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## Abbreviations

Abbreviation	Meaning
CSO	Committee of Senior Officials
ERC	European Research Council
ERG	European Reintegration Grants
ESR	Early Stage Researcher
EST	Early Stage Training
IAPP	Industry-Academia Partnerships and Pathways
IEF	Intra-European fellowships for career development
IIF	International Incoming Fellowships
IOF	International Outgoing Fellowships
IRG	International Reintegration Grants
IRSES	International Research Staff Exchange Scheme
ITN	Initial Training Networks
MC	Management Committee
NCPs	National Contact Points
NoE	Network of Excellence
RTN	Research Training Network
SCF	Series of events
T&M	Training and Mobility
TOK	Transfer of Knowledge

## Executive Summary

The objective of training and mobility (T&M) programmes is to quantitatively and qualitatively strengthen the human potential in research and technology in Europe by luring people into the researcher's profession, encouraging European researchers to stay in Europe, and attracting to Europe researchers from the entire world, in order to make Europe more attractive for the best researchers. This will be done by putting into place a coherent set of T&M actions and addressing researchers at all stages of their careers, from initial research to training to life-long and career development.

Abundant, highly trained, qualified researchers play a key role in advancing science and underpinning innovation. They are also an important factor in attracting and sustaining investments in research by public and private entities. To support a beneficial circulation of researchers and knowledge in the face of growing global competition, it is necessary to develop an open European labour market for researchers, and to encourage the participation of researchers with diverse skills and career paths.

Trans-national and inter-sectorial mobility, including the stimulation of industrial participation and the opening of research and academic positions on a European scale, are key components of the European Research Area and are essential for increasing European capacities and performances in research.

The objective of DETRA project WP1 is to define activities at a European level in order to prepare and train the next generation of surface transport scientists and professionals.

Task 1 of WP1 aims to identify currently-implemented actions pertaining to researchers' training and mobility. Existing European projects related to these topics were analyzed. Results of this analysis, presented in this deliverable, highlight weaknesses found in these projects.

One of major problems that emerge was the lack of information on projects that favour researchers' mobility. This problem could be corrected by implementing the Euraxess platform, which should collect and advertise all European researchers' positions. Regarding the transport field, this problem could be also solved using the dedicated "Mobility web portal in transport" set up by DETRA project (task 4). This portal aims to gather PhD, post-doctoral and researcher positions from organisations that are members of the seven European entities of DETRA. In a second step it aims to advertise job offers to European universities, research laboratories, and enterprises working in the transport area. This task is perfectly coherent with the outcomes of the current deliverable.

Other projects, such as Eurodoc ([5]), have recorded some concrete hindrances to mobility and suggested some possible solutions. Moreover, the DETRA project has tried to go further by analysing what went wrong, and has envisaged a lack of systemic approach in the European mobility and training projects both at proposal stage level (template) and at project implementation. This weakness does not allow the improvement of the research system and tends to strengthen the inequalities among the different countries (brain drain). The lack of a common and shared approach in defining what is a "mobility and training project" and which outcome can be expected from it is a hot topic. The EU must face this topic if it wants to build a new generation of researchers.

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Europe needs to adopt coordinated schemes, requiring indicators to measure the “growth” of the researchers within each project.

Considering the importance attributed to researchers’ mobility by the European Charter for Researchers, it could be useful to introduce among the parameters of European projects’ evaluation a specific entry that considers positively the projects that provide some forms of mobility. A good example can be given by COST programme where the evaluation of the proposal, at both the stages (pre-proposal and full proposal), provides specific criteria devoted to measure the presence, participation and plans for further involvement of young researchers. In addition, one recommended action could be to ask for real feedback on the above initiatives (such feedback is currently lacking), as well as a follow up that should be provided from the funding agencies. A questionnaire addressed to the beneficiary of the funds for mobility should be conceived and designed to check and monitor the impact of the mobility on the researchers’ careers.

Finally, some suggestions can be made regarding researchers’ training, moving towards an integration of the initiatives using common schemes, emphasizing the mobility and training aspects, and not only the pure research results. After observing that the several training initiatives are usually sectoral, we suggest that researchers be provided with a common basis of understanding, and that they are supported in tackling the challenges that the research work puts in front of them. To this extent, a real policy for young researchers is still far from being satisfactory and, at this point, some few good practices and examples should be supported by the European Commission. In particular, two good practices have been identified by this research. The first successful practices are the training sessions provided by the ECTRI Young Researchers Seminar, where young researchers are supported and followed by senior experts (tutors) as they write high-level scientific papers and present them to expert audiences. The second practice is the organization of “brainstorming activities” (workshops) in which young researchers are asked to deliver specific outcomes on defined topics, in order to strengthen their ability to work together and interact on complex themes, covering various aspects and involving several areas of expertise.

## 1 Introduction

The main scope of DETRA WP1 is to take part in building a new generation of transport researchers in the European Union and its Associated States by increasing their skills, improving their employability and favouring their trans-national mobility in a multicultural and multidisciplinary context. According to the Frascati Manual definition, researchers are *“professionals engaged in the conception or creation of new knowledge, products, processes, methods and systems, and in the management of the projects concerned”*.

Researchers are commonly divided in Early-Stage Researcher and Experienced Researchers (Euraxess – researchers in motion [4]):

- the term “Early-Stage Researcher” refers to researchers in the first four years (full-time equivalent) of their research activity, including the period of research training;
- “Experienced Researchers” are defined as researchers having at least four years of research experience (full-time equivalent) since gaining a university diploma giving them access to doctoral studies, in the country in which the degree/diploma was obtained, or researchers already in possession of a doctoral degree, regardless of the time taken to acquire it.

Recently, in July 2011, the European Commission has published a new document, “Towards a European framework for research careers” ([3]), in which it has classified Researchers in four distinct levels according to their knowledge and skills:

- First Stage Researcher: up to the point of PhD;
- Recognised Researcher: PhD holders or equivalent who are not yet fully independent;
- Established Researcher: researchers who have developed a level of independence;
- Leading Researcher: researchers leading their research area or field.

It is interesting to observe that this subdivision is still a draft. This is a proof of the difficulties involved in standardising the definitions and providing distinct classes.

Within WP1, Task 1 deals specifically with the analyses of existing European actions in the transport field that support the Mobility and Training of the researchers and aim to recommend improvements. The seven European entities of DETRA have already taken specific actions to train young researchers in their network. It is now time to evaluate the strengths and the weaknesses of these initiatives as well as the use of the tools provided by the EC to improve training and mobility of researchers. This state of the art will be the basis for further recommendations to improve training and mobility in the transport domain and to contribute to EC policies, notably PEOPLE and IDEAS agenda.

Examining the current status of mobility and training in transport research is an important starting point in the comprehension of the possibilities and limitations of developing the European Research Area in the transport field.

This document aims to provide an overview of the current and past efforts to train transport researchers and to increase their mobility within the European Union and its Associated States, throughout several programmes and projects specifically focused on mobility and training. The document also aims to analyse the results of these efforts in terms of their strengths and weaknesses. These programs, when made widely available and well-known in the researchers' community, play a key role in allowing researchers to increase their skills, improving their employability, and making them more transnationally mobile in a multicultural and multidisciplinary context.

Another objective of this document is to propose innovative ideas to foster the mobility of researchers.

## **2 Methodology**

Building a new generation of transport researchers in the European Union is a challenging task and several attempts have been made in the past and/or are in progress. A number of uncoordinated support schemes for early stage researchers (ESR) are present in the ERA; for example, the ERC (European Research Council) Starting Scientists Grants and the Marie Curie Scheme – two major international schemes. – as well as the COST framework.

The European Charter of Researchers ([6]) has set up some principles to support researchers' mobility and favour young researchers. Uncoordinated initiatives have been set up by NoE and other Associations in the education field: ex. Erasmus exchanges, Erasmus Mundus, etc.

Thus, a methodology has been defined to well outline the state of the art in Europe concerning training and mobility, to allow for analysis of its strengths and weaknesses and to propose innovative ideas to foster the mobility of researchers.

The methodology provides four steps:

1. design of a questionnaire to collect information about the current initiatives and intentions to develop future initiatives to improve the research mobility in the different EU countries;
2. investigation of past and current European projects on mobility and training in the transport field; collecting information from several actors (e.g. COST) plus a deep state of the art of EU projects;
3. critical analysis of the outcome coming from the questionnaires and from the analysis of the past and current projects;
4. recommendations to improve training and mobility in the transport domain and to contribute to EC policies, even in view of the FP8.

### **2.1 Survey design and realization**

A questionnaire has been designed with the purpose of collecting information about current and future/planned initiatives for improving the research mobility in the different EU countries.

A draft questionnaire was sent to DETRA partners for comments (6th of February 2011) asking for feedback in one week. The feedback arrived later than expected and the finalization of the questionnaire was consequentially postponed.

The questionnaire was finally revised and clarified in some points where difficulties in the response were witnessed. Next, the questionnaire was sent to a larger audience (members of Associations ECTRI, FEHRL, FERSI as well NoE as Humanist and Eurnex) to obtain more information.

Annex 1 reports the first outline of the questionnaire that was sent to the DETRA partners and the members of their associations. This first release of the questionnaire was in Excel format, intended mostly for internal use.

Very few partners replied immediately, and the majority of them did not reply at all. After three months, from April to June, only 12 institutes/universities replied, despite the use of reminders. A plan was set up to overcome the lack of responses. In particular, it was decided to:

- send a request to the National Contact Points with the intent to deliver a questionnaire to all the main European Institutions involved in European, international and national training and mobility projects on transport. These institutions were asked to indicate all the suitable projects in which they were involved. For each project, they provided a brief description of the outcomes/results and perceived strengths and/or weaknesses of mobility and training activities. The final aim was to obtain a complete coverage of Europe;
- reformulate the questionnaire with a new layout, using the internet as an easier and more flexible mean to collect the information and creating an automatic database of the responses. The layout of the web questionnaire is presented in Annex 2. The web site used to reply to the questionnaire and sent as link to the potential respondents is:  
<http://transportsurvey.polito.it/detra-training-project.htm>.

The web questionnaire was resent, at the end of July 2011, to DETRA partners, members of their association and to the National Contact Points identified. A new reminder was sent at the beginning of September. These different survey waves and reminders strive to profit from a relatively quiet period – before, during, and after holidays – to try to collect as many answers as possible.

## ***2.2 Investigation on past and current European projects***

In addition to the web survey, to overcome the witnessed lack of response, the Working Group reviewed the different documents related to mobility and training of researchers from several programmes (e.g. Marie Curie, People, COST) and wrote an in-depth state of the art report of EU projects.

Researchers' analysis on programmes and projects was performed using COmmunity Research and Development Information Service (CORDIS [1]) database.

At first, the search was carried out on the major European programmes that boost mobility and training of researchers within Member States such as:

- FP-6 MOBILITY (Marie Curie Actions in FP6);

- FP-7 PEOPLE (Marie Curie Actions in FP7);
- FP-7 IDEAS.

The Working Group performed an additional research using selected key-words to investigate the existence of further programmes, actions, or projects. Key words highlighted in the search included the following:

- "EDUCATION AND TRAINING": improve the quality of learning systems and provide greater opportunities for people at all stages of their lives;
- "COOPERATION": support all types of research activities carried out by different research bodies in trans-national cooperation and aim to gain or consolidate leadership in key scientific and technology areas.

The investigation was focused on the 6th and 7th Framework programmes ended or active after year 2000. A brief description of the main programmes follows.

### **2.2.1 Marie Curie Actions (FP6 - MOBILITY)**

The Sixth Framework Programme's Human Resources and Mobility actions were largely focused on the financing of training and mobility activities for researchers through the Marie Curie Actions. Active from 2002 to 2006, it provided actions aimed at the development and transfer of research competencies, the consolidation and widening of researchers' career prospects, and the promotion of excellence in European research.

The different actions were grouped as follows:

#### **Host-driven actions**

*Marie Curie Research Training Networks (RTN)*: provide the means for research teams of recognised international stature to link up, in the context of a well-defined collaborative research project, in order to formulate and implement a structured training programme for researchers in a particular field of research.

*Marie Curie Host Fellowships for Early Stage Research Training (EST)*: aimed at offering structured scientific and/or technological training as well as providing complementary skills.

*Marie Curie Host Fellowships for the Transfer of Knowledge (TOK)*: targeted towards European organisations which need to develop new areas of competence. This action will be implemented through two sub-schemes:

- *Development Scheme (ToK-DEV)*, where institutions recruit experienced researchers, for a period up to 2 years. They may also send experienced researchers from among their own staff to one (or more) partner institutions in another country for the acquisition of new knowledge to be transferred on their return home.
- *Industry-Academia Strategic Partnership Scheme (ToK-IAP)*, which aims to create and develop strategic and durable partnerships between academia and private enterprises, (in particular SMEs) through the mutual exchange of experienced research staff.

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*Marie Curie Conferences and Training Courses* (SCF): aim to provide short-term training opportunities to allow researchers to network and keep abreast of the latest scientific developments in their field. The action is targeted primarily at early-stage researchers and researchers with up to 10 years of experience.

Funding is provided for either a 'series of events' (SCF) or 'large conferences' (LCF).

#### Individual-driven actions

*Marie Curie Intra-European Fellowships* (EIEF): individual fellowships that aim at providing advanced training tailored to the researchers' individual needs with a view to adding different/complementary scientific competencies. This was done in order to allow them to reach or reinforce a position of professional maturity and independence or to permit them to resume their career.

*Marie Curie International Outgoing Fellowships* (IOF): individual fellowships that aim to reinforce the international dimension of the career of European researchers by giving them the opportunity to be trained in a world level third country research organisation and to apply the experience gained in a return host institution in a Member State or Associated State.

*Marie Curie Incoming International Fellowships* (IIF): individual fellowships that aim to attract top-class researchers from third countries to work and undertake research training in Europe from 1 to 2 years with a view to developing mutually-beneficial research co-operation.

#### Excellence promotion and recognition

*Marie Curie Excellence Grants* (EXT): give promising researchers the opportunity to set up or develop their own research teams in Europe.

*Marie Curie Excellence Awards* (EXA): aim to give public recognition to outstanding past achievements of scientists who have reached a level of exceptional excellence in their given field. Researchers of any nationality are eligible, provided they have taken part in an EU training and mobility programme for a minimum of 12 months.

*Marie Curie Chairs* (EXC): career mechanism for world-class researchers who have already attained a certain level of independence in their research activities and who are looking to resume, or further develop, their scientific careers in Europe to counter the brain drain effect by retaining or luring back the best international talent to Europe's shores.

#### Return and reintegration mechanisms

*Marie Curie European Reintegration Grants* (ERG): individual grants which are aimed at researchers from the EU and Associated States who have participated in a Marie Curie action for at least two years. The grants assist them to become professionally reintegrated usually within their country of origin.

*Marie Curie International Reintegration Grants* (IRG): individual grants which are aimed at researchers from the EU and Associated States who have carried out research outside Europe for at least 5 years and who wish to return to Europe.

### 2.2.2 Other FP-6 Programmes (FP-6)

DETRA partners suggested, through the questionnaire, the existence of several calls within European FP-6 programmes not directly focused on researchers' mobility (as Marie Curie is), that allowed transport researchers exchanging experiences and gaining new knowledge.

The different programmes and their main goals are listed as follows:

- SUSTDEV (Sustainable Development, Global Change and Ecosystems): implements a sustainable development model in the short and in the long term, integrating its social, economic and environmental dimensions.
- IST (Information Society Technologies): increases innovation and competitiveness in European businesses and industry and to help all European citizens so that they can fully benefit from the development of the knowledge-based society.

### 2.2.3 People (FP-7)

In the Seventh Framework Programme, the 'Marie Curie Actions' have been regrouped and reinforced in the 'People' Specific Programme. The programme recognizes the centrality of human resources in the research field. Its projects focus on making the Europe more attractive for best researchers throughout their whole research career and stimulating cooperation between academia and industry. Nonetheless, these actions aim also to attract the best third country Researchers and, on the other hand, to release fellowships with a mandatory return for EU-researchers life-long training and career development. The programme is designed to be active over a period of seven year ending in 2013.

The 'People' Specific Programme has been implemented through actions under five headings:

*Initial training of researchers:* to improve mostly young researchers' career perspectives in both public and private sectors, by broadening their scientific and generic skills, including those related to technology transfer and entrepreneurship.

*Life-long training:* to support experienced researchers in complementing or acquiring new skills and competencies or in enhancing inter/multi-disciplinarity and/or inter-sectorial mobility, in resuming a research career after a break and in (re)integrating into a longer term research position in Europe after a trans-national mobility experience.

*Industry-academia (IAPP):* pathways and partnerships' to stimulate inter-sectorial mobility and increase knowledge sharing through joint research partnerships in longer term co-operation programmes between organisations from academia and industry, in particular SMEs and including traditional manufacturing industries.

*International dimension:* to contribute to the life-long training and career development of EU-researchers, to attract research talent from outside Europe and to foster mutually beneficial research collaboration with research actors from outside Europe.

*Specific actions:* to support removing obstacles to mobility and enhancing the career perspectives of researchers in Europe.

#### 2.2.4 Ideas (FP-7)

The IDEAS Programme, implemented by the European Research Council, is a grant addressed to projects submitted by European or foreign researchers. The specific goal of the programme is to recognize the best ideas, and retain and confer status and visibility to the best researchers operating in Europe. The duration of the programme is 2007-2013.

Under the Seventh Framework Programme (FP7), the Specific Programme 'Ideas' has the objective of supporting investigator-driven frontier research across all fields of science, engineering and scholarship carried out by researchers on subjects of their choice.

There are 3 different categories of grants (ERC):

*Starting Independent Researcher Grant:* aims to support up-and-coming research leaders who are about to establish or consolidate a proper research team and to start conducting independent research in Europe. It will support the creation of excellent new research teams and will strengthen others that have been recently created.

*Advanced Investigators Grant:* aims to encourage risk-taking and inter-disciplinarity, and supports pioneering frontier research projects.

*Proof of Concept funding:* aims at supporting grant-holders during the pre-demonstration phase to prepare a "package" to be presented to venture capitalists or companies that might invest in the new technology and take it through the early commercialization phase.

#### 2.2.5 Other FP-7 Programmes

As suggested by DETRA partners, a series of programmes not directly focused on mobility and training allowed transport researchers to exchange experiences and gain new knowledge.

The different programmes and their main goals are listed as follows:

- **TRANSPORT:** develops safer, greener and smarter transport systems for Europe that will benefit citizens, respect the environment, and increase the competitiveness of European industries in the global market.
- **ICT (Information and Communication Technologies):** develops Information and Communication Technologies (ICTs) research, a key factor to create jobs and improve quality of life.
- **ENVIRONMENT:** promotes the sustainable management of both the man-made and the natural environment and its resources.
- **ERASMUS MUNDUS:** aims to foster cooperation between higher education institutions and academic staff in Europe and third countries with a view to creating poles of excellence and providing highly trained human resources. It is composed of two sub-actions:
  - Erasmus Mundus Master Courses (EMMCs);
  - Erasmus Mundus Joint Doctorates (EMJDs).

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## **2.3 COST programme**

COST (European Cooperation in Science and Technology [2]) allows the coordination of nationally-funded research on a European level, enables break-through scientific developments leading to new concepts and products and thereby contributes to strengthen Europe's research and innovation capacities.

COST is a unique means for European researchers to jointly develop their own ideas and new initiatives across all scientific disciplines through trans-European networking of nationally funded research activities.

COST key features are:

- building capacity by connecting high-quality scientific communities throughout Europe and worldwide;
- providing networking opportunities for early career investigators;
- increasing the impact of research on policy makers, regulatory bodies and national decision makers as well as the private sector.

Through its inclusiveness COST supports integration of research communities, leverages national research investments and addresses issues of global relevance.

COST is a building block of the European Research Area, instrumental for successful innovation strategies and global cooperation and having a well defined young researchers' policy on mobility and training.

## **3 Results**

As described in the methodology, a great effort has been carried out to obtain a clear overview of the European scenario in terms of training and mobility activities and their efficiency and outcomes. The difficulty of obtaining information and the lack of easily available data could give an idea about the perceived utility of such activities and the devotion towards them. In fact, a question arises: "are we sure that mobility and training of researchers are considered important issues for universities and research centres?"

