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Sustainable Surface Transport (SST) Call Content FP7-SST-2012-RTD-1

Information Day Madrid 27/06/2011



EU



TRANSPORT RESEARCH



European Commission, DG RTD, Unit H2 - Surface Transport

Liam BRESLIN
Head of Unit



COOPERATION



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Rail



Road



Water



1. General Aspects



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SST Foundations

SST 2007-2013

- BUILT ON

- ➔ **Experience** and existing activities, impacts, RTD results, consultation including Member States

- ➔ **Policy dimension** (European Research Area, Transport White Paper mid-term review, wide range of EU Policies), Industry support package, Green Car.

- ➔ **Industrial dimension** input from Technology Platforms

- ◆ ERTRAC

- ◆ ERRAC

- ◆ WATERBORNE

- ◆ Intermodal - EIRAC

- ➔ **Flexibility** to cope with emergencies





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SST Global Objective

SST 2007-2013



Address to **European Transport System (s)**



→ Develop **greener, smarter and safer** Surface Transport System (s)



→ Secure the **leading role** of EU transport **industry** in the global market



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Approach

SST 2007-2013

- Integrated **Surface Transport System** (s) (3 modes)
- Integrating the **components of the system:**

- **Vehicle/Vessel**
- **Infrastructure**
- **Users**



...interactions, interfaces, logistics, Transport Networks & Services

- Integrating stakeholders, disciplines, activities, etc
- Integrating discipline and activities: **5 Activity Lines; CROSS CUTTING** + European GREEN CARS initiative



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Research characteristics

SST 2007-2013

- Basic and applied research
- Break through research/ Incremental research
- Development of innovative solutions for surface transport products, processes, operations and services
- Large and Multi-disciplinary demonstration
- Socio-economic research
- Structuring European surface transport research (ERA)
- Supporting programme implementation (SMEs, international cooperation, communication, citizen awareness and support to new policies related to transport, etc)





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FP7 Transport Work programme

– Overview of SST calls (RTD & MOVE)

SST Workprogramme	Year of publication	Budget Mio €
2007	2006 (1 st call)	255.68
2008	2007 (2 nd call)	138
2010	2009 (3 rd call)	141.5
2011	2010 (4 th call)	129.25
2012	2011 (5 th call)	150
2013	2012 (6 th call)	



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Call for Proposals Theme 7: Transport

- Publication of Calls for Proposal on 20 July 2011
- Deadline for submission of proposals on 1 Dec 2011
- Info days on 18th – 19th July 2011 in Brussels
- Three main areas
 - ◆ Aeronautics and Air Transport: indicative budget €145 Million
 - ◆ Sustainable Surface Transport: indicative budget €150 Million
 - **Call FP7-SST-2012-RTD-1** - **€114 M**
 - Call FP7-SST-2012-MOVE-1 - € 26 M
 - Joint Call on materials for Green Cars - € 35 M (€10 M from Transport)
 - FP7-ERANET-2012-RTD - € 3 M (for Transport)
 - ◆ Horizontal Activities for the Implementation of the Transport Programme:
 - ◆ Call FP&-TPT-2012-RTD-1 - € 10 M



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Spanish participation in FP7

SST 2007-2013

- Successful participation in AAT, SST, GC, ERANET, OCEAN and CHINA calls
- Participation in 176 projects in total
- Coordination of 31 projects





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Spanish participation in FP7 - Example

- ARIADNA project
- Topic: Maritime Volumetric Navigation System
- Start – end 01/11/2009 – 30/10/2012
- EC contribution 3,504,758 EUR
- Coordinator ISDEFE
- Goals:
 - optimisation of the use of maritime and inland infrastructures,
 - safe navigation in dense traffic situations in ports, rivers, channels, lock and port access areas,
 - improvement of traffic separation schemes,
 - improved risk control, including grounding,
 - efficient and environmentally-friendly operations.



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Rail



Road



Water



2.

