

BR-GC-2010-1

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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	Passive Thermal Management of battery packs using PCM in injected plastic parts.		
Project idea, objectives	<p>The aim of the project is the reduction of the power consumption and the downsize of the cooling system needed for the refrigeration of the battery pack in a HEV/EV vehicle.</p> <p>We propose the integration of Phase Change Materials in the plastic structure of the battery pack in order to improve the thermal management of the system. The PCM-containing matrix surrounding the different cells allows for a better heat removal and also keeps a uniform temperature profile in the different cells.</p> <p>To facilitate the feasibility of an industrial implementation of the concept, we propose the integration of the PCM in the injection-molding processes.</p> <p>Recyclability of the PCM material will be also research issue.</p>		
Partner search description			
Type = Company/SME/Research organisation/university			
+ desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> • Company TIER 1 provider of Battery Pack Solutions for HEV/EV		
Partner 2	<ul style="list-style-type: none"> • Research organization Recycle of the PCM material.		
Partner 3	<ul style="list-style-type: none"> • Research organization Thermal characterization of Battery Pack		
Partner 4	<ul style="list-style-type: none"> • Company Provider of tailored PCM.		

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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	Modeling, elaboration, making and testing of traction motors (on permanent magnets and inductor) and their control systems		
Project idea, objectives	<p>Our aim is modeling, elaboration, making and testing of the traction motors (on permanent magnets and inductor) and their control systems. Application of these approaches will allow achieving of high effectiveness and accuracy of speed and torque regulation at once with high reliability and noise immunity. The applicant collective has very rich experience in creation of electric drive systems on permanent magnets for mobile machines and test benches for their studies. Among the tasks, which had been done in this field, the following projects should be marked out:</p> <ul style="list-style-type: none"> - Development and making of a hybrid light car with electric motor on permanent magnets; - Modeling of the electromagnetic processes in inductor and permanent magnets of electric motors; - Development of algorithms and programs for microprocessor control system of electric motor with short circuit rotor; - Development of microprocessor based systems, algorithms and programs for coordinated control of electric motors used in electric and hybrid transmission. <p>We want to point out that the laboratory disposes by a stand for modeling, investigation of characteristics and setting up of algorithms of electric drives mobile machines in traction and generation modes. We would like to take part in elaboration, manufacture and technical support of different types electric motors and control systems for them.</p> <p>We are looking for Coordinator, scientists (Universities, Research Centers) and SMEs interested in development of these approaches with the aim of further cooperation and participating in FP7 proposal.</p>		
Partner search description			
Type = Company/SME/Research organisation/university + desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> • Universities, Research Centers working in the field of "Green Car Initiative" 		
Partner 2	<ul style="list-style-type: none"> • Manufacturing companies 		

Contact person			
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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	Studying of materials and technologies in the sphere of construction and design of a hybrid power drive with electronic control system for a city-bus		
Project idea, objectives	<p>Electrical wheel-motor drive has a number of advantages, for instance:</p> <ul style="list-style-type: none"> - increased reliability of electrical wheel-motor drive's aggregates and decreased operating costs (saving of fuel about 30 percent) at the expense of increase in efficiency and possibility of optimization of working regimes; - increased safety of bus movement at the expense of introduction of independent electric braking; - possibility of producing buses of high capacity and comfort with high propulsion and coupling characteristics; - improvement of dynamic characteristics of buses at the expense of using infinitely variable control; - removal of a large quantity of unsprung mass and excess mass of the drive itself. <p><u>The aim of this project</u> is in working out a resource-saving bus with hybrid electromechanical transmission, based on up-to-date domestic and foreign engineering, technological and material authority developments.</p> <p>To realize the aim the following scientific-and-technical objectives are to be solved:</p> <ul style="list-style-type: none"> - to choose constructional material for producing cogged wheels and other important parts of hybrid drive and to test them according to their ability to correspond the requirements of the construction; - to design a bus, corresponding the latest ergonomic requirements; - to design the construction and to create an experimental model of a hybrid power device on the basis of choosing the scheme of transmission, designed analysis of the reduction unit, geometry and qualitative characteristics of gears mesh, design, production and adaptation of the electrical integrated control system of the hybrid power drive. • We are looking for Coordinator, scientists (Universities, Research Centers) and SMEs interested in development of these approaches with the aim of further cooperation and participating in FP7 proposal. 		
Partner search description			
Partner 1	<ul style="list-style-type: none"> • Universities, Research Centers working in the field of "Green Car Initiative" 		
Partner 2	<ul style="list-style-type: none"> • Manufacturing companies 		

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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	Development of methodological and instrumental means for vibration monitoring of resource expenditure by car transmission knots in service		
Project idea, objectives	<p>Working out of effective methodical and instrumental means for technical conditions estimation and forecasting of a residual resource of responsible car knots is a necessary condition of the non-productive costs reduction for their servicing and repair. These approaches create conditions for transition from scheduled preventive system of maintenance service to their on-line work. Questions of vibration diagnostics and residual resource forecasting of various mechanisms (pumps, fans, compressors, etc.) including stationary geared systems are enough full developed and presented in many scientific and technical publications. At the same time questions of methodical and instrumental servicing of the transmission systems vibration diagnostics under operating conditions are not developed enough fully yet. It is connected with difficulties of identification of defects arising in knots and having parameters of vibrating signal which constantly vary in accordance with changes of speed and loading operating modes of a car.</p> <p>It is offered to create the methodical and onboard instrumental means allowing by means of continuous vibration monitoring of transmission systems (gear boxes, transmissions conducting bridges, reducers of motors-wheels, etc.) and changing of their vibrating parameters in service, to estimate their technical state and to predict a residual resource of the transmission knots elements. These approaches make possible timely informing of a driver about oncoming crash.</p> <p>We are looking for Coordinator, scientists (Universities, Research Centers) and SMEs interested in development of these approaches with the aim of further cooperation and participating in FP7 proposal.</p>		
Partner search description			
Type = Company/SME/Research organisation/university			
+ desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> Universities, Research Centers working in the field of "Green Car Initiative" 		
Partner 2	<ul style="list-style-type: none"> Manufacturing companies 		

