

of R&D: from basic sciences, socio-economic research to applied sciences and demonstration activities. The intention is to assure a long-term commitment to develop and maintain a European high standard scientific conference. The conference should have a systemic approach to building sustainable transport especially aiming at greener, safer and smarter transport. It will concern European and national research activities. The link to European Technology Platforms related to transport (e.g. ERTRAC, ERRAC and Waterborne) is necessary. Finally, it should also be complemented by an early-stage research student competition with the goal of stimulating the interest among young researchers in the conference.

Expected Impact: Proposals should demonstrate contributing to the dissemination of knowledge and/or of the results of European and national research in the field of surface transport, thus to improved co-ordination of research and technology development in the sector.

Funding scheme: Coordination and Support Actions aiming at supporting research activities

Group of topics N° 4

Open in call: FP7-SUSTAINABLE SURFACE TRANSPORT (SST)-2011-RTD-1

7.2.7. THE 'EUROPEAN GREEN CARS INITIATIVE'

The 'European Green Cars Initiative' includes three major research and development avenues within its RTD pillar:

- **Research for heavy duty vehicles based on internal combustion engines (ICE)** [Sustainable Surface Transport sub-theme (SST)]: The research will primarily concentrate on advanced ICE with emphasis on new combustion, the use of alternative fuels, intelligent control systems, 'mild' hybridization (use of recuperated electricity to power the auxiliary systems) and special tyres for low rolling resistance.
- **Research on electric and hybrid vehicles:** This component will be the most essential in this package. To have a real impact on the green economy, research in this field should no longer focus on electric vehicles technologies seen in isolation from the rest of the transport system: a massive introduction of the technology requires the availability of smart electricity grids and intelligent vehicle charging systems tailored to customers' needs.
- **Logistics and co-modality** combined with **intelligent transport system** technologies are essential to optimize the overall system efficiency and sustainability avoiding for example that empty trucks circulate on highways due to sub-optimal logistics. In this respect, smooth and co-operative interactions between the different transport modes will be essential.

The work programme 2011 will cover all three above mentioned research avenues of the 'European Green Cars Initiative'. It will concentrate on energy efficient heavy duty vehicles for long distances, by improving ICE-based power trains and reducing rolling resistance and on research on logistics and co-modality. Furthermore, WP2011 includes several topics related to the electrification of vehicles with a focus on vehicle system integration.

► **TOPICS FOR LEVEL 1**

GC.SST.2011.7-1. Specific safety issues of electric vehicles

To facilitate widespread customer acceptance and use of Fully Electric Vehicles (FEVs), a series of potentially-critical safety issues specifically need to be addressed. Therefore, an analysis of the consequences of electrification with respect to safety requirements has to be made. In particular, the presence of high voltages and potentially hazardous chemicals necessitate the definition of specific design, usage and rescue guidelines, while the absence of engine noise requires in-depth assessment regarding interior and exterior acoustic characteristics during normal operation.

Activities will focus on:

- Safe handling, rescue and maintenance including solutions to ensure safe plug-in/re-charging during normal operation, prevention of misuse/abuse, and protection against fire and electric shocks during maintenance and repair or in the event of a crash including rescue and towing operations in the post crash phase.
- Acoustic perception of the FEV, requiring solutions to warn vulnerable road users of the presence of a nearby moving vehicle while providing a means for heightening the awareness of drivers in critical situations. Including the application/adaptation of existing pedestrian protection systems (active safety) to the raised needs.

Different technologies and solutions shall be explored and assessed also from the perspective of overall effectiveness and acceptability, the objective being to develop FEVs which are optimized in terms of both energy efficiency and safety, a fundamental requirement to enable FEVs to become mass products in the future.

Innovative EV specific safety technologies and solutions should eliminate the risk that these new vehicles be perceived as less safe than their current equivalents, thus the safety and energy efficiency of EV use should contribute to more customer acceptance of EVs.

Given the specificity of these subtopics, small, focused projects are encouraged in particular.

