilding industry, petrochemical industries, ship equipment manufacturers etc.), decision makers dealing with policy or related matters (maritime administrations, classification societies).

ANNEX

LIST OF TASKS

2nd CALL. DECEMBER 2000

THESE TASKS **ARE NOT OPEN** IN THE 3rd CALL

LIST OF TASKS
2nd CALL. DECEMBER 1999

Objective 2.1 Socio-economic scenarios for mobility of people and goods

2.1.1 Quantitative tools for decision-making

2.1.1/8 Thematic Network on transalpine crossing

2.1.2 Driving forces in transport

2.1.2/4 Cluster on socio-economic impacts of transport investments and policies and network effects

2.1.3 Policies for sustainable mobility

2.1.3/2 Implementation of marginal cost pricing in transport

Objective 2.2 Infrastructures and their interfaces with transport means and systems

2.2.1 Infrastructure development and maintenance

2.2.1/10 Improved tools for railway infrastructure capacity and access management
2.2.1/11 Road infrastructure pavement maintenance management
2.2.1/12 Thematic Network on airport activities

2.2.2 Environment

2.2.2/6 Use and Integration of New-generation Vehicles and Radically Improved Propulsion Systems in the Transport System
2.2.2/7 Assessment and development of mitigation measures and procedures for environmentally friendly shipping operations

2.2.3 Safety

2.2.3/8 Drivers' and Riders' Physical Fitness and Physical State
2.2.3/9 Safety in tunnels

2.2.5 Human factors

2.2.5/5 Training concepts for improved cross-border train operations
2.2.5/6 Development of methodologies and performance measures to assess long term safety implications of new in-vehicle technologies including HMI for road transport.

Objective 2.3 Modal and intermodal transport management systems

2.3.1 Traffic management systems

2.3.1/11 Thematic Network on Air Transport and ATM Validation activities
2.3.1/12 Assessment of new concepts for ship and shore traffic management and information systems (VTMIS) to improve efficiency in waterborne transport operations

2.3.2 Transport and mobility services

2.3.2/7 Innovative intermodal transport solutions for non-unitised cargoes and other specific market segment
2.3.2/8 Integration of air freight transport in the intermodal transport chain

ANNEX

LIST OF TASK

1st CALL. MARCH 1999

THESE TASKS **ARE NOT OPEN** NEITHER IN THE 2nd NOR IN 3rd CALL

LIST OF TASKS
1st CALL (March 1999)

Objective 2.1 Socio-economic scenarios for mobility of people and goods

2.1.1 Quantitative tools for decision-making

2.1.1/1 Testing of methodologies for long distance passenger travel data

2.1.1/2 Transport network accounts and marginal costs in relation to fair payment for infrastructure use

2.1.1/3 Thematic network on policy and project evaluation methodologies

2.1.1/4 Understanding and predicting mobility trends and transport patterns

2.1.1/5 Transport Modelling and Exploration Tools

2.1.1/6 Analysis of the cost structure of door-to-door intermodal freight transport services and the conditions to optimise it.

2.1.1/7 Thematic network on Benchmarking in transport

2.1.2 Driving forces in transport

2.1.2/1 Effects on Transport of Trends in Logistics and Supply Chain Management

2.1.2/2 Role of third party logistics service providers and their impact on transport

2.1.2/3 Influencing transport intensity of economic growth

2.1.3 Policies for sustainable mobility

2.1.3/1 Changing legal and organisational frameworks in local public transport: assessing the impacts on roles and activities of key players

Objective 2.2 Infrastructures and their interfaces with transport means and systems

2.2.1 Infrastructure development and maintenance

2.2.1/1 Integration between local and regional rail, incl. cross-border aspects

2.2.1/2 Improvement of cross-border connections for local and regional passenger transport

2.2.1/3 Optimisation of the use of semitrailers in the intermodal transport chain

2.2.1/4 Thematic Network on freight transfer points and terminals

2.2.1/5 Integration of horizontal transhipment techniques in intermodal transport operations

2.2.1/6 Total Airport Optimisation by Simulation, including land-side

2.2.1/7 Thematic Network on maintenance and management of railway infrastructure

2.2.1/8 Condition based, and reliability centred, maintenance of railway infrastructure

2.2.1/9 Automated underground distribution and tube transportation systems

2.2.2 Environment

2.2.2/1 Thematic network on transport and the environment

2.2.2/2 Monitoring emissions from transport, including particulates

2.2.2/3 In-service Test Procedures for Road Vehicle Emissions

2.2.2/4 Thematic network on the integration of new generation vehicles into the transport system

2.2.2/5 Tools and strategies for reduced source noise and vibrations from trains

2.2.3 Safety

2.2.3/1 Cost/benefit analysis of regulations and investments to optimise air transport safety

2.2.3/2 Improve the regulatory framework for the implementation of new operational concepts and technologies in air transport

2.2.3/3 Thematic Network on Safety Assessment in Waterborne Transport

2.2.3/4 Cost-efficient integration of new safety technologies to improve Quality Shipping

2.2.3/5 Thematic Network on Cost/Benefit and Cost-Effectiveness Assessment Tools for Road Safety/Environment Measures.

2.2.3/6 Further Development of Road Vehicle Safety Standards

2.2.3/7 Drivers' and Riders' Physical Fitness and Physical State.

2.2.4 Security

2.2.4/1 Security in local and regional public transport

2.2.5 Human factors

2.2.5/1 Training to improve the safety of air transport operations

2.2.5/2 Driver Training and Hazard Perception

2.2.5/3 Thematic Network on Maritime Education, Training and Certification

2.2.5/4 Promoting the take up of project results by leading educational institutions

Objective 2.3 Modal and intermodal transport management systems

2.3.1 Traffic management systems

2.3.1/1 Extension of ERTMS System specification

2.3.1/2 The definition and management of a master plan for ATM validation

2.3.1/3 Full Airport A-SMGCS Test Trial

2.3.1/4 Assessment of User Needs for Traffic Information and Traffic Management and their Reaction to Methods of Information Provision.

2.3.1/5 Enhanced Road Traffic Simulation for Transport Strategy Assessment.

2.3.1/6 Implementation scenarios and impact assessment of advanced driver assistance systems

2.3.1/7 Thematic Network for the creation of an intermodal framework for freight transport information and management services.

2.3.1/8 Designs for inter-urban road pricing schemes

2.3.1/9 Testing the effectiveness and acceptance of urban pricing schemes

2.3.1/10 Thematic Network on Waterborne Traffic Management and Information Services

2.3.2 Transport and mobility services

2.3.2/1 Thematic Network on rail freight services

2.3.2/2 Innovative Waterborne Transport Concepts

2.3.2/3 Thematic Network on an Operational Platform for Quality Shipping

2.3.2/4 Thematic Network on movement of goods in urban areas

2.3.2/5 Mobility management - new partnerships to encourage sustainable travel

2.3.2/6 Travel awareness, communication, education and publicity