European Union 7th Framework Programme (FP7):

Opportunities for Researchers from the Socio-economic Sciences and Humanities (SSH)

Analysis of SSH-relevant Topics in Areas other than Theme 8 Socio-Economic Sciences and Humanities

FP7 Work Programmes 2012 & other ERA Initiatives

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Table of Contents

Introduction

"Opportunities for Researchers in the Socio-economic Sciences and Humanities" is a document compiled within Task 3.3, "SSH Opportunities in other FP7 Themes and other ERA Initiatives" in the frame of the EU-financed project "NET4SOCIETY – Trans-national co-operation among National Contact Points for Social-economic sciences and the Humanities". It aims at raising the awareness of researchers from the socio-economic sciences and humanities, who are familiar with Theme 8 "Socio-economic Sciences and Humanities", to opportunities for socio-economic research and humanities research in all the other areas of the 7th European Research Framework Programme (FP7) and other ERA Initiatives.

This document includes the SSH relevant topics in FP7 calls opened in July 2011.

The topics were extracted from the four specific programmes of FP7: Cooperation, Ideas, People and Capacities, which researchers from socio-economic sciences and humanities might find of interest. In addition, opportunities in ERA-Nets, Joint Programming Initiatives and Article 185 Initiatives are presented as well.

The approach we took here is a "targeted" approach: included are topics that contain SSH related themes with strong relevance (compared with marginal relevance) to the SSH community.

Yet, for some programmes, a list of additional titles of topics is added, with no further details. For obtaining information on the content of these topics, please use the website under "Call Information" of the relevant call.

Therefore, researchers are strongly encouraged to screen the Work Programmes themselves in order not to lose out on research opportunities offered to their specific interest. In any case, the Work Programmes need to be read in more detail to be aware about the overall approach of the Theme, the context of the topics, rules of participation and other specific requirements.

Of special importance are budget thresholds and funding schemes. These and any other relevant information can be found in the specific "Work Programme" and in the "Guide for Applicants". All the relevant documents can be downloaded from the page dedicated to open calls. The specific links are provided for every call in the respective chapters.

This analysis of SSH relevant topics in other thematic areas of FP7 and other ERA Initiatives will be updated following the publications of new calls.

I. COOPERATION

Programme: HEALTH

Call Identifier: FP7-HEALTH-2012-INNOVATION-1

Call's Objectives:

The Theme Health is aligned with the fundamental objectives of EU research policies: improving the health of European citizen and increasing competitiveness of European health related industries and services, as well as addressing the socio-economic dimension of health care and global health issues.

With a view to achieve the EU 2020 objective of a smart, sustainable and inclusive growth, the Commission launched the **European Innovation Partnership (EIP) on "active and healthy ageing"**. Its aims should be, by 2020, to enable citizens to live longer independently in good health by increasing the average number of healthy life years by two and, in achieving this target, to improve the sustainability and efficiency of our social and healthcare systems, and to create an EU and global market for innovative products and services with new opportunities for EU business.

Active and healthy ageing: Theme Health will contribute to the realisation of the EIP "active and healthy ageing" with the strategic aim of contributing to the Europe 2020 objectives of inclusion, sustainability and growth. More specifically it will promote and enable EU citizens to lead healthy, active and independent lives until old age; contribute to ensuring the sustainability and efficiency of social and healthcare systems; and contributing to the creation of a European and global market for innovative products and services related to healthy and active ageing. Theme Health will make a major contribution with ageing-related research to a longer healthy period at old age supported by 11 topics related to medical technologies for different purposes, e.g. detection, diagnosis & monitoring, innovative therapies, large scale data gathering, systems biology, human development and ageing, chronic diseases, health care systems and support actions. "In addition clinical trials may also contribute, if they include elderly people.

Theme specific information

With regard to submission, evaluation and selection procedures a major simplification is foreseen for implementing the Health work programme 2012: to use the **two-stage submission and evaluation procedure** (with the exception of an ERA-Net topic). The implementation will be via two two-stage calls: **FP7-HEALTH-2012-INNOVATION-1** as main call with an indicative budget of EUR 546 million with broader topics of which many are tailored for SME participation (bottom-up with a minimum percentage of EU funding requested going to SMEs) and FP7-HEALTH-2012-INNOVATION-2 as a pilot call with an indicative budget of 108 million EUR with very specific conditions (see section III of this document).

Ethical issues: It is particularly important that applicants address the potential ethical issues of their proposals, both in the proposed methodology and the possible implications of the results. The specific requirements for addressing ethical issues are described in the Guide for Applicants (Annex 4, section 4). The differences of gender/sex in research (risk factors, biological mechanisms, causes, clinical features, consequences and treatment of diseases and disorders) must be considered where appropriate.

Gender dimension: The pursuit of scientific knowledge and its technical application towards society requires the talent, perspectives and insight that can only be assured by increasing diversity in the research workforce. Therefore, all projects are encouraged to have a balanced participation of women and men in their research activities and to raise

awareness on combating gender prejudices and stereotypes. When human beings are involved as users, gender differences may exist. These will be addressed as an integral part of the research to ensure the highest level of scientific quality. In addition, specific actions to promote gender equality in research can be financed as part of the proposal, as specified in Appendix 7 of the Negotiation Guidance Notes.

Socio-economic dimension of research: Where relevant, account should be taken of possible socio-economic impacts of research, including its intended and unintended consequences and the inherent risks and opportunities. A sound understanding of this issue should be demonstrated both at the level of research design and research management. In this context, where appropriate, research actions and Coordination and Support Actions should ensure engagement of relevant stakeholders (e.g. patients' organisations, civil society organisations, policy-makers, user groups) as well as cultivate a multi-disciplinary approach (including, where relevant, researchers from social sciences and humanities) and social innovation. Projects raising ethical or security concerns are also encouraged to pay attention to wider public outreach.

Publication Date: 20 July 2011

Deadline: 04 October 2011

Calls information:
http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-HEALTH-2012-INNOVATION-1

List of relevant topics:

HEALTH.2012.3.2-1: Improving the organisation of health service delivery

HEALTH.2012.3.2-2: New methodologies for health technology assessment

HEALTH.2012.3.2-3: Social innovation for active and healthy ageing

HEALTH.2012.3.4-1: Research on health systems and services in low- and middleincome countries

HEALTH.2012.4.1-2: Training actions linked to intellectual property rights management and knowledge transfer

HEALTH.2012.4.1-4: Communicating the benefits of European research to the general public

HEALTH.2012.4.1-5: Preparing the future for health research and innovation

HEALTH.2012.4.1-6: Setting health-related development goals beyond 2015

HEALTH.2012.3.2-1: Improving the organisation of health service delivery

SSH Relevant Scientific Field: Business Management, Finance, Health Systems Administration, Organizational Behavior

Topic Description:

The objective of this topic is to benchmark best practices regarding the structure, care processes, ***cost containment issues***, reimbursement systems and performance of health care organisations in Europe. Applicants would be expected to address the issues of the ***organisational, management, financial (including costs) and regulatory aspects*** of health systems, including where appropriate the context of cross-border settings. The expected outputs would be an enhanced performance of Member States' health services based on proposals that address one or more elements given below:

• **The integration of care across organisations** and how collaboration between different health care providers can integrate primary and secondary care in pathways. Such research for example could focus on the effect of integration on patient experiences, outcomes, and efficiency; could examine the best forms of integration and under what conditions/context and for which patients groups is the integration of care suitable; and investigate the evaluation of new organisational approaches to integration.

• **Quality of cost information for patient care**. Research for example could focus on the assessment of health costing systems and practices for patient services (including the identification of best practice costing models); the analysis of the cost information quality, the impact and relevance upon decision making; the improvement of comparability of ***health cost data*** among EU countries with a view to advancing the economic efficiency of services.

• **Patient-centred care and patient involvement** and how organisations and patients, including self-help groups, can be empowered in this direction. Such research for example could focus on the ***evaluation of strategies, interventions, and incentives***; under which conditions would new health technologies lead to more patient-centred care; investigate interventions and guideline adherence. Different health care settings should be taken into account.

• ***Skill mix and management of human resources***. Such research for example could focus on the impact of changing skill mix of health professionals across Europe on quality of care and future health needs; the organisation of care processes and professional roles and competencies; the identification and comparison of successful health workforce planning strategies addressing the ageing health workforce and increasing mobility of health professionals across Europe.

• ***The transfer of knowledge into practice*** using results and outcomes of relevant EU FP projects with regards to health systems and health services research. Best practices and the factors that determine the transferability of these mechanisms should be considered, applying relevant tools and brokerage skills, to ensure that research findings and results are indeed applicable and used for a better organisation of health service delivery in Europe.

Note: Limits on the EU financial contribution apply. These are implemented strictly as formal eligibility criteria.

Funding Scheme: Collaborative Project (small-scale focused research project)

Additional Information:

- The topic is open for proposals in all relevant research areas covered by the topic description; however some proposals, depending on their scientific content, may contribute to the EIP "Active and Healthy Ageing".

- Proposals that include participation from Member States engaged in reforming their health systems and candidate countries will be considered. Projects should generally be of 4 years' duration; however a proposal addressing the issue of knowledge into practice should span 5 years.
- One or more proposals can be selected.
- ***Expected impact***: This research should contribute to the scientific evidence base that supports Member States to better organise their health systems within the relevant policy context. Projects should address the varieties in health care practice across Europe's health care landscape including critically an understanding of the relationship between organisations and how patients move through them. Projects should advance the state of the art in the field of health services research, stimulate social innovation and enhance cooperation between researchers in Europe and other regions to promote integration and excellence of European research and social innovation in this field.
- Additional eligibility criterion: The requested EU contribution per project shall not exceed EUR 3 000 000

HEALTH.2012.3.2-2: New methodologies for health technology assessment

SSH Relevant Scientific Field: Ethics, Finance, Health Systems Administration

Topic Description:

Health Technology Assessment (HTA) is intended to provide a bridge between the world of research and the world of decision-making by providing relevant information about the medical, social, economic, legal and ethical issues related to the use of health technology. This should be achieved in a systematic, transparent, unbiased and robust manner, also highlighted by the European network for Health Technology Assessment. Research under this call should develop new and /or improved methodologies for HTA that address the present challenges affecting the current methodological framework regarding complexity, efficacy and effectiveness. Proposals should address one or more elements of the following areas:

- HTA methodologies should be broadened to expand further the spectrum and complexity of technologies assessed. For example complex interventions consisting of a wide spectrum of technologies and multidisciplinary delivery modes should be addressed, such as personalised medicines, public health interventions, organisational interventions and information and communication technologies related to health. Other challenges to be addressed could include the need for the continuous assessment of health technologies throughout their life cycles, the integration of ***social, organisational, ethical and legal aspects***, assessment of relative effectiveness and to evaluate their implementation into health service provision.
- Research for example could address the real need to complement those efforts already undertaken by the Member States' network of HTA organisations (EUnetHTA JA) as regards the development of HTA methodologies to assess, for example, the efficacy and effectiveness of technologies. The applicability of these technologies into broader clinical contexts requires a better understanding of their use. In addition, there is a need to strengthen HTAs so that they may be used in very specific and particular circumstances, such as in hospital settings - mini-HTAs, where very local contextual organizational considerations have to be taken into account. Non-exhaustive examples would include: advanced therapies, diagnostics, medical devices, personalised medicines, transfusion and transplantation, health-related information and communication technologies.

Collaboration between the selected projects should be foreseen in the proposals in view of exchanging information and promoting the development of best practice.

Note: Limits on the EU financial contribution apply. These are implemented strictly as formal eligibility criteria.

Funding Scheme: Collaborative Project (small-scale focused research project)

Additional Information:

- One or more proposals can be selected.
- Additional eligibility criterion: The requested EU contribution per project shall not exceed EUR 3 000 000
- ***Expected impact***: This research should improve the scope, validity and applicability of HTA as a tool to determine the potential impact of innovative technologies on individual and population health gains. It should complement work undertaken by the European Network for Health Technology Assessment and broaden the HTA methodological framework to develop it into a truly meaningful tool that provides structured, evidence-based input into health policies that are patient-focused and promoting good quality care, equity in access and best value for money.
- The topic is open for proposals in all relevant research areas covered by the topic description; however some proposals, depending on their scientific content, may contribute to the EIP "Active and Healthy Ageing".
- EUnetHTA JA is a joint action funded under the EC's 2nd Community Programme of public health in response to the 2009 call - http://www.eunethta.net/Public/Home/.
- Gene therapy medicinal products, somatic cell therapy medicinal products and tissue engineered products, as defined by Regulation (EC) no 1394/2007 of the European Parliament and of the Council of 13 November 2007 on Advanced Therapy Medicinal Products and amending Directive 2001/83/EC and Regulation (EC) No 726/2004
- FP7 HSREPP project– a roadmap project on health services research: http://www.nivel.nl/oc2/page.asp?PageID=11023&path=/Startpunt/NIVEL%20international/HSREPP/Home

HEALTH.2012.3.2-3: Social innovation for active and healthy ageing

SSH Relevant Scientific Field: Business Management, Finance, Health Systems Administration

Topic Description:

This topic as a whole contributes to the European Innovation Partnership (EIP) pilot initiative on “Active and Healthy Ageing”. Social innovation for active and healthy ageing should aim to develop innovative approaches to promote better quality of life and improved well-being for the elderly. Proposals should develop new ideas (products, services and/or models) that simultaneously meet ***social needs*** and create ***new social relationships***. Such research, with a holistic approach to well-being and with open participation of a variety of stakeholders, should take into account the broad spectrum of ***social, economic and health needs*** of Europe's elderly citizens, and contribute to implement the factors enabling an improved quality of life of older people. Relevant stakeholders at the appropriate level(s) (e.g. local, regional) are expected to define how the new ideas developed in the framework of the project can be implemented. Non-exhaustive examples would include: innovative products and services aimed at promoting healthy lifestyle, nutrition and/or healthy environment, disease prevention, supporting independent and active older citizens; or reform of the health care system and services to adequately meet the needs of independent living of an ageing population.

Note: Limits on the EU financial contribution apply. These are implemented strictly as formal eligibility criteria.