Nevertheless, institutes might be dissuaded from carrying out T&M actions due to a lack of monetary benefit. This could result in a "lack of devotion" as highlighted above.

The double-check performed on the CORDIS web site investigation and questionnaire has allowed us to assess NCPs' general awareness of training and mobility programmes and the possible reasons for lack of participation.

### **3.1 Questionnaire response**

Twenty-six institutes from seventeen different countries (Austria, Belgium, Czech Republic, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Former Yugoslav Republic of Macedonia, Malta, the Netherlands, Norway, Portugal, Spain and United Kingdom) filled out the questionnaire. This

result was obtained thanks to the contribution of the two types of questionnaires (spreadsheet and on-line survey).

What emerged from the answers is that the strengths of the above mentioned European projects are the possibility to work in an international environment, allowing young researchers to learn how to work with colleagues of other countries, expanding their circle of knowledge and exchanging ideas.

On the other hand, the most frequent weaknesses cited by the respondents refer to Marie Curie Actions and are related to administrative problems. In particular, the procedures necessary to participate in these actions are considered unclear. In addition, some respondents raised concerns related to financial matters:

- contribution to PhD's, postdoctoral and other training activities in Marie Curie actions covers only the researcher's salary. This might be acceptable for universities, where researcher salaries represent almost the full costs, but it is not sufficient for other institutes.
- salary differences among European countries are perceived as a drawback, with lower-salary research positions ostensibly less desirable than higher-paying positions.
- differing tax regimes can create complexities and/or competitive advantages.

Unfortunately the low response rate prevents researchers from giving a complete European overview. However, some precise trends emerge and some considerations can be made.

Europe reveals too many differences and different countries advance at different speeds. An effective common policy on research is missing. In fact, it is unfair to try to rank researchers only in terms of the obtained results when these results are dependent upon the funds available for obtaining them. For the time being, inequalities remain, and only the highest-level research centres successfully attract researchers. Specific actions focussed on single researchers are not sufficient – hosting countries should possess comprehensive research policies. Research programmes should reduce inequalities by encouraging researchers, with financial compensation, to work in countries with less research appeal.

A nation's research sector is affected by many elements including nation's history, its national education policy and economic factors. Even countries that are major players in the global economy experience brain drain due to their lack of a comprehensive research policy, their failure to invest in retaining researchers at home and their failure to attract researchers from abroad.

Two questions merit further discussion:

- Could EU-funded initiatives supporting mobility and training induce a change in the research system?
- Could EU-funded initiatives help the countries to tackle their problems in research funding, or is there a risk of exacerbating inequalities among countries?

The building of a new generation of researchers must be based on a common ground, where the sharing of information and ideas turns the differences of background, culture, and practices into strengths. Thus, mobility can become an element of discovering these differences, knowing that the

quality of knowledge should be the same everywhere and the added value should lay on the “diversity”. This aspect does not emerge from the survey, where respondents were asked for their expectations.

The main problems emerging from the answers of the Institute representatives were financial in nature, and representatives did not always perceive mobility as a cost-effective and energy-effective investment. If the European funding mechanism is somewhat complex and demanding, there is a concrete risk this system complexity could kill the potential positive outcomes and make these initiatives unfruitful.

Even more worrisome is the lack of a collective, cooperative European approach, which results in a fully uncoordinated scheme, as stated in the survey responses. Every research group goes in its own direction, addressing its own interests without a real focus on researchers’ growth. Even if this approach might seem correct, it is uncertain how research outcomes should be presented: whether they should only include scientific results, or whether they should also consider the personal enrichment and growth of the researchers involved.

The analysis of the EU projects, described in the next section, seems to confirm this trend, as it is difficult to understand the mobility and training aspects of the projects that are usually hidden behind the research results. This trend might be acceptable for a conventional EU project, but it is not acceptable in a project that aims to favour researchers’ mobility among countries, experiencing other research approaches and other cultures.

### ***3.2 Analyses of European projects***

The outcomes of the European project EURODOC, concerning the hindrances to the mobility of the researchers, have been analysed in order to gather the information that does not emerge from the survey.

The problems found in these projects concern:

- quality of life issues: in particular, problems encountered in moving with families and partners abroad have emerged as clear inhibiting factors, as well as problems in getting children into school and in finding accommodation;
- pension, tax, pay and benefits issues: the inability to transfer healthcare insurance and pension schemes across borders in the EU is (and has been) a major impediment to mobility. For example, in Spain, young researchers are not considered workers, but students. A problem is the distinct lack of recognition in terms of contributing to national insurance and pension schemes of a period out of one’s own country;
- career progression issues: in some cases the return to academia in one’s home country is difficult, for example, because of difficulties in obtaining credit for time spent abroad;
- availability of posts/information: some researchers experience a lack of information regarding availability of positions and opportunities for mobility;

- lack of harmonization across Europe: a further inhibiting factor is the lack of harmonisation and portability of research grants in Europe.

What emerges, however, is a positive view from respondents towards mobility.

### 3.2.1 EU Projects related to T&M activities

The information gathered through the CORDIS database and the partners' indications allowed the work group to identify 91 projects at the end of the search phase.

The projects are divided by theme to provide an overview of the main fields of interest of the approved project within the EC funding. Partners' declared involvement is highlighted in the following lists.

Each list reports the Programme name, the project Acronym, the Type of Grant and the project's Starting Year if available. Some of the Projects that were reported as European by the institution are not under a FP6 or FP7 programmes.

#### Energy and Environment

Programme	Acronym	Type of Grant	Year
FP6 - Mobility	CARBONPART	IEF	2003
FP6 - Mobility	Diesel PM	IEF	2003
FP6 - Mobility	SUSTAINABLE FUELUBE	TOK	2003
FP6 - Mobility	EASY-ECO 2005-2007	SCF	2004
FP6 - Mobility	STAR CITY	SCF	2004
FP6 - Mobility	Active Control-Jets	IEF	2004
FP6 - Mobility	AeroTraNet	EST	2005
FP6 - Mobility	PREMAID	TOK	2005
FP6 - Mobility	SIM-VIA 2	EST	2005
FP6 - Mobility	Virtual Powertrain	TOK	2005
FP6 - Mobility	EASY-ECO 2008-2010	SCF	2006
FP6 - Mobility	ENGINE EFFICIENCY	TOK	2007
FP6 - SUSTDEV	CANTOR	-	2006
FP7 - ENVIRONMENT	ENNAH	-	2009
FP7 - People	COMVEBONOV	IAPP	2007
FP7 - People	IAPP-STRATEGI	IAPP	2007
FP7 - People	MARINECFD	IRG	2007
FP7 - People	VIETA	IAPP	2008
FP7 - People	Sustainable Hybrid	IRG	2009
FP7 - People	PartheNO2n	ERG	2009
FP7 - People	BioAOPBDies	IEF	2010
FP7 - People	SPRiNT	ERG	2011

#### Freight and Logistics

Programme	Acronym	Type of Grant	Year
ERASMUS	RIFLE	-	2010
FP6 - Mobility	Port cities	IEF	2005
FP7-TRANSPORT	Freightvision	-	2008

#### Intelligent Transport System

Programme	Acronym	Type of Grant	Year
FP6 - IST	HUMANIST	-	2004
FP6 - IST	Intuition	-	2004
FP6 - Mobility	MASCOT	IRG	2005
FP7 - IDEAS	OFAV	ERC Advanced Grant	2008
FP7 - People	VECOM	ITN	2007
FP7 - People	STADY	IEF	2008
FP7 - People	SAIL	IAPP	2009
FP7 - People	IVWSN	IRG	2009
FP7 - People	LUMAN	IRSES	2009
FP7 - People	ITS4SIT	IEF	2010
FP7 - People	IMESCON	ITN	2010
FP7-ICT	AEGIS	-	2008

#### Means of Transport design

Programme	Acronym	Type of Grant	Year
FP6 - Mobility	SEAMOCS	RTN	2005
FP6 - Mobility	ERGODESK	EIF	2006

#### Mechanics

Programme	Acronym	Type of Grant	Year
FP6 – Mobility	SHAPEOPT	IEF	2003
FP6 – Mobility	VERA	TOK	2003
FP6 – Mobility	MCMACM	TOK	2004
FP6 – Mobility	PORTES	TOK	2004
FP6 – Mobility	MOMENTUM	RTN	2005
FP6 – Mobility	AWARE	TOK	2006

#### Mobility, Urban mobility

Programme	Acronym	Type of Grant	Year
<b>FP6 - Mobility</b>	IBRAM	IEF	2004
<b>FP7 - People</b>	SCaRSe	ERG	2007
<b>FP7 - People</b>	airlines	IRG	2008

<b>FP7 - People</b>	Public Put In Motion	IEF	2009
<b>FP7 - People</b>	PORTA	IEF	2010
<b>FP7 - People</b>	DATE	IEF	2010
<b>FP7 - People</b>	SCIFAM	ERG	2010

#### Safety and security

Programme	Acronym	Type of Grant	Year
FP6 - IST	PREVENT	-	2004
FP6 - Mobility	RAIL SAFE	TOK	2003
FP6 - Mobility	SAFEAST	TOK	2003
FP6 - Mobility	VUDEGFEM	IRG	2005
FP6 - Mobility	MDO-WAD	IRG	2006
FP6 - Mobility	MYMOSA	RTN	2006
FP7 – People	MIEDT	IRG	2008
FP7 – People	PedPCReact	IIF	2009

#### Transport Economics and Policy, Transversal Issue

Programme	Acronym	Type of Grant	Year
FP6 – Mobility	TRANS-AID	TOK	2004
FP6 – Mobility	E3SD CY	IEF	2005
FP6 – Mobility	TITaM	TOK	2005
FP6 – Mobility	TRANSPORTNET -EST	EST	2005
FP6 – Mobility	TRANSPORTNET TC	SCF	2005
FP6 – Mobility	CREATE (ECO)	SCF	2006
FP6 – SUSTDEV	EUR <sup>2</sup> EX	-	2004
FP7 – IDEAS	DESTABLE	ERC Starting Grant	2008
FP7 – IDEAS	OPTION	ERC Advanced Grants	2010
FP7 – People	DYNADEM	IOF	2007
FP7 – People	Automotive Industry	IRG	2007
FP7 – People	ADAPTATION	ITN	2008
FP7 – People	Transantiago2008	IIF	2008
FP7-TRANSPORT	YEAR	SCF	2007
FP7-TRANSPORT	CETRRA	-	2008
FP7-TRANSPORT	YEAR-2010	SCF	2009
FP7-TRANSPORT	Futurail	-	2009
FP7-TRANSPORT	Skillrail	-	2009
FP7-TRANSPORT	OPTIC	-	2009
NC	DAAD	-	1925
NC	OECD	-	1961
NC	EPOMM	-	1999

NC	YRS	-	2003
NC	TUNRail	-	2009

In the Annex 3 is reported a brief description of the objectives of each project and an indication about the training and/or mobility activity conducted.

### 3.2.2 Other EU initiatives

During this research we also considered some initiatives of European Commission on behalf of the researchers' mobility in European context. One of these initiatives is "EURAXESS", The European Services Network. EURAXESS Services is a network of more than two hundred centres located in thirty-eight European countries; it assists researchers and their families in every step of their moves, starting in their home countries and continuing until they have settled in new ones, providing practical information about administrative and legal issues (like accommodation, childcare/school, daily life, family/pregnancy, health/medical care, info about country/city, intellectual property rights, language courses, recognition of qualifications, social security, taxation, visa formalities, work permits) when moving from one country to another. This free personalised service exists to remove red tape and make researchers' lives easier. Another service, useful for job-searching in foreign countries, is the European Job Mobility Portal (EURES [7]). The purpose of EURES is to provide information, advice and recruitment/placement (job-matching) services for the benefit of workers and employers as well as any citizen wishing to benefit from the principle of the free movement of persons. In European cross-border regions, EURES has an important role in providing information and helping to solve all sorts of problems related to cross-border commuting that workers and employers may experience.

One of the best-established policies focussed on young researchers can be found within the COST Programme.

Two of the major international schemes above mentioned (Starting Scientists Grants and Marie Curie Scheme) are playing in a different league than COST in terms of their financial potential. These two schemes can finance not only coordination costs, but also spend major amounts to support research and the building-up of research groups under the auspices of an early stage researcher (the Starting Grant will have a budget of approx. €300 million per year).

In 2007 the Committee of Senior Officials (CSO) adopted the COST Strategy towards increased support of early stage researchers. An updated COST Strategy towards increased support of early stage researchers was approved by the CSO at its 176th meeting on 1-2 December 2009.

Early stage researchers play a major role in the research projects running in the framework of COST Actions (a considerable number of ESRs propose COST Actions or act as Action or Working Group Chairs). Direct financial support from COST covers the coordination costs of the Actions, including reimbursement of travel costs, short-term scientific missions (STSM) and training schools. Based on the fact that the financial means of COST to support early stage researchers are limited to coordination activities, COST, as an intergovernmental initiative, cannot prescribe support measures

on a national level. COST, through its policy and strategy, will support ESRs, motivating them to submit Actions and to take responsibility in the management of the Actions.

COST Programme provides seven support measures:

1. Short Term Scientific Mission (STSM);
2. Training schools;
3. Action think tank. An early stage researchers' network may be created within the COST action as a "think tank". Each year one of the workshops of the action would involve early stage researchers to strengthen links with each other and with experienced scientists involved in the management of the action.
4. Conference grants. Each domain offers 3 supporting grants (max. 3000 € each) per year for early stage researchers to participate in an international conference outside of the COST action activities. The grant can be used to cover travel and subsistence costs, conference fees, and the costs of conference workshops. In order to be eligible for this grant, an accepted oral contribution is required. The selection process is carried out by written procedure.
5. Selection of chairs. Recommendation to the actions to nominate early stage researchers as chairs of working groups.
6. Open call. The text as well as the criteria of the open call shall encourage early stage researchers to submit proposals to the open call.
7. Early stage researchers as national MC delegates. Recommendation to the COST national coordinators to nominate early stage researchers as national delegates whenever feasible.

The introduction of the early stage researchers' strategy in March 2007 has had the following effects:

- STSMs boasts 350 such missions by ESRs in 2008 and already 916 in 2009, compared to none in 2007 (support measure 1);
- organisation of 15 specific training schools in the first half of 2009 (Support measure 2);
- organisation of three early stage researchers' workshops at ESOF2008 in July 2008 (support measure 3);
- on the number of preliminary proposals of open call with ESRs' involvement. In 2008 both collection dates attracted 326 such proposals out of 946 and 219 out of 764 in 2009 (support measure 6).

Another important initiative designed to stimulate the mobility of young people, not only of the researchers, is the Youth in Action Programme ([10]). The Youth in Action Programme aims to achieve the following general objectives:

- promote young people's active citizenship in general and their European citizenship in particular;

- develop solidarity and promote tolerance among young people, in particular in order to foster social cohesion in the European Union;
- foster mutual understanding between young people in different countries;
- contribute to developing the quality of support systems for youth activities and the capabilities of civil society organisations in the youth field;
- promote European cooperation in the youth field.

To this end, the Programme is structured around 5 Actions:

1. Youth for Europe: encourages young people's active citizenship, participation and creativity through youth exchanges, youth initiatives and youth democracy projects.
2. European Voluntary Service: helps young people to develop their sense of solidarity by participating, either individually or in group, in non-profit, unpaid voluntary activities abroad.
3. Youth in the World: promotes partnerships and exchanges among young people and youth organisations across the world.
4. Youth Support Systems: includes various measures to support youth workers and youth organisations and improve the quality of their activities.
5. Support for European Co-operation in the Youth Field: supports youth policy co-operation at the European level, in particular by facilitating dialogue between young people and policy makers.

In addition to the projects above, it could be possible to find solutions implemented at national level for improving the knowledge and mobility of researchers and facilitating their entry in the working world. An example is the Italian BAF project. BAF project is set up by a consortium formed by European Social Funds, EC, Ministry of Work and of Social Policies, and Piedmont region that has involved Politecnico di Torino.

The aims of the BAF project are various according to the different actors involved: enterprises, young researchers, and the academic world.

The aims for the enterprise are:

- to integrate the traditional PhD course with specific activities focussed on favouring the insertion of researchers in the enterprises;
- to create a strategic, long-term partnership with the best universities and expand the collaboration network in the educational and research field;
- to increase the capacity to attract students towards possible employment, getting in contact with young researchers;
- to get a wide vision of the advanced research thanks to the collaboration with the academia;
- to receive from young researchers innovative contributions in terms of ideas and stimulus;

- to focus on specific topics, interesting for the enterprises, made possible by collaboration during the PhD thesis.

The aims for the young researchers include the following:

- to apply the theoretical knowledge and get in contact with the different sectors of the enterprise;
- to become familiar with the activities, objectives, structures and decisional processes of the enterprise;
- to test their entrepreneurial ability, acquire experience and improve their skills;
- to acquire a direct knowledge of the industrial world, developing perspectives and points of view integrating those got during the PhD training;
- to enter into contact with potential employers and to build a network of personal contacts for their future careers.

The aims for the academic world include these:

- the transfer of theoretical know-how towards industrial and applied contexts;
- the growth of the culture of “doing” in respect to that of “knowing”, with particular interest to industrial issues;
- the creation of new relationships and strengthening of current collaborations with industrial partners, research centres and public administration in the sectors of education, research and innovation;
- the updating of curricula to meet industry and societal needs, according to the inputs received through the interactions with the socio-economical system;
- to improve the possibility of PhD students to enter in the working world, both at a national and an international level;
- to advertise the image of university as “Research University”, improving the national and international visibility.

In conclusion, we can say that the BAF project has a goal for every subject involved: to link knowledge and innovation through “cross-fertilization” processes among university, industry and society, displaying a high degree of transnationality. The project is in progress, thus it is too early to evaluate the effects, but at this stage the enterprises are starting to understand the PhD program and the potential added value of a PhD student.

Another example of a national project is the DLR Graduate Program, held by the German Institute DLR, which targets post-graduates at DLR with the goal of “strengthening communication and social skills, project management competencies by a comprehensive modular training program”. Germany provides another national programme that encourages the mobility of researchers, the DAAD (German Academic Exchange Service), reported in Annex 3.

### **3.3 General comment**

The information currently available on CORDIS' web site as well as on the very few projects' web sites does not provide a clear and detailed vision of the training/mobility activities carried out within the analysed projects.

This deficiency is cause for alarm. It means that dissemination of the project has been weak, and that the issues of training and mobility are not given enough attention in the assessment of the project's results.

To shed more light on such projects and properly evaluate their outcomes, coordinators were asked directly about the aspects that interest them. A very short questionnaire was sent to coordinators to collect the necessary information and fulfil the aims of task 1 of WP1, but very few answers have been obtained, even after the creation of a second web-survey on a wide scale (DETRA partners, DETRA partners' related associations, National Contact Points, selected universities).

As already observed in the previous section, there is a good convergence of the results of the projects' analysis and of the questionnaire. The biggest difficulty faced during the analysis was to understand the role of training and mobility in the projects. The reason could be two-fold:

- the main focus has been kept on the research results while less attention in terms of reporting and dissemination has been paid to the "human aspects" of the researchers' growth;
- the complex EU system of deliverables and reporting probably does not pay enough attention to this aspect or a template to show these kind of results is not provided.

Generally speaking, a lack of visibility, and unclear dissemination of mobility and training aspects are evident, given the difficulty we faced in "discovering" those topics within the projects. If a viewing of CORDIS' web site and a search of the web, using specific keywords, have not yielded a catalogue of all the projects in this "funding line," and only the survey of our own network and contacts have produced a complete list of projects, there is likely a problem.

Separate and uncoordinated efforts, and the lack of common awareness of the importance of training and mobility in building the generation of researchers of tomorrow, are serious drawbacks for the ERA, as well as the lack of an approach helping to give value for the money spent.

One recommended action could be to ask for real feedback on the above initiatives (such feedback is currently lacking), as well as a follow up that should be provided from the funding agencies. A questionnaire addressed to the beneficiary of the funds for mobility should be conceived and designed to check and monitor the impact of the mobility on the researchers' careers.

## **4 Suggestions and proposals**

The work carried out in task 1 and presented in this deliverable highlights some weaknesses affecting the current approach adopted in Europe regarding training and mobility of researchers.