BR-GC-2010-5

Contact person			
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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input type="checkbox"/> European Green Cars Initiative			
Topic/Title	Simulation of processes in road traffic		
Project idea, objectives	<p>Management of traffic and pedestrian flows is impossible without taking crash, economic and ecological losses into account that means social and economic cost of optional expenses in process of road traffic.</p> <p>The purpose is the optimal balanced control of traffic flows on highways of cities and streets of towns.</p> <p>With the use of complex evaluative criterion – losses in road traffic – the following is carried out:</p> <ul style="list-style-type: none"> – Control of traffic and pedestrian flows; – Choice of design decisions of transport nodal points; – Optimization of traffic signal control (local and systemic); – Developing measures for limiting the access; – Developing coordinated timing plans on highways network and on isolated highways; – Reasoning the increasing speed modes; – Estimation of road traffic organization measures; – Transport planning measures, etc. 		
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Type = Company/SME/Research organisation/university			
+ desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> • Universities, Research Centers working in the field of "Green Car Initiative" 		
Partner 2	<ul style="list-style-type: none"> • Manufacturing companies 		

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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	Efficient Multimodal Transport Chain for Belarusian Potash Fertilizers Delivery to Baltic Ports		
Project idea, objectives	<ul style="list-style-type: none"> • Belarus is the world third possessor and producer of potash fertilizers. The overwhelming quantity of this Belarusian resource is transported to ports in Klaipeda (Lithuania) and Ventspils (Latvia). The high-level discussions of the development of the corresponding delivery structure (port terminals and rail roads) are in progress. So this approach makes it possible to say about "greening" of transport supplies. • The idea of the project is to develop a software system based on modern computer science technologies, which, taking into account world market requirements, participants' economic preferences, technical constraints and ecological standards, will suggest <ul style="list-style-type: none"> ▪ variants of an efficient multimodal transportation structure, including loading and unloading terminals, port facilities and rail routes, and ▪ variants of the product quantities to be delivered to the ports and the corresponding timetables. <p>These variants will be used to make scientifically grounded decisions about the structure of the relevant transportation system and its functioning.</p> <ul style="list-style-type: none"> • Project objectives are: <ul style="list-style-type: none"> ○ Development of virtual variants for an efficient multimodal transportation system for potash fertilizers delivery from Belarus to ports in Lithuania and Latvia, and a user friendly software for on-line modifications of these variants. ○ Development of a software system to determine optimal distribution of a certain (parameterized) quantity of Belarusian potash fertilizers between different ports in Lithuania and Latvia, and the corresponding delivery timetables, subject to national and world market requirements, technical constraints and ecological standards. 		
Partner search description			
Partner 1	<ul style="list-style-type: none"> • Companies, SMEs and governmental bodies in Lithuania and Latvia, which are involved in transportation and processing of Belarusian potash fertilizers. 		
Partner 2	<ul style="list-style-type: none"> • Research organizations and universities in EU, which have experience in the development of virtual multimodal transportation systems and systems for determining market oriented product flows. 		

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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	Improving of ecological characteristics of a direct injection diesel engine on the base of working process perfection		
Project idea, objectives	<p>Scientific research is aimed on improvement of ecological, economic and power parameters of direct injection diesel engines. It based on optimized correlation between fuel sprays characteristics and combustion chamber parameters. This investigation includes:</p> <ul style="list-style-type: none"> - Creation of mathematical model of fuel sprays development in a diesel engine combustion chamber in order to determine spray cone angle, average diameter of fuel spray drops and fuel distribution in spray. - Creation of the computer model, which allows: <ul style="list-style-type: none"> • to observe fuel sprays development in a diesel engine cylinder in any moment of injection, • to calculate characteristics of fuel sprays taking into account the shape and dimensions of a combustion chamber, • to determine position of fuel sprays and their interaction with wall of a combustion chamber, • to determine parameters of injector nozzle holes, providing necessary fuel sprays characteristics, as well as to optimize shape and dimensions of combustion chamber, fuel injection characteristics and supercharging parameters during design stage. - Optimization of combustion chamber and injector nozzle holes parameters, fuel injection characteristics for direct injection diesel engines. <p>We are looking for Coordinator, scientists (Universities, Research Centers) and SMEs interested in development of these approaches with the aim of further cooperation and participating in FP7 proposal.</p>		
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Type = Company/SME/Research organisation/university			
+ desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> • Universities, Research Centers working in the field of "Green Car Initiative" 		
Partner 2	<ul style="list-style-type: none"> • Manufacturing companies 		