Funding Scheme: Collaborative Project (small-scale focused research project)

Additional Information:

- One or more proposals can be selected.
- ***Expected impact***: Innovation needs to be reflected not only in research, science and ***business*** but also in all areas of ***society*** including the health sector in order to make life better for European citizens. ***Social innovation*** in the public sector, the private and non-for-profit sectors must be harnessed to improve the quality of life of older citizens and society as a whole. The projects are expected to develop a new paradigm in this area based on the principles underlying the Innovation Union and subsequent reflections emerging from the EIP pilot initiative on "Active and Healthy Ageing".
- Additional eligibility criterion: The requested EU contribution per project shall not exceed EUR 3 000 000

HEALTH.2012.3.4-1: Research on health systems and services in low- and middleincome Countries

SSH Relevant Scientific Field: Health Systems Administration

Topic Description:

The weakness of health systems is an obstacle to effective health care in many low-and middle-income countries. Projects should allow ***national and regional decision makers*** to better translate knowledge, empirical data and operational experience into policies and planning for more effective, efficient and equitable health systems and services. Research should combine inter- and intra-country comparisons, quantitative and qualitative approaches with experience about best practices with a view to increase and sustain universal health coverage. Research could also ***develop plans for improved management of the health workforce in low-resource settings*** such as rural areas and urban slums. Collaboration between selected projects as well as with relevant ongoing EU funded projects is welcome in order to develop synergies and increase impact. Proposals should allocate at least one third of the requested EU contribution to capacity building on the basis of a thorough assessment of local training needs in collaboration with key stakeholders. Particular attention should be given to the next generation of researchers and health care professionals. Measures to strengthen the scientific capacity for health systems/health policy research through South-South cooperation could also be included. A single geographical ICPC region or sub-region can be addressed. Projects should generally be 5 years in duration.

Note: Limits on the EU financial contribution apply. These are implemented strictly as formal eligibility criteria.

Funding Scheme: Specific International Cooperation Action (SICA), Collaborative Project (small or medium-scale focused research project) target regions: All international cooperation countries (ICPC).

Additional Information:

- One or more proposals can be selected.
- ***Expected impact***: This research should empower national or regional decision-makers in low- and middle-income countries in the planning, management and organisation of health systems through the contribution of a robust evidence base building on best practice knowledge transfer mechanisms, to support the theory and practice of strengthening health systems. With reference to the health workforce, research could

contribute to the development of innovative, effective and sustainable policies that motivate health workers to remain in their workplaces, support education and training for health workers, strengthen governance capacities, and subsequently improve overall access and quality of health care. Projects are expected to promote capacity building as a key to creating a sustainable and attractive research landscape for health systems/services research in the target countries.

- Additional eligibility criteria: The requested EU contribution per project shall not exceed EUR 6 000 000
- Projects will only be selected for funding on the condition that consortia include a minimum of 6 different ICPC partners and a minimum of 2 EU/AC partners from different countries.
- The list of international cooperation partner countries (ICPC) is provided in Annex I to the Cooperation Programme ftp://ftp.cordis.europa.eu/pub/fp7/docs/icpc-list.pdf.

HEALTH.2012.4.1-2: Training actions linked to intellectual property rights management and knowledge transfer

SSH Relevant Scientific Field: Business Management, Law

Topic Description:

This three years coordination action shall address in particular participants in EU funded projects in health. The programme shall involved experienced practitioners with consolidated experience in the life-science sector and its specificities, who shall ***provide concrete case studies (on the MBA model) to be discussed and analysed by participants*** and, as appropriate, provide coaching and advise on specific situations, whenever appropriate will provide evidence on best practice on the transfer of knowledge, including standardisation. Hands-on training should be given in ***innovation management and economic exploitation of research results in health/life sciences*** including (i) ***intellectual property rights and asset management*** (ii) preparation of ***viable business/exploitation plans*** (iii) launching successful new companies, (iv) ad-hoc knowledge transfer for academia. The proposed action should strive to include most of the EU Member States and Associated Countries. It shall complement activities provided by organisations like Enterprise Europe Network or Fit for Health and National Contact Point activities, working in synergy with them and with other EU funded supports. Applications shall provide a detailed action plan with quantitative and measurable objectives.

Note: Limits on the EU financial contribution apply. These are implemented strictly as formal eligibility criteria.

Funding scheme: Coordination and Support Action (coordinating action)

Additional Information:

- Only up to one proposal can be selected.
- ***Expected impact***: This initiative is targeting in particular participants of EU funded projects in health, where a large percent are academics, with a programme tailored for the Healthcare sector and its specificities. It is promoting innovation in healthcare and supporting the Innovation Union Flagship Initiative, it should help researchers to lean towards interdisciplinarity, entrepreneurship and stronger business partnerships. It should contribute creating an innovation culture in all Member States.
- Additional eligibility criterion: The requested EU contribution per action shall not exceed EUR 2 000 000

HEALTH.2012.4.1-4: Communicating the benefits of European research to the general public

SSH Relevant Scientific Field: Anthropology, Linguistics, Media

Topic Description:

The objective is to support coordination actions that communicate the effects of health related scientific research to the general public. Actions would include information on the positive effects of Europe-wide collaborative research and technology development, and the benefits of cross cultural collaborations (industry-academia). ***Proposals should include media professionals (filmmakers, journalists)*** and scientists from academic organisations and industry, and possibly information distributors. ***Efforts should be made to ensure the multilingual potential of the project results*** and may be aimed at the European public in general or a specific group. Projects should be led by SMEs with proven capacities in creating high quality public productions, but the coordinator does not need to be an SME. It is expected that a team of professionals from both media and science will participate in the project. Examples of activities could include the production of a film or series of films portraying the impact of European science and research on one or more specific health issues or diseases, focused newsletters etc. Use of internet to communicate the production is encouraged.

Note: Limits on the EU financial contribution apply. These are implemented strictly as formal eligibility criteria.

Funding scheme: Coordination and Support Action (coordinating action)

Additional Information:

- One or more proposals can be selected
- ***Expected impact***: These actions should target to improve the visibility of EU-funded health research not only towards scientific community but also for the larger public. Successful projects should result in a tangible production, activity, event or product aimed at a high impact promotion of European science to the general public.
- Additional eligibility criterion: The requested EU contribution per action shall not exceed EUR 1 000 000

HEALTH.2012.4.1-5: Preparing the future for health research and innovation

SSH Relevant Scientific Field: Business Management, Finance

Topic Description:
Proposals for coordination actions are sought in important and/or emerging areas of health research, where there is a need to step up coordination efforts between European key players. Different actors from academia, industry, national programmes and other relevant organisations, should come together to develop a strategy plan for the further development of the targeted health research area with high impact on competitiveness, healthcare systems and benefit for European citizens' health. For all proposed activities European added value must clearly be discernible. Under this topic activities will be supported with the aim of assessing profoundly the research and/or innovation resources, gaps and needs of the thematic target area, and to evaluate its potential as a focal area for a future innovative partnership. Expert advice may be sought, and industry interest may be probed, such that in case of positive outcomes detailed roadmaps may be developed. Existing activities, such as project(s) aiming at the development of SRAs or roadmap-oriented activities, must be taken into account and - where relevant – coordination with these shall allow for synergies and exclude competition or duplication. In addition, the proposal should demonstrate how it intends to ensure maximum transparency and openness to all relevant

stakeholders. Where health issues are at stake that go beyond the confines of Europe, consideration may be given to integration of European coordination efforts with pertinent other international initiatives such that Europe may play an active and leading role in the respective thematic area of health research. Relevant target institutions and channels for diffusion of the deliverables (reports, recommendations, roadmaps, etc.) have to be clearly identified. The timeframe considered for implementation should also be duly justified.

Funding Scheme: Coordination and Support Action (supporting action)

Additional Information:
- One or more proposals can be selected.
- ***Expected impact***: Projects should contribute to preparing strong partnerships in key areas of health research, where important ***societal and/or economic return*** is expected. Where health issues go beyond Europe, projects may be used to coordinate the European participation in pertinent international activities.
- Additional eligibility criterion: The requested EU contribution per action shall not exceed EUR 500 000

HEALTH.2012.4.1-6: Setting health-related development goals beyond 2015

SSH Relevant Scientific Field:

Topic Description:
This action should provide the follow up of the current Millennium Development Goals (MDGs) and propose options for a set of new, health-related development goals for the period beyond 2015. The new development goals should capture the core health challenges of the current ones, but propose a better balance between horizontal and vertical approaches to healthcare. They should also pave the way towards an improved system for global health innovation, including aspects such as capacity building and technology transfer through partnership between private and public stakeholders from developing countries, emerging economies and industrialised countries. The proposed goals should be measurable, achievable and sustainable, and should consider the constraints of developing countries for improving health outcomes themselves.
Note: Limits on the EU financial contribution apply. These are implemented strictly as formal eligibility criteria.

Funding Scheme: Coordination and Support Action (coordinating action)

Additional Information:
- Only up to one proposal can be selected
- ***Expected impact***: This action should ensure that the health-related development objectives for the period after 2015 are based on the best scientific evidence available and address the main shortcomings of the current MDGs. Effective engagement in the global process for setting new development goals is expected, and the consortium should therefore ensure broad geographic and multidisciplinary coverage.
- Additional eligibility criteria: The requested EU contribution per action shall not exceed EUR 2 000 000

Programme: FOOD, AGRICULTURE AND FISHERIES, AND BIOTECHNOLOGY

Call Identifier: **FP7-KBBE-2012-6-singlestage**

Call's Objectives:

Building a European Knowledge Based Bio-Economy by bringing together science, industry and other stakeholders, to exploit new and emerging research opportunities that address social, environmental and economic challenges: the growing demand for safer, healthier, higher quality food and for sustainable use and production of renewable bio-resources, the increasing risk of epizootic and zoonotic diseases and food related disorders; threats to the sustainability and security of agricultural, aquaculture and fisheries production; and the increasing demand for high quality food, taking into account animal welfare and rural and coastal context and response to specific dietary needs of consumers.

The topics in WP2012 support the development of a sustainable European KBBE and contribute to the Europe 2020 strategy and the Innovation Union, in particular by (i) moving towards the completion of the European Research Area in the bio-based economy sectors (ii) linking the existing and new initiatives in the bio-based economy field such as joint programming, Lead Market, Innovation Partnership into a coherent policy framework (iii) stimulating innovation including promotion of knowledge transfer; (iv) contributing to the ***EU policies*** e.g. Common Agricultural Policy (CAP); reform of the Common Fisheries Policy (CFP); Integrated Maritime Policy (IMP); Community Animal Health Policy (CAHP); Key Enabling Technologies (KETs), regulatory frameworks to protect the environment, health and safety; regulatory frameworks related to resource efficiency and waste; (v) and supporting international initiatives such as the Millennium Development Goals and Global Research Alliance on Agricultural Greenhouse Gases.

Theme specific information

Providing the tools needed by policy makers and other actors to support the implementation of relevant ***strategies, policies and legislation*** and in particular to support the building of the European Knowledge Based Bio-Economy (KBBE) and the needs of rural and coastal development. The Common Fisheries Policy and the new European Maritime Policy will be supported through a whole ecosystem approach for the harvesting and the farming of marine resources. Research for all policies, including the Common Agricultural Policy, will include socio-economic studies and cost-benefit analysis, comparative investigations of different farming systems including multifunctional ones, cost-effective fisheries management systems, the rearing of non-food animals, interactions with forestry and studies to improve rural and coastal livelihoods.

Publication Date: 20 July 2011

Deadline: 15 November 2011

Call information:

http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-KBBE-2012-6-singlestage

List of relevant topics:

KBBE.2012.1.4-01: Design of a systems analysis tools framework for the EU bio-based economy strategy

KBBE.2012.1.4-03: Advocacy and informational material for different media targeting decision makers at different levels and end-users in Africa in the fight against neglected zoonotic diseases

KBBE.2012.1.4-05: Volatility of agricultural commodity markets

KBBE.2012.1.4-06: Short chain delivery of food for urban-peri-urban areas

KBBE.2012.1.4-07: Agricultural Knowledge and Innovation Systems for an inclusive Europe

KBBE.2012.1.4-08: Development and application of methodologies and tools, including indicators, for the assessment of environmental impacts of rural development programmes in the EU

KBBE.2012.1.4-09: International comparisons of product supply chains in the agro-food sectors: determinants of their competitiveness and performance on EU and international markets

KBBE.2012.2.1-01: Role of health-related symbols and claims in consumer behaviour

KBBE.2012.2.3-04: Personalised approaches to food production and distribution

KBBE.2012.2.5-02: Optimising food use for social innovation

KBBE.2012.2.5-03: A comparative analysis of global versus local food supply systems

KBBE.2012.3.3-01: Overcoming hurdles for innovation in industrial biotechnology in Europe

KBBE.2012.3.4-01: Conversion of bio-waste in developing countries – SICA (African ACP, Mediterranean Partner Countries)

KBBE.2012.3.5-04: Verification of GMO risk assessment elements and review and communication of evidence collected on the biosafety of GMO

List of topics with Agricultural Economics and Management and Business Management aspects (details not included in this document)

KBBE.2012.1.1-02: Animal and farm-centric approach to precision livestock farming in Europe

KBBE.2012.1.2-01: Development of new or improved logistics for lignocellulosic biomass harvest, storage and transport

KBBE.2012.1.2-03: Plant growth-promoting bio-effectors (microorganisms and active natural compounds) for alternative plant nutrition strategies in non-leguminous crops

KBBE.2012.1.2-06: Multipurpose trees and non-wood forest products for an innovative forestry in rural areas

KBBE.2012.1.2-07: Development of management strategies for planted and managed forests to increase mitigation capacity

KBBE.2012.2.2-03: Impact of lifestyle on well-being and diet-related disease

KBBE.2012.2.3-02: Exploitation of Framework Programme project results in food processing by small and medium-sized enterprises

KBBE.2012.3.1-02: Multipurpose crops for industrial bioproducts and biomass

KBBE.2012.3.3-03: Mastering integration and intensification of bioprocesses

KBBE.2012.1.4-01: Design of a systems analysis tools framework for the EU bio-based economy strategy

SSH Relevant Scientific Field: Agricultural Economics and Management, Business Management

Topic Description:

The relationships between the bio-economy sectors and with the rest of the economy within the European Union, the definition of the European strategy and the evaluation of its future impacts and long term evolution as well as its monitoring need the development of a systems analysis tools framework ; such a system would include data basis, indicators, models which would be used to proceed to forward looking analysis addressing forecast, foresight, impact assessment, evaluation of technologies; both quantitative and qualitative analysis would be considered.