Other projects such as Eurodoc ([5]) have recorded some very concrete hindrances to mobility and suggested some solutions. Moreover, DETRA project has tried to go further, analysing what went wrong and what could be done to create a systemic approach in training and mobility.

Eurodoc ([5]) considers mobility as an instrument for the transfer of scientific knowledge, as well as in terms of career prospects, institutional and personal development, trans-national cooperation and innovation, and following continuous developments in the European Research Area. Researchers' mobility is recognized as a central issue for the Bologna process and its importance is also emphasized in EC's "European Charter for Researchers, the Code of Conduct for the Recruitment of Researchers ([6])". In fact, the European Charter for Researchers states that all forms of mobility should be encouraged as part of a comprehensive human resource policy in R&D at national, regional and institutional level. It also points out that the value of all forms of mobility needs to be fully recognized in the career appraisal and career advancement systems for researchers, guaranteeing that such an experience is conducive to their professional development.

The following suggestions could be proposed for future initiatives of researchers' training and mobility, starting from the previous statements and developing them using the results of the web-survey and the outcomes of other similar projects like EURODOC ([5]).

Monetary costs of mobility are an important issue for researchers; allocate incentives to compensate direct and indirect costs of mobility should solve the problem.

Concerning the problem of researchers moving with families and partners abroad, the solutions that could be implemented are:

- the application of an increase of the researcher salary in the case he/she brings with him/her a partner or one or more children;
- the introduction of innovative dual career strategies. Many universities in the U.S. have successfully applied such a strategy. An example of a successful dual career program, according to the document "Realising a single labour market for Researchers" ([9]), is "Partnerjob" ([8]).

On the other hand, some mobility activities' costs, in particular meetings and assemblies, could be reduced using new technologies especially for virtual mobility without harming the effectiveness of the projects. This result could be achieved through e-conferences, e-seminars, electronic newsletters, thematic portals, e-fora and chats, video-conference infrastructure, virtual labs etc. This solution has also been proposed in the document "Realising a single labour market for Researchers" ([9]), a Report of the ERA Expert Group.

The problem of a lack of information on mobility projects could be corrected by implementing the Euraxess platform, which should collect and advertise all European researchers' positions. A standard format should be designed to favour this information exchange. A handbook reporting the principal information could be prepared for all the countries. Some countries such as Austria, Belgium, Croatia, Cyprus, Montenegro, Serbia and Sweden, already have this tool.

The above problem could be also solved using the dedicated Mobility web portal, in transport, set up by DETRA project (task 4) that aims to gather PhD, post-doctoral and researcher positions from organisations members of the seven European entities of DETRA and, in a second step, to open the publication of job offers to any European university, research laboratory, and enterprise working in the transport area. This task is perfectly coherent with the outcomes of the current deliverable.

As described in the previous sections, the main problem encountered, aside from those already highlighted by Eurodoc [5] project, is a lack of systemic approach in the European mobility and training projects, both at proposal stage level (template) and at project implementation. This weakness does not allow the improvement of the research system and tends to strengthen the inequalities among the different countries (brain drain). The lack of a common and shared approach in defining what is a “mobility and training project” and which outcome can be expected from it is a hot topic. Therefore, EU has to face this topic if it wants to build a new generation of researchers.

The current “tools” have not allowed mobility to become an element of discovering differences, knowing that the quality of knowledge should be the same everywhere and the added value should lay on the “diversity”. This can help to lower the inequalities among the countries and encourage coordinated schemes, adopted throughout Europe, and asking for outcomes addressed to measure the “growth” of the researchers, defining proper indicators to do it.

Considering the importance attributed to researchers’ mobility by the European Charter for Researchers, it could be useful to introduce among the parameters of European projects’ evaluation a specific entry that considers positively the projects that provide some forms of mobility. A good example can be given by COST programme where the evaluation of the proposal, at both the stages (pre-proposal and full proposal), provides specific criteria devoted to measure the presence, participation and plans for further involvement of young researchers (see in the Annex 4, the annexes A and B of COST guidelines).

Finally, some suggestions can be made regarding researchers’ training, moving towards an integration of the initiatives using common schemes emphasizing the mobility and training aspects, in addition to the pure research results. After observing that the several training initiatives are usually sectoral, we suggest that researchers must be provided with a common basis of understanding and that they have to be supported in tackling the challenges that the research work puts in front of them. For this purpose a real policy for young researchers is still far from being satisfactory and at this point some good practices and examples should be supported by the European Commission. A concrete suggestion to develop a strategy for training of researchers could be the organization of training sessions on the model of the successful activity of the ECTRI Young Researchers Seminar (YRS, see Annex 3). In particular, a significant support and follow up from senior experts (tutors) helps young researchers to write high level scientific papers and present them to expert audiences. In addition to this important training, a networking approach is used, thanks to the organization of the event, putting together young researchers coming from different universities and research institutes of different EU countries.

A second suggestion related to training activities is the organization of “brainstorming activities (workshops)” in which young researchers are asked to deliver specific outcomes on defined topics,

possibly multidisciplinary and complex, to strengthen their ability to work together and interact on complex themes, covering several aspects and involving several expertises. The purpose of this exercise is to tackle the problems using different point of views, strengthening the integration among the different topics and helping to create a new generation of researchers more able to tackle the difficult tasks of complexity and multidisciplinary.

As a final remark, it is important to note how our suggestions are mainly related to the method to adopt, both in organizing training activities and in defining mobility project.

Other suggestions about training aspects will be developed in the task 3 of DETRA project, where PhD rules of different countries are analyzed with the aim of establishing the standards for an "European PhD in Transport".

## 5 References

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- [2] COST – <http://www.cost.esf.org>
- [3] EC - Towards a European framework for research careers - [http://ec.europa.eu/euraxess/pdf/research\\_policies/Towards\\_a\\_European\\_Framework\\_for\\_Research\\_Careers\\_final.pdf](http://ec.europa.eu/euraxess/pdf/research_policies/Towards_a_European_Framework_for_Research_Careers_final.pdf)
- [4] Euraxess – researchers in motion - <http://ec.europa.eu/euraxess/index.cfm>
- [5] EURODOC - <http://www.eurodoc.net/>
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- [9] Realising a single labour market for Researchers - [http://ec.europa.eu/euraxess/pdf/research\\_policies/era\\_green\\_paper\\_eg1\\_lowres.pdf](http://ec.europa.eu/euraxess/pdf/research_policies/era_green_paper_eg1_lowres.pdf)
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## 6 Annexes

### 6.1 Annex 1: The outline of the first release (excel format) of the questionnaire on training and mobility activities

<b>TASK1: Analyses of existing European actions related to Mobility and Training in transport and</b>					
<b>OBJECTIVES</b>					
<i>The 7 European entities of DETRA have already experienced specific actions towards the young researchers of their network. It is now time to evaluate the strengths and the weaknesses of these different initiatives as well as the use made by the transport research Community of the tools provided by the EC to improve training and mobility of researchers.</i>					
<b>Please fill in the following</b>					
1	COUNTRY	1			
2	Institution	2			
				EU projects	National projects
					Other projects (specify)
3	Please, refer to the initiatives/actions (including EU, national, etc. projects) on mobility and training your institution carried out (finished activities) or is carrying out (in progress activities)- you are asked to list them (question 3.1), to describe the obtained/obtainable results (question 3.2), and finally to highlight the strong points (question 3.3) and the weak points (question 3.4) of such results	3.1	Please list the initiatives/actions, specifying the period of activity (years)		
		3.2	Please, list the outcomes/results of the activities listed in 3.1		
		3.3	Strong points of the initiatives/actions listed in 3.1, according to the obtained results (in 3.2) (list and comment)		
		3.4	Weak points of the initiatives/actions listed in 3.1, according to the obtained results (in 3.2) (list and comment)		



1	COUNTRY	1				
2	Institution	2				
				<b>EU projects</b>	<b>National projects</b>	<b>Other projects (specify)</b>
4	Please, now refer to the initiatives (including EU, national, etc. projects) on mobility and training your institution would like to carry out in the future. This question wants to collect your desires. This means that you have not to refer to the current activities on this issue, but only to the planned or simply thought activities you would like to implement in the future. All your dreams are welcomed (question 4.3). Finally, you are asked to try to list what you are expecting as outcomes/results coming from these future/probable initiatives (question 4.2).	4.1	Please indicate the initiatives			
		4.2	Please, list the outcomes you would expect from the activities in 4.1			

## 6.2 Annex 2: The outline of the web questionnaire on training and mobility activities



**DETRA** ([detra.fehrl.org](http://detra.fehrl.org)) is an European funded project focused to strengthen the ERA development within the transport domain.

The main scope of **WP1**, coordinated by ECTRI ([www.ectri.org](http://www.ectri.org)), is to build up a new generation of transport researchers in the European Union and its Associated States, to increase their skills, to improve their employability and to favour their trans-national mobility in a multicultural and multidisciplinary context.

To do this, we need your help.

In this Survey we ask you to indicate all the European and National projects your institution carried out or is still carrying out concerning the "Transport theme" and providing initiatives/actions on mobility and/or training and education of researchers.

We ask you to indicate the strong points and the weaknesses you have found for each one of these projects.

**DETRA**

### European Projects

Please, indicate all the "European" Projects your institution carried out or is still carrying out concerning the "Transport theme" and providing initiatives/actions on mobility and/or training and education of researcher.

First Project	<input type="text"/>
Second Project	<input type="text"/>
Third Project	<input type="text"/>
Fourth Project	<input type="text"/>
Fifth Project	<input type="text"/>
Sixth Project	<input type="text"/>
Seventh Project	<input type="text"/>
Eighth Project	<input type="text"/>
Nineth Project	<input type="text"/>
Tenth Project	<input type="text"/>

Previous

Next

### European Projects

Concerning the European Project:

**Name of one of the projects indicated in the previous list**

Could you list the outcomes/results of the project?

Could you list the strenghts of the mobility and/or training activities carried out within the project?

Could you list the weaknesses of the mobility and/or training activities carried out within the project?

Previous

Next

### European Projects

Please, now indicate the european initiatives on mobility and/or training your institution would like to carry out in the future, even if it is only a desire.

Please, list the outcomes you will expect from the initiatives you indicate

Previous

Next

### National Projects

Please Indicate all the "National" Projects your institution carried out or is still carrying out concerning the "Transport theme" and providing initiatives/actions on mobility and/or training and education of researcher.

First Project	<input type="text"/>
Second Project	<input type="text"/>
Third Project	<input type="text"/>
Fourth Project	<input type="text"/>
Fifth Project	<input type="text"/>
Sixth Project	<input type="text"/>
Seventh Project	<input type="text"/>
Eighth Project	<input type="text"/>
Nineth Project	<input type="text"/>
Tenth Project	<input type="text"/>

Previous

Next

### National Projects

Concerning the National Project:

**Name of one of the projects indicated in the previous list**

Could you list the outcomes/results of the project?

Could you list the strenghts of the mobility and/or training activities carried out within the project?

Could you list the weaknesses of the mobility and/or training activities carried out within the project?

Previous

Next

### National Projects

Please, now indicate the national initiatives on mobility and/or training your institution would like to carry out in the future, even if it is only a desire.

Please, list the outcomes you will expect from the initiatives you indicate

Previous

Next

### Other Projects

Please Indicate all the other type of Projects your institution carried out or is still carrying out concerning the "Transport theme" and providing initiatives/actions on mobility and/or training and education of researcher.

First Project	<input type="text"/>
Second Project	<input type="text"/>
Third Project	<input type="text"/>
Fourth Project	<input type="text"/>
Fifth Project	<input type="text"/>
Sixth Project	<input type="text"/>
Seventh Project	<input type="text"/>
Eighth Project	<input type="text"/>
Nineth Project	<input type="text"/>
Tenth Project	<input type="text"/>

Previous

Next

### Other Projects

Concerning the National Project:

**Name of one of the projects indicated in the previous list**

Could you list the outcomes/results of the project?

Could you list the strenghts of the mobility and/or training activities carried out within the project?

Could you list the weaknesses of the mobility and/or training activities carried out within the project?

Previous

Next

### Other Projects

Please, now indicate the national initiatives on mobility and/or training your institution would like to carry out in the future, even if it is only a desire.

Please, list the outcomes you will expect from the initiatives you indicate

Previous

Next



Click "Send Data" to complete the survey

Send Data

Many thanks for your contribution!

Previous

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### **6.3 Annex 3: description of the objectives of each project and indication about the training and/or mobility activity conducted**

#### **Active Control-Jets - Numerical Investigation of the Active Flow Control of Jets - IEF**

*Objective:*

In this project the numerical approach will be used for further development of a recently proposed method of active flow control relying on an interaction between a primary jet and a small-scaled high frequency control jet. The main goal is the derivation of a 'simplified' computational model, capable to reduce significantly the enormous computational effort required by the fully resolved simulation approach.

*Training and mobility activity:*

Not found.

#### **ADAPTATION - Drivers' behavioural adaptation over the time in response to ADAS use - ITN**

*Objective:*

The objective of ADAPTATION is to improve the career perspectives of young researchers by taking part in an innovative European research programme aiming at investigating drivers' behavioural adaptation and its underlying processes over the time in response to Advanced Driver Assistance Systems (ADAS) use.

The research programme integrates, under a joint theoretical framework and a joint longitudinal methodological design, a set of individual projects dealing with the various aspects of the adaptation process. In addition to training-through research, personalized training actions will extend the skills of this future generation of academia and industry researchers.

*Training and mobility activity:*

Many activities directed to build up a new generation of academia and industry researchers concerning the ADAS:

- training of 10 ESR (PhD students), with training through research o gain research skills with their PhD work;
- training of 2 ER (post-docs), with training by doing to acquire complementary skills with their involvement in the task co-ordination and progress monitoring;
- implementation of different training actions at the level of the network with 3 objectives:
  - favoring multi-disciplinary approaches to investigate drivers' adaptation processes;
  - strengthening the abilities of researcher to disseminate research results;
  - widening the career prospects of researchers.

#### **AEGIS - Open accessibility everywhere: groundwork, infrastructure, standards - FP7-ICT**

*Objective:*

The ÆGIS project seeks to determine whether 3rd generation access techniques will provide a more accessible, more exploitable and deeply embeddable approach in mainstream ICT (desktop, rich Internet and mobile applications).

ÆGIS is placing users and their needs at the centre of all ICT developments.

The project includes strong industrial and end users participation (the participating Industries are among the market leaders in the corresponding mainstream ICT markets).

*Training and mobility activity:*

Development of Mobility Schemes Area for the exchange of employment information (e.g. CVs, job placements, registered companies) which is in the AEGIS OAEG (Open Accessibility Everywhere Group) site. This menu (Mobility Schemes Area) supports the job opportunities. Using this functionality, the visitor is able to read the submitted CVs and organizations of the database and also search for a CV which meets specific qualifications. On the other side, the registered users can also add their CV and/or Job Placement to the OAEG database.

**AeroTraNet - Unsteady aerodynamics training network in airframe components for competitive and environmentally friendly civil transport aircraft - EST**

*Objective:*

The EST programme outcome will be a group of doctors in aeronautics who have learnt to work together in the ERA, have experience of mobility in the ERA and are well equipped to contribute to the future of an integrated European aeronautical industry and academia. This is a tangible contribution to structuring the human resources in the ERA.

*Training and mobility activity:*

The objectives are to:

- provide trans-national doctoral training in unsteady a aerodynamics with trans-national mobility;
- improve the design of selected aircraft fuel vents and door seals (small cavities) and of the landing gear wells and vehicle open tops (large cavities);
- enhance the breadth of methodological approaches and research tools open to the EST trainees;
- award a doctoral qualification readily expendable across the ERA, by adding a Diploma Supplement in accordance to the Bologna process;
- improve the participation of women in science and engineering.

**AIRLINES - Hubs and direct carriers: An oligopoly model of the airline market - IRG**

*Objective:*

AIRLINES proposes an economic model that analyses the equilibrium market structure in the competition between a direct carrier and a hub and spoke carrier. The model departs from traditional economic models of the airline industry by separating the hub carrier's decision to service a city and the carrier's pricing decisions for city-pair routes.

*Training and mobility activity:*

Not found.

**Automotive Industry - Industrial upgrading and regional development effects of the Czech and Slovak automotive industries - IRG**

*Objective:*

The proposed project aims to study the effects of automotive foreign direct investment (FDI) on industrial upgrading and regional economic development in the Czech Republic and Slovakia. The research project is designed to deliver policy recommendations contributing to the effective implementation of the EU Cohesion and Regional Policies; and allows the principal investigator to develop a personal network for future international research collaboration dealing with the effects of FDI, the automotive industry and regional development in the context of the EU.

*Training and mobility activity:*

The knowledge will be transferred to the host institution, Charles University in Prague, in the form of teaching, training and supervising both pre- and post-doctoral students.

The financial support to the proposed project will allow the re-integration of the highly experienced US-based researcher back to his home institution in the Czech Republic.

**AWARE - Reliable Prediction of the Wear of Railway Wheels - TOK**

*Objective:*

Focus of AWARE research is the evolution of wheel geometry, due to wear and material flow, which depends from creep coefficients and forces and from their distribution and occurrence as well as from material mechanics and microstructure in deformed condition.

AWARE main objective is to drastically improve the knowledge of wear prediction of wheel profiles through:

- accurate dynamic simulation of contact geometry and friction phenomena;
- wear mechanisms of wheel profiles, on the basis of materials' structure;
- reconstruction of the evolution of wheel profiles

Further objective is to obtain an integrated approach for wheel design and maintenance so as to double the life of wheel profile including:

- simple measuring devices;
- integrated wheel/rail re-profiling actions;
- optimal lubrication.

*Training and mobility activity:*

Personnel exchange between Alstom Ferroviaria (Italy) as main Host Unit, and 3 complementary Universities in: Chalmers (Sweden), Sheffield (UK) and Zilina (Slovakia).

AWARE will reinforce the industry / academy relationships on the long term by providing guidance for future research activity based on industrial vision.

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**BioAOPBDies - Intimate coupling of biological advanced oxidation processes for environmental de-pollution and biodiesel production - IEF**

*Objective:*

This project aims on the development of novel environmental friendly technologies with two main objectives: a) the removal of recalcitrant pollutants and b) the concomitant production of biodiesel.

*Training and mobility activity:*

Not found

**CANTOR - Coordinating Noise Transportation Research and engineering solutions - FP6-SUSTDEV**

*Objective:*

The overall aim of CANTOR is to engage experts from vehicle manufacturing industry chain from system to component level, government agencies and renowned research groups, jointly focussing on improved performance; with a reduced impact on the environment, enabling a balanced system cost and maintaining comfort in road, rail and waterborne vehicles. The means to achieve the goals are the accumulation and technology transfer of existing knowledge and information on new prediction tools, measurement techniques, research plans, material data as well as new educational programmes applied to vehicle acoustics. The aim is also the formulation of new joint research programmes between industry and universities.

*Training and mobility activity:*

Formulation of new joint research programmes between industry and universities.

The mobility of personnel within the Consortium would automatically be stimulated by the partnership enabling inter-research institute fast track exchange and highly-relevant cross fertilization effects.

The results will be disseminated at seminars, meetings and workshops.

**CARBONPART - Predicting the Size Distribution and Morphology of Sub-Micron carbon particles in Diesel Engines - IEF**

*Objective:*

The proposed research will aim at developing a comprehensive model capable of predicting the size distribution (PSDF) and morphology of carbon particles in flames and diesel engines. It is envisaged that a major exploitable outcome will be a comprehensive model for predicting soot size distribution and morphology in practical combustion systems, which might become a valuable tool for engineers. This could successively lead to a reduction of the number and mass of particulate matter emitted from Diesel engines.

*Training and mobility activity:*

Not found

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**CETRRA - Actions to stimulate participation of cooperation partners in surface transport research - FP7-TRANSPORT**

*Objective:*

The project aims to contribute to the European Research Area in surface transport to strengthen the competitiveness of the European surface transport sector. This will be achieved by using the excellent EURNEX competence to provide research excellence capabilities to European Small and Medium Size Enterprises (SMEs). Furthermore the cooperation with research excellences from non EU countries will stimulate research that is of mutual interest and strengthen the European as well as non-European research excellences.