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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	Technologies for "greening" and improvement of safety in transport motion		
Project idea, objectives	<p>We are interesting in cooperation on following scientific questions:</p> <ol style="list-style-type: none"> 1) Development of Acoustic Noise Compensation System for vehicles. Microphones are established near an engine, wheels and other sources of noise. The DSP processor models transfer function of space from a source of noise to a driver. Processed and inverted acoustic signal is played inside car salon. It will allow to lower noise level without raising of a thickness and quantity of sound insulator layers. 2) Development and perfection of algorithms for refinement of a driver speech from a noise for accurate recognition of phrases (work in the noisy environment). 3) Development and perfection of algorithms for driver speech recognition with the aim of voice-activated control by car systems. 4) Development of compression algorithms for systems of video registration of surrounding conditions. The system is intended for constant videorecording of road conditions, actions of the driver and other drivers, and can be used with the aim of innocence proof at road accident. 5) Development of images processing algorithms allowing identification of pedestrians and bicyclists on a road. 6) Development of a system for traffic signs and a road marking recognition. <ul style="list-style-type: none"> • We are looking for Coordinator, scientists (Universities, Research Centers) and SMEs interested in development of these approaches with the aim of further cooperation and participating in FP7 proposal. 		
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Type = Company/SME/Research organisation/university			
+ desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> • Universities, Research Centers working in the field of "Green Car Initiative" 		
Partner 2	<ul style="list-style-type: none"> • Manufacturing companies 		

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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	<p>The investigation for processes and the development for scientific foundations regarding the formation of catalytically active layers of internal combustion neutralizers</p>		
Project idea, objectives	<p>The aim of the project is the investigation for catalytic ceramic nanostructured composite oxide layers activity on neutralizer working surfaces as well as the elaboration of scientific foundations, technology methods and recommendations on the creation of neutralizers reducing the emission for carbon and nitrogen oxides as well as for hydrocarbons.</p> <p>The scientific idea (hypothesis) is as follows: the current project, unlike the well known similar developments, envisages the development of model ideas about activating and modifying action of nanostructured working surfaces of composite oxide ceramic composition allowing to predict properties and the possibility for obtaining neutralizers, which provide low temperature and complete after- burning of high disperse carbons , as well as enabling to manufacture in practice the neutralizers for used internal combustion engine gases. These neutralizers have high energy activity and do not contain platinum group metals.</p>		
Partner search description			
Type = Company/SME/Research organisation/university + desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> Universities, Research Centers working in the field of "Green Car Initiative" 		
Partner 2	<ul style="list-style-type: none"> Manufacturing companies 		

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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input type="checkbox"/> European Green Cars Initiative			
Topic/Title	Development and production of a motor-wheel of improved technical characteristics		
Project idea, objectives	<p>The essential stage of a transport vehicle creation is development of a conversion mechanism of energy, produced by a generator of any type in driving-wheels motion. An effective version of such mechanism is motor-wheel, which possesses a lot of advantages over transmissions of other kinds: silence, improvement of a transport vehicle composition, possibility creation of a transport mean, possessing by any quantity of driving axles and so on.</p> <p>At the same time motor-wheels have some deficiencies, the most essential of which are presence of large unsprung mass and low reliability indexes. Solving of these problems, we develop electric drives as well as reducers of optimal construction and their implementation in motor-wheels. Reducer, used in a motor-wheel, should possess the following properties: small overall dimensions (to locate it into wheel rim) and mass (to minimize unsprung masses), high coefficient of performance (to provide high efficiency of a motor-wheel) and reliability. That is why we propose development and production of the motor-wheels, created on the base of planetary pin reducers (which are also known as cycloid reducers). Due to high-capacity contact in coupling, reducers of this type possess high load-carrying capability and kinematic accuracy. Low sliding friction provide high coefficient of performance. Taking into account wide range of reduction ratios, small overall dimensions and mass, high reliability of such constructions, we can conclude that planetary pin reducers may be effectively used in construction of motor-wheels. Unitary Enterprise "Instrument making plant "Optron" has a large experience in methodological maintenance, development and production of planetary pin reducers for different application fields.</p> <ul style="list-style-type: none"> We are looking for Coordinator, scientists (Universities, Research Centers) and SMEs interested in development of these approaches with the aim of further cooperation and participating in FP7 proposal. 		
Partner search description			
Type = Company/SME/Research organisation/university + desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> Universities, Research Centers working in the field of "Green Car Initiative" 		
Partner 2	<ul style="list-style-type: none"> Manufacturing companies 		

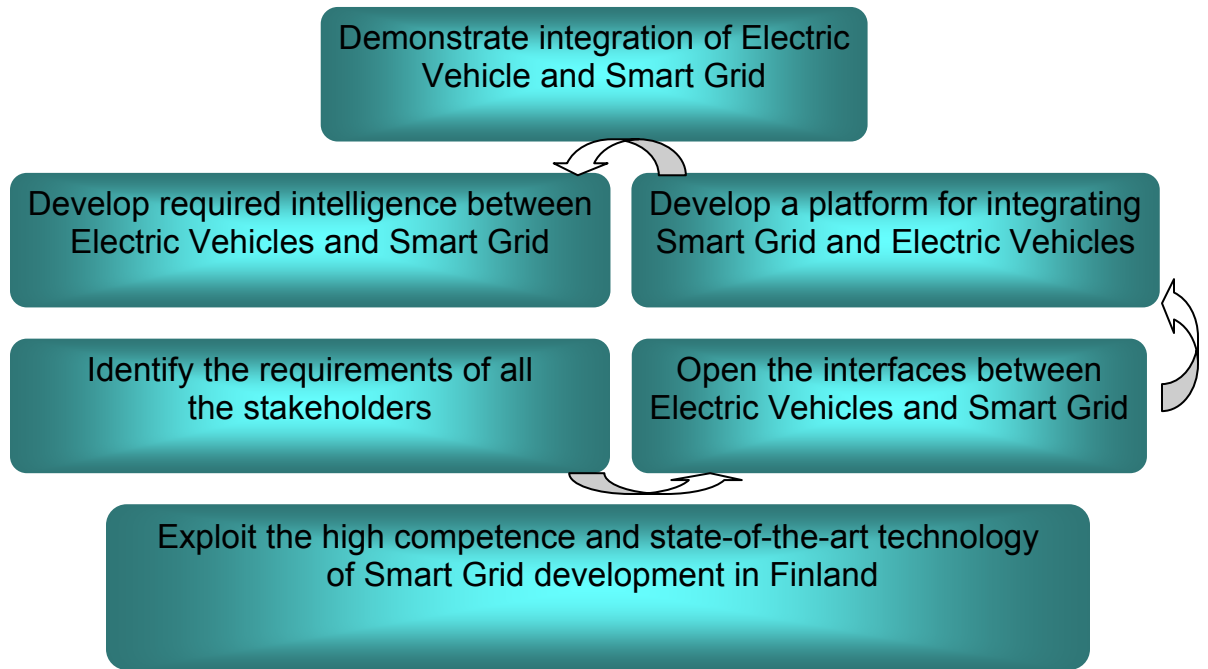
Contact person			
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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	Operational guidance for Life Cycle Assessment studies of the European Cars Initiative		
Project idea, objectives	<ul style="list-style-type: none"> • Life Cycle Impact Analysis • External Costs of environmental impacts • Integrated Assessment <p>If the environmental impacts are known the Impact Pathway Approach (IPA), funded by the EC, can be used and aims in an Integrated Assessment.</p> <p>Examples for the applied assessment methodologies can be found in several EC funded projects like HEATCO (Developing Harmonized European Approaches for Transport COsting and Project Assessment), GRACE (Generalisation of Research on Accounts and Cost Estimation), ASSET (ASsessing SEnsitiveness to Transport) and HEIMTSA (Health and Environment Integrated Methodology and Toolbox for Scenario Assessment).</p>		
Partner search description			
Type = Company/SME/Research organisation/university			
+ desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> • Company/SME/Research organisation/university • Coordinator 		
Partner 2	<ul style="list-style-type: none"> • Company/SME/Research organisation/university • Life Cycle Analysis 		