This supporting action is limited to an exploratory / operational phase providing first results, and aiming at the elaboration of the concept and the design of such a systems analysis framework; it will identify (i) the data basis and indicators to be part of the framework, mainly related to the ***social, economic,*** environment and technology aspects (ii) the models to be considered, both ***macro-meso-economic*** and sectoral (agriculture, energy-environment…) models. These tools, preferably existing at this stage (or tools already under development) will be specified, as well as their accessibility; the necessary softwares for the access to these tools will be designed whereas new informatic developments for the interfaces between these tools will be specified.

The scope of the framework will cover EU countries with possibility of regional representation; land use, ecosystems and geographical dimensions should be also part of the framework if their size is relevant for the type of analysis to be done and compatible with the whole size of the framework. Large regions and countries of the world will have to be taken into account. The introduction of the tools under development within Framework Programmes (e.g. from Theme Food, Agriculture and Fisheries, and Biotechnologies – the

bio-based economy) into the framework analysis would have to be envisaged when appropriate.

Funding Scheme: Coordination and Support Action (supporting action)

Additional Information:

- Additional eligibility criterion: The requested European Union contribution shall not exceed EUR 500 000 per proposal.
- One project may be funded.
- ***Expected impact***: The proposed framework analysis would make possible during the next EU framework programme strategic analysis in terms of forward looking, impact assessment of policies and measures, monitoring research and innovation activities to support policies. It would help to start already in 2013 the development or adaptation of models and indicators, as well as data collection and elaboration of scenarios relative to the bio-based economy.

KBBE.2012.1.4-03: Advocacy and informational material for different media targeting decision makers at different levels and end-users in Africa in the fight against neglected zoonotic diseases

SSH Relevant Scientific Field: Agricultural Economics and Management, Cultural Anthropology, Gender Science, Pedagogy, Sociology

Topic Description:

Neglected zoonotic diseases (NZD) are endemic in most developing countries affecting livelihood of the poorest populations. Addressing the ***socio-economic, cultural and anthropological*** aspects are crucial in the fight against these diseases. In this regard the change in ***behaviour patterns*** of populations affected which contribute to the maintenance of these diseases needs to be tackled. Communities led initiatives have proven very fruitful in tackling diseases. In addition ***decision makers involved in animal and public health issues*** need to be involved for the support and sustainability of the initiatives and to transplant them to other areas. The project will generate ***educational material*** targeted to livestock owners, decision makers and media. It will involve a comprehensive multidisciplinary approach including ***sociology, economics, anthropology, gender science and traditional knowledge*** and environmental sciences. It will foresee the organization of an international conference.

Funding Scheme: Coordination and Support Action (supporting action)

Additional Information:

- Additional eligibility criteria:
  - The requested European Union contribution shall not exceed EUR 500 000 per proposal.
- SME-targeted projects will only be selected for funding on the condition that the estimated EU contribution going to SME(s) is 25 % or more of the total estimated EU contribution for the project as a whole. This will be assessed at the end of the negotiation, before signature of the grant agreement. Proposals not fulfilling this criterion will not be funded.
- One project may be funded.
- ***Expected impact***: Reduce prevalence of NZDs in a structural and sustainable way. Improve livelihood of affected populations by raising animal production and improving public health. MDGs. Continue commitment of the EU in NZDs. In line with “One

health". Development of models applicable to other parts of the world including in some European areas, Asia and Latin America.

KBBE.2012.1.4-05: Volatility of agricultural commodity markets

SSH Relevant Scientific Field: Agricultural Economics and Management, Business Management

Topic Description:

Price volatility remains on the international agenda. Volatility of agricultural and food prices and its implications for producers, consumers and food security continue to be discussed following price changes of 2007 – 2008, and more recently in 2011. Commodity price volatility has been analysed using rather simple statistical and econometric tests. Additional tools are needed to deepen the analysis, especially on the linkages between financial and physical markets. A variety of methods can also be borrowed from financial economics. Moreover, new, multidisciplinary theories (possible going past perfect competition and broadening to new areas) and approaches are needed. This includes better linkages between ***financial, economic and geo-physical models*** (e.g. impact of climate change on production and yields).

The project calls for state-of-the art literature review of methods and results of price volatility, advancing methods to study price volatility including an in-depth study of price volatility on various markets in various stages along the food chain using advanced statistical and ***econometrical methods*** for different agricultural commodities as well as quantitative assessment of volatility on agricultural and food markets, its causes (including yields) and its impacts. Price volatility will be studied for both financial and physical markets, including their linkages. Different agricultural commodities some agricultural inputs and relevant nonagricultural commodities should be covered with different data frequences and with a preference for more frequent (daily). Both international benchmark prices as well as more local markets, including the EU and selected developing country markets should be covered.

The project should study (and quantify when possible) the causes of changes in agricultural commodity price volatility, such as on the supply and demand sides seeking reasons for changes in supply and demand going beyond seasonal factors, and exploring the share of price changes explainable by changes in fundamentals. This implies incorporating linkages between economic models and geo-physical models (e.g. impact of climate change on yields). Linkages with and transmission from other commodities with have a connection with agriculture, macroeconomic linkages: e.g., impact of exchange rates, interface between financial and physical markets and the role of policies should be considered. Food, feed and non-food uses should be considered. The impact of volatility on farmers and users along the food chain, including a focus on the most vulnerable in Europe and in developing countries should also be considered.

Funding Scheme: Collaborative project (small or medium-scale focused research project)

Additional Information:

- Additional eligibility criterion: The requested European Union contribution shall not exceed EUR 1 500 000 per proposal.
- One project may be funded.
- ***Expected impact***: The project would contribute to a better understanding of market dynamics and discussion of risk management policy tools in the Common Agricultural Policy (CAP) post 2020 debate. It will also contribute to informing discussions and policy recommendation in international forums dealing with price volatility and

development of new policy tools. It will have implications for different EU policies in agriculture, common market, enterprise, development and trade.

KBBE.2012.1.4-06: Short chain delivery of food for urban-peri-urban areas

SSH Relevant Scientific Field: Finance, Sociology

Stakeholders: Policy makers

Topic Description:

The rapid urban growth no longer supports the traditional divide between 'urban' and 'rural'. In Europe, a significant share of agricultural activities take place in highly urbanised settings, producing food and public goods (such as recreation, landscape management) and confronted with particular pressures on land resources as well as opportunities. There is a growing trend in the urban population to consume fresh and local products, demand short chain food delivery and to request more transparency on the origin of the products. Citizens are increasingly calling for the creation of a regional urban-focused food system and for support to small farmers in rural peri-urban areas, in order to increase availability and accessibility to food. Moreover, both technological and ***social innovation*** in urban peri-urban agriculture can play an important role in mitigating climate change, closing nutrient cycles and prepare effective tools for adaptation and building more resilient urban areas.

In developing countries, there has been a growing recognition of the significance of urban and peri-urban agriculture (UPA) for poor people's livelihood, contributing to food security and poverty alleviation. However, negative impacts of UPA include the potential over-use of pesticides and human exposure to contaminants and pathogens associated with UPA conflict in use of natural resources, land and water, between agriculture, industry and urban development.

The project will provide technical and institutional insights for sustainable development pathways of peri-urban food supply chains in different EU countries, and, if relevant, also in developing countries. Special attention shall be paid to identifying sustainable solutions for water management and nutrient recycling while keeping the local food supply chains safe for the consumer. For this purpose, innovative concepts in different farming systems (conventional, low-input, organic production) shall be studied.

The role of ***social innovation*** and institutional interaction is an important issue to consider in terms of ***governance processes*** towards sustainable decision making of land-use in peri-urban areas. The role of the CAP and rural development as an instrument to reach sustainability objectives has also to be assessed for EU countries. Similarly, the relation between peri-urban pressures and the participation of farmers and other stakeholders in rural development measures shall be considered. Technical, ***economic, and social aspects***, including logistical aspects, of the establishment of short chain delivery in peri-urban areas should be studied with the help of a range of case-studies, and best practices. The involvement of SMEs in the process is essential.

Funding Scheme: Collaborative project (small or medium-scale focused research project targeted to SMEs)

Additional Information:

- Additional eligibility criteria: The requested European Union contribution shall not exceed EUR 1 500 000 per proposal.
- SME-targeted Collaborative Projects will only be selected for funding on the condition that the estimated EU contribution going to SME(s) is 15 % or more of the total

estimated EU contribution for the project as a whole. This will be assessed at the end of the negotiation, before signature of the grant agreement. Proposals not fulfilling this criterion will not be funded.

- Up to two projects may be funded.
- ***Expected impact***: The topic is expected to generate new knowledge on the development of peri-urban areas and to provide safe and healthy food to the benefit of consumers together with more transparency in the delivery process. It is expected to generate innovative approaches involving SMEs to short chain food supply together with multi-functional approach to peri-urban agriculture in EU countries and possibly in developing countries. It is expected to contribute to the development of rural-urban policy.

KBBE.2012.1.4-07: Agricultural Knowledge and Innovation Systems for an inclusive Europe

SSH Relevant Scientific Field: Business Management

Topic Description:

Extension services have been reformed in recent years in a number of EU Member States (partly under the pressure of decreasing public resources and changes in the thinking about the roles of the various players) but the needs for this kind of services are still very high (e.g. increasing regulatory constraints such as environment, safety, standards etc). In some of the countries of the European Union, there is also a large layer of semi-subsistence farms and small commercial farms, which are not sufficiently involved in knowledge exchanges.

A complete picture of the EU-27 is needed on the research – extension – farmers knowledge flows in both directions. The basis of this picture should be a comprehensive inventory of the actors in the field: basic and applied agricultural research institutes and universities, advisory and extension services, and other actors influencing research priorities and practical decision making on farms, e.g. co-operations, supply services, farmers` organisations and groups, etc. The formal and informal interactions between all these actors in the different Member States should be described. A typology of knowledge flow systems should be elaborated. Surveys will support the description of knowledge flows and will help to reveal how research and farming practice are linked, how the scientific community is informed about research needs and how the spread of technological and ***social innovation*** can be promoted.

Which systems are part of the official Farm Advisory System of the Common Agricultural Policy and which other public and private advisory services are operational in the field? Information is needed on farmers access to these services, including possible constraints for uptake of advice (e.g. price, trust etc.) and whether what is delivered meets their challenges. Is there a need for knowledge outside classical agricultural disciplines and how is it mobilised? Which forums could improve coordination, which could be good incentives to reconnect farm practice and research, to encourage uptake of advice, to valorise flows from advisors to research and vice versa, and to push application of innovative practices and techniques?

The project would extend and deepen the work undertaken in the framework of the Agriculture Knowledge and Innovation Systems (AKIS) collaborative working group in the Standing Committee on Agricultural Research (SCAR). It would be complementary to ongoing projects like SOLINSA and build on previous projects like EU-AgriMapping or Insight.

Funding Scheme: Coordination and Support Action (supporting action)

Additional Information:
- Additional eligibility criterion: The requested European Union contribution shall not exceed EUR 1 500 000 per proposal.
- One project may be funded.
- ***Expected impact***: The project will contribute to build a European agricultural innovation system and lead to better informed policy decisions on how to improve the functioning of the different components on European, national and regional level.

KBBE.2012.1.4-08: Development and application of methodologies and tools, including indicators, for the assessment of environmental impacts of rural development programmes in the EU

SSH Relevant Scientific Field: Agricultural Economics and Management

Topic Description:

Council Regulation (EC) No 1698/2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) provides the legal framework for the preparation and implementation of rural development programmes in the Member States for the period 2007-2013. The regulation establishes the overall objectives, strategic approach and specific priorities for the EU rural development policy for the period 2007-2013.

The regulation acknowledges the importance of evaluating the ***socio-economic*** and environmental impacts of the rural development programmes to ensure accountability and to allow for improvements to be made in terms of the design and targeting of the support. The Common Monitoring and Evaluation Framework (CMEF) for rural development policy provides a solid foundation in this respect and progress has been achieved over the last years in developing appropriate evaluation methodologies and tools.

However, the evaluation of environmental impacts is especially challenging and Member States have reported difficulties in identifying the impacts attributable to specific rural development measures in the context of multiple intervening factors. Moreover, environmental impacts are strongly influenced by site-specific circumstances, and they may take a long time to emerge.

In this context, the objective of the research project should be the development of new and improved evaluation methodologies and tools in order to:
- Assess the environmental impacts of rural development programmes against their counterfactual (i.e. calculating the changes that would have occurred without the specific programme intervention).
- Measure the micro and the macro level environmental effects of the programmes and to meaningfully integrate the results.
- Estimate the net environmental effects of rural development programmes by netting out deadweight, substitution and multiplier effects.

Funding Scheme: Collaborative project (small or medium-scale focused research project)

Additional Information:
- Council Regulation (EC) No 1698/2005 - OJ L 277 of 21.10.2005, p. 1.
- Additional eligibility criterion: The requested European Union contribution shall not exceed EUR 2 000 000 per proposal
- One project may be funded.

- ***Expected impact***: The project will contribute to a better delivery of public goods through the Common Agricultural Policy. A better targeting of the measures will increase their costeffective contribution to environmental objectives, like those linked to climate change mitigation, biodiversity and others.

KBBE.2012.1.4-09: International comparisons of product supply chains in the agro-food sectors: determinants of their competitiveness and performance on EU and international markets

SSH Relevant Scientific Field: Agricultural Economics and Management, Business Management

Topic Description:

The EU international trade in agri-food products plays a major role. In particular, the EU is a significant exporter of processed products with final products representing 68% it its exports in value in 2007-2009, intermediary products representing 23% and commodities only 9%. The significance of these final products has regularly increased in the past years. At the same time the EU is a significant importer of agri-food products from third markets.

