

# **ECTRI MEMBERS IN FP7 and COST PROJECTS**

**October 2013**

# ECTRI MEMBERS IN FP7 and COST PROJECTS

This document presents an overview of the European projects in which ECTRI Members are involved; it mainly focuses on 7th Framework Research and Development Programme (FP7) and COST funded projects. This overview is based on the available data ECTRI could gather, it is a non-exhaustive list which is regularly updated. The projects cover the rail, road, waterborne modes and cross-cutting issues.

The FP7 projects are listed by research themes:

- 1 mobility and urban mobility,
- 2 safety and security,
- 3 energy and environment,
- 4 freight and logistics,
- 5 Intelligent Transport Systems (ITS),
- 6 transport economics and policy, transversal issues.

The Directorates-General that launched the call (DG Research and Innovation (RDI), DG Mobility and Transport (MOVE), DG Communication, networks, content and technology (CONNECT) and DG Environment (ENV)) are also mentioned as well as the call identifiers and the task of the work programme, when known.

The Directorates-General that launched the call (DG Research and Innovation (RDI), DG Mobility and Transport (MOVE), DG Communication, networks, content and technology (CONNECT) and DG Environment (ENV)) are also mentioned as well as the call identifiers and the task of the work programme, when known.

Each project is presented as follows:

- short description of the project including objectives,
- coordinator and number of partners,
- ECTRI partners,
- duration,
- website, if available.

The projects which are officially sponsored by ECTRI are preceded by the ECTRI logo and printed **bold**.

ECTRI Members have been involved in **249 transport related projects in FP7**: **2** Networks of Excellence (NoE), **165** Collaborative Projects (CP), **71** Coordination and Support Actions (CSA), **3** Marie Curie Initial Training Networks (ITN), **1** Marie Curie International Incoming Fellowship (IIF), **1** Marie Curie Career Integration Grants (CIG), **1** Collaborative project for Specific Cooperation Actions dedicated to international cooperation partner countries (SICA), **2** Research for SME (SME) and **3** Large-scale Integrating Projects (IPS)

Additionally, ECTRI Members have been involved in **6** Policy Support Programmes / Intelligent Energy Europe (CIP) and **17 COST actions**.

# **Table of Content**

<b>LIST OF THE FP7 PROJECTS' ACRONYMS IN ALPHABETICAL ORDER .....</b>	<b>4</b>
<b>A – FP7 PROJECTS.....</b>	<b>7</b>
1. MOBILITY, URBAN MOBILITY .....	7
2. SAFETY AND SECURITY.....	9
3. ENERGY AND ENVIRONMENT .....	20
4. FREIGHT AND LOGISTICS .....	31
5. INTELLIGENT TRANSPORT SYSTEMS (ITS).....	47
6. TRANSPORT ECONOMICS AND POLICY, TRANSVERSAL ISSUES .....	65
<b>B – COST ACTIONS .....</b>	<b>82</b>

# List of the FP7 projects' acronyms in alphabetical order

2-BE-SAFE .....	12	DURABROADS .....	41
2DECIDE .....	57	DYNOTRAIN.....	57
3IBS .....	11	EATS .....	24
ACCESS 2 ALL .....	7	EAGAR.....	66
ACCESSIBLE .....	170	EASYBAT.....	36
ACEM RAIL .....	50	EBSF .....	9
ACTIBIO.....	168	ECODRIVER.....	63
ADAM4EVE.....	24	ECOGEM .....	61
ADAPTATION .....	70	ECOMOVE .....	60
ADSEAT .....	19	ECOSHELL .....	37
ADOSE.....	53	EFUTURE.....	63
AEGIS .....	171	e-Freight.....	46
AIMS .....	43	ELIBAMA .....	39
AMBER-ULV .....	25	EMAR .....	73
AMITRAN .....	65	ENABLE .....	45
ARTIC .....	52	ENNAH.....	28
ASPECSS.....	23	ENR2 .....	72
ASSESS .....	15	EPOCh .....	13
ASSET-Road.....	12	ERRAC Road Map .....	71
ASSIST .....	74	ETISplus .....	69
AUTOMAIN .....	46	ETNA .....	60
AVENUE.....	71	ETNA PLUS .....	77
AZIPILOT.....	42	EUCARGOEXPRESS.....	29
B2B LOCO.....	45	EURAXLES.....	20
BE LOGIC .....	43	EUREMCO .....	10
BESST .....	57	EURIDICE .....	44
BESTFACT.....	73	euroFOT .....	53
BESTPOINT .....	70	EUROLIION .....	38
CAPACITY4RAIL .....	79	EU-PORTRAITS .....	78
CAPITAL.....	11	EUTRAIN.....	74
CASPER .....	12	EVADER .....	23
CATCH.....	33	eVALUE .....	54
CARGOVIBES .....	35	EVITA.....	51
CITY MOVE .....	7	EWENT .....	32
CITYLOG.....	44	EXCROSS.....	22
CITY-HUB.....	10	FAROS .....	26
CLEANER D .....	33	FESTA .....	52
CLOSER.....	8	FIMCAR .....	15
CLOUD4all .....	62	FIRERESIST.....	34
CO2NTROL.....	30	FLOODPROBE .....	42
COFRET .....	47	FLOWHEAD.....	71
ComPair .....	30	FOSTERRAIL.....	81
COMPASS4D.....	65	FOT-NET.....	52
CONCERTOUR .....	7	FOTSIS .....	60
CONVENIENT .....	40	FREILOT .....	58
CORE .....	38	FUTRE.....	80
COVER .....	17	GHG-TransPoRD .....	68
CYCLADE.....	23	GINA .....	58
D-RAIL.....	26	GOAL.....	9
DaCoTA .....	17	GREEN EFFORTS.....	37
DECOMOBIL.....	62	HAVE-IT .....	52
DELTA .....	71	HEATRECAR .....	31
DETRA .....	73	HERCULES B .....	31
DHErgo.....	13	HERCULES-C .....	38
DIRECT_MAT.....	28	HCV .....	33
DRIVE C2X.....	61	HELIOS .....	32

HERMES .....	8	POINTER.....	9
HERMES .....	76	PORTOPIA .....	78
HOSANNA .....	29	POSE <sup>2</sup> IDON.....	31
HYCON2 .....	70	PREDRIVE C2X.....	51
I-C-EU .....	76	PROLOGUE .....	16
iCars.....	59	PROMARC .....	67
ICeWin .....	68	QUIESST.....	29
ICT-Emissions.....	48	RACE2050 .....	78
IFM PROJECT.....	54	RAILECT .....	15
iMobility Challenge.....	63	REFRESCO.....	79
iMobility Support .....	63	RESTRAIL .....	21
IMVITER.....	54	Re-road .....	28
INCRIS.....	76	RISPECT .....	14
INESS .....	19	ROADIDEA.....	53
InGAS.....	28	ROSATTE.....	54
INNOSUTRA.....	69	SAFEJOINT .....	39
INOMANS <sup>2</sup> HIP .....	36	SAFELAND .....	34
INSTANT MOBILITY .....	64	SAFELANE .....	23
INTERACTION .....	50	SAFERIDER .....	13
INROADS.....	62	SAFETRIP .....	16
INSIGHT.....	65	SAFEWAY2SCHOOL.....	16
Interactive.....	18	SARTRE 4 .....	18
INTERSAFE-2 .....	51	SATIE .....	64
ISABELLE .....	26	SAVELEC .....	22
ISI-PADAS.....	50	SAVE ME.....	16
ISEMOA .....	34	SECRET .....	25
ISTIMES .....	25	SecureMetro.....	14
ITERATE IT .....	55	ShLOW .....	12
iTETRIS .....	51	SERON.....	17
i-TRAVEL.....	50	SHOPERA .....	41
ITS TESTBEDS.....	55	SILENV.....	30
JOBVEHELEC.....	75	SKEMA .....	44
JOULES.....	41	SKIDSAFE .....	20
KOMODA .....	43	SMARTBATT.....	35
LOGINN .....	49	SmartCM.....	44
MARKET-UP .....	75	SmartFuSION .....	7
MARPOS.....	67	SMART RAIL .....	22
MERLIN .....	41	SMARTYards.....	79
METPEX.....	77	SMART-WAY .....	59
METRONOME.....	66	SPECTRUM.....	47
MOBiNET .....	64	SOLUTIONS.....	80
MoDe.....	30	Star-Net transport.....	66
MODSAFE .....	18	STARTER .....	39
MOWE-IT .....	40	STRAIGHTSOL .....	48
NEAR2.....	24	STREAMLINE.....	32
NEARCTIS .....	53	SUBITO .....	18
NICHES+ .....	8	SUPERGREEN.....	46
OASIS .....	59	SUSTRAIL.....	47
ON-TIME.....	74	SYMPASS .....	50
OPERA4FEV .....	37	TARGETS .....	35
OPTIBODY .....	21	TEAM.....	61
OPTIC .....	69	TeleFOT .....	52
OPTICITIES .....	11	TEFLES .....	34
OPTIMISM .....	72	TELLIBOX .....	43
OSIRIS .....	38	TIDE.....	10
PEDPCREACT.....	25	THORAX .....	13
PERSUADE.....	42	THROUGHLIFE.....	75
PLATINA .....	66	TRA2012 .....	75
POINT.....	69	TRANSCEND .....	72

TRANSFEU .....	19
TRANSFORUM .....	80
TransNEW .....	68
TRANSTOOLS 3 .....	72
TRA VISIONS .....	79
TREND .....	9
TRIMM .....	22
TRIPOD .....	36
TRI-VALUE .....	80
T-TRANS .....	64
TULCS .....	20
TYROSAFE .....	14
UDRIVE .....	77

ULYSSES .....	35
UNIVERSAAL .....	57
UNPLUGGED .....	40
URBAN-EV .....	42
USTIR .....	67
VECOM .....	58
VEL-WAGON .....	46
VERITAS .....	60
VIAJEO .....	55
VRUITS .....	26
WEATHER .....	32
YEAR-2010 .....	68

**Note:**

	Network of Excellence - NoE
	Collaborative Project - CP
	Coordination and Support Action - CSA
	Marie Curie Initial Training Network (ITN)/Career Integration Grants (CIG)/International Incoming Fellowship (IFF)
	Collaborative project for Specific Cooperation Actions dedicated to international cooperation partner countries -SICA
	Research for SME -SME
	Large-scale Integrating Project – IPS
	Policy Support Programme / Intelligent Energy Europe - CIP

## 1. Mobility, urban mobility

### 1. ACCESS 2 ALL “Mobility Schemes Ensuring Accessibility of Public Transport for All Users” – CSA-CA

**Call DG TREN (FP7-SST-2007-TREN-1)** (*New mobility concepts for passengers ensuring accessibility for all*)

The main aim of ACCESS 2 ALL is to encourage Public Transport operators belonging to the project target group to adopt innovative technological concepts and mobility schemes that enable high quality mobility and transportation services for all, as well as to provide their personnel with the necessary knowledge on the particularities of specific user groups, such as the elderly and disabled, ICT-illiterate, dyslexic and illiterate people, etc. ACCESS 2 ALL aimed at defining concrete mobility schemes, guidelines and policy recommendations, ensuring accessibility of Public Transport to ALL users, through the coordination of current research efforts, the production of common research roadmaps, the identification of best practice models and the appropriate use of ICT aids and networks. The achievement of all above stated objectives will be measured and verified through well specified milestones and specific success assessment criteria. This project includes 9 partners. Coordinator: ERT, France

• **ECTRI partners:** HIT and INRETS

Duration: 24 months, from December 2008 to November 2010

<http://www.access-to-all.eu>

### 2. CONCERTOUR “Concerted innovative approaches, strategies, solutions and services improving mobility and European tourism” – CSA-SA

**Call DG RTD (FP7-TPT-2007-RTD-1)** (*Transport contribution to improve competitiveness of European tourism*)

CONCERTOUR is an horizontal activity (Support Action) aiming at creating synergies between transport research and tourism services in Europe, improving competitiveness, encouraging co-modality, focusing on the subject regardless of the involved DG Programme. The overall objective is to propose new concepts guiding tourists through “the stages of whole travel itinerary” and to support EU policies in improving tourism competitiveness, considering emerging needs and tourism demand by acting on main aspects affecting tourism market (e.g. intermodality, information, ticketing).

This project includes 7 partners. Coordinator: FIT Consulting, Italy

• **ECTRI partners:** INRETS and TØI

Duration: 21 months, from January 2008 to September 2009

<http://concertourproject.eu>

### 3. CITY MOVE “City multi-Role Optimized Vehicle” – CP

**Call DG RTD (FP7-SST-2008-RTD-1)** (*New vehicle concepts for the delivery of goods*)

CITY MOVE aims to develop a new concept for urban delivery vehicles, a real breakthrough from the actual vehicle platforms, using the latest state-of-the-art technologies to guarantee the market introduction in short term (leaving from 2013 i.e. two years after the end of the project). It is a co-operative venture between the leading freight vehicle companies in Europe and other key stakeholders. The aim is to develop an innovative freight vehicle solution that is adaptable to the diverse needs of European cities. The solution will provide freight transport vehicles that are secure, flexible, reliable, clean, CO<sub>2</sub> energy efficient and safe. Developing this common industrial platform for future freight transport systems in Europe requires a greater emphasis on economic efficiency, but combined with a necessary emphasis on social, energy and environmental considerations. These are paramount concerns for European city policy makers when matching the objectives of local economic growth with a sustainable environment. Developing such a range of freight vehicles requires a co-ordinated effort by all stakeholders, so that future freight vehicles have the flexibility to adapt to changes in the city commercial environment over the short, medium and long terms.

This project includes 13 partners. Coordinator: IVECO, Italy

- **ECTRI partners:** LET and VTI

Duration: 36 months, from January 2010 to December 2012

<http://www.citymoveproject.eu>

#### 4. NICHES+ “New and innovative concepts for helping European transport sustainability - towards implementation” – CSA-CA

**Call DG RTD (FP7-SST-2007-RTD-1)** (*New mobility concepts for passengers ensuring accessibility for all; Intelligent mobility systems and multi-modal interfaces for transport of passengers*)

The mission of NICHES+ is to promote innovative measures for making urban transport more efficient and sustainable and to move them from their current “niche” position into a mainstream urban transport application. The project looks into the details of 12 innovative measures, structured in 4 thematic areas: 1. Innovative concepts to enhance accessibility, 2. Concepts for Efficient Planning and Use of Infrastructure and Interchanges, 3. Traffic Management Centres and 4. Automated and Space Efficient Transport Systems

This project includes 6 partners. Coordinator; POLIS, Belgium

- **ECTRI partner:** UNEW

Duration: 36 months, from May 2008 to April 2011

<http://www.niches-transport.org/>

#### 5. CLOSER “Connecting LOng and Short-distance networks for Efficient tRansport” – CP-FP

**Call DG RTD (FP7-TPT-2008-RTD-1)** (*New mobility/organisational schemes: interconnection between short and long-distance transport networks*)

The European Transport Policy (ETP) proposes the concept of co-modality as an essential instrument to achieve, at the same time, a high level of mobility and of environmental protection. But the existing transport system still remains far away from that concept. The interface between long and short-distance transport networks remains as the weak link in the transport chain for both, passengers and freight. The purpose is to develop innovative tools for the analysis of interfaces, check these tools in a number of case studies, and make recommendations to stakeholders.

This project includes 7 partners.

- **ECTRI partners:** FhG, Germany (coordinator), CDV, CERTH-HIT, Ifsttar, TØI, VGTU-TMI and VTT

Duration: 36 months, from January 2010 to December 2012

<http://www.closer-project.eu>

#### 6. HERMES “High Efficient and Reliable arrangeMEnts for CroSsmodal Transport” – CP-FP

**Call DG RTD (FP7-TPT-2008-RTD-1)** (*New mobility/organisational schemes: interconnection between short and long-distance transport networks*)

HERMES project will provide development and analysis of new mobility schemes and associated organisational patterns at the interface and interconnection between long distance transport networks and local/regional transport network and local regional transport networks. Although these are conceptually simple operations, requiring only some real-time telecommunication, there are organizational and contractual difficulties in its realisation. The first part should concentrate on identification of the key requirements of the travellers, the corresponding services and necessary underlying company agreements to provide them, followed by a business plan for the operation. The second part of the project would have demonstrations in the selected corridors for a period of at least 6 months of field experience. The final product of the project should be a handbook of recommendations based on the analytical part and on the demonstration part of the project. Prototypes for the business model of the innovative services will be developed and further tested in case studies for validation of its functional, economic and organizational aspects aiming to provide recommendations regarding enhanced co-ordination between decision-making levels on issues related to the interconnection of transport networks of different scales and modes, addressing institutional, legal, design, planning, technical and deployment aspects.

This project includes 11 partners. Coordinator: UTL-IST, Portugal

- **ECTRI partners:** CERTH-HIT, LET and UPM





Duration: 24 months, from January 2010 to December 2011

<http://www.hermes-7fp.eu>

## 7. POINTER "Support Action for Evaluation and Monitoring of CIVITAS Plus" – CSA-SA

**Call DG TREN (FP7-SST-2007-TREN-1)** (*Support action for evaluation and monitoring*)

The aim of CIVITAS POINTER project is to support the monitoring of the demonstration projects and cities by helping to guide the monitoring process via standard management tools. It strives to help all the CIVITAS Plus cities to understand the importance of data collection and evaluation as well as help the cities in a practical way with all work on evaluation. This will be achieved by setting up practical guidelines for data collection, helping with the ex-ante evaluation, communicating in a direct way with the cities through organising workshops. Furthermore, CIVITAS POINTER will undertake a cross-site evaluation for CIVITAS Plus based upon all the data collected by the cities.

This project includes 7 partners. Coordinator: TNO, the Netherlands

- ECTRI partner: CDV

Duration: 52 months, from September 2008 to March 2013

## 8. EBSF "European Bus System of the Future" – CP-IP

**Call DG RTD (FP7-SST-2007-RTD-1)** (*High Quality Public Transport*)

The research carried out in the project will lead to the conception and development of an innovative high-quality bus system that will demonstrate the full potential of a new generation of urban bus networks. The project will build upon state-of-the-art clean vehicular technologies and concentrate on improving the bus system as a whole.

This project includes 21 partners. Coordinator: UITP, Belgium

- ECTRI partners: FhG, Ifsttar, UNEW and UPM

Duration: 48 months, from September 2008 to August 2012

<http://www.ebsf.eu>

## 9. TREND "Test of Rolling Stock Electromagnetic Compatibility for cross-Domain interoperability" – CP-FP

**Call DG RTD (FP7-SST-2011-RTD-1)** (*Rail system interoperability (regulatory and non-legislative interoperability based on technological innovations)*)

The TREND project has the objective to progress beyond the state of the art, addressing this situation by means of the design of a test setup and a test procedure that enable the harmonization of freight and passengers rolling stock approval tests for EMC, focusing not only on interferences with broadcasting services but also on railway signalling systems. TREND will also identify and design the cross acceptance test sites on electrified and non-electrified lines that reproduce representative worst case conditions for steady state and transient behaviours. These worst case conditions will be obtained thanks to the electromagnetic modelisation of the rolling stock within the rail and feeding infrastructure.

This project includes 7 partners. Coordinator: Centro de estudios e invetigaciones tecnicas, Spain

- ECTRI partner: Ifsttar

Duration: 30 months, from November 2011 to April 2014

<http://www.trend-eu.org/>

## 10. GOAL "Growing Older, stAying mobile: The transport needs of an ageing society" – CP – FP

**Call DG RTD (FP7-TPT-2011-RTD-1)** (*Transport needs for an ageing society*)

The aim of GOAL is to provide an action plan for innovative solutions to fulfil the transport needs of an ageing society. This action plan will be developed by state-of-the-art reviews, identification of possible and relevant societal developments and alternatives to transport. We identify relevant research gaps and product developments through contacts in the USA and Japan. The focus of GOAL is on land-based transport.

This project includes 6 partners. Coordinator: TNO, the Netherlands

- ECTRI partner: AIT

Duration: 35 months, from September 2011 to September 2013

<http://www.goal-project.eu/>

**11. EUREMCO “European Railway Electromagnetic Compatibility” – CP-FP**

**Call DG RTD (FP7-SST-2011-RTD-1)** (*Rail system interoperability - regulatory and non-legislative interoperability based on technological innovations*)

The EUREMCO objective is to harmonise and reduce the certification process of rail vehicle against Electromagnetic Compatibility (EMC). The main concept of the project is to specify the conditions for cross-accepted certification all around Europe, through sound scientific methodologies allowing for the identification of the transfer functions to be applied to results obtained on different test tracks in different countries, for the same power supply system. For this purpose, a common understanding of transients very short and very high interference currents and a harmonized test procedure will be also developed. By addressing also non electrified lines, the EUREMCO project will cover the whole European railway network.

By closing the corresponding open points in the TSIs, the EUREMCO project will lead to a time and cost reduction of the certification process of rail vehicle against Electromagnetic Compatibility issues, which correspond to an estimated saving of 60m for the next 15 years.

This project includes 18 partners. Coordinator: UNIFE, Belgium

- ECTRI partner: IK

Duration: 36 months, from October 2011 to September 2014

<http://www.euremco.eu/>

**12. CITY-HUB – CP-FP**

**Call DG RTD (FP7-SST-2012-RTD-1)** (*Innovative design and operation of new or upgraded efficient urban transport interchanges*)

CITY-HUB starts by analysing the best and bad practices developed from current urban interchanges. Apart from the state of the practice, the case study approach includes surveys to identify the travellers' priorities in transfer trips. All these will feed the development of an integrated model and a comprehensive set of methodological guidelines to obtain the maximum efficiency by upgrading existing urban interchanges or by building new ones. City-HUB aims to make them more accessible to all users. The approach is integrated, covering the different aspects of an urban interchange in order to increase the use of public transport, improve the efficiency and propose a new business model.

The integrated model will be validated through a set of European case studies selected as demonstrators. The model and methodological guidelines will be fully exploited through a European transferability exercise and dissemination initiatives to target groups throughout Europe.

This project includes 9 partners.

- ECTRI partners: UPM, Spain (coordinator), CDV, CERTH-HIT, Ifsttar, KTI, TRL, TØI and VTT

Duration: 30 months, from September 2012 to February 2015

<http://www.cityhub-project.eu/>

**13. TIDE “Transport Innovation Deployment for Europe” – CSA**

**Call DG RTD (FP7-SST-2012-RTD-1)** (*Take-up of transport innovation in urban and regional transport*)

The mission of the TIDE project will be to enhance the broad transfer and take-up of 15 innovative urban transport and mobility concepts throughout Europe and to make a visible contribution to establish them as mainstream measures. The TIDE partners will make a range of new and feasible solutions easily accessible to address key challenges of urban transport such as energy efficiency, decarbonisation, demographic change, safety, access for all and new economic and financial conditions. TIDE will focus on 15 innovative concepts in five thematic clusters: financing models and pricing measures (1), non-motorised transport (2), network and traffic management to support traveller information (3), electric vehicles (4) and public transport organisation (5).

This project includes 13 partners. Coordinator: POLIS, Belgium

- ECTRI partner: FhG

Duration: 36 months, from October 2012 to September 2015

<http://www.tide-innovation.eu/>



**14. 3IBS “The Intelligent, Innovative, Integrated Bus Systems” – CSA-CA****Call DG RTD (FP7-SST- 2012-RTD-1) (Priorities for road safety research in Europe)**

The 3iBS project will maintain the current research activities in top of promoting and exploiting their key findings, will develop bus-system research, exploit and implement key solutions, promote the dissemination and exchange of knowledge on a global scale. It will achieve these objectives through: 1. The development of a Roadmap for European Advanced Bus Systems research that will support the European and National institutions to develop efficient answers to citizens mobility needs present and future; 2. The definition of a work-plan for the exploitation of Advanced Bus Systems research results, to move from research (use of funding to build new ideas) to innovation (implementation of new ideas into business) and 3. The identification, dissemination and transfer of most innovative concepts and solutions for Advanced Bus Systems to a wider audience in European cities and regions as well as outside Europe

This project includes 16 partners. Coordinator: Union Internationale des Transports Publics, Belgium

- ECTRI partner: FhG

Duration: 30 months, from October 2012 to March 2015

<http://www.3ibs.eu>

**15. CAPITAL “CIVITAS CAPITAL – making the best of CIVITAS!” - CSA****Call DG MOVE (FP7-SST-2013-MOVE-1) (Capitalising CIVITAS knowledge and experience)**

The mission of CIVITAS CAPITAL is to contribute significantly to the goals of the EU’s Transport White Paper by capitalising systematically on the results of CIVITAS and creating an effective “value chain” for urban mobility innovation. CAPITAL will initiate and support a mainstreaming process of CIVITAS principles based on a strengthened community of stakeholders. CAPITAL will help CIVITAS to build the bridge towards a more advanced identity within Horizon 2020.

This project includes 14 partners. Coordinator: Rupprecht Consult, Germany

- ECTRI partner: CDV

Duration: 36 months, September 2013 to August 2016

**16. OPTICITIES “Optimise Citizen Mobility and Freight Management in Urban Environments”-CP****Call DG RTD (FP7-SST-2013-RTD-1) (Managing integrated multimodal urban transport network)**

OPTICITIES’ strategy focuses on the optimisation of transport networks through the development of public/private partnerships and the experimentation of innovative ITS services. OPTICITIES addresses both passenger and freight transport issues supporting a user-centered approach.

This project includes 23 partners. Coordinator: Communauté Urbaine de Lyon, France

- ECTRI partners: POLITO and UPM

## 2. Safety and security

### 17. ShLOW "Show Me How Slow: Mobilising Evidence from Transport Research into Speed" – CSA-SA

#### **Call DG RTD (FP7-TPT-2007-RTD-1)** (*Raising Citizen Awareness of Transport Research in Europe*)

The aim of ShLOW is to have dedicated students undertake speed management activities within their local surroundings in ten EU countries. These actions will help achieve significant reductions in excessive and illegal speeds across the EU's road network. It is also to spread the Know-How from transport research into speed management across Europe and train and encourage future road safety, transport, and environmental sector professionals to carry out effective speed management measures within their career.

This project includes 14 partners. Coordinator: ETSC, Belgium

• **ECTRI partners:** CDV, CETH-HIT, ITS and UVEG

Duration: 24 months, from March 2008 to February 2010

<http://www.shlow.eu>

### 18. 2-BE-SAFE "2-wheeler behaviour and safety" – CP-FP

#### **Call DG RTD (FP7-SST-2007-RTD-1)** (*Human physical and behavioural components & safety and security by design*)

The high rate of motorcycle-related deaths and injuries calls for new and refined countermeasures, deriving from solid behavioural and ergonomics research. In this proposal we outline an innovative program of research, involving partners from Europe, Israel and Australia, that directly targets those behavioural and ergonomic factors cited in the MAIDS study as contributing to PTW crashes.

This project includes 26 partners. Coordinator: Cyprus University of Technology, Cyprus

• **ECTRI partners:** AIT, BAST, CDV, CETH-HIT, Ifsttar, TRL, and VTT

Duration: 36 months, from January 2009 to December 2011

<http://www.2besafe.eu>

### 19. ASSET-Road "Advanced Safety and Driver Support in Essential Road Transport" – CP-IP

#### **Call DG RTD (FP7-SST-2007-RTD-1)** (*Integral system solutions for safety*)

ASSET project promotes a holistic traffic safety theory where safety is a product of four different entities: driver and operator, vehicle and traffic, infrastructure and environment, regulation and control as a push to traditional Systems Theory.

The work focuses on the most common interactions of these entities based on the knowledge of accident causation and nature of multiple factors in the birth of accidents.

This project includes 23 partners. Coordinator: PTV, Germany

• **ECTRI partners:** VTI and VTT

Duration: 42 months, from July 2008 to December 2011

<http://www.project-asset.com>

### 20. CASPER "Child Advanced Safety Project for European Roads" – CP-FP

#### **Call DG RTD (FP7-SST-2007-RTD-1)** (*Human physical and behavioural components*)

The objectives of CASPER are to reduce fatalities and injuries of children in traffic accidents. Children are more and more often involved in all modes of transportations; they have no choice, they are bound to the adult careers, taking for granted that the adults will take good care of them.

CASPER will address two main aspects: 1. on one hand, the improvement of the efficiency of child protection through the development of innovative tools, such as sensors, dummies models and child human models, completed by test procedures in frontal and lateral impacts, with associated injury criteria, in order to provide to CRS (Child Restraint Systems) manufacturers the possibility to develop and test their products at a lower cost, with new methods, and at a same guarantee of efficiency; 2. on another hand, the analysis of the reasons and consequences of misuse of CRS's and of the influence of the conditions of transportation of children, as compared to the certification test procedures. The main deliverables will be the improvement of behaviour of dummies, associated to new sensors, as well as dummies and child human numerical models and improved test procedures, allowing solving the issues of children protection. Reports on the conditions of use of CRS and consequences in accidents, including campaigns of information, will be made in order to solve the problem of children involved in traffic accidents.

This project includes 14 partners. Coordinator: PSA Renault, France

- ECTRI partners: BAST and Ifsttar

Duration: 36 months, from April 2009 to March 2012

<http://www.casper-project.eu>

## 21. DHErgo “Digital Humans for Ergonomic design of products” – CP-FP

**Call DG TREN (FP7-SST-2007-TREN-1)** (*Competitive product development, Cost effective manufacturing and maintenance*)

Ergonomic evaluation of a product often requires building up a physical mock-up or a prototype, having a group of experts or a representative sample of users to test it and to give their discomfort feeling. Digital Mock-Ups (DMU) together with Digital Human Models (DHM), are more and more used in the early phase of product design in order to reduce the product development time and cost. In order to help the designer to evaluate the future product, the digital human should ideally behave like a real human being, not only in terms of anthropometry but also in terms of motion, discomfort perception and work related tissue injury. Therefore the main objective of the project is to develop more advanced digital humans for ergonomic design of products (DHErgo).

This project includes 10 partners. Coordinator: ERT, France

- ECTRI partner: Ifsttar

Duration: 36 months, from September 2008 to August 2011

[www.dhergo.org](http://www.dhergo.org)

## 22. EPOCh “Enabling protection for older children” – CP-FP

**Call DG RTD (FP7-SST-2007-RTD-1)** (*Safety and security by design*)

The EU Directive that covers seat belt wearing requires children less than 150cm tall (or where there is an exemption - 135cm) travelling in cars, vans and goods vehicles to use an appropriate child restraint. The concept of EPOCh is to drive the improvement of safety for older children travelling in vehicles. This will be done by extending the development of the protocols, test procedures and measurement tools necessary to carry out impact tests for restraint systems designed to protect older and larger children in vehicle collisions.

This project includes 5 partners.

- ECTRI partner: TRL, United Kingdom (coordinator)

Duration: 36 months, from January 2009 to December 2011

<http://www.epochfp7.org>

## 23. THORAX “Thoracic injury assessment for improved vehicle safety” – CP-FP

**Call DG RTD (FP7-SST-2007-RTD-1)** (*Human physical and behavioural components*)

The objective of THORAX is to develop the required understanding in thoracic injury mechanisms and to implement this into numerical and experimental tools that will enable the design and evaluation of advanced vehicles restraint systems that offer optimal protection for a wide variety of car occupants.

This project includes 12 partners. Coordinator: First Technology safety systems, the Netherlands

- ECTRI partners: BAST, Ifsttar, TRL and UPM

Duration: 42 months, from February 2009 to July 2012

<http://www.thorax-project.eu>

## 24. SAFERIDER “Advanced telematics for enhancing the SAFETY and comfort of motorcycle RIDERS” – CP-FP

**Call DG INFSo (FP7-ICT-2007-1)** (*For intelligent vehicles and mobility services*)

SAFERIDER aims to enhanced PTW riders’ safety by applying ADAS/IVIS on PTWs of all types for the most crucial functionalities and develop efficient and rider-friendly interfaces and interaction elements for riders’ comfort and safety. Relevant applications prioritisation is based on in-depth accident studies, riders needs and wants, as well as benchmarking and ergonomic inspection of existing applications.

This project includes 20 partners.

- ECTRI partners: CERTH-HIT, Greece (coordinator), BAST, FhG and Ifsttar

Duration: 36 months, from January 2008 to December 2010

<http://www.saferider-eu.org>



**25. TYROSAFE “TYre and Road surface Optimisation for Skid resistance And Further Effects” – CSA -CA**  
**Call DG RTD (FP7-SST-2007-RTD-1)** (*Safety and security by design, Vehicle/vessels and infrastructure concepts for intermodal freight transport*)

The main objectives of the TYROSAFE project are to raise awareness, to coordinate and prepare for European harmonisation and to optimise the assessment and management of essential tyre/road interaction parameters in order to increase safety and support greening of European road transport.