Contact person			
Name	Prof., D. Eng. G. Kukharonak		
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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input type="checkbox"/> European Green Cars Initiative			
Topic/Title	Development of methods and ways of effective use of second generation biofuels in vehicles		
Project idea, objectives	<p>The work is aimed at the study of the use of second generation biofuels in vehicles (for instance biogas and biobutanol), the development of methods for evaluating performance of the engine work on alternative fuels under different composition, the identification of effective and ecological characteristics of the vehicle while operating on second generation biofuels, and the formulation of recommendations for the practical use of biofuels in vehicles and draft standards for second generation biofuels.</p> <p>Leading EU documents on promoting the use of biofuels or other renewable fuels for transport guide countries to increase the use of alternative fuels (in particular, replacement of 20% of traditional fuels for vehicles to alternative fuels by 2020). These objectives determine the relevance of research and development aimed at diversifying the resource base and the search for effective alternative cleaner fuels. One of the directions allowing, on the one hand, to significantly reduce the amount of harmful substances in exhaust gases of engines, and on the other to reduce consumption of non-renewable hydrocarbon fuels, is to use as a motor fuel second generation biofuels, derived from biomass, and to adapt the engines to run on these fuels. This will be done by using mathematical models of the working process, taking into account the physical and chemical properties of fuels, and conducting experimental research aimed at finding the adjustment parameters, ensuring efficient operation of the engine. In addition, it is important to formulate the requirements for new fuel in the form of a draft standard that defines the basic characteristics of alternative fuels.</p>		
Partner search description			
Type = Company/SME/Research organisation/university			
+ desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> Universities, Research Centers working in the field of "Green Car Initiative" 		
Partner 2	<ul style="list-style-type: none"> Manufacturing companies 		

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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	New type of effective modular vehicle for a "Western Europe - Far East" high-speed transcontinental transportation routes		
Project idea, objectives	<p>The main idea of the project is the development and creation of modular multilink highway truck with remote control, including:</p> <ul style="list-style-type: none"> ▪ active bogies (traction modules) with promising hybrid and electric transmission; ▪ on-board electronics control systems and units combination (suspension, brakes, steering, coupling links, etc.); ▪ synchronized steering drives combination (electrohydraulic and electromechanical roller-screw gear); ▪ "smart" trailer coupling; ▪ driverless control system, including automatic powertrain, trailer coupling devices, suspension, drive steering parts, brakes. <p>The proposed project will:</p> <ul style="list-style-type: none"> ▪ increase the total tonnage and capacity of trucks alongside the possibility of changing the reach and capacity of the same vehicle by changing the number of modules; ▪ avoid the dimensions and weight limitations by decoupling into separate modules in certain situations (for example, crossing the bridge or movement on a two-lane roadway); ▪ use of existing terminals for loading and unloading; ▪ improve mobility and reliability of trucks; ▪ improve dynamic and aerodynamic characteristics; ▪ increase fuel efficiency of multilink trucks per unit of transported cargo in comparison with traditional forms of road transport via the effective use of power unit capacity and recuperation of braking energy; ▪ improve ecological haulage via reducing the number of vehicles on roads. 		
Partner search description			
Type = Company / SME / Research organization / university			
+ desired skills / knowledge			
Partner 1	Truck Manufacturers – Company / SME		
Partner 2	Manufacturers of components for trucks – Company / SME		
Partner 3	Manufacturers of electronic components – Company / SME		
Partner 4	Software Developers for an unmanned vehicle management, including logistics focus – Company / SME		