Work Programme 2012

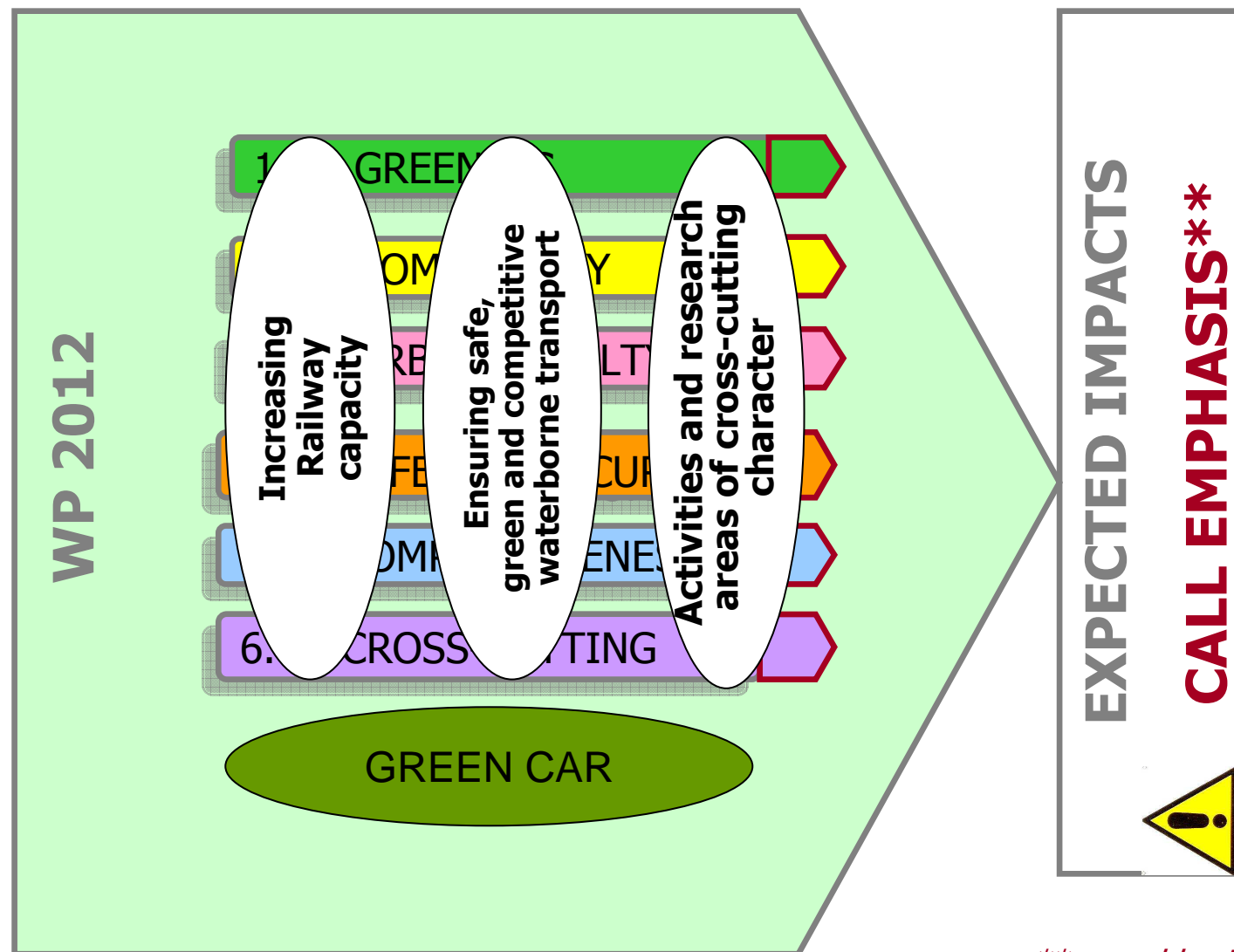


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WP Structure

SST 2012



Activities are sub-divided in Areas and Topics

****annual basis**





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Legal Reference

SST-2012-RTD-1

with reference to:

✓ FP7 Specific Programme
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✓ THEME 7 – TRANSPORT

✓ SUB-THEME 7.2 - Sustainable
Surface Transport (SST)

✓ Call:FP7-(SST)-2012-RTD-1


✓ Indicative Budget: 114M€

Open date: 20th July 2011

Closure date: 2nd December 2011

Legal basis:

Annual SST Work Programme
Call text and ***Call Fiche***



Screen 1 of 203

FP7-TRAN

ANNEX 13 TO THE DECISION

WORK PROGRAMME 2010

Cooperation

THEME 7

TRANSPORT (INCLUDING AERONAUTICS)

Call title: FP7- SUSTAINABLE SURFACE TRANSPORT (SST)-2010-RTD-1

- Call identifier: FP7-SST-2010-RTD-1
- Date of publication: 30 July 2009
- Deadline¹: 14 January 2010 at 17.00.00 (Brussels local time)
- Indicative budget²: EUR 93.79 million

The indicative distribution of the call budget is as follows:

- EUR 22.895 million for Group of topics (GT) N° 1: The development of rail freight transportation.
- EUR 20.895 million for Group of topics (GT) N° 2: Eco-innovations in shipbuilding and waterborne transportation.
- EUR 40 million for Group of topics (GT) N° 3: The 'solidification' of road and urban transport.
- EUR 10 million for Group of topics (GT) N° 4: The rest of topics of this call.