Assessments of the competitiveness on international markets are often limited to some segments of the product chains, e.g. comparison of competitiveness at the farm level, whereas the determinants of competitiveness of the agri-food industry go well beyond production cost comparisons: they include other elements of prices and costs (e.g. logistics, losses along the product supply chains, etc.) but also non-price competitiveness elements (strategies of firms, product differentiations, innovations, etc.). Given the important role of the EU and international markets for EU product chains, in particular for processed products, it is important to gain a more comprehensive view on the different elements which contribute to their competitiveness.

The project should cover the measurement of the components of the competitiveness of product chains on both the EU market and international markets for a selection of major products and relevant countries. It should provide and analysis of costs (including at agricultural level) along the product chains, including logistics and assessment of the significance of losses along the product supply chain. The analysis at farm level would include the evolutions of total factor productivity. Price/cost transmission along the product chain should be covered as well as other elements of the competitiveness (product differentiation, ***economies of scale***, sourcing, etc.)

Funding Scheme: Collaborative Project (small or medium-scale focused research project)

Additional Information:

- Additional eligibility criterion: The requested European Union contribution shall not exceed EUR 2 500 000 per proposal.
- One project may be funded.
- ***Expected impact***: An assessment of competitiveness of the European agro-food industry will allow better targeted and evidence based ***policies***. A better ***assessment of the various costs*** along the food supply chain will provide a the information needed to develop better regulation further in line with the citizens expectations while keeping the competitiveness of the agrofood chain.

KBBE.2012.2.1-01: Role of health-related symbols and claims in consumer behavior

SSH Relevant Scientific Field: Behavioural and Cognitive Science, Psychology

Topic Description:

The labelling of food products is intended to help consumers make an informed choice when buying food. The project will provide scientific evidence on how consumers understand health claims and health-related symbols, and how those claims and symbols contribute to healthier food choices at the point of purchase. ***Behavioural and cognitive science research*** should address the health-related information that the consumer wants, needs and understands on food labels, how best to present this information, and what behavioural consequences and changes health claims and health-related symbols may induce in purchasing and consumption patterns. Health-related information on labels should be considered, together with other labelling information on the food product itself, as well as other information made available to the consumer. The wording of health claims should be addressed with a view to avoiding possible misinterpretation on the part of the consumer, and to optimise the impact of such claims on healthier choices, taking into account country specificity.

Funding Scheme: Collaborative Project (small or medium-scale focused research project)

Additional Information:

- Additional eligibility criterion: The requested European Union contribution shall not exceed EUR 3 000 000 per proposal.
- One project may be funded.
- ***Expected impact***: Generation of knowledge of how to guide the consumers' behavior towards healthy choices. Contribution to the EU policy related to food information and health claims leading to social innovation.

KBBE.2012.2.2-03: Impact of lifestyle on well-being and diet-related disease

SSH Relevant Scientific Field: Economics, Gender Science, Psychology, Sociology

Topic Description:

The objective is to improve understanding of the effects of ***lifestyle factors*** on human health and their relative importance, so as to contribute to developing new ways for the prevention of diet-related diseases, and for maintaining and promoting optimal health and well-being across lifespan and ultimately towards healthy ageing. The effects of lifestyle factors, diet and physical activity and their interaction with other lifestyle factors, such as sleep and stress, should be considered, as well as links with ***behavioural***, environmental, ***cultural and socioeconomic components***. The research will aim at augmenting scientific understanding as it applies to humans based on epidemiological and/or intervention studies. The lifestyle factors influencing health should be representative of those currently pertaining at European level, with a view to contributing to better strategy in public health. The EU's ageing population is a major challenge, with significant ***social and economic implications***, so research should address all age groups and include elderly subjects. Where appropriate, ***gender issues*** should be considered.

Funding Scheme: Collaborative Project (large-scale integrating project)

Additional Information:

- Additional eligibility criterion: The requested European Union contribution shall not exceed EUR 9 000 000 per proposal
- One project may be funded.

- ***Expected impact***: The project will provide more knowledge on the relationship between lifestyle factors, health and well-being, and evidence of the importance of lifestyle in helping to prevent diet-related diseases and contribute to healthy ageing of the population in Europe. The European added value lies in the fact that the expected project results should clearly be of interest and potential benefit to European citizens, in particular elderly population, as they will help to inform new strategies in public health. Projects supported under this topic should integrate relevant partners from Australia, Canada, New Zealand, and/or the USA. The participation of partners from those countries is essential to achieve the expected impact of the research to be undertaken.

KBBE.2012.2.3-04: Personalised approaches to food production and distribution

SSH Relevant Scientific Field: Business Management

Topic Description:
The aim is to further develop processing, packaging and distribution aspects of convenient, personalised food products attractive to the consumer. Personalisation can take many forms, and might refer to individual health or ***lifestyle aspects*** and/or address ***personal preferences*** regarding quality, portion size or cost, convenience, packaging, taste or pleasure, or it might concern specific target groups. The project will provide integrated approaches applicable to SMEs that include innovative technological and organisational solutions for production and processing of personalised foods, their delivery to consumers at the point of purchase, and their preparation at the point of consumption. The project should involve scientists, industry (especially SMEs), catering services and/or retailers. It should be emphasised that this topic definitely goes beyond the following issues: nutrigenomics, genotyping and phenotyping; specific nutrients; dietary advice. The conceptual models should be applied to developing prototype foods for a limited segment of the market, preferably in a demonstration unit. Dissemination and demonstration of the technological and organisational solutions developed will be required. If applicable, an environmental, social and economic life-cycle assessment in line with the International Reference Life Cycle Data System (ILCD) Handbook should be carried out.

Funding Scheme: Collaborative Project (small or medium-scale focused research project targeted to SMEs)

Additional Information:
- Additional eligibility criteria:
  - The requested European Union contribution shall not exceed EUR 3 000 000 per proposal.
  - SME-targeted Collaborative Projects will only be selected for funding on condition that the estimated EU contribution going to SME(s) is 35 % or more of the total estimated EU contribution for the project as a whole. This will be assessed at the end of the negotiation, before signature of the grant agreement. Proposals not fulfilling this criterion will not be funded.
- Up to two projects may be funded.
- ***Expected impact***: The European added value lies in strengthening European research capacity to provide sound scientific support to a technology that might be an important breakthrough in food distribution. Processing and distribution technologies will be integrated into innovative applications with direct impact on the consumer leading to ***social innovation***. In the long run, a strong contribution to diversifying the food industry's range of products for consumers is expected.

KBBE.2012.2.5-02: Optimising food use for social innovation

SSH Relevant Scientific Field: Business Management, Pedagogy, Psychology, Sociology

Stakeholders: Policy makers, consumer organisations, NGOs, Regulators

Topic Description:
Numerous families in Europe have been pushed to the edge of poverty by the current economic crisis and are facing difficulties in purchasing quality foods. At the same time, a large amount of food in Europe is wasted in the retail and catering sector, in restaurants and households. The current lack of unambiguous data regarding food waste, however, makes it impossible to define policy and other measures to appropriately deal with this issue and reduce the ***social*** and environmental impacts of food wastage. The widely differing sources of information at Member State level hinder the availability of relevant, high-quality and comparable data, resulting in a fragmented, partially redundant and often incomplete picture on food waste, which impedes the analysis of long-term trends in food waste management.
This topic aims (1) at obtaining reliable data and information sources to improve understanding of the patterns and causes of food waste, at giving possible solutions for improved food use, and at making recommendations to ***policy makers for social innovation***. The project should also aim (2) at setting up European and national multi-stakeholder platforms (comprising, among others, ***consumer organisations***, food services, retailers, **NGOs**, ***regulators***, food industry, food scientists, and ***socio-economic experts***) to look at options to prevent or reduce food wastage at household, food service and retail level. The platforms (3) should produce recommendations to be used for policy makers and regulators at European and national level addressing ***socially innovative solutions*** for optimised food use including also ***socio-economic incentives and improved legislation***. In addition, the platforms (4) should test some best practices for reducing food wastage (for example regarding logistics) via feasibility studies with all stakeholders involved.

Funding Scheme: Coordination and Support Action (supporting action)

Additional Information:
- Additional eligibility criteria: The requested European Union contribution shall not exceed EUR 4 000 000 per proposal
- One project may be funded.
- ***Expected impact***: This topic will improve the coordination of the monitoring activities by the Member States on food wastage and its ***social*** and environmental impacts. The data collected through standardised methodologies will, in turn, allow EUROSTAT and the Member States to report correctly on the issue of food waste and ultimately facilitate the shaping of better food waste management strategies. Improving the food waste reporting requirements at EU and Member State level is seen as an essential step for the prevention of food wastage. It will also enable policy initiatives aiming at coherent food safety and hygiene regulation, labeling (best-before date), food distribution, and ***awareness and educations campaigns*** to all players involved. In the context of ***social innovation***, the feasibility studies carried out should show best-practice examples to be applied by others. The project supported under this topic should lead to a greater integration of research actors and activities from across the European Union, and the candidate countries.

KBBE.2012.2.5-03: A comparative analysis of global versus local food supply systems

SSH Relevant Scientific Field: Business Management, Agricultural Economics and Management, Sociology

Topic Description:

The EU consumer has been used to purchasing quality food at affordable prices. The food crisis of 2007-2009 and current food price spikes have marked an end to this certainty. Buying local food is advocated as more sustainable by some professional groups and a justified alternative to buying from global food supply chains, though the benefits of this are not substantiated by scientific evidence. There is currently no comprehensive EU-wide database on the advantages, drawbacks and total cost of local versus global food production and supply systems. The objective of this topic is to analyse the benefits and disadvantages of both systems in terms of value and sustainability. ***A full understanding of the real cost of food is needed***. This includes the examination of external costs, which may refer to environmental degradation, food safety surveillance systems, public health, fair income distribution, and animal welfare or any other cost which is still ignored, minimised or moved to another economic sector of society.

Funding Scheme: Collaborative Project (small or medium-scale focused research project)

Additional Information:

- Additional eligibility criteria: The requested European Union contribution shall not exceed EUR 3 000 000 per proposal
- One project may be funded.
- ***Expected impact***: The EU added value of this topic lies in its potential to create a common scientific basis for supporting food-related EU policies with an impact on ***social innovation***. A better understanding of external costs would facilitate comparison between global and local food systems and enable evidence-based decision-making concerning which food systems to support. Enhanced knowledge of the real cost of food could harness demand towards sustainably-produced food as a consumer segment that is likely to continue growing. Equally, it could help to identify situations in which moves to increase sustainability could have an ***impact on the poorest people***, who will require support. Projects supported under this topic should lead to a greater integration of research actors and activities from across the European Union, and the candidate countries.

KBBE.2012.3.3-01: Overcoming hurdles for innovation in industrial biotechnology in Europe

SSH Relevant Scientific Field: Economics, Business Management

Stakeholders: Policy makers, NGOs, Regulators

Topic Description:

Several hurdles hamper the full exploitation of Industrial Biotechnology's (IB) potential today:

- Lack of awareness of potential benefits that IB can offer to a number of established and often conservative sectors;
- Unfavourable framework conditions for innovation in IB due to regulatory uncertainty, e.g. on intellectual property rights, standards and labelling rules;
- Limited access to pilot plants and financing of demonstration plants for up-scaling;
- Limited available data on the use of biomass for the development of a wide range of bioproducts.

The objective of the project is to: i) identify relevant stakeholders and end-users at regional, national and European level; ii) create platforms enhancing the interaction between these groups with IB -related stakeholders (e.g. large industries and SMEs, industry associations, academia) with the aim to obtain a comprehensive overview of the

market potential of IB, setting R&D priorities and identifying needs for pilot and demonstration plant activities.; iii) identify regulatory hurdles that may inhibit these collaborations and prepare a study for ***policy makers*** on key market entry barriers; iv) identify reliable data sources and establish a data collection that can be used for annual analyses and prospective studies (for 2020 and beyond) on the use of biomass for the production of bioproducts in the EU in general and by sector; v) establish robust communication and dissemination tools (e.g. a website, conferences, training, reports, brokerage events) that facilitate the transfer of knowledge and technology between all the stakeholders and will ensure a long lasting impact of the project.

The project will strengthen the IB sector as a provider of technological solutions for many industrial sectors (e.g. energy, chemicals, materials, consumer products and mining) and improve the balance between technology push and market pull. The data collection on the use of biomass for the production of bioproducts in the EU will constitute a basis for developing of an institutional frame for annual reporting, (e.g. like the EurObserv'ER on Renewable Energy), and will complement the reports on biomass use for energy under Directive 2009/28/EC. The project will provide clear indicators to measure the ***socio-economic*** and environmental impact of IB and the use of biomass for bioproducts in the EU (e.g. on employment, GDP, climate change mitigation potential).

The project will liaise with industry associations, European Technology Platforms (ETPs) and other relevant organisations and networks. Interaction with policy-makers, policy support bodies (e.g. JRC, EuroStat) and other relevant stakeholders (e.g. ***NGOs***) at national and European level must be explored.

The activities of the project will take into account existing initiatives supporting innovation in IB under FP7 and the Competitiveness and Innovation Framework Programme.

Funding Scheme: Coordination and Support Action (coordinating action)

Additional Information:

- Additional eligibility criteria:
  - The requested European Union contribution shall not exceed EUR 2 000 000 per proposal.
  - Minimum number of participants: 3 from different Member States or Associated countries.
- One project may be funded.
- ***Expected impact***: The project will support the creation of a more favourable environment for innovation in IB, thus enhancing European industrial competitiveness in this sector. In particular, it will contribute to establishing a healthy balance between technology push and market pull in the area of IB and thus reduce ***regulatory*** uncertainty and commercial risk, as well as leverage more private investment into IB solutions. The project's annual reports on the use of biomass for bioproducts will help establishing an efficient strategy for the biomass use in the EU.