The work should be complementary to the objective GC-ICT-2011.6.8 'ICT for fully electric vehicles'.

Expected impact:

The expected impact of the first subtopic should be technologies and procedures that avoid additional casualties to the current level due to electrocution risks. The second subtopic should produce systems and technologies capable of giving effective warning to vulnerable users at a sufficient distance while maintaining the advantages of electric technologies in terms of improving the current road noise environment.

Funding scheme: Collaborative Projects - small or medium-scale focused research projects

Group of topics N° 3

Note: Limits on the EU financial contribution apply. These are implemented strictly as formal eligibility criteria. You must refer to the call fiche for details of these limits

Open in call: FP7-SUSTAINABLE SURFACE TRANSPORT (SST)-2011-RTD-1

GC.SST.2011.7-2. Integrated thermal management

The challenge of the implementation on a wide scale of electric vehicles needs a high reliability of the electric power train including the battery, the longest possible range of the vehicle and the satisfaction of customer's expectations for thermal comfort. Therefore, the thermal management of the power train and of the vehicle itself, which includes heating and cooling aspects, is an integrated important part of the future electrification of vehicles. The goal of these activities is to develop cost efficient and industrially viable integrated thermal systems for long range, reliable and comfortable electric vehicles when no waste heat source is available.

Activities will address:

- Improvement of the efficiency of the thermal control of the energy storage system, independently of the actual ambient temperature, in order to reduce the impact on vehicle range and battery life of extremely cold or high environments.
- Optimization of the impact of the thermal comfort of the users on the overall energy consumption of the vehicle through innovative, light, cost efficient, electronically controlled materials used in the vehicle and their integration aspects (e.g. new insulating materials, active glazing, local heating, etc.).
- Development of cost effective thermal management systems of the power train including the cooling and heating aspects for the battery and power electronics during charging, operation of the vehicle as well as during parking periods.
- Cooling aspects of the electric motor in combination with a ICE range extender or auxiliaries. This activity includes the integration of the electric motor either with the combustion engine (high temperature), or with the power electronics, battery and air conditioning (low temperature) in one thermal system, and the control and optimization of the heat flows between these elements especially during heating up.

Expected impact:

- Synergies in terms of energy efficiency, cost, weight, size and robustness due to optimized coolant temperature and heat load timing resulting from the integration of the electric motor with other vehicle functions in one thermal system.
- A substantial reduction of the energy requirement for the cooling, heating and demisting functions with respect to the current state of the art technologies (compressor driven AC and electric resistances)
- A significant weight reduction of the cooling circuits and equipment to achieve the same component level cooling requirements.

The work should be complementary to the objective GC-ICT-2011.6.8 'ICT for fully electric vehicles'.

Funding scheme: Collaborative Projects - small or medium-scale focused research projects

Group of topics N° 3

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Open in call: FP7-SUSTAINABLE SURFACE TRANSPORT (SST)-2011-RTD-1

GC.SST.2011.7-3. Efficient long distance transport – waste heat recovery

In a current truck engine, more than about 50% of the combustion energy is lost via the exhaust and the heat rejection system. Therefore, reducing this heat loss is a clear target for further fuel consumption reduction. The further development of waste heat recovery systems and, in particular, the associated components, such as the expander (Rankine cycle), advanced heat exchanger and cooling system is therefore needed, including the investigation of more advanced waste heat recovery systems based on thermodynamic cycles (organic/non-organic) or other advanced technologies, excluding thermoelectric devices, already researched in existing projects. The integration of waste heat recovery systems with different degrees of hybridization can also be considered in order to achieve the highest levels of efficiency.

Scope of the work:

- System design for the thermodynamic cycle (organic and non-organic).
- Development of expanders, advanced heat exchangers and working fluids.
- Cooling system and integration, arrangement at the power train and vehicle.
- Development of simulation methods for future adaptation of such a system on the various power trains for heavy duty trucks.