The main benefits for the integration of non EU researchers in EURNEX are the scientific exchange on an international level, the training of junior scientists and researchers using the EURNEX assets, the identification of research areas that are of mutual interest, and the solving of problems in the international railway sector with European know how.

*Training and mobility activity:*

- Cooperation with research excellences from non-EU countries;
- Scientific exchange on an international level; training of junior scientists and researchers.

**COMVEBONOV - Computational modelling and analysis of automotive vehicle body noise and vibration - IAPP**

*Objective:*

The proposed topic of research is on the probabilistic modelling and analysis of uncertain structures important to vibro-acoustic design of automotive vehicles, aerospace, and marine structures.

*Training and mobility activity:*

A 4-year project is proposed involving secondments of both early-stage and experienced researchers. Extensions of the method will provide an excellent training and career development path for researchers who wish to work on uncertain structures across the entire frequency range. Each partner plans to recruit an experienced researcher at respective locations for continuous periods of two years, phased appropriately.

**CREATE (ECO) - Creating a competitive ERA through empowerment of the young researchers - integrating multidisciplinary aspects of research management and innovation - SCF**

*Objective:*

This proposal describes a series consisting of four events. The goal of this series is to strengthen young and inexperienced researchers' competencies in research management more broadly defined than in traditional economic approaches. By offering training courses led by senior researchers tightly tied to innovation, international cooperation, technology management and HRM, this series of events represents complementary key aspects of research management, indispensable for the future development of the European Research Area.

The young participants will then get very practical training using different tools (project work simulation, work process modelling, writing and presentation of learning histories from experiences, improvisation, creativity and team building, communication techniques). The courses are aimed at eligible researchers from all over Europe, and will leave them better prepared to work in a multicultural context with high demands for skills and competencies on a broader and more coherent approach to research management than is possible to acquire through regular project work.

*Training and mobility activity:*

Training courses led by senior researchers tightly tied to innovation, international cooperation, technology management and HRM

**DAAD - German Academic Exchange Service**

*Objective:*

The German Academic Exchange Service (DAAD) is the German national agency for the support of international academic cooperation. It offers programs and funding for students, faculty, researchers and others in higher education, providing financial support to over 55,000 individuals per year.

*Training and mobility activity:*

Programs and funding for students, faculty, researchers and others in higher education

**DATE - The dynamic between airlines and high-speed trains in Europe - IEF**

*Objective:*

The aim of this research is to investigate the Dynamic between Airplanes and high-speed Train modes in Europe (DATE) in order to evaluate the potential for HST development to cut air transport flows and the conditions required to support it.

Four objectives are set:

- leading a critical analysis of the literature on the relationships between HSTs and air services, providing a new vision linking both modes;
- analysing all European HSTs services to determine the extent to which HSTs were able to reduce the supply of air services from 1981 to 2010;
- analysing the factors determining the extent to which HST services can reduce air transport services, accounting also for regulatory frameworks;
- determining the policy and planning implications of the results for the future development of European air and HST networks.

*Training and mobility activity:*

Not found.

**DESTABLE - Destabilisation of sociotechnical regimes as the key to transitions towards sustainability - ERC Starting Grant**

*Objective:*

Sociotechnical transitions are important to address environmental problems. The present literature focuses on green options that break through and replace existing sociotechnical regimes. The project turns the analytical focus upside down, seeing the destabilisation and decline of existing regimes as the key to transitions. Regimes refer to the rules (knowledge base, belief system, mission, strategic orientation) shared by incumbent actors in an industry. Destabilisation results from increasing external pressures (economic, normative, regulatory) and eroding commitment of actors to regime rules. Research questions are:

1. To what degree have regimes in transport, energy and agriculture destabilised in the last 30 years, as a result of environmental pressures?
2. What kind of process is regime destabilisation and how should it be conceptualised for environmental problems? Which mechanisms are important and how do they interact?

*Training and mobility activity:*

Is a PhD project.

#### **Diesel PM - Physical and chemical characterisation of particle emissions from diesel driven vehicles - IEF**

*Objective:*

The research pretends to assist in the setting of future regulation limits on PM emissions for this type of vehicles, addressing last generation diesel engines (direct injection), advanced particle emission reduction technologies (diesel particle filters) and novel diesel fuels (biodiesel). For that purpose, a new system for PM sampling and measurement will be developed and assessed in order to allow for accurate, repeatable and reproducible measurements of particles in the exhaust of diesel vehicles, mostly in the ultrafine and nanometre range, at the low emission levels from the technologies anticipated for the future market and at the stringency levels expected in future legislations.

*Training and mobility activity:*

Not found

#### **DYNADEM - Dynamics of automobile demand - IOF**

*Objective:*

One of the limitations of existing research is that it relies primarily on aggregate data as there is no information on consumers purchasing patterns over their lifetime. The proposed project aims to make a contribution to the literature by exploiting a unique dataset that records every vehicle registered in Cyprus since 1970.

*Training and mobility activity:*

Not found.

#### **E3SD CY - Energy-Economy-Environment Policy Analyses for Sustainable Development in Europe - Special Focus on Cyprus - IEF**

*Objective:*

The project has two objectives:

1. Development of a model that produces a long-term outlook of energy demand and supply and emissions of greenhouse gases and air pollutants in Cyprus, and assesses energy policy options with regard to their energy, environmental, welfare and distributional impacts;
2. Redesign and refinement of an energy-economy-environment model for policy analyses in the transportation sector in the EU, and its application to Cyprus.

*Training and mobility activity:*

Researcher's training in the field of consumer demand analysis, econometrics and welfare economics,

**EASY-ECO 2005-2007 - Evaluation of sustainability: European conferences and training courses - SCF**

*Objective:*

EASY-ECO 2005-2007 is a training and conference programme on evaluations in the specific context of sustainable development. The topic is important because:

- evaluations support institutional reforms and good governance in knowledge-based societies;
- Europe is positioning itself as advocate of sustainable development;
- sustainability evaluations are different from conventional evaluations and therefore require specific training opportunities.

*Training and mobility activity:*

EASY-ECO 2005-2007 consists of 3 conferences and 4 training courses. By training young researchers hands-on, the training courses address the urgent need for sustainability evaluations and support institutional capacity building. The training courses are hosted in CEE countries because the need for sustainability evaluations is most urgent there. The conferences, all hosted in Western Europe, enhance mobility between old and new member states, support the training of young researchers and aim at scientific impact.

The training courses are based on an already developed blueprint: In a 3-months virtual preparation phase, young researchers are selected and effectively prepared for the 10 day training phase at the location. In the training phase they go through 8 core courses and a good practice case study. Thereby, complementary skills play an important role. Individual scientific support and networking activities are continued in a 3-months virtual follow-up phase.

The 3 conferences support the training of the young researchers by providing them with an international scientific platform, framing the series of events and helping to develop the details of the training course curricula. Scientific impact can be expected from the exchange between scientists and practitioners and the in-depth coverage of a specific topic. The topics of the 3 conferences are "Evaluation as decision-making support", "Evaluation as performance assessment" and "Evaluation as learning process".

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### **EASY-ECO 2008-2010 - Evaluation of sustainability: European conferences and training courses - SCF**

*Objective:*

EASY-ECO 2008-2010 is a training and conference programme on evaluations in the specific context of sustainable development.

*Training and mobility activity:*

EASY-ECO 2008-2010 consists of two scientific conferences, six virtual training courses on theoretical issues and six hand-on training courses on-site.

The two conferences support the training courses by giving young researchers the chance to present their own research to a broad scientific audience, and by bringing them in touch with a broad range of leading experts.

### **ENGINE EFFICIENCY - Fluid interactions for engine efficiency – TOK (Industry-Academia Strategic Partnership Scheme)**

*Objective:*

This proposed industry-academia interchange tackles fundamental challenges in understanding mechanisms that will be key to unlocking future improvements in engine efficiency.

The project will advance the research capabilities of Shell and a well-established product development pipeline is available to exploit the knowledge as innovative, sustainable, energy efficient products.

*Training and mobility activity:*

Long-term collaborative relationships will be established between Shell, the coordinating host organisation and five partner universities - Dublin, Imperial College London, Leeds, Lund, and Stockholm.

In the first three years, university researchers will participate in multi-disciplinary RandD projects carried out at Shell. An annual one-week workshop will bring together all the participants (researchers, industrial and university supervisors, and an advisory board), enabling new technical synergies to be established. Shell will pay for the cost of the researchers' reintegration year.

### **EPOMM - European Platform On Mobility Management**

*Objective:*

EPOMM is the European Platform on Mobility Management, a network of governments in European countries that are engaged in Mobility Management.

EPOMM is organised as an international no-profit organisation with seat in Brussels.

The main aims of EPOMM are:

- to promote and further develop Mobility Management in Europe;
- to support active information exchange and learning on Mobility Management between European countries.

*Training and mobility activity:*

The renowned yearly European Conference on Mobility Management (ECOMM), taking place every year in a city in an EPOMM member state.

Workshops organised by EPOMM.

**ERGODESK - Innovative design of ergonomic train driver desk - EIF**

*Objective:*

The design of a next generation of cabin desk of fully interoperable rolling stocks must take into account the safety issues (decisions taken by the drivers must never jeopardize the passenger safety) as well as the comfort of the drivers.

*Training and mobility activity:*

Exchange of experienced researchers in complementary disciplines (ergonomics, virtual reality, risk assessment and visualization) in a win/win situation between 3 high skilled research centres (LIU, P5-UE and UPM-CITEF) and one of the main rolling stock manufacturer (ALSTOM); 10 experienced researchers will participate to this program that is the start of a long term collaboration.

**EUR2EX - European rail research network of excellence (EUR<sup>2</sup>EX) – FP6-SUSTDEV**

*Objective:*

The strategic objectives of the European Rail Research Network of Excellence (EUR<sup>2</sup>EX) are:

1. to integrate the fragmented European Rail Research landscape by networking together the critical mass of resources and expertise to provide European leadership and be a world class player;
2. to promote the railway contribution to sustainable transport policy;
3. to improve the competitiveness and economic stability of the railway sector and industry by:
  - a. creating a durable integrated network of excellence in rail research, technology innovation and knowledge management from the research capacities of universities and institutions;
  - b. implementing knowledge from rail operators, rail industry incl. SME, with priority given to engineering interfaces and methods for product qualification in line with ERRAC's SRRA.

*Training and mobility activity:*

The members of the regional networks will provide the researchers and research projects that will be integrated and form the research base for new joint projects.

The pole 10 has the following objectives:

- to create a pool of short training courses;
- to support the running of short training courses;
- to implement international PhD and Master programs;
- to launch a European University of Railway;
- to promote interdisciplinary contacts (collaboration across poles);

- to be a permanent forum for prospective studies;
- to promote exchange of knowledge ((e)-learning material, publications etc);
- to promote dissemination of knowledge out of research project results and publications;
- to use research results in education programs and short training courses.

#### **FREIGHTVISION - Freight Transport FORESIGHT 2050 - FP7-TRANSPORT**

*Objective:*

The FREIGHTVISION project aims to develop a long-term vision and a robust and adaptive action plan both for transport and technology policy for sustainable long-distance freight transport, which are supported as much as possible by the relevant stakeholders.

In order to develop a vision and an action plan the following tasks will be performed:

- Analysing transport policy, technology development, and mega trends with regard to long-distance freight transport;
- Integrating them into forecasts;
- Developing scenarios how to reach a desirable future;
- Defining for this the vision and action plan.

*Training and mobility activity:*

Not found.

#### **FUTURAIL - Job opportunities for the railway community of tomorrow - FP7-TRANSPORT**

*Objective:*

The purpose of FUTURAIL is to foster a better match between the human resources needs to make railways a more competitive and innovative sector. FUTURAIL will act by matching demand and supply of the required skills and competencies to foster the development of the sector.

FUTURAIL objectives are to:

- disseminate the social, economic and industrial benefits of education and research in the railway sector and promote the idea that society needs advanced technologies and further education as applied to a highly innovative and technological developed sector;
- identify and develop actions promoting and supporting women participation for the benefit of outstanding railway transports research;
- identify the necessary skills and expertises for the future jobs in the railway sector;
- establish the close link between demand (rail industry and operators) and providers (Universities) of academic education and training;
- organise competitions between Universities (also involving high schools) for innovative new education concepts/curricula that are capable to meet the future railway sector requirements;
- organise specifically tailored events to attract young people for academic jobs in the railway sector.

*Training and mobility activity:*

Not found.

### **HUMANIST - HUMAN centred design for Information Society Technologies - FP6-IST**

#### *Objective:*

Road telematics and driver assistance systems can constitute a real opportunity to support mobility and to improve road safety. Nevertheless, it is necessary to conceive them according to users' needs and requirements, in order to ensure their acceptability and to detect potential harmful effects of their widespread use. Human factors and cognitive engineering competencies exist in Europe but are scattered. For addressing this fragmentation of research capacities, HUMANIST gathers the most relevant European research institutes involved in Road Safety and Transport to contribute to the eSafety initiative and to improve road safety by promoting human centred design for IVIS and ADAS. The goal of HUMANIST is to create a European Virtual Centre of Excellence on HUMAN centred design for Information Society Technologies applied to Road Transport (IVIS and ADAS), with a coherent joint program of activities, gathering research, integrating and spreading activities.

#### *Training and mobility activity:*

Many activities to improve young researcher scientific knowledge:

- funding of 9 PhD and 9 Post-doc positions;
- favouring young researcher mobility inside the network through the access to partners research infrastructures;
- organization of training events on Human Centred Design for ITS dedicated to PhD students;
- organization of exchanges between PhD students in a pluri-disciplinary perspective through tandem learning actions.

### **IAPP-STRATEGI - Industry-academia partnerships and pathways on stratified combustion for quiet low emissions aero-engines - IAPP**

#### *Objective:*

The project will combine the experimental and numerical expertise of all partners to investigate new concepts in turbulent stratified combustion. The project will also significantly benefit Cancom by employing its fast acting valve technology and further developing it for use in a new application.

#### *Training and mobility activity:*

Specific goal of the partnership is to create a network of highly trained scientists and engineers, in a key area of gas turbine combustion research, with both industrial experience and trained in state-of-the-art scientific methods and innovative technologies, promoting the exchange of researchers between industry and academia. The proposal involves two academic (Cambridge University, UK, and Technische Universitaet Darmstadt, Germany) and three industrial partners (Rolls-Royce, UK, Rolls-Royce, Germany, and Camcon, UK). The envisaged problem are different tax regimes creating significant difficulties, while the strength is the excellent exchange of researchers between industry and academia, with very good transfer of knowledge.

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### **IBRAM - Integration between rail and access-to-rail-station Modes - IEF**

*Objective:*

The main objectives of the research are to analyse:

1. integration between bus and rail services, mainly by developing indicators to measure the quality of interchange between the modes;
2. provision of parking facilities at railway stations in the context of car access to railway stations, and how these can encourage rail use;
3. car, bus, and soft modes access to railway stations, considering also the opportunity costs of providing interchange facilities (e.g. car parks) at railway stations.

The central question this research will address is: How rail use can be increased through facilitating the interchange between different transport modes at railway stations, while resolving conflicting land use claims.

*Training and mobility activity:*

Not found.

### **IMESCON - Innovative Methods of Separated Flow Control in Aeronautics - ITN**

*Objective:*

The IMESCON network is a high quality training network to produce well qualified researchers in the area of active flow control and new helicopter technology.

Proposed research project of mutual interest to partners will address key questions in the complex multi physics phenomena research related to active flow control with the application of the novel piezoelectric materials.

The project outcomes will both serve the designers of the next-generation aircrafts and at the same time strengthen the human potential in R&D in Europe.

*Training and mobility activity:*

This training programme of best quality early stage and experienced researchers from industry and academia will combine expertise from fluid dynamics, composite material, Micro Electro Mechanical Systems (MEMS), experimental techniques and numerical modelling of coupled multiple simultaneous physical phenomena.

IMESCON is Marie Curie ITN training programme involving 2 large European helicopter designers and manufacturers, 2 SMEs specialised in MEMS, 3 world class academic research groups and prime engineering innovation partner. The strong involvement of the industry will shape the training needs of the researchers and increase their employability.

### **INTUITION - NETWORK OF EXCELLENCE ON VIRTUAL REALITY AND VIRTUAL ENVIRONMENTS APPLICATIONS FOR FUTURE WORKSPACES - FP6-IST**

*Objective:*

INTUITION major objective is to bring together leading experts and key actors across all major areas of VE understanding, development, testing and application in Europe, including industrial

representatives, SMEs and key research institutes, universities and major international organisations or associations in order to overcome fragmentation and promote VE establishment within product and process design. Its major objectives include the integration of resources and VR equipment all around Europe, the structuring of European Research Area at VR and the promotion of Europe as a leading force in this field worldwide.

*Training and mobility activity:*

Many arrangements have been encouraged, promoted and supported, such as researcher and PhD student visiting periods and exchanges, shared studentships between universities, intern schemes placing researchers in developer or user companies, sabbaticals of industry personnel into universities, mobility schemes, and all kinds of more stable bilateral and multilateral agreements.

**ITS4SIT - Intelligent Transportation Systems for Safer and Improved Traffic - IEF**

*Objective:*

The project investigates on making the vehicles intelligent so that they reduce consumption. At the same time, the project has another very important goal: improving driving safety. Road accidents are a major concern in many countries. Thus, by providing the vehicles with some intelligence, researchers expect to reduce the number of accidents.

*Training and mobility activity:*

Not found.

**IWWSN - Intra-Vehicular Wireless Sensor Networks - IRG**

*Objective:*

The first goal of this project is to provide the mathematical model of the intra-vehicle radio frequency (RF) propagation channel crucial for the design of a robust communication system by building an experimental set up on a real car.

The second goal of this project is to build the first systematic methodology to MAC protocol design that considers all possible intra-vehicle sensor applications together based on a deep analysis of their requirements for delay, throughput and reliability.

*Training and mobility activity:*

Not found.

**LUMAN - Land Use Modelling and Analysis Network - IRSES**

*Objective:*

The Land Use Modelling and Analysis Network aims to co-ordinate and consolidate the research efforts of three organisations involved in land-use modelling and analysis and to animate the aspirations of the European Research Area. This 4 year programme of exchanges of early stage and experienced researchers will enliven a research area with considerable capacity for intellectual

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innovation and with wide applicability to real-world problems faced by regional administrations, such as resource management and spatial planning which occurs in many territories around the world.

*Training and mobility activity:*

A 4 year programme of exchanges of early stage and experienced researchers

**MARINECFD - Development of CFD tools for large marine diesel engine applications - IRG**

*Objective:*

The proposed research consists of model development and detailed computational studies of internal combustion engine aero-thermo-chemistry, using state-of-the-art techniques. Emphasis will be placed on large marine diesel engine applications. These studies will be also supported by advanced experiments, performed in parallel by colleagues of the researcher in a number of research institutions worldwide.

*Training and mobility activity:*

Training of the Researchers and advancement of the host Institution's research potential. The weakness is that the action can benefit from an increased indirect support to the Researcher (e.g. via equipment, software, etc.).

**MASCOT - Behavioural Modelling and Simulation of Congested Traffic - IRG**

*Objective:*

The purpose of this project is to develop, test and implement new driving behaviour models that enable development of microscopic simulators.

The following major tasks will be performed:

- use of rigorous statistical methods to specify and estimate advanced driving behaviour models. These models will improve the performance of simulation models for current applications and expand the range of applications for which the models can be used;
- implement the new models within a traffic simulator, and validate it against real-world traffic data;
- demonstrate the improved capabilities of the traffic simulator that implements the new driving behaviour models by application to a real-world problem.

*Training and mobility activity:*

Not found.

**MCMACM - Modern Composite Materials Applied in Aerospace, Civil and Mechanical Engineering: Theoretical Modelling and Experimental Verification - TOK**

*Objective:*

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The project aims for establishing new areas of competence at Lublin University of Technology (LUT) comprising modelling of composite materials and their applications to civil, mechanical and aircraft engineering.

*Training and mobility activity:*

Not found.