KBBE.2012.3.4-01: Conversion of bio-waste in developing countries – SICA (African ACP, Mediterranean Partner Countries)

SSH Relevant Scientific Field: Anthropology, Business Management, Pedagogy

Stakeholders: Local Communities, International Organisations, NGOs

Topic Description:

Agricultural, industrial and municipal biowastes are often insufficiently exploited in developing countries despite being a potential feedstock for value-added products with

local applications. At the same time these biowastes can cause problems for human and animal health and the environment.

The objective of the project is to develop biotechnological processes for converting three types of biodegradable wastes, i.e. municipal, agricultural and industrial biowastes into useful bioproducts for different applications, e.g. animal feed, fertilisers and biofuels. Numerous methods exist for this type of conversion processes. Some of these available methods are quite sophisticated but others are simple and could be adapted to the local conditions found in different developing countries.

The project will therefore: 1) assess biotechnological methods adapted to the ***socio-economic*** and environmental ***conditions*** of developing countries for the conversion of biowastes (cost benefit analysis of the techniques); 2) document best practices including traditional knowledge and management strategies and opportunities offered by innovative technologies; and 3) develop novel schemes and methodologies for knowledge transfer and application, for ***education*** and training (e.g. short exchanges of staff or training workshops) and for raising awareness of options for the conversion of biowaste.

In order to ensure that the proposed processes are in line with the needs in developing countries, the project should involve ***local communities***, ***international organisations*** and ***NGOs***. A robust dissemination strategy involving these stakeholders will be key to maximising the long-term impact of the project.

Funding Scheme: Collaborative Project (small or medium-scale focused research project) for Specific Cooperation Actions dedicated to International Cooperation partner countries

Additional Information:

- Additional eligibility criteria:
  - The requested European Union contribution shall not exceed EUR 3 000 000 per proposal.
  - Minimum number of participants: 3 from different Member States or Associated countries and 3 from different ICPC from African ACP and Mediterranean Partner Countries.
- One project may be funded.
- ***Expected impact***: The project will contribute to the Millennium Development Goals by improving the management of biowastes in developing countries and thus reducing their potential adverse impacts on human and animal health, the environment and the ***economy***. A well balanced participation of European and African partners is required to address the issues properly and produce the expected impact. It is considered that the involvement of partners from other ICPC countries should add to the expected impact of the research to be undertaken. Solutions developed in partnership between the European, African and international partners will be well adapted to local conditions.

KBBE.2012.3.5-04: Verification of GMO risk assessment elements and review and communication of evidence collected on the biosafety of GMO

SSH Relevant Scientific Field: Business Management, Communication, Finance, Pedagogy

Stakeholders: Policy makers, Regional or National authorities, NGOs

Topic Description:

Specific questions about the environmental and health effects of GMOs and GM food and feed remain to be answered on a perceived lack of readily available information on environmental and health effects of already commercialised GMOs (GM crops/plants in

general, GM food/feed) and on the design, execution and interpretation of results of animal feeding trials for assessing the safety of GM food and feed.

Environmental, health and ***socio-economic effects*** of the aforementioned GMOs have been the subject of scientific analysis, however a comprehensive review of national, EU and international research activities in this regard and in view of any potential benefits of GMOs is missing. Collection and review of information must take account of scientific quality and could be based on an open-access database. Linking up with already ongoing/existing activities will be considered (e.g. Scientific Committee for Agricultural Research Collaborative working group GMO, Cooperation in Science and Technology action 0905, International Centre for Genetic Engineering and Biotechnology, International Society for Biosafety Research, GM crop database of the Centre for Environmental Risk Assessment, etc.). Mechanisms to maintain the operation of the database beyond the lifetime of the project will be explored and implemented where possible.

With regard to toxicological studies based on animal feeding trials, proposals will aim to gather further knowledge on the need and design of such studies and the interpretation of the results obtained and associated uncertainties. In particular the: a) need for 90-day feeding trials in all cases (single event GMOs/stacked GMOs); b) design of 90-day feeding trials on the basis of whole GM food/feed; c) added-value of extending the duration of 90-day feeding trials will be investigated. Proposals will also aim to provide scientific guidance on the biological relevance of observations made during GMO feeding trials. These animal feeding studies should cover several GMOs and should be performed in accordance with the relevant European Food Safety Authority guidance and of guidance available through other national or international bodies (e.g. Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail, OECD, Codex Alimentarius). Furthermore, account will be taken of the "three R's" principle, as anchored within the revision of EU Directive 86/609/EEC. The suitability of in-vitro tests to replace in-vivo tests must be considered and tested. Studies should be carried out according to relevant quality assurance standards.

Dedicated ***communication programmes***, targeting specific groups (scientists, ***policy makers***, general public) will be developed. These could include e.g. a series of citizens' conferences in EU Member States, handbooks, websites, ***educational*** 'bio-kits' or other appropriate solutions. Interaction and networking with local, ***regional or national authorities***, science organisations, ***NGOs*** and other stakeholders should be considered.

Funding Scheme: Collaborative Project (large-scale integrating project)

Additional Information:

- Additional eligibility criterion: The requested European Union contribution shall not exceed EUR 6 000 000 per proposal
- One project may be funded.
- ***Expected impact***: The selected project is expected to support EU risk assessors and EU policy makers by providing scientific evidence and scientific recommendations regarding the EU risk assessment process and generally on the outcome of research on the biosafety of GMOs. This is expected to increase the awareness of the evidence available regarding benefits and risks of GMOs and reduce relevant knowledge gaps, but even more importantly increase overall confidence across the Member States in the EU risk assessment and management principles of GMOs.

Programme: INFORMATION & COMMUNICATION TECHNOLOGIES

Call's Objectives:

Improving the competitiveness of European industry and enabling Europe to master and shape future developments in ICT so that the ***demands of its society and economy are met***. ICT is at the very core of the knowledge-based society. Activities will continue to strengthen Europe's scientific and technology base and ensure its global leadership in ICT, help drive and stimulate product, service and process innovation and creativity through ICT use and value creation in Europe, and ensure that ICT progress is rapidly transformed into benefits for Europe's citizens, businesses, industry and governments. These activities will also help reduce the digital divide and social exclusion.

Funding Schemes:

The activities supported by FP7 will be funded through a range of funding schemes as specified in Annex III of the FP7 decision. These schemes will be used, either alone or in combination, to fund actions implemented throughout FP7. The funding schemes used for the research objectives identified in this Work Programme are the following (see Appendix 2 for more details):

Collaborative Projects (CP)

Support to research projects carried out by consortia with participants from different countries, aiming at developing new knowledge, new technology, products, demonstration activities or common resources for research. The Funding Scheme allows for two types of projects to be financed: a) 'small or medium-scale focused research actions' (STREP), b) 'large-scale integrating projects' (IP).

STREPs target a specific research objective in a sharply focused approach while large scale integrating projects have a comprehensive 'programme' approach and include a coherent and integrated set of activities dealing with multiple issues.

Both instruments play an important and complementary role. With this Work Programme, the objective is to support a balanced portfolio of projects that will enable on one hand focused and agile scientific and technological exploration through STREPs and on the other hand concentration of efforts - where needed - through IPs.

To this end, an indicative budget distribution per instrument is specified for each objective and also to some extent per funding scheme. The distribution is based on the size of the available budget per objective and on the nature of the research needed to achieve the relevant target outcome and expected impact.

The overall aim is to ensure that about half of the support for Collaborative Projects is delivered through IPs and about half through STREPS.

Networks of Excellence (NoE)

Support to Joint Programme of Activities implemented by a number of research organisations integrating their activities in a given field, carried out by research teams in the framework of longer term cooperation.

Coordination and Support Actions (CSA)

Support to activities aimed at coordinating or supporting research activities and policies (networking, exchanges, coordination of funded projects, trans-national access to research infrastructures, studies, conferences, etc). These actions may also be implemented by

means other than calls for proposals. The Funding Scheme allows for two types of projects to be financed: a) 'Coordination Actions' (CA), b) 'Specific Support Actions' (SA).

Combination of Collaborative Projects and Coordination and Support Actions (CP-CSA)

CP-CSA involves a combination of the collaborative projects and coordination and support actions (CP-CSA) funding schemes. It enables therefore the financing, under the same grant agreement, of research, coordination and support activities. In this Work Programme, CPCSAs requiring Pre-Commercial Procurement (PCP) will combine:

- Networking and coordination activities: for public bodies in Europe to cooperate in the innovation of their public services through a strategy that includes PCP.
- Joint research activities: related to validating the PCP strategy jointly defined by the public bodies participating in the action. This includes the exploration, through a joint PCP, of possible solutions for the targeted improvements in public sector services, and the testing of these solutions against a set of jointly defined performance criteria.

This work programme specifies for each of the research objectives, the type(s) of funding scheme(s) to be used for the topic on which proposals are invited.

List of relevant topics:

Call identifier: FP7-ICT-2011-8

- **Publication Date**: 20 July 2011
- **Deadline**: 17 January 2012
- **Call information**: http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-ICT-2011-8

ICT 2011.1.4 Trustworthy ICT

ICT 20011.1.6 Future Internet Research and Experimentation (FIRE) (b), (c), (e)

ICT-2011.6.7 Cooperative Systems for energy efficient and sustainable mobility

ICT-2011.8.1 Technology-enhanced learning

ICT-2011.9.14 'Science of Global Systems'

Call identifier: FP7-ICT-2011-9

- **Date of publication**: 18 January 2012
- **Deadline**: 17 April 2012
- Topics related to this call are published in the Work Programme of the FP7-ICT-2011-8 call:

http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-ICT-2011-8

ICT-2011.8.2 ICT for access to cultural resources

Call identifier: FP7-ICT-2011-8

ICT 2011.1.4 Trustworthy ICT

SSH Relevant Scientific Field: Finance, Law, Sociology

Topic Description:

The objective is a trustworthy Information Society based on an ecosystem of digital communication, data processing and service provisioning infrastructures, with trustworthiness in its design, as well as ***respect for human and societal values and cultures***. Projects must ensure ***strong interplay with legal, social and economic research*** in view of development of a techno-legal system that is usable, socially accepted and economically viable.

a) ***Data policy, governance and socio-economic ecosystems***
   - Management and governance frameworks for consistent expression and interpretation of security and trust policies in data governance and means for implementation, including in the ubiquitous scale-less Web or Cloud. ***Technology supported socio-economics frameworks for risk analysis, liability assignment, insurance and certification to improve security and trust economics in the EU single market.***
   - Multi-polar governance and security policies between a large number of participating and competitive stakeholders, including mutual recognition security frameworks for competing operators; transparent security for re-balancing the unfair, unequal face-to-face relationship of the end-user in front of the network; tools for trust measurement, based on cost-benefit analysis.

Priority will be given to (i) ***stimulating and organising the interplay between technology development and legal, social and economic research through multi-disciplinary research communities***; (ii) promoting standards, certification and best practices; (iii) coordination of national RTD activities.

Funding Schemes: IP and STREP

ICT 20011.1.6 Future Internet Research and Experimentation (FIRE) (b), (e)

SSH Relevant Scientific Field: Economics, Sociology

Topic Description:

b) **FIRE Experimentation:** Experimentally-driven research in the broad field of the Future Internet using one or more of the existing FIRE facility prototypes. Projects should be challenging both in terms of visionary R&D to be undertaken, e.g. on holistic network and service architectures, on ***applications with high social value***, on low energy and cost solutions, etc.; and in terms of innovative usage of the facility, e.g. large scale & diversity of experiments, broad and systematic involvement of large groups of end-users, complex system-level testing, ***assessment of socio, economic***, or environmental impact, and methodology and tools used for measurements and benchmarking. Proposers must demonstrate a clear commitment of the FIRE facilities they intend to use.
   Where appropriate, participation from international cooperation countries at use level is encouraged.

e) **Coordination and Support Actions**: EU-wide co-operation with related EU-level and Member States and associated countries activities such as the Public Private Partnership on the Future Internet, or national experimentation facilities; international co-operation with initiatives in industrial countries and emerging economies; co-operation on standardization in order to exploit synergies; ***socio-economic requirements gathering***, impact analysis, and awareness creation.

Funding Scheme:
(b): One IP
(e): CSA

ICT-2011.6.7 Cooperative Systems for energy efficient and sustainable mobility

SSH Relevant Scientific Field: Economics, Sociology

Topic Description:

a) **Cooperative Systems for low-carbon multi-modal mobility** covering cooperative applications and services for energy efficiency and eco-friendly mobility based on the harmonised European Communications Architecture and bidirectional vehicle-to-vehicle (V2V), road-to-vehicle (R2V) and vehicle-to-infrastructure (V2I) communication technologies:
   - Design, development and testing of new cooperative and pro-active traffic and travel management and control strategies based on the availability of reliable real-time systemwide data, including handling of special events and recovery after incidents.
   - Addressing the interaction between the driver, the vehicle and the infrastructure, user acceptance and deployment of cooperative energy efficiency services, taking into account the needs of Fully Electric Vehicles such as integration with charging networks.

Liability, privacy, reliability, security and Human Machine Interaction should be addressed as well. The focus should be on road transport, as this sector presents the largest challenges. Projects could also address all transport modes according to the principle of comodality, and include smart urban mobility.

b) **European Wide Service Platform (EWSP) for cooperative system enabled services**, aiming at providing to the drivers and other users a large variety of energy efficiency, mobility, comfort and safety related services:
   - Intelligent combination of wireless communication technologies, development of network and transport communication protocols and security and control mechanisms, and support to their standardisation.
   - Development of the necessary EWSP subsystems for service development, discovery, provision and administrative operations
   - Development of interoperable innovative services for the EWSP, based on Future Internet technologies and in coordination with activities under the Future Internet PPP of Challenge 1.

c) Coordination and support actions
   - Dissemination of results, user awareness campaigns, ***assessments of socio-economic impact and training***.
   - In accordance with the specific cooperation agreements with Japan and the USA: active exchange of information and results, and international standardisation and harmonisation.

The coordination and support actions should include relevant stakeholders in the domain.