Expected impact: A minimum 10% fuel consumption reduction at vehicle level (thus including the effect of any weight or performance penalties) should be demonstrated with an initial cost increase recoverable in a 5 year period.

Funding scheme: Collaborative Projects - small or medium-scale focused research projects

Group of topics N° 3

Note: Limits on the EU financial contribution apply. These are implemented strictly as formal eligibility criteria. You must refer to the call fiche for details of these limits

Open in call: FP7-SUSTAINABLE SURFACE TRANSPORT (SST)-2011-RTD-1

GC.SST.2011.7-4. Urban – interurban shipments

Today, around 80% of the population worldwide lives in urban areas. Urban areas are consequently the hubs of enormous flows of goods and people with the associated problems of congestion, accidents and pollution. To deal with the multitude of challenges, a new concept of Smart Urban Freight Systems and sustainable solution for city based logistics has to be developed. The aim of this topic is to develop a comprehensive approach to provide the overall socio-economic, managerial, technical, environmental balance of such systems. The logistics efficiency changes as well as the environmental effects shall be addressed by an impact assessment e.g. by applying planning and simulation tools.

The following aspects could be addressed and tested:

- New transportation solutions (electrical cars, public transport, etc.).
- New mechanisms for control on ordering, monitoring, supervising and executing city delivery.
- Decoupling of supply lines and distribution activities around cities.
- Optimization of terminals connecting long distance transport and urban distribution.

- Research on urban distribution of goods (delivery systems, delivery routes, last mile logistics organization and operation) to reduce the impact of freight movements on urban resident.
- New regulatory solutions.
- New instruments/technologies for urban freight data collection.
- The transport operation of delivery vehicles within zero-emission zones.
- Collaboration between authorities, transportation providers and major customers.

The proposal should consider previous work on urban freight financed through EU and/or national programmes or even city governments.

Expected impact: A more efficient urban freight distribution system and a sustainable European transport and mobility network within urban centres efficiently linked with long distance transportation. The added value of the proposed solutions must be realistically demonstrated on the basis of actual practices and measurable indicators.

Funding scheme: Collaborative Projects - small or medium-scale focused research projects

Group of topics N° 3

Note: Limits on the EU financial contribution apply. These are implemented strictly as formal eligibility criteria. You must refer to the call fiche for details of these limits

Open in call: FP7-SUSTAINABLE SURFACE TRANSPORT (SST)-2011-RTD-1

GC.SST.2011.7-5. Integrated intermodal traveller services

The aim of the topic is to integrate available traveller information systems for all transport modes (rail, air, road and waterborne) in order to provide and establish an open platform for planning, booking and travelling multimodal journeys. Research should exploit the open platform concept further, and take into account the results of recent FP6 and FP7 projects on transport planning and travel information.

The trips can be long, i.e. from one country to another country, or short, i.e. within a city. The research aims at intermodal management based on up-to-date on-line information. The optimization of transport mode choices and interchanges will be based on real-time and forecast state of public and private transport as well as specific needs of users and service providers, journey purpose, cost and environmental impacts. Integrated travel information services should re-use as much as possible existing information services and allow for seamless integration of offerings of new and/or niche travel services and information providers.

These integrated travel information services shall ensure co-operation between transportation modes and improve the ability of the system to cope with unexpected scenarios. In particular, research should develop solutions to compensate for a sudden decrease of the traffic capacity in one transportation mode to ensure continuity of mobility services (for example, following unexpected hazards and natural phenomena, such as the recent volcanic ash clouds across Europe).

To ensure a seamless journey, seamless traveller information services are also required. The traveller information services can provide 'early warning' to travellers including

regular updates on delays and service disruptions and will thus allow any necessary change of plan according to the actual situation.