This project includes 7 partners.

• ECTRI partners: AIT, Austria (coordinator), BAST, DVS, Ifsttar and TRL

Duration: 24 months, from July 2008 to June 2010

<http://tyrosafe.fehrl.org>

**26. RISPECT “Risk-based expert system for through life ship structural inspection and maintenance and new-build ship structural design”- CP-IP**

**Call DG RTD (FP7-SST-2007-RTD-1)** (*Competitive product development; Cost effective manufacturing and maintenance*)

The primary objective of the RISPECT project is to use ship structural inspection results (coating condition, corrosion, cracks and deformation) along with the calculated expected results to guide future inspections required to achieve a minimum structural reliability. This probabilistic inspection planning is not new but this project takes the method a stage further to use data from large numbers of ships in a central statistical database to contribute to the decision making process for any one ship. This has the effect of combining the traditional Classification Society broad view with the usual probabilistic method that is based on data from one ship only. Secondary objectives of the project are to improve communications between ship owners, managers, inspectors and class, and to use the results as input to new design.

This project includes 11 partners. Coordinator: University of Strathclyde, United Kingdom

• ECTRI partner: UNEW

Duration: 54 months, from October 2010 to March 2013

<http://www.rispect.eu/>

**27. SecureMetro “Inherently secure blast resistance and fire safe metro vehicles” – CP-FP**

**Call DG RTD (FP7-SST-2008-RTD-1)** (*Safety and security by design, Human components*)

The aim of this project is to increase safety and security of metro vehicles from terrorist attacks by explosives and firebombs through materials choices and design, thereby increasing resilience and reducing the impact of attacks on passengers, staff, infrastructure and property. The SecureMetro project will consider threats from conventional explosives and firebombs. The four project objectives are: 1. To increase metro vehicle resilience to terrorist bomb blast through selection of vehicle materials and structural design. This will reduce injuries from fragments of vehicle materials and improve structural integrity in blast situations, offering greater security to passengers and staff. This includes enhancing the ability of a vehicle to remain on the track and keep moving so that underground rescue is not required. 2. To increase security against a firebomb attack through design of fire barriers and fire suppression technology while also contributing to passenger safety from accidental or vandalism fires. 3. Through increasing resilience of vehicles to blast and fire attacks and reduced damage to adjacent vehicles and infrastructure, speed up recovery following attack, allowing the rail system to “bounce-back” to normal operation quickly. 4. Reduce the attractiveness of metro systems as a target for attack by reducing deaths and injuries, increased resilience, reducing economic impact and making recovery faster.

This project includes 11 partners.

• ECTRI partners: UNEW, United Kingdom (coordinator) and Ifsttar

Duration: 36 months, from January 2010 to December 2012

<http://securemetro.inrets.fr>

**28. RAILECT “Development of an ultrasonic technique, sensors and systems for the volumetric examination of alumino-thermic rail welds” – SME**

**Call DG RTD (FP7-SME-2007-RTD-1)** (*Research for the benefit of SMEs*)

RAILECT is an FP7 project bringing together expertise in the fields of ultrasonic Non Destructive Evaluation NDE inspection, fracture mechanics and welding technology from around Europe. Its main aim is to produce a “clamp-on” ultrasonic testing device that performs an ultrasonic test of the weld and classifies the weld according to pre-determined quality criteria.

This will involve novel developments in advanced phased array probe technology and instrumentation to include means of the probes being automatically deployed, electronically scanned and the beam steered as well as means of rapid analysis and interpretation of the signals in order to compare defect sizes with defined acceptance criteria.

This project includes 8 partners.

• ECTRI partner: UNEW

Duration: 27 months, from September 2008 to December 2010

<http://www.railect.com/>

## 29. FIMCAR “Frontal Impact and Compatibility Assessment Research” – CP-FP

**Call DG RTD (FP7-SST-2008-RTD-1)** (*Safety and security by design*)

For the real life assessment of vehicle’s safety in frontal impact accident the compatibility (described by the self-protection level and the structural interaction) between the opponents is crucial. Although compatibility has been analysed worldwide for years, no final assessment approach was defined. Taking into account the EEVC WG15 and the FP5 VC-COMPAT project activities, two test approaches are the most important candidates for the assessment of compatibility. Both are composed of an off-set and a full overlap test procedure. However, no final decision was taken. In addition another approach (tests with a moving deformable barrier) is getting more and more in the focus of today’s research programmes. Within this project different ODB, full overlap and MDB test procedures will be analysed to be able to propose a compatibility assessment approach, which will be accepted by a majority of the involved industry and research organisations.

This project includes 17 partners. Coordinator: Technische Universität Berlin, Germany

• ECTRI partners: BAST and TRL

Duration: 36 months, from October 2009 to September 2012

<http://www.fimcar.eu>

## 30. ASSESS “Assessment of Integrated Vehicle Safety Systems for improved vehicle safety” – CP-FP

**Call DG RTD (FP7-SST-2008-RTD-1)** (*Safety and security by design*)

The objective of the ASSESS Project is to enable widespread introduction of these systems by developing required understanding on the evaluation of Integrated Vehicle Safety Systems and implementing these findings in test and assessment procedures that will set targets for optimal systems in terms of occupant protection. To address this objective, ASSESS mobilises the European car industry and research community to develop a relevant set of test and assessment methods applicable to a selection of current integrated vehicle safety systems. Methods will be developed for driver behavioural aspects, pre-crash sensing performance and crash performance under conditions influenced by pre-crash driver and vehicle actions. The knowledge gained will be implemented in a proposal for test and assessment procedures that will be evaluated on the basis of actual systems currently offered to the market. By doing so, ASSESS aims to stimulate the introduction of new “crucial” technologies in vehicles to further reduce road fatalities and injuries to car occupants in Europe and to make the traffic environment safer for all road users. As such, the project also aims to increase the level of competitiveness of the European automobile industry; safety is a proven selling point.

This project includes 15 partners. Coordinator: First Technologies Safety System Europe, the Netherlands

• ECTRI partners: BAST and TRL

Duration: 42 months, from July 2009 to December 2012

<http://www.assess-project.eu>

**31. SAFEWAY2SCHOOL “Integrated System for safe transportation of children to school” – CP-FP****Call DG RTD (FP7-SST-2008-RTD-1) (Human components)**

SAFEWAY2SCHOOL aims to design, develop, integrate and evaluate technologies for providing a holistic and safe transportation service for children, from their home door to the school door and vice versa, encompassing tools, services and training for all key actors in the relevant transportation chain. These include optimal route planning and rerouting for school buses to maximize safety, on-board safety applications (i.e. for speed control and seat belts), intelligent bus stops, effective warning and information systems for bus drivers, children, parents and the surrounding traffic; as well as training schemes for all actors. The project innovative systems, services and training schemes will be tested in 4 sites Europe wide, including North (Sweden), Central (Austria), South (Italy) and Eastern (Poland) Europe; to evaluate their usability, efficiency, user acceptance and market viability; taking into account the very different children's transportation to/from school systems across the different European regions as well as key cultural and socio-economic aspects.

This project includes 15 partners.

- ECTRI partners: VTI, Sweden (coordinator), CETH-HIT, Ifsttar and ITS

Duration: 36 months, from September 2009 to August 2012

**32. SAFETRIP “Satellite Application For Emergency handling, Traffic alerts, Road safety and Incident Prevention” – CP-IP****Call DG RTD (FP7-SST-2008-RTD-1) (Integral system solutions for safety)**

The concept of SafeTRIP is to provide an integrated system platform that will allow any third party company to develop applications for the road market. During the project, we will develop the SafeTRIP platform and demonstrate the following applications: provision of real-time traffic information and warnings generated by the collection of data coming from other vehicles, emergency call system, tracking in real-time of vulnerable passengers transports. “SafeTRIP” will integrate innovative satellite technologies and communication features: accurate satellite positioning (GPS / EGNOS / GALILEO), 2-way data communication via satellite, Digital radio broadcast via satellite in the new S-band. These unique features allow exploring a new generation of services in order to improve the road safety and to contribute to the environment protection.

This project includes 20 partners. Coordinator: SANEF, France

- ECTRI partners: DLR and FhG

Duration: 36 months, from October 2009 to September 2012

<http://www.safetrip.eu>

**33. SAVE ME “System and Actions for VEHICLES and transportation hubs to support Disaster Mitigation and Evacuation” – CP-FP****Call DG RTD (FP7-SST-2008-RTD-1) (Human components)**

SAVE ME aims to develop a system that detects natural (i.e. earthquake, fire, etc.) and man-made (i.e. terrorist attacks) disaster events in public transport terminals / vehicles and critical infrastructures (i.e. tunnels, and bridges) and that supports quick and optimal mass evacuation guidance, to save the lives of the general public and the rescuers, giving particular emphasis to the most vulnerable travellers (i.e. children, elderly and disabled).

This project includes 11 partners.

- ECTRI partners: UNEW, United Kingdom (coordinator), CETH-HIT and UPM

Duration: 36 months, from October 2009 to September 2012

<http://www.save-me.eu>

**34. PROLOGUE “Promoting real Life Observations for Gaining Understanding of road behaviour in Europe” – CP-FP****Call DG RTD (FP7-SST-2008-RTD-1) (Safety and security by design, Human components)**

The main objective of PROLOGUE is to prove the feasibility and usefulness of a large-scale European naturalistic observation study. The project aims at road safety researchers and other stakeholders including



car industry, insurance companies, driver training and certification organisations, road authorities, and governments. Whereas road safety is the main motive, the project will also look at the relevance for environmental issues, e.g. CO<sub>2</sub> emissions, and traffic management. Based on inventory studies, a series of small-scale field trials, and close involvement of user groups and stakeholders, PROLOGUE will result in recommendations and an outline for a large-scale naturalistic study, dealing with research questions, methodology and technology for data collection, data storage, data reduction, data mining and data analysis. Communication and dissemination to all potential stakeholders are vital to gain their support for and involvement in a large-scale European study.

This project includes 9 partners. Coordinator: SWOV, the Netherlands

• **ECTRI partners:** CETH-HIT, TØI and UVEG

Duration: 24 months, from August 2009 to August 2011

<http://www.prologue-eu.eu>

### 35. DaCoTA "Road safety Data Collection, Transfer and Analysis" – CP

**Call DG TREN (FP7-SST-2008-TREN-1)** (*Improving safety and security*)

Evidenced based approaches lie at the heart of the most successful road safety policies and accident and other road safety data is a key component. No single set of data can support all road safety questions and the European Road Safety Observatory has been developed as a focus for a range of data and information types. DaCoTA WP3 aims to continue the efforts made in previous projects by gathering, consolidating and standardizing the available road safety data and information, through the exploitation of all available sources, in a systematic and comprehensive way.

This project includes 17 partners. Coordinator: Loughborough University, United Kingdom

• **ECTRI partners:** Ifsttar, ITS and TRL

Duration: 18 months, from January 2011 to June 2012

<http://www.dacota-project.eu>

### 36. COVER "Coordination of vehicle and road safety initiatives" – CSA-CA

**Call DG RTD (FP7-SST-2007-RTD-1)** (*Integral system solutions for safety*)

The general objectives of COVER are to develop a harmonised and consistent direction of research and to accelerate the implementation of research findings of four complementary EU and US initiatives dealing with road and, in particular, vehicle safety. To maximise the benefits gained from the individual initiatives synergies between the projects will be fully exploited by coordinating the exchange and usage of results, joining dissemination actions towards relevant stakeholders, and exchanging of best practices and policies with respect to relevant aspects like test methods and deployment strategies. For the objective of dissemination both towards relevant high-level stakeholders and the general public a coordinated approach will be an important factor in providing a clear message and obtaining the necessary visibility.

This project includes 7 partners. Coordinator: FTSS Europe, the Netherlands

• **ECTRI partners:** BAST and TRL

Duration: 48 months; from April 2009 to March 2013

<http://www.biomechanics-coordination.eu>

### 37. SERON "Security of road transport networks" – CP-FP

**Call DG ENTR (FP7-ICT-SEC-2007-1)** (*Security systems integration, interconnectivity and interoperability: Risk assessment and contingency planning for interconnected transport or energy networks*)

The SeRoN project will undertake a holistic approach both at individual infrastructure object and at road network level. Its main objectives are to investigate the impacts of possible terrorist attacks on the transport network, in particular the resulting regional and supra-regional impacts on transport links and their economic impacts. SeRoN will focus on the development of a methodology which is to help owners and operators to analyze critical road transport networks or parts hereof with regard to possible terrorist attacks. It will evaluate planned protection measures for critical road transport infrastructures concerning their impact on security and cost-effectiveness. Finally SeRoN will give adequate recommendations concerning possible current and future threat situations and the related most effective security measures.

This project includes 7 partners. Coordinator: PTV, Germany

• **ECTRI partner:** BAST

Duration: 36 months, from November 2009 to October 2012

<http://www.seron-project.eu/>

**38. InteractiVe “Accident avoidance by active intervention for Intelligent Vehicles” – CP****Call DG INFSO (FP7-ICT-2009-INFSO-1)** (*ICT for Safety and Energy Efficiency in Mobility*)

The interactiVe project addresses the development and evaluation of next-generation safety systems for Intelligent Vehicles, based on active intervention. The project is based on the concept that by integrating applications together, vehicle components may be shared among the various safety systems. This is accomplished in interactiVe by discrete architectural layers that are common to all applications. These provide large amounts of knowledge about the driver, state of the vehicle, and the environment to all interested applications. The overall result is an optimal use of resources, lower implementation costs, and ultimately a much broader acceptance of the technology. Although application and sensor fusion is an active area of study, substantial amount of research is still required before its commercial feasibility. By building upon current state-of-the-art technologies, interactiVe will develop next-generation safety systems based on three pillar concepts, namely continuous driver support, collision avoidance, and collision mitigation. The core activities of the project will address the design and development of the Intelligent Vehicle Systems, whose capabilities will be shown in demonstrator vehicles.

This project includes 29 partners. Coordinator: Ford Forschungszentrum Aachen, Germany

• **ECTRI partners:** BAST, DLR and VTT

<http://interactive.schmidt-works.de>

**39. SUBITO (Surveillance of Unattended Baggage and the Identification and Tracking of the Owner) – CP****Call DG RTD (FP7-SEC-2007-RTD-1)** (*Detection of unattended goods and of owner*)

SUBITO is a capability project designed to research and further develop automated real time detection of abandoned luggage, fast identification of the individual responsible and his/her subsequent path and current location.

This project includes 9 partners. Coordinator: SELEX S&AS, United Kingdom

• **ECTRI partners:** AIT and VTT

Duration: 24 months, from January 2009 to October 2011

<http://www.subito-project.eu>

**40. SARTRE 4 - Social Attitudes to Road Traffic Risk in Europe – CP****Call DG TREN (TREN/09/sub/E3/229/S12.544555/SARTRE 4)**

The project deals with European road users' attitudes, perceptions, opinions, needs, experiences and expectations with respect to road transport and safety. It is based on a common representative survey to be conducted in each participating member state, and a shared analysis of the large database. The survey will address issues such as mobility experiences, perception of safety needs by different types of road users; opinions and experiences about speeding, impaired driving; attitudes towards motorcycle riders; pedestrians and other road users. The information will be useful for comparing the relative standing of member states on the issues examined. It will also aid assessing citizens' acceptance of EU (and national) road transport and safety policies the limitations or successes of existing safety measures, or support for new measures and policies. As such SARTRE 4 can be viewed as a building block of ERSO.

This project includes 21 partners.

• **ECTRI partners:** Ifsttar, France (coordinator), BAST, CDV, ITS, KTI, VTI and VTT

<http://www.attitudes-roadsafety.eu>

**41. MODSAFE “Modular Urban Transport Safety and Security Analysis” – CP-FP****Call DG RTD (FP7-SST-2007-RTD-1)** (*Integrated safety and security for urban rail*)

The purpose of the MODSAFE project is to undertake research of major steps of the safety Life Cycle of urban guided transport systems in Europe. Even if the rail safety landscape in urban guided transport is highly diversified, the sector will benefit from some kind of harmonization.

This project includes 22 partners. Coordinator: TÜV Rheinland, Germany

• **ECTRI partner:** Ifsttar

Duration: 48 months, from September 2008 to August 2012

<http://www.modsafe.eu/>



#### 42. AZIPILOT “Intuitive operation and pilot training when using marine azimuthing control devices” – CSA-CA **Call DG RTD (FP7-SST-2007-RTD-1)** (*Human physical and behavioural components*)

The aim is to improve by policy and design, the safety and security of ships by taking into account the man-machine interface and the training of maritime pilots; specifically when operating ships equipped with azimuthing control devices. From the thrusters on smaller, but numerous, harbour support vessels through to the pod-drives on cruise ships and ocean going liners, azimuthing control has rapidly established itself in the maritime industry. But while the industry has risen to meet the demand, this rapid evolution has not allowed sufficient time for the propagation of knowledge throughout the different disciplines. Though the various sectors of the industry each have their own expertise, a lack of communication is both restricting progress and compromising safety and security; in addition, much work is being repeated unnecessarily. To address this problem, the project will provide a forum for technical review and cross-disciplinary discussion between the key industry sectors.

This project includes 14 partners.

- **ECTRI partner:** UNEW, United Kingdom (coordinator)

Duration: 36 months, from November 2008 to October 2011

<http://pilot.ncl.ac.uk/>

#### 43. ADSEAT “Adaptive seat to reduce neck injuries for female and male occupants” – CP-FP **Call DG RTD (FP7-SST-2008-RTD-1)** (*Safety and security by design*)

This project aims at establishing the properties for a model of an average female and to implement those in a computational model in order to provide an improved tool for the development and evaluation of adaptive systems with special focus on protection against whiplash injuries.

The project will result in a computational model of a female, in addition to the male model that already exists, for low severity testing. In addition, the computational models will be used in the design and evaluation of adaptive seat systems in order to provide enhanced neck injury protection from the seat.

This project includes 12 partners.

- **ECTRI partner:** VTI, Sweden (coordinator)

Duration: 42 month, from October 2009 to March 2013

<http://www.adseat.eu/>

#### 44. INESS “Integrated European signalling system” – CP-IP

##### **Call DG RTD (FP7-SST-2007-RTD-1)** (*Delivering ERTMS-compliant Interlocking Systems*)

Railways and the signalling supply industry agree that the scope of INESS should be the interlocking up to the point of interfaces with the surrounding other signalling and train control systems like centralised traffic control, neighbouring interlocking, ETCS Radio-block centres and possibly object controllers for outdoor devices. INESS will adopt the CENELEC norm with the underlying system engineering principles. It will build on the available results of both the Euro-Interlocking project and the ERTMS developments and it will especially not modify the current ETCS functionalities and solutions.

This project includes 30 partners. Coordinator: Union Internationale des Chemins de Fer-UIC, France

- **ECTRI partners:** DLR and UPM

Duration: 36 months, from October 2008 to September 2011

[www.iness.eu](http://www.iness.eu)

#### 45. TRANSFEU “Transport fire safety engineering in the European Union” – CP-FP

##### **Call DG RTD (FP7-SST-2008-RTD-1)** (*Safety and security by design*)

TRANSFEU undertakes to deliver both a reliable toxicity measurement methodology and a holistic fire safety approach for all kind of surface transport (trains, vessels, etc.). It will be based on a harmonized Fire Safety Engineering methodology which will link passive fire security with active fire security mode. This all embracing system is the key to attain optimum design solutions to respect fire safety objectives as an alternative to the prescriptive approach. It will help in the development of innovative solutions (design and products used for the building of the surface transport) which will better respect the environment. In order to reach these objectives new toxicity measurement methodology and related classification of

materials, new numerical fire simulation tools, fire test methodology and a decision tool to optimize or explore new design in accordance to the fire safety requirements will be developed.

This project includes 21 partners. Coordinator: Laboratoire National de Métrologie et d'Essais, France.

• ECTRI partners: IK and VTT

Duration: 44 months, from April 2009 to November 2012

<http://www.transfeu.eu>

#### 46. TULCS "Tools for Ultra Large Container Ships" – CP-FP

**Call DG RTD (FP7-SST-2008-RTD-1)** (*Safety and security by design*)

The increase in world trade has largely contributed to the explosion in sea traffic. As a result, the market demand is leading to Ultra Large Container Ships (ULCS), which have a capacity up to 14,000 TEU with length up to 400 m, without changes of the operational requirements (speed around 27 knots). The particular structural design of the container ships, leads to open midship sections, resulting in increased sensitivity to torsional and horizontal bending loads which is much more complex to model. At the same time, due to their large dimensions, the ULCS become much softer and their structural natural frequencies become significantly lower so that the global hydroelastic structural responses (springing & whipping) can become a critical issue in the ship design and should be properly modelled by the simulation tools. In view of the potential increase in wave loading due to whipping effect, further research is required to ensure that the effect is adequately accounted for in ship design and structural analyses, and that sufficient allowance is made for the effect when determining design margins. The final goal of the project is to deliver clearly validated design tools and guidelines, capable of analysing all hydro-structure interaction problems relevant to ULCS.

This project includes 14 partners. Coordinator: Bureau Veritas-Registre international de classification de navires et d'aéronefs SA, France

• ECTRI partner: DTU

Duration: 42 months, from June 2009 to November 2012

<http://www.fsb.unizg.hr/tulcs/>

#### 47. SKIDSAFE ' Enhancer Driver Safety due to improved Skid Resistance – CP-FP

**Call DG RTD (FP7-SST-2008-RTD-1)** (*Safety and security by design*)

The FP7 SKIDSAFE project constitutes an attempt to examine at a more fundamental level the processes taking place at the interface between the pavement surface and the tire. The project aims at integrating state-of-the-art tire models with rolling contact algorithms, hydrodynamic algorithms for simulation of the effects of water and advanced constitutive models.

The overall objective of SKIDSAFE is the development of a micro-mechanical, multi-physics computational tool for the prediction of the progressive loss of skid resistance as a function of the composition of the pavement surface and the deterioration of its characteristics with traffic loading.

The project includes 7 partners. Coordinator: Delft University of Technology, the Netherlands

• ECTRI partner: Ifsttar

Duration: 48 months, from November 2009 to October 2013

<http://www.skidsafe.org/index1.html>

#### 48. EURAXLES: Minimizing the risk of fatigue failure of railway axles – CP-FP

**Call DG RTD (FP7-SST-2010-RTD-1)** (*Minimizing the risk of fatigue failure of railway axles*)

EURAXLES aims to develop innovative, safer solutions for railway wheel sets with improved reliability in a cost effective way. The research will consist in:

1. A design approach will be developed, including a risk analysis method which could offer a simple design route by combining loads with difference occurrences including loading specificity of vehicles and service conditions together with the axles resistances, including new materials and methods in order to predict the failure probability.
2. New developments will also include (i) improved axle protection against corrosion, including protection of already corroded axles; (ii) improved adhesion of coatings with a study of the roughness influence

(adhesion and fatigue behaviour); and (iii) new, innovative coating solutions. The new solutions will also aim to fulfil environmental requirements to avoid or limit VOC emissions.

3. New/improved NDT inspection methods will allow the in-service inspection of axles in order to guarantee safe service conditions with a low impact on the vehicle availability.

4. A RAMS/LCC analysis of the solutions will be carried out.

This project includes 24 partners. Coordinator: UNIFE, Belgium

• ECTRI partner: FhG

Duration: 36 months, from November 2011 to October 2013

<http://www.euraxles.eu/>

#### **49. OPTIBODY “Optimized Structural components and add-ons to improve passive safety in new Electric Light Trucks and Vans (ELTVs)” – CP-FP**

**Call DG RTD (FP7-GC-SST-2010-RTD-1)** (*Advanced electric vehicle concepts*)

OPTIBODY, is a new concept of modular structural architecture for electric light trucks or vans (ELTVs) that will focus on the improvement of passive safety in order to help to reduce the number of fatalities and severe injuries. This new structural concept is composed of a chassis; a cabin improving current levels of EVs' comfort, occupant protection and ergonomics; and a number of add-ons bringing specific self-protection in case of impacts or rollover, and providing partner protection (crash compatibility) while interacting with other vehicles or vulnerable users. Each module can be individually optimized. OPTIBODY, together with the less restrictive distribution of internal components of EVs (with less architectural constraints than conventional ones) will represent a unique opportunity to implement innovative solutions for passive safety in ELTVs. OPTIBODY, as a module-based design, has also important results in terms of reparability.

This project includes 10 partners. Coordinator: Universidad de Zaragoza, Spain

• ECTRI partner: POLITO

Duration: 36 months, from April 2011 to March 2014

<http://optibody.unizar.es/>

#### **50. ACEM RAIL “Automated and cost effective maintenance for railway” – CP-FP**

**Call DG RTD (FP7-SST-2010-RTD-1)** (*Automated and cost effective railway infrastructure maintenance*)

ACEM-Rail project deals with automation and optimisation of railway infrastructure maintenance. It focuses on the track. The final goal is to reduce costs, time and resources required for maintenance activities and increase the availability of the infrastructure. The project includes both conventional and high speed lines.

This project includes 10 partners. Coordinator: Centro de estudios materiales y control de Obras S.A., Spain

• ECTRI partners: FhG and POLITO

Duration: 48 months, from December 2010 to November 2013

<http://www.acem-rail.eu>

#### **51. RESTRAIL “Reduction of Suicides and Trespasses on RAILway property” – CP-FP**

**Call DG RTD (FP7-SST-2011-RTD-1)** (*Mitigation measures and good practice to reduce human fatalities and disruption of services resulting from suicides and trespasses on railways property*)

The aim of the RESTRAIL project is to reduce the occurrence of suicides and trespasses on railway property and the costly service disruption these events cause, by providing the rail industry with an analysis and identification of cost-effective prevention and mitigation measures.

The project includes 17 partners. Coordinator: UIC, France

• ECTRI partners: Ifsttar, IK and VTT

Duration: 36 months, from October 2011 to September 2014

<http://www.restrail.eu/>



**52. EXCROSS “Exploiting safety results aCROSS transportation modes” – CSA-SA**

**Call DG RTD (FP7-TPT-2011-RTD-1)** (*Enhanced cross-fertilization and synergies in research actions dealing with safety aspects*)

EXCROSS aims to enhance cross-fertilization and synergies between research initiatives dealing with safety in the different transport modes (e.g. road transportation, aviation, etc.), reducing the fragmentation that exists in Europe between these initiatives.

This project includes 6 partners. Coordinator: Deep Blue Srl, Italy

• ECTRI partner: CERTH-HIT

Duration: 26 months, from October 2011 to December 2013

<http://www.dblue.it/?p=572>

**53. SAVELEC “Safe control of non-cooperative vehicles through electromagnetic means” –CP-FP**

**Call (FP7-SEC-2011)** (*Innovative techniques for safe external control of non-cooperative vehicles – Capability Project*)

SAVELEC aims to provide a solution for the external, safe control of a non-cooperative vehicle without any consequences on the persons inside the vehicle or other persons and objects nearby. The proposed solution is based on the use of electromagnetic means, electromagnetic pulses (EMP) and high power microwaves (HPM), in order to disrupt the proper behaviour of the electronic components inside the vehicle, which will lead it to slow down and stop. The SAVELEC approach is based on the premise of obtaining an optimized solution in terms of field strength. In this sense, electromagnetic compatibility experiments on key components of cars will be performed in order to evaluate the effect of different types of signals. The consequences of human exposure to the signals chosen will be evaluated in the context of European legislation in order to ensure safety of persons inside the vehicle and in the environment as well as of the user of the technology. The effect in explosive atmospheres regarding exposure to this kind of signal is also within the scope of SAVELEC.

This project includes 10 partners. Coordinator: ITACA, Spain

• ECTRI partners: DLR and VTI

Duration: 40 months, from January 2012 to April 2015

<http://savelec-project.eu/>

**54. SMART RAIL “Smart Maintenance and Analysis of Transport Infrastructure” – CP-FP**

**Call DG RTD (FP7-SST-2011-RTD-1)** (*Cost-effective improvement of rail transport infrastructure*)

The SMART Rail project brings together experts in the areas of highway and railway infrastructure research, SMEs and railway authorities who are responsible for the safety of national infrastructure.

The goal of the project is to reduce replacement costs, delay and provide environmentally friendly maintenance solutions for ageing infrastructure networks. This will be achieved through the development of state of the art methods to analyse and monitor the existing infrastructure and make realistic scientific assessments of safety. These engineering assessments of current state will be used to design remediation strategies to prolong the life of existing infrastructure in a cost-effective manner with minimal environmental impact.

This project includes 14 partners. Coordinator: University of College Dublin, Ireland

• ECTRI partners: AIT, CDV, IK, TRL and VTI

Duration: 36 months, from September 2011 to August 2014

<http://smartrail.fehrl.org/?m=25>

**55. TRIMM “Tomorrow’s Road Infrastructure Monitoring and Management” – CP-FP**

**Call DG RTD (FP7-SST-2011-RTD-1)** (*Advanced and cost effective road infrastructure construction, management and maintenance*)

The overall idea behind TRIMM is to map the needs for monitoring data and develop a means of cost-benefit analysis of monitoring techniques and utilisation in asset management. The identified key technologies for monitoring pavements and bridges will then be investigated to improve data processing, interpretation and indicators. Finally, aspects of implementation of indicators in road asset management will be investigated to provide information on application areas, added values, and procedures.

This project includes 15 partners.

• **ECTRI partners:** VTI, Sweden (Coordinator), AIT, Ifsttar, LNEC and TRL

Duration: 36 months, from December 2011 to November 2014

<http://trimm.fehrl.org/>

## 56. ASPECSS “Assessment methodologies for forward looking Integrated Pedestrian and further extension to Cyclists Safety Systems” – CP-FP

**Call DG RTD (FP7-SST-2011-RTD-1)** (*Design of vehicle safety systems for a better protection of vulnerable road users and other under-protected and less safe user groups*)

The objective of the AsPeCSS project is to contribute towards improving the protection of vulnerable road users, in particular pedestrians and cyclists by developing harmonized test and assessment procedures for forward looking integrated pedestrian safety systems. The outcome of the project will be a suite of tests and assessment methods as input to future regulatory procedures and consumer rating protocols. Implementation of such procedures / protocols will enforce widespread introduction of such systems in the vehicle fleet, resulting in a significant reduction of fatalities (30% pedestrians; 20% cyclists) and seriously injured (50% pedestrians; 20% cyclists) among these vulnerable road users.

This project includes 13 partners. Coordinator: Idiada Automotive Technology SA, Spain

• **ECTRI partners:** BAST and TRL

Duration: 30 months, from September 2011 to February 2014

<http://www.aspecss-project.eu/>

## 57. EVADER “eVADER: Electric Vehicle Alert for Detection and Emergency Response” – CP-FP

**Call DG RTD (FP7-GC-SST-2011-RTD-1)** (*Specific safety issues of electric vehicles*)

The eVADER will investigate the interior and exterior sound scape of electric vehicle for safe operation, considering drivers feedback, feasible pedestrian reactions, driver and pedestrian warning systems and pedestrian safety. The project will also analyse innovative methods to improve the acoustic detectability of electric vehicles in urban scenarios. The project will define solutions to warn vulnerable users of a nearby moving vehicle while providing means for heightening the awareness of drivers in critical situations.

This project includes 11 partners. Coordinator: Idiada Automotive Technology SA, Spain

• **ECTRI partner:** AIT

Duration: 36 months, from October 2011 to September 2014

<http://www.evader-project.eu/>

## 58. SAFELANE “An all-encompassing, intelligent safety and asset management system for highway maintenance” – SME

**DG RTD Call (FP7-SME-2012-RTD-1)** (*Research for SMEs*)

Road maintenance is one of the most dangerous occupations in Europe. These safe zones are either protected by positive protection systems such as concrete barriers or soft barriers such as traffic cones. The latter are mainly used for temporary works. In such a scenario cones may be the only protection a road worker has from traffic. Due to the maturity of Europe's road network and the rapid deterioration as a result of heavy traffic and weather conditions, temporary road work is increasing. In addition, preparation of these temporary barriers is a major drain on resources. As a lot of roadwork is carried out at night, barriers are equipped with lanterns. These are typically powered by disposable batteries which only last a short period of time. In Safelane, the consortium will develop a novel smart battery which can be charged in situ. This will enable major savings in terms of battery changes and reliability as well as potentially displacing millions of batteries currently going to land fill or recycling sites. In addition, Safelane will focus on full integration of the roadworker safety system within existing highway management and maintenance IT systems, enabling major cost savings and improve accuracy of operational and incident reporting.

This project includes 5 partners.