The budget for this call is indicative. The final budget awarded to actions implemented through calls for proposals may vary:

- The final budget of the call may vary by up to 10% of the total value of the indicated budget for each call; and
- Any repatriation of the call budget may also vary by up to 10% of the total value of the indicated budget for the call.
- In case the budget of one or more topic groups could not be consumed (totally or partially), the remaining budget shall be transferred to the other topic groups in accordance with the opinion of the evaluation review panel.

• Topics called:

Activity / Area	Topics called	GT N°	Funding Schemes
7.2.1 THE GREENING OF SURFACE TRANSPORT			
7.2.1.1 The greening of products and operations	SST 2010.1.1-1 Carbon footprint of freight transport	1	CP-FP (small or medium-scale focused research)
	SST 2010.1.1-2 Energy efficiency of ships	2	CP-FP (small or medium-scale focused research)
	SST 2010.1.1-3 Attenuation of ground-borne vibration affecting residents near railway lines	4	CP-IP (large scale integrating project)
	SST 2010.1.1-4 Advanced after treatment solutions for mitigation of emissions from ships	2	CP-FP (small or medium-scale focused research)

¹ The Directorate-General responsible may delay this deadline by up to two months.
² Under the condition that the preliminary draft budget for 2010 is adopted without modifications by the budget authority.

1



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Terminology

SST 2012

- **Work Programme addresses three CHALLENGES**

- Eco-Innovation
- Safe Seamless Mobility
- Competitiveness through Innovation

- **Work Programme organised by ACTIVITIES**

- 5 activities in line with the strategic objectives, to ensure impact and facilitate visibility and understanding
- +1 cross cutting activities in support of SST

- **Activities are sub-divided in AREAS**

- Research areas are broad domains of investigation, stable during the coming years, and whose expected impacts are indicated

- **Areas are addressed by TOPICS**

- Identification of research contents to be addressed by proposals to be submitted in the call.



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Topic Levels

SST 2007-2013

Level 1 (*GENERIC*)



- Define broad fields of activity
- Normally common to all modes
- Encourage synergies between modes
- Proposal do not need to cover all the topic content

Level 2 (*SPECIFIC*)



- Mission oriented
- Explicit in their formulation
- Mostly specific to one mode
- Proposals need to cover all aspects of topic content

GC.SST.2012.3-1. Towards sustainable interconnected logistics - development of standardised and modular solutions for freight transport vehicles, loading units and transhipment equipment

Level 1 - Call: FP7-SST-2012-RTD-1

Content and scope: Efficient load units are absolutely key in improving transport of goods, their storage and handling across the consumer driven supply chain process. Manufacturers, retailers and transporters can benefit from committing themselves to a set of driving principles and must address the physical component of seamless interconnected logistics focusing on the development of standardised and modular solutions for freight transport vehicles, load units storage, handling and transhipment equipment. Research will specify, demonstrate and recommend a standardised set of load unit sizes and functionalities along with the associated information and protocols to route them through the logistics networks across the EU and the world. It will impact fields such as logistics networks, transportation, material handling, supply chain, production, sourcing and distribution strategies. Solutions should follow the "well-to-wheel" approach looking at all elements of the logistics chain, i.e. the transport, storage, warehousing from the early stages of the production process till the last transport and distribution activity. Research will evaluate the impact of a new standardised iso-modular units approach for logistics down to the last km on the revenues and business models for the various stakeholders. It is possible and encouraged to build partnerships with research programs from other continents to help build the international framework required to promote a worldwide solution.