Funding Scheme: a) and b): IPs, STREPs; c): CSA

ICT-2011.8.1 Technology-enhanced learning

SSH Relevant Scientific Field: Cognitive Science, Pedagogy, Psychology, Sociology

Topic Description:

a) ***Technology Enhanced Learning systems endowed with the capabilities of human tutors.*** Research should advance systems' capabilities to react to learners' abilities and difficulties, and provide systematic feedback based on innovative ways of interpreting the user's responses - particularly in relation to deep/shallow reasoning and thinking. Research should advance systems' understanding and use of the appropriate triggers (praise, constructive comments, etc.) influencing learning. ***The systems shall improve learners' metacognitive skills, understand and exploit the underlying drivers of their learning behaviours***.

Solutions should exploit advances in natural language interaction techniques (dialogues), in rich and effective user interfaces and should have a pedagogically sound, smart and personalised instructional design (STREP).

b) **Educational technologies for science, technology and maths:** *(b1)* Supporting students to understand and construct their personal conceptual knowledge and meaning of scientific, technological and/or mathematical subjects. Technological solutions should take the learners through the complexity of a subject, activating and feeding curiosity and reasoning, and support the creative applications of the theory. (STREP; NoE) *(b2)* Supporting Europeanwide federation and use of remote laboratories and virtual experimentations for learning and teaching purposes. The service shall enable online interactive experimentations by accessing and controlling real instruments, or using simulated solutions. Open interfacing components for easy plug-and-play of remote and virtual labs should be made available to stimulate the growth of the network of labs. Research shall include work on the user interfaces that mediate the complexities of creation and usability of experiments, for specific pedagogical contexts in primary and secondary schools and higher education, including at university level. This part of the target outcome should be pursued by IPs that include large scale pilots.

c) **Advanced solutions for fast and flexible deployment of learning opportunities at the workplace (targeting, in particular, SMEs)**: enable faster, situated, just-in-time up-/reskilling, and lower the costs/efforts of developing and maintaining quality instructional material to be used in continuing education and training processes. Solutions should aim at creating a networking environment that fosters cross-organisational learning and that will help SMEs to adopt and sustain effective learning attitudes. Proposals must include research on novel business training models, and on how to overcome organisational, inter-organisational and individual barriers to widespread adoption of the developed technologies. This target outcome focuses specifically on the needs of SMEs in sectors without an established tradition in the adoption of learning solutions and facing innovation and competitiveness challenges deriving from efficiency needs or new processes/products development. Proposals should include SMEs and relevant professional associations. SMEs shall also be the final users of the solutions, and be actively involved in clearly justified, representative and sizeable pilots. (IP)

d) ***Computational tools fostering creativity in learning processes***: innovative tools encouraging nonlinear, non-standard thinking and problem-solving, as well as the exploration and generation of new knowledge, ideas and concepts, or new associations between existing ideas or concepts. ***The aim is to support people's learning as well as the formation and evolution of creative teams by developing***

technological solutions that facilitate questioning and challenging, foster imaginative thinking, widen the perspectives and make purposeful connections with people and their ideas. (STREP)

e) **Exploratory activities** for fundamentally new forms of learning through ICT; establishment of a pan-European network of living schools for validations, demonstrations and showcases. (CSA)

For all target outcomes, projects should include a scientifically sound evaluation component.

Funding Scheme: a) STREP; b) STREP/NoE (b1) and IP (b2); c) IP; d) STREP; e) CSA

ICT-2011.9.14 'Science of Global Systems'

SSH Relevant Scientific Field: Economics, Political Science, Sociology

Topic Description:

Progress in global systems dynamics is required to better understand the ***interactions between ecological and socio-economic systems and to better respond to global environmental change***.

Global coordination requires new developments in science based on global system models that span the whole range from local regional to global multi-national decision making. A science of global systems must pay special attention to the interface with policy and society to better ground the scientific tools. It will support the massive needs in computing and data handling and help establish new links between science, policy and society.

Target outcomes:

- Improve use of data and knowledge from the past to choose between options for the future: Tools to represent uncertainty and to construct chains of causality (narratives) from models and data to outcomes for use in socio-political decision processes.
- ICT tools for better use- and user centred modelling techniques, data collection and user model interaction. Methods to address use of system models in a policy decision context.
- Understanding of distributed multilevel policy decision processes. Identify system patterns relevant for properties like resilience, vulnerability, and regime shift tendencies.
- - Use and develop formal languages, constructive type theory and domain specific languages to make policy interfaces of models more adaptable to changing contexts.

Funding Scheme: STREP

Call identifier: FP7-ICT-2011-9

ICT-2011.8.2 ICT for access to cultural resources

SSH Relevant Scientific Field: Anthropology, Sociology

Topic Description:

Target outcomes

a) Technologies for creating personalised and engaging digital cultural experiences: research should address adaptability of systems for personalised interaction with users. Research should investigate technologies that add value and new meaning to cultural digital artefacts and improve user engagement with cultural resources, for example through smart, context-aware artefacts and enhanced interfaces with the support of features like story-telling, gaming and learning.
b) Open and extendable platforms for building services that support use of cultural resources for research and education: research should explore seamless and universal, but also customisable access to digital cultural resources across a wide range of technical formats (sound, image, 3D, text), including cultural resources/objects with diverse characteristics (e.g. languages, temporal, spatial). Usability should be demonstrated through large scale pilots and specific contextual use cases (e.g. functionalities that support active research, creation of new knowledge, meaning extraction...).
c) Improved and affordable technologies for the digitisation of specialised forms of cultural resources, including tools for virtual reconstructions: the focus is on innovative approaches for capturing, imaging, 3D (including movement) modelling, resulting in enriched virtual surrogates which convey and embed knowledge beyond the original object.
d) Awareness raising of research results through road mapping and support to validation and take up of such results in practical settings.

Funding Scheme: a) STREP/IP b) IP c) STREP d) CSAs

Additional Information:

- Indicative Budget distribution
  - IP/STREP: EUR 35 million with a minimum of 40% to IPs and 30% to STREPs
  - CSA: EUR 5 million
- ***Expected impact***:
  - Affordability and widespread availability of tools and services for releasing the economic potential of cultural heritage in digital form and for adding value to cultural content in educational, scientific and leisure contexts;
  - Wider range of users of cultural resources in diverse real and virtual contexts and considerably altered ways to experience culture in more personalised and adaptive interactive settings

Programme: NANOSCIENCES, NANOTECHNOLOGIES, MATERIALS AND NEW PRODUCTION TECHNOLOGIES

Call Identifier: FP7-NMP-2012-CSA-6

Call's Objectives:

Improve the competitiveness of European industry and generate knowledge to ensure its transformation from a resource-intensive to a knowledge-intensive industry, by generating step changes in knowledge and implementing decisive knowledge for new applications at the crossroads between different technologies and disciplines. This will benefit both new, high-tech industries and higher-value, knowledge-based traditional industries, with a special focus to the appropriate dissemination of RTD results to SMEs. These activities are primarily concerned with enabling technologies which impact all industrial sectors and many other Seventh Framework Programme themes.

Broadly speaking, calls of the NMP Theme in 2012 and 2013 will continue to span the spectrum from enabling research, to applications and demonstration activities. The NMP Theme covers the entire range of industrial research activities. Sustainability and societal challenges have always been implicit in NMP strategies, but are receiving increased attention. In a few words, the NMP Theme focuses on smart and sustainable growth, for a greener industry, its three constituent activities being the tools rather than ends in themselves.

Publication Date: 20 July 2011

Deadline: 24 January 2012

Call information:
http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-NMP-2012-CSA-6

List of relevant topics:

NMP.2012.1.4-4 Evaluation of EC communication and dialogue on research and innovation in nanotechnologies and design of future needs for the EU (industry and society)

NMP.2012.1.4-5 Improving education in nanotechnologies to match the skill needs of EU industry and society

NMP.2012.1.4-4 Evaluation of EC communication and dialogue on research and innovation in nanotechnologies and design of future needs for the EU (industry and society)

SSH Relevant Scientific Field: Psychology, Sociology

Topic Description:

Providing European citizens and stakeholders with science-based, balanced and updated information on research and innovation in nanotechnology is part of the European Commission's Action Plan on Nanotechnology. Appropriate activities in communication outreach, dialogue and engagement have been developed from 2008 to 2011 as its main implementation tool. ***To be effective, communication and dialogue should enjoy continuity and build on results, considering changes in expectations and concerns, in order promote responsible social support for nanotechnology***. Ex-post evaluation is therefore crucial in designing activities to match the future needs of the EU in communication and dialogue on nanotechnologies. The intention is to finance one support action, which should assess the effective ***(i) outreach, (ii) feedback and (iii) dialogue generated by these activities in various audiences of EU population (e.g. industry, scientists, NGOs, media, educators and the public), with a specific focus on young people***. This action should also develop robust methodologies to evaluate the drivers of the changes in awareness, knowledge, attitudes, opinions and behaviours these activities have generated, considering national and/or cultural specificities.

Funding Scheme: Coordination and Support Action

Additional Information:

- No more than one supporting action will be funded.
- Validation through open and participative approaches is essential: future communication/dialogue needs for the EU must be identified, also considering OECD Working Party's works on controversial issues (e.g. safety, decision-making, privacy and ethics), and future EC actions designed: these should be made public to receive and integrate the inputs via an appropriate open web-platform (e.g. NODE).
- The EU contribution must not exceed EUR 250 000 per project.
- The project duration must not exceed 12 months.

NMP.2012.1.4-5 Improving education in nanotechnologies to match the skill needs of EU industry and society

SSH Relevant Scientific Field: Education, Finance, Gender Sciences, Sociology

Topic Description:

Conventional ***educational*** and academic ***disciplines*** often constrain the introduction of interdisciplinary courses and trans-disciplinary approaches that are necessary to nanotechnology. Overcoming such limitations is mandatory in order to educate highly skilled nano-scale scientists and engineers, whose scarcity is pinpointed by industry as a major obstacle to innovation. The multidisciplinary and multi-sectoral character of nanotechnologies requires developing novel forms of integration in the education systems, in order to prepare flexible and adaptable scientific and engineering pools of talent, while at the same time enhancing the necessary in-depth scientific background. This requires ***new frameworks of cooperation between schools, universities, research institutes and industry, as well as convergence of educational departments in nanotechnologies, biotechnologies, ICT, cognitive and other sciences, such as physics and chemistry (for example quantum mechanics and physical chemistry are***

fundamental to nanotechnology). Connection should also be made to social and business sciences. Special attention is required to ***encourage females to study nanotechnologies***. The emphasis should be on graduate and post-graduate university level.

Funding Scheme: Coordination and Support Action

Additional Information:

- No more than one supporting action will be funded.
- This Support action should provide:
  - mapping and critical assessment of best practices across the EU to identify enhanced integrated strategies for education in nanotechnologies;
  - development of pilot teaching materials, lab activities and assessment tools as independent subjects or modules;

development of a platform for disseminating, testing and fine tuning of the strategies and the 'open courseware'.

Programme: ENERGY

Call's Objectives:

The FP7 Energy Theme continues its focus on the implementation of the Strategic Energy Technology Plan (SET-Plan - COM(2007) 723, COM(2009) 519), the technology pillar of the EU's Energy and Climate policy. The great majority of topics included are supporting the SET-Plan European Industrial

Socio-economic dimension of research

Where relevant, account should be taken of possible socio-economic impacts of research, including its intended and unintended consequences and the inherent risks and opportunities. A sound understanding of this issue should be demonstrated both at the level of research design and research management. In this context, where appropriate, the projects should ensure engagement of relevant stakeholders (e.g. user groups, civil society organisations, policy-makers) as well as cultivate a multi-disciplinary approach (including, where relevant, researchers from social sciences and humanities). Projects raising ethical or security concerns are also encouraged to pay attention to wider public outreach.

Gender dimension

The pursuit of scientific knowledge and its technical application towards society requires the talent, perspectives and insight that can only be assured by increasing diversity in the research workforce. Therefore, all projects are encouraged to have a balanced participation of women and men in their research activities and to raise awareness on combating gender prejudices and stereotypes. When human beings are involved as users, gender differences may exist. These will be addressed as an integral part of the research to ensure the highest level of scientific quality. In addition, specific actions to promote gender equality in research can be financed as part of the proposal, as specified in Appendix 7 of the Negotiation Guidance Notes:

ftp://ftp.cordis.europa.eu/pub/fp7/docs/negotiation_en.pdf

Publication Date: 20 July 2011

There are 4 open calls with relevant topics:

Call identifier: FP7-ENERGY-2012-1

- **Deadlines**:
  - For CSA topics (one stage submission): 25 October 2011
  - For Collaborative Project (CP) topics (two stage submission):
    - First stage: 25 October 2011
    - Second stage: 3 April 2012
- **Call information**:

  http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-ENERGY-2012-1-1STAGE

Call identifier: FP7-ENERGY-2012-2

- **Deadline**: 08 March 2012
- **Call information**:
  http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-ENERGY-2012-2

Call Identifier: FP7-ENERGY-SMARTCITIES-2012

- **Deadline**: 01 December 2011
- **Call information**: http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-ENERGY-SMARTCITIES-2012

Call Identifier: FP7-2012-ENV-ICT-ENERGY-NMP-EeB

- **Deadline**: 01 December 2011
- **Call information**: http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-2012-NMP-ENV-ENERGY-ICT-EeB

List of relevant topics:

Call identifier: FP7-ENERGY-2012-1

ENERGY.2012.7.1.3: Empowering smart customers to participate in active demand and electricity supply system efficiency

Call Identifier: FP7-ENERGY-SMARTCITIES-2012

ENERGY.2012.8.8.1: Strategic sustainable planning and screening of city plans

Call Identifier: FP7-2012-ENV-ICT-ENERGY-NMP-EeB

EEB.ENERGY.2012.8.8.3: Demonstration of nearly Zero Energy Building Renovation for cities and districts

List of further topics with economic aspects (not included in this document)

Call identifier: FP7-ENERGY-2012-1

ENERGY.2012.2.5.1: Research, development and testing of solar dish systems
ENERGY.2012.2.9.1: Power generation in the low temperature range
ENERGY.2012.3.2.2: Development and testing of advanced sustainable bio-based fuels for air transport
ENERGY.2012.4.1.1: Research and development for medium temperature range solar collectors (100°-250°C)
ENERGY.2012.7.1.1: Integration of variable distributed resources in electricity distribution networks

Call identifier: FP7-ENERGY-2012-2

ENERGY.2012.2.6.1: Demonstration of first ocean energy farms
ENERGY.2012.3.2.3: Pre - commercial industrial scale demonstration plant on lignocellulosic ethanol
ENERGY.2012.5&6.1.1: Pilot plant-scale demonstration of advanced postcombustion CO2 capture processes with a view to integration in fossil fuel power plants
Energy.2012.5&6.1-2: Pilot plant-scale demonstration and integration of emerging and new combustion technologies

Call identifier: FP7-ENERGY-2012-1

ENERGY.2012.7.1.3: Empowering smart customers to participate in active demand and electricity supply system efficiency

SSH Relevant Scientific Field: Economics, Sociology

Contents/scope:

The project should investigate barriers, opportunities and solutions for the active participation of users in active demand and in energy efficiency of the overall electricity system. ***This R&D project should emphasize the socio-economic aspects of demand participation and should investigate customer behaviour for different classes of users such as residential and small commercial/industrial users***. The project should analyse and compare different technical and user interaction solutions and customer awareness initiatives being tested in Europe and measure these against appropriate key performance indicators. It should ***ensure the engagement of customer representation*** and pay particular attention to ***data protection issues***.