• **ECTRI partner:** TRL

<http://www.safelane.fp7.co/>

## 59. CYCLADES “Crew-centered Design and Operations of ships and ship systems” – CP-FP

**Call DG RTD (FP7-SST-2012-RTD-1)** (*Human element factors in shipping safety*)

The CyClaDes project is designed to promote the increased impact of the human element in shipping across

the design and operational lifecycle. The project brings together a multi-disciplinary team to focus on all the key steps in the lifecycle; the stakeholders; where the barriers to human element integration occur; and how to best locate, produce, disseminate, and apply human element knowledge within the overall context of shipping. The advantage is realized by supporting the integration of the human element in the design and operational life-cycle from appreciation, to concept, to design, to application, to evaluation and approval, to maintenance. The outcome will directly address pressing needs identified in the shipping industry

This project includes 14 partners. Coordinator: Deutsche Lloyd, Germany

- ECTRI partner: FhG

Duration: 36 months, from October 2012 to September 2015

<http://www.cyclades-project.eu/CyClaDes/index.xhtml>

#### 60. NEAR2 “Network of European Asian Rail Research capacities” -CSA

**Call DG RTD (FP7-SST-2012-RTD-1)** (*Europe to Asia: rail research collaboration*)

The main aim of NEAR2 is to build a rail research network along the Trans-Eurasian land bridge and to establish an efficient cooperation among the rail research centers in order to promote railway transport research and development. The NEAR2 Research Network will exploit the complementary strengths of the collaborating institutions and experts to build coordinated integrated research capacity to support the railway industry at a strategic, tactical and operational level. NEAR2 will establish a unique, international (with a special focus in the Trans-Eurasian land bridge region), interdisciplinary research capacity with the goal of contributing in advancing a major sector of the regional economy, as well as broadening the knowledge basis of the railway research sector.

This project includes 13 partners.

- ECTRI partners: CErTH-HIT, Greece (coordinator), IK and VGTU

Duration: 24 months, from December 2012 to November 2014

<http://www.near2net.imet.certh.gr/>

#### 61. EATS - ETCS Advanced Testing and Smart Train Positioning System – CP-IP

**Call DG RTD (FP7-SST-2012-RTD-1)** (*Innovation and standardisation in the field of signalling to accelerate a European Train Control System rollout*)

Currently European Train Control System (ETCS) rollout is a major concern for the railway sector. Equipment for ETCS level 1 and 2 typically follows a long process before being put into service due to interpretation variations in the specification and certification procedures requiring long and expensive field-testing. On the other hand, migration from ETCS level 2 to 3 has not been yet foreseen due to the technical. EATS has the objective to address these two situations: 1. EATS will propose innovative lab. tools providing a model of the on-board ERTMS system, and including the dynamic behaviour of the air-gap comm. and fault injection for the safety assessment. This will lead to reduced laboratory and field-testing certification process time and cost. In the current economic situation, this is crucial to keep the ETCS deployment speed. 2. EATS will propose a novel positioning system based on the combination of different techniques proved useful for other industrial sectors and exploit unique features of the railway and the train.

This project includes 7 partners. Coordinator: CEIT, Spain

- ECTRI partner: FhG

Duration: 42 months, from October 2012 to March 2016

<http://www.eats-eu.org/>

#### 62. ADAM4EVE “Adaptive and smart materials and structures for more efficient vessels” – CP-FP

**Call DG RTD (FP7-SST-2012-RTD-1)** (*Innovative structural and outfitting materials for ships including inland ships*)

Materials and structures are called adaptive if they can change certain properties in a predictable manner due to the forces acting on them (passive) or by means of built in actuators (active). Those materials and structures are referred to as smart if they provide best performance when operation circumstances change. The project ADAM4EVE focuses on the development and assessment of applications of such materials and



structures in the shipbuilding industry.

This project includes 20 partners. Coordinator: Center of Maritime Technologies, Germany

• ECTRI partners: FhG and VTT

Duration: 36 months, from January 2013 to December 2015

### 63. AMBER-ULV “Automotive Mechatronic Baseline for Electric Resilient Ultra Light Vehicle” – CP

**Call DG RTD (FP7-GC-SST-2013-RDT-1)** (*Future light urban electric vehicles*)

The project proposal AMBER-ULV aims to develop and integrate several innovative concepts, resulting from successfully completed R&D projects, giving a socially acceptable answer to safety concerns but not penalising the driving experience.

This project includes 10 partners. Coordinator: Centro Studi Industriali SRL, Italy

• ECTRI partner: FhG

Duration: 36 months, from July 2013 to June 2016

### 64. ISTIMES “Integrated system for transport infrastructures surveillance and monitoring by electromagnetic sensing” – CP

**Call (FP7-ICT-SEC-2007)** (*Optimised situational awareness through intelligent surveillance of interconnected transport or energy infrastructures*)

The aim of the proposal is to design, assess and promote an ICT-based system, exploiting distributed and local sensors, for non-destructive electromagnetic monitoring in order to achieve the critical transport infrastructures more reliable and safe. This has the overall aim to developing a high situation awareness in order to provide real time and detailed information and images of the infrastructure status to improve decision support for emergency and disasters stakeholders.

This project includes 10 partners. Coordinator: Tecnologie per le osservazioni della terra ed I rischi naturali, Italy

• ECTRI partner: Ifsttar

Duration: 36 months, from July 2009 to June 2012

<http://www.istimes.eu/>

### 65. SECRET “SECurity of Railways against Electromagnetic aTtacks” – CP-FP

**Call (FP7-SEC-2011)** (*Protection of Critical Infrastructure (structures, platforms and networks) against Electromagnetic Attacks - Capability Project*)

SECRET addresses the protection of railway infrastructure against EM attacks. Railway infrastructure is an attractive target for EM attacks, because of its familiarity and ease of access, with extended economic and security consequences. Today, the European rail network is evolving to harmonize the management system. This is reflected by new integrated technologies, adequate procedures and centralization of command centres. The new technologies facilitate the implementation of a harmonized system and improve the network competitiveness. However, they are also highly vulnerable to EM attacks (HPM and EMP). Railway actors fear this growing EM vulnerability and have no knowledge on the extent and severity of consequences.

This project includes 11 partners. Coordinator: ERT, France

• ECTRI partners: FhG, Ifsttar and POLITO

Duration: 36 months, from August 2012 to July 2015

<http://www.secret-project.eu/>

### 66. PEDPCREACT “Pedestrian pre-crash reactions and their effects on crash outcomes” – IIF

**Call (FP7-PEOPLE-2009-IIF)** (*International Incoming Fellowship*)

Under perceived risk such as an imminent pedestrian accident, basic human survival instinct can result in sudden involuntary reactions which eventually affect muscle activity, posture and location just before and during the pedestrian impact. Consequently, pedestrian kinematics, kinetics and injuries could differ from that of predicted using passive human surrogates such as cadaver, dummy or passive numerical models. This could have multiple consequences as the procedures currently used to design and evaluate

the performance of safety systems are based on such passive responses.

This project includes 1 partner.

- ECTRI partner: Ifsttar, France (coordinator)

Duration: 24 months, from October 2010 to September 2012

#### 67. ISABELLE “Integrated Safety Benefit Estimation tool for 2-wheelers” – CIG

**Call (FP7-PEOPLE-2011-CIG)** (*Career Integration Grants*)

The goal of this project is to develop deeper understanding of the injury mechanisms of motorcycle accidents and a new framework for the assessment of safety of all 2wheelers. This project will be realized with focus on motorcycles but the developed methodology, and tools will be applicable to all other 2wheelers. The major expected results of this project are: (a) an ambulatory motion capture system, (b) new knowledge on motorcyclist’s kinematics, (b) development of a biofidelic numerical active human model, (c) better understanding of the motorcycle accident’s injury, (d) the creation of a database of simulations. The simulation database will be developed for motorcycles but it will be applicable to all other 2wheelers.

The project includes 1 partner.

- ECTRI partner: CERTH-HIT, Greece (Coordinator)

Duration: 48 months, from January 2010 to December 2015.

#### 68. D-RAIL Development of the Future Rail Freight System to Reduce the Occurrences and Impact of Derailment – CP

**Call DG RTD (FP7-SST-2011-RTD-1)** (*Reducing the occurrences and impacts of freight rail derailments*)

D-RAIL will focus on freight traffic, identifying root causes of derailment of particular significance to freight vehicles, which have a wider range of operating parameters (as a result of the huge range in loads, speeds and maintenance quality) than passenger vehicles. One key question that will be studied is how independent minor faults (e.g., a slight track twist and a failing bearing) could combine to cause a derailment. D-RAIL will extend this study to include the expected demands on the rail freight system forecast for 2050, such as heavier axle loads, faster freight vehicle speeds for time-sensitive – low volume high value high speed services (LVHVHS) – goods, radically new vehicle designs, or longer train consists.

This project includes 20 partners.

- ECTRI partner: UNEW, United Kingdom (coordinator)

Duration: 36 months, from October 2011 to September 2014

<http://www.d-rail-project.eu/>

#### 69. VRUITS “Improving the Safety and Mobility of Vulnerable Road Users through ITS applications” - CP

**Call DG MOVE (FP7-TRANSPORT-2012-MOVE-1)**

The VRUITS project will achieve the following objectives:

1. Assess societal impacts of selected ITS and provide recommendations for policy and industry regarding ITS in order to improve the safety and mobility of VRUs;
2. Provide evidence-based recommended practices on how VRU can be integrated in Intelligent Transport Systems and on how HMI designs can be adapted to meet the needs of VRUs, and test these recommendations in field trials.

This project includes 12 partners.

- ECTRI partner: VTT, Finland (coordinator)

Duration: 36 months, from April 2013 to March 2016

<http://www.vruits.eu/>

#### 70. FAROS “Human Factors in Risk-Based Design Methodology” – CP-FP

**Call DG RTD (FP7-SST-2012-RTD-1)** (*Human element factors in shipping safety*)

FAROS is an EC FP7 funded, three year project to develop an approach to incorporate human factors into Risk-Based Design of ships. FAROS will use experimental data, simulations, parametric ship design models and optimisation processes to integrate human factors into the ship design process at a conceptual stage. This will

include global and local ship design factors features. This project builds on previous research and development of Risk-Based Design (RBD) for ships which began with SAFEDOR, and encompasses damage stability (GOALDS), fire safety (FIREPROOF), flooding control (FLOODSTAND) and environmental impact (FLAGSHIP). This project includes 12 partners. Coordinator: Brookes Bell LLP, United Kingdom

- ECTRI partner: VTT

Duration: 36 months, from October 2012 to September 2015

<http://faros-project.eu/>

#### **71. AVENUE “Actions for Vulnerable, Elderly, Novice drivers and road Users in Europe – for traffic safety” – CP Call DG MOVE**

The objectives of the project are to promote the Road Safety NESTs, to raise road safety awareness for all, to reduce accidents and fatalities within Europe and to promote safe driving and courtesy on the road. AVENUE’s purpose is linked with the major objective of the European Action Safety Program to improve the behaviour of road users.

This project includes 12 partners.

- ECTRI partner: ITS

<http://www.avenuefortrafficsafety.eu/index.html>

### 3. Energy and environment

**72.** DIRECT\_MAT “DISmantling and RECycling of vehicle Tyres and road MATerials into roads - Sharing knowledge and practices” – CSA-CA

**Call DG RTD (FP7-SST-2007-RTD-1)**

DIRECT-MAT aims to facilitate the sharing of national experiences on dismantling and recycling of road materials into new roads at the European level. This will be achieved through the building of a European Web database and the drafting of Best Practice guides.

The project addresses the dismantling and recycling or safe disposal of unbound, hydraulically bound and asphalt road materials. It also addresses other materials related to road use but not commonly recycled in road construction. These include tyre shreds, sediment from ditches, industrial by-products and reinforcement materials. The intention is that the project results shall support the daily work of practitioners, researchers and standardisation bodies. In this way DIRECT-MAT will actively contribute to reducing the waste disposal associated with roads.

This project includes 20 partners.

• ECTRI partners: Ifsttar, France (coordinator), CDV, KTI, LNEC and VTI

Duration: 36 months, from January 2009 to December 2011

<http://direct-mat.fehrl.org>

**73.** InGAS “Integrated Gas Powertrain - Low Emission, CO2 optimised and efficient CNG engines for passenger cars (PC) and light duty vehicles (LDV)” – CP-IP

**Call DG RTD (FP7-SST-2007-RTD-1)** (*Integrating natural gas power-trains*)

The objective of the INGAS project is to deploy a custom designed engine integrated with specific aftertreatment systems applied to a light duty (LD) vehicle able to achieve a 10% higher fuel conversion efficiency than that of a corresponding 2006 diesel vehicle and complying with an emission level lower than Euro 6. Additional features are advanced storage systems and vehicle architectures, as well as multi-grade fuel tolerance and fuel flexibility.

This project includes 29 partners. Coordinator: Research Centre FIAT, Italy

• ECTRI partner: POLITO

Duration: 36 months, from October 2008 to September 2011

<http://www.ingas-eu.org>

**74.** Re-road “End of life strategies of asphalt pavements” – CP-FP

**Call DG RTD (FP7-SST-2007-RTD-1)** (*The greening of transport-specific industrial processes*) (*End of life strategies for vehicles/vessels and infrastructures*)

The Re-road project aims to develop knowledge and innovative technologies for enhanced end of life strategies for asphalt road infrastructures. Such a strategy has an important impact on the energy efficiency and the environmental footprint of the European transport system and fits within the life-cycle thinking which is being introduced in waste policy at European level. It leads to reduction of the need for new raw materials, prevents the creation of waste and the occupation of landfills and consequently minimizes the need to transport these materials to and from the work site and hence reducing energy, pollution including CO2 emissions.

This project includes 14 partners.

• ECTRI partners: VTI, Sweden (coordinator), Ifsttar and TRL

Duration: 48 months, from January 2009 to December 2012

<http://re-road.fehrl.org>

**75.** ENNAH “European Network on Noise and Health” – CSA

**Call DG ENV (FP7-ENV-2008-1)** (*Health effects of exposure to environmental stressors*)

The network will review the existing literature on environmental noise exposure and health focussing on the consolidation of existing state of the art knowledge and the identification of gaps in the evidence and future research needs and hypotheses to be tested. In the network we will train junior researchers in noise and health through setting up an exchange network across Europe. The network will focus on noise exposure assessment in health studies in order to build more complex analytical models of noise and health effects that take into account moderating factors including the joint effects of air pollution and noise.

This project includes 29 partners. Coordinator: Queen Mary & Westfield College, United Kingdom

• ECTRI partners: DLR, Ifsttar and TØI

Duration: 30 months, from September 2009 to January 2012

<http://www.ennah.eu>

**76. HOSANNA “Holistic and sustainable abatement of noise by optimized combinations of natural and artificial means” – CP-FP**

**Call DG RTD (FP7-SST-2008-RTD-1)** (*Holistic noise and vibration abatement*)

The main idea of the project is to optimize the use of green areas, green surfaces and other natural elements in combination with artificial elements in urban and rural environments for reducing the noise impact of road and rail traffic. The project offers a variety of powerful abatement strategies that will make a cost effective improvement by its combination of approaches concerning: ground and road surface treatments; trees, forests and tall vegetation; greening of buildings and other surfaces; and innovative barriers. The noise impact will be assessed in terms of sound levels (including spectra and time patterns) as well as perceived environment (including annoyance, well-being and other health related aspects).

This project includes 12 partners. Coordinator: CHALMERS, Sweden

• ECTRI partner: TØI

Duration: 36 months, from November 2009 to October 2012

<http://www.greener-cities.eu>

**77. EU-CARGOXPRESS “Greening of surface Transport through an innovative and competitive CARGO-VESSEL Concept connecting marine and fluvial intermodal ports” – CP**

**Call DG RTD (FP7-SST-2008-RTD-1)** (*Innovative product concepts*)

A completely new type of freighter is needed; one that can access these ports and load or unload goods by its own means, whilst being faster than traditional freighters. Moreover, this project's intention is to halt the declining situation of the European Shipyards, being impossible for them to compete within the international market due to costs and a lack of their own know-how. At the same time, anticipating the rise of energy costs in the future for maritime transport, the need of low fuel consumption technology and the use of additional alternative energies is crucial.

The project CargoXpress is aiming to use its unique construction of the superstructure to make use of wind propulsion in adequate meteorological conditions, which could easily add an additional saving of fuel consumption of about 10 to 12%. The second path to use alternative energy is the intent to cover part of the very flat surface of the superstructure and the loading bay inclosures for solar collectors which should in the near future have considerable higher output per square meter.

This project includes 7 partners. Coordinator: Compania Transmediterranea, Spain

• ECTRI partner: UPM

Duration: 32 months, from September 2009 to April 2012

<http://cargoxpress.eu>

**78. QUIESST “Quietenening the Environment for a Sustainable Surface Transport” – CP-FP**

**Call DG RTD (FP7-SST-2008-RTD-1)** (*Holistic noise and vibration abatement*)

The European Commission clearly addresses transport noise through its 2002/49/EC Directive. However, with EC expected impacts of noise reduction of about 10 to 20 dB, it is evident that no action limited to a single step of the whole noise problem could obtain such reduction in noise values: one should act (and optimise the means of action) at all the consecutive steps of the whole process (sound emission, sound propagation, and sound reception). Acting on sound propagation, ground transport Noise Reducing Devices (NRD) do play an important role in the reduction of noise: depending on numerous different factors, their global effectiveness could be as low as a few decibels (if used inadequately), or reaching up to 20 dB (while using appropriate design). The main idea of QUIESST is to optimise the knowledge, the methods, the use and the GLOBAL effectiveness of the ground transport NRD, in order to allow a durable and sustainable development of transport.

This project includes 13 partners. Coordinator: A-tech-acoustic technologies, Belgium

• ECTRI partners: AIT and BAST

Duration: 36 months, from November 2009 to October 2012

<http://www.quiesst.eu/>

**79. MoDe “Maintenance on Demand” – CP****Call DG RTD (FP7-SST-2008-RTD-1)** (*Innovative product concepts; Competitive transport operations*)

The combination of Structural Health Monitoring (SHM) with smart structures and advanced method of structural durability allows the realisation of an advanced life cycle management of vehicles (through all transport modes). Beside a functional SHM system the availability of a reliable smart structure able to control the structural properties is a precondition for designing a Maintenance-on-Demand system. Currently, smart structures are primarily developed to control noise and vibrations but could also be used to monitor and control the structural health at the same time. The SHM system provides information on the endured operational loads and the actual condition of the structure. From this, the remaining durability and life time expectancy can be estimated and new cost functions for the smart structure is derived. The embedded actuators and sensors allow now the minimisation of the local loads in the damaged area extending the life-time of the overall structure. Topics to be addressed: Usage-Monitoring; Self-diagnosis of components; Life-time and durability assessment; Handling of data.

The project includes 10 partners.

- ECTRI partners: FhG, Germany (coordinator) and VTT

Duration: 36 months, from September 2009 to August 2012

<http://fp7-mode.eu>

**80. CO2NTROL “Integrated Solutions for Noise and Vibration Control in Vehicles” – CP****Call DG RTD (FP7-SST-2008-RTD-1)** (*Holistic noise and vibration abatement*)

Improvement of vehicle noise and vibration without affecting other performances is proving to be extremely difficult if not impossible with state-of-the-art technology. Frequently, new technologies in the fields of smart materials and active control provide potential solutions but have only be proved in the laboratory. One aim of this project proposal would consequently be to integrate such advanced laboratory-level technologies with conventional solutions with direct application to next generation city-car.

This project includes 8 partners.

- ECTRI partner: FhG, Germany (coordinator)

Duration: 36 months, from September 2009 to August 2012

<http://fp7-co2ntrol.eu>

**81. SILENV “Ships oriented Innovative sOLutions to rEduce Noise and Vibrations” – CP****Call DG RTD (FP7-SST-2008-RTD-1)** (*Holistic noise and vibration abatement*)

The SILENV project is a response to noise pollution for the maritime domain. This project proposes a holistic approach to reduce ship-generated Noise & Vibration pollution. After a definition of realistic target levels, existing experimental data from main types of ships and on-site measurements will be analysed to identify the most critical sources of noise and vibration. Innovative solutions will be listed and individually assessed on technical and economic criteria. These solutions shall subsequently be virtually tested and refined on numerical models of entire ships, thus allowing us to scientifically grade N&V improvements. SILENV final main deliverable is a green label proposal that includes recommended target levels for N&V and associated design guidelines.

This project includes 14 partners. Coordinator: DCNS, France

- ECTRI partner: VTT

Duration: 36 months, from October 2009 to September 2012

<http://www.silenv.eu/>

**82. ComPair “Continuous health monitoring and non-destructive assessment of composites and composite repairs on surface transport applications” – CP-FP****Call DG RTD (FP7-SST-2007-RTD-1)** (*Competitive product development, Cost effective manufacturing and maintenance*)

The project compare aims at developing quantitative non-invasive NDT (non-destructive technique) approaches for prompt assessment of composites during the manufacturing and assembly stages of the composite materials and structures. It will develop a health monitoring approach for the composite components on full scale structures as well as a robotic scanner that will accommodate the NDT approach for the in-situ testing of the structures during inspection and maintenance.

This project includes 11 partners. Coordinator: TWI LIMITED, United Kingdom

- ECTRI partner: VTT



Duration: 38 months, from September 2008 to November 2011

<http://www.compairproject.com>

**83. HEATRECAR “Reduced energy consumption by massive thermoelectric waste heat recovery in light duty trucks” - CP-FP**

**Call DG RTD (FP7-SST-2007-RTD-1)** (*Vehicle/vessel and infrastructure technologies for optimal use of energy*)

The main objective of the project is to reduce the energy consumption and curb CO<sub>2</sub> emissions of vehicles by massively harvesting electrical energy from the heat within the exhaust system and re-use this energy to supply electrical components within the vehicle or to feed the powertrain of hybrid electrical vehicles (HEV). The recovery of the thermal energy will be performed by novel, laboratory-available thermoelectric (TE) materials which are able to work at the adequate high temperatures and exhibit high performance. This project includes 7 partners. Coordinator: Research Center FIAT, Italy

• **ECTRI partner:** FhG

Duration: 38 months, from January 2009 to December 2012

<http://www.heatrecar.com/>

**84. HERCULES-B “Higher efficiency engine with ultra-low emissions for ships” – CP-IP**

**Call DG RTD (FP7-SST-2007-RTD-1)** (*Clean and energy efficient marine diesel power trains*)

The project HERCULES-B is the Phase II of the HERCULES programme; the research objectives in HERCULES-B focus on the drastic reduction of CO<sub>2</sub> emissions from maritime transport, considering the existing and foreseen composition of the world fleet and fuel infrastructure.

The principal aim in HERCULES-B is to reduce fuel consumption of marine diesel engines by 10%, to improve efficiency of marine diesel propulsion systems to a level of more than 60%, and thus reduce CO<sub>2</sub> emissions substantially. An additional concurrent aim is towards ultra low exhaust emissions (70% Reduction of NO<sub>x</sub>, 50% Reduction of Particulates) from marine engines by the year 2020. Today diesel propulsion systems power 99% of the world fleet. HERCULES-B targets the development of engines with extreme operational pressure and temperature parameters, considering the thermo-fluid-dynamic and structural design issues, including friction and wear as well as combustion, air charging, electronics and control, so as to achieve the efficiency / CO<sub>2</sub> target.

This project includes 39 partners. Coordinator: ULEME E.E.I.G, Germany

• **ECTRI partners:** DTU and VTT

Duration: 36 months, from September 2008 to August 2011

<http://www.hercules-b.com>

**85. POSE<sup>2</sup>IDON « Power Optimized Ship for Environment with Electric Innovative Designs ONboard’ – IPS**

**Call DG RTD (FP7-SST-2007-RTD-1)** (*Electric ship technology*)

The project POSE<sup>2</sup>IDON consists in providing a working guide on how to improve efficiency and reduce the environmental impact of the combined European commercial shipping fleet and to enhance the electric ship concept so that it can be applied to a wider range of vessels than is currently the case. The principal barrier to adoption of the electric ship concept in smaller merchant ships is the size of the generating equipment and propulsion motor. The Pose<sup>2</sup>idon consortium is then focusing on achieving size reduction through the development of new technologies across all aspects of marine electrical engineering. A key element of this will be the application of High Temperature Superconductivity (HTS) technology that will allow for smaller principal electrical components and an increase in efficiency. Additionally, electric auxiliaries, wireless technology and fail safe power distribution will be studied.

This project includes 27 partners. Coordinator: BMT Defence Services Ltd, United Kingdom.

• **ECTRI partner:** UNEW

Duration: 48 months, from January 2009 to December 2012

<http://www.poseidon-ip.eu>

**86. STREAMLINE “Strategic Research for Innovative Marine Propulsion Concepts” – CP-IP****Call DG RTD (FP7-SST-2008-RTD-1)**

Increasing environmental concerns and soaring oil prices are creating a new focus on fuel efficiency for the marine industry. Combining low emissions with demands for more advanced vessels than ever before, drives the need for radically new propulsion concepts delivering a step-change in efficiency. STREAMLINE is the response of the marine community to this demand that will be addressed through four key objectives. The first objective of STREAMLINE is to demonstrate radically new propulsion concepts delivering an increase in efficiency of at least 15% over current state-of-the-art. As its second objective, STREAMLINE will investigate methods to fully optimise current SoA systems including conventional screw propeller systems, pods and waterjets. Finally, STREAMLINE will characterise the operational, economic and classification aspects of each of the new propulsion concepts.

This project includes 22 partners. Coordinator: Rolls-Royce Power Engineering, UK.

- **ECTRI partner:** UNEW

Duration: 48 months, from March 2010 to February 2014

<http://www.streamline-project.eu/>

**87. EWENT “Extreme Weather impacts on European Networks of Transport” – CP-FP****Call DG RTD (FP7-TPT-2008-RTD-1)** *(Assessing disruptive effects of extreme weather events on operation and performance of EU transport system)*

The goal of EWENT is to estimate and monetise the disruptive effects of extreme weather events on the operation and performance of the EU transportation system. The methodological approach is based on generic risk management framework that follows a standardised process starting from the identification of hazardous extreme weather phenomena, followed by impact assessment and concluded by mitigation and risk control measures. EWENT will evaluate the efficiency, applicability and finance needs for adaptation and mitigation measures which will minimise the costs of extreme weather impacts.

This project includes 9 partners.

- **ECTRI partners:** VTT, Finland (coordinator), DLR and TØI

Duration: 30 months, from December 2009 to May 2012

<http://ewent.vtt.fi/>

**88. WEATHER “Weather Extremes: Assessment of impacts on Transport Systems and Hazards for European Regions” – CP-FP****Call DG RTD (FP7-TPT-2008-RTD-1)** *(Assessing disruptive effects of extreme weather events on operation and performance of EU transport system)*

The WEATHER project aims at adding to the current state of knowledge on the impacts of extreme weather events on economy and society in total and on European transport systems in particular. The project starts from the broad picture of climate scenarios and breaks them down to specific regions. Best practices in emergency management are identified by studying the numerous damage cases worldwide and options for adapting to more frequent and / or more extreme weather events are assessed. Moreover, the project will identify policy options to implement the recommended measures and demonstrate the competitive potential and the innovation power of a European lead market for adaptation and emergency management technologies and policies. The toolbox of the project consists of literature review, targeted interviews, workshops, cost accounting models and case studies.

This project includes 8 partners.

- **ECTRI partners:** FhG, Germany (coordinator) and CERTH-HIT

Duration: 30 months, from November 2009 to April 2012

<http://www.weather-project.eu>

**89. HELIOS “High Energy Lithium-ion Storage Solutions” – CP-FP****Call DG RTD (FP7-SST-2008-RTD-1)** *(Electric-hybrid power trains)*

A large consortium including six car manufacturers, several laboratories and test institutes, one recycler and a battery manufacturer will combine their efforts to understand the causes behind the battery cells aging and safety behavior. The study is performed on large High Energy cells for Electric Vehicles, high e-range PHEV and Hybrid Heavy Duty trucks applications.

The objectives of the HELIOS project are to: 1- Propose updated specifications and test procedures for high energy battery cells used in European context, 2- Perform the study on representative large cell formats



(close to 40Ah cells) with identical design, using four different positive electrodes, 3- Have the new and aged cells samples analysed “post-mortem” after ageing to identify for each technology the aging and safety mechanisms., 4- Assess the impact of such results on the battery system/pack level: estimation of extra recycling needs and of the consequence of safety tests results on the battery pack concept, 5- Consequent cost evaluation.

This project includes 18 partners. Coordinator: Renault S.A.S, France

- ECTRI partner: AIT

Duration: 36 months, from November 2009 to November 2012

<http://www.helios-eu.org/>

#### 90. HCV “Hybrid Commercial Vehicle” – CP-IP

**Call DG RTD (FP7-SST-2008-RTD-1)** (*New mobility concepts for passengers ensuring accessibility for all*)

The HCV project aims to develop urban buses and delivery vehicles with advanced second generation of energy efficient hybrid electric powertrains. The final result will be the demonstration of this advanced technology in early second generation buses and distribution trucks in practical real-life conditions in different cities in the enlarged Europe in order to ensure good acceptance by public transport, delivery operators, drivers and passengers.

Research, development and demonstration will be made of innovative e-drives, energy storage technologies as well as auxiliary components. In addition lightweight body technologies will be demonstrated. The decision to start vehicle production with advanced second generation technology will to a high degree be based on the outcome of the project.

This project includes 19 partners. Coordinator: Volvo Technology AB, Sweden

- ECTRI partners: AIT and CERTH-HIT

Duration: 36 months, January 2010 to December 2013

<http://www.hcv-project.eu>

#### 91. CATCH “Carbon aware travel choices in the climate-friendly world of tomorrow” – CP-FP

**Call DG RTD (FP7-TPT-2008-RTD-1)** (*The climate-friendly travel choice in the city, region and world of tomorrow*)

The project aims to develop a knowledge platform which will become a public information system for mobility related greenhouse gas (GHG) emissions reduction advice. The holistic Platform will provide travellers, businesses, planners and other mobility stakeholders with the tools to play their part in creating a new mobility culture promoting timely and informed climate-friendly travel choice and policies. The Platform will enable travellers to understand the climate change impacts of their choices, and take effective actions to reduce them, and enable policy decision makers to include carbon constraints into their actions.

This project includes 11 partners. Coordinator: MRC McLean Hazel Limited, United-Kingdom

- ECTRI partner: TRL

Duration: 28 months, from August 2009 to January 2012

<http://www.carbonaware.eu>

#### 92. CLEANER D Clean European rail – diesel – IPS

**Call DG RTD (FP7- SST-2008-RTD-1)** (*Emission reduction technologies for diesel locomotives*)

Clean European Rail-Diesel (CleanER-D) is a partly European Commission funded project that aims to develop, improve and integrate emissions reduction technologies for diesel locomotives and rail vehicles. Its target is to achieve emission levels below the limits established by the new European Directive 2004/26/EC and to evaluate innovative and hybrid solutions for the best possible contribution to reductions in CO<sub>2</sub> emissions. Furthermore, CleanER-D offers competitive rail vehicles to the market in order to avoid a modal shift from rail to road to enable the industry, and evaluates different solutions to fulfil stage IIIB emission limits on rail vehicles.

The project includes 26 partners. Coordinator: UNIFE, Belgium

- ECTRI partners: CERTH-HIT and UNEW

Duration: 48 months, from June 2009 to May 2013

<http://www.cleaner-d.eu>

**93. ISEMOA “Improving seamless energy-efficient mobility chains for all” – CIP**

ISEMOA helps local and regional authorities in Europe to increase energy-efficiency in transport by improving the accessibility of door-to-door mobility-chains and thus enabling all citizens and visitors (including people with reduced mobility (PRM)) to adopt a less car-dependent life-style.

The project includes 19 partners. Coordinator: FGM-AMOR, Austria

• **ECTRI partners:** ITS and UNIZA

Duration: 36 months, from May 2010 to May 2013

<http://www.isemoa.eu/index.php?ID1=4&id=4>

**94. FIRERESIST “Developing Novel Fire-Resistant High Performance Composites**

**NMP - Nanosciences, Nanotechnologies, Materials and New Production Technologies” – CP-IP**

**Call (FP7-NMP-2009-LARGE-3) (Light high-performance composites)**

The overall aim of FIRERESIST is to develop novel, cost-effective, high-performance, lightweight polymer matrix composites with a step-change improvement in fire behaviour. The greater use of polymer matrix composite materials would be highly desirable. Their low weight, along with their inherent resistance to corrosion and fatigue, enables more fuel efficient and sustainable transport structures. However, for many applications, the biggest factor currently preventing the more widespread use of light high-performance polymer matrix composites is their poor fire performance. This is due to the organic matrices, which first soften on heating, causing a loss of mechanical properties and then, at higher temperatures, decompose. Decomposition results in the production of smoke and toxic or flammable decomposition products.

This project includes 19 partners.