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Project information				
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative				
Topic/Title	Platform for Smart Grid and EV interfaces			
Project idea, objectives	<p>The overall aim of this project is the development of the interfaces between intelligent electricity distribution network and electric vehicles. The development of Smart Grid opens new service opportunities and creates new business models. This project concentrates inter alia on smart charging of electric vehicles.</p> <p>Objectives:</p> <ul style="list-style-type: none"> • To open and develop the interfaces between Smart Grid and Electric Vehicles • To develop a platform for Smart Grid and Electric Vehicles integration • To develop Automatic Electric Vehicle Identification • To develop Roaming and Billing Automations • To develop Smart Well-Timed Charging • To pilot Smart Grid application Vehicle-2-Grid • To develop and test these objectives in winter conditions <p>Expected results:</p> <ul style="list-style-type: none"> • Innovative platform for Smart Grid and Electric Vehicle interfaces development and testing • New business models and earnings logics for Smart Grid and Electric Vehicle integration. • Winter condition requirements 			
Known Partners				
S.No	Partner Name	Type	Country	Role in the Project
1	Aalto University	Research University	Finland	Coordinator and responsible research party
2	Helen Group – Helsingin Energia	Energy Company	Finland	Development of Smart Grid and Electric Vehicle interfaces
3	Fortum	Energy Company	Finland	Development of Smart Grid and Electric Vehicle interfaces
4	Nokia Siemens Networks	ICT Company	Finland	Development of Smart Grid and Electric Vehicle interfaces ICT hardware, software and services
5	ABB	Power Technology Company	Finland	Development of Smart Grid and Electric Vehicle interfaces Products for power and automation technology

Project structure:



Partner search description

**Type = Company/SME/Research organisation/university
+ desired skills/knowledge**

<p>Partner 1</p>	<ul style="list-style-type: none"> • Large scale car manufacturer - Knowledge to develop the interfaces between electric vehicle and smart grid
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<p>Partner 2</p>	<ul style="list-style-type: none"> •
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Contact person			
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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	ELECTRIC POWERED MOBILITY SCOOTER SAFETY (EPMOSSAFE)		
Project idea, objectives	<p>STATE-OF-THE-ART</p> <p>Indeed very little, if anything, is known about the new Vulnerable Road Users (VRUs) on Mobility Scooters (MS). Preliminary studies on European city roads have shown the number of users of Mobility Scooters to have exponentially risen from a few hundreds to a couple of millions. In the UK alone the number of Mobility Scooters on roads has increased by 250% in the last 3 years to 450000. Many of the riders, indeed 90% to 98% of them are between 60 years and 82 years old. These new MS VRUs are different to say cyclists and motorcyclists, because they are of old age, frail and with some degree of disability. While cyclists and motorcyclists are predominately young, middle age and able people. Therefore, MS VRUs are extremely high risk as they drive their MSs on main roads mingling with high speed vehicles and must be protected. Hence this research that is vitally important to the safety and protection of our elderly population in Europe and other road users. The MS population on our roads will increase in future as European elderly population lives longer. So will be the increase in the incident risks, which will result in high EU societal costs. This research will address the risks involved, mitigate them and overall reduce EU societal cost therewith.</p> <div style="border: 1px solid black; background-color: yellow; padding: 5px; text-align: center;"> <p>BOLTON AUTOMOTIVE AND AEROSPACE RESEARCH GROUP (BAARG)</p> <p>AT THE UNIVERSITY OF BOLTON IN UK</p> <p>IS A DINSTINGUISHED RESEARCH CENTRE OF EXCELLENCE IN CRASHWORTHINESS AND IMPACT BIOMECHANICS</p> <p>www.bolton.ac.uk/bee/baarg</p> </div> <p>Specific objectives of the proposed research are to:</p> <ul style="list-style-type: none"> (i) Carry out a study in some selected European Countries : Collect all data on mobility scooter types, power, analyse riders' posture and behaviour while in control. Most of the mobility scooters are recorded in UK, Italy, Spain, Germany and Netherlands; (ii) Define the new VRUs who are mainly old over 60 years, frail and with some conditions of physical and/or mental disability; (iii) Gather incident/accident data from those nations' databases so that evaluation between collisions, scooter factors and injury mechanisms of the new VRUs can be made; (iv) Develop detailed design procedures that will maximise safety for mobility scooter users. Examine safety features of MS that may need to be redesigned to adapt to older riders and the infrastructure; (v) Develop a catalogue of potential injury mechanisms that manufacturers can use during scooter structural design. Look at restraints and helmet use possibility; (vi) Develop education material and training procedures for the newly defined MS VRUs; (vii) Prepare an initial policy document based on the research to be transmitted to the Commission so that legislation can be proposed on the design and use of mobility scooters. 		

Partner search description	
Type = Company/SME/Research organisation/university + desired skills/knowledge	
ANY INTERESTED PARTNER MUST HAVE A TRACK RECORD IN CRASHWORTHINESS AND IMPACT BIOMECHANICS RESEARCH.	
A total of 2-4 Companies/SMEs, 2-4 Research Organisations/ 4-6 Universities are required.	
Expertise/skills must be in: (i) Incident investigation; (ii) vehicle design for crashworthiness; (iii) occupant safety & protection; (iv)packaging; (v) data collection; (vi) component and (vii) full vehicle experimental testing; (viii) Modelling using Multi-body dynamics and (ix) Finite element methods to provide validation.	
Partner 1	• TUG VSI, TECHNICAL UNIVERSITY GRAZ, AUSTRIA
Partner 2	•
Partner 3	•
Partner 4	•
Partner 5	•
Partner 6	•
Partner 7	•
Partner 8	•
Partner 9	•



Mr S. Murphy, a 75 year old cruising on the Motorway among other road users travelling at 100 kph, UK



Mr A Luca, a 57 year old with mental and physical disability travelling as part of the normal traffic in Italy

Mr S Pindus, a 69 year old with a history of heart problem being treated at the accident scene in UK