Funding Scheme: Collaborative Project

Additional Information:

- ***Expected impact***: The results should allow a better understanding of the measures that allow the active participation of the demand side in electricity markets and its contribution to the stability of the electricity networks. It should facilitate the deployment of active demand programmes in Europe by collecting and comparing technology solutions, ***providing a better understanding of customer behaviour, and providing insight in the success factors of customer awareness measures***.
- This family of projects is expected to form part of the EEGI and to contribute to its monitoring and knowledge sharing scheme.

Call Identifier: FP7-ENERGY-SMARTCITIES-2012

ENERGY.2012.8.8.1: Strategic sustainable planning and screening of city plans

SSH Relevant Scientific Field: Economics, Urban Planning

Contents/scope:

This action aims at i) creating the models for strategic sustainable planning by addressing the efficiency of energy flows across various sectors in various types of cities across Europe and ii) supporting cities with the development of ambitious and innovative projects embedded in comprehensive urban planning.

The successful project(s) will gather cities with proven credible and ambitious targets and innovative planning, while finding the optimal mix of all these measures and indicating the time line, the costs and pay-back periods. The pay-back period analysis should build on different regulatory and market conditions. These plans must be validated by experts on technology and finance and be supported by the public authorities on the highest political levels as well as show commitment from the key public and private stakeholders involved in its implementation.

Funding Scheme: Coordination and Support Action – Coordinating

Additional information:

- ***Expected impact***: The planning exercise is expected to show that the integrative approach achieves much better economics than individual actions without integrative planning. The project will help exchange of best practices and dissemination of Key Performance Indicators.
- This action supports the implementation of the Smart Cities and Communities Initiative of the SET-Plan. The European Commission reserves its right to ask the project, during the negotiation, to establish strong links, where appropriate, with relevant R&D projects at EU, national or regional level.

Call Identifier: FP7-2012-ENV-ICT-ENERGY-NMP-EeB

EEB.ENERGY.2012.8.8.3: Demonstration of nearly Zero Energy Building Renovation for cities and districts

SSH Relevant Scientific Field: Architecture, Economics, Sociology, Urban Planning

Contents/scope:

This topic aims to demonstrate innovative technical, ***economical and financial solutions*** to significantly increase overall energy efficiency of cities and districts. The objective is to renovate a district of existing buildings, in support to the Smart Cities initiative.

Retrofitting existing individual buildings to very high performance buildings will result in excessive costs for extremely ambitious levels. Previous programmes have shown high added value and significant economies of scale to optimise a large amount of buildings in a fully integrated concept. Optimising a whole district consisting of a large number of buildings in a fully integrated way, with extension of the building energy management system to the whole district, and including ***efficient urban planning*** allows further significant savings. Mixed societies bringing together living with working, leisure, shopping, etc may result in reduced needs for transportation, but also allow for better peak management of energy (energy peaks on offices happen at different times of the day than for private homes), water, wastes, etc.

A systemic approach is expected in the measures to be taken. All elements and systems of the buildings that could contribute to a better energy efficiency and sustainability through integrated design and planning should be envisaged, including heat recovery technologies and very efficient water/waste management, enhanced systems for energy behaviour monitoring and demand response and load control systems as well as ICT tools in a district level.

Building Information Modelling and other methods of integrated project delivery should also be used.

While the proposed measures can encompass all types of buildings (residential, commercial, public) the focus should lie on retrofitting of residential buildings. The retrofitting should be as cost effective as possible. The return on investment for the energy saving measures should be calculated and presented and should be acceptable under current market standards. Priority will be given to buildings of which typology and use could be representative for large geographical areas in Europe. Innovation should rely in the technologies to be demonstrated and in the innovative integration of the whole city/district with appropriate and cost-effective balance between energy efficiency

measures and the integration of active systems for energy generation, distribution, storage and use.

For the city area to be affected, detailed information should be provided on the current and future energy use, with emphasis on the building(s): their design, their current and future energy use, the energy efficiency measures to be applied should also be described extensively. The gross floor area of the building(s) should be specified together with the targeted annual energy use per m2 (kWh/m²/year, broken down by space heating, cooling, domestic hot water heating, electricity (including lighting) consumption etc.).

In addition to the detailed description of the buildings and the measures to be taken, it is strongly suggested for participants to complete and include in the proposals the Building Energy Specification Table (BEST) summarizing this information for every type of building proposed. The template of the BEST table is made available through the relevant Guide for Applicants.

Successful proposals will be asked to follow a common monitoring data structure, using a common methodology, in order to feed the relevant Commission data bases.

Additional accompanying measures affecting the future operation of the building (e.g. ***behavioural changes, post occupancy evaluation***, active training of the occupants, training of professionals and architects in view of the replication of the project in other European regions) should be clearly addressed. Social and economic issues should also be addressed. Buildings utilising thermal masses through their architecture while being of high aesthetic quality that people like to live and work in should be envisaged.

Funding Scheme: Collaborative Project with predominant demonstration component – Scale of Units (CP-SoU)

Additional Information:

- ***Expected impact***:
    - Acceleration of the market uptake of the most innovative tools for efficient city energy management.
    - Contribution to raise the performance standards and regulations on European, national and local level, in the urban design and construction sector, through the best practice examples. The projects should have a high potential of replication contributing to large scale market deployment before 2020.

Programme: ENVIRONMENT

Call's Objectives:

The overall objective of Theme 6 "Environment (incl. Climate Change)" within the FP7 Specific Programme "Cooperation" is to promote the sustainable management of the natural and human environment and its resources by advancing our knowledge on the interactions between the biosphere, ecosystems and human activities, and by developing new technologies, tools and services.

The heading for the current call is "Transformative and Responsible Innovation". The topics respond to global societal challenges especially in the framework of resource efficiency (it refers to the EU Flagship Initiative "Resource Efficiency") and climate resilience. It addresses the "Innovation Union" initiative by fostering innovation in key environmental technologies, but also in the fields of ***policy, governance and consumption behaviour***.

Theme specific information:

The novelty of the 2012 Environment (including climate change) work programme is the challenge driven approach which is implemented through fewer but broader topics using a two-stage submission and evaluation procedure. Five challenges are forming the key research priorities for the 2012 work programme. Efforts are made to boost industry and SME participation by introducing specific SME-targeted and SME-friendly topics. Furthermore, a shift towards larger scale projects has been introduced with the possibility to support several projects per topic.

The main calls in 2012 with relevance to Socio-economic Sciences and Humanities **are FP7-ENV-2012-one-stage** (topics for smaller projects, one-stage evaluation procedure) and **FP7-ENV-2012-two-stage** (two-stage evaluation procedure).

Publication Date: 20 July 2011

There are 2 open calls with relevant topics:

Call Identifier: FP7-ENV-2012-one-stage:

- **Deadline**: 20 October 2011
- **Call information**:

  http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-ENV-2012-one-stage

Call Identifier: FP7-ENV-2012-two-stage:

- **Deadlines**:
  - 20 October 2011 First-stage proposals
  - successful first-stage applicants will be asked to hand in full proposals until 15 February 2012
- **Call information**:

http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-ENV-2012-two-stage

List of relevant topics:

Call Identifier: FP7-ENV-2012-one-stage:

ENV.2012.6.1-4 Exploiting the full potential of economic instruments to contribute to achieving the EU's greenhouse gas emission reduction objectives for 2050

ENV.2012.6.1-5 Explore opportunities, risks, feasibility and policy implications associated with key geo-engineering options

ENV.2012.6.3-2 Policy options for a resource efficient economy

ENV.2012.6.3-3 Development of resource efficiency indicators

Call Identifier: FP7-ENV-2012-two-stage:

ENV.2012.6.1-2 Development of advanced techno-economic modelling tools for assessing costs and impacts of mitigation policies

ENV.2012.6.1-3 Strategies, costs and impacts of adaptation to climate change

ENV.2012.6.2-1 Exploration of the operational potential of the concepts of ecosystem services and natural capital to systematically inform sustainable land, water and urban management

ENV.2012.6.2-3 Innovative tools for understanding and integrated assessment of Good Environmental Status (GES) of marine waters ('The Ocean for Tomorrow')

ENV.2012.6.2-4 Management and potential impacts of litter in the marine and coastal environment ('The Ocean for Tomorrow')

ENV.2012.6.4-1 Improving the resilience of society to catastrophic natural hazards through new risk management partnerships

ENV.2012.6.5-1 Developing community-based environmental monitoring and information systems using innovative and novel earth observation applications.

Call Identifier: FP7-ENV-2012-one-stage

ENV.2012.6.1-4 Exploiting the full potential of economic instruments to contribute to achieving the EU's greenhouse gas emissions reduction objectives for 2050

SSH Relevant Scientific Field: Finance, Political Science, Behavioural Economics

Topic Description:

In the context of greenhouse gas (GHG) emissions reductions needed by 2050 by the EU, this research should address questions key to the design of feasible, ***cost-effective and efficient mixes of economic instruments*** to achieve emissions reductions in 2030 consistent with an 80% reduction in greenhouse gas emissions by 2050 in Annex I countries. Research under this topic should take the ***EU Emissions Trading System (EU ETS) and existing legislation (e.g. renewable policies and energy efficiency standard)*** as a starting point and cornerstone of the EU's mitigation policy for the coming decades, assessing ***how the current policy mix may be improved***. This can include the possibility of further development of the ETS, e.g. at international level. Furthermore, it has to ***examine how it can be supplemented with other economic and non-economic instruments*** to achieve the optimal instrument mix in terms of environmental effectiveness (EU and global), ***economic efficiency*** (static and dynamic), ***administrative feasibility*** (monitoring and enforcement), ***and political and legal feasibility***. The research is to address the ***key risks and market imperfections in the use of proposed instrument mixes, (e.g. costs of use under uncertainty, incomplete information and information asymmetries, financial market imperfections, volatility, learning externalities)***, and demonstrate how these can be managed/mitigated. Consideration may be given ***to insights from behavioural economics*** that may help to improve the effectiveness of the proposed instrument mixes.

Funding Scheme: Collaborative Project

Additional Information:

- The requested EU contribution per project shall not exceed EUR 3 000 000
- One or more proposals can be selected.
- ***Expected impact****:* Identify faster and more cost-effective GHG emissions reductions pathways, foster faster introduction of highly innovative and low carbon technologies, and secure increased EU competitiveness on global markets.

ENV.2012.6.1-5 Explore opportunities, risks, feasibility and policy implications associated with key geo-engineering options

SSH Relevant Scientific Field: Finance, Political Science, Sociology

Topic Description:

Deliberate large-scale manipulation of the earth-climate system (geo-engineering) is increasingly explored as an additional potential strategy to counteract anthropogenic climate change. However, geo-engineering options i) suffer from limited understanding of the physical science basis; ii) include major uncertainties regarding effectiveness, impacts and feasibility; iii) lack comprehensive risk assessment.

The action should evaluate the main geo-engineering options in an inter-disciplinary manner, using the latest scientific data and information, in order to assess: i) whether, and if so how, they can effectively contribute to climate change mitigation; ii) their potential

impact and **associated risks on human and natural systems**; iii) **their feasibility including costs**; iv) **the associated governance and legal issues**. The action should also identify key knowledge gaps and recommend future research needs. **Social and policy implications that are likely to arise from the implementation of these options should also be explored.** The action should take stock of the results of previous EU projects in the field.

Funding Scheme: Coordination and Support Action (supporting action)

Additional Information:

- The requested EU contribution per project shall not exceed EUR 1 000 000
- Up to one proposal can be selected.
- ***Expected impact**:* Inform policy makers and the public about the main geo-engineering options in light of their effectiveness, risks, uncertainties, costs and governance implications. Better consensus on knowledge gaps and research needs (both at short and long term).

ENV.2012.6.3-2 Policy options for a resource efficient economy

SSH Relevant Scientific Field: Economics, Political Science

Topic Description:

The need to build a resource-efficient Europe can only be achieved with an adequate policy-mix that optimises synergies and addresses trade-offs between different areas and policies. Research is called for to help to choose the best policy-mix (regulatory and economic instruments and voluntary and information based). The proposal should carefully assess the effectiveness, efficiency and sustainability (in the short and long term) of the different components of the policy-mix and of their combinations, with an emphasis on taking best advantage of synergies and mitigating possible trade-offs. The proposal should firstly perform an in-depth analysis of the reasons that led some resources not to be used efficiently (ex-post analysis). Secondly, the research should investigate new concepts and paradigms to ensure that the resource efficiency dimension throughout the life cycle of products/services is embedded in policy formulation. The proposal should demonstrate that the proposed policy-mix will lead to an absolute decoupling of economic growth from unsustainable use of natural resources and environmental degradation (ex-ante analysis with innovative modelling permitting two-way linkages between the environmental, economic and social pillars). In addition, the proposal will have to demonstrate tangible support towards the implementation of the Flagship Initiative on Resource Efficiency and Innovation Union, the EC Communication on 'Tackling the challenges in commodity markets and on raw materials' as well as the EU Strategy for Sustainable Development.