• **ECTRI partners:** UNEW, United Kingdom (coordinator) and VTT

Duration: 48 months, from February 2011 to January 2015

<http://www.fire-resist.eu/FireResist/index.xhtml>

**95. SAFELAND “Living with landslide risk in Europe: Assessment, effects of global change, and risk management strategies” – CP-IP**

**Call DG ENV (FP7-ENV-2008)**

SafeLand will develop generic quantitative risk assessment and management tools and strategies for landslides at local, regional, European and societal scales and establish the baseline for the risk associated with landslides in Europe, to improve our ability to forecast landslide hazard and detect hazard and risk zones.

The project includes 27 partners. Coordinator: Stiftelsen Norges Geotekniske Institutt, Norway

• **ECTRI partner:** TRL

<http://www.safeland-fp7.eu>

**96. TEFLES “Technologies and Scenarios for Low Emissions Shipping” – CP-FP**

**Call DG RTD (FP7-SST-2010-RTD-1) (Advanced after treatment solutions for mitigation of emissions from ships)**

The TEFLES project aims to reduce emissions from shipping both at sea and in port. Port operations which generate emissions include ships on port approach, manoeuvring activities and loading/unloading. These operations often occur near urban areas. In this project, a selection of innovative and promising technologies which offer emission reducing solutions will be investigated and developed. The assessed technological solutions will be modelled and simulated and then integrated into impact models for both at sea and port scenarios. Economic benefits, regulatory and policy issues will also be considered.

The project includes 11 partners. Coordinator: Inova Consultores en Excelencia e Innovacion Estrategica S.L., Vigo, Spain.

• **ECTRI partner:** UNEW

Duration: 36 months, from February 2011 to January 2014

[http://tefles.eu/?page\\_id=4](http://tefles.eu/?page_id=4)

**97. TARGETS “Targeted Advanced Research for Global Efficiency of Transportation Shipping” – CP-FP**

**Call DG RTD (FP7-SST/TPT-2010-RTD-1)** (*Energy efficiency of ships; Demand/supply management and logistics for transport of passengers through increased co-modality and understanding of social behaviour*)

TARGETS addresses the “Energy Efficiency of Ships” area of the work programme, aiming to provide substantial improvements to ship energy efficiency by adopting a holistic approach to energy generation, transmission, consumption and operational management with focus on life-cycle issues. A key aim of TARGETS is the adoption of a systematic methodology that integrates component-based knowledge (e.g. resistance, propulsion) at system based level (shipboard systems / plant configuration) and the development of a suitable simulation tool for the prediction, evaluation and management of energy performance in ship design and operation for varying operational profiles.

This project includes 11 partners. Coordinator: Hamburgische Schiffbau-Versuchsanstalt GmbH, Germany

• **ECTRI partner:** UNEW

Duration: 36 months, from December 2012 to November 2015

**98. SMARTBATT “Smart and Safe Integration of Batteries in Electric Vehicles” – CP-FP**

**Call DG RTD (FP7- SST-2010-RTD-1)** (*Smart storage integration*)

The objective of SmartBatt is to develop and proof an innovative, multifunctional, light and safe concept of an energy storage system which is integrated in the pure electric car’s structure. The main challenges of this smart integration are the combination of lightweight design with a high safety level against all kinds of hazards, the optimization of functions and the intelligent design of interfaces to various on-board systems. In order to meet the various challenges, a consortium of different companies and institutes with good reputation was formed capable of viewing on the problem from all important sides and willing to contribute with their knowledge and capacities to the solutions for this specific topic. The expertise of all partners comprises complete vehicle competence, electrics, electronics, batteries, lightweight design, engineering, materials, testing and validation.

The project includes 10 partners.

• **ECTRI partners:** AIT, Austria (coordinator) and FhG

Duration: 24 months, from January 2011 to December 2012

<http://www.smartbatt.eu/>

**99. CARGOVIBES Attenuation of ground-borne vibration affecting residents near freight railway lines – CP-IP**

**Call DG RTD (FP7-SST-2010-RTD-1)** (*Attenuation of ground-borne vibration affecting residents near railway lines*)

As pointed out in the White paper for European transport the aim of the European rail operators is to increase the market share of goods traffic from 8 % in 2001 to 15 % in 2020. The nightly time slots will play an important in this. Railway vibration annoyance and sleep disturbance in residential areas is a potential show stopper for this increase. Therefore the aim of Cargovibes is to develop and assess measures to ensure acceptable levels of vibration for residents living in the vicinity of freight railway lines in order to facilitate the extension of freight traffic on rail. Existing evaluation criteria in use are deemed too strict and not based on relevant surveys. There are no uniform assessment methods available and knowledge about mitigation measures is fractured and hardly common. In this proposal the right criteria will be established, given the characteristics of freight traffic. Existing mitigation measures for conventional railway are not directly applicable to freight trains which generate a different soil vibration pattern than conventional railways in terms of vibration amplitudes and frequency contents. Viable efficient new mitigation measures for freight rail traffic will be designed and validated.

This project includes 11 partners. Coordinator: TNO, the Netherlands

• **ECTRI partner:** IK

Duration: 48 months, from April 2011 to March 2014

<http://www.cargovibes.eu>

**100. ULYSSES “Ultra Slow Ships” – CP-FP**

**Call DG RTD (FP7-SST-2010-RTD-1)** (*Energy efficiency of ships; improved through-life asset management through application of advanced production, retrofit and dismantling processes*)

With climate change coming to the forefront of society’s perception, there is increasing pressure on all industries to CO<sub>2</sub> emissions through increased efficiency and the maritime industry is no exception. The

objective of ULYSSES is to demonstrate, through a combination of ultra-slow speeds and complementary technologies, that the efficiency of the world fleet can be increased to a point where the following CO<sub>2</sub> targets are met.

This project includes 13 partners. Coordinator: Bureau Veritas – Registre international de classification de navires et d'aéronefs SA, France

- ECTRI partners: DTU and UNEW

Duration: 36 months, from January 2011 to December 2013

<http://www.ultraslowships.com/>

#### **101. INOMANS<sup>2</sup>HIP “INOvative Energy MANagement System for Cargo SHIP” – CP-FP**

**Call DG RTD (FP7-SST-2010-RTD-1)** (*Energy efficiency of ships*)

A holistic approach considering the overall production and management of energy aboard ships (including propulsion systems and energy output optimization) is the most promising approach to accelerate the adoption of low emission-higher energy efficiency cargo ships. Taking this consideration into account and based on the array of innovative and renewable sources of energy, the INOMANS<sup>2</sup>HIP concept aims at proposing a break-through energy management system aboard ships based on a preferred DC network integrating all potential sources of energy. A Life-Cycle Analysis study will be performed. The INOMANS<sup>2</sup>HIP project will therefore contribute to reducing greenhouse gas (GHG) emissions and pollution as a whole (SO<sub>x</sub>, NO<sub>x</sub>, Noise). It will foster European competitiveness by providing an innovative global advantage to both European equipment manufacturers and shipyards.

This project includes 9 partners.

- ECTRI partner: UNEW, United Kingdom (coordinator)

Duration: 36 months, from May 2011 to April 2014

#### **102. TRIPOD “TRiple Energy Saving by Use of CRP, CLT and PODded Propulsion” – CP-FP**

**Call DG RTD (FP7-SST-2010-RTD-1)** (*Energy efficiency of ships*)

The main objective of the TRIPOD project is the development and validation of a new propulsion concept for improved energy efficiency of ships. The ship propulsion efficiency will be optimized through the advanced combination of three existing propulsion technologies. In particular TRIPOD explores the feasibility of a novel propulsion concept resulting from the integration of two promising EU grown technologies (podded propulsion and tip loaded endplate propellers) in combination with energy recovery based on counter-rotating propeller (CRP) principle.

This project includes 6 partners.

- ECTRI partner: VTT, Finland (Coordinator)

Duration: 30 months, from January 2010 to April September 2013

<http://www.vtt.fi/sites/tripod/index.jsp?lang=en>

#### **103. EASYBAT “Models and generic interfaces for easy and safe Battery insertion and removal in electric vehicles” – CP-FP**

**Call DG RTD (FP7-GC-SST-2010-RTD-1)** (*Smart storage integration*)

New traction battery packs make the fully electric & plug-in vehicles more and more capable. Their share of the price of the car is set to become even more dominant. Factors driving this include the strident demand for better car range. Battery packs increasingly incorporate electronics for safety and power conversion. The integration of these new complex battery packs presents major challenges especially considering the current lack of standards. EASYBAT's main mission is to address these integration challenges by defining new concepts for the smart insertion of batteries and by developing in particular generic interfaces for electric vehicles. This research aims at enabling smooth batteries integration and swap. The EASYBAT integration system will be developed for fully electric vehicles.

The project includes 11 partners. Coordinator: Better Place Labs Israel LTD, Israel

- ECTRI partner: FhG

Duration: 30 months, from January 2011 to June 2013

<http://www.easybat.eu>

**104. OPERA4FEV "OPERating RACK For Full-Electric Vehicle" – FP-IP**

**Call DG RTD (FP7-GC-SST-2011-RTD-1)** (*Advanced eco-design and manufacturing processes for batteries and electrical components*)

The OPERA4FEV project aims to develop a cost effective innovative thermoplastic battery rack, able to integrate any type of cylindrical cells. The solution proposed by OPERA4FEV project, adaptable to any Full Electric Vehicle model, will indeed integrate electrical, hydraulic connections and component housing to reduce cost assembly. OPERA4FEV will pay particular attention to the evaluate the effects of the rack characteristics regarding vehicle crash safety, and will focus on the potential risks for the vehicle and its occupants in case of failure of one or more batteries. To sum up, the main innovations of the OPERA4FEV project are : Thermoplastic rack integrating the electrical and hydraulic connections; use of thermoplastic pultruded reinforcements, infrared welding for plastic part assembly; improved regulation and heat transfer; use of recycled material; recycling and End of Life; weight reduction; Life Cycle Assessment; reduction of number of components; maintain the cells in the rack reversibly and lighter with robust tightness; establish fast connections.

This project includes 10 partners. Coordinator: MECAPLAST, Monaco

• ECTRI partner: UPM

Duration: 42 months, from September 2011 to February 2015

<http://www.opera4fev.eu/>

**105. GREEN EFFORTS "Green and Effective Operations at Terminals and in Ports" – CP - FP**

**Call DG RTD (FP7-SST-2011-RTD-1)** (*Efficient interfaces between transport modes*)

The reduction of the CO2 footprint in ports and terminals will only be possible through a cleaner energy mix and through reduced energy consumption. To achieve this goal, it is necessary to develop understandable, practicable and transparent methods and standards. Such standardization should also provide the basis for policy-making aiming at the reduction of port and terminal carbon footprint and strengthened competitiveness of this industrial sector. The Green EFFORTS project primarily aims at the reduction of energy consumption and a cleaner energy mix at terminals (container, RoRo and inland waterway) to be controlled in a standardized transparent and easy-to-follow way, but will also consider the role of a port authority may play to achieve these goals.

This project includes 8 partners. Coordinator: Jacobs University Bremen GMBH, Germany

• ECTRI partner: FhG

Duration: 30 months, from January 2012 to June 2014

<http://www.green-efforts.eu/>

**106. ECOSHELL "Development of new light high-performance environmentally benign composites made of bio-materials and bio-resins for electric car application" – CP-FP**

**Call DG RTD (FP7-GC-SST-2010-RTD-1)** (*Advanced electric vehicle concepts*)

ECOSHELL is concerned with the development of optimal structural solutions for superlight electric vehicles (category L6 and L7e), decreasing its environmental footprint and using an innovative bio-composite material for the vehicle body. Traditionally this category of urban vehicles has been relatively expensive and lacking of sufficient security measures compared to a classic vehicle (category m1 n1), thus less attractive for popular use. However, a body car lighter than 100Kg can allow the electric vehicles to have acceptable performances at an affordable price, due to lower power of the engine and lower energy consumption. This project aims at handling the first two major draw backs (production cost and safety) while further improving the associated environmental advantages via the application of innovative biodegradable materials for the vehicle body .

This project includes 10 partners. Coordinator: Conception Etudes Realisation et gestion Informatique SAS, France

• ECTRI partners: FhG and VTT

Duration: 32 months, from January 2011 to September 2013

<http://www.ecoshell.eu>



**107. EUROLIION “High energy density Li-ion cells for traction” – CP**

**Call DG RTD (FP7-GC-SST-2010-RTD-1)** (*Materials, technologies and processes for sustainable automotive electrochemical storage applications*)

This project aims to develop a new Li-ion cell for traction purposes with the following characteristics: ‘High energy density of at least 200 Wh/kg ‘Low costs i. e., a maximum of 150 Euro/kWh ‘Improved safety Although the Li-ion cell appears to be the most appropriate technology to meet these goals, considerable research and development is required. For example, the much-used LiFePO<sub>4</sub> cells cannot reach the energy density criterion, and in addition, LiFePO<sub>4</sub> is patented, which hampers worldwide commercialisation. Many other materials are either too expensive or do not meet current safety, environmental standards (e. g., cobalt in LiCoO<sub>2</sub>). Thus, we propose a shift from carbon to the much higher capacity silicon-based anodes, and from cobalt-based to iron and/or manganese/nickel-based cathodes, and to use novel electrolyte salts.

This project includes 13 partners. Coordinator: Technische Universiteit Delft, the Netherlands

• ECTRI partner: AIT

Duration: 48 months, from February 2011 to January 2015

<http://www.euoliion.eu/>

**108. OSIRIS “Optimal Strategy to Innovate and Reduce energy consumption In urban rail Systems ” – CP-IP**

**Call DG RTD (FP7-SST-2011-RTD-1)** (*Energy consumption reduction in urban rail systems*)

For many transport modes, energy reduction strategies can be effectively formulated at the level of the vehicle or vessel. New technologies can therefore be introduced to a vehicle and the direct energy savings can be readily quantified. However, such approach is not suitable to be employed for urban rail, where it is not sufficient to consider only the energy performance of vehicles; the energy associated with the infrastructure, as well as the influence of the mode of operation are to be considered too. What is needed, and what has been lacking so far, is a holistic approach for the reduction of energy consumption for urban rail systems embracing vehicles, infrastructure and operation, as is proposed by OSIRIS.

This project includes 17 partners. Coordinator: Union Internationale des chemins de fer, France

• ECTRI partner: UNEW

Duration: 36 months, from January 2012 to December 2014

<http://www.osirisrail.eu/>

**109. CORE “CO<sub>2</sub> REduction for long distance transport” – CP-IP**

**Call DG RTD (FP7-GC-SST-2011-RTD-1)** (*Efficient long distance transport future power train concepts -includes: advanced combustion and after-treatment*)

The objective is to demonstrate a substantial reduction of CO<sub>2</sub> emissions, 15% improved fuel efficiency compared to a EURO V engine and at the same time fulfilling EURO VI emission legislation. By using novel technology and combine them in flexible engines with a high level of precise control, performance advantages will be achieved with improvements in emissions and fuel consumption. The research will focus on efficient air management, combustion and control for the diesel engine, together with optimizing the power train layout utilizing electric hybridization, downsizing and electrification of auxiliaries and alternative fuels.

Research to the after treatment system is included to further improve the powertrain efficiency. This will be combined improvements to the base engine friction for developing highly efficient drivelines for long distance transports.

This project includes 16 partners. Coordinator: VOLVO Technology AB, Sweden

• ECTRI partner: POLITO

Duration: 36 months, from January 2012 to December 2015

<http://co2re.eu/index.html>

**110. HERCULES-C “Higher Efficiency, reduced emissions, increased reliability and lifetimes, engine for ships” – CP-IP**

**Call DG RTD (FP7-SST-2011-RTD-1)** (*Towards zero emission marine engines*)

The present proposed HERCULES-C project is the Phase III of the HERCULES Programme. In order to take marine engine technology a step further towards improved sustainability in energy production and total energy economy, an extensive integration of the multitude of the new technologies developed in Phases

I and II is required. HERCULES-C addresses this challenge by adopting a combinatory approach for engine thermal processes optimization, system integration, as well as engine reliability and lifetime. The first Objective of HERCULES-C is to achieve further substantial reductions in fuel consumption, while optimizing power production and usage. The second Objective of HERCULES-C is to achieve near-zero emissions by integrating the various technologies developed in the previous research Projects, in Phases I and II. The third Objective is to maintain the technical performance of engines throughout their operational lifetime.

The project includes 22 partners. Coordinator: National Technica University of Athens, Greece.

• ECTRI partner: DTU

Duration: 36 months, from January 2012 to December 2014

<http://www.hercules-c.com/>

#### **111. ELIBAMA “European Li-Ion Battery Advanced Manufacturing for Electric Vehicles” – CP-IP**

**Call DG RTD (FP7-GC-SST-2011.RTD-1)** (*Advanced eco-design and manufacturing processes for batteries and electrical components*)

The global objective of the ELIBAMA project is to enhance and accelerate the creation of a strong European automotive battery industry structured around industrial companies already committed to mass production of Li-ion cells and batteries for EVs. Europe faces strong competition from Asia and the USA where more investments and production capacities for Li-ion batteries currently exist. The ELIBAMA project will exploit advanced eco-design methods of manufacturing battery cells in order to guarantee drastic gains in cost reduction and environment-friendliness across the value chain of the battery production.

This project includes 17 partners. Coordinator: Renault S.A.S., France

• ECTRI partner: FhG

Duration: 36 months, from November 2011 to October 2014

#### **112. STARTER “Sustainable Transport for Areas with Tourism through Energy Reduction” - CIP**

The overall objective of the STARTER project is to promote energy efficiency through the use of Local Travel Plan Networks (LTPNs) in areas dealing with seasonal demand management. Through this project local cooperation will be promoted. Special emphasis will be put on how to mature LTPNs into networks that are economically independent: by developing a strategy by which LTPNs become ‘tools’ that are mobility improving and energy reducing, and that are viable without the financial support of governmental organizations.

The main outcome of the project will be the implementation of innovative mobility measures in 5 regions suffering from a steep seasonality of transport demand, which will contribute to achieve a less energy consuming transport system and less car-dependant ‘lifestyles’. Increased awareness and knowledge of LTPNs and mobility management by policy shapers, makers, implementers and users through the project website, reports, journal articles, and workshops / conferences will also be a key result of the project.

This project includes 10 partners. Coordinator: MOBYCON, the Netherlands

• ECTRI partner: CErTH-HIT

Duration: 32 months, from April 2012 to December 2014

<http://www.starter-project.eu>

#### **113. SAFEJOINT “Enhancing structural efficiency through novel dissimilar material joiningTechniques” – CP-FP**

**Call DG RTD (FP7-NMP-2012-SMALL-6)** (*Joining dissimilar materials (excluding applications specific only to healthcare)*)

There is a high demand for the design of lightweight energy efficient structures for transport applications in order to meet CO<sub>2</sub> emissions targets set worldwide. To achieve this designers have introduced the concept of “hybrid” structures where two or more lightweight materials are used each possessing unique properties that when joined together result in high performance lightweight structures that would not have been possible if a single material was used. This approach requires the development of joining techniques for materials with fundamentally different physical properties that will ensure the safe and reliable transfer of load between the constituent materials. SAFEJOINT addresses this challenge by developing novel techniques for metal to metal and metal to composite joining as well as developing novel techniques for the non-destructive inspection and evaluation of such joints in order to enhance confidence to designers and end-users of hybrid structures of their through life safe performance.

This project includes 9 partners.

- **ECTRI partners:** UNEW, United Kingdom (coordinator) and FhG  
Duration: 36 months, from November 2012 to October 2015  
<http://www.safejoint.net/>

**114. MOWE-IT “Management of weather events in transport system” – CSA - SA**  
**Call DG RTD (FP7-TPT-2012-RTD-1) (Reduction of the vulnerability of the European Transport System to extreme weather events and natural disasters)**

The MOWE-IT project shall assess factors that prerequisite cross-modal transferability between the air and surface-based European transport systems in order to protect the passengers, shippers, European institutions and citizens against travel delays, cancellations and/or stoppages in freight transfer caused by extreme weather and/or other natural disasters. The WEATHER and EWENT-projects have established how the different extreme weather events harm the safety and security of passengers and drivers, reduce the inter-urban and regional accessibility, disrupt logistics chains, delay cargo delivery, inflate supply costs for operators and consignees, and immobilise public infrastructure. However, there is still a need to find out how the air and surface transport systems may improve operational resilience by substituting each other's services when suffering from traffic curtailment, infrastructure shutdowns, and/or capacity shortages caused by emergencies.

This project includes 12 partners.

- **ECTRI partners:** VTT, Finland (coordinator), CERTH-HIT, DLR and FhG  
Duration: 24 months, from October 2012 to September 2014  
<http://www.mowe-it.eu/>

**115. CONVENIENT “Complete Vehicle Energy-saving Technologies for Heavy-Trucks” – CP-IP**  
**Call DG RTD (FP7-GC-SST-2012-RTD-1) (Complete vehicle energy management)**

The objective of CONVENIENT is to achieve complete vehicle energy management by proposing highly innovative solutions for improved efficiency and enhanced integration of components currently designed independently) which will be developed, integrated and evaluated directly on validator vehicles.

The most relevant and novel aspect of CONVENIENT is represented by the holistic approach to on-board energy management, considering the tractor, semi-trailer, driver and the mission as a whole.

This project includes 22 partners. Coordinator: Centro Ricerche FIAT, Italy

- **ECTRI partner:** FhG  
Duration: 36 months, from November 2012 to October 2015

**116. UNPLUGGED “Wireless charging for Electric Vehicles” – CP-FP**  
**Call DG RTD (FP7-GC-SST-2012-RTD-1) (Smart infrastructures and innovative services for electric vehicles in the urban grid and road environment)**

UNPLUGGED project aims to investigate how the use of inductive charging of Electric Vehicles (EV) in urban environments improves the convenience and sustainability of car-based mobility. In particular, it will be investigated how smart inductive charging infrastructure can facilitate full EV integration in the urban road systems while improving customer acceptance and perceived practicality. UNPLUGGED will achieve these goals by examining in detail the technical feasibility, practical issues, interoperability, user perception and socio-economic impacts of inductive charging. As one special variant, inductive en-route charging will be investigated thoroughly.

This project includes 17 partners. Coordinator: FKA, Germany

- **ECTRI partners:** POLITO and TRL  
Duration: 30 months, from October 2012 to March 2015  
<http://unplugged-project.eu>





**117. MERLIN “Sustainable and intelligent management of energy for smarter railway systems in Europe: an integrated optimisation approach” – CP-IP****Call DG RTD (FP7-SST-2012-RTD-1) (Management of energy in railway systems)**

MERLIN's main aim and purpose is to investigate and demonstrate the viability of an integrated management system to achieve a more sustainable and optimised energy usage in European electric mainline railway systems. MERLIN will provide an integrated optimisation approach that includes multiple elements, dynamic forecasting supply-demand scenarios and cost considerations to support operational decisions leading to a cost-effective intelligent management of energy and resources. MERLIN will also deliver the interface protocol and the architecture for energy management systems in the railway domain, combining the technical development with new business model that would enable and foster their application.

This project includes 19 partners. Coordinator: Union des industries ferroviaires Européennes, Belgium

• ECTRI partner: UNEW

Duration: 36 months, from October 2012 to August 2015

<http://www.merlin-rail.eu/>

**118. DURABROADS “Cost-effective DURABLE ROADS by green optimized construction and maintenance” – CP-FP****Call DG RTD (FP7-SST-2013-RTD-1) (Innovative, cost-effective construction and maintenance for safer, greener and climate resilient roads)**

The objective of the DURABROADS project is the design, development and demonstration of cost-effective, eco-friendly and optimized long-life roads, more adapted to freight corridors and climate change by means of innovative designs and the use of greener materials improved by nanotechnology. The optimization of current construction, maintenance and rehabilitation procedures is also aimed in this project.

This project includes 9 partners. Coordinator: Universidad de Cantabria, Spain

• ECTRI partners: FhG and KTI

**119. JOULES “Joint Operation for Ultra Low Emission Shipping” – CP****Call DG RTD (FP7-SST-2013-RTD-1) (Towards the zero emission ship)**

Reducing emissions from shipping has increasingly become a challenge over the last years, both as a counter measure against global climate change and to protect local environments and population from waste, gas emissions and noise. JOULES follows an integrated and holistic approach, not only limited to integrating the components of the simulation of the energy grid, but through the consideration of other viable options for emission reduction.

This project includes 39 partners. Coordinator: Flensburger Schiffbau-Gesellschaft MBH & CO KGFSG, Germany

• ECTRI partners: UPM and VTT

Duration: 48 months, from June 2013 to May 2017.

**120. SHOPERA “Energy Efficient Safe SHIP OPERATION” – CP****Call DG RTD (FP7-SST-2013-RTD-1) (Towards the zero emission ship)**

The aim of the proposed research project is to address the sufficiency of propulsion power and of steering devices to maintain the manoeuvrability of ships in adverse conditions by: further development and refinement of high fidelity, hydrodynamic simulation software tools for the efficient analysis of the manoeuvring performance and safety of ships in complex environmental conditions; Performing sea keeping/manoeuvring model tests in combined seaway/wind environment for different ship types, to provide the required basis for the validation of results obtained by numerical simulations, whereas full scale measurements available to the consortium will be exploited; Integrating validated software tools into a ship design software platform and set-up of a multi-objective optimization procedure; Investigating the impact of the proposed new guidelines on the design and operational characteristics of various ship types; investigating in parallel the impact on EEDI by the developed integrated/holistic optimization procedure in a series of case studies; development of new guidelines for the required minimum propulsion power and steering performance to maintain manoeuvrability in adverse conditions; preparing and submitting to IMO a summary of results and recommendations for further consideration.

This project includes 23 partners. Coordinator: NTUA, Greece

• ECTRI partners: DTU and VTT

**121. URBAN-EV “Super Light Architectures for Safe and Affordable Urban Electric Vehicles” – CP****Call DG RTD (FP7-SST-2013-RTD-1)**

URBAN-EV will apply innovative manufacturing technologies and materials to produce prototypes of a 2-seat urban electric vehicle with considerably enhanced autonomy vs. the SoTA EV of its kind, and a similar occupant safety level than normal passenger cars. Specifically, a purely electric range (in urban conditions) of 150 Km is targeted as well as a compelling acceleration time of 10 s for 0-100 Km/h.

This project includes 11 partners. Coordinator: NTUA, Greece

- ECTRI partner: FhG

**122. FLOODPROBE “Technologies for the cost-effective flood protection of the built environment” – CP-FP****Call (FP7-ENV-2009)** *(Technologies for improved safety of the built environment in relation to flood events)*

The principal aim of FloodProBE is to provide cost-effective means for the flood protection and damage mitigation in urban areas. To this end, FloodProBE will develop, test and disseminate technologies, methods, concepts and tools for risk assessment and mitigation, focussing particularly on the adaptation of new and existing buildings (retrofitting) and on infrastructure networks.

This project includes 15 partners. Coordinator: Stichting Deltares, the Netherlands

- ECTRI partner: Ifsttar

Duration: 48 months, from November 2009 to October 2013

<http://www.floodprobe.eu/>

**123. PERSUADE “PoroElastic Road Surface: an innovation to Avoid Damages to the Environment” – CP-FP****Call (FP7-ENV-2008)** *(Innovative environmental technologies including design concepts and materials for the reduction of damage to the environment) (Technologies for high added value production from waste)*

Low-noise road surfaces are recognized as a cost-effective tool for traffic noise abatement. The best performance can be achieved by optimizing surface texture and porosity. That way, a bottom line of a 3dB lifetime average reduction with respect to ordinary asphalt has been reached. Any progress must resort to another noise-relevant characteristic i.e. elasticity by which the noise due to tyre vibrations can be suppressed. A recently completed European project has shown that, in order to be effective, the elasticity of the road surface must be in the same range as that of the tyre itself. This explains why previous attempts of incorporating a little rubber in an asphalt mix failed to produce significant noise reductions.

This project includes 12 partners. Coordinator: Centre de recherches routières, Belgium

- ECTRI partners: Ifsttar and VTI

Duration: 60 months, from September 2009 to August 2015

<http://persuade.fehrl.org/>

## 4. Freight and logistics

### 124. KOMODA "Co-modality - towards optimised integrated chains in freight transport logistics" – CP-FP Call DG RTD (FP7-TPT-2007-RTD-1) (Optimisation of an integrated chain for freight transport logistics by co-modality)

The KOMODA proposal is presented as an answer to the research objectives launched by call TPT 2007.2 concerning the optimization of the logistics chain through co-modality. More precisely, KOMODA's objective is to produce a roadmap, with associated action plans, to nurture an integrated e-Logistics platform by and between modes of freight transport across Europe. Such platform must comply with a series of basic requirements: has to be based in open standards, usable by any concern, able to communicate freely between existing applications and allow the integration of legacy systems and future development.

This project includes 10 partners. Coordinator: ILIM, Poland

- ECTRI partner: CERTH-HIT and UNEW

Duration: 24 months, from January 2008 to December 2009

### 125. BE LOGIC "Benchmarking Logistics and Co-modality" – CP Call DG TREN (FP7-SST-2007-TREN-1) (Benchmarking and logistics)

Efficient use of transport modes and resources requires to understand the options and to be able to make the right logistics choices. Benchmarking is an instrument which can help to answer this question. The major improvement potential in logistics performance is among small and medium sized enterprises (SMEs'), including shippers with relatively small transport volumes. Therefore, the focus in BELOGIC lies on applying the logistics benchmark methodology on SMEs.

This project includes 9 partners. Coordinator: ECORYS, the Netherlands

- ECTRI partner: UNEW and VGTU-TMI

Duration: 30 months, from September 2008 to February 2011

<http://www.be-logic.info>

### 126. TELLIBOX "Intelligent megaswapboxes for advanced intermodal freight transport" – CP-IP Call (FP7-SST-2007) (Vehicle/vessels and infrastructure concepts for intermodal freight transport)

Tellibox is about the development of an all-purpose loading unit, the MegaSwapBox, which is applicable for intermodal transport of road, rail, inland- and short sea shipping. The MegaSwapBox will combine both the advantages of containers and semitrailers via a technical and efficiency feasibility analysis, to be finalised in concrete demonstrators. The overall aim is to counteract the trend towards increasing freight transport by making better use of the different modes on their own and in combination with each other ('Co-modality'), offered in an integrated, safer, greener, smarter and competitive product. This project includes 10 partners. Coordinator: RWTH Aachen, Germany

- ECTRI partner: UNIZA

Duration: 36 months, from April 2008 to March 2011

<https://www.zlw-ima.rwth-aachen.de/webtellibox/>

### 127. AIMS "Advanced Impacts evaluation Methodology for innovative freight transport Solutions" – CSA-SA Call DG RTD (FP7-TPT-2007-RTD-1) (Development of methodology and evaluation of the impact of FP5 and FP6 projects in the field of Transport)

In different fields of freight transport a variety of research projects have been realised in the Framework programmes FP 5 and FP 6. The results of these projects are widespread concerning aspects like enlargement of scientific knowledge, technological feasibility, commercialisation and level of innovation. In depth analysis and benchmarks of the project results have strong importance regarding future chances of commercialisation. AIMS has the objective to analyse finished FP 5 and FP 6 projects using an innovative approach combining systemic and socio-economic approaches.

This project includes 9 partners. Coordinator: PTV, Germany

- ECTRI partner: KTI

Duration: 24 months, from September 2008 to July 2010

<http://www.aims-project.net>

**128. SmartCM “SMART Container Chain Management” – CP-IP**

**Call DG TREN (FP7-SST-2007-TREN-1)** (*Smart supply chain management in intermodal door-to-door container transport*)

The project is an urgent response of key players along the logistics supply chain to make trade and transport more efficient, secure, visible and competitive not only in the EU but across the world in a global intermodal context, while respecting existing initiatives and pilot projects in the context of AEO and Green Lanes implementation. By streamlining custom procedures and container management processes, value is added both for public administrations and private businesses in terms of more accurate and quicker information exchange while scarce capacity and connecting transport modes can be better balanced between continents and from port to hinterland. It provides real-time information to key actors along the entire global journey of the container through a secured and unbiased information gateway (SMART-CM Neutral Layer), which receives the information from a Container Security Device or CSD. The device reports position, conditions and security status of the container to the Neutral Layer, which in turn provides selected information to customs officials and logistics actors to perform their risk assessment and grant the container that all important ‘green light’ to exit the port without inspection before arrival. The project developed other added value services such as notifications about the container’s arrival and departure times, alerts for delays and information about each container’s condition. By coupling CSD information with other actors sources, such as vessel tracking systems, shipping lines systems and terminal operator systems it enables chain visibility and efficient management support.

This project includes 30 partners.