BR-GC-2010-16

Contact person			
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Project information			
<input type="checkbox"/> European Green Cars Initiative			
Topic/Title	GC.SST.2011.7-11. Green corridors and supply chain management		
Project idea, objectives	<ul style="list-style-type: none"> • The project idea is to use developed models based on the last Supply Chain theories in order to establish optimum parameters in the supply chain in sectors where logistics cost are high, supply chains are complex and have a high environmental impact (environmental footprint). • These models will allow the company to define both parameters and business methodologies in an environmentally friendly way. It will be validated by using advance models that take into account the demand, their area and location, transport connections, etc. • The model will allow reducing logistics costs by implementing new ways of collaboration between the different agents. Producers and suppliers could establish relationships in order to reduce costs. (Market vs logistics costs). • The model will guarantee a clean, agile and lean supply chain (environmental-flexibility-low costs). • The model will guarantee efficient freight transport. • Other benefits: 		
Partner search description			
Type = Company/SME/Research organisation/university			
+ desired skills/knowledge			
Partner 1	University or RTD specialised in efficient transport with a role of Coordinator and experienced on: <ul style="list-style-type: none"> • Algorithm programming • Supply chain modeling and methodologies • Simulation techniques and tools • Logistics operations • Supply chain costs calculation • Supply chain Collaboration methodologies • Theory games • Supply chain strategy • KPIs 		
Partner 2	<ul style="list-style-type: none"> • Rail networking management 		

BR-GC-2010-17

Contact person			
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Project information			
X Factories of the Future X Energy-efficient Buildings ✓ European Green Cars Initiative			
Topic/Title	GC.SST.2011.7-10. Architectures of Light Duty Vehicles for urban freight transport		
Project idea, objectives	<ul style="list-style-type: none"> • As this is a Level 2 Topic, proposals must address it entirely. The Topic description requires proposals that will quantify and demonstrate whole vehicle concepts that will achieve high energy efficiency. • QinetiQ has developed a concept for a lightweight, compact combined motor and differential that removes the need for a drive shaft and enables a low cost, flexible vehicle layout with a lower cargo bay floor. This concept would suit front or rear wheel drive configurations. This modular approach will result in considerable energy efficiency savings, reduced parts count and will facilitate repair and maintenance. • We envisage a project that would utilise this combined motor-differential, along with additional innovations that may include a novel structural layout, common corner units, efficient power electronics, etc, to generate a concept vehicle that takes full advantage of these systems to result in an efficient urban delivery vehicle with high degree of usability. Further innovation could include integrating some of the power electronics into the combined motor-differential thus eliminating separate components and vulnerable interconnections. • We believe that we have a unique element of this vehicle, the combined axle motor/differential, along with all of the performance modelling capability needed to assess this but, as a whole vehicle concept is required, we are seeking suitable partners to help to deliver this. 		
Partner search description			
Type = Company/SME/Research organisation/university			
+ desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> • Vehicle Design House • Organisation familiar and comfortable with whole vehicle concept design. 		
Partner 2	<ul style="list-style-type: none"> • Commercial Vehicle OEM or Tier 1 automotive supplier • Organisation with recognised market position 		

BR-GC-2010-18

Contact person			
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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	e-offroad		
Project idea, objectives	<p>eseia is a European association of leading innovation organisations in the field of sustainable energy systems and covers all relevant fields in sustainable energy from energy provision to energy consumption in research, teaching and innovation. (www.eseia.eu)</p> <p>With regard to the challenges to off-road and recreational mobility that arise from limitations on fossil energy carriers as a result of decreasing resources as well as climate change restrictions of their use the focus of this eseia-project will be laid on recreational road and snow mobility systems based on bio-resources.</p> <p>The planned project cluster consists of:</p> <ul style="list-style-type: none"> • a technology development project aimed at optimising the range extender technology based on CNG using bio-methane (taking into account key issues like availability of suited energy carriers, logistics of energy carriers/storage systems, etc.) • regional implementation projects developing the necessary infrastructure in different major European tourism regions where on and off road mobility plays a major role (taking into account regional context of pilot regions in terms of natural environment and techno-social framework) • a review project about legal requirements, economic and ecologic perspectives (including the whole value chain) for recreational mobility using range extender systems based on Bio CNG 		
Partner search description			
Type = Company/SME/Research organisation/university + desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> • SME/Company • Research organisations/university 	} range extender systems based on bio-resources	
Partner 2	<ul style="list-style-type: none"> • pilot regions 		

BR-GC-2010-19

Contact person			
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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	GC.SST.2011.7-8. Advanced eco-design and manufacturing processes for batteries and electrical components		
Project idea, objectives	<p>Eco-innovation of batteries and other components of electrical vehicles, including several reference technologies, and environmental assessment of the obtained improvement.</p>		
Partner search description			
Type = Company/SME/Research organisation/university + desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> Manufacturers of battery packs (Company/SME) 		
Partner 2	<ul style="list-style-type: none"> Manufacturers of electrical motors and other components (Company/SME) 		

Contact person			
Name	Antonio Reyes Lorite		
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Telephone	(+34) 953 649 406	e-mail	antonio.reyes@cetemet.es
Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative <input checked="" type="checkbox"/>			
Topic/Title	European Green Cars		
Project idea, objectives	<ul style="list-style-type: none"> • Testing different elements (for example, batteries and electrical components) of the 'Green car' in the CETEMET's Climatic Wind Tunnel. • CETEMET's Climatic Wind Tunnel is also able to test trains and trams. • Improving the elements according to the results of our tests. • Improvement of the efficiency of the thermal control of thee energy storage system • Reducing heat loss in different types of vehicles (cars, trains, trucks, etc.) 		
Partner search description			
Type = Company/SME/Research organisation/university			
+ desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> • Company/SME/Research organisation/university with expertise in HVAC (Heating, ventilating, Air Conditioning) to lead the project 		
Partner 2	<ul style="list-style-type: none"> • Two international partners to collaborate with the Spanish SME 'Solarmens Tech.' an CETEMET in a project related to 'Green Cars' 		