Expected impact:

GC.SST.2012.3-2. Improve capturing and sharing of transport data in support of innovative freight transport schemes

Level 2 - Call: FP7-SST-2012-RTD-1

Contents and scope: In order to improve the performance of the European transport system and to support business and policy decisions, better information on freight flows and the performance of freight transport systems is needed. The focus of research is on generating and sharing information among shippers, transporters and logistic service providers and other stakeholders which allow them to make more rational decisions on the use of vehicles, which can improve the load factor of vehicles and hence reduce the number of freight movements.

Research will consider:

- The development and demonstration of an innovative data gathering methodology.
- Opportunities for improvements in interfacing between data collection and company transport IT systems.
- Cross-fertilisation of best practice in freight data collection between countries.
- Correction of current statistical anomalies, and filling in data gaps.

Implementation and management: Results of previous EU projects, such as WORLDNET and TRANSTOOLS will have to be taken into account.

example





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SST 2007-2013

Proposal Apply to Topics

SST.2012.x.y-z

Each **TOPIC** (SST.2012.x.y-z.) refers to an Activity (x), an Area (y) and specifies the type of proposal in terms of:

→ **S&T Content**

→ **Scale**



→ *Since 2010*

◆ **Small Scale** : EC funding less than 3 M€

◆ **Large Scale** : EC funding more than 3M€



→ **Funding scheme**

◆ **Collaborative Projects**: CP,CP-IP,CP-FP, CP-SICA

◆ **Coordination and Support Actions**: CSA-CA, CSA-SA)

Topics are either **Level 1** or **Level 2**

According to the degree of specification in the WP



→ *Since 2010*

Groups of topics (4 groups)





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Topic Group and Their Indicative Budget

SST 2012

- **Call identifier: FP7-SST-2012-RTD-1 – single stage**
- **Date of publication : 20 July 2011**
- **Deadline : 1 December 2011 at 17.00.00 (Brussels local time)**
- **Indicative budget : EUR 114.04 million**
- **The indicative distribution of the call budget is as follows:**
 - ➔ EUR 24.00 million for Group of topics (GT) N° 1: Increasing railway capacity.
 - ➔ EUR 24.00 million for Group of topics (GT) N° 2: Ensuring safe, green and competitive waterborne transport.
 - ➔ EUR 37.04 million for Group of topics (GT) N° 3: Implementing research for the 'European Green Car Initiative'.
 - ➔ EUR 27.00 million for Group of topics (GT) N° 4: Activities and research areas of cross-cutting character. They include: ensuring sustainable urban mobility, improving surface transport through ITS, and safety and security.
 - ➔ EUR 2.00 million for topic SST.2012.1.1-2. Support to the development of joint programming in marine and maritime research to address cross-cutting sea-related challenges (support action within the framework of the 'Ocean of Tomorrow').



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Topics for Group No 1 - Increasing railway capacity *SST 2012*

- SST.2012.1.1-3. Management of energy in railway systems (CP-IP, Level 2)
- SST.2012.2.4-1. Planning rail towards 2050 (CP-FP, Level 1)
- SST.2012.2.4-2. The role of rail in the European transport system in response to major disruptions (CP-FP, Level 2)
- SST.2012.2.4-3. Efficient rolling stock and train operations for competitive rail freight services (CP-FP, Level 1)
- SST.2012.2.5-1. Rail system interoperability (regulatory and non-legislative interoperability based on technological innovations) (CP-FP, Level 1)
- SST.2012.2.5-2. Europe to Asia: rail research collaboration (CSA-SA, Level 2)



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Topics for Group No 1 - Increasing railway capacity ***SST 2012***

- SST.2012.5.2-1. Tools and conditions for attractive, efficient and competitive single wagonload traffic and its interaction with road and intermodal transports (CP-FP, Level 1)
- SST.2012.5.2-2. Next generation tools for optimised infrastructure asset management (CP-FP, Level 1)
- SST.2012.5.2-4. Innovation and standardisation in the field of signalling to accelerate a European Train Control System rollout (CP-IP, Level 1)



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Topics for Group No 2 - Ensuring safe, green and competitive waterborne transport

SST 2012

- SST.2012.1.1-1. Assessment and mitigation of noise impacts of the maritime transport on the marine environment (coordinated topic within the framework of the 'Ocean of Tomorrow') (CP-FP, Level 2)
- SST.2012.2.2-1. Innovative fleet for efficient logistics chain (CP-FP, Level 1)
- SST.2012.4.1-1. Human element factors in shipping safety (CP-FP, Level 1)
- SST.2012.4.1-2. Safety of ships in Arctic conditions (CSA-SA, Level 2)
- SST.2012.5.2-3. Innovative structural and outfitting materials for ships including inland ships (CP-FP, Level 1)
- SST.2012.5.2-5. E-guided vessels: the 'autonomous' ship (CP-FP, Level 2)