- The following aspects could be addressed:
- Creation of standardized interfaces to facilitate dynamic data exchanges among different transport modes, air, rail, water and public transport and different operators of these transport modes.
- Development of forecast mechanism to deliver a short term forecast of state of relevant transport modes. The forecast will be based on available information, e.g. weather, road traffic situation and planned large events. The forecast will be used to generate optimized intermodal exchange between different transport modes and different operators based on real-time information and forecasts to ensure a smooth journey.
- Design of standardized approach to deliver cross mode information. The information will be delivered to mobile devices with wireless communication. The information will also be integrated with e-ticket services.
- Development of recommendations on conditions on the availability of data and data exchange (metadata) between different actors.

The research activities should result in fully integrated intermodal transport services with support of traveller information services that are up-to-date, reliable, user-friendly and wide-ranging, as well as covering public transport and non-road modes.

A strong commitment from European and non-European stakeholders including research organizations, transport operators, information providers, industry associations and ITS organizations towards developing a joint platform and sharing information is essential.

Following the conclusions of the SIMBA 2 project, intermodal traveller services have been identified as a common field of research cooperation between Europe, Brazil, China and Russia, with strong commitment from non-European stakeholders, including research organizations, industry associations and ITS organizations. International cooperation is therefore encouraged, in particular with countries which are facing fast growth transport demand and/or advanced multi-modal traveller support systems (Brazil, China and Russia).

The research will support the development of specifications for compatibility, interoperability and continuity of intelligent transport systems in the area of EU-wide traveller information as foreseen by the future new Directive on the Deployment of Intelligent Transport Systems and the activities for the ITS Action Plan.

Expected impact: Research will increase the acceptance and take up of new fully integrated intermodal traveller services and therefore contribute to a more efficient and safe transport system with reduced CO₂, pollutant emissions and noise.

Funding scheme: Collaborative Projects (small or medium-scale focused research) for specific cooperation actions (CP-FP-SICA) dedicated to international cooperation partner countries.

Group of topics N° 3

Note: Limits on the EU financial contribution apply. These are implemented strictly as formal eligibility criteria. You must refer to the call fiche for details of these limits

Open in call: FP7-SUSTAINABLE SURFACE TRANSPORT (SST)-2011-RTD-1

GC.SST.2011.7-6. Capability of improving and exploiting capacity

Expenditures in logistics at EU level amount at roughly EUR 600 billion per year. If the loading factor in transport could be significantly improved, this would lead to substantial annual savings and contribute positively to sustainable transport. To achieve this, it is essential that a balance is found between two seemingly conflicting dilemmas: on the one hand, the logistic process should have more frequent deliveries in order to deliver goods to the consumers; on the other hand, even very large companies do not carry enough volumes to exploit intermodal transport properly. To achieve a better balance, organizational changes are needed (in addition to those of e-logistic technologies). New ways of cooperation to reorganize and scale-up transport flows to fully exploit the transport capacity have to be found.

The topic aims at providing instruments to stimulate the cooperation between manufacturing and transport industries in the definition of innovative business models and measures, in view of increasing the load factor up to 80%. Models and measures could include share of transport capacity, new schemes of product sourcing, swapping, thus increasing reliability and efficiency of the logistic chain.

Through coordination and networking activities, studies or expert groups the following issues must be addressed:

- Promoting match-making and sharing sustainable logistics knowledge between manufacturing industries and the transport & distribution sector.
- Methodology to calculate revenues and benefits, including a legal framework to split costs and benefits in shared transportation.
- New business models for the entire supply-chain, fully based on the used of co-modality and focusing on the increase of loading factors through new practices, such as company collaboration, customer and product swapping, product sourcing, etc.
- Application and validation of business models on different configurations (supply chain, modes of transport, shippers, types of goods, etc.).

Expected outcomes of this action should be new business models developed by the industries in the direction of collaboration in managing and operating logistics, and to demonstrate - by means of use cases and comparison with baselines - that the practical application of these models improve both quality and performance of the logistics chain, expressed in terms of different indicators, such as load factor, overall costs, energy efficiency, etc.