- **ECTRI partners:** CERTH-HIT, Greece (coordinator), FhG and VTT

Duration: 39 months, from August 2008 to October 2011

<http://www.smart-cm.eu>

**129. EURIDICE “EUROpean Inter-Disciplinary Research on Intelligent Cargo for Efficient, Safe and Environment-friendly Logistics” – CP-IP**

**Call DG INFSO (FP7-ICT-2007-1)** (*for Intelligent Vehicles and Mobility Services*)

EURIDICE is an Integrating project that will create the necessary concepts, technological solutions and business models to establish information services platform centred on the context of individual cargo items and their interaction with the surrounding environment and the types of users.

This project includes 22 partners. Coordinator: INSIEL, Italy

- **ECTRI partner:** VTT

Duration: 52 months, from February 2008 to October 2011

**130. SKEMA “Sustainable Knowledge Platform for the European Maritime and Logistics Industry” – CSA-CA**

**Call DG TREN (FP7-SST-2008-TREN-1)** (*Maritime and logistics co-ordination platform*)

SKEMA aimed at establishing a Sustainable Knowledge Platform for the use of stakeholders in the Maritime Transport & Logistics industry. The SKEMA Knowledge Platform will contain a Knowledge Base that will be populated by project Studies and outputs from workshops and case studies addressing key challenges for the European maritime transport and logistics industry. The Studies will be constructed to facilitate improved usability and accessibility of valuable results from previous projects, studies & publications.

This project includes 14 partners. Coordinator: Athens University of Economics and Business- Research Center, Greece

- **ECTRI partner:** VTT

Duration: 36 months, from June 2008 to June 2011

<http://www.skematransport.eu>

**131. CITYLOG “Sustainability and efficiency of city logistics” – CP-FP**

**Call DG RTD (FP7-SST-2008-RTD-1)** (*Urban freight delivery systems*)

The CITYLOG project proposal aims at increasing the sustainability and the efficiency of urban delivery of goods by means of an adaptive and integrated mission management and innovative vehicle solutions. Three action domains have been identified to improve today’s city logistic system: - logistic-oriented telematic services are expected to give a decisive contribution to improve mission planning processes by utilising optimized routing and drivers’ support systems. Towards the final customers, tracking and communication capabilities need to be deployed to reduce the number of unsuccessful deliveries; - vehicle technologies represent a key factor to increase the operational flexibility of lorries and vans. It means that

the vehicles shall be able to support different mission profiles, and thus reduce the number of vehicles needed for the tasks. Therefore, a re-configurable internal layout will enable different uses either as simple container or mobile pack station (BentoBox concept). The innovative approach of CITYLOG will lead to decrease the number of delivery vehicles and optimise the use of delivery trucks in urban areas, while resulting in an increased quality of services.

The project includes 18 partners. Coordinator: Research Center FIAT, Italy

- ECTRI partner: FhG

Duration: 48 months, from January 2010 to December 2012

<http://www.city-log.eu>

**132. ENABLE “Stimulate Sustainable Freight Transport Systems with Latin American countries” – CSA-SA Call DG RTD (FP7-SST-2008-RTD-1)** *(Stimulating International Cooperation with Latin American countries in developing sustainable freight transport systems)*

The ENABLE project aimed at ameliorating Latin American (LA) freight transport performance, particularly in Argentina and Brazil, by transferring European business expertise and research innovation addressing the specific topics of intermodal freight transport and logistics. The project’s main goal was to implement the appropriate activities and communication strategies that would strengthen the trade and transport relations between EU and the Latin American countries. This goal was achieved through the close collaboration between EU and LA stakeholders and industrial players, as well as the definition of specific and concrete action lines and plans that could be implemented in the future for stimulating EU – LA business and research cooperation opportunities. The technical activities of ENABLE included the identification of barriers, obstacles and opportunities of the inter- and multi-modal freight transport and logistics sustainability in Brazil and Argentina, as well as the identification of European outstanding business cases and research innovations that best address the LA regional freight transport needs and requirements. The project resulted to the production of a set of roadmaps and a Framework for knowledge transfer. Special focus was placed on dissemination actions, in order for ENABLE to become an active platform of exchange of opinions, experiences and expertise between representatives of the industry, policy and research fields of freight transport and logistics in both Europe and particularly LA.

The project includes 5 partners.

- ECTRI partners: CERTH-HIT, Greece (coordinator) and VTT

Duration: 24 months, from September 2009 to August 2011

<http://www.enable-project.net/>

**133. B2B LOCO “Baltic to Balkan Network for Logistics Competence” – CSA-SA Call DG RTD (FP7-SST-2008-RTD-1)** *(Stimulating participation of Small and Medium Size Enterprises (SMEs) through Regional Clusters)*

Based on successful FP5&6 experiences of POLLOCO and CENTRAL LOCO projects, B2B LOCO project is that local market-oriented research units collaborating in an international network aimed at experience exchange - can substantially increase the participation of SMEs in the FP projects by demonstrating and actively promoting the most business practice-oriented results of past and current RTD projects of the FP among the enterprises. B2B LOCO will target Regional Clusters gathering different types of SMEs: transport and logistics companies, manufacturing and retail companies, hi-tech and green technologies companies. Companies from these groups are often “FP-ready” yet they are not realising their potential because the FP is best communicated to the research community. As a result of B2B LOCO activities, SMEs will benefit from advanced solutions developed by FP consortia, experiences of successful SME- RTD - Academia co-operation cases which are laudable and should be copied.

This project includes 16 partners. Coordinator: Instytut Logistyki i Magazynowania, Poland

- ECTRI partners: CDV, TTI and VGTU-TMI

Duration: 36 months, from September 2009 to August 2011

<http://www.b2bloco.eu/index.html>



**134. e-Freight “European e-freight capabilities for co-modal transport” – CP****Call DG TREN (FP7-SST-2008-TREN-1)** (*Encouraging modal shift and decongesting transport corridors*)

The key issues that will be addressed in e-Freight are: Intra-European trade is complicated due to disconnected logistic chains. This hindrance conflicts with the legitimate ambition of achieving a European maritime transport space without barriers. The movement towards a much more open environment for the realisation of co-modality goals is dependent on transport service providers publishing their services in the internet in a manner that can readily be used by independent web based transport management systems. This requires both stakeholder engagement in the promotion of open networks and innovative but practical utilisation of web services’ standards and enabling technologies including a suitable registry of e-Freight services.

This project includes 29 partners. Coordinator: BMT Group Limited, United Kingdom

• ECTRI partners: CERTH-HIT, UNEW and VTT

Duration: 42 months, from January 2010 to June 2013

<http://www.efreightproject.eu/>

**135. SuperGreen “Supporting EU’s Freight Transport Logistics Action Plan on Green Corridors Issues” – CSA-CA****Call DG RTD (FP7-SST-2008-RTD-1)** (*Green corridors*)

SuperGreen aims to assist the Commission with defining the ‘Green Corridor’ concept and promotes the development of European freight logistics in an environmentally friendly manner. The objectives of the SuperGreen project concern supporting the development of sustainable transport networks by fulfilling requirements covering environmental, technical, economic, social and spatial planning aspects.

This project includes 22 partners. Coordinator: NTUA-LMT, Greece

• ECTRI partner: UNEW

Duration: 36 months, from January 2010 to January 2013

<http://www.supergreenproject.eu>

**136. AUTOMAIN “Augmented Usage of Track by Optimisation of Maintenance, Allocation and Inspection of railway Networks” – CP-FP****Call DG RTD (FP7-SST-2010-RTD-1)** (*Automated and cost effective railway infrastructure maintenance*)

The AUTOMAIN project focuses is to optimise and automate maintenance & inspection where possible, also to introduce new planning & scheduling tools and methodology. The project aims to reduce the possession time around 40%.

To achieve this five objectives are set: 1. Adopting best practice from other industries in maintenance optimisation (e.g. highways, aerospace), 2. Developing novel track inspection approaches for freight routes with a scope on in-train measuring and self-inspecting switch, 3. Researching and assessing innovations that can improve the effectiveness and efficiency of large scale inspection & maintenance processes with a scope on track and switch maintenance, track inspection, 4. Further developing of key technologies that will drive the development of modular infrastructure design, 5. Developing a new maintenance planning and scheduling tool that is able to optimise the maintenance activities, taking account of the benefits brought about by other improvements in this project.

This project includes 18 partners. Coordinator: PRORAIL B.V., the Netherlands

• ECTRI partner: DLR

Duration: 36 months, from February 2011 to January 2014

<http://www.automain.eu/>

**137. VEL-WAGON “Versatile, Efficient and Longer Wagon for European Transportation” – CP-FP****Call DG RTD (FP7-SST-2010-RTD-1)**

Project VEL-Wagon is a key milestone for the efficiency of intermodal freight wagons since it will demonstrate that fewer elements and less dead weight can result in the same or even more transport output. Coherently, the project will design a versatile platform element for a multipurpose function and intermodal use that will bring about an important gain of flexibility, accessibility and efficiency of railway services. The project will investigate the current status of the European freight railway market and, more importantly, it will look at the trend thereof and its associated logistics. In synchronisation, a wagon engineering activity will be launched for determining the final costs of a solution matching the market requirements. The basic working paradigm is the markets need for longer and lighter wagons with fewer axles.



This project includes 4 partners. Coordinator: Technische Universität Berlin, Germany

- ECTRI partner: UNIZA

Duration: 25 months, from December 2010 to December 2012.

<http://www.vel-wagon.eu/>

### **138. SPECTRUM “Solutions and Processes to Enhance the Competitiveness of Transport by Rail in Unexploited Markets” – CP-FP**

**Call DG RTD (FP7-SST-2010-RTD-1)** (*Step changes in rail freight logistics: new technologies and methods to increase freight competitiveness in the emerging low density, high value market*)

SPECTRUM will develop a rail freight train that provides a higher speed service for high value, low density and time sensitive goods with the performance characteristics of a passenger train. SPECTRUM takes a longer term, radical and first principles approach to deliver a new rail freight offering that can compete with road and air in the growing sectors of logistics where rail freight has traditionally little to offer. We shall work towards a freight train that: Behaves like a passenger train in terms of speed, acceleration, braking, momentum: allowing full scheduling on urban and sub urban train networks; Has a standardised and universal power supply system for the delivery of power to temperature controlled containers (reefers) in a controllable fashion.

This project includes 22 partners.

- ECTRI partner: UNEW, United Kingdom (coordinator)

Duration: 48 months, from May 2011 to April 2015

<http://www.spectrumrail.info/>

### **139. SUSTRAIL ‘The sustainable freight railway: Designing the freight vehicle track system for higher delivered tonnage with improved availability at reduced cost’ – CP-IP**

**Call DG RTD (FP7-SST-2010-RTD-1)** (*The sustainable freight railway: Designing the freight vehicle - track system for higher delivered tonnage with improved availability at reduced cost*)

SUSTRAIL aims to contribute to the rail freight system to allow it to regain position and market and the proposed solution is based on a combined improvement in both freight vehicle and track components in a holistic approach aimed at achieving a higher reliability and increased performance of the rail freight system as a whole and profitability for all the stakeholders. The SUSTRAIL integrated approach is based on innovations in rolling stock and freight vehicles (with a targeted increased in speed and axle-load) combined with innovations in the track components (for higher reliability and reduced maintenance), whose benefits to freight and passenger users (since mixed routes are considered) are quantified through the development of an appropriate business case with estimation of cost savings on a life cycle basis. In fact, a holistic approach to vehicle and track sustainability has to be taken, since improvements in track design and materials alone are not enough as demands on the rail system increase.

This project includes 29 partners. Coordinator: Consorzio per la ricerca e lo sviluppo di tecnologie per il trasporto innovativo, Italy

- ECTRI partners: UNEW and UPM

Duration: 48 months, from June 2011 to May 2015

<http://www.sustrail.eu>

### **140. COFRET “Carbon footprint of freight transport” – CP- FP**

**Call DG RTD (FP7-SST-2010-RTD-1)** (*Carbon footprint of freight transport*)

COFRET’s main objective is to develop and test a methodology and framework for the accurate calculation of carbon emissions in the context of supply chains. COFRET provides for a methodology to calculate and monitor carbon emissions based on their component CO<sub>2</sub>-emissions and if applicable further GHG gases such as CH<sub>4</sub> and N<sub>2</sub>O as well as so- called F-gases deriving from cooling processes. This comprises the consideration of the user needs and requirements of different stakeholders, such as producers, shippers, wholesalers and political bodies. COFRET is based on existing emission calculation tools in use by its stakeholder already.

This project includes 14 partners.

- ECTRI partners: DLR, Germany (coordinator), CERTH-HIT, Ifsttar, ITS, TØI, VGTU-TMI and VTT

Duration: 30 months, from June 2011 to November 2013

<http://www.cofret-project.eu/>

**141. ICT-Emissions “Development of a methodology and tool to evaluate the impact of ICT measures on road transport emissions” – CP****Call DG CONNECT (FP7-ICT-2011- CONNECT-7) (Low carbon multi-modal mobility and freight transport)**

ICT-EMISSIONS aims at developing a novel methodology to evaluate the impact of ICT-related measures on mobility, vehicle energy consumption and CO<sub>2</sub> emissions of vehicle fleets at the local scale, in order to promote the wider application of the most appropriate ICT measures. The proposed methodology combines traffic and emission modelling at micro and macro scales. These will be linked with interfaces and submodules which will be specifically designed and developed. A number of sources are available to the consortium to obtain the necessary input data. Also, experimental campaigns are offered to fill in gaps of information in traffic and emission patterns. The application of the methodology will be demonstrated using commercially available software. However, the methodology is developed in such a way as to enable its implementation by a variety of emission and traffic models.

This project includes 11 partners. Coordinator: Aristotelio Panepistimio Thessalonikis, Greece

Duration: 36 months, from October 2011 to September 2014

• ECTRI partner: UPM

<http://www.ict-emissions.eu/>

**142. STRAIGHTSOL “STRATEGies and measures for smarter urban FREIGHT SOLutions” – CP-FP****Call DG RTD (FP7-GC-SST-2011-RTD-1) (Urban and interurban shipments)**

The objectives of STRAIGHTSOL are threefold:

1) Develop a new impact assessment framework for measures applied to urban-interurban freight transport interfaces.

2) Support a set of innovative field demonstrations showcasing improved urban-interurban freight operations in Europe.

3) Apply the impact assessment framework to the live demonstrations and develop specific recommendations for future freight policies and measures.

The STRAIGHTSOL demonstrations and deliverables will give policy makers and transport industry players input for future measures in the field of last mile distribution and urban-interurban freight transport interfaces at the European, country, region, city and local levels.

This project includes 15 partners.

• ECTRI partners: TØI, Norway (Coordinator), CENIT and CErTH-HIT

Duration: 36 months, from September 2011 to August 2014

<http://www.straightsol.eu/>

**143. SmartFuSION “Smart Urban Freight SOLUTIONs” – CP-IP****Call DG RTD (FP7-SST-2011-RTD-1) (Urban – interurban shipments)**

The SMARTFUSION public-private partnership (PPP) will build upon existing urban freight development strategies of three demonstration regions and to demonstrate smart urban freight solutions on co-operative and sustainable city distribution in urban interurban supply chains. Leading idea is to introduce the concept of the European Green Car Initiative in the last mile operations, introduce innovative technology developments in the field of urban freight planning, vehicle technology and urban inter urban transshipment and to develop comprehensive and transferable impact assessment models for smart urban freight solutions.

This project includes 14 partners.

• ECTRI partner: UNEW, United Kingdom (coordinator)

Duration: 36 months, from April 2012 to March 2015

<http://www.smartfusion.eu/>

**144. LOGINN “LOGistics INNovation uptake” – CSA**

**Call DG RTD (FP7-GC-SST-2012-RTD-1)** (*Platform for continuous intermodal freight transport strategic research and innovation*)

The LOGINN CSA aims at co-ordinating and supporting RTD projects in the logistics area to improve their capabilities to bridge the gap between pilot implementation and marketable solutions. To achieve this goal LOGINN will set up a collaborative platform (Virtual Arena) to allow the main stakeholders of the logistics domain (industry, SMEs, public authorities, investors and research organizations) to work together on promoting innovative transport logistics solutions aiming at increasing efficiency and with a particular focus on intermodal transport. The main results of LOGINN will be an Innovation Action Plan that will integrate the proposed initiatives for market uptake, an Innovation Accelerator and an Innovation toolbox, containing practical guidelines for transport logistics companies interested in innovations boosting intermodal transport and efficiency.

This project includes 12 partners. Coordinator: INSIEL, Italy

- ECTRI partner: CERTH-HIT

Duration: 30 months, from November 2012 to April 2015

<http://www.loginn-project.eu/>

## 5. Intelligent Transport Systems (ITS)

### 145. i-TRAVEL “Service Platform for the Connected Traveller” – CP-FP

**Call DG RTD (FP7-TPT-2007-RTD-1)** (*The connected traveller in the city, region and world of tomorrow*)

The connected traveller in the city, region and world of tomorrow ‘i-Travel’ is an original concept that combines three key innovations. The goal of the overall i-Travel IP is to develop, validate and demonstrate an innovative solution for a personalised, context-aware online ‘virtual travel assistant’ service for travellers, both before and throughout their journey, based on the integration of e-commerce and internet technologies to create the first ‘e-marketplace’ in the traffic and travel information services sector, through which creation of a wide-ranging community of information and service suppliers who through i-Travel can expand their customer base while fulfilling travellers’ needs.

This project includes 20 partners. Coordinator: ERTICO-ITS Europe, Belgium

• ECTRI partners: DLR and CETH-HIT

Duration: 18 months, from January 2008 to June 2009

<http://www.i-travelproject.com>

### 146. INTERACTION “Differences and similarities in driver INTERACTION with in-vehicle technologies” – CP-FP

**Call DG RTD (FP7-SST-2007-RTD-1)** (*Human physical and behavioural components*)

New technologies implemented in vehicles are more and more present on the European market. They are slowly adopted by the European drivers. INTERACTION’s objective is to study the real use the drivers make of these devices, and the long term effect of this use on the driver behaviour. The retained scientific approach is an association of the declared driving behaviour and the observed behaviour, in a quantitative and qualitative analysis. Differences and similarities of drivers in their interaction with devices will be studied as well at individual level (micro) as at national level (macro).

This project includes 12 partners. Coordinator: ERT, France

• ECTRI partners: CDV, Ifsttar, TRL and VTT

Duration: 42 months, from November 2008 to April 2012

<http://www.interaction-fp7.eu>

### 147. ISI-PADAS “Integrated Human Modelling and Simulation to support Human Error Risk Analysis of Partially Autonomous Driver Assistance Systems” – CP-FP

**Call DG RTD (FP7-SST-2007-RTD-1)** (*Safety and security by design*)

The main objective of the ISI-PADAS project is to provide an innovative methodology to support risk based design and approval of Partially Autonomous Driver Assistance Systems (PADAS) focusing on elimination and mitigation of driver errors by an integrated Driver-Vehicle-Environment modelling approach. The main objective of the ISI-PADAS project is to provide an innovative methodology to support risk based design and approval of Partially Autonomous Driver Assistance Systems (PADAS) focusing on elimination and mitigation of driver errors by an integrated Driver-Vehicle-Environment modelling approach.

This project includes 10 partners. Coordinator: OFFIS. EV, Germany

• ECTRI partners: DLR and Ifsttar

Duration: 36 months, from September 2008 to August 2011

<http://www.isi-padas.eu>

### 148. SYMPASS “System Modelling Process for Auxiliary Supply Systems” – CP-FP

**Call DG RTD (FP7-SST-2007-RTD-1)**

The project aims to develop a simulation environment for the complex auxiliary power system in railway vehicles together with its onboard control system called TCMS. It is the follow-up of MODTRAIN FP6 project. The environment should be open to hardware-in-the-loop and software-in-loop applications.

This project includes 15 partners. Coordinator: Bombardier Transportation, Belgium

• ECTRI partner: DLR

**149. PREDRIVE C2X “PREparation for DRIVING implementation and Evaluation of C2X communication Technology” – CP-FP****Call DG INFSo (FP7-ICT-2007-2) (For cooperative systems)**

The objectives of PREDRIVE C2X are to create and apply a dedicated tool set that allows the complete interacting system of vehicle traffic, communication and application to be evaluated. Simulation will show the effects of various C2C (car-to-car) applications on traffic safety, traffic flow efficiency and alleviate the environmental impact of traffic. It will point to the driver assistance and assistance systems as well as new kinds of traffic services that are possible through C2C.

This project includes 22 partners. Coordinator: DAIMLER, Germany

- ECTRI partners: DLR, FhG and INRETS

Duration: 24 months, from July 2008 to June 2010

<http://www.pre-drive-c2x.eu>

**150. INTERSAFE-2 “Cooperation Intersection Safety” – CP-FP****Call DG INFSo (FP7-ICT-2007-2) (For cooperative systems)**

The INTERSAFE-2 project aims to develop and demonstrate a Cooperative Intersection Safety System (CISS) that is able to significantly reduce injury and fatal accidents at intersections. The novel CISS combines warning and intervention functions demonstrated on three vehicles: two passenger cars and one heavy goods vehicle. Furthermore, a simulator is used for additional RandD. These functions are based on novel cooperative scenario interpretation and risk assessment algorithms.

This project includes 13 partners. Coordinator: IBE0, Germany

- ECTRI partner: VTT

Duration: 36 months, from June 2008 to May 2011

**151. EVITA – “E-safety vehicle intrusion protected applications” – CP-FP****Call DG INFSo (FP7-ICT-2007-2) (For cooperative systems)**

Car to car and car to infrastructure communication has a great potential to further decrease road fatalities. But this implies a massive deployment of a communication infrastructure comprising the car, and consequently opens the door to vehicle intrusion threats, which will in turn create substantial threats to the overall car safety functions. It is the distinct objective of EVITA to address these threats by preventing un-authorised manipulation of on-board systems in order to successfully prevent the intrusion into the in-vehicular systems and the transmission of corrupted data to the outside.

This project includes 12 partners.

- ECTRI partner: FhG, Germany (coordinator)

Duration: 42 months, from July 2008 to December 2011

<http://evita-project.org>

**152. iTETRIS “An integrated Wireless and Traffic Platform for Real-Time Road Traffic Management Solutions” – CP-FP****Call DG INFSo (FP7-ICT-2007-2) (For cooperative systems)**

Despite the potential development of Field Operational Tests to get the first insights into the benefits and problems faced in the development of wireless vehicular cooperative systems, there is yet the need to evaluate in the long term and large dimension the true potential benefits of wireless vehicular cooperative systems to improve traffic efficiency. To this aim, iTETRIS is devoted to the development of advanced tools coupling traffic and wireless communication simulators. This will enable large scale computing analysis and development of adequate protocols and algorithms, overcoming the limitations of current data dissemination and routing proposals; characterized by over-simplistic wireless conditions.

This project includes 9 partners. Coordinator: THALES, France

- ECTRI partner: DLR

Duration: 30 months, from July 2008 to January 2011

<http://www.ict-itetris.eu/>

**153. ARTIC "Antenna research and technology for the intelligent car" – CSA-CA****Call DG INFSO (FP7-ICT-2007-2) (For cooperative systems)**

Antenna Research is a strategic enabling technology for intelligent vehicles and road safety services. Car-to-car communications, real time congestions localisation, obstacle and collision radars, on board sensor networks, etc. are based on novel antennas solutions and subsystems integration.

This project includes 11 partners. Coordinator: I.D.S., Italy

- ECTRI partner: UPM

Duration: 30 months, from April 2008 to September 2010

<http://www.antennasvce.org>

**154. FESTA "Field opErational teSt supportT Action" – CSA-SA****Call DG INFSO (FP7-ICT-2007-1) (Field Operational Tests)**

The FESTA handbook will cover issues concerning all aspects of the time-line and administration of an FOT, such that advice will be provided regarding aspects from needs analysis at the commencement of an FOT all the way through to the integration of the acquired data and estimation of socio-economic benefits at the end.

This project includes 18 partners. Coordinator: Research Centre FIAT, Italy

- ECTRI partners: BAST, INRETS, VTI and VTT

Duration: 6 months, from November 2007 to May 2008

<http://www.its.leeds.ac.uk/festa>

**155. TeleFOT "Field Operational Tests of Aftermarket and Nomadic Devices in Vehicles" – CP-IP****Call DG INFSO (FP7-ICT-2007-2) (For cooperative systems)**

The objectives of the TeleFOT project are to assess the impacts of functions provided by aftermarket and nomadic devices in vehicles and raise wide awareness of their traffic safety potential. These devices can provide different types of driver support functions and almost nothing is known about their safety and other impacts yet. The market penetration of portable navigators and smart phones is exploding today. The timing for the project is ideal.

This project includes 25 partners.

- ECTRI partners: VTT, Finland (coordinator) and CETH-HIT

Duration: 48 months, from June 2008 to May 2012

<http://www.telefot.eu>

**156. FOT-NET "Field Operational Tests Networking and Implementation" – CSA-SA****Call DG INFSO (FP7-ICT-2007-2) (For cooperative systems)**

During the lifetime period of the different FOTs carried out both at the National and European levels, there is a crucial need for a platform of knowledge exchange in order to let these individual FOTs benefit from each others' learning experiences as well as giving the European Commission an overview of the activities involved. This networking platform open to all stakeholders from public and private sectors will give a benchmarking overview of the range of successes in reaching societal benefits with ICT based functions and systems for road transport all over Europe. FOT-Net's prime goal is to establish a support action for strategic networking of existing and future National, European and Global FOTs (e.g. US and Japan).

This project includes 11 partners and 10 associate partners. Coordinator: ERTICO-ITS Europe, Belgium

- ECTRI partners: BAST, DVS, FhG and 3 ECTRI associated partners: Ifsttar, DLR and VTT

Duration: 26 months, from June 2008 to August 2010

<http://www.fot-net.eu>

**157. HAVE-IT "Highly Automated vehicles for Intelligent Transport" – CP-IP****Call DG INFSO (FP7-ICT-2007-1) (For Intelligent Vehicles and Mobility Services)**

The path-breaking HAVE-IT proposal aims at the long-term vision of highly automated driving. Within this proposal important intermediate steps will be developed, validated and demonstrated.

These intermediate results on the one hand offer high potential for exploitation within 3-5 years after HAVE-IT and on the other hand form the ideal basis to integrate further next generation ADAS (highly automated functionalities) by adding software modules.

This project includes 20 partners. Coordinator: Continental, Germany

- ECTRI partners: DLR and Ifsttar



Duration: 42 months, from February 2008 to July 2011

<http://www.haveit-eu.org>

**158. ADOSE “Reliable application Specific Detection of Road Users with Vehicle On-board Sensors” – CP-FP Call DG INFSO (FP7-ICT-2007-1) (For Intelligent Vehicles and Mobility Services)**

According to ICT-2007.6.1, ADOSE addresses research challenges in the area of ‘accident prevention through improved-sensing including sensor fusion and sensor networks’. Besides, focus is on ‘increased performance, reliable and secure operation’ for ‘new generation advanced driver assistance systems’. ADOSE project aims at enhancing ADAS functions through the development of high performance and low cost technologies suitable for reliable detection and classification of road users in hostile environments.

This project includes 12 partners. Coordinator: Research Centre FIAT, Italy

• **ECTRI partners:** AIT, FhG and VTT

Duration: 36 months, from January 2008 to December 2010

<http://www.adose-eu.org>

**159. ROADIDEA “Road Map for Radical Innovations in European Transport Services” – CP-FP Call DG INFSO (FP7-ICT-2007-1) (For Intelligent Vehicles and Mobility Services)**

ROADIDEA argues that effective accessibility to all kinds of useful background information combined with advanced data fusion methods and technological information platforms with high level of standardization are prerequisites for creation of innovative mobility services. These help developing better information infrastructure as well as public and private services providing Clean, Safe and Efficient mobility for people and goods. The hypothesis is a framework for technical development in the project, and verified in Northern, Central and South-Eastern parts of Europe.

This project includes 14 partners. Coordinator: Foreca Consulting Oy, Finland

• **ECTRI partners:** DLR and VTT

Duration: 33 months, from December 2007 to September 2010

<http://www.roadidea.eu>

**160. NEARCTIS “Network of Excellence Advanced Road Cooperative Traffic management for the Information Society” – NoE**

**Call DG INFSO (FP7-ICT-2007-2) (For cooperative systems)**

NEARCTIS is an academic network involving several of the main teams working on the field of traffic management and optimisation, with a particular focus on cooperative systems. Within the field of ICT for mobility, the project deals more specifically with the question of cooperative systems for road traffic optimisation, but it covers a wider scope as it appears that cooperative systems have to be integrated into the whole traffic management system. This aims to develop systems able to cope with what are the main problems at stake: safety, energy consumption, environmental impacts and congestion as an obstacle to mobility. The main objective of the project is to constitute what could be considered as a virtual research institute.

This project includes 9 partners. Coordinator: ERT, France

• **ECTRI partners:** DLR and Ifsttar

Duration: 48 months, from July 2008 to June 2012

<http://www.nearctis.org>

**161. euroFOT “European Large Scale Field Operational Test on In-Vehicle Systems” – CP-IP**

**Call DG INFSO (FP7-ICT-2007-2) (For cooperative systems)**

The goal of EuroFOT is to identify and coordinate an in-the-field testing of new Intelligent Vehicle Systems with the potential for improving the quality of European road traffic. This permits assessing their effectiveness on actual roads, while determining how they perform towards the intended objectives. In addition, this offers an early publicity of the technologies, and enables the analysis of the user acceptance and its subsequent potential for market penetration.

This project includes 29 partners. Coordinator: Ford Research & Advanced Engineering Europe, Germany

• **ECTRI partners:** BAST, Ifsttar and POLITO

Duration: 40 months, from May 2008 to August 2011

<http://www.eurofot-ip.eu>



**162. ROSATTE “Road Safety attributes exchange infrastructure in Europe” – CP-FP****Call DG INFSO (FP7-ICT-2007-INFSO-1)** (*For Intelligent Vehicles and Mobility Services*)

The ROSATTE project aims at establishing an efficient and quality ensured data supply chain from public authorities to commercial map providers with regards to safety related road content. The ROSATTE project will consider national organisational issues and technical interoperability issues and include a substantial number of road authorities and motorways operators, both with and without national road databases.

This project includes 20 partners. Coordinator: ERTICO-ITS Europe, Belgium

- ECTRI partner: DVS

Duration: 30 months, from January 2008 to June 2010

<http://www.ertico.com/en/activities/safemobility/rosatte.htm>

**163. eVALUE “Testing and Evaluation Methods for ICT-based Safety Systems” – CP-FP****Call DG INFSO (FP7-ICT-2007-INFSO-1)** (*For Intelligent Vehicles and Mobility Services*)

Going forward to accident free traffic, evaluation and standardised testing methods of ICT-based safety systems are essential. The main focus of the proposed research project is to define objective evaluation and testing methods for ICT-based safety systems. Performance test results presented to the public will help to promote the use of ICT-based safety systems. The project is based on safety systems used in today's vehicles and will investigate the future upcoming ICT-based systems. Aims are to identify evaluation and testing methods, especially for active safety systems, with respect to the user needs, the environment and economic aspects.

This project includes 8 partners. Coordinator: RWTHA, Germany

- ECTRI partner: VTI

Duration: 48 months, from January 2008 to December 2011

<http://www.evaluate-project.eu>

**164. IFM PROJECT “Interoperable Fare Management Project” - CSA****Call DG INFSO (FP7-ICT-2007-INFSO-1)**

This project aims to make access to public transport networks more user-friendly by facilitating their accessibility. By 2015 smart ticketing systems will be compatible to ease access to all the users of public transport. The objective of the “Interoperable Fare Management Project” (IFM Project) is to provide travellers with shared types of contact-less media throughout Europe. These can be used for multiple transport products (“tickets”) in different geographic areas and for sustainable modal switching, such as the use of “Park and Ride”. Today, most media are restricted for use in specific networks.

This project includes 9 partners. Coordinator: ITS0 Limited, United Kingdom

- ECTRI partner: UNEW

Duration: 30 months, from January 2008 to June 2010

<http://www.ifm-project.eu/>

**165. IMVITER “Implementation of Virtual Testing in Safety Regulations” – CP-FP****Call DG RTD (FP7-SST-2007-RTD-1)** (*Safety and security by design*)

Implementation of virtual (VT) procedures in existing safety standards by consolidation of advanced VT technologies, analyzing the ensuing costs and benefits and looking for the improvement of homologation procedures as well as setting the base for improvement of integrative safety.