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Topics for Group No 3 - Implementing research for the European Green Car Initiative

SST 2012

- GC.SST.2012.1-2. Smart infrastructures and innovative services for electric vehicles in the urban grid and road environment (CP-FP, Level 1)
- GC.SST.2012.1-3. European strategy for rare materials and their possible substitution (CSA-SA, Level 2)
- GC.SST.2012.1-4. Modelling and testing for improved safety of alternatively-powered vehicles (CP-FP, Level 2)
- GC.SST.2012.1-5. Integration and optimisation of range extenders on Electric Vehicles (CP-FP, Level 2)
- GC.SST.2012.1-6. Advanced energy simulation and testing for Fully Electric Vehicles (FEV) (CP-FP, Level 2)
- GC.SST.2012.2-1. Extreme low rolling resistance tyres (CP-FP, Level 1)



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Topic for Group No 3 - Implementing research for the European Green Car Initiative

SST 2012

- GC.SST.2012.2-2. Complete vehicle energy management (CP-IP, Level 2)
- GC.SST.2012.3-1. Towards sustainable interconnected logistics - development of standardised and modular solutions for freight transport vehicles, loading units and transshipment equipment (CP-FP, Level 1)
- GC.SST.2012.3-2. Improve capturing and sharing of transport data in support of innovative freight transport schemes (CP-FP, Level 2)
- GC.SST.2012.3-3. Platform for continuous intermodal freight transport strategic research and innovation (CSA-CA, Level 2)
- GC.SST.2012.3-4. Green hubs enabling co-modal network design (CP-FP, Level 2)



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Topics for Group No 4 - Activities and research areas of cross-cutting character ***SST 2012***

- SST.2012.3.1-1. Research actions regarding the accessibility of transport systems (CP-FP, Level 2)
- SST.2012.3.1-2. Innovative design and operation of new or upgraded efficient urban transport interchanges (CP-FP, Level 2)
- SST.2012.3.1-3. Take-up of transport innovation in urban and regional transport (CSA-CA, Level 2)
- SST.2012.3.1-4. Automated urban vehicles (CP-IP, Level 2)
- SST.2012.3.2-1. Coordinating innovation for efficient bus systems in the urban environment (CSA-CA, Level 2)
- SST.2012.4.1-3. Large scale naturalistic driving observations for safe and sustainable transport (CP-IP, Level 2)
- SST.2012.4.2-1. Priorities for road safety research in Europe (CSA-CA, Level 2)



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Topic Group and Their Indicative Budget

TPT 2012

- Call identifier: FP7-TPT-2012-RTD-1 – single stage
- Date of publication : 20 July 2011
- Deadline : 1 December 2011 at 17.00.00 (Brussels local time)
- Indicative budget : EUR 10.00 million





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Topics called

TPT 2012

- TPT.2012.1-2. Transport infrastructure impact on international competitiveness of Europe. (CSA-SA)
- TPT.2012.1-3. Prospects for transport evolution: challenges for the competitiveness of the European transport sector in the long term. (CSA-SA)
- TPT.2012.2-2. Reduction of the vulnerability of the European Transport System to extreme weather events and natural disasters. (CSA-SA)
- TPT.2012.3-1. Fostering innovation for trans-national cooperation in European transport research and promoting active participation of stakeholders in European research calls and projects. (CSA-SA)
- TPT.2012.3-2. Bringing innovative products and services to the market: analysis of pathways and best conditions for innovation. (CSA-SA)



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Public-Private Partnership "Green Cars" *2012-GC*

- **Call title: FP7-2012- MATERIALS FOR GREEN CARS**
- **Call identifier: FP7-2012-GC-MATERIALS**
- **Date of publication: 20 July 2011**
- **Deadline: 1 December 2011 at 17.00.00 (Brussels local time).**
- **Indicative budget: EUR 35 million from the 2012 budget of which:**
 - ➔ EUR 10 million from Theme 7 – Transport (including Aeronautics).
- **Topic called:**
 - ➔ GC.NMP.2012-1. Innovative automotive electrochemical storage applications based on nanotechnology (CP-FP)