Funding scheme: Coordination and Support Actions aiming at coordinating research

Group of topics N° 3

Open in call: FP7-SUSTAINABLE SURFACE TRANSPORT (SST)-2011-RTD-1

GC.SST.2011.7-7. Advanced eco-design and manufacturing processes for batteries and electrical components

Content / scope: Further development and deployment of electrical vehicles call for large scale production of batteries and electrical components with good performances and at the lowest possible cost. Research shall address the whole value chain, including the eco-design, assembly/integration and production of batteries and electrical components

(motors, battery management systems, etc.).Eco-design should properly account for the relevant dismantling, recycling/disposal, and health and safety aspects of critical materials.

For near-to-market types of lithium-based batteries, projects should focus on manufacturing processes of cells, but also on their integration into manageable battery modules and packs. Advanced manufacturing processes of battery cells, should be flexible enough or reconfigurable to cope with new chemistries. Special attention should be devoted to thermal management systems and safety issues, which are critically dependant on battery system design.

For electric drive trains and in particular motors, the main challenge of cost reductions is to be achieved by design improvements, in order to produce lighter systems with increased power density, while at the same time taking into account the availability of critical materials and their dismantling/recycling. Projects should not include design or manufacturing of the power chips.

For a significant industrial benefit, it should be possible to integrate the advanced manufacturing tools, methodologies and processes developed within the project into conventional or already existing production lines or, in case of new architectures, include new methodologies. In both cases the projects are expected to cover small-scale production-line demonstrators. The environmental improvements achieved should be proven via ILCD-conform Life Cycle Assessment. The feasibility of the dismantling/recycling process for motors should be proven at least at bench/pilot scale for the most critical materials.

In order to ensure the industrial relevance and impact of the research efforts, active participation of industrial partners, including SMEs, component suppliers, electrical vehicles manufacturers and component recyclers, represents an added value to the activities and this will be reflected in the evaluation, under the criteria Implementation and Impact.

The work should be complementary to the objective GC-ICT-2011.6.8 ‘ICT for fully electric vehicles’.

Additional eligibility criterion: The EU contribution requested must be greater than EUR 4 million.

Expected impact: Establishing the basis for a world level European automotive battery and electrical components manufacturing industry. In particular production of cells, battery packs, electrical motors, and components with the required performances at competitive costs. Reduction of waste production and improvement of resource efficiency through a more efficient recycling of critical materials.

Funding scheme: Collaborative Projects - large scale integrating projects

Group of topics N° 3

Open in call: FP7-2011-GC-ELECTROCHEMICAL-STORAGE

GC.SST.2011.7-8. ERA-Net Plus ‘Electromobility’

Content and scope: The main aim of this ERA-NET Plus is to pool the necessary financial resources from the participating national (or regional) research programmes and the European Union with a view to launching a single joint call for proposals for research projects in the field of Electromobility, which will be evaluated and managed jointly by the participating programmes.

An ERA-NET Plus on Electromobility research should aim at improving the coordination of national research activities and policies in the domain of transport regarding the integration of a sustainable infrastructure for Electromobility in Europe.

The joint call should focus on an interdisciplinary approach to transport research on the specific field of Electromobility.

More information about the ERA-NET PLUS actions (including eligibility criteria) can be found in Annex 4 of the work programme.

Expected impact: As a complement to the European Green Car Initiative, a significant participation of the Member States and Associated States in shaping of the European landscape of Electromobility is expected. Better use of scarce resources and the avoidance of double funding. Reduction of fragmentation of research efforts made at national and regional level. The ERA-NET Plus can provide a basis for a long-term platform on Electromobility.