PPP: GC Topic SST.2011.2.1-1 Efficient interfaces between transport modes

"PROFIT EU" – Project Future Interfaces and Terminals in Europe

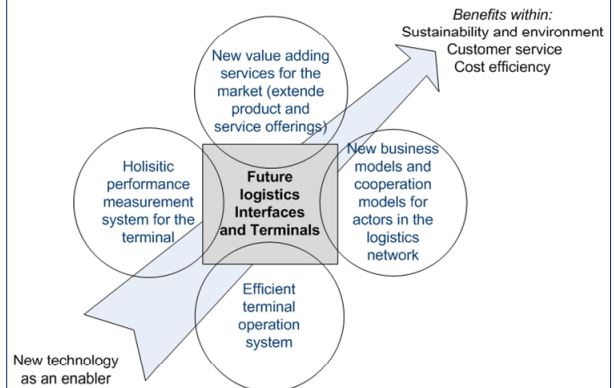
Objectives:

- Develop Interfaces between transport modes from a cost centre towards a centre for value creation in the future co-modal transport networks.
- Explore and demonstrate next generation control systems for terminal operations aiming at eco-efficient technologies

Expected results:

- Develop an efficient terminal operation system
- Develop an holistic performance measurement system for the terminal
- Develop new business models and cooperation models for the actors involved at the different interfaces
- Develop new value adding services for the future intermodal terminal

Main idea:



EXPRESSED INTEREST IS WELCOMED

Organisation:

SINTEF Technology and Society

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PPP:GC Topic GC.SST.2011.7-11 Green corridors and supply chain m

LINK EU Linking Europe's Future Transport and Logistics Networks

Main objective of LINK EU:

- To develop the future intelligent and co-operative management and control solutions - enabled by ICT - for all transport and logistics stakeholders

Expected results:

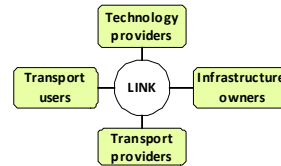
- An ICT based e-freight framework
- To enable research-based innovations for involved partners
- Commitment and collaboration between all stakeholders in a cross-disciplinary international network of research centres, test sites and laboratory environment.

EXPRESSED INTEREST IS WELCOMED

Cross-disciplinary research to link together:

- Transport users
- Transport providers
- Infrastructure owners
- Technology providers

LINKing the future transport and logistics networks



Organisation:

SINTEF Technology and Society

Contact person:

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Project information			
X <input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings X <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	Energy-On-The-Move, 500+ Long Range, Fully EV with V2G Capabilities		
Project idea, objectives	<p>The invention is the first attempt at solving questions of range for EVs and EV-related technologies by economic means. It addresses gaps in EV technology and applies to all forms of transport, including rail, road (buses, long haul), and river boats. It is an absolute zero carbon emission because it is based on Self-Generating Power Technology or Energy-On-The-Move, Innovative Methods of Advanced, Continuous Regeneration, something that has never been used or heard of before and that taps unexplored areas that have never been touched previously. The technology will borrow techniques and methods applied in the aviation industry with advanced electronics to execute a multi-function operation. It requires balancing and tuning multi components and combined electro-mechanic system. Sophisticated electronics and complex wiring are the most crucial elements in the overall design, execution and construction.</p> <p>It sets the pace for future R & D, which will overlap on the essence of future manufacturing processes and other related areas and fields such as "Factories of the Future" and road electrification in general. This technology is a tool for sharp CO2 reduction and meeting EU, Kyoto, and UN targets on time and even above expectations if it is allowed to proceed and is funded properly. It is impossible to convince anyone in simple words that Graviton Dynamics is the ultimate link to cover gaps in previous EV technology development, primarily because GD shifted entirely away from expensive battery development. The first direct impact will explore range extension by new means other than battery development. This radical shift is a deviation in direction that no person or single company has tried before. Micro Generative Technology and Energy-On-The-Move is a revolutionary innovation in itself. Moreover, depending on adequate funding to support GD strategy, we can move rapidly to present and materialize other inventions and innovations, such as the full exploitation of V2G (Vehicle To Grid) concept. All in one way or another represent GD's innovative concepts that offer strategic solutions that will radically reduce CO2 levels and create thousands of needed jobs in green industries.</p> <ul style="list-style-type: none"> Negative views of EV technology are rooted in "Range Anxiety" and battery limitations. Graviton Dynamics firmly believes that batteries alone do not offer permanent solutions to these problems because their energy provides only temporary storage, for hours, not for days. Thus, we deviate in the opposite direction to develop other means to charge batteries on the move and ultimately, at a later stage, when we secure an adequate budget and resources, in a parked position. The technology of 2030 and 2050 is available now in less than a year. Graviton Dynamics offers multiple 		

solutions/choices for the entire EV technology and newborn electro-automotive industry that we must consider and determine their capability of revitalizing the economy and beating recession and unemployment at the same time. **Our technology is an environmental and economic revolution in one on the road of economic recovery.**

Partner search description

**Type = Company/SME/Research organisation/university
+ desired skills/knowledge**

Partner 1	Sympathic and enthusiastic independent auto manufacturers who believe in total paradigm shift to fully embrace electro-automotive technology. Ability to join permanent consortium with or without grants to form solid supply chain with like minded people and companies to adopt strategic and marketing strategy and philosophy. Must think outside the box and accept challenges with can-do attitude and hunger for success.
Partner 2	Private and public organisations that are willing to offer full technical assistance or incentives to fully prototype an electric car. Must be capable of solving logistic problems to create inter-European independent industries that enhance the supply chain of the anticipated permanent consortium members. Also to ensure and secure international cooperation, collaboration, and expansion. Regional development authorities and progressive academic institutions with focus on electronics are welcome.