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ERA-NET 'Transport III'

ERANET-2012

- Call identifier: FP7-ERANET-2012-RTD
- Date of publication: 20 July 2011
- Indicative budget: EUR 3 million
- Topic called:
 - ➔ SST.2012.6-1. ERA-NET 'Transport III'





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Further information

- **CORDIS:**
<http://cordis.europa.eu/fp7/dc/index.cfm>
- **Transport web site:**
 - ➔ RTD: http://ec.europa.eu/research/transport/index_en.html
 - ➔ TREN: http://ec.europa.eu/transport/index_en.html
- **Helpdesk:**
http://ec.europa.eu/research/new_hp/index.cfm?pg=enquiries
- **Call for experts (evaluators and reviewers):**
<http://cordis.europa.eu/emmfp7>



European Green Cars Initiative: a coordinated approach

Transport Directorate, DG Research and Innovation - European Commission



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A European Economic Recovery Plan

- Adopted by the EC on 26 Nov 2008 and endorsed by the EU Council on 11-12 Dec 2008 *“To support innovation in manufacturing, construction and in the **automobile sector**, which have recently seen **demand plummet** as a result of the **crisis** and which face significant challenges in the transition to the **green economy**...”*
- The **European green car initiative** is one of 3 Public-Private Partnerships (PPPs) proposed, along with:
 - European energy efficient buildings initiative
 - Factories of the future initiative



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Public-Private Partnerships

- Objective: **to promote the convergence of** public interest **with** industrial **commitment and leadership in determining strategic research activities**
- Quick response: **use existing schemes & structures (FP7 and ETPs)**
- Smart investments : **to improve** competitiveness **of European industries & environmental protection**
- Implementation approach: cross-thematic calls **and exploitation of other possibilities**



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EGCI: interface with the industry



EPoSS

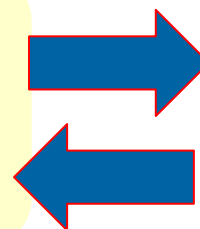
European Technology Platform
on Smart Systems Integration



SMARTGRIDS



Ad-hoc
advisory
group



European Commission



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Ad Hoc Industrial Advisory Group

Role:

- integration of all involved sectors and EC services
- strategic dialogue between Commission and industry
- implementation of the Green Cars Initiative as a PPP
- give advice for the R&D priorities of FP7 calls

Members (representing ETPs ERTRAC, EPoSS, SmartGrids, EIRAC):



- AVL
- Bosch
- Continental
- ECT
- FEV
- Fiat Research Center
- Iberdrola
- IFP
- KU Leuven
- Procter & Gamble
- PTV
- Renault
- Ricardo

- Schachinger
- Siemens
- Valeo
- VDI/VDE-IT
- Volkswagen
- Volvo
- +
- DG RTD
- DG INFSO
- DG MOVE
- DG ENVI
- DG ENTR
- EIB



EPoSS

European Technology Platform
on Smart Systems Integration



European Intermodal Research Advisory Council





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European Green Cars Initiative: 3 main streams of actions

- **Research activities**

Budget: €1 billion (€500 million from FP7 matched by a similar amount from industry and Member States)

- **EIB loans in support of industrial innovation**

Budget: €4 billion (additional amount for 2009-2010)

- **Demand size measures & public procurement: e.g. reduction of circulation and registration taxes for cars with low CO2 emission (no budget foreseen)**



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Estimated Budget Breakdown for the Green Car Initiative: FP7 contribution

Year	EC funding (€ Mio)
2010	ca. 118
2011	ca. 112
2012	ca. 143
2013	ca. 145
Total	518

	Transport	NMP	Energy	Envir.	ICT
Total (M€)	ca.238	ca.60	ca.75	ca.25	ca.120
%	44%	12%	15%	5%	24%





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EIB Loans: RSFF Risk-Sharing Finance Facility"

- **What is RSFF?**
*Loans for research, development and innovation.
A tool for implementing the Green Car Initiative.*
- **What does it offer?**
Loans of up to 50% of cost of research projects.
- **Who can apply?**
Entities of any size and ownership.
- **What specific requirements?**
Projects must be in line with FP7 objectives.
- **How to apply?**
Contact RDI@eib.org



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EGCI: research activities



Heavy duty vehicles (Internal combustion engines, technologies for energy optimisation)



Road and urban transport electrification



Logistics, co-modality and Intelligent Transport Systems





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Electrification - Challenges