Funding scheme: Coordination and Support Actions aiming at coordinating research activities

Group of topics N° 3

Open in call: FP7-ERANET-2011-RTD

► TOPICS FOR LEVEL 2

GC.SST.2011.7-9. Efficient long distance transport – future power train concepts (includes: advanced combustion and after-treatment)

The aim of this research is to contribute to the further reduction of the fuel consumption of heavy duty trucks. It is necessary to investigate the engine downsizing potentials, along with the possible integration of hybrid systems for boosting the power for acceleration and starting of heavy duty trucks on a hill. This approach also opens a potential for an emission reduction, due to reduced transient behaviour period of the truck engine. This sector is already facing the forthcoming EU VI emission legislation in 2012 and must therefore look to the further expected steps of regulation. Therefore, this aspect is also part of the objective of these research activities. To meet this challenge, it is necessary to work on the development of improved combustion systems as well as on key components, such as the turbo charging system, the thermal management for the after-treatment system and the efficiency of the Selective Catalytic Reduction (SCR) system. For the realization of this goal, advanced drive train control considering e.g. model based approaches is needed.

Scope of activities:

Engine innovation will include a suitable combination of these activities to demonstrate the expected impacts:

- Down-sizing / down-speeding with advanced turbo-charging.
- Development of a new turbo charger system with higher pressure ratio and wider area of high efficiency.
- Friction reduction: piston, crankshaft camshaft and auxiliaries (oil and water pumps).
- Faster combustion (e.g. high PCP, low EGR rate, VVA), supported by advanced injection strategies, using closed loop functionality as well as high thermal efficiency.
- Advanced air control systems for internal EGR and effective compression ratio management.

After-treatment innovation will include a suitable combination of these activities to demonstrate the expected impacts:

- Reduced thermal losses, with a possible integration of improved exhaust after treatment systems for cold start and transient conditions, considering new catalytic materials.
- Advanced NO_x after-treatment systems: SCR (Selective Catalytic Reduction) systems (e.g. new catalytic materials) and combinations with NO_x trap and particle filters/oxidat, with an additional aim of minimizing the NO₂ fraction in NO_x emissions.
- Heat management for the after-treatment system.

Expected impact: The results of the research will demonstrate a 15% efficiency improvement from the power train, based on Euro 5 power train (without considering the reduction of CO₂ through blending of bio fuels) on the WHTC and the ETC (all emissions should however be tested under the both test cycles). At the same time Euro VI emission limits should be met (including measurement according to the forthcoming particle count methodology), with no increase in the NO₂ share of the total engine-out NO_x (both of the prototype and of the baseline engine). To ensure real life benefits, improvements should be confirmed with a multiplier for in-use compliance with PEMS testing reduced to 1.25. This activity will lead to new technologies for the next generation of truck power trains.

Funding scheme: Collaborative Projects - large scale integrating projects

Group of topics N° 3

Note: Limits on the EU financial contribution apply. These are implemented strictly as formal eligibility criteria. You must refer to the call fiche for details of these limits

Open in call: FP7-SUSTAINABLE SURFACE TRANSPORT (SST)-2011-RTD-1

GC.SST.2011.7-10. Architectures of Light Duty Vehicles for urban freight transport

Electrified vehicles, which may be radically different from conventional vehicles, offer significant new opportunities in terms of functionality and construction whilst enabling further improvement of usability, energy efficiency and manufacturing processes. Whereas the architectures of vehicles currently on the market are constrained by mechanical, thermal and safety considerations due to the presence of the internal combustion engine and its transmission system, in many respects the requirements and constraints of an electrical power train are much less stringent and are yet to be fully exploited. Aiming at turning such innovative vehicles into viable products, novel architectures are needed which explore all the different aspects and requirements emerging from this new paradigm, particularly as concerns light duty vehicles (LDVs) and their usability with respect to mobility and the transportation of goods in the urban environment, e.g. last mile delivery and other applications such as the powering of tools by making appropriate use of the available source of electrical power.

Activities will focus on novel electrified LDV concepts and solutions (conversions and adaptations of existing vehicles and platforms are therefore excluded) to enable gains in their efficiency particularly with regard to:

- Usability in the urban environment.
- Optimized structural layout aiming at improving weight and crashworthiness.
- Modularization of subsystems and standardization of components for low cost and high efficiency.