This project includes 15 partners. Coordinator: CIDAUT, Spain

- ECTRI partner: BAST

Duration: 36 months, from April 2009 to March 2012

<http://www.imviter.com>

**166. ITS TESTBEDS “Intelligent Transport Systems Testbeds” – CSA****Call DG RTD**

The ultimate goal of the ITS Test Beds project is to establish an ITS test environment based on the findings and results of ITS research projects and suitable to serve as a basis for large Field Operational Tests. This test environment contains the necessary components and tools to allow interested parties to “plug in” their applications and components and run field. The test environment allows testing the behaviour of innovative ITS systems and validating their compliance with European and National standards.

This project includes 14 partners. Coordinator: Telematics cluster, Belgium

- ECTRI partners: DLR and Ifsttar

Duration: 30 months, from February 2009 to July 2011

**167. ITERATE IT “for Error Remediation And Trapping Emergencies” – CP-FP****Call DG RTD (FP7-SST-2007-RTD-1) (Human physical and behavioural components)**

The aim of the proposed project is to develop and validate a unified model of driver behaviour and driver interaction with innovative technologies in emergency situations. This model will be applicable to and validated for all the surface transport modes. Drivers’ age, gender, education and experience and culture are factors that will be considered together with influences from the environment and the vehicle.

This project includes 7 partners.

- ECTRI partner: VTI, Sweden (coordinator)

Duration: 36 months, from January 2009 to December 2011

<http://iterate-project.eu>

**168. ACTIBIO “Unobtrusive Authentication Using ACTivity Related and Soft BIOmetrics” – CP****Call DG INF50 (FP7-ICT-2007-INF50-1) (Secure, dependable and trusted Infrastructures)**

ACTIBIO developed a completely new concept in biometric authentication, i.e., the extraction of biometric signatures based on the response of the user to specific stimuli while performing specific work-related activities. The novelty of the approach lies in the fact that the measurements used for authentication correspond to individual responses to specific events whilst being fully unobtrusive and completely integrated in an Ambient Intelligence infrastructure.

ACTIBIO targeted a multimodal approach fusing information from various sensors capturing either the dynamic user behavioural profile (face, gesture, gait, body dynamics) or the user’s physiological response to various events (analysis of EEG and ECG). The consortium carried out research on the use of unobtrusive sensors, either wearable (in garments of uniforms to capture body dynamics) or integrated in the infrastructure (sensing seat sensors capturing the anthropometric profile of the user, sound-based activity recognition sensors, etc.).

The project included 12 partners. Coordinator CErTH-ITI, Greece

- ECTRI partner: CErTH-HIT

Duration: 36 months, from March 2008 to March 2011.

<http://www.actibio.eu>

**169. VIAJEO “International Demonstration of Platform for Transport Planning and Travel Information” – SICA****Call DG RTD (FP7-SST-2008-RTD-1) (Transport planning and traffic information systems in cities)**

The VIAJEO project designed, demonstrated and validated an open platform which: supports the transport operations, planning and a wide range of traveller information services; delivers dynamic information independent from the language to improve their provision of transport information and traveller services through integrated traffic data collection and management; delivers a solution that enables cross-modal journey planning, dynamic route guidance, effective payment access and improved personal mobility, etc.; provides standardised interfaces to connect a variety of entities needed for the mobility services. The open platform facilitates the integration of components for data management allowing integration of European and local components as most convenient in Athens, Sao Paulo, Beijing and Shanghai. The demonstration cities in Europe, China and Brazil have been carefully chosen to ensure that they have a reputation as national role models, allowing the results of successful demonstrations to be extended to other cities in these countries and also potentially to other countries in the respective continents. The scientific and technical objectives of the project are: (1) Design of an open platform with interfaces to a wide range of mobility services (2) Implementation of the open platform in Europe, and in the emerging

Economies, i.e. China and Brazil. (3) Validation of the open platform (4) Assessment of social and transport impacts of the implementation and demonstration of the open platform.

The project includes 22 partners. Coordinator: ERTICO-ITS Europe, Belgium

• ECTRI partners: CERTH-HIT and DLR

Duration: 36 months, from September 2009 to August 2012

<http://www.viajeo.eu>

#### **170. ACCESSIBLE “Accessibility Assessment Simulation Environment for New Applications Design and Development” - CP**

**Call DG INFO (FP7-ICT-2007- INFO-2)** (*Accessible and inclusive ICT, Information and Communication Technologies*)

The main goal of ACCESSIBLE was to improve the accessibility of software development products, by introducing a harmonized accessibility methodology into the software design and development processes, using significantly better measurement strategies and methodologies. ACCESSIBLE carried out research and developed a process for collating and merging different methodological tools, checking the coherence with the W3C/WAI ARIA and other standards in order to produce an Open Source Assessment Simulation Environment.

The triggering idea behind ACCESSIBLE was to contribute for better accessibility for all citizens, to increase the use of standards, and to develop an assessment simulation to assess efficiently, easily and rapidly the accessibility and viability of software applications for all user groups. A challenge of ACCESSIBLE was also the integration of combinations of many possible disabilities, rather than on an individual basis.

The project included 14 partners. Coordinator CERTH-ITI

• ECTRI partner: CERTH-HIT, Greece (Technical Manager & Quality Manager)

Duration: 42 months, from September 2008 to February 2012.

<http://www.accessible-eu.org/>

#### **171. AEGIS “Open Accessibility Everywhere: Groundwork, Infrastructure, Standards”- CP**

**Call DG INFO (FP7-ICT-2007-INFO)** (*ICT & Ageing*)

The AEGIS project sought to determine whether 3<sup>rd</sup> generation access techniques will provide a more accessible, more exploitable and deeply embeddable approach in mainstream ICT (desktop, rich Internet and mobile applications). AEGIS developed and explored this approach with the Open Accessibility Framework (OAF) through which aspects of the design, development and deployment of accessible mainstream ICT were addressed. The OAF provided embedded and built-in accessibility solutions, as well as toolkits for developers, for “engraving” accessibility in existing and emerging mass market ICT-based products, thus making accessibility open, plug, personalized; configurable, realistic; applicable in various contexts; AEGIS aimed to place users and their needs at the centre of all ICT developments. Based on a holistic UCD, AEGIS identified user needs and interaction models for several user groups, (users with visual, hearing, motion, speech and cognitive impairments as well as application developers) and developed open source-based generalized accessibility support into mainstream ICT devices/applications. The project results’ uptake was promoted by strong standardization activities, as well as an Open Accessibility Everywhere Group (OAEG).

The project included 23 partners.

• ECTRI partners: CERTH-HIT, Greece (Coordinator & Quality manager – first three years), UPM, Spain (coordinator for last year) and FhG

Duration: 48 months, from September 2008 to August 2012.

<http://www.aegis-project.eu/>

**172. UNIVERSAAL “UNIVERSal open platform and reference Specification for Ambient Assisted Living” – CP  
Call DG INFSO (FP7-ICT-2009-INFSO-4) (Open Systems Reference Architectures, Standards and ICT Platforms for Ageing Well)**

UNIVERSAAL aims at creating an open platform and standards which will make it technically feasible and economically viable to develop Ambient Assisted Living (AAL) solutions. The project follows an open source license model and standardizes and integrates different architectures of AAL applications, thus supporting independent living and mobility of the elderly.

UNIVERSAAL will provide an online uStore as a one-stop-shop for AAL services and other resources both for the general public (to find what they need) and the developers (as a marketplace to make their services available).

The project includes 17 partners. Coordinator: SINTEF, Norway

• ECTRI partner: CERTH-HIT

Duration: 48 months, from February 2010 to January 2014.

<http://www.universaal.org>

**173. BESST “Breakthrough in Europe Ship and Shipbuilding Technologies” – CP-IP  
Call DG RTD (FP7-SST-2008-RTD-1) (Competitive ship)**

The strategic objective of BESST is to secure and improve the competitive position of European shipyards in a sustainable way, looking into the medium and long term future. Having in mind the comparatively high labour cost in Europe, the goal is to increase the competitiveness of European built ships through decreased life cycle cost, drastically reduced environmental impact and improved safety. The results of the project will be demonstrated in three virtual show cases, representing close-to-reality complex ships. In medium and long term the project will thus contribute to the competitiveness of European shipbuilding and shipping, as well as to the reduction of emissions and the environmental footprint of ships.

The project includes 65 partners. Coordinator: FINCANTIERI, Italy

• ECTRI partner: VTT

Duration: 42 months, from September 2009 to February 2013

<http://www.besst.it>

**174. 2DECIDE “Toolkit for sustainable decision making in ITS deployment” – CSA-SA**

**Call DG TREN (FP7-SST-2008-TREN-1) (Encouraging modal shift and decongesting transport Corridors)**

2DECIDE addresses one of the most important ITS (Intelligent Transport Systems and Services) deployment related challenges on European level: Support and speed up consistent decision making related to ITS deployment for road and public transport (timely, cost-effective, interoperable, positive impact to urban and interurban mobility, positive cost/ benefit ration). Key ambition of 2DECIDE is to support both EU ITS policy goals as well as national ITS deployments strategies to gain the utmost benefit of ITS deployment and the related investments for a sustainable road and public transportation system. In this respect 2DECIDE takes also care for an post project operation and maintenance strategy within the form of EASYWAY (TEN-MAP: 2007- 2013).

This project includes 14 partners. Coordinator: Austria Tech, Austria

• ECTRI partners: CERTH-HIT and VTT

Duration: 24 months, from October 2009 to September 2011

<http://www.2decide.eu>

**175. DYNOTRAIN “Railway Vehicle Dynamics and Track Interaction Total Regulatory Acceptance for the Interoperable Network” – CP-FP**

**Call DG RTD (FP7-SST-2008-RTD-1) (Interoperable rolling stock)**

The DYNOTRAIN project aims at developing and introducing a computer-aided certification process that allows to decrease the time and cost of rolling stocks certification against ENs and TSI by transferring some of the current physical track tests to simulation.

This project includes 22 partners. Coordinator: Association of European Railway Industry (UNIFE), Belgium

• ECTRI partner: Ifsttar

Duration: 48 months, from June 2009 to May 2013

<http://www.triotrain.eu>



**176. GINA “GNSS for Innovative road Applications” – CP****Call DG TREN (FP7-GALILEO-2007-GSA-1)**

GINA project is addressing the adoption of EGNOS and Galileo in the road sector considering the technical feasibility of the concept on a large scale, its economic viability and positive impacts in aspects such as congestion and pollution, as a general scope. The final objectives of the project will comprise 3 main aspects: -1. The analysis of the context (legal, regulatory, interoperability, standardisation) affecting a nation wide GNSS-based road pricing solution (and VAS running on same platforms) -2. The thorough market and business potential analysis for the applications (Road pricing + VAS), to base a commercially feasible large scale adoption of the solution -3. To acquire valuable operational information only accessible thanks to the implementation to the fully operational implementation of a large-scale demonstrator of GNSS-based Road Pricing at national level and VAS (PAYD for car leasing companies and traffic information generation, modelling and provision) which is technically feasible and allows to go a step beyond for the adoption of GNSS for these applications.

This project includes 13 partners. Coordinator: GMV, Spain

• ECTRI partners: CENIT and TRL

Duration: 24 months, from March 2009 to February 2011

<http://www.gina-project.eu>

**177. VECOM “Vehicle Concept Modelling” – ITN****Call (FP7-PEOPLE-2007-ITN) (Initial Training Network)**

The aim of the proposed training network is to provide dedicated research training in the emerging field of vehicle concept modelling for up-front pre-CAD functional performance engineering, bridging between industry and academia across Europe. The research area is of highly strategic importance to European automotive OEMs, who must launch products on an ever shorter time frame, at increased quality of multiple performance attributes.

When simulation results become available in an early design stage, problems can already be solved before the first detailed CAD model is created, which will increase the quality of the first detailed simulation models and reduce the time to market. Moreover, early what-if studies can be performed to balance and optimize possibly conflicting performance attributes (safety, NVH, dynamics, durability ...) at an increased feasibility and at reduced costs. Novel methods will be developed to address this industrial need for a novel engineering process in which analysis leads the design. Applications will be worked out across partners and application fields, fully embedded in the vehicle industry context.

This project includes 14 partners.

• ECTRI partners: AIT, Austria (coordinator), FhG and POLITO

Duration: 48 months, from October 2008 to September 2012

<http://www.vecom.org>

**178. FREILOT “urban FREIght energy efficiency piLOT” – CIP****Call DG INFSO**

Reduction of fuel consumption, CO<sub>2</sub> emissions and emissions of other pollutants is one of the biggest challenges for the road transport today. The specific energy consumption of a goods vehicle in urban areas depends on many factors such as vehicle performance, driver behaviour, traffic control strategies and performance, weight of the vehicle and its load, urban geography and the road network, etc. Clearly, all of these aspects cannot be addressed by one single solution, (e.g. optimizing truck engine or providing better route guidance). The FREILOT consortium has developed a new approach to deal with this issue where four of the above mentioned factors will be addressed: - Traffic management (intersection control optimised for energy efficiency) - Vehicle (Acceleration and adaptive speed limiters) - Driver (Enhanced “eco driving” support) - Fleet management (Real-time loading/ delivery space booking) The basic idea is that cities will give priority at traffic lights, on certain roads or during certain times of the day, to the trucks that follow FREILOT scheme. The main goal of the pilot is to show that up to 25% reduction of fuel consumption in urban areas can be achieved through FREILOT scheme.

This project includes 21 partners. Coordinator: ERTICO-ITS Europe, Belgium

• ECTRI partners: CETH-HIT and LET

Duration: 42 months, from April 2009 to September 2012

<http://www.freilot.eu>



**179. OASIS “Open Architecture for accessible services integration and standardisation” – CP****Call DG RTD (FP7-ICT-2007-INFOS) (ICT and ageing)**

OASIS introduces an innovative, Ontology-driven, Open Reference Architecture and Platform, which will enable and facilitate interoperability, seamless connectivity and sharing of content between different services and ontologies in all application domains relevant to applications for the elderly and beyond. The OASIS platform is open, modular, holistic, easy to use and standards abiding. It includes a set of novel tools for content/services connection and management, for user interfaces creation and adaptation and for service personalization and integration. Through this new Architecture, over 12 different types of services are connected with the OASIS Platform for the benefit of the elderly, covering user needs and wants in terms of Independent Living Applications (nutritional advisor, activity coach, brain and skills trainers, social communities platform, health monitoring and environmental control), Autonomous Mobility and Smart Workplaces Applications (elderly-friendly transport information services, elderly-friendly route guidance, personal mobility services, mobile devices, biometric authentication interface and multimodal dialogue mitigation and other smart workplace applications).

This project includes 33 partners. Coordinator: FIMI S.R.L., Italy

• **ECTRI partners:** CERTH-HIT, FhG and UPM

Duration: 48 months, from January 2008 to December 2011

<http://www.oasis-project.eu>

**180. iCars “Network “intelligent Cars Thematic Network” – CIP****Call DG INFOS (ICT-2007-INFOS) (Intelligent cars)**

The iCars Network contributes to the deployment of Transport ICT technologies (or ITS – “Intelligent Transport Systems”) by exchanging knowledge and experience on these technologies among a wide variety of stakeholders on a number of specific topics.

The Network is formed by thematic groups which will identify and invite relevant organizations and experts, organise a number of information exchange and consensus building events, and issue material and a report on the present state of play, availability of methods and technologies, obstacles, policy recommendations and a road map in the case of energy efficiency.

This project includes 16 partners. Coordinator: Fédération Internationale de l’Automobile, France

• **ECTRI partners:** BAST and VTT

Duration: 24 months, from July 2008 to June 2010

**181. SMART-WAY “Galileo based navigation in public transport systems with passenger interaction” – CP****Call DG TREN (FP7-GALILEO-2008-GSA-1)**

The idea of the proposal is to develop a real public transport navigation system based on mobile devices that give passengers the possibility to act as they are used to do with common navigation systems in their cars. Once entered the destination of their trip they will be able to get into a vehicle and to jump off/on as often as they like to. To put this into praxis, existing studies about the Galileo satellite system, about navigation, and about mobile applications from former projects and several sources will be analysed and put together with user needs and general conditions into a meta study, the technical developments of the project will be based on. The focus of the project will be the development of all necessary applications for the passenger navigation system based on a business plan that is focused on a sustainable operation for all usual public transportation networks in Europe. Functional tests and demonstrations will verify the functionality of the system and the effect analysis will verify and adjust the proposed business model. Finally an evaluation and dissemination process will ensure the sustainable usability and the successful knowledge transfer from research and development to an operational service of this passenger navigation system.

The project includes 8 partners.

• **ECTRI partners:** FhG, Germany (coordinator), CERTH-HIT, POLITO, VTI, and UPM

Duration: 24 months, from February 2010 to January 2012

<http://www.smart-way.mobi/>



**182. ETNA “European Thematic Network on Assistive Information and Communication Technologies” – CIP Call DG INFSO (ICT-PSP-2009-4) (Thematic Network)**

This Thematic Network will facilitate and co-ordinate the implementation of a European Web Portal able to provide information on ICT-based Assistive products which are available in Europe, and on related organisations and services. The Portal will also allow access to repositories of freeware, open source software products and tools for developers of accessibility and assistive solutions, or for mainstream developers who wish to make their products accessible; and will serve as a platform to share expertise, ideas, views, resources and field experience.

The project includes 24 partners and one affiliate partner. Coordinator: Centre for Innovation and Technical Transfer (CITT)/Don Carlo Gnocchi Foundation, ITALY

- ECTRI partner: CERTH-HIT

Duration: 24 months, from January 2011 to December 2013.

<http://www.etna-project.eu/>

**183. VERITAS “Virtual and Augmented Environments and Realistic, User Interactions To achieve Embedded Accessibility DesignS” – CP**

**Call DG CONNECT (FP-ICT-2009-INFOS) (Accessible and Assistive ICT)**

VERITAS aims to develop, validate and assess tools for built-in accessibility support of ICT and non-ICT products under a holistic framework. The objective is to introduce simulation based and virtual-reality testing at all designing stages of assistive technologies products in 5 application areas: automotive, smart living places, workplace, health and wellbeing, and infotainment. VERITAS wants to ensure that future products are systematically designed for all, including people with disabilities and older people and plans to promote its results to the appropriate standards organisations for consideration and potential adoption.

The project includes 31 partners.

- ECTRI partner: FhG, Germany (coordinator), CERTH-HIT, Greece (Quality Manager), UNEW' and UPM.

Duration: 48 months, from January 2010 to December 2013

<http://veritas-project.eu/>

**184. ECOMOVE “Cooperative Mobility Systems and Services for Energy Efficiency” – CP**

**Call DG CONNECT (FP7-ICT-2009-INFOS) (ICT for Safety and Energy Efficiency in Mobility)**

The eCoMove project will create an integrated solution for road transport energy efficiency by developing systems and tools to help drivers sustainably eliminate unnecessary fuel consumption (and thus CO2 emissions), and to help road operators manage traffic in the most energy-efficient way. By applying this combination of cooperative systems using vehicle-infrastructure communication, the project aims to reduce fuel consumption by 20% overall. This target can be achieved by: -Saving unnecessary kilometers driven (optimising routes), -Helping driver to save fuel (optimising driver behaviour), -Managing traffic more efficiently (optimising network management).

This project includes 32 partners. Coordinator: ERTICO-ITS Europe, Belgium

- ECTRI partner: DLR

Duration: 36 months, from April 2010 to March 2013

<http://www.ecomove-project.eu/>

**185. FOTSIS “European Field Operational Test on Safe, Intelligent and Sustainable Road Operation”**

**Call DG Connect (FP7-ICT-2009-6) (Information and Communication Technologies)**

FOTSis is a large-scale field testing of the road infrastructure management systems needed for the operation of seven close-to-market cooperative I2V, V2I & I2I technologies (the FOTSis Services), in order to assess in detail both 1) their effectiveness and 2) their potential for a full-scale deployment in European roads.

Specifically, FOTSis will test the road infrastructure's capability to incorporate the new cooperative systems technology and provide the following services in four European Test-Communities (Spain, Portugal, Germany and Greece) regrouping 10 Test-Sites.

The project includes 23 partners. Coordinator: IRIDIUM, Spain

- ECTRI partners: CERTH-HIT and UPM

Duration: 42 months, from April 2011 to September 2014.

<http://www.fotsis.com/>

**186. DRIVE C2X “DRIVING implementation and Evaluation of C2X communication technology in Europe” – CP  
Call DG INFSO (FP7-ICT-2009-INFSO-6) (ICT for Mobility of the Future)**

The objective of the DRIVE C2X Integrated Project is to carry out comprehensive assessment of cooperative systems through Field Operational Tests in various places in Europe in order to verify their benefits and to pave the way for market implementation. This general objective is split into four major technical objectives: 1.Create a harmonised Europe-wide testing environment for cooperative systems; 2.-Coordinate the tests carried out in parallel throughout the DRIVE C2X community; 3.-Evaluate cooperative systems and 4.-Promote cooperative driving.

This project includes 34 partners. Coordinator: Daimler AG, Germany

• ECTRI partners: BAST, DLR, FhG, Ifsttar and VTT. DVS is support partner.

Duration: 36 month, from January 2011 to December 2013

<http://www.drive-c2x.eu/project>

**187. ECOGEM “Cooperative Advanced Driver Assistance System for Green Cars” -CP  
DG INFSO (FP7-ICT-2010-INFSO)**

EcoGem claims that the success and user acceptability of Fully Electric Vehicles (FEVs) will predominantly depend on their electrical energy consumption rate and the corresponding degree of autonomy that they can offer. EcoGem aims at providing efficient ICT-based solutions to this great issue, by designing and developing a FEV-oriented highly-innovative Advanced Driver Assistance System (ADAS), equipped with suitable monitoring, learning, reasoning and management capabilities that will help increase the FEV’s autonomy and energy efficiency. EcoGem will base its approach on rendering the FEV: (i) capable of reaching the desired destinations through the most energy efficient routes possible; (ii) fully aware of surrounding recharging points/stations while on move.

This project includes 11 partners. Coordinator: Temsa Global Sanayive VE Ticaret A.S., Turkey

• ECTRI partner: ITS

Duration: 30 months, from September 2010 to February 2013

**188. TEAM “Tomorrow’s Elastic Adaptive Mobility” – CP  
Call DG INFSO (FP7-ICT-2011-INFSO-8)**

The TEAM project develops new collaborative transport solutions and thus addresses two challenges at the same time: the need to design an infrastructure for increasing traffic and the need to reduce environmental pollution. Therefore TEAM combines driving technologies with sophisticated telecommunication technologies and telematics. For the first time in this field of research, elements such as vehicle electronics and mobile devices, navigation systems, tablet computers and smartphones are integrated to focus on the road users’ behavior. Road users will benefit from the new TEAM technologies through real time traffic recommendations balanced with global mobility and environmental aspects. In this way TEAM turns static into elastic mobility by joining drivers, travellers and infrastructure operators into one collaborative network. Collaboration is the key concept, which extends the cooperative concept of vehicle-2-x systems to include interaction and participation.

This project includes 6 partners.

• ECTRI partners: VTT, Finland (coordinator) and AIT

Duration: 48 months, from November 2012 to October 2016

<http://www.collaborative-team.eu/>

**189. CLOUD4all “Cloud platforms Lead to Open and Universal access for people with Disabilities and for All” - CP****Call DG INFSO (FP7-ICT-2011-INFSO-7) (ICT for smart and personalise inclusion)**

Cloud4All represents a European based effort to advance the GPII concept by pulling together a large multi-sector international community including stakeholders, industry leaders and experts in emerging technologies to thoughtfully research, design, develop and test the key software infrastructure and pilot implementations needed to explore this promising approach to digital inclusion. Cloud4all/GPII aim at the following objectives: Simple Instant accessibility for ALL, anywhere Any Device Access, Supply and Demand better connected and affordable method to offer diversity needed. If successful, this approach may give us our first chance of reaching the large group of users that do not qualify for or otherwise have not been reached by special services, but nonetheless face barriers to access that prevent them from participating in our rapidly advancing digitally enabled society.

The project includes 24 partners. Coordinator: TECHNOCITE, Spain

- ECTRI partner: CERTH-HIT, FhG and UPM

Duration: 48 months, from November 2012 to October 2015.

<http://cloud4all.info/>

**190. INROADS “INtelligent Renewable Optical ADvisory System” – CP-FP****Call DG RTD (FP7-SST-2011-RTD-1) (Advanced and cost effective road infrastructure construction, management and maintenance)**

This project aims to develop Intelligent Road Studs (IRS) combining LED lighting, sensor systems and communication technologies. The IRS will integrate renewable energy technologies that will fully or partially power the devices, making them self contained. The principle identified renewable technologies are solar photovoltaic and piezoelectric, although other sources will be investigated. Powering the units using renewable energy will reduce carbon emissions and allow for their use on sections of highway with no readily available power source. The integration of communication technology, and for certain applications, sensors within the individual units will enable enhanced traffic management and driver information and this will represent the significant step forward over existing systems, as the lights will be able to communicate with each other and with a central control.

This project includes 8 partners.

- ECTRI partners: TRL, United Kingdom (Coordinator), AIT and Ifsttar

Duration: 36 months, from December 2011 to November 2014

**191. DECOMOBIL “Support action to contribute to the preparation of future community research programme in user centred Design for ECO-multimodal MOBILity” – CSA-CA****Call DG INFSO (FP7-ICT-2011-INFSO-7) (Low carbon multi-modal mobility and freight transport)**

DECOMOBIL will take advantage of the structured research network set up in HUMANIST NoE and followed up in HUMANIST VCE, in order to develop and widely disseminate knowledge in the area of human centred design of ICT for sustainable transport. Expected impacts of DECOMOBIL are: widening the market for ICT based mobility and transport services by contributing to the development and the widespread of user-friendly innovative nomadic services, impacting bicycles, public transport and car-sharing use through the understanding of multimodal travelers needs; by setting up design recommendations for the next generation of cooperative systems and improving integrated road transport system; by analysing long term effects and potential impact of ITS deployment on clean and safe multimodal mobility and improvements in efficiency and environmental friendliness of mobility and transport in Europe by improving eco-driving behaviour leading to the decrease of vehicles carbon emission for car, bus and trucks and by understanding human behaviour critical parameters linked to the implementation of electric mobility system.

This project includes 3 partners. Coordinator: Humanist, France

- ECTRI partners: BAST and TRL

Duration: 36 months, from October 2011 to September 2014

<http://decomobil.humanist-vce.eu/>

**192. iMobility Support “iMobility Support” – CSA****Call DG INF50 (FP7-ICT-2011-INF50-8)**

iMobility Support fosters the deployment of intelligent mobility in Europe by organising the iMobility Forum activities, including stakeholder networking, deployment support, awareness raising and dissemination of results of ICT for smart, safe and clean mobility. iMobility Support fosters the deployment of intelligent mobility in Europe by organising iMobility Forum activities, including – but not limited to – stakeholder networking, deployment support, awareness raising and dissemination of results. The action is conceptually structured on three ‘pillars’: 1. Support to the iMobility Forum constituencies and activities, 2. Support to the deployment of ICT for smart, safe and clean mobility (mainly cooperative ITS) and 3. Support to awareness-raising and dissemination of results activities of ICT for smart, safe and clean mobility (mainly cooperative ITS).

This project includes 7 partners. Coordinator: ERTICO, Belgium

• **ECTRI partner:** VTT

Duration: 36 months, from January 2013 to December 2015

<http://www.imobilitysupport.eu/>

**193. iMobility Challenge “iMobility Challenge and Awareness Raising” – CSA****Call DG INF50 (FP7-ICT-2011-INF50-8)**

Mobility Challenge is a 24 months project aimed at demonstrating, promoting and boosting the deployment of ICT systems for efficient and sustainable mobility. The project will highlight both off-the-shelf products (i.e. technologies that have just been launched on the market) and emerging technologies addressed by current research. In particular focus will be placed on current EU Research conducted in the field of cooperative systems for energy efficient and sustainable mobility. Intelligent mobility is notably characterised by efforts to better integrate and connect intelligent drivers, intelligent cars and intelligent infrastructures together, and this can be achieved through cooperative systems.

This project includes 5 partners. Coordinator: FIA, Belgium

• **ECTRI partner:** VTT

Duration: 24 months, from January 2013 to December 2015

<http://www.imobilitychallenge.eu/>

**194. ECODRIVER “Supporting the driver in conserving energy and reducing emissions” – CP****Call DG INF50 (FP7-ICT-2011-INF50-7) (Low carbon multi-modal mobility and freight transport)**

ecoDriver addresses the need to consider the human element when encouraging green driving, since driver behaviour is a critical element in energy efficiency. The focus of the project is on technology working with the driver. The project aims to deliver the most effective feedback to drivers on green driving by optimising the driver-powertrain-environment feedback loop. It will carry out a substantial programme of work to investigate how best to win the support of the driver to obtain the most energy-efficient driving style for best energy use. Feedback coverage will include preview of the upcoming situation, optimising the current driving situation as well as post-drive feedback and learning. The target of ecoDriver is to deliver a 20% improvement in energy efficiency by autonomous means alone, which opens up the possibility of greater than 20% savings in combination with cooperative systems.

The project includes 12 partners. Coordinator: University of Leeds, United-Kingdom

• **ECTRI partners:** Ifsttar and VTI

Duration: 48 months, from October 2011 to September 2015

<http://www.ecodriver-project.eu/>

**195. EFUTURE “Safe and Efficient Electrical Vehicle” – CP****Call DG INF50 (FP7-ICT-2010-INF50) (ICT for the fully electrical vehicle)**

The idea of intelligent vehicles that cope with safety requirements and adapt their energy needs is a long-term strategy. We have started our work with successive European research projects in the last years by starting with the development of a drive-by-wire platform, but the combustion engine is still a drawback. eFuture wants to prepare the next generation of electric vehicle based on our first prototype by creating a platform which minimises its energy needs but can still optimise dynamically its decision between safety and energy efficiency. Our key issues will be the optimisation of this energy usage and its influence on the vehicle/driver.

This project includes 6 partners. Coordinator: Thales, Germany



- ECTRI partner: Ifsttar

Duration: 36 months, from September 2012 to August 2013

<http://www.efuture-eu.org/>

#### 196. INSTANT MOBILITY “Instant Mobility for Passengers and Goods” – CP

**Call DG INF50 (FP7-ICT-2011-INF50-FI)** (*Use Case scenarios and early trials*)

The Instant Mobility project has created a concept for a virtual “Transport and Mobility Internet”, a platform for information and services able to support radically new types of connected applications for scenarios centred on the stakeholder groups: multimodal travellers, - drivers & passengers, passenger transport operators, - goods vehicle operators and- road operators & traffic managers. The project will define requirements for Future Internet technology tools and enablers, so that all these services will be available to any Internet-connected user, whether using a portable, vehicle-based or fixed terminal.

This project includes 21 partners. Coordinator: Thales Services SAS, France

- ECTRI partners: DLR, Ifsttar and VTT

Duration: 24 months, from April 2011 to March 2013

<http://instant-mobility.com/>

#### 197. MOBiNET “Europe-Wide Platform for Cooperative Mobility Services” – CP

**Call DG INF50 (FP7-ICT-2011-INF50-8)**

MOBiNET will develop, deploy and operate the technical and organisational foundations of an open, multi-vendor platform for Europe-wide mobility services. Key MOBiNET innovations address the barriers to cooperative system-enabled service deployment, including the lack of harmonised services; availability of communication means; inaccessibility and incompatibility of transport-related data; fragmentation of end-user subscription and payment services; proprietary technologies in user devices; etc.

This project includes 34 partners. Coordinator: ERTICO, Belgium

- ECTRI partners: DLR and VTT

Duration: 44 months, November 2012 to June 2016

<http://www.mobinet.eu/>

#### 198. SATIE “Support Action for a Transport ICT European large scale action” – CSA

**Call DG INF50 (FP7-ICT-2011-INF50-7)** (*Low carbon multi-modal mobility and freight transport*)

The SATIE support action will prepare the way for the successful launch of a programme of European large scale actions:

1. elaborate the concept, procedures and added value of a large scale action
2. Disseminate and raise the awareness with regard to the possibilities of a Transport-ICT elsa with all stakeholders throughout Europe
3. map existing initiatives and possible future initiatives which would fit into an elsa approach.