- **Energy Storage Systems**
(cost, performance, lifetime, safety)
- **Drive Train Technologies**
(energy recovery, range extenders)
- **System Integration**
(energy efficient interplay of components)
- **Grid Integration**
(charging, metering, renewables, V2G)
- **Safety**
(crashworthiness, HV, emergency)
- **Transport System Integration**
(road infrastructures, intermodal use)





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www.green-cars-initiative.eu



PPP
European
Green Cars
Initiative



EPoSS

European Technology Platform
on Smart Systems Integration



SMARTGRIDS



European Intermodal Research Advisory Council





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Transport Research Arena • Europe 2012



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23-26 April, 2012 Athens - Greece
Sustainable Mobility through Innovation.



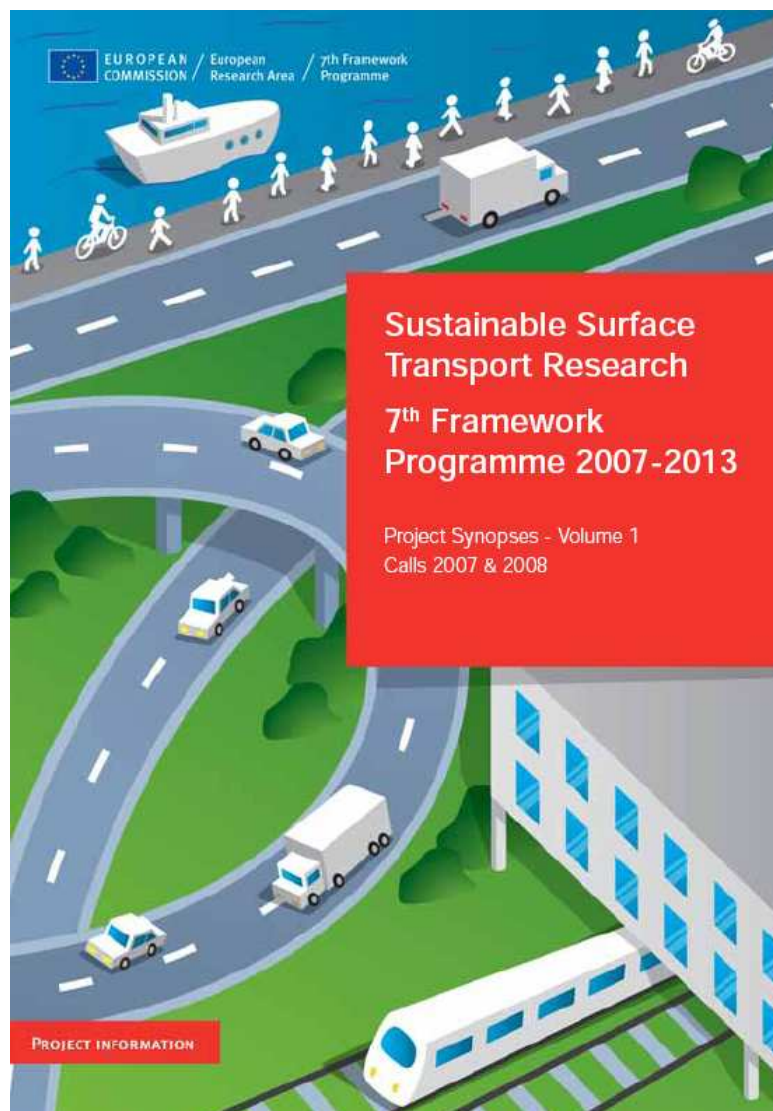
- **Scope: European Transport Research Conference on all surface transport modes (road, rail, waterborne) and cross-modal aspects (inc. intermodal freight transport, urban transport and ITS).**
- **Organisers: European Commission: DG RTD, INFSO and MOVE
CEDR
ETPs: ERTRAC, ERRAC, WATERBORNE TP**
- **Sessions: Plenary, Strategic, Technical, Poster and Special Sessions**
- **Exhibition: EC stand with key FP6/FP7 projects**
- **YEAR: Young European researchers competition**
- **For more information: <http://www.traconference.eu>**
- **Contact: Patrick.Mercier-Handisyde@ec.europa.eu or
Natascia.Lai@ec.europa.eu**



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FP7 SST Project synopses Volume 1





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Thank you for your attention !