These concepts should be considered in a holistic way to achieve optimized performance also with respect to safety, EMI/EMC and radiation health impact issues (particularly important given the longer driving time and therefore exposure), maintenance and repair, while exploiting the significant opportunities offered in terms of layout and packaging, functionality, and construction.

The development of complete vehicle concepts is envisioned, projects only dealing with a limited part of the topic are excluded, and a strong industrial participation is recommended in order to maximize the impact.

The work should be complementary to the objective GC-ICT-2011.6.8 'ICT for fully electric vehicles'.

Expected impact: The proposal should quantify and demonstrate that the resulting vehicle concept would achieve higher energy efficiency (at least 40% less in terms of primary energy consumption) with respect to best of class vehicles in the same category, while achieving a range adequate to the typical daily urban mission.

Funding scheme: Collaborative Projects - small or medium-scale focused research projects

Group of topics N° 3

Note: Limits on the EU financial contribution apply. These are implemented strictly as formal eligibility criteria. You must refer to the call fiche for details of these limits

Open in call: FP7-SUSTAINABLE SURFACE TRANSPORT (SST)-2011-RTD-1

GC.SST.2011.7-11. E-freight solutions and supply chain management

The European Commission in its Freight Logistics Action Plan introduces the e-Freight concept. The Freight Logistics Action Plan states the following aim: "To overcome the current and future transport problems Europe's transport system needs to be optimized by means of advanced logistics solutions that can increase the efficiency of individual modes and their combinations". Transport administrations and the business community must share the responsibility for developing a common ICT application or e-freight framework in ways that serve transport policy goals, society's interests and have a convincing business case. From commercial, technical and business perspectives, there is a need for an open and efficient e-freight framework open to all partners in the transport supply chain. It must enable the management of goods movements into, out-of and around the Union that will operate within and across modes. It must be affordable, accessible, reliable, accountable and secure.

The aims of this topic are to:

- Demonstrate the interoperability of a wide range of e-logistic solutions that have been developed recently through various EU funded and national projects.
- Demonstrate that these solutions, while diverse in terms of concepts, information requirements and information management, fill the gap between data availability and data needs throughout the supply chain.

Specific issues to be addressed:

- To demonstrate the SME friendliness, giving SMEs access to easy-to-use and environmentally friendly co-modal transport options.
- To create a solid European transport e-logistic framework, which in its turn is a sound basis for developments on e-customs, e-health, etc.
- To analyse possible new roles, opportunities and responsibilities of stakeholders in respect of accurate data provision and management; or alternatively to describe new transportation business models.
- To develop where needed legal structures and measures required to make the intelligent cargo and supply chain management operate in an efficient, accurate and secure way, protecting users.

Scope:

- Geographically: EU and global transport & distribution.
- Door to door consignments and TEU levels.
- All inland modes, possibly with air transport linking up with IATA business.
- Large stakeholders but also SMEs.

Expected impact:

The demonstration project needs to be of sufficient representative size that convincingly proves the attainability of an open e-freight framework, independent of specific technologies, and agreed among the stakeholders involved in supply chain management processes. The demonstration project must demonstrate the costs and benefits for the individual stakeholders when participating in such an e-freight framework.

Funding scheme: Collaborative Projects - small or medium-scale focused research projects

Group of topics N° 3

Note: Limits on the EU financial contribution apply. These are implemented strictly as formal eligibility criteria. You must refer to the call fiche for details of these limits

Open in call: FP7-SUSTAINABLE SURFACE TRANSPORT (SST)-2011-RTD-1

7.2.8. CALL ‘THE OCEAN OF TOMORROW’ – JOINING RESEARCH FORCES TO MEET CHALLENGES IN OCEAN MANAGEMENT

Oceans offer opportunities for sustainable economic development. However, human activities are exerting increasing environmental pressure on the oceans, threatening marine ecosystems and sustainable maritime activities. In particular, the growing demand for maritime transport, offshore energy, tourism, coastal development, resource extraction, fisheries and aquaculture, may have a major impact on the marine environment.