This project includes 10 partners. Coordinator: ERTICO, Belgium

- ECTRI partners: Ifsttar and VTT

Duration: 36 months, from September 2011 to August 2014

<http://www.satie.eu/>

#### 199. T-TRANS “Enhancing the transfer of Intelligent Transportation System innovations to the market” – CSA-SA

**DG RTD Call (FP7-TPT-2012-RTD-1)** (*Bringing innovative products and services to the market: analysis of pathways and best conditions for innovation*)

T-TRANS project aims at providing information on innovation mechanisms for the Intelligent Transportation Systems domain, encouraging and facilitating an accelerated market deployment of related innovative products and services. A deep analysis of the current activity in Intelligent Transportation Systems shows an increasing importance of this transport research and application domain to support major EU priorities as regard of economic growth objectives by 2020 and beyond. This project includes 9 partners. Coordinator: Universitat Autònoma de Barcelona, Spain

- ECTRI partners: FhG and TTI



**200. AMITRAN “Assessment Methodologies for ICT in multimodal transport from User Behaviour to CO2 reduction” – CP****Call DG CONNECT (FP7-ICT-2011-CONNECT-7) (Low carbon multi-modal mobility and freight transport)**

The AMITRAN project will develop a framework for the evaluation of the effects of ICT measures in traffic and transport on energy efficiency and CO2 emissions. By doing so, it will contribute to the development of ICT solutions that allow more efficient multimodal goods transport and passenger mobility.

This project includes 7 partners. Coordinator: TNO, the Netherlands

• ECTRI partners: DLR

<http://www.amitran.eu>

**201. COMPASS4D “Cooperative Mobility Pilot on Safety and Sustainability Services for Deployment” - CIP****Call DG CONNECT (ICT-PSP-2012-CONNECT) (Cooperative Transport system for smart mobility)**

Compass4D aims to be the tool for European cities, road operators, vehicle fleets and all other road transport stakeholders, to support them in navigating on their way to sustainable deployment of cooperative services. The cities and industrial partners will jointly implement three cooperative services, Forward Collision Warning, Red Light Violation Warning and Energy Efficient Intersection service. These services will be piloted over one year of real life driving.

In addition, the project aims at identifying deployment opportunities, barriers and finding solutions for those. Another aspect that is looked at is the global harmonisation of services. Consortium partners plan to cooperate closely with their US, and Japanese associates; contributing to global harmonisation of these services. Standardisation cooperation with ETSI and CEN is already very strong and the certification framework, required for pan-European and global deployment of these services will be further developed.

This project includes 33 partners. Coordinator: ERTICO-ITS Europe, Belgium

• ECTRI partner: CERTH-HIT

Duration: 36 months, from January 2013 to December 2015

<http://www.compass4d.eu>

**202. INSIGHT “Innovative Policy Modelling and Governance Tools for Sustainable Post-Crisis Urban Development” – CP****Call DG INFOS (FP7-ICT-2013-INFOS) (ICT for Governance and Policy Modelling)**

INSIGHT aims to investigate how ICT, with particular focus on data science and complexity theory, can help European cities formulate and evaluate policies to stimulate a balanced economic recovery and a sustainable urban development. The objectives of the project are the following:

1. to investigate how data from multiple distributed sources available in the context of the open data, the big data and the smart city movements, can be managed, analysed and visualised to understand urban development patterns;
2. to apply these data mining functionalities to characterise the drivers of the spatial distribution of activities in European cities,
3. to develop enhanced spatial interaction and location models for retail, housing, and public services;
4. to integrate the new theoretical models into state-of-the-art simulation tools, in order to develop enhanced decision support systems able to provide scientific evidence in support of policy options for post-crisis urban development;
5. to develop innovative visualisation tools to enable stakeholder interaction with the new urban simulation and decision support tools and facilitate the analysis and interpretation of the simulation outcomes;
6. to develop methodological procedures for the use of the tools in policy design processes, and evaluate and demonstrate the capabilities of the tools through four case studies

This project includes 6 partners.

• ECTRI partner: UPM, Spain (coordinator)

Duration: 36 months, from October 2013 to September 2016

## 6. Transport economics and policy, transversal issues

### 203. PLATINA "Platform for the implementation of NAIADES" – CSA-CA

#### **Call DG TREN (FP7-SST-2007-TREN-1)** (*Promotion of inland waterway transport*)

The main objective of PLATINA is to support the Commission, Member States and third countries in the implementation of the NAIADES action programme. This will be achieved by providing technical, organisational and financial support for targeted policy actions and by building on strong interrelations with existing expert groups, projects and initiatives.

This project includes 23 partners. Coordinator: Via Donau, Austria

• **ECTRI partner:** DVS

Duration: 48 months, from June 2008 to June 2012

<http://www.naiades.info/platina>

### 204. EAGAR "European Assessment of Global Publicly Funded Automotive Research– Targets and Approaches" – CSA-SA

#### **Call DG RTD (FP7-SST-2007-RTD-1)** (*Stimulating Research with international cooperation partner countries and EU neighbouring regions*)

The objective of the project is benchmarking public automotive research activities at international level, in particular the UE versus North-America, Japan, South-Korea, India, China and ASEAN, and identify potential cooperation areas.

This project includes 7 partners. Coordinator: AVL List, Germany

• **ECTRI partner:** FhG

Duration: 36 months, from September 2008 to October 2011

<http://www.eagar.eu>

### 205. METRONOME "Methodology for evaluation of project impacts in the field of transport" – CSA-SA

#### **Call DG RTD (FP7-TPT-2007-RTD-1)** (*Development of methodology and evaluation of the impact of FP5 and FP6 projects in the field of Transport*)

An extensive amount of transport research projects has been conducted in the past EU Framework Programmes. Traditionally, the projects have been grouped under more specific themes aiming towards commonly defined objectives for those themes. In Policy oriented transport research projects sustainable mobility has often been the key objective, in technology oriented projects the focus has been more in the European competitiveness. Quite seldom project objectives have included both of these issues. The METRONOME project will provide three contributions to the above dilemma. Firstly, it will identify the criteria to measure the effectiveness of European transport research. Secondly, the project will develop a methodology for the evaluation of Framework Project impacts in the field of transport. Thirdly, METRONOME project will perform the evaluation to a representative number of different projects. The ultimate aim of the evaluation results will be to help in definition of new research policy objectives and intermediate performance targets for FP7.

This project includes 6 partners.

• **ECTRI partners:** VTT, Finland (coordinator), CDV, DVS, HIT, TRL and UPM

Duration: 18 months, from February 2008 to July 2009

<http://www.vtt.fi/sites/metronome/?lang=en>

### 206. Star-Net transport "European Network to Support the Sustainable Surface Transport SMEs" – CSA-SA

#### **Call DG RTD (FP7-SST-2007-RTD-1)**

The strategic objective of the project was to increase the participation of surface transport-related SMEs in the research program. The aim of the project was to be the first step towards the formation and development of a consolidated structure for support of SMEs in Europe for participation in Sustainable Surface Transport activities, building on the knowledge, tools and services developed within some of the most relevant FP6-SUSTDEV support actions over the recent years (SURFACE NET, TranSMEs, AUTOIN, EURO-TRANS, SurfTran and HUN-POL-TRANS) and in future FP7-SST-SSAs projects.

The project included 16 partners. Coordinator: INOVAMAIS, Portugal



- ECTRI partner: UNIZA

Duration: 26 months, from November 2009 to January 2011

<http://www.starnet-transport.eu/>

#### 207. MARPOS "MARitime Policy Support" – CSA-SA

**Call DG TREN (FP7-SST-2007-TREN-1)** (*The "Future maritime policy" and surface transport research*)

The MARPOS project aims at assisting the European Commission in the implementation of the EU Maritime Transport Policy priorities by utilizing the results of past and current research work in Maritime Transport and related expertise from the transport sector. It addresses the issue by consolidating and synthesizing the results of Maritime Transport research in the past two FPs (FP5 and FP6) as well as the first four calls of the FP7, in order to come up with a set of conclusions about the results of research on 5 maritime transport thematic areas namely competitiveness, environment, energy, safety-security and human factors. Key output of the MARPOS project is a publication with the results of the EC funded research work and an easy-to-use searchable database (e-tool), the e-tool, available through <http://www.maritimetransportresearch.com/> is updateable providing links to past and current/future research work in the European maritime transport research area.

The project looks also in detail in the reverse direction, in a way compatible with the requirements of the current transport research programme, the future needs and priorities for EU funded Maritime Transport research so as to better serve the realisation of the objectives of the general Maritime Transport Policy.

This project includes 6 partners.

- ECTRI partner: CERTH-HIT, Greece (coordinator)

Duration: 32 months, from December 2008 to August 2011

<http://www.marpos-project.net>

#### 208. USTIR – User Driven Stimulation of Radical New Technological Steps in Surface Transport CSA-SA

**Call DG RTD (FP7-SST-2007-RTD-1)**

The objectives of the project were to define know-how and technologies to address Europe's surface transport problems Stimulate radical technological changes by supporting the development and capture of know- how: creating an innovation friendly climate, enabling co-operation between highly qualified research organisations and creative individuals, triggering the development of innovative solutions by introducing radical new ways of thinking and innovation support systems, avoiding technological 'white elephants', stimulating innovative transport solutions regarding economic, ecologic and social optima.

The project included 9 partners.

- ECTRI partner: UNIZA, Slovakia (Coordinator)

Duration: 24 months, from January 2009 to December 2010

[http://www.transport-research.info/web/projects/project\\_details.cfm?ID=37676](http://www.transport-research.info/web/projects/project_details.cfm?ID=37676)

#### 209. PROMARC "PROmoting MARine Research Careers" – CSA-SA

**Call DG RTD (FP7-SST-2007-RTD-1)** (*Raising Awareness of potential job opportunities in the Surface Transport sectors*)

In order to remain at the cutting edge of knowledge and technology for green, competitive, safe and secure advanced maritime products and operations not only naval architects, offshore and marine engineers but also marine scientists, marine transport economists and financiers as well as other related science and engineering graduates have to be attracted to undertake research and development in the maritime sector. PROMARC will raise awareness of job opportunities in the marine transport technology sector in Research and Innovative product development through different tools.

This project includes 13 partners. Coordinator: WEGEMT, United Kingdom

- ECTRI partner: UNEW and UPM

Duration: 24 months, from October 2008 to September 2010

**210. IceWin “Innovative Icebreaking Concepts for Winter Navigation” – CP-FP****Call DG RTD (FP7-SST-2008-RTD-1)** (*Innovative product concepts, Competitive transport operations*)

The objective of the proposal is to find out what benefits can be attained in the level of service of icebreaking assistance, in logistics and especially in oil transports, and with regard to environmental emissions and risks, by a) adopting the new technical solutions, and/or b) utilising the new type of agreement system.

This project includes 4 partners.

- **ECTRI partner:** VTT, Finland (coordinator)

Duration: 24 months, from June 2009 to May 2011

<http://www.vtt.fi/sites/icewin/index.htm>

**211. YEAR-2010 “Young European Arena of Research – 2010” – CSA-SA****Call DG RTD (FP7-SST-2008-RTD-1)** (*Shaping the New Generation of Sustainable Surface Transport Mobility for Europe*)

The Young European Arena of Research 2010 is a competition for early-stage researchers exploring the area of surface transport within their research. The competition gives the students an opportunity to showcase their work to experts within the field, both on the web and, for the best applicants, at the Transport Research Arena conference, TRA2010 in Brussels in June 2010. Students are asked to submit an abstract on-line under one of the YEAR2010 scientific pillars, or the additional pillar of Future Visions of Transport. This collection of submitted abstracts is hosted online on the YEAR2010 website and represents a showcase of European research and is open for viewing by all those interested in the field. All abstracts will go through an online judging review, after which the top 50 finalists will be invited to attend the TRA2010 Conference in Brussels to display their research in an exhibition space. The 50 finalists will be judged a second time at the conference and the Gold, Silver and Bronze medals for each of the pillars will be announced and presented during the conference, for an expected 1,500 delegates to observe.

This project includes 6 partners. Coordinator: University College Dublin, Ireland

- **ECTRI partner:** ECTRI supported by ECTRI Member POLITO

Duration: 20 months, from January 2009 to August 2010

<http://year2010.fehrl.org>

**212. GHG-TransPoRD “Reducing greenhouse-gas emissions of transport beyond 2020: linking R&D, transport policies and reduction targets” – CSA-SA****Call DG RTD (FP7-TPT-2008-RTD-1)** (*Techno-economic analysis per mode and combined to meet EU GHG emission reduction targets at time horizon 2020 and beyond*)

The GhG-TransPoRD proposal aims to contribute to the development of a research strategy for the EU to reduce the GHG emissions of the different transport modes (road, rail, air and shipping) linking this research strategy with the available policy measures. Thus the proposal supports the FP7 objective to develop integrated, “greener” and smarter transport systems.

This project includes 5 partners.

- **ECTRI partner:** FhG, Germany (coordinator)

Duration: 24 months, from October 2009 to September 2011

<http://www.eutransportghg2050.eu/cms/>

**213. TransNEW “Support for realising new Member and Associate States’ potentials in transport research” – CSA-SA****Call DG RTD (FP7-TPT-2008-RTD-1)** (*Assessing, analysing and defining strategies for realising new Member and Associated States’ potentials in transport research*)

TransNEW aims at supporting transport research activities in the New Member States. It contributes to the implementation of the Framework Programme and to the preparation of future Community research and technological development. It also stimulates, encourages and facilitates the participation of the New Member States and particularly SMEs in those countries in national, regional and European research. TransNEW has one primary focus to assess, analyse and define strategies for realising New Member and Associated States potentials in transport research. TransNEW aims to map the transport research capacities in new Member States (and Associated States) by analysing their transport research activities to establish their recent patterns of collaboration. This project includes 15 partners.



- **ECTRI partners:** UNEW, United Kingdom (coordinator), CDV and VGTU-TMI  
Duration: 24 months, from January 2010 to December 2011  
<http://www.transnew.eu>

**214.** ETISplus “European Transport policy Information System Development and implementation of data collection methodology for EU transport modelling Corridors” – CSA-SA

**Call DG TREN (FP7-SST-2008-TREN-1)** (*Encouraging modal shift and decongesting transport*)

ETISplus sets out to build upon the strengths of the ETIS project (2005) and to address the lessons learnt. In principle, the Commission’s objectives have not changed, but greater emphasis is required upon the frameworks. In ETISplus several innovations and extensions are proposed. By proposing the innovations and extensions as mentioned above the proposal gives a balance between at the one hand building on existing results through updating and at the other hand innovation using new technologies for data collection, new efficient cost-effective methods in cases where the quality is still behind standards, a new retrieval tool, extending both geographically and by adding new variables and developing a business model for the future. TRANSTOOLS is the key application that the project ETISplus must support.

This project includes 17 partners. Coordinator: NEA Transport research and training, The Netherlands

- **ECTRI partner:** UNIZA

Duration: 30 months, from September 2009 to April 2012

<http://www.tmleuven.be/project/etisplus/home.htm>

**215.** OPTIC “Optimal Policies for Transport in Combination” – CSA-CA

**Call DG TREN (FP7-SST-2008-TREN-1)** (*Encouraging modal shift and decongesting transport corridors*)

OPTIC is a high level policy support activity that will consolidate and extend knowledge for policy-making in the process of construction and implementation of optimal packages of transport policy measures. A strong emphasis on training, dissemination and user involvement is maintained throughout the project through a Page 1 of 3 series of activities including a webpage, a transport conference session, academic publications, targeted workshops and newswire services.

This project includes 8 partners.

- **ECTRI partners:** TØI, Norway (coordinator), CDV, DLR and DTU

Duration: 24 months, September 2009 to August 2011

<http://optic.toi.no/>

**216.** POINT “Policy Influence of Indicators” – CP-FP

**Call DG RTD (FP7-SSH-2007-RTD-1)** (*Current Use of and Emerging Needs for Indicators in Policy*)

The overall aim is to help find better ways of using indicators in all aspects of policy, but with a thematic focus on the role of indicators in fostering and supporting change in areas of policy making towards ‘Sustainable Development’. The research area of indicators in the presumed service of sustainability will provide a rich ground for addressing the actual use, influence and impacts of indicators, reflecting dynamic interactions between forces for policy continuation and versus policy change.

The project includes 9 partners. Coordinator: NERI-AU, Denmark

- **ECTRI partner:** DTU

Duration: 36 months, from April 2008 to March 2011

<http://www.point-eufp7.info/>

**217.** INNOSUTRA “INNOvation process in SURface TRANsport” – CSA-CA

**Call DG TREN (FP7-SST-2008-TREN-1)** (*Innovation process in surface transport*)

The main objective of the INNOSUTRA project is to assess the conditions, including policy support, under which innovative concepts have a high chance of getting adopted and being successful. The work will start from the state-of-the-art and results attained in previous research projects and actions dealing with innovation processes, not only at European but often also at national or regional level.

The project includes 7 partners. Coordinator: Universiteit Antwerpen, Belgium

- **ECTRI partner:** LET

Duration: 24 months, from January 2010 to December 2011



**218. HYCON2 - European Network of Excellence for highly Complex and networked control systems - NoE****Call DG INFOS (FP7-ICT-2009-INFOS) (Engineering of Networked Monitoring and Control Systems)**

HYCON2 will address engineering technologies for highly-complex and networked control systems that is large scale, distributed and cooperating systems for monitoring and control, including wireless sensor networks. This emerging research discipline provides the theoretical foundations for modelling and analysing the behaviour of embedded systems and promises a much improved design technology.

This project includes 23 partners. Coordinator: CNRS, France

• **ECTRI partner:** Ifsttar

Duration: 48 months, from September 2010 to August 2014

<http://www.hycon2.eu/>

**219. BESTPOINT - Criteria for BEST practice demerit POINT systems – CSA****Call DG TREN (FP7-2009-TREN-1)**

Demerit Point Systems (DPS) have been implemented by numerous legislations all over the European Union to enhance road safety by reducing crashes through sanctioning risky road safety behaviour. Most of them have been designed more or less sophisticatedly and as a consequence of the lack of evaluation the positive effects of various DPS systems are difficult to estimate.

The objective of BESTPOINT is to collect, analyze, summarize and disseminate best practice criteria for DPS as well as to develop a tool towards harmonisation on European level. To achieve this goal a comprehensive literature analysis will be carried out which will besides expertise be the foundation for evaluation tools. With the help of those tools and an EU-wide data collection regarding DPS a best practice criteria list will be derived which will be further discussed on the national and the European level. Final outcome will be best practice guidelines (handbook) for the implementation of an effective demerit point system.

This project includes 18 partners. Coordinator: KfV, Austria

• **ECTRI partners:** BAST, CDV, CERTH-HIT, DTU, Ifsttar, ITS and VTT

Duration: 24 months, from 2010 to 2012

<http://www.bestpoint-project.eu/>

**220. ADAPTATION “Driver’s Behavioural adaptation over the time in response to ADA use” – ITN****Call DG RTD (FP7-PEOPLE-ITN-2008) (Initial Training network)**

ADAPTATION is constituted of well-recognised European organisations (universities, research institutes and industrial partners) working on drivers’ behaviour research and Advanced Driver Assistance Systems (ADAS) design. ADAS have emerged as an integral part of modern road vehicles. They make use of the newest information technologies in order to enhance driver safety and comfort, and thereby avoiding driver errors and accidents. Today several systems and functions, available on the market, have the potential to meet these objectives. However, concerns have been raised that drivers adapt to these new systems in unexpected ways that can compromise safety. The objective of ADAPTATION is to improve the career perspectives of young researchers by taking part in an innovative and ambitious European research programme. ADAPTATION aims at studying the whole range of adaptation processes in response to ADAS including not only observable behavioural changes, but also changes in regulatory, cognitive and motivational processes. In addition to training-through research (PhD and post-doctoral positions), personalised training actions will extend the skills of this future generation of academia and industry researchers.

This project includes 10 partners and 4 associate partners. Coordinator: ERT, France

• **ECTRI partners:** Ifsttar and TRL

Duration: 48 months, from January 2010 to December 2013

<http://adaptation-itn.eu>

**221. DELTA “Concerted coordination for the promotion of efficient multimodal interfaces” – CSA-CA**

**Call DG RTD (FP7-SST-2007-RTD-1)** (*Intelligent mobility systems and multi-modal interfaces for transport of passengers*)

Having recognized the critical role that regions with steep seasonal demand can play to economic growth and development, DELTA will initiate coordination and networking action, and commence an active dialogue among projects, research stakeholders, policy makers, experts, representatives of regions and local governmental agencies to promote sustainable solutions and efficient multimodal interfaces in regions with seasonal peaks. The action will lead to a Decision Support Instrument composed of mobility schemes, measures or policies that can be applied by cities towards integrated and sustainable mobility. Additional outcomes will be: Knowledge base with the detailed characteristics of the cities and regions with seasonal demand profile; Cities classification; Framework of mobility schemes; Handbook of benchmarks; Local and External Research Stakeholders Forums; Network of European cities; and Future research needs.

This project includes 13 partners.

- ECTRI partners: CERTH-HIT, Greece (coordinator) and VTI

Duration: 24 months, from January 2009 to December 2010

<http://www.delta-project.eu>

**222. FLOWHEAD “Fluid optimisation workflows for highly effective automotive development processes” – CP-FP**

**Call DG RTD (FP7-SST-2007-RTD-1)** (*Competitive product development*)

The aim of FlowHead is to develop fast gradient-based optimisation methods using adjoint sensitivities for automotive flow design. This is done by: 1- developing and enhancing a range of adjoint solvers, including commercially licensed solvers, open source solvers and research codes, 2 - developing automated shape parametrisation methods to deliver sensitivities for the complete design chain, 3 - develop topology optimisation methods for industrial applications, 4 - to integrate the optimisation tools into the design workbench and the product development process.

This project includes 11 partners. Coordinator: Queen Mary and Westfield College, University of London, United Kingdom

- ECTRI partner: DTU

Duration: 36 months, from February 2009 to January 2012

<http://flowhead.sems.qmul.ac.uk>

**223. ERRAC Road Map “European Rail Research Advisory Council, Coordinating, Creating Roadmaps, Evaluating and Prioritising Future Rail Research” -CSA**

**Call DG RTD (FP7-SST-2008-RTD-1)** (*Competitive transport operations Interoperable rolling stock Holistic noise and vibration abatement*)

ERRAC- ROADMAP covers research related to all types of freight and passenger rail services as well as their interaction with other modes within the transport system (High Speed and conventional rail over long, medium and short distances, as well as urban rail and co-modal services), the implementation of such research, and to support the various activities of the European Rail Research Advisory Council in 2008 and beyond and to favour the sustainable mobility of European citizens. ERRAC- ROADMAP will contribute to translate, monitor and disseminate to the whole European industry the strategic recommendations and guidelines of the SRRA.

This project includes 26 partners. Coordinator: Union Internationale des Chemins de fer, France

- ECTRI partner: UNEW

Duration: 36 months, from June 2009 to May 2012

**224. ENR2 "ERA-NET ROAD II" – CSA - CA****Call DG RTD (FP7-ERANET-2008-1) (ERA-NET ROAD II)**

ERA-NET ROAD II's aim is to strengthen the European Research Area in road research by coordinating national and regional road research programmes and policies. The consortium comprises owners and managers of road research programmes in fifteen countries and two regions, i.e. the eleven National Road Administrations active in the first ERA-NET ROAD plus four more National Road Administrations and two Regional Road Administrations. Jointly, they will promote, develop and facilitate collaborative trans-national programming, financing and procurement of road research.

This project includes 21 partners.

- **ECTRI partners:** Ifsttar, France (coordinator), BAST, DVS, KTI and VGTU-TMI

Duration: 30 months, from May 2009 to December 2011

<http://www.eranetroad.org/>

**225. TRANSCEND "Understanding Transport for Concrete which is Eco friendly iNnovative and Durable" – ITN****Call (FP7-PEOPLE-2010-ITN) (Initial training network)**

The industry is calling urgently for the researchers with the ability to predict water transport in concretes. Without this, there can be no confidence in the introduction and use of new materials; the status quo based on years of experience but relatively little scientific understanding will prevail for decades to come.

TRANSCEND Initial Training Network will provide the trained personnel who can.

(i) Enable the construction industry to predict water transport in cements and concretes and hence design appropriate tests to predict concrete degradation.

(ii) Provide a basis for user confidence which enables the cement industry to introduce new more sustainable cements.

This project includes 13 partners. Coordinator: EPFL, Switzerland

- **ECTRI partners:** DTU and Ifsttar

Duration: 24 months, from October 2012 to September 2014

**226. OPTIMISM "Optimising Passenger Transport Information to Materialize Insights for Sustainable Mobility" – CSA-CA****Call DG RTD (FP7-TPT-2011-RTD-1) (Integration of passenger transport modes and travel information services through the analysis of social behaviour, mobility patterns and business models as basis for the decarbonization of the European transport system)**

OPTIMISM's main outcomes are the creation and development of different sets of strategies and methodologies for optimising passenger transport systems based on co-modality ICT solutions. OPTIMISM also takes into consideration the passenger needs and the carbon-neutral objective. The main scope is to provide a scientifically documented insight of the transport system and people's travel choices via the study of social behaviour, mobility patterns and business models. This will also allow defining future changes in the passenger's travel system that would lead to more sustainable method/mode(s) of travelling.

This project includes 9 partners. Coordinator: Coventry University Enterprises Limited, United Kingdom

- **ECTRI partner:** DLR

Duration: 36 months, from October 2011 to September 2013

<http://www.optimismtransport.eu/>

**227. TRANSTOOLS 3 "Research and development of the European Transport Network Model Transtools Version 3" – CSA-CA****Call DG RTD (FP7-SST-2010-RTD-1) (Transport modelling for policy impact assessments)**

The objective of the project is to upgrade and further develop the current TRANSTOOLS model, here referred to as TT2, to a new and improved European transport demand and network model (TT3). The project will improve the methodological basis of TRANSTOOLS, improve and validate its data foundation, deal with known deficiencies of the existing model, make the software faster and more efficient, and focus on the user needs, model documentation and model validation. The model will be updated to the 2010 base year based upon ETISplus data. The level of detail with regard to the rail, maritime and air transport modules will be increased. The aim here is to better analyse issues of cost, capacity and externalities of transport. The impact assessment model will be improved.

This project includes 14 partners

- **ECTRI partners:** DTU, Denmark (Coordinator) and VTI

<http://transportmodel.eu/>

**228. BESTFACT “ Best Practice Factory for Freight Transport” – CSA-CA****Call DG RTD (FP7-SST-2010-RTD-1)** (*Development and promotion of best practice in freight logistics*)

The BESTFACT objective is to develop, disseminate and enhance the utilisation of best practices and innovations in freight logistics that contribute to meeting European transport policy objectives with regard to competitiveness and environmental impact.

BESTFACT builds up on the work of BESTUFS, PROMIT and BESTLOG and integrates four interrelated areas of the key freight logistics challenges the European Union is confronted with and creates coherence with the key actions of the Freight Logistics Action Plan: urban freight, green corridors and co-modality, transport related environmental issues and eFreight. This project includes 18 partners. Coordinator: PTV Planung Transport Verkehr AG, Germany

- **ECTRI partners:** Ifsttar, UNEW, VGTU-TMI and VTT

Duration: 48 months, from January 2012 to December 2015

<http://www.bestfact.net/>

**229. EMAR “e-Maritime Strategic Framework and Simulation based Validation” – CP****Call DG RTD (FP7-SST-2010-RTD-1)** (*Upgraded maritime transport information management*)

The objective of e-Maritime is to make maritime transport safer, more secure, more environmentally friendly and more competitive. For this, e-Maritime must ameliorate complexities that hinder networking of different stakeholders, help to increase automation of operational processes particularly compliance management and facilitate the streaming of synthesised information from disparate sources to assist decision making.

The eMar approach will facilitate extensive participation of the European maritime public, business and research community in a knowledge development process leading to the specification of the e-Maritime Strategic Framework. The emphasis will be in multiple iterations across different stages and with different stakeholders.

This project includes 29 partners. Coordinator: BMT Group Limited, United Kingdom

- **ECTRI partner:** VGTU-TMI

Duration: 24 months, from January 2012 to December 2014

<http://www.emarproject.eu/default.aspx>

**230. DETRA “ Developing the European Transport Research Alliance” – CSA-CA****Call DG RTD (FP7-TPT-2010-RTD-1)** (*Analysis of the state of ERA development within the transport domain*)

The concept of DETRA derives from the so-called Lyon Declaration. In 2008, the Lyon Declaration signatories i.e ECTRI, FERSI, FEHRL, EURNEX, HUMANIST, ISN and NEARCTIS committed themselves to work together on the deepening the European Research Area objectives in transport in order to address the Grand Challenges. From this commitment grew the objective to create a European Transport Research Alliance (ETRA) that would strengthen transport domain. Key priorities of this Alliance were to examine the strengths, weaknesses, opportunities and threats (SWOT) in the domain and develop common understanding and approaches to reducing fragmentation and overcoming barriers.

This project includes 5 partners and 2 supporting organizations. Coordinator: FEHRL, Belgium

- **ECTRI partner:** ECTRI supported by 3 ECTRI Members: CENIT, LET and POLITO

Duration: 28 months, from June 2010 to September 2012

<http://detra.fehrl.org/>





**231. EUTRAIN “European Transport Research Area International cooperation activities” – CSA-SA Call DG RTD (FP7-TPT-2011-RTD-1) (A productive international cooperation to strengthening the European Transport research area and facing global challenges)**

As the European Transport Research Area (ERA-T) takes shape and strength, international transport research collaboration can both help its further strengthening and internal cohesion as well as boost Europe’s competitiveness in the global economy. The EUTRAIN proposal seeks to put forward a framework for such international cooperation in Transport research between the European Transport Research Area (ERA-T) and other regions, in order to ease existing barriers and limiting factors for such collaboration. It is also of major interest to try and achieve, within international research collaboration, an increased focus on human resources and creating the next generation of global researchers.

EUTRAIN will build upon the existing experience and know-how in this field - that has been gained in recent years through specific actions of international cooperation as well as projects / studies and will go one step further to make specific recommendations and policies that will be ripe for implementation.

This project includes 5 partners.

- **ECTRI partners:** ECTRI is the coordinator of this project, supported by 5 ECTRI Members: HIT, Ifsttar, KTI, TRL and UPM

Duration: 24 months, from October 2011 to September 2013

<http://www.eutrain-project.eu/>

**232. ON-TIME “Optimal Networks for Train Integration Management across Europe” – CP-IP**

**Call DG RTD (FP7-SST-2011-RTD-1) (A system approach for railway operations management to increase capacity and decrease delays for railway customers’ satisfaction)**

The aim of this project is a step-change in railway capacity by reducing delays and improving traffic fluidity. This will be achieved by a partnership between railway industry experts, system integrators, small dynamic knowledge led companies and academic researchers. The project will draw on previous research projects and national trials. Previously, railways have improved their own networks to remove bottlenecks and increase fluidity. Such changes have generally been done ad hoc so results and best practice have not been shared. Previous relevant academic research has, in general, been based on algorithm development. To apply the results of such research needs an understanding of the practical operating principles and the nature of delay initiation and propagation. This project will address both issues and deliver research-based results that can be freely applied to commercial traffic management and traffic planning tools.

This project includes 19 partners. Coordinator: D’Appolonia SPA, Italy

- **ECTRI partner:** Ifsttar

Duration: 36 months, from November 2011 to October 2014

<http://www.ontime-project.eu/>

**233. ASSIST ‘Assessing the social and economic impacts of past and future sustainable transport policy in Europe’ – CP-FP**

**Call DG RTD (FP7-SST-2011-RTD-1) (Social and economic impacts of transport policy)**

The main objective of the ASSIST proposal is to provide the EU with sound policy advice on the possible social and economic impacts of future sustainable transport policies that would bear the potential to contribute to the strategic objectives of the EU given by the Lisbon Strategy, the Sustainable Development Strategy and the upcoming EU-2020 strategy. The ASSIST proposal follows a broad definition of the meaning of Transport Policy including traditional transport policies (e.g. pricing, fuel taxation, regulation/liberalisation of transport markets), infrastructure implementation and transport technology related measures (e.g. technological/efficiency standards, R&D support, market introduction support). We would summarize such a broad understanding of policies as Transport Policy Measures (TPM), which then have a broader meaning than just transport policy.

This project includes 6 partners.

- **ECTRI partner:** FhG, Germany (Coordinator) and LET

Duration: 24 months, from April 2011 to March 2013

<http://www.assist-project.eu/assist-project-en/index.php>



**234. TRA2012 “Supporting the Transport Research Arena 2012 conference” – CSA**

**Call DG RTD (FP7-SST-2011-RTD-1)** (*Supporting the organization of the TRA 2012 conference and other research relevant events*)

This project will give support for organising and promoting the Transport Research Arena 2012 in Athens. It will reinforce the scientific excellence of the conference and cement its position as the main transport research event in Europe.

The fourth Transport Research Arena (TRA) will be organised in Athens, Greece, in April 2012. The project is a coordinated commitment of partners from all of the relevant stakeholder organisations plus the 2012 and 2014 TRA organisers.

This project includes 11 partners. Coordinator: Conference Européenne Directeurs Routes Association, France.