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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	GC.SST.2011. 7.9.: ERA-Net Plus "Electromobility" Electromobility: Life Cycle Impact Assessment and Cost-Benefit-Analysis		
Project idea, objectives	<p>We would like to contribute by charring out integrated assessment (IA), including:</p> <ul style="list-style-type: none"> - Scenario building, Economic assessment and Cost-Benefit Assessment, Modelling of energy demand and supply, IA of impacts due to air pollution of ICE (conventional internal combustion engines), with a focus of human heath due to emission of particulate matter, i.e. fine dust in urban areas; Evaluation of safety issues with regard to traffic accidents; - IA of impacts on human health, environment and ecosystems due to electricity generation and supply, of impacts due to noise in urban areas and urban development; of impacts due to climate change and greenhouse gas emissions - Monetary evaluation of all physical impacts and comparison with other economic factors. <p>We will further improve and apply our methodology (www.ExternE.info), which is already widely used for assessing transport and energy technologies.</p>		
Partner search description			
Type = Company/SME/Research organisation/university			
+ desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> • Company, SME, Research organisation, university desired skills/knowledge: <ul style="list-style-type: none"> • coordination • private / internal costs of different technologies • LCA of different technologies 		
Partner 2	<ul style="list-style-type: none"> • Company or SME or Research organisation or university desired skills/knowledge: <ul style="list-style-type: none"> • Noise propagation • LCA of accumulators and of other energy storage • Urban development • Mobility experts for scenario building 		

Contact person			
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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	Integrated in-situ metrology <u>and testing technology</u> for <u>manufacturing</u> of high performance electrical machines for electrical vehicles		
Project idea, objectives	<ul style="list-style-type: none"> • Integration of newly developed and standardized testing technology into production lines for electric vehicles. Goal is the reduction of testing steps and the promptly detection of faulty components or products to enhance quality and security and strengthen European job market by producing at competitive costs. • Highly increasing quantities of high performance electrical machines for electric vehicles require an adapted testing concept which consists of a manufacturing integrated testing of all relevant parameters and a reduced sampling "End-Of-Line"-test. Due to highly complex requirements to security, efficiency, and availability to certain features and electromechanical parameters, new in-situ methods (i.e. isolation, junction testing, motor efficiency) which are not available on the market are needed to be developed. • Necessary therefore, is an overall standardized testing method containing the minimal number of testing steps integrated for aiming towards a zero error manufacturing and a reproducible qualification of the electrical machine between supplier and customer. • Research and development shall aim to install a reliable, traceable and widely approved testing method for electrical machines which has to be demonstrated by means of comparing actions to current production and reliability tests at OEM. 		
Partner search description			
Type = Company/SME/Research organisation/university			
+ desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> • Sensor manufacturers (preferably SME's) • OEM (manufacturer of electrical car or vehicles) • National metrology institutes 		
Partner 2	<ul style="list-style-type: none"> • University/Institute for electrical machines • Software Company for metrology domain 		

BR-GC-2010-26

Contact person			
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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	Electrochemical Storage (Battery) State of Function.		
Project idea, objectives	<ul style="list-style-type: none"> • Determination of state-of-charge (SoC) / state-of-health (SoH) through the use of observer corrector methodologies. • Spectral measurement of pack / cell voltage alongside demand current measurement. • Assess battery lifetime based on measurements. • Optimisation of state of charge to maximise possible regeneration. 		
Partner search description			
Type = Company/SME/Research organisation/university			
+ desired skills/knowledge			
Partner 1 Battery manufacturer	<ul style="list-style-type: none"> • Supplier of batteries with electrochemical knowledge 		
Partner 2 Electric Vehicle manufacturer / OEM component manufacturer	<ul style="list-style-type: none"> • System supplier / vehicle constructor • Drive test data / cycles • System architecture 		

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Project information			
<input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input checked="" type="checkbox"/> European Green Cars Initiative			
Topic/Title	Acoustic safety and noise assessment		
Project idea, objectives	<ul style="list-style-type: none"> • Life Cycle Impact Analysis • External Costs of environmental impacts/noise impacts • Transport related impacts <p>Methodologies for assessing noise have been developed, improved and applied, which focus on the impact pathway approach (IPA), i.e. in the first step noise levels are estimated, as a second step dose- response functions are applied to calculate health impact and annoyance level distributions. The third step is evaluated by transforming the impacts into monetary values.</p> <p>Realizing an integrated assessment approach, in a fourth step measures can be deduced for the reduction of noise. As a step fifth this information will be adapted in the calculation of the noise level estimation (see step one).</p> <p>Examples for the applied assessment methodologies can be found in several EC funded projects like HEATCO (Developing Harmonized European Approaches for Transport COsting and Project Assessment), GRACE (Generalisation of Research on Accounts and Cost Estimation), ASSET (ASsessing SENSitiveness to Transport) and HEIMTSA (Health and Environment Integrated Methodology and Toolbox for Scenario Assessment).</p>		
Partner search description			
Type = Company/SME/Research organisation/university			
+ desired skills/knowledge			
Partner 1	<ul style="list-style-type: none"> • Company/SME/Research organisation/university • Coordinator 		
Partner 2	<ul style="list-style-type: none"> • Company/SME/Research organisation/university • Life Cycle Analysis 		