**MDO-WAD - Multi-disciplinary Design Optimization (MDO) of adaptive vehicle safety systems for Whiplash Associated Disorders (WAD) - IRG**

*Objective:*

The current study proposes to develop a design methodology incorporating the contribution of vehicle design factors (such as vehicle structural characteristics, seat geometry and material, etc.) to all four phases (retraction, extension, rebound and protraction) of whiplash, and to optimise vehicle safety/minimize injury potential. Also, there is much scope for safety system design to "adapt" to females and children, because statistically they incur twice the risk of whiplash injury, as male car occupants. The adaptability of safety system to occupant size/gender is one of the major project undertakings proposed here.

*Training and mobility activity:*

Not found.

**MIEDT - MIEDT: modelling and implementation of expert driving techniques towards the development of new active safety systems for passenger vehicles - IRG**

*Objective:*

The project proposes the study of driving techniques used by expert (race) drivers to maintain control of their vehicle in extreme situations, explore their benefit in accident avoidance and encapsulate them within a rigorous mathematical framework. It is envisioned that the expert driver knowledge and techniques studied and reproduced by mathematical models will be implemented in novel active safety systems, which will take advantage of the situational awareness capabilities of modern vehicles to detect an potential accident and correct or even override the driver's commands in order to (semi-) autonomously perform evasive accident avoidance manoeuvres.

*Training and mobility activity:*

The International Reintegration Grant will play a key role in the researcher (recently joined the faculty of the School of Engineering and Design at Brunel University after spending nearly nine years in post-graduate and post-doctorate research in the United States) pursuit of a permanent (tenured) position with an established higher education and research institution within the European Union.

**MOMENTUM - Multidisciplinary Research and Training on Composite Materials Applications in Transport Modes - RTN**

*Objective:*

The objective of the MOMENTUM research training network is to set up an effective and sustainable research platform for the study and development of innovative composite materials applications for the rail, aerospace, maritime and automotive transport modes using outstanding training based on a multidisciplinary approach and transfer of knowledge as main tools producing a new generation of highly employable researchers with unique skills.

*Training and mobility activity:*

To fulfil the aim of MOMENTUM, the following training objectives will be pursued:

- defining the means whereby research teams of international stature can interlink and collaborate within the well defined context of MOMENTUM;
- implementation of a well-structured training programme for both ESRs and Ers;
- provision of a cohesive flexible and multidisciplinary framework for training and professional development;
- development of a critical mass of qualified researchers to create value to the European community;
- development of extended links to the new member states, candidate and associated countries as well as other less favoured regions of the EU.

**MYMOSA - Motorcycle and motorcyclist safety - RTN**

*Objective:*

The main aim of the present proposal is to create a highly qualified training environment for early stage researchers, who want to develop their career in the sector of road safety, with a special focus on the fast growing area of motorcycle and motorcyclist safety. In this way the project would contribute to the overall objectives of the EU to structure the ERA and to make the EU the world's most dynamic and competitive economy (Lisbon Strategy).

*Training and mobility activity:*

A specifically trained researcher has to develop multidisciplinary skills in the areas of motorcycle, personal protective equipment design, and infrastructure, which in turn require knowledge of virtual testing procedures and software, material modelling, biomechanics. These skills will be developed exploiting the different competences and fields of expertise of the partners.

**OECD - Organization for Economic Cooperation and Development**

*Objective:*

The mission of the Organisation for Economic Co-operation and Development (OECD) is to promote policies that will improve the economic and social well-being of people around the world.

*Training and mobility activity:*

Not found.

**OFAV - Open intelligent systems for future autonomous vehicles – ERC Advanced Grant**

*Objective:*

The objective of this proposal is the development of an open architecture for future autonomous vehicles to become a standard platform shared by car makers in the design of next generation intelligent vehicles. It is based on 360 degrees sensorial suite which includes perceptual and decision making modules, with the ultimate goal of providing the vehicle with autonomous driving capabilities and/or supervise the driver's behaviour.

*Training and mobility activity:*

Not found.

**OPTIC - Optimal Policies for Transport in Combination - FP7-TRANSPORT**

*Objective:*

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.

It includes:

- critical reviews of existing studies and theories about policy interactions in the field of policy packaging;
- improvement to existing models and assessment tools in reflecting such interactions, taking into account the impact on transportation itself and on socio-economic issues;
- combined practitioner/research workshops to involve stakeholders and identify best practices from existing cases of policy packages;
- dissemination of knowledge and experience to ease implementation and make it more effective

OPTIC will help improve and optimise the use of existing infrastructure through more efficient, combined use of policy tools, and encompasses best practices within different fields of transport policy making.

A strong emphasis on training, dissemination and user involvement is maintained throughout the project.

*Training and mobility activity:*

Transport conference session, academic publications, targeted workshops and newswire services

**OPTION - Optimizing Policies for Transport: accounting for Industrial Organisation in Network markets – ERC Advanced Grants**

*Objective:*

Traditional models of transport networks ignore the existence and strategic behaviour of large actors who are often active in transport markets. Both for positive and normative analyses, this omission can lead to substantial errors, and therefore to seriously biased policy evaluations and recommendations. Ignoring their behavioural responses to policy changes therefore leads to a wrong prediction of the policy's optimal design as well as its impacts. An important reason why they are

nevertheless usually ignored is the analytical and numerical complexity of transport network models in which large actors, with strategic behaviour, are active. This project seeks to develop such models. Although applying to different cases, these models will have important methodological characteristics in common, particularly in that they apply multilevel optimization techniques for (transport) network models that account for strategic behaviour of and interactions between large actors. We will investigate how this behaviour affects the formation of network equilibria in transport markets, as well as the impacts and (second-best) optimal design of transport policies.

*Training and mobility activity:*

Not found.

**PartheNO2n - Pollution of air in the extended region of Athens: Space-based Nitrogen Dioxide (NO2) observations and their comparison with remote and ground? based measurements and modelling simulations - ERG**

*Objective:*

'PARTHENO2N' focuses on the investigation of the abundances and the seasonal changes of the NO2 columns retrieved over the region of Athens and its surroundings from four different satellite instruments (GOME, SCIAMACHY, GOME-2 and OMI).

*Training and mobility activity:*

Not found

**PedPCReact - Pedestrian pre-crash reactions and their effects on crash outcomes - IIF**

*Objective:*

The objectives of this project are to investigate are:

1. reaction of a subject placed in pedestrian accident situation able to modify the outcome of accident in terms of kinematics and injury risk;
2. age related changes in reaction behaviour (i.e. reaction time and muscle force capacity) important to consider in this context.

This project will be separated in two major tasks i.e. experiment and computer simulations.

*Training and mobility activity:*

Allow a strong collaboration with India.

**Port cities - Towards a comparison of European port city dynamics - IEF**

*Objective:*

The project aims at understanding how do port cities continue to attract services and cargo, putting in question their role as 'central places' as opposed to pure 'hubs' remote from urban settlements (e.g. Gioia Tauro in Italy, an extreme case).

The objective of this project is therefore to collect time-series data linked with the concepts of urban centrality (population and services), port nodality (nodes and infrastructures) and maritime

intermediacy (calls and networks). The major interests of this work would be to propose an up-to-date database, which may be used to answer specific questions such as congestion trends, competition at a wider scale, with harmonious data collected for comparable places.

*Training and mobility activity:*

Is a PhD project.

**PORTA - Railway Stations as Interface between The Global and The Local - IEF**

*Objective:*

PORTA proposes to study the social dynamics of mobility environments associated with inner-city high-speed rail stations. Previous related studies point at a tension between everyday life rhythms, and the development choices of railway stations.

*Training and mobility activity:*

Is a PhD project.

**PORTES - Power reliability for traction electronics - TOK**

*Objective:*

PORTES Marie-Curie TOK programme, gathering one industrial, ALSTOM-Transport (F), and 3 RTD centres, ISEA (D), CNM (E) and IIS (CH), will focus on the particular aspect of reliability of power converters, which is the weakest part in the full chain of energy conversion of a traction drive. The weakest component of this assembly is the reliability of IGBT components.

From a non-technical point of view, the objectives are:

- to reinforce the relation between industry and academia;
- to edit a common book dedicated to "Design for Reliability";
- to implement courses with new knowledge acquired;
- to improve the competitiveness of a European leading sector: the railway transportation.

*Training and mobility activity:*

Expert in different fields (2 for semiconductor, 1 for packaging and 1 for IGBT drive) will work at ALSTOM Transport Components/PEARL (Power Electronics Associated Laboratory) and 1 person from ALSTOM will visit each laboratory for 3 months.

**PREMAID - Predictive maintenance and diagnostics of railway power trains - TOK**

*Objective:*

The objective of the PREMAID project is to set up a transfer of knowledge program between four academic centres located in Italy, Spain Poland and Portugal (UNIBO, UNIOVI, GUT and IT-Coimbra) that have developed complementary expertise sought by ALSTOM-Transport that in return will transfer, its knowledge on development, tests and manufacturing of motors and power electronics for railways applications.

*Training and mobility activity:*

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The project will involve 15 experienced researchers during 3 years. They will be mainly hosted (13) in ALSTOM-Transport research centre located in Tarbes for secondment periods from 2 to 24 months. Researchers from AT will carry out complementary researches, validate transfer of knowledge and launch new research programs.

#### **PREVENT - Develop a training programme to improve work zone safety**

*Objective:*

The objective of the project is to provide appropriate training to the main actors involved in work zone accidents: the workers and the drivers. To achieve this, PREVENT has developed dedicated and life-long vocational training schemes for highway repair and maintenance worker training personnel, and driving instructors. The ultimate goal of PREVENT is to increase safety around work zones and reduce the number of work zone related accidents.

*Training and mobility activity:*

No training of the researcher but of people.

#### **Public Put In Motion - Public participation and urban transport innovation. The European light rail renaissance and user involvement, city revitalization, urban mobility agenda - IEF**

*Objective:*

The research project focuses on the analysis of the mutual relations between tram revival and three other societal developments: the emergence of new social movements, new forms of direct deliberative democracy and new emphasis for urban space and culture, with a special emphasis on the emergence of participative democracy and passenger involvement in public transport. The empirical research of the project will be carried out in a comparative way, focusing on six European cities and thus six case studies to understand how in principle similar problems and tasks were identified and solved in very different ways

*Training and mobility activity:*

24-month training-through-research project of a researcher. The aim of this project is both to achieve the research targets and to enhance the researcher's profile, adding competencies on user involvement and public participation theory in the urban arena to his previous political and historical experience, guaranteeing him a professional maturity.

#### **RAIL SAFE - New optimized and integrated strategies for railway safety and systems reliability - TOK**

*Objective:*

The main aim of this project is the collaboration between Norwegian University of Science and Technology as one of the best research communities in safety management and eastern railway industry in order to transfer safety knowledge needed for practical deregulation of national railway state organisations in terms of safety and reliability and necessary to achieve the future interoperability of national railway networks.

*Training and mobility activity:*

A plan to educate the current and future workforce in new approaches and technologies to help improving safety and attain an efficient and sustainable integrated transport

**RiFLE - Rail Freight and Logistics Curriculum Development**

*Objective:*

The objective of the RiFLE project is to develop an MSc in Rail Freight and Logistics. Specifically the project will develop Master Courses to be delivered in the English language by participating institutions as separate but shared programmes in their universities.

It will develop a handbook consolidating all the RiFLE merits and contributions into one cohesive document that provides necessary information for everyone interested in rail freight and logistics higher education at large.

*Training and mobility activity:*

Development of Master Courses in Rail Freight and Logistics, in the English language, with shared programmes.

**SAFEAST - Towards safer road traffic in Eastern Mediterranean region - TOK**

*Objective:*

This project is aimed at improving the knowledge and research skills of Eastern Mediterranean traffic researchers by training experienced researchers in Greece and Turkey and sending selected researchers to the leading road safety research institutes in EU.

*Training and mobility activity:*

Multi-disciplinary traffic safety experts from different fields and countries will be working together. Core group of researchers from Turkey will be sent to a specialized training period to partner institutes.

**SAIL - ICT System addressed to integrated logistic management and decision support for intermodal port and dry port facilities - IAPP**

*Objective:*

The project aims at developing an integrated ICT tool able to support logistic chain of goods flow and all business operations provided in the port and the dry port areas.

The SAIL project will develop a Decision Support System (DSS) and a Discrete Event Simulation (DES) to support the management of port intermodal facilities in a European context.

*Training and mobility activity:*

Not found.

**SCaRSe - Spatial Competition between Railway Stations - ERG**

*Objective:*

The SCaRSe research main question is: Do overlaps in railway stations' catchment and impact areas represent a burden on railways' financial viability while not contributing to the use of rail as a mode of transport?

To answer the above question, the following objectives are set, which also illustrate the methodology adopted:

- measuring railway stations' catchment areas and assessing the factors influencing it;
- measuring railway stations' impact areas and assessing the factors influencing it;
- mapping the railway stations' catchment and impact areas and identifying overlaps;
- evaluating the extent to which overlaps in the catchment and impact areas of railway stations affect overall rail use and the railways' financial viability.

*Training and mobility activity:*

Not found.

#### **SCIFAM - Scientific Mobility and Family Life in Europe - ERG**

*Objective:*

The number of researchers working within the European Research Area (ERA) is increasing and there is a strong demand for increased scientific mobility. Scientific mobility is integral to the new strategic vision for the ERA and is central to its global competitiveness.

The central aim of the SCIFAM Project is to present a new analysis of scientific mobility to, from and within the ERA by utilising a multiple methods approach and incorporating both children's and parents' perspectives.

The project will: present a new theoretical framework for understanding the mobility decisions of scientists with children; provide the first assessment of the impacts of scientific mobility on the children of scientists; and identify the barriers to, and facilitators of mobility, for scientists with children. The project findings will be transformed into policy recommendations that will be disseminated widely and will help to deliver equality of opportunity for all scientists across the ERA.

*Training and mobility activity:*

Study of researchers' mobility.

#### **SEAMOCS - Applied stochastic models for ocean engineering, climate and safe transportation - RTN**

*Objective:*

The idea behind the network is to bring together the best possible knowledge and research potential in the different fields in order to:

1. improve information extraction from marine data;
2. validate non-linear wave models from spectral properties;
3. improve extreme value analysis for climate and sea data;
4. improve computational tools for wave analysis and route simulation;
5. get better understanding of near-shore waves and hazards for coastal installations;

6. improve technique to determine stricter safety limits in marine design, regulation and operation.

*Training and mobility activity:*

The network shall bring together probabilists/statisticians, researchers in the marine and meteorological fields, and maritime safety enterprise on wave climate, information and databases, and the safety of marine transports, offshore and coastal installations.

**SHAPEOPT - Aerodynamic shape optimization for minimum transient growth in compressible flow - IEF**

*Objective:*

Two main objectives characterize this project. The first is to increase the fundamental understanding of spatial transient growth as a scenario for laminar/turbulent transition. The second objective is to incorporate the newly developed model of spatial transient growth as a transition prediction method in shape optimisation in order to enable the design of slender bodies with low drag.

*Training and mobility activity:*

Not found.

**SIM-VIA 2 - Advanced and New Simulation Methods in Vehicle Vibro-acoustics - Scientific Analysis, Experimental Verification and Development of Methodologies for the Industrial Application - EST**

*Objective:*

The EST project SIM-VIA 2 aims to provide training facilities and scientific supervision for young researches in the field of vibro-acoustics for vehicles. The focus of SIM-VIA 2 is to motivate and encourage early stage researchers for scientific work in this interdisciplinary field. The aim is to the predictive qualities of models of different simulation techniques (FEM, SEA, BEM,..). Furthermore, complementary techniques should be introduced and improved (e.g. Wave Based Technique) as well as simulation modelling for new technologies (active layers).

*Training and mobility activity:*

Specific workshops, courses and educational programmes exist and planned respectively within this training centre. SIM-VIA 2 is formed by a group of participating hosts, combining high education and research institutions as well as industrial enterprises in different countries of the EC including New Member States. The engineers will have the chance to participate in both the scientific research work and the practical application of developed methods. They will profit from extended international knowledge in the field of simulation techniques and vibro-acoustic methodologies and will thus profit at the time they start to work in the industry after their academic education. Furthermore, the industry will gain from the specific training of the young researchers for the requirements in the development of new and technologically improved products in the sensitive field of noise pollution

**SKILLRAIL - Training and education for a more competitive and innovative railway sector - FP7-TRANSPORT**

*Objective:*

The purpose of SKILLRAIL is to contribute to the enhancement of the transport sector by fostering a better match between the human resources needs to make railways a more competitive and innovative sector and the offer of skills coming out of the different research based education and training institutions across Europe.

EURail (European Railway University) will provide the conditions to disseminate the social and industrial benefits of training and education in the railway sector and to develop, at European level, high quality training and education activities for the railway community of tomorrow.

The purpose of the present project is to build up the necessary conditions namely in training programs to develop the appropriate scientific and technological skills for the railway sector of the future taking into account the needs of individual stakeholders.

*Training and mobility activity:*

50 European Universities with research expertise in various rail related domains provide training and education activities.

**SPRiNT - Smart Panels for the Reduction of Noise Transmission - ERG**

*Objective:*

The three objectives of the project SPRiNT are:

- to improve on the stability of the feedback loops;
- to investigate ways to reduce mass added to the structure by the active control system components;
- to optimize the number of control units per smart panel area.

This will be done theoretically by numerical simulations and experimentally on prototype smart panels.

*Training and mobility activity:*

Not found

**STADY - Simulation tool for airplane ditching hydrodynamics - IEF**

*Objective:*

The study concerns with the emergency landing of airplanes on the sea surface (ditching). The final goal is the development of a simulation tool for the description of the hydro-structural-dynamics of ditching. This proposal is aimed at elaborating simpler models, respect actual ones, in which the theory drives the numerical method towards correct results, thus avoiding the limitations of purely computational methods.

*Training and mobility activity:*

Not found.

**STAR CITY - The green city of the future - STaR city - SCF**

*Objective:*

## Training of researcher

### *Training and mobility activity:*

Two training courses will be held in each sector in different European locations where young researchers will be given lectures and problems needing solution given by leading industrialists, academics and government officials.

The project will take place in a two phase structure with the first batch of training courses (one for each sector) taking place in suitable professional locations either on the campus of the host universities or at conference centres close to the event organiser. The first phase will end with the midterm Technical Feedback Meeting (TFM). Quality of work done so far will be critically assessed and new challenges be determined for the next set of training courses. The second batch of training courses will include a new set of speakers and topics containing a new batch of problems to be addressed by the young researchers.

The training courses will run for 5 days including one day technical visit to relevant industrial and scientific facilities. Finally all participants will be able to attend the final TFM which will take the format more of a conference.

## **SUSTAINABLE FUELUBE - CO2 reduction through automotive biocomponent enabling and sustainable step changes in fuels and lubricants performance - TOK**

### *Objective:*

This proposed industry-academia interchange addresses key step changes necessary to realise EU targets on local air quality, climate change and sustainability by enabling the use of bio-components and by improving combustion and lubrication efficiency.

### *Training and mobility activity:*

Long-term collaborative relationships will be established between Shell Global Solutions, the coordinating host organisation (at their two research sites in Chester and Hamburg) and eight partner universities (Dublin, Eindhoven, Heidelberg, Istanbul, Lulea, Napoli, Stockholm and Thessaloniki).

In the first two years, experienced university researchers will participate in multi-disciplinary R&D projects carried out at Shell GS. An annual one-week workshop will bring together all the participants (researchers, industrial and university supervisors, and an advisory board), enabling new technical synergies to be established.

Shell GS will pay for services equivalent to the cost of the researchers' reintegration year.

## **SUSTAINABLE HYBRID - Investigating Battery and Capacitor Sizing Problems with More Efficient Power Flow Control Techniques for Sustainable Hybrid Electric Vehicle Development – IRG**

### *Objective:*

This project aims to investigate new methods for power flow control to apply to this system so that battery and DC link electrolytic capacitor current ripple at low and high frequencies can be reduced.

### *Training and mobility activity:*

Not found

#### **TITaM - Transport infrastructure technologies and management - TOK**

*Objective:*

On the 1st May 2004 the Czech Republic became one of the 25 member countries in the enlarged European Union.

This has greatly increased the demand on the transport infrastructure, therefore in response to these new demands; the Czech Republic is seeking solutions to reduce the damaging effects of the increased loads on the transport infrastructure.