• **ECTRI partners:** CERTH-HIT and Ifsttar

Duration: 24 months, from January 2011 to December 2012

<http://www.traconference.eu/>

**235. THROUGH LIFE “Development and proof of new approaches for through-life asset management based on next generation of materials and production technology” – CP-FP**

**Call DG RTD (FP7-SST-2010-RTD-1)** (*Improved through-life asset management through application of advanced production, retrofit and dismantling processes*)

Within this framework, the main objective of the project is to develop and prove new approaches for through-life asset management for selected technologies and application scenarios. This will be done by considering all life cycle phases of the technologies concerned in view of their cost efficiency, environmental performance and safety. Special emphasis will be given to the identification, elaboration and demonstration of innovative joint services of the main actors in the life cycle, i.e. primarily new building yards, repair yards and ship operators.

This project includes 18 partners. Coordinator: Meyer Werft GMBH, Germany

• **ECTRI partner:** FhG

Duration: 36 months, from April 2011 to March 2014

<http://www.throughlife.eu>

**236. JOBVEHELEC “Job opportunities in vehicle electrification” – CSA-CA**

**Call DG RTD (FP7-GC-SST-2010-RTD-1)** (*Raising awareness of potential job opportunities related to the electrification of road transport*)

Vehicle electrification plays a significant role in the process of lowering road transport emissions, and this role will continue to grow as we shift to an electric road transport paradigm. The successful development of the infrastructure, vehicles, and research breakthroughs that will enable a competitive transition to electric vehicle transport requires adding new dimensions to the traditional skills and capabilities of road transport engineers and technicians. Therefore, the transition requires not only new approaches to vehicle manufacture and development, but also to road transport education. To ensure that young people respond to the important and attractive opportunities arising in the transition, JobVehElec aims to raise awareness of the future jobs in vehicle electrification and the educational paths for reaching these jobs among the engineers and technicians of tomorrow.

This project includes 5 partners. Coordinator: Chalmers Tekniska Högskola AB

• **ECTRI partner:** POLITO

Duration: 36 months, from January 2011 to December 2013

**237. MARKET-UP “Transport Research Market Uptake (Market-up)” – CSA-SA**

**Call DG RTD (FP7-TPT-2010-RTD-1)** (*Market uptake of transport research and role of actors and regions*)

The objectives of the Market-up project are fourfold:

1. To get a better understanding of the context in which research funding for transport takes place in Europe and for the different transport modes, including concentration pattern in terms of actors (role and weight of big companies vs SMEs).
2. To derive conclusions as to what drives or hampers the development and uptake of transport technologies.
3. To develop insights into which policy instruments could be usefully applied to respond to the drivers and address the barriers such that faster progress can be achieved with the introduction and uptake of

transport technologies.

4. To identify and define the roles of the actors and regions involved in this action.

This project includes 9 partners. Coordinator: TIS PT, Consultores em Transportes, Inovacao e sistemas SA, Portugal.

• ECTRI partners: FhG and UNIZA

Duration: 24 months, October 2010 to September 2012

<http://www.market-up.org/>

#### **238.** INCRIS - Improving International Cooperation and R&D Road Infrastructure Strategy for Ukraine –CSA-SA

##### **Call (FP7-INCO-2011)**

Ukraine plays a strategic role in facilitating East-West transport connections, the countrys strategic road network. It however, cannot handle the increasing traffic load due to insufficient technical parameters. The overall objective of the INCRIS coordinating action is to ensure that the cooperation capacities of Ukraines leading road research centre, the Shulgin State Road Research Institute (DNDI) are reinforced in order for it to foster its integration into the European Research Area and this improve road infrastructure in Ukraine through joint research..

This project includes 6 partners. Coordinator: DNDI, Ukraine

• ECTRI partner: VTI

Duration: 29 months, from December 2011 to May 2014

<http://incris.fehrl.org/>

#### **239.** HERMES “Establishing a CompreHensive transport Research information Management and Exchange System” – CSA-SA

##### **Call DG RTD (FP7-TPT-2011-RTD-1)** (*A productive international cooperation to strengthening the European Transport research area and facing global challenges*)

The HERMES project aims to develop closer and more effective communication between researchers working in the field of transport technologies in the EU, and their counterparts around the world by facilitating the exchange of information and developing a framework for long term collaboration. As second aspect of the HERMES project aims to facilitate international collaboration in transport research and requires your opinion and experiences in order to develop the policy framework and conditions that will allow a truly global transport research community to be established.

This project includes 5 partners.

• ECTRI partner: UNEW, United Kingdom (coordinator)

Duration: 27 months, from November 2011 to January 2014

<http://www.hermes-project.net/>

#### **240.** I-C-EU “Impact of Transport Infrastructure on International Competitiveness of Europe” – CSA-SA

##### **Call DG RTD (FP7-TPT-2012-RTD-1)** (*Transport infrastructure impact on international competitiveness of Europe*)

The transition process between the Lisbon Agenda and the Europe 2000 strategy plans happens exactly in the time when Europe is undergoing its hardest economic crisis since its formation. The objective of getting out of the crisis together with the urgent need to remains performance in the context of fiercer world economic competition especially against the new emerging economies has made Europe’s competitiveness and economic performance fundamental issues. White Paper 2011 has summarized the main objective of European transport strategy which is to help establish a system that underpins European economic progress, enhances competitiveness and offers high quality mobility services while using resources more efficiently. In this sense, it is essential then first to clarify the relationship between the transport sector, economic growth and competitiveness and second, to elaborate a working framework so that transport policy intervention can effectively improve European economic growth and competitiveness. The I-C-EU will clarify the relationship between transport infrastructure investment and its wider economic impacts by exploring the state-of-the-art of the theoretical methodology of the assessment tools, analysing current and future situation of Europe while taking into account European strategy on growth and competitiveness. Using this triad of concept will allow I-C-EU to provide recommendations to the European Commission on making political intervention in order to enhance competitiveness of Europe.

This project includes 6 partners. Coordinator: Transport & Mobility Leuven NV, Belgium

- ECTRI partner: FhG

Duration: 24 months, from October 2012 to September 2014

<http://www.i-c-eu.eu/index.htm>

#### 241. ETNA PLUS “European Transport Network Alliance” – CSA

**Call DG RTD (FP7-TPT-2012-RTD-1)** (*Fostering innovation for trans-national cooperation in European transport research and promoting active participation of stakeholders in European research calls and projects*)

ETNA Plus will build upon the activities and knowledge acquired in the ongoing project European Transport NCP Alliance (ETNA) with a new and wider approach reflecting the new political context and the priority given to Europe 2020 and to the Horizon 2020 objectives. The overall objective of ETNA Plus is to foster innovation in trans-national cooperation in Transport with a focus on promoting the active participation of new actors and regions in EU research calls and projects. The project foresees: the development of a web tool on EU funding opportunities, both public and private; an analysis of innovation strategies implemented in the industrialized Countries; the support to stakeholders to build trans-national consortia and the reinforcement of Transport NCPs’ and researchers’ expertise through ad hoc training and twinning measures; networking with other initiatives relevant to transport.

This project includes 16 partners. Coordinator: Agenzia per la promozione della Ricerca Europea, Italy

- ECTRI partners: UNEW and UNIZA

Duration: 30 months, from January 2013 to June 2015

<http://www.transport-ncps.net/index.php>

#### 242. UDRIVE “eUropean naturalistic Driving and Riding for Infrastructure & Vehicle safety and Environment” – IPS

**Call DG RTD (FP7-SST-2012-RTD-1)** (*Large scale naturalistic driving observations for safe and sustainable transport*)

Road transport is indispensable for the exchange of goods and persons. However, at the same time it has severe negative consequences, among others related to road safety and the environment. In order to meet EU targets, both the number of crashes and vehicle emission levels need to be reduced substantially. Therefore, with the aim of identifying the next generation of measures that will enable us to effectively reach these targets, a far more in-depth understanding of actual road user behaviour is needed. The UDRIVE project builds further on the experience of the PROLOGUE feasibility study and various Field Operational Tests (FOTs), and aims to contribute to developing this in-depth knowledge by conducting the first large-scale European Naturalistic Driving (ND) study.

This project includes 19 partners. Coordinator: SWOV, The Netherlands

- ECTRI partners: BAST, CDV, DLR and Ifsttar

Duration: 48 months, October 2012 to September 2016

<http://www.udrive.eu/>

#### 243. METPEX “A MEasurement Tool to determine the quality of the Passenger Experience” – CP-FP

**Call DG RTD (FP7-SST-2012-RTD-1)** (*Research actions regarding the accessibility of transport systems*)

METPEX will develop an inclusive passenger experience measurement tool for European transport providers, passenger groups and municipalities validated through its use across 8 sites of varying transport complexity. Its development will be informed by the consortiums understanding that data collection methods themselves have to be inclusive. The data collected will enable the creation and dissemination of service quality and accessibility benchmark indicators. Through its deployment the tool will have far reaching impact in terms of providing more grounded intelligence to inform transport design, accessibility, land use and sustainability, and ultimately improve mobility and quality of life for EU citizens.

This project includes 16 partners. Coordinator: Coventry University, United Kingdom

- ECTRI partner: POLITO

Duration: 36 months, from November 2012 to October 2015

<http://www.metpex.eu/>

**244. RACE2050 “Responsible innovation Agenda for Competitive European transport industries up to 2050” – SA**

**Call DG RTD (FP7-TPT-2012-RTD-1)** (*Prospects for transport evolution: challenges for the competitiveness of the European transport sector in the long term*)

RACE2050 foresight study aims to identify key success factors for a sustainable growth of the European Transport industry and for policies which can increase its strength in a long perspective up to 2050.

By studying the actual impacts of past foresight studies we will learn how to present our own integrative foresight synopsis and what to expect from transport industry and policy. Important drivers of change will be extracted by analysing current policies, emerging technologies, energy and environment aspects, demand forces, geopolitical trends and other relevant domains.

This project includes 6 partners. Coordinator: Technische Universität Berlin, Germany

• ECTRI partner: TØI

Duration: 30 months, from September 2012 to February 2015

<http://race2050.org/>

**245. EU-PORTRAITS “EUropean PORTWorkers TRAINing Scheme” – CSA-SA**

**Call DG MOVE (FP7-SST-2013-MOVE-1)** (*Towards a competitive and resource efficient port transport system*)

EU-PORTRAITS will facilitate the implementation of “broad & open dialog with the social stakeholders” for the “establishment of a mutually recognizable framework on the training of port workers in different fields of port activity” under the unique goal of bringing EU ports at the forefront of competition by investing in the development of a well-trained, competent & strong human capital securing the employee rights at work.

This project includes 8 partners.

• ECTRI partners: CETH-HIT, Greece (Coordinator) and VTT

**246. PORTOPIA “Ports Observatory for Performance Indicator Analysis” – CP**

**Call DG MOVE (FP7-SST-2013-MOVE-1)** (*Towards a competitive and resource efficient port transport system*)

Its main objective is to develop a ports observatory with a set of indicators measuring EU ports performance through trends, activities and developments. It will look at performance for the port industry’s stakeholders, such as:

- Development of a forecasting dimension in port performance management;
- Development of top-down methods for harmonised socio-economic impact calculation;
- Development of an innovative, port-individualized tool for environmental and safety performance;
- Development of European port-related logistics chain connectivity indicators;
- Development of new governance indicators based on the changing role of port authorities, including indicators on financial capabilities and transparency;
- Development of a method to capture user perceptions of port performance;
- Development of a dedicated performance management system for the inland ports sector, including attention to the interaction between sea and inland ports;
- Development of a strategy map and an integrated benchmarking tool taking into account the specificities of ports.

This project includes 8 partners. Coordinator: Free University Brussels, Belgium

• ECTRI partner: FhG

**247. CAPACITY4RAIL “Increasing Capacity 4 Rail networks through enhanced infrastructure and optimised operations”-CP**

**Call DG RTD (FP7-SST-2013-RTD-1)** (*New concepts for railway infrastructure and operation: adaptable, automated, resilient and high-capacity*)

The project builds on previous useable results and will deliver both technical demonstrations and system wide guidelines and recommendations that will be the basis for future research and investment, increasing the capacities of rail networks in the future. The time used for infrastructure monitoring, maintenance and renewal means ‘down time’. New concepts for low maintenance infrastructure, using standardized and “plug-and-play” concepts will be proposed. Non-intrusive innovative monitoring techniques or self-monitoring infrastructure will be investigated, allowing low or no impact on train operations. The fragility of some key component of the infrastructure system (especially in extreme weather conditions) such as switches may impact the efficiency of the whole system. The resilience of switches to any kind of known failure will be reinforced, as well as the ability of the operation system to recover from incidents. Capacity enhancements will also be achieved by higher speed freight vehicles, allowing an optimized interleaving of freight trains into mixed traffic, and improved planning models for operation. Intermodal integration within the global transport system will be improved through enhanced transshipment of passengers and freight. CAPACITY4RAIL will also look towards 2030/2050, by proposing guidelines for future deployments in the mid-term, recommendations for technologies to be developed and deployed in the long term and investigating the key opportunities for funding these within national and EU funding schemes.

This project includes 48 partners. Coordinator: International Union of Railways, France

- ECTRI partners: FhG, Ifsttar and IK

**248. REFRESCO “Towards a REgulatory FRamework for the use of Structural new materials in railway passenger and freight Carbodyshells” – CP**

**Call DG RTD (FP7-SST-2013-RTD-1)** (*Technical requirements for the certification of new materials for railway rolling stock*)

The implementation of new lightweight materials has been slow mainly due to the lack of suitable certification procedures addressing the specific operational requirements of a railway vehicle. Such procedures are necessary so that rail vehicle manufacturers and operators can be confident that rolling stock made of a new material will perform as intended and will be at least as safe as a vehicle made out of the material it replaces. The REFRESCO project aims to achieve this goal by creating the regulatory framework for the use of new structural materials in rail car bodies.

This project includes 18 partners. Coordinator: UNIFE, Belgium

- ECTRI partner: DLR

**249. SMARTYards “Developing Smart Technologies for Productivity Improvement of European Small and Medium Sized Shipyards” – CP**

**Call DG RTD (FP7-SST-2013-RTD-1)** (*Low cost flexible automation and mechanisation in small to medium shipyards*)

The SMARTYards proposal aims to improve the productivity of European small and medium sized shipyards and related subcontractors working with them by at least 20%. This will be achieved by improving knowledge and technological skills, needed to survive in a tough global competition and to provide innovative products. In the technical part, the project will develop, test and validate smart technology solutions, comprising the optimum between design, equipment and work organization.

This project includes 21 partners. Coordinator: Center of Maritime Technologies, Germany

- ECTRI partner: FhG

**250. TRA VISIONS “TRA2014-VISIONS” – CSA**

**Call DG RTD (FP7-SST-2013-RTD-1)** (*Organisation of Transport Research Awards for the Transport Research Arena (TRA) conference*)

TRA VISIONS has for the objective the organisation of Transport Research Awards for the Transport Research Arena (TRA 2014) conference.

This project includes 9 partners. Coordinator: Wegemt, United Kingdom

- ECTRI partner: FhG

<http://www.travisions.eu/TRAVisions/index.xhtml>



**251. TRI-VALUE “Ex-post evaluation of Transport Research and Innovation in the FP7 ‘Cooperation’ Programme” – CSA****Call DG RTD (FP7-TPT-2012-RTD-1)** (*Ex-post evaluation of the Transport (including Aeronautics) theme of the FP7 ‘Cooperation’ specific programme*)

TRI-VALUE will look back into the FP7 work on transport with the aim of performing an ex-post evaluation. The objectives are: (1) analyse implementation and management; (2) assess achievements and impacts of the transport research financed by FP7 (regarding specific objectives, economic, social and environmental impacts); (3) evaluate efficiency, effectiveness and relevance of the funding; and (4) assess sustainability and utility of the programmes. This information will be used to outline conclusions and recommendations for improving transport research and innovation.

This project includes 6 partners. Coordinator: TIS, Portugal

- **ECTRI partners:** CERTH-HIT, FhG and UPM

**252. FUTRE “Future prospects on TRansport evolution and innovation challenges for the competitiveness of Europe – CSA - SA****Call DG RTD (FP7-TPT-2012-RTD-1)** (*Prospects for transport evolution: challenges for the competitiveness of the European transport sector in the long term*)

The transport sector is of utmost importance for economic growth and the quality of life in European countries. The main objective of FUTRE is to assess the effect of future challenges, demand drivers and upcoming innovations on the competitiveness of the European transport sector as a basis for developing strategic options for transport-related research activities. The project will highlight which future challenges and demand drivers can have a considerable impact on the global demand patterns in the passenger and the freight sector and how this might affect the competitiveness of related industries and service providers. In doing so, it aims at bridging the gap between the manifold studies on the future of the European transport system and its subsections on the one hand, and, on the other hand, the issue of competitiveness, which needs to be supported by targeted research strategies.

This project includes 5 partners.

- **ECTRI partners:** CERTH-HIT, Greece (coordinator) and FhG

Duration: 24 months, from October 2012 to September 2014

<http://www.futre.eu>

**253. TRANSFORUM “The stakeholder forum delivering European Transport White Paper goals” – CSA-SA****CALL DG MOVE (FP7-TPT-2012-MOVE-1)**

TRANSFORuM will contribute to the transformation of the European transport system towards more competitiveness and resource-efficiency. It does so by engaging key stakeholders in carefully moderated forum activities and through other consultation measures in order to identify their views about the challenges, barriers, trends, opportunities and win-win potentials in shaping the future European transport system. The TRANSFORuM project contributes to this transformation process, in particular to the implementation of the following four key goals of the Transport White Paper:

The project includes 13 partners. Coordinator: Rupperecht Consult Forschung & Beratung GmbH, Germany

- **ECTRI partners:** CDV, DTU, LET, VTI and TØI

Duration: February 2013 - January 2015

<http://www.transforum-project.eu>

**254. SOLUTIONS “Sharing Opportunities for Low Carbon Urban TransportION” – CSA****Call DG RTD (FP7-SST-2013-RTD-1)** (*Implementing innovative and green urban transport solutions in Europe and beyond*)

The overall mission of this project is to support the uptake of innovative sustainable urban mobility solutions in Europe and other regions in the world, in particular in Asia, Latin America and the Mediterranean. SOLUTIONS aims to bridge the “implementation gap” between the potential of innovative sustainable mobility and transport solutions and packages of solutions and the actual level of up-take and quality of the deployment mechanisms.

This project includes 23 partners. Coordinator: Wuppertal Institute for Climate Environment and Energy, Germany.

- **ECTRI partners:** CERTH-HIT, Ifsttar and LNEC

Duration: 36 months, from May 2013 to April 2016

**255. FOSTERRAIL “Future of Surface Transport Research Rail” – CSA**

**Call DG RTD (FP7-SST-2013-RTD-1)** (*Strengthening the research and innovation strategies of the transport industries in Europe*)

FOSTER RAIL will assist ERRAC and the other transport-related European technology platforms (ETP) in defining research needs for their strategies and programmes in order to realise the objectives of the Europe-2020 strategy and further on the vision of the White Paper 2011 for a competitive and resource-efficient future transport system. This will be done in consultation with the European Commission (EC) and Member States and Associated States (MS/AS). FOSTER RAIL will integrate the work done so far by ERRAC and its Working Groups and will further develop this. FOSTER RAIL shall build on ERRAC-ROADMAP and continue to support and enhance cooperation between stakeholders, including decision-makers, and enhanced definition of strategic research and innovation needs. As regard research and innovation targeting co-modality and other multi-modal issues, FOSTER RAIL shall address them in supportive cooperation with other transport modes. Finally, this project will be an essential support tool to provide a relevant Strategic Rail Research and Innovation Agenda as well as a Rail Business Scenario for 2050. This Railway Business Scenario shall be the reference for future research agendas and technology roadmaps to be developed in the timeframe from now on until 2050.

This project includes 20 partners.

- ECTRI partner: UNEW

Duration: 36 months, from May 2013 to May 2016

# COST Actions

1. **TU0602 “Land Management for Urban Dynamics”**. Previous studies in urban development show the decisive importance of the public actors’ ability to mobilize the required land resources for the success of urban projects. European cities largely differ from each other in their land ownership situation, building industry and real estate configurations, mortgage system, planning culture, policies, and management tools. However, the actual impacts of those differences on the success of urban development are poorly known, in spite of their utmost importance for European long term economic growth, especially for new Eastern EU members. COST offers an accurate framework to lead an Europe-wide comparative study that focuses on (1) land management regimes and land policies for urban development and regeneration, (2) land management tools for large urban development projects, and (3) the overall assessment of the performance of those regimes, policies, and tools. This action includes the following ECTRI partner: DTU-Transport  
Duration: 48 months, May 2007 to November 2011  
<http://costtu0602.altervista.org/>
2. **TU0603 “Buses with a high level of service”**. The main objective of the Action is to increase the public transport use by a better understanding of the BHLS concept and implementation, or in other words, to enhance sustainable mobility by developing new bus services within public transport networks to be able to fight or to compete with car use within Europe.  
This action includes the following ECTRI partners: UPM and CDV  
Duration: 48 months, October 2007 to October 2011  
<http://www.bhls.eu>
3. **TU0702 “Real-time Monitoring, Surveillance and Control of Road Networks under Adverse Weather Conditions”**. The main objective of this action is to understand better the impacts of weather on freeways/motorways as well as on urban networks highway operations and to develop, promote and implement strategies and tools to mitigate those impacts.  
This action includes the following ECTRI partners: Ifsttar, France (coordinator), CDV and AIT  
Duration: 48 months, March 2008 to March 2012
4. **TU0804 “SHANTI - Survey Harmonisation with New Technologies Improvement”**. The main objective of the Action is to provide guidelines for harmonizing national travel surveys across Europe. This harmonization aims at improving their comparability without preventing longitudinal analyses with previous surveys at country level and therefore should increase data quality at national level. The Action will build bridges between European countries as well as among researchers, enhancing research and disseminating recommendations throughout European society.  
This action includes the following ECTRI partners: Ifsttar, France (coordinator), CDV, DLR, DTU, POLITO, TØI, TTI, VTT and UPM  
Duration: 48 months, April 2009 to April 2013  
<http://shanti.inrets.fr/>
5. **TU0902 “Integrated Assessment Technologies to Support the Sustainable Development of Urban Areas”**. The main objective of the Action is to develop better representations of the urban systems interactions and dynamics as well as new configurations of urban areas so that they consume fewer resources, emit less pollution, are more resilient to the impacts of climate change and are more sustainable in general.  
This action includes the following ECTRI partners: FhG, LET, UNEW and TTI  
Duration: 48 months, October 2009 to March 2014  
[http://w3.cost.eu/index.php?id=240&action\\_number=TU0902](http://w3.cost.eu/index.php?id=240&action_number=TU0902)

6. **TU0903 “MULTITUDE - Methods and tools for supporting the use, calibration and validation of traffic simulation models”**. The main objective of the Action is to develop, implement and promote the use of methods and procedures for supporting the use of traffic simulation models, especially on the topics of model calibration and validation.  
This action includes the following ECTRI partners: CENIT, DLR, Ifsttar, LNEC and TTI  
Duration: 48 months, October 2009 to October 2013

7. **TU1001 “Public private partnership in transport: trends and theory”**. While Public Private Partnerships (PPP) are now used in many countries for Transport capital projects, research has been, in principal, descriptive. PPPs are complex contractual arrangements extending into an unpredictable future and the economic crisis has highlighted many shortcomings. The scope of this proposal is to develop the theoretical basis for PPPs in the transport sector.  
This action includes the following ECTRI partners: CDV, DTU, UPM and UVEG  
Duration: 48 months, August 2010 to August 2014

8. **TU1002 “Accessibility instruments for planning practice in Europe”**. Accessibility concepts are increasingly acknowledged as fundamental to understand the functioning of cities and urban regions. In particular, accessibility instruments are able to provide a framework for understanding the reciprocal relationships between land use and mobility. Such a framework has important potential advantages when transferred to the realm of urban planning. However, despite the large number of instruments available in literature, they are not widely used to support urban planning practices. Significant benefits are expected, both in terms of process; the establishment of bridges between scholars and practitioners from different approaches and different domains; and in terms of results; insights on how to improve the relevance of accessibility instruments for urban planning practices.  
This action includes the following ECTRI partners: DTU, Ifsttar, LET, POLITO, TØI and UPM  
Duration: 48 months, October 2010 to October 2014  
<http://www.accessibilityplanning.eu/>

9. **TU1004 “Modelling public transport passenger flow in the era of intelligent transport system”**. The challenge of sustainability that the European Union is facing calls for a shift of the demand for mobility from individual to collective means of transport. Hence more attractive public transport systems are required, above all in urban contexts. Since a shortage of funds for public transport is envisaged for the next years, efforts are needed to allocate money in the most effective and efficient way. Transit assignment models describe and predict the patterns of network usage by passengers, which are a fundamental input for transport planning. The models currently used do not take adequately into consideration the effects brought about by the increasingly advanced and widespread intelligent Transportation Systems on transit operations and on transit user behaviour, nor do they exploit to the full the amount of high quality data made available by the new technologies. This deficiency can delay the realisation of the benefits of enhanced passenger information provision. This action gathers together researchers in the field of transport and urban and regional planning, transport operators and authorities, consultancies and software developers with the main aim of giving rise to and of disseminating a new generation of transit assignment models tailored to the era of Intelligent Transport Systems.  
This action includes the following ECTRI partners: DTU, TTI and UPM  
Duration: 48 months, May 2011 to May 2015

**10. TU1103 “Operation and safety of tramways in interaction with public space”.** The Light Rail Transit (LRT) is spread in many countries all over the world, and particularly in Europe. Some historical networks have a very long experience and others are (re)discovering LRTs with a high disparity in terms of institutional and economical contexts, safety management, operational monitoring and technical choices. In this context, the action aims at improving LRT safety and reducing the impact of their conflicts with other public space users. This can be achieved by sharing European experiences on LRTs’ accidents and their interaction with public space, practices and operating methods, taking into account the different cultural and historical contexts. Through exchanges with other LRT specialists on available data and results, analysis and comparisons on accident and incident data, the action will allow to give the greatest safety benefits for best costs. This action is built on a bottom-up approach in order to give practical results and solutions to operators and authorities. Beyond internal exchanges, communication and dissemination of outcomes by various means (guidelines, recommendations, website...) will allow to reach most concerned actors at the EU level. It will also encourage a common approach and possible transpositions of some good practices in a context of internationalisation.

This action includes the following ECTRI partner: CDV

Duration: 48 months, September 2011 to September 2015

<http://www.tram-urban-safety.eu/>

**11. TU1102 “Towards autonomic road transport support systems”.** A current, well recognised societal problem is the frequent failure of road transportation networks, resulting from traffic incidents, system overloading and lack of optimised support systems. The aim of this action is to unite and align groups across Europe from computer science, engineering and transport studies into a world leading research community that will develop new ways of designing Road Transportation Support (RTS) systems based on the ideas of autonomic systems. If used as a platform on which to implement leading edge RTS technologies, such systems have the potential to deliver savings in the cost of system configuration, maintenance, and infrastructure, while potentially improving network efficiency and reducing the chances of human error. Using an autonomic approach to RTS is a novel and very ambitious idea requiring interdisciplinary community building, hence the need for COST, and a European dimension. This action will bring together disparate strands of research into an integrated discipline, putting Europe at the leading edge of autonomic transportation system development. Additionally it will have the wider benefit of producing a transformative change within the field of autonomic systems itself that will translate to other application areas such as energy management.

This action includes the following ECTRI partner: Ifsttar

Duration: 48 months, September 2011 to September 2015

**12. TU1101 “Towards safer bicycling through optimization of bicycle helmets and usage”.** Cyclists have few safety options, of which a helmet is one. However, there are strong indications that law-mediated increases of helmet usage for cyclists cause confounding factors which temper the positive effect of these helmets on head and brain injury. Furthermore, current helmet design is suboptimal. Since several fields are important to bicycle helmet optimization, a combined effort involving all of these is necessary; so that a given parameter is not optimized at the cost of another. Finally, the attitudes of cyclist towards helmets will be focused upon; providing tools for improving helmet usage. The multidisciplinary approach respects the complex nature of the issue, it is unique in Europe, and will provide more complete information to legislators, manufacturers, end-users, and scientists, ultimately leading to increased safety for cyclists.

This action includes the following ECTRI partners: DTU-Transport, Ifsttar, TØI and UVEG

Duration: 48 months, October 2011 to October 2015

[www.bicycle-helmets.eu](http://www.bicycle-helmets.eu)



**13. TU1104 “Smart Energy Regions”**. Government policy throughout the world needs to achieve considerable reductions in CO<sub>2</sub> emissions over a relatively short time scale to avoid catastrophic climate change. The built environment needs to play a major role in CO<sub>2</sub> reductions and needs to be addressed at a large scale. A broad set of issues have a significant impact on the successful adoption of new technologies and processes on a larger scale to create a low carbon built environment, including a lack of flexibility and shortage of skills in the supply chain, a misunderstanding of capital and operational costs, where technologies can be implemented, the impact on quality of life and policy and planning for the future. These need to be understood to enable technologies to be widely applicable and transferable within and between regions. This Action will investigate the drivers and barriers that may impact on the long term creation of low carbon regions in Europe. It will identify what can be done to assist the large scale implementation of low carbon technologies and processes. The main focus will be on new and retrofit of existing buildings, their operation, embodied energy and potential for using low and zero energy supply.

This action includes the following ECTRI partners: Ifsttar and UPM

Duration: 48 months, from March 2012 to March 2016

<http://www.smart-er.eu/>

**14. TU1105 “NVH analysis techniques for design and optimization of hybrid and electric vehicles”**. The aim of this action is to engage NVH experts from vehicle industry and renowned research groups in the accumulation, development and dissemination of such novel techniques. The COST framework provides the unique opportunity to bring together experienced academic and early-stage researchers, EU authorities for transport regulations, independent consultants, experienced representatives from industry and associations of transporters.

This action includes the following ECTRI partners: UNIZA and FhG

Duration: 48 months, July 2012 to June 2016

<http://www.tu1105.ulg.ac.be/index.html>

**15. TU1202 “Impact of climate change on engineered slopes for infrastructure”**. The aim of this action is to build a coalition of researchers equipped to address the challenges of engineered slope infrastructure resilience and adaptation to climate change. This group will develop collective understanding; share techniques, facilities and data, and work jointly in disseminating results across the EU and to asset owners. Ultimately, the proposed COST action will enable infrastructure asset owners to make evidence based investment and adaptation decisions to improve resilience and safety.

This action includes the following ECTRI partners: UNEW and LNEC

Duration: 48 months, October 2012 to October 2016

**16. TU1204 “People Friendly Cities in a Data Rich World Cities are the future”**. In 2008, the percentage of people living in urban areas surpassed those living rural communities. These trends are expected to continue; the United Nations estimates that over 70% of the world’s population will be living in towns and cities by 2050. The Action builds on an ESF European Science Foundation exploratory workshop on the emerging theme of “smart and liveable cities”. Supported by a European network of candidate cities, the Action co-ordinates a trans-disciplinary network of experts and non-experts that investigate the alignment of the “hardware” and “software” of a city with user needs to promote wellbeing, good health, and a sustainable use of resources, within an evolving people-centred consultation framework for economic, cultural, and political development.

This action includes the following ECTRI partners: CERTH-HIT, VGTU-TMI and UPM

Duration: 48 months, from April 2013 to April 2017

#### 17. TU1209 “Transport Equity Analysis: assessment and integration of equity criteria in transportation planning (TEA)”

Understanding the equity implications of transport policies and investments is becoming increasingly important, as underscored by social movements around the world. This poses a major challenge in the assessment and appraisal of transport projects and policies, in which equity issues are currently hardly addressed. In fact, current evaluation methods in transport do not account for equity issues, and this topic is not dealt with in EU guidebooks for project evaluation. Only Germany, as an exception, considers equity between regions (Länder), but not in terms of accessibility to key life activities within an urban region. This Action proposal contributes to the body of research by bringing together new approaches to incorporate equity consideration in transport project evaluation and decision making. The approaches consist of the measurement of accessibility with the literature on social justice, travel behaviour models and socio-economic impacts analysis in line with mainstream welfare economics.

The three main objectives of this Action proposal are: 1) to establish a methodology to explore the links between transport accessibility and distributional factors; 2) to develop new transport evaluation criteria accounting for accessibility in the social welfare function; 3) to help embed equity assessment into future transport policies and investments.

This action includes the following ECTRI partners: CENIT, CERTH-HIT, DTU, Ifsttar, KTI, LET, LNEC and UPM

Duration: 48 months, from April 2013 to April 2017





## Contact details:

**ECTRI** Office :

Rue du Trône 98 • 1050 Brussels • Belgium

info@ectri.org

+32 (0)2 500 56 88

**www.ectri.org**

**ECTRI:** The Leading European Research Association for Sustainable and Multimodal Mobility