Currently CDV is the only research institute under the responsibility of the Ministry of Transport that specialises in transport issues. Building a new area of competence concerning the innovative methods of transport infrastructure technologies and management (TITaM) at CDV is to be supported through the TITaM project.

*Training and mobility activity:*

Seven long-term fellowships of CDV researchers at the partner institutes (BAST and TRL); eight long-term fellowships of external experts at CDV

#### **TRANS-AID - Transfer of Knowledge in Transport Infrastructure Financing - TOK**

*Objective:*

The new countries, among them Hungary, will have to invest in major infrastructure Programmes in order to be able to keep pace or even compete their counterparts in Europe and upgrade their living conditions.

The ultimate objective of the project is the reinforcement of the research potential and competence of the Budapest University of Technology and Economics (BUTE) and its Department of Transport Economics in particular, in the research topic 'transport infrastructure financing'.

*Training and mobility activity:*

Mobilization of researchers to/from BUTE in cooperation with two well-known European Transport Research Institutes, INRETS and HIT.

Two researchers' mobilization schemes will be employed:

1. Two experienced researchers will be selected (following an international publication of vacancies) and recruited by BUTE in order to train the local staff of BUTE at its premises. The project will exploit the extensive networks of ECTRI, FERSI, SETREF and EU Cordis in order to find researchers with substantial skills in training and experience in the research topic;
2. Four BUTE researchers will visit the laboratories of INRETS and HIT (two in each Institute), in order to be trained by the experienced researchers of these two Institutes.

The weakness is the low motivation for applying the Hungarian researcher position from abroad", probably due to the low salaries.

#### **Transantiago2008- Constructing users for public transport: the case of Transantiago - IIF**

*Objective:*

This research looks for contribute to the development of a specific research agenda on the users of public transport. Using a multidisciplinary theoretical framework the aim is to study in a comparative way the design and development of the user of a new public transport plan started in the city of Santiago, Chile in February 2007, called Transantiago.

In particular this research project will study the development of the concept of the user of Transantiago and its implication for the implementation, and subsequent crisis, of the plan.

*Training and mobility activity:*

Not found.

**TRANSPORTNET TC - TRANSPORTNET - European Transport Research and Education Network - Training Courses - SCF**

*Objective:*

The education and training of young researchers in the transportation systems field is one of the major targets of TRANSPORTNET, a network of eight European leading universities involved in transport research and education:

1. Universiteit Antwerp (UA);
2. Instituto Superior Tecnico Lisboa (IST);
3. Universität Karlsruhe (IWW);
4. Università di Genova (UNIGE-DIEM);
5. Ecole Polytechnique Fédérale de Lausanne (EPFL);
6. Technische Universiteit Delft (TUD);
7. Laboratoire d'Economie des Transports Lyon (LET);
8. University of the Aegean (STTAEGEAN).

The network was setup in 2003 having its main purpose the co-operation in the field of transportation research and research training.

*Training and mobility activity:*

- Exchange of Professors in the Master;
- PhD and post-doctoral programmes;
- exchange of students;
- organisation of summer courses and master classes;
- co-operation in research programmes;
- creation of a European PhD programme in Transportation.

**TUNRail**

*Objective:*

TUNRail objective are to develop a "transatlantic" function within the context of railway higher education that enhances the knowledge exchange between EU and US and secures a robust

collaboration on areas with transatlantic synergies. It wants to develop a railway education handbook that outlines:

- comprehensive inventory and analysis (comparison and benchmarking) of current railway higher education programmes or practices in the EU and the US;
- examples of better practices and successful approaches in railway higher education;
- specific recommendations and strategies for enhanced transatlantic knowledge transfer and for development of new programmes or improvement of current programmes;
- dissemination of the obtained results to the interested parties in academia and industry;
- better understanding of the synergies and differences of railway systems in the EU and US and a solid foundation for increased transatlantic cooperation in rail higher education and training;
- other products produced as part of the study include:
  - web-page of the Project;
  - open Access Web-Based Railway Education Forum / Blog;
  - trans-Atlantic Web Conference for industry and academia stakeholders to present study outcomes.

*Training and mobility activity:*

Establishment for a solid foundation for Staff and Student exchange in the near future between EU and US.

**VECOM - Vehicle concept modelling - ITN**

*Objective:*

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.

*Training and mobility activity:*

Integrate PhDs into teams to develop on a certain topic, having joint workshops with young researchers and professionals. 17 fellows are in training. Numerous workshops are organised for their benefit and also a close working relationship.

**VERA - Vehicle-rail interaction modelling - TOK**

*Objective:*

In this project MER MEC S.P.A. targets to acquire the skills required in order to develop a numerical model able to simulate the dynamic interaction between the railway vehicles and the track system. This model will use experimental data acquired with optoelectronic systems developed by MER MEC regarding both track geometry, rail profile and wheel profile measurement.

*Training and mobility activity:*

12 months for an experienced researcher and 12 months for a more experienced researcher.

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### **VIETA - Vehicle Independent Electric Transmission Architectures – IAPP**

*Objective:*

This project, involving two SMEs and one University, concerns a rapid development of a European capability in electric drivetrains for low-carbon vehicles, with focus on urban electric vehicles and commercial vehicles, in order to meet the urgent needs of a rapidly growing market, in particular in London and other European cities.

*Training and mobility activity:*

This is a people-centred program to mobilize the human capitals of the participating organization so that enhanced and new capability in road transport, and in particular electric drive-train, is to be developed. For the 10 seconded researchers involved, the VIETA project provides significantly leveraged resources for effective acquisition of new skills, and refreshed career prospects. For the newly recruited researcher, the aim is to develop an accelerated and excellent career within a unique academic-industry partnership over two years.

### **Virtual Powertrain - Research work for a virtual power-train system simulation platform - TOK**

*Objective:*

This project proposed by IMAGINE aims at investigating innovative solutions permitting the development of a Virtual Powertrain System Simulation Platform based on AMESim.

*Training and mobility activity:*

The IMAGINE company, want to setup a partnership with the 'Energy and Environment Protection Research Centre' of the University 'Politehnica' of Bucharest to welcome three research fellows, for two years, who will explore key technologies for the success of the 'Virtual Powertrain'.

Research work will focus on physical modelling, numerical and computer science issues. For the research fellows, it will be the opportunity to acquire to acquire skills in domains other than their own speciality by being involved in a multi-discipline research project, interact with industry and apply their skills to complex industrial problem; publish scientific papers and being involved in a high tech SME with worldwide profile.

### **VUDEGFEM - Vulnerable Road Users: Detailed Geometry and Finite element models for impact conditions - IRG**

*Objective:*

The development of Vulnerable Road Users (VRU) models can benefit from the research effort on the occupant, in particular since the material properties of biological tissues do not depend on posture. However, it also requires specific geometrical and validation data. This proposal focuses on the geometrical aspects of the problem.

The aims of this project are to:

1. collect geometrical data on the internal anatomy of human volunteers in standing, seating and riding positions;
2. quantify the effects of the posture on the internal geometry;

3. combine the data with the existing HUMOS2 model to develop geometrically improved VRU models.

*Training and mobility activity:*

Allow the recruitment of a researcher back from USA.

**YEAR - Young European arena research - SCF**

*Objective:*

This is a proposal for an early-stage postgraduate research student competition a kind of Transport Research Olympics to complement the goals of the Transport Research Arena conference, TRA 2008, in Ljubljana, Slovenia. The goal is to stimulate interest among young researchers in the conference and contribute to establishing it as the premier Transport event in the world.

Up to 1000 students will submit abstracts, clearly specifying the deliverables and practical outputs of their research and about 50 finalists will be brought to the TRA 2008 conference to present their work in the form of posters or audio visual displays.

*Training and mobility activity:*

Researchers' competition.

**YEAR-2010 - Young European arena of research - 2010 - SCF**

*Objective:*

This is a proposal for an early-stage research student competition a kind of Transport Research Olympics to complement the goals of the Transport Research Arena conference, TRA, in Brussels in 2010. The goal is to stimulate interest among young researchers in the conference and contribute to establishing it as the premier Transport event in the world.

Up to about 600 students will submit abstracts, clearly specifying the deliverables and practical outputs of their research and about 50 finalists will be brought to the TRA-2010 conference to present their work in the form of posters and other displays.

*Training and mobility activity:*

Researchers' competition.

**YRS – Young Research Seminar**

*Objective:*

The Young Researchers Seminars (YRS) are jointly organised by ECTRI with FEHRL and FERSI organisations.

During the seminars, young researchers from institutes that are members of ECTRI, FEHRL or FERSI, present the results of their research in presence of senior researchers. The senior researchers acting as tutors, make recommendations for their future presentations.

At the end of the seminar, the three best presentations (written and oral) are rewarded by the Steering Committee, composed of two senior figures from each organisation.



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*Training and mobility activity:*

Training researchers achieving PhD

#### **6.4 Annex 4: Guidelines for Assessment of applications for COST Actions**

**European Cooperation  
in Science and Technology  
- COST -**

**Secretariat**

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**Brussels, 28 March 2011**

**COST 4111/11**

#### **NOTE**

From :	COST Secretariat
To :	COST Committee of Senior Officials (CSO)
Subject :	Guidelines for Assessment of applications for COST Actions

Delegations will find attached the "Guidelines for Assessment of applications for COST Actions" as approved by the CSO by written procedure on 24 March 2011.

These Guidelines will enter into force as from the next Collection date on 25 March 2011 and replace the previous version set out in COST 4115/10.

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## **Guidelines for Assessment of applications for COST Actions**

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## 1 - Introduction

The main tasks assigned to a COST Domain Committee (DC) in pursuit of a successful Action are:

- a. Quality Control
  - Assessment of proposals for new Actions
  - Monitoring of Actions in progress
  - Evaluation of completed Actions
- b. Dissemination and exploitation of the results of a COST Action.

Quality control is the prime responsibility of a DC, in accordance with its Terms of Reference approved by the Committee of Senior Officials (CSO) (see COST Docs 4161/10 - 4169/10 or any new document amending or replacing them to be found in [www.consilium.europa.eu/cost](http://www.consilium.europa.eu/cost)). The quality control tasks aim to maintain the excellence of COST Actions, by combining best practices used in the scientific community with the bottom up approach, equality of access and flexibility traditional to COST. Best practices adopted by the CSO as mandatory include consistent use of external peer review, both in assessing full proposals for new Actions and in the final evaluation of a completed Action.

## 2 - Conflict of Interest

COST strives to avoid any kind of conflicts of interest in its framework. Standard good practice in science funding schemes requires that any individual with an interest in a proposal for funding should not take part in the selection process. Executing the COST quality control tasks may give rise to a conflict of interest, for example if a DC member is at the same time a participant in a current Action, or is involved in a new Action proposal. No CSO member should be in a position to nominate him/herself as a member of another COST Committee.

To ensure the 'bottom-up' characteristics of an Action, the proposition and execution of an Action shall not normally be performed by any member of a body that has executive or advisory power over its assessment, management or evaluation.

The same principle applies to any other person who may be approached to assist with any COST quality control task. It is mandatory that any potential conflict of interest be declared. A declaration that there is no potential conflict of interest must be made by every assessor of preliminary proposals. The responsibility to solve a possible conflict of interest is in the hands of the relevant Committee. Details addressing the conflict of interest issue for all players involved are given in COST Code of Conduct, doc. COST 4160/10 or in any new document amending or replacing it (to be found in [www.consilium.europa.eu/cost](http://www.consilium.europa.eu/cost)).

### 3 – Anonymity

All individual marks and comments during the assessment process will be kept anonymous. On the other hand, in order to guarantee the widest transparency, all such marks and comments will be made available for the Applicant and those involved in the assessment process.

Every effort should be made to keep the identity of applicants of Preliminary Proposals anonymous. The identity of the members of the External Expert Panel (EEP) is also to be kept confidential.

### 4 - Commission involvement

The Commission Contact Persons will have access to all proposals and are encouraged to submit comments on the Full Proposals. These comments will be encoded in the online tool in due time and will hence be made available both to the EEP and the DC for consideration. They will also be made available to the COST National coordinators (CNC).

### 5 - Assessment of new Action proposals

New Action proposals are assessed and selected from submissions to a continuous and thematically Open Call normally with two collection dates a year. Proposals submitted after a collection date are retained for the next collection date.

The objective of the Open Call is to enhance the scientific excellence and transparency of COST through an accessible bottom-up opportunity with rigorous peer review. The Call follows a two step process, with Preliminary Proposals followed by invited Full Proposals. This helps to reduce over-subscription and ensures a reasonable success rate for Full Proposals.

#### ***Characteristics of a COST Action***

COST Actions are new, innovative and often interdisciplinary scientific networks. COST does not fund the research in itself. COST Actions contribute to the scientific, economic, cultural or societal development of Europe, by supporting networking activities such as meetings, conferences, short term scientific exchanges and outreach activities. An Action is based on a Memorandum of Understanding (MoU) accepted by the Governments of at least 5 COST member countries.

A successful proposal should:

- reach out for high scientific/technological quality in an innovative way (interdisciplinary topics are also welcome);
- contribute substantially to the coordination and defragmentation of research efforts across Europe and to the strengthening of Europe's scientific networking capacity (in the context of the European Research Area), namely with the participation of relevant stakeholders;
- contribute strongly and visibly to European society, economic growth and welfare by producing results of potential interest to important sectors such as public authorities, policy institutions, standards bodies and/or private companies and industry;
- be based on a) careful consideration of the level of interest and relevant research resources in the countries likely to participate in the Action; b) assessment of the added value expected from the coordination of national research efforts by the Action;
- be flexible enough to permit the inclusion, at the implementation stage, of disciplinary perspectives and activities not foreseen during the preparation of the proposal;
- identify and take into account R&D efforts supported by other national and international funding schemes;
- encourage capacity building and the mobility of early-career European researchers.

## 6 - The Open Call process for New COST Actions

Upcoming collection dates for the Open Call will be announced on the COST website, in the Official Journal of the European Union and in other appropriate media (see Annex E).

### Selection Procedure

#### *1. Preliminary Proposals* (see Template in Annex C)

- a. The initiative of preparing a new Action proposal is normally taken by a group of European researchers, who see an opportunity for advancing scientific, technological or social knowledge through the international coordination support offered by COST. The Coordinator of the group (the "Applicant") should come from a COST Country or a European body and is responsible for submitting the proposal.
- b. Applicants may wish to contact their national COST Coordinator (CNC) for information and guidance – see [www.cost.eu/cnc](http://www.cost.eu/cnc).
- c. Submission: the Preliminary Proposal is submitted on-line to a dedicated secure database operated by the COST Office. The web template (see Annex C) limits the main text of the proposal to 10,000 characters (equivalent to about 1500 words). The Applicant is asked to indicate the preferred Domain of allocation and which other Domain(s) is/are relevant to it. The text must be in English, as no translation is provided and peer reviewers will come from various countries. The Applicant is strongly advised to have the text checked for correctness and clarity.

- d. A pre-check is performed by the COST Office to reject any Preliminary Proposal which does not meet the basic requirements for COST support. The pre-check addresses four questions:
- Does the Proposal conform with the specified template? [NO = Reject]
  - Are 5 or more COST Member States involved in the Proposal? [NO = Reject]
  - Does the Proposal seek funding for research? [YES = Reject]
  - Is there obvious duplication with work currently or recently supported by COST? [YES = Reject]
- e. The COST Office allocates the Preliminary Proposal to the relevant Domain, based on the Applicant's stated preference and its own judgment. The DC Chairs and the Chair of the Trans Domain Proposal Standing Assessment Board (TDP-SAB) may also be consulted, if needed. Any Preliminary Proposal which cannot readily be allocated to a COST Domain, because its topic is unusually broad and inter-disciplinary, is allocated as a Trans Domain Proposal (TDP) and assessed as follows:
1. A TDP Standing Assessment Board (TDP-SAB) is constituted.
  2. Members are nominated by CNCs in the same way as for Domain Committees and should have a broad interdisciplinary expertise. However, since the TDP-SAB should also represent the different COST Domains, the DC Chairs are also members of the TDP-SAB, although they cannot become Chair of the TDP-SAB.
  3. The Chair of the TDP-SAB is elected by its members and his/her country will then be allowed to nominate another member. The Chair remains neutral in the process.
  4. The TDP-SAB will operate according to the usual rules for the assessment of pre-proposals in the COST Open Call. At the end of the pre-proposal assessment phase, the marks given by the TDP-SAB are to be treated for filtering at the same level as the other 9 Domains. In case TDPs are invited for submission of full proposals, then an EEP will be formed and TDP-SAB hearings will be organised.
  5. In case of need of an EEP, its composition is decided by the Chair with the help of the COST Office. The Chair is the convenor of the EEP.
  6. In case a TDP is approved by the CSO, it is allocated to a single Domain for administrative purposes, but Rapporteurs from several DCs should normally be appointed to monitor the resulting Action.

In the following paragraphs references to DC or DC Chair should be read as including the TDP-SAB or its Chair.

- f. Assessor allocation: The DC chair, supported by the COST Office, allocates to each proposal sufficient Assessors, i.e. DC members or external experts (who may be drawn from the pool of "nominated DC experts" or from other sources), to ensure that a minimum of three assessments are completed for each proposal. DC Chairs are not entitled to assess the pre-proposals in their domains. The Assessors mark their allocated Preliminary Proposals on the basis of the criteria at Annex A by assigning marks between 1 and 6 to each criterion. For this purpose they have electronic access to the proposal, and secure access to an on-line automated marking database.

- g. In order to guarantee a fair evaluation, assessors are required to justify their scoring through clear comments so that appropriate and constructive feedback can be provided to the Applicant.
- h. Access to the marking database is password protected. Marks are not visible during the assessment period in order to guarantee unbiased assessment.
- i. If the average total of the remaining marks for the Proposal fails to reach the threshold of 70% of the maximum achievable score, the Proposal cannot be considered for invitation to submit a Full Proposal.
- j. To overcome inter-Domain variation in scoring practice, a process of filtering is applied. The filtering formula must be consensual between the DC Chairs and the COST Office and any possible conflicts are to be resolved by JAF/CSO. The COST Office provides for each Domain a table with the total remaining Assessor marks, and derived from that the average mark for all proposals. This table is made available to all members of the Domain Committee.
- k. The COST Office normally invites, in total, between around two and three times as many top ranked Preliminary Proposals to submit Full Proposals as the total number of new Actions that can be supported by the available funds.
- l. The COST Office informs all other Applicants that they are not invited to submit a full proposal. If requested by the Applicant, the COST Office shall provide the assessment scores and comments for Proposals that received at least three marks.
- m. The COST Office provides the Commission Contact Persons with username and password for access to the COST website with an overview of the selected pre-proposals. The relevant time table for the assessment process will be available on the COST website.

## **II. Full Proposals**

When submitting a full proposal, the Applicant should inform the national COST Coordinator (CNC) – see [www.cost.eu/cnc](http://www.cost.eu/cnc).

- a. Full Proposal format: The text of a successful Full Proposal will constitute the formal Technical Annex of the Memorandum of Understanding of the COST Action, and must therefore conform in all material respects, including formatting, to the template provided by the COST Office (see Annex D). The Proposal must be formatted as Rich Text Format (.rtf) or a word (.doc) file. The Proposal must be written in English; no translation service is provided by the COST Office, and peer reviewers will come from various countries. The Applicant is strongly advised to have the text checked for correctness and clarity.

The Assessment Criteria for a Full Proposal are shown in Annex B.

- b. External Expert Panel (EEP): The COST Office, in close cooperation with each DC, convenes for each round and each DC an EEP. The EEP typically has five members, drawn from the pool of nominated DC experts or experts from other sources, aiming to cover adequately the required expertise and to ensure gender balance. The EEP members provide individual assessments of each Full Proposal, before they convene for a consensus meeting.
- c. The Commission Contact Person will give comments according to relevance for their Directorate and RTD FP activities via the online tool. These comments will be made available to the members of the EEP and DC.
- d. The EEP is normally co-ordinated by the DC chair or a member delegated by the DC ("the Convenor"). The Convenor moderates the EEP meeting.
- e. The COST Office draws up a summary table of the individual EEP assessor marks; organises the consensus meeting; prepares briefing materials in consultation with the Convenor and makes these available to members before the meeting; and ensures that all relevant documentation is provided at the meeting.
- f. At the meeting the members consider how far each Full Proposal meets the assessment criteria, and agree on consensus marks and the recommendation or not for the DC-Hearings for each Full Proposal. Proposals marked below the threshold of 55 points are excluded from further assessment. The EEP may decide to recommend any number of proposals to the DC-Hearings, among those that have reached the threshold mark.
- g. Before the meeting closes the members must agree a brief consensus report on each Full Proposal, highlighting its strengths and weaknesses. This consensus report is made available to the Applicant. In addition, the EEP may suggest leading experts or institutions in the relevant field for possible nomination to the Management Committee (MC) by the CNC. The Convenor must present the EEP's conclusions to the DC.
- h. DC decision process: The Applicants of each Full Proposal recommended by the EEP are invited to present the Proposal to the DC (or its delegated Executive Group). Following the presentations the DC (or Executive Group) ranks the Proposals and shall document the reasons for the ranking, in particular regarding any deviations with respect to the EEP rating. The respective document is made available to the Applicant. The DC may suggest leading experts or institutions in the relevant field for possible nomination to the MC by the CNC. In addition the DC decides on the requested number of qualified proposals for funding.
- i. The COST Office prepares the final list to be approved by the CSO based on the following key elements:
  - a. The Domain's share, which is generated by a filtering distribution that takes into account the submission distribution per Domain. TDP is treated as a separate Domain.
  - b. The number of Action Credits per Domain, which is generated from the past Collection Dates up to 4 years, from the accumulated differences between the number of proposals actually approved and the Domain's share for those Collection Dates.

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The number of proposals to be approved per Domain is produced by taking into consideration the DCs' requests, the Domains' share, and the Action Credits for each Domain.

The technical details of the methodology must be consensual between the DC Chairs and the COST Office and any possible conflicts are to be resolved by JAF/CSO.

- j. On the basis of the above procedure the JAF group will propose a definitive list for the CSO to approve within the available funding.
- k. The COST Office will inform all the Applicants of the Full Proposals of the result of the selection process.

The envisaged time line for the open call process is indicated in Annex F.

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**ANNEX A**

**ASSESSMENT CRITERIA FOR PRELIMINARY PROPOSAL**

I.1	<p><b>RIGHT FOR COST?</b>  <b>Is COST the best mechanism for achieving the Action's objectives?</b></p> <ul style="list-style-type: none"> <li>High marks are given to proposals for which COST is the best adapted mechanism.</li> <li>Lower marks are given otherwise.</li> </ul>	<p>yes no  <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>                    6 5          4 3 2 1</p>
I.2	<p><b>PUBLIC UTILITY/SCIENCE</b>  <b>Does the proposed Action address real current problems/ scientific issues?</b></p> <ul style="list-style-type: none"> <li>High marks are given to highly exciting and interesting proposals on a very important and/or timely topic.</li> <li>Lower marks are given otherwise.</li> </ul>	<p>yes no  <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>                    6 5          4 3 2 1</p>
I.3	<p><b>INNOVATION</b>  <b>Is the proposed Action innovative?</b></p> <ul style="list-style-type: none"> <li>High marks are given to highly innovative proposals.</li> <li>Lower marks are given otherwise.</li> </ul>	<p>yes no  <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>                    6 5          4 3 2 1</p>
I.4	<p><b>IMPACT</b>  <b>Would the proposed network make a significant difference in terms of knowledge, capacity building, social impacts, etc?</b></p> <ul style="list-style-type: none"> <li>High marks are given to proposals with high potential impact.</li> <li>Lower marks are given otherwise.</li> </ul>	<p>yes no  <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>                    6 5          4 3 2 1</p>
I.5	<p><b>NETWORKING</b>  <b>Are networking aspects well motivated and developed in the proposal?</b></p> <ul style="list-style-type: none"> <li>High marks for proposals that both motivate the need for networking in the field and show how the proposed networking will add value to the current state-of-the-art.</li> <li>Lower marks are given otherwise.</li> </ul>	<p>yes no  <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>                    6 5          4 3 2 1</p>
I.6	<p><b>PRESENTATION</b>  <b>Is the proposed Action presented in a clear, rational and understandable way?</b></p> <ul style="list-style-type: none"> <li>High marks for proposals that are presented in a clear, rational and understandable way.</li> <li>Lower marks are given otherwise.</li> </ul>	<p>yes no  <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>                    6 5          4 3 2 1</p>

**ANNEX B**

**ASSESSMENT CRITERIA FOR FULL PROPOSAL**

<b>A</b>	<b>SCIENCE AND NETWORKING (Weight 2)</b>	
<b>A.1</b>	<p><b>Does the proposed Action address real current problems/scientific issues?</b></p> <p>4. The topic is very important and /or timely and proposal presents the correct approaches.            3. The topic is very important and /or timely, but proposal fails to present the correct approaches.            2. The topic is not important nor timely, although proposal presents the correct approaches.            1. Serious lack of substance and/or relevance.</p>	<p>yes            no</p> <p><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></p> <p>4 3 2 1</p>
<b>A.2</b>	<p><b>Does the proposed Action show awareness of the state-of-the-art of the relevant scientific/technical/socio-economic fields?</b></p> <p>4. Excellent and up to date awareness of relevant scientific/technical fields            3. Good awareness of relevant fields.            2. Defective awareness of relevant fields.            1. Serious lack of awareness of relevant fields.</p>	<p>yes            no</p> <p><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></p> <p>4 3 2 1</p>
<b>A.3</b>	<p><b>Is the proposed Action innovative?</b></p> <p>4. Highly innovative: identifies a significant new problem and/or a significant new approach.            3. Innovative in some notable aspects.            2. Not very innovative: the topic is already well-studied and/or the proposal largely follows a well-trodden approach.            1. Not at all innovative.</p>	<p>high            no</p> <p><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></p> <p>4 3 2 1</p>
<b>A.4</b>	<p><b>Does the proposed Action answer a need for the networking of experts in the field?</b></p> <p>4. Networking in this field ranks amongst the best mechanisms to progress the state-of-the-art and the proposal uses such a mechanism in a sound manner.            3. Networking in this field ranks amongst the best mechanisms to progress the state-of-the-art, but the proposal fails to use such a mechanism in a sound manner.            2. Networking in this field is not amongst the best mechanisms to progress the state-of-the-art, although the proposal uses such a mechanism in a sound manner.            1. Networking in this field is not amongst the best mechanisms to progress the state-of-the-art and the proposal fails to use such a mechanism in a sound manner.</p>	<p>high            no</p> <p><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></p> <p>4 3 2 1</p>

Comments:

TOTAL MARK FOR SECTION A (Max 16 x 2 = 32)



**ANNEX B**

<b>B.3</b>	<b>Is attention given to the involvement of stakeholders in order to increase the potential application of results (including, where appropriate, fostering their commercial exploitation)?</b>  4. Stakeholders are already part of experts who took part in the preparation of the proposal. 3. Plans for implication of stakeholders are clear, wide-ranging and feasible. 2. Plans for implication of stakeholders are reasonable. 1. Plans for implication of stakeholders are unambitious or defective.	good little <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 4 3 2 1
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Comments:

TOTAL MARK FOR SECTION B (Max 12 x 2 = 24)

**ANNEX B**

<b>C</b>	<b>STRUCTURE AND ORGANISATION (Weight 1)</b>	
<b>C.1</b>	<p><b>Is the proposal presented in a clear, convincing, and appropriate way?</b></p> <p>4. Very clearly written with compelling argument; fully appropriate format.</p> <p>3. Well written; argument is easy to follow; appropriate format but may need minor changes;</p> <p>2. Poorly written, but argument can be followed with effort; and/or defective format.</p> <p>1. Poorly written; argument is unclear; and/or inappropriate format.</p>	<p>high      low</p> <p>□□□□</p> <p>4   3   2   1</p>
<b>C.2</b>	<p><b>Are the workplan and organisation appropriate?</b></p> <p>4. Workplan and organisation make full, productive and cost-effective use of COST opportunities.</p> <p>3. Workplan and organisation are reasonable, any defects are minor.</p> <p>2. Workplan and/or organisation show significant defects.</p> <p>1. Workplan and/or organisation are lacking or inappropriate or unclear.</p>	<p>very                  not</p> <p>□□□□</p> <p>4   3   2   1</p>
<b>C.3</b>	<p><b>Are the time schedule and the setting of milestones appropriate?</b></p> <p>4. Schedule and milestones are well-defined and practical.</p> <p>3. Schedule and milestones are reasonable.</p> <p>2. Schedule and/or milestones show some defects.</p> <p>1. Schedule and/or milestones are lacking or inappropriate or unclear.</p>	<p>very                  not</p> <p>□□□□</p> <p>4   3   2   1</p>
<b>C.4</b>	<p><b>Are appropriate plans made for monitoring and evaluating the achievement of objectives?</b></p> <p>4. Monitoring and evaluation plans are well-defined and practical.</p> <p>3. Monitoring and evaluation plans are reasonable.</p> <p>2. Monitoring and evaluation plans show some defects.</p> <p>1. Monitoring and evaluation plans are lacking or inappropriate or unclear.</p>	<p>good                  little</p> <p>□□□□</p> <p>4   3   2   1</p>

Comments:

TOTAL MARK FOR SECTION C (Max 16)		
<b>D</b>	<b>CONTRIBUTION TO WIDER COST GOALS (Weight 1)</b>	

**ANNEX B**

D.1	<p><b>How well does the proposed Action aim to involve early stage researchers?</b></p> <p>1. An innovative plan is presented in addition to the standard template in Section E.4 of Full Proposal</p> <p>0. Otherwise.</p>	<p style="text-align: right;">□□ 1 0</p>
D.2	<p><b>How well does the proposed Action aim at gender balance?</b></p> <p>1. An innovative plan is presented in addition to the standard template in Section E.4 of Full Proposal</p> <p>0. Otherwise.</p>	<p style="text-align: right;">□□ 1 0</p>
D.3	<p><b>Does the proposed Action have the potential to contribute to the solution of global challenges in a global dimension?</b></p> <p>1. Proposal will certainly attract interest from a wide range of non-COST Countries if approved</p> <p>0. Otherwise.</p>	<p style="text-align: right;">□□ 1 0</p>

Comments:

TOTAL MARK FOR SECTION D (Max 3)	
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TOTAL MARK FOR FULL PROPOSAL (Threshold: 55 points out of 75)
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E	<p><b>OVERALL RECOMMENDATION OF EEP</b></p> <p>Comments:</p> <p>Strength of proposal</p> <p>Weakness of proposal</p> <p>New experts suggested by the EEP for possible nomination by the CNCs</p>	
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**COST Open Call Proposal**  
**1st stage: Preliminary Proposal**

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**Applicant Details**  
 Please note that proposals should come from COST Countries

**For statistical purposes (mandatory):**

**Gender:**

**Title:** title ▼ title ▼  
 gender ▼ gender ▼

**Family Name:**   **Early-stage researcher**

**(less than PhD+8 years):** Yes/No ▼ Yes/No ▼

**Forename:**   **Resubmission:** Yes/No ▼ Yes/No ▼

**Year of Birth:** year ▼ year ▼

**Email:**

**Institution:**

**Position:**

**Country:** country ▼

**Contact Address :**

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**Scientific Content**  
**Proposal Title**

Form fields for proposal submission, including sections for Abstract, Key Words, Relevant COST Domains, Preferred COST Domain, and Text of proposal.

**Abstract** ( max 1000 characters, approx. 150 words ):

**Key Words** ( open format, max 400 characters, approx. 50 words):

**Relevant COST Domains:** to know more about COST Domains please click >>here<<  
Select all Domains covered by your proposal  
Select Domains\*\*\*\*\*

**Preferred COST Domain:**  
If you don't find a suitable domain for your proposal or your proposal covers several domains, select "Transdomain (TD)" in the drop-down  
Select Domain\*\*\*\*\*

**Text of proposal** ( maximum 10000 characters, approx. 1500 words ):  
Please use the following structure:

- Background, problems.** for details click >>here<<
- Benefits.** for details click >>here<<
- Objectives, Deliverables and expected scientific impact.** for details click >>here<<
- Scientific programme and innovation.** for details click >>here<<
- Organisation.** for details click >>here<<

Deleted: ¶

TEMPLATE FOR PRELIMINARY PROPOSAL

ANNEX C

BACKGROUND, PROBLEMS ADDRESSED BENEFITS OBJECTIVES, DELIVERABLES AND EXPECTED SCIENTIFIC IMPACT SCIENTIFIC PROGRAMME AND INNOVATION ORGANISATION	
BACKGROUND, PROBLEMS ADDRESSED BENEFITS OBJECTIVES, DELIVERABLES AND EXPECTED SCIENTIFIC IMPACT SCIENTIFIC PROGRAMME AND INNOVATION ORGANISATION	
<b>Participants interested in network</b> ( name, institution and country, maximum 2000 characters, approx. 300 words ):	
Name, Institution, Country	
Name, Institution, Country	
<hr/>	
<hr/>	

## **Template for Full Proposal**

### ***Introduction***

In case a proposal is selected to become a COST Action, the first part of the Full Proposal, the draft Technical Annex, will become part of the Memorandum of Understanding (MoU), which is a specific formal intergovernmental document. Therefore the thorough drafting of the Full Proposal is of highest importance. The draft MoU which will be presented to the CSO for final approval consists of the Memorandum proper which is prepared by the COST Office, and the Technical Annex which is prepared by the Applicant.

Good proposals are precise, concise, formally and linguistically correct and drafted in a clear and easily understandable way.

The proposal should consist of a title page and two parts:

- Part I – the draft Technical Annex
- Part II – Additional information.

In order to help you to draft a Full Proposal that corresponds to the particular COST framework, the following guidelines – formal and content-related – have been developed. Please note that your Full Proposal may be rejected if it does not comply with these guidelines.

The structure of Part I – draft Technical Annex – of the proposal is mandatory, while the structure of Part II – Additional Information – is a recommendation (except for the List of Experts which is mandatory and must include current contact details for each named person).

Please make sure that your proposal contains all the necessary information in parts I and II for its evaluation, which must follow this template.

### ***General specifications on the format***

- The Full Proposal has to be submitted as a word file (.doc) or a rich-text format (.rtf)
- Margins: Top 2cm, Bottom 2cm, Left 2cm, Right 2cm, Header/Footer 1.25cm
- Font type: Times New Roman
- Size: 12pts
- Font colour: black
- No font effects, underlining or background colours
- Alignment: left
- No foot notes/endnotes

**Formal Instructions**

**Language**

Make sure that the text is of high linguistic quality. COST does not provide translation or correction services. Peer reviewers, likely to come from several different countries, will assess the proposal as presented.

**Spelling**

Have the full document spell checked. For terms like "Action", "Action Chair", "Management Committee", "Working Group" etc. please use capitals.

**Expression**

Make sure (use "Find" function on Word/Edit) in Part I

- that neither "I" nor "we" appears in the text
- that no individual scientists or institutes are mentioned in sections C and D
- that words like "planned" or "envisaged" or "proposed" about the Action are deleted. Rather use factual words such as "will be", "this COST Action" etc.
- that no references to information contained in Part II are used (such as "see attached list of experts")
- that the indicated structure A, B, C, ... is respected
- that the economic dimension is properly cited and calculated

**Title Page**

The Title Page must contain the following information: preliminary title of the Action and acronym if applicable; the name and contact details of the applicant; the name and contact details of the COST National Coordinator of the proposing country and the date of the proposal. The names and contact details of the rapporteur appointed by the DC will be added by the COST Office.

**Full Proposal for a new COST Action**

*Title*

**Applicant:** *full coordinates incl. name of applicant, name of Institute, address, tel, fax and email*

**COST National Coordinator:** *\* full coordinates incl. names, affiliation, address, tel, fax and email*

**DC:** *Domain name* <sup>\*</sup>

**DRAFT**  
**MEMORANDUM OF UNDERSTANDING**  
**For the implementation of a European Concerted Research Action**  
**designated as**

*Title*

The Parties to this “Memorandum of Understanding”, declaring their common intention to participate in the concerted Action referred to above and described in the “technical Annex to the Memorandum”, have reached the following understanding:

1. The Action will be carried out in accordance with the provisions of document COST 4159/10 “Rules and Procedures for Implementing COST Actions”, or in any new document amending or replacing it, the contents of which the Parties are fully aware of.
2. The aim of the Action is **XX**.
3. The economic dimension of the activities carried out under the Action has been estimated, on the basis of information available during the planning of the Action, at Euro **XX** million in **XX** prices.
4. The Memorandum of Understanding will take effect on being accepted by at least five Parties.
5. The Memorandum of Understanding will remain in force for a period of **XX** years, calculated from the date of the first meeting of the Management Committee, unless the duration of the Action is modified according to the provisions of Chapter V of the document referred to in Point 1 above.

**Part I - Draft Technical Annex**

**A. ABSTRACT**

**Maximum 200 words, maximum 5 keywords or very short phrases**

**General remark:** Be very clear and precise as this section will form the basis for COST information – web site and booklets – and reporting. The Abstract should include the broader scientific context of the Action as well as the expected deliverables and benefits. It should also indicate the European added value of the Action and the reasons for undertaking it in the COST framework.

**B. BACKGROUND**

**Maximum 2-3 pages**

**B.1 General background**

- Define the research topic in such a way that it is clear that the network will address real current problems or scientific issues.
- Inform about the wider relevance of the Action (why is it desirable to launch it as COST Action).
- Explain why COST, which funds only networking and capacity-building activities and not research, is the best mechanism for support. State reasons **why COST** seems to offer the appropriate framework for the Action, compared to other research frameworks such as ESF, ESA, EUREKA! or the EU Framework Programme.
- Describe the advantages or benefits which should arise from carrying out your project within the COST framework.

**B.2 Current state of knowledge**

- Summarise the previous research in the field of the proposal.
- Describe the **current state of the art**, including relevant research within the EU Framework Programmes and other EU fora, comparison of EU research with that in other parts of the world.
- Explain how the Action will be innovative in addressing either a new problem or a new approach to an existing problem.

**B.3 Reasons for the Action**

- **Reasons for launching the Action**, indicating the need for an experts network in the area and the added value of the Action networking. Emphasise immediate and future benefits and envisaged applications (understandable for non-specialists readers).
- Indicate whether the Action is mainly aimed at European economic/societal needs, or at scientific/technological advance, or both.
- Clearly distinguish between objectives, expected results and the means that are needed to achieve them. The impact of COST comes from concrete outcomes, not just activity; so indicate how the Action will aim for maximally productive outcomes.
- If this is a Trans-Domain proposal, clearly demonstrate the following:
  - o How the research topic includes two or more COST Domains.
  - o How the research requires the reciprocal interaction between these Domains.
  - o Why within the scientific approach, the reference to common theoretical concepts and methods as well as to their common evolution is needed for all involved Domains.

**B.4 Complementarity with other research programmes (if appropriate)**

## ANNEX D

- **Relevant links to and complementarity** with any current and/or planned European research projects, such as ESF, FP, EUREKA! (bear in mind that avoiding duplication is one of the goals of COST)

### **C. OBJECTIVES AND BENEFITS**

**Maximum 2 pages**

#### **C.1 Aim**

**Standard text** as first item of this section (as this sentence will be quoted word for word in point 2 of the Memorandum proper, it should be extremely concise):

"The aim of the Action is... (please add)"

- *The impact of COST comes from concrete outcomes, not just activity. Therefore indicate clearly **what should be achieved** through the Action. Given that all COST Actions are networks of scientists, the objectives should therefore clearly state the purpose of such networking, indicating - where possible - clear expected deliverables, not only research activities to be undertaken. However, if the proposed Action is of specially novel or "high risk" nature so that concrete deliverables are difficult to envisage, this should be explained clearly in the proposal.*

#### **C.2 Objectives**

- **List and explain objectives** (whenever possible in quantitative terms, which will make it easier to evaluate how well the Action may achieve its goals).

#### **C.3 How networking within the Action will yield the objectives?**

- **Distinguish between objectives** (aims of the Action) **and means needed** (manpower, equipment, etc.) **to achieve these objectives** (avoid any reference to method and means – e.g. scientific problems to be solved as well as research tasks – as they belong to section D (Scientific programme) detailed below).

#### **C.4 Potential impact of the Action**

- Describe expected benefits that will stem from the Action (with reference to section B).

#### **C.5 Target groups/end users**

- Reflect on the likely stakeholders and end users that will exploit the expected results. Indicate whether they were involved in the preparation of the proposal.

**D. SCIENTIFIC PROGRAMME**

**Maximum 3-4 pages**

**D.1 Scientific focus**

- Describe the **most important research tasks** to be coordinated by the Action.
- Provide a structured, but not too detailed work plan flexible enough to permit the inclusion, at the implementation stage, of disciplinary perspectives and activities not foreseen during the preparation of the proposal. Keep the framework of the Action open and flexible.
- Explain the human and technical **means to achieve the objectives** described in section C.
- **Remember that this section must be clear to non-specialists** (even if the description may be more "technical").

**D.2 Scientific work plan – methods and means**

- **Do not mention explicitly** the names of individual scientists, specific research institutions or other bodies (only exceptionally, if the Action cannot be implemented without the participation of a specific Institution, you should clearly mention this with the relevant explanation); Always remember that scientists who have not participated in the preparation are also entitled to join if their countries accept the MoU.
- **Focus on work plan and methods** of the Action and not on its organisation.
- If you plan Working Groups, you may mention their objectives and what they will achieve.

## **E. ORGANISATION**

### **Maximum 2 pages**

*General remark: You need not reiterate organisational features common for all COST Actions, described in the "Rules and Procedures for Implementing COST Actions" (doc. COST 4159/10). As a rule, organisational matters should be mentioned only if you intend to apply them in some specific way. In order to avoid unnecessary repetitions or contradictions, please refer to Rules and Procedures when drafting this section.*

### **E.1 Coordination and organisation**

- **Give a clear picture of the management and organisation of the Action.**
- Reflect the fact that a COST Action is implemented through a **concerted action**, which means that the research is carried out in and financed by the participating countries, while COST provides the necessary co-ordination.
- Use **organisational features common to all COST Actions**, but also allow for limited **Action-specific variations** (e.g. you may want to introduce a Steering Group, an Editorial Board, STSM manager, etc.). Consult "Rules and Procedures for implementing COST Actions". Keep in mind in particular that the Management Committee remains ultimately in charge of the Action, whilst it may arrange for particular support to it or its Chair in their tasks.
- Mention **milestones** – major achievements that are crucial to the future direction of the Action.
- Explain **how the coordination of national research will be implemented** (including the creation of possible common research teams, conferences and workshops, short-term scientific missions or other exchanges between laboratories, training schools, websites, etc.).
- Be aware of the **obligation to set up an Action specific website** that will not duplicate general information already available from the COST website (e.g. list of Parties, MC list, etc.) and to keep it updated: Include a plan to keep this website up to date, both to serve the needs of the participants and with the specific aim of ensuring the dissemination or exploitation of the results of the Action.
- As a rule, do not list names of interested research establishments and scientists. (This will be part of the Additional Information.)

### **E.2 Working Groups**

- Working Groups are a useful way of extending the Action beyond the membership of the Management Committee and of sharing workloads.
- An Action has normally 4, but not more than 6 Working Groups.
- If you plan Working Groups, explain their organisation (without repeating unnecessarily the "Scientific Programme" given under Section D).

### **E.3 Liaison and interaction with other research programmes**

- Address possible liaisons and interaction with other COST Actions and other European and international research programmes, such as ESF, FP, EUREKA!, etc.
- Indicate how these interactions will be organised: by exchange of information, meetings, by joint seminars or any other means.

**E.4 Gender balance and involvement of early-stage researchers**

***The following paragraph is compulsory:***

“This COST Action will respect an appropriate gender balance in all its activities and the Management Committee will place this as a standard item on all its MC agendas. The Action will also be committed to considerably involve early-stage researchers. This item will also be placed as a standard item on all MC agendas.”

*Please add any additional support the Action plans concerning gender balance and the involvement of early-stage researchers, in particular with respect to the organisation of training schools, STSMs etc. Explain how you intend to realise capacity building.*

**F. TIMETABLE**

**Maximum ½ page**

- Give a **clear picture of the timescale** of the Action and an **explicit estimate of the total duration** of the Action, preferably in the first paragraph. (This estimate will be quoted in the Memorandum proper and will determine the period for which the MoU enters into force.)
- Bear in mind that the normal duration of a COST Action is normally **four years**, unless there are specific cases to be approved by the CSO, on the basis of a justification provided in the proposal.
- Use **relative time scales** (Year 1, Year 2, etc) rather than specific years.

**G. ECONOMIC DIMENSION**

**Maximum ½ page**

**General remark:** *The purpose of this section is to provide an estimate of the total manpower expressed in person-years dedicated to the activities of the Action for each year and the total duration of the Action (The maximum would therefore normally be 10 person-years per country, in the case that 2 persons on the MC and 2 on each of 4 WGs from that country all work full time on COST.) An average of 100.000 € per scientist including overhead can normally be used as basis for the calculation. Additional expenses, such as equipment, instruments and/or infrastructure, should be added to the total. Please round up the total to the next full Million.*

“The following COST Countries have actively participated in the preparation of the Action or otherwise indicated their interest: **<list of the relevant countries>**.”

On the basis of national estimates, the economic dimension of the activities to be carried out under the Action has been estimated at **X** Million € for the total duration of the Action.

This estimate is valid under the assumption that all the countries mentioned above but no other countries will participate in the Action. Any departure from this will change the total cost accordingly.”

## **H. DISSEMINATION PLAN**

**Maximum 2 pages**

### **H.1 Who?**

- Identify the **target audiences** for the dissemination of the results of the Action (in particular findings and recommendations), e.g. other researchers working in the field; other research frameworks; research Institutes and Academia; Standards Bodies; industry (represented by manufacturers and service providers); European level policy makers; Government policy makers, regional planners and policy makers; general public.

### **H.2 What?**

- Describe the **dissemination methods** you intend to use.
- For each of your audiences you may choose several of the existing possibilities, e.g.
  - posting of general information on a public website;
  - posting of working documents on a password protected website;
  - set up of an electronic communication network (internet discussion forum, e-mail network, etc.);
  - publications: state of the art reports, interim reports, case study reports, proceedings, guidelines, manuals, final reports;
  - events: workshops, seminars and conferences organised by the MC, contributions to other national and international conferences and symposia;
  - articles in peer-reviewed scientific and technical Journals;
  - non-technical publications.

### **H.3 How?**

- Describe **how these dissemination methods will be used**.
- Note that dissemination goes beyond publication of results.
- Take into consideration the progress of the Action as well the results of its evaluation in updating the dissemination plan during the course of the Action.

For details, see chapter 9: "Dissemination of results".

## **Part II – Additional Information**

**Maximum 10 pages (excluding Part A)**

*General remark: The main purpose of the second part of the proposal is to facilitate the assessment of the proposal and the nomination of National Representatives to the Management Committee (MC). This part will not be element of the MoU. To some extent, however, the information contained in it may also be useful, when the Action starts and a detailed work programme is being planned. Note that part A (List of Experts) is mandatory as the information given here is important for the later nominations to the MC.*

*The structure of the Additional Information is not standardised and you are at liberty to structure it in any logical way. A suggested guideline is given hereafter under the following subheadings:*

### **A. LIST OF EXPERTS**

## **ANNEX D**

Two lists should be submitted. The first is a list of experts who have been consulted during the drafting of the proposal and who have already expressed interest in participating in the Action. The second list, if appropriate, covers those experts who may well be interested but who have not been contacted, or who have not yet replied, during the pre-proposal planning.  
Please highlight the experts that might be part of the Management Committee (give full contact details), subject to the appointment by the COST Countries concerned. For the others, please list only title, institution and e-mail.

Name and title:                      **Country:**                      Institution:

Contact details (if appropriate):

E-mail:    Telephone:

At the stage of approval of the draft MoU, remember to provide, the COST Office with a detailed updated list of potential participants in the Action for the CSO, in order to facilitate the work of the CNCs (clearly distinguishing contacted and non-contacted experts).

### **B. HISTORY OF THE PROPOSAL**

*The purpose of this section is to give the historical background of the proposal: how the idea of the COST Action was born and how the subsequent definition of the objectives and the pre-proposal planning was carried out.*

### **C. PRELIMINARY WORK PROGRAMME**

*Especially if the proposal is very complex and based on participation of research teams from different fields of research interacting in a specific way, you may wish to explain how this has been envisaged, at a more concrete level than that indicated in the draft Technical Annex.*

### **D. RECENT PUBLICATIONS**

*In order to make it easier to assess the scientific merits of the proposal, you may wish to compile a short list of recent scientific publications relating to the topic of the Action. If desired, you could group all the publications authored or co-authored by you as a kind of scientific self-portrait. This should be a maximum of 2 pages.*

### **E. FURTHER REMARKS**

*In this subheading you may add any information or remarks but also comment on the following assessment criteria as outlined in Annex B.*

- *To what extent does the proposed network aim at involving early-stage researchers?*
- *To what extent does the proposed network aim at being gender balanced?*
- *Does the number of countries the Applicants come from reflect a wide European dimension?*
- *To what extent have provisions been made for monitoring and evaluating the achievement of objectives?*
- *To what extent have provisions been made for assessing potential application, and fostering exploitation, of results?*

## **Checklist for Applicants of new COST Actions**

## ANNEX D

Before submitting your Full Proposal, please check it against the following items:

- Confirming to the title page template given in the Template
- Respecting the formatting guidelines
- Respecting the indicated structure of the draft Technical Annex
- Presenting the text in a logical way, avoiding unnecessary repetition between the different sections
- Respecting the word limits
- Language check
- Spell check
- Use of capital letters for COST-specific and Action-related expressions; non-exhaustive list: Action, Action Chair, Management Committee, Working Group, STSM (Short-Term Scientific Mission), Steering Group, etc.
- Explaining all acronyms (including those commonly used in the Framework Programme context)
- Use of "Europe" or "COST Countries" when referring to the overall geographical scope of COST. "European Union" or "EU Member States" should only be used to refer to the EU as a player ("EU legislation", "EU programmes", "EU policies" etc) or when only EU Member State(s) need to be explicitly mentioned, excluding COST Countries not members of EU
- Use of "framework" or "scheme" when referring to COST (COST is an intergovernmental framework, not an "EU instrument", although it is funded by the Framework Programme)
- No mentioning of individual scientists, institutes or organisations
- Avoiding pronouns such as "I", "we"; rather use "the Action"
- Avoiding expressions such as "planned" or "proposed" when referring to the Action; rather use "aims at", "will", etc.
- Avoiding unsubstantiated "value judgements" (neutrality of research) or "overstatements" (regarding the potential/importance of the Action)
- Proper quoting of standard texts (Part A: main objectives; part E: commitment to gender balance and involvement of early-stage researchers; part G: economic dimension)
- Proper calculation of the economic dimension in part G
- Clarity and comprehensibility (also for non-specialist readers)
- Addressing all indicated items

**OPEN CALL**

**European Cooperation in Science and Technology (COST)**

COST brings together researchers and experts in different countries working on specific topics. COST does NOT fund research itself, but supports networking activities such as meetings, conferences, short term scientific exchanges and outreach activities. Currently more than (xx) scientific networks (Actions) are supported.

COST invites proposals for Actions contributing to the scientific, technological, economic, cultural or societal development of Europe. Proposals playing a precursor role for other European programmes and/or initiated by early-stage researchers are especially welcome.

Developing stronger links amongst European researchers is crucial to building the European Research Area (ERA). COST stimulates new, innovative, interdisciplinary and broad research networks in Europe. COST activities are carried out by research teams to strengthen the foundations for building scientific excellence in Europe.

COST is organised in nine broad Domains (Biomedicine and Molecular Biosciences; Chemistry and Molecular Sciences and Technologies; Earth System Science and Environmental Management; Food and Agriculture; Forests, their Products and Services; Individuals, Societies, Cultures and Health; Information and Communication Technologies; Materials, Physics and Nanosciences; Transport and Urban Development). The intended coverage of each Domain is explained at [www.cost.eu](http://www.cost.eu).

Applicants are invited to locate their topic within one Domain. However, inter-disciplinary proposals not fitting readily into a single Domain are particularly welcome and will be assessed separately.

Proposals should include researchers from a minimum of five COST Countries. Financial support in the range of (xx) € p.a. for normally 4 years can be expected, subject to available budget.

Proposals will be assessed in two stages. *Preliminary Proposals* (maximum 1500 words/3 pages), submitted using the on-line template at [www.cost.eu/opencall](http://www.cost.eu/opencall) should provide a brief overview of the proposal and its intended impact. Proposals not conforming to the eligibility criteria of COST (e.g. requesting research funding) will be excluded. Eligible Proposals will be assessed by the relevant Domain Committees in accordance with the published criteria at [www.cost.eu](http://www.cost.eu). Applicants of selected Preliminary Proposals will be invited to submit a Full Proposal. Full Proposals will be peer reviewed according to the assessment criteria at [www.cost.eu/opencall](http://www.cost.eu/opencall). The decision will normally be taken within six months of the collection date and the Actions should expect to start within three months thereafter.

The collection date for Preliminary Proposals is (*date*), 17:00 Brussels time. Approximately (xx) Full Proposals will be invited for final selection of up to (xx) new Actions, subject to available budget. Full Proposals will be invited by (*date*) for submission by (*date*), with decisions expected in (*date*). The next collection date is envisaged for (*date*).

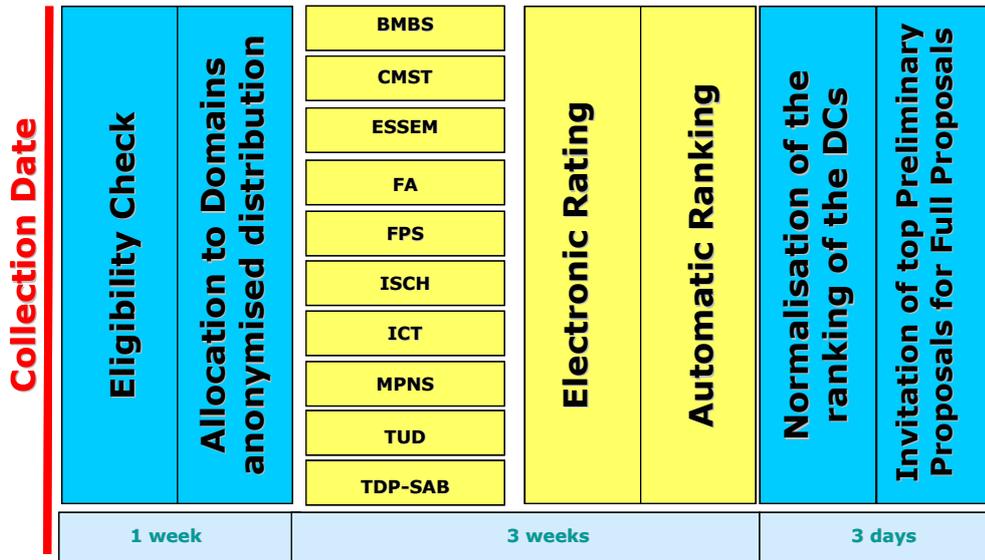
Applicants may wish to contact their national COST Coordinator (CNC) for information and guidance – see [www.cost.eu/cnc](http://www.cost.eu/cnc).

Proposals must be submitted on-line to the COST Office website.

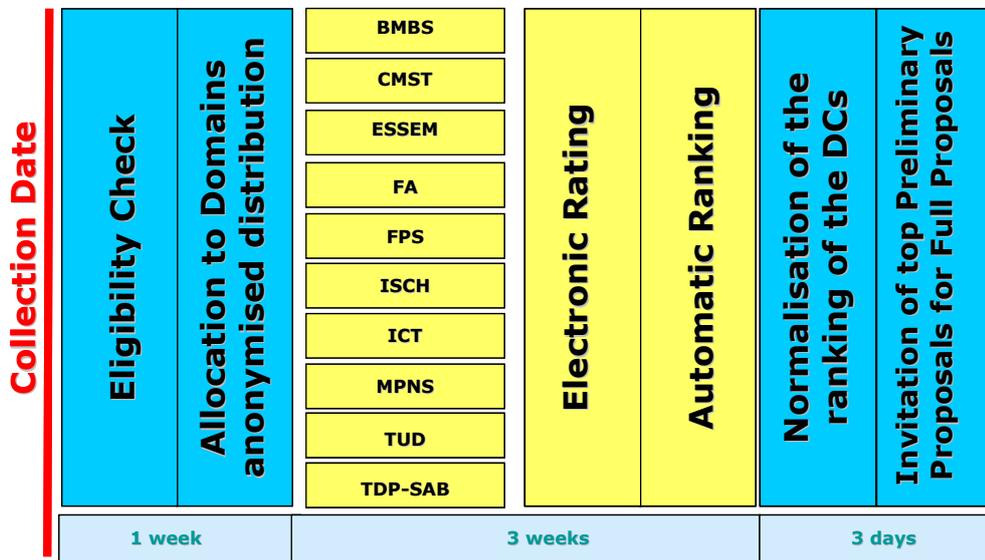
COST receives financial support for its coordinating activities from the EU RTD Framework Programme. The COST Office, set up by the European Science Foundation (ESF), acting as the implementing agent for COST, provides and manages the administrative, scientific and technical secretariat for COST, its Domain Committees and its Actions.

TIME LINE FOR COST OPEN CALL

**Selection process – Preliminary Proposals:**

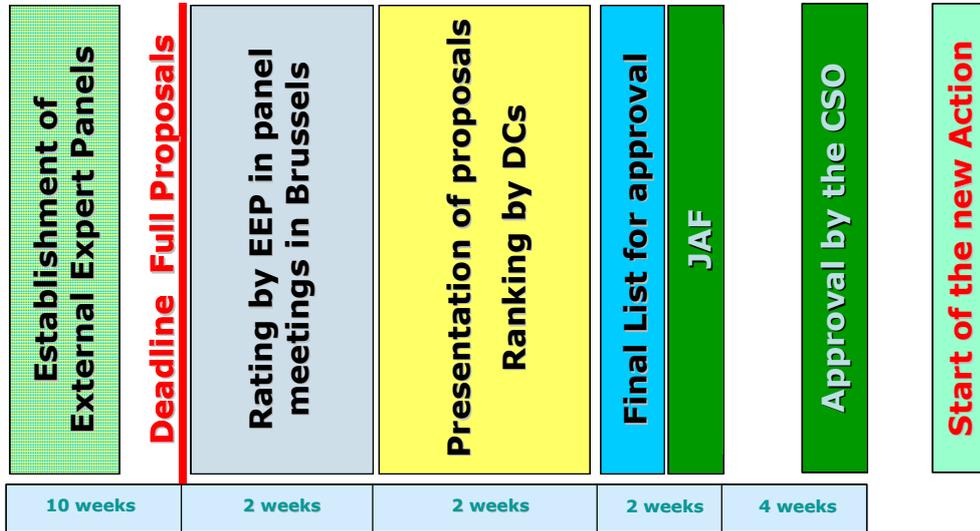


**Selection process – Preliminary Proposals:**



Minimum time span

**Selection process – Full Proposals:**



Minimum time span

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**List of acronyms**

APC	Annual Progress Conference
BMBS	Biomedicine and Molecular Biosciences
CEN	European Committee for Standardization
CMST	Chemistry and Molecular Sciences and Technologies
COST	European Cooperation in the field of Scientific and Technical Research
CNC	COST National Co-ordinator
CSO	Committee of Senior Officials
DC	Domain Committee
ESR	Early Stage Researchers
ESSEM	Earth System Science and Environmental Management
EEP	External Expert Panel
ERA	European Research Area
ESF	European Science Foundation
ESA	European Space Agency
EU	European Union
FA	Food and Agriculture
FP	Framework Programme
FPS	Forests, their Products and Services
ICT	Information and Communication Technologies
ISCH	Individuals, Societies, Cultures and Health
JAF	COST Working Group on Legal, Administrative and Financial Affairs
MC	Management Committee
MPNS	Materials, Physics and Nanosciences
MoU	Memorandum of Understanding
R&D	Research and Development
RTD	Research and Technological Development
TDP	Trans Domain Proposal
TDP-SAB	Trans Domain Proposal Standing Assessment Board
TUD	Transport and Urban Development

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