Funding Scheme: Collaborative Project

Additional Information:

- The requested EUcontribution per project shall not exceed EUR 3 000 000
- One or more proposals can be selected.
- ***Expected impact**:* Shortening the path towards a resource efficient economy supported inter alia by eco-innovation. Providing decision makers with an analysis of the inadequacy of the current policy mixes regarding resource efficiency and with clear scenarios to help to identify the most appropriate one, leading to truly sustainable use

and management of natural resources and contributing to societal advances in the European Union and globally.

ENV.2012.6.3-3 Development of resource efficiency indicators

SSH Relevant Scientific Field: Economics, Indicators & LCA Experts

Topic Description:

Indicators used (e.g. Gross Domestic Product (GDP)/Domestic Material Consumption (DMC)) are not adequate to analyse, monitor and communicate the ***impact of different resource efficiency strategies on effectiveness, efficiency and sustainability of resource use*****,** and on pollution and environmental degradation/quality improvement. Research on ***new indicators needs to be developed based on data on and/or modelling of resource extraction, renewable resources, inputs, flows, within and across industrial sectors, and the final outputs.*** Evolving physical and ***economic dimension of resource scarcity and life cycle approaches, taking into account the links between consumption / production, and resource use / environmental impacts / waste generation, must be considered.*** A global view and an adequate sectoral breakdown should be conducted, distinguishing in particular the public and the private sector e.g. through the use of the ***national accounts classification*** (non-financial corporations, financial corporations, general government, households, non-profit institutions serving households and the rest of the world) and also allowing further disaggregation into sections (e.g. manufacturing) and subsections (e.g. manufacture of transport equipment). The product group level may also be considered. In each case, the reference (GDP, population unit, etc.) should be duly justified. Long time series and now-casting should also be considered. In addition, proposals will have to demonstrate tangible support towards the implementation of the Flagship Initiatives on Resource Efficiency and Innovation Union, the
EC Communication on 'Tackling the challenges in commodity markets and on raw materials' as well as the EU Strategy for Sustainable Development.

Funding Scheme: Collaborative Project

Additional Information:

- The requested EU contribution per project shall not exceed EUR 3 000 000
- One or more proposals can be selected.
- ***Expected impact****:* Provide the European Union with adequate indicators (building on the work carried out by Eurostat, the JRC, DG ENV, EEA, etc.) to contribute to the achievement of truly sustainable use and management of natural resources by supporting an absolute decoupling between economic growth and environmental degradation as well as to contribute to global social advances in Europe and worldwide.

Call Identifier: FP7-ENV-2012-two-stage

ENV.2012.6.1-2 Development of advanced techno-economic modelling tools for assessing costs and impacts of mitigation policies

SSH Relevant Scientific Field: Economics, Political Science

Topic Description:

Research on the environmental and ***socio-economic opportunities and impacts of climate change mitigation policies*** are of paramount importance for the development of a resource efficient and climate resilient society. Climate-energy***-economy models*** are fundamental tools to evaluate mitigation strategies, ***assessing the costs and inform decision makers***. However, currently available tools have relevant limitations such as the difficulty to represent pervasive technological developments, positive feedbacks, the difficulty to represent non-linearities, thresholds and irreversibility, and ***the insufficiently developed representation of economic sectors with a significant potential for mitigation and resource efficiency.*** Research should focus on the development and validation of new models, new model components or in the improvement/upgrading of existing models. ***Economic impacts of implemented and planned mitigation policies in the EU and beyond should be assessed at different scales and for the key economic and societal sectors.*** Transparency in the description of the models' functioning, of their strengths and limitations is requested with a view to unequivocally frame the relevant area of application of each model and hence to improve users confidence in the results. The availability of large datasets for model validation purposes has to be taken into account, and their completeness should be improved. International collaboration to address the key challenges in Europe and globally is encouraged. The involvement of relevant stakeholders is highly recommended.

Funding Scheme: Collaborative Project

Additional Information:

- The requested EU contribution per project shall not exceed EUR 6 000 000
- One or more proposals can be selected.
- International collaboration is encouraged.
- The involvement of relevant stakeholders is highly recommended.
- ***Expected impact***: Reduced costs, improved acceptance, higher confidence on mitigation trajectories. More effective knowledge-based climate mitigation policy options. Support to the Roadmap for moving to a low carbon economy by 2050.
- ***Specific feature***: Projects selected under this topic will be linked through a coordination mechanism that will be defined during the negotiation stage.

ENV.2012.6.1-3 Strategies, costs and impacts of adaptation to climate change

SSH Relevant Scientific Field: Finance, Political Sciences, Psychology, Sociology

Topic Description:

Research on adaptation to climate change is imperative in order to better inform and support the development and implementation of adaptation policies and related action programmes at international, European and Member State level. Research should build a strong and comprehensive knowledge base that is required to identify appropriate options and ***develop medium and long-term strategies for adaptation at national, regional and local scales. Methods and tools should be developed to assess climate impacts, vulnerability, risks and their costs, and to predict the*** environmental, ***social and economic effects of adaptation options. Of particular relevance will be the bottom-up assessment of the full economic costs and benefits of climate change adaptation at sector level with particular attention to sectors of high economic and social importance, as well as the aggregation of such bottom-up approaches to enable the estimation of economy wide costs and benefits at EU and national level. Appropriate consideration should be given to human responses to change and to the complex interlinkage of adaptation policies with other policies including the investigation of***

conflicts and synergies between mitigation and adaptation actions. International cooperation to address key challenges in Europe and globally is encouraged. Participation of stakeholders is highly beneficial.

Funding Scheme: Collaborative Project

Additional Information:

- The requested EU contribution per project shall not exceed EUR 6 000 000
- One or more proposals can be selected.
- International collaboration is encouraged.
- The involvement of relevant stakeholders is highly recommended.
- ***Expected impact****:* Reduced costs, better understanding and acceptance of adaptation measures. Improved integration of adaptation research into decision making leading to more effective knowledge-based decision making, in adaptation policy as well as in all other policy and business areas potentially affected by climate change. Enhanced understanding of and participation of society in adaptation measures. Social and economic benefits for the sectors and policy areas mentioned in the White Paper 'Adapting to climate change: Towards a European framework for action'[1]. Research activities under this topic are expected to contribute to an enlargement of the databases of socio-economic data related to climate change impacts, vulnerability and adaptation (e.g. the adaptation Clearing House Mechanism).
- ***Specific feature****:* Projects selected under this topic will be linked through a coordination mechanism that will be defined during the negotiation stage using project resources.

ENV.2012.6.2-1 Exploration of the operational potential of the concepts of ecosystem services and natural capital to systematically inform sustainable land, water and urban management

SSH Relevant Scientific Field: Economics, Political Sciences, Sociology

Topic Description:

Ecosystem services and natural capital are increasingly put forward as key conceptual approaches to inform sustainable land, water and urban management and develop innovative public goods and sustainable economic activities. This requires a better understanding of (i) the potential of the ecosystem services and natural capital approach and (ii) ***how best to operationalise these concepts within key regulatory frameworks and in decision making processes***. Integrated natural, ***social and economic research*** is needed to assess the ecosystem services ***relevant to human well-being***, and analyse links between and comparisons across locales, sectors, scales and time (for example, across a coherent set of case studies) ***in a range of social-ecological systems*** that must

[1] COM(2009) 147 final: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0147:FIN:EN:PDF

at least include fresh water bodies, coastal zones, urban and rural[2] areas and their interfaces. Focusing on the bio-physical control of ecosystem services, research will examine the effects of multiple drivers (including the use of renewable resources), structural and functional factors (including biodiversity and tipping points), and ***human feedbacks*** on ecosystem services. Such research is to (i) provide a better ***understanding of how drivers and management, including the green infrastructure approach, ecological restoration, and EU regulatory framework (e.g. Water Framework Directive), change ecosystem services, and (ii) explore, demonstrate and validate mechanisms, instruments and best practices that will serve to maintain and enhance a sustainable flow of a broad range of services from ecosystems while preserving their ecological value and biological diversity. Focusing on the socio-economic implications of choices on the use of ecosystem services, research will address the trade-offs and synergies between ecosystem services and between components of social and individual well-being that arise from the demands on these systems. Such research is to (iii) qualify and quantify these trade-offs and synergies and link them to the respective stakeholders across locales, sectors, scales and time, (iv) identify the potential for the development of innovative and sustainable processes derived from ecosystem services, and (v) explore, demonstrate and validate instruments and practices that will serve to align disconnected and conflicting interests and take power asymmetries into account in balancing trade-offs in social and individual well-being.*** In both bio-physical and ***socio-economic dimensions***, work will (vi) develop methods and coherent and shared protocols to provide consistent and integrated datasets and knowledge (vii) and explore and where possible implement ways to ensure the perennity of any key data base, decision support system or other major product of the research. Integrating these strands of investigation, research ***should examine the potential of existing policies and provide plural and conditional alternatives for enhanced operationalisation of the concept of ecosystem services and natural capital to support the formulation and implementation of regulatory frameworks*** such as the Water Framework Directive, Air Quality Framework Directive, the Common Agricultural Policy, the Green Infrastructure approach, the Thematic Strategy on the Urban Environment and Environmental Impact Assessments. International collaboration, especially in developing countries is strongly encouraged, to qualify and quantify the interrelations and trade-offs between the provision and use of ecosystem services and natural capital on a global scale.

Funding Scheme: Collaborative Project

Additional Information:

- The requested EU contribution per project shall not exceed EUR 9 000 000
- One or more proposals can be selected.
- International collaboration is encouraged.

[2] The word 'rural' means 'everything outside urban areas.' Forests, mountain ecosystems, islands, wetlands, pasture, and arable land are rural, as is all other non-urban land cover such as desert, heath, scrub, and moorland.

- ***Expected impact***: Improved understanding of how ecosystem services and natural capital contribute to human well-being across locales, sectors, scales and time. Contribution to more sustainable ecosystem management maintaining and enhancing a sustainable flow of a broad range of services from ecosystems while preserving their ecological value and biological diversity. Contribution to more effective and inclusive management of ecosystem services balancing trade-offs in social and individual well-being. Increased EU competitiveness by innovative processes and services derived from operationalising the concept of ecosystem services and natural capital.
- ***Specific feature***: SMEs are expected to play a role in developing services and products derived from ecosystem services or in assessing and monitoring them. Projects selected under this topic will be linked through a coordination mechanism that will be defined during the negotiation stage using project resources.
- ***Additional eligibility criterion:*** Projects will only be selected for funding on the condition that the estimate EU contribution going to SMEs is 15% or more of the total estimated EU contribution for the project as a whole. This will be assessed at the end of the negotiation, before signature of the grant agreement. Proposals not fulfilling this criterion will not be funded.

ENV.2012.6.2-3 Innovative tools for understanding and integrated assessment of Good Environmental Status (GES) of marine waters ('The Ocean for Tomorrow')

SSH Relevant Scientific Field: Economics, Sociology

Topic Description:

The Marine Strategy Framework Directive (MSFD) defines GES having regard to the structure, functions and processes of marine ecosystems. In addition, marine biodiversity is a key descriptor for the assessment of the environmental status of marine waters. However the understanding of the relationships between pressures from human activities and climatic influences and their effects on marine ecosystems including biological diversity are still only partially understood. There are a number of aspects of these relationships which need to be better understood in order to support the ecosystem based management and fully achieve a good environmental status (GES) of marine waters, the objective of the MSFD. The topic will contribute, in a harmonized way for the four regions identified in the MSFD, to (i) ***improve our understanding of the cumulative impact of human activities*** -and variations associated to climate on marine biodiversity, (ii) test indicators (referred in the Commission Decision on GES) and develop options for new ones for assessment, particularly for biodiversity, at several ecological levels (species, habitat, ecosystems), -and the characterization and status classification of the marine waters, (iii) develop, test and validate, on the basis of observations, innovative integrative modelling tools in order to further strengthen our understanding of ecosystem and biodiversity changes in space and time due to human impacts and climatic influences. The resultant outputs and models should be developed for implementation as operational tools for managers and policy makers with a view to reduce pressures through actions. The project shall also contribute to (i) enable the development of adaptive management (ecosystem-based management approach) strategies and management measures taking into account the role of industry and relevant stakeholders, (ii) ***provide economic and social assessment of the consequences of management practices, (iii) identify the barriers (socio-economic and legislative) that prevent progress towards GES, (iv) provide a set of policy options for the relevant authorities to prioritize actions to reduce pressure from human activities*** and climatic influences. In addition the project should propose and demonstrate the utility of innovative monitoring systems capable of providing data on a range of parameters, efficiently and effectively, that may be used as indicators of good environmental status.

Funding Scheme: Collaborative Project

Additional Information:

- The requested EU contribution per project shall not exceed EUR 9 000 000
- Up to one proposal can be selected.
- ***Expected impact**:* Contribute to the implementation of the Marine Strategy Framework Directive (MSFD) and associated Commission Decision on Good Environmental Status (GES) in particular to the requirements of descriptor 1 (biological diversity) and also those parts of descriptors 4 and 6 that relate to the impacts of human activities and climatic influences on biological diversity. Promote EU-wide harmonisation in the environmental status classification of the marine waters in the four regions for a coherent implementation by all Member States. Improved capacity to provide assessments and where possible predictive advice and strengthen the knowledge base necessary to address sustainable management of seas and oceans resources. Contribute to enhance European leadership in innovation on the field of marine environment monitoring tools.
- ***Specific feature**:* The participation of SMEs is encouraged particularly with regard to the development of the monitoring systems.
- *Additional eligibility criterion:* Projects will only be selected for funding on the condition that the estimate EU contribution going to SMEs is 15% or more of the total estimated EU contribution for the project as a whole. This will be assessed at the end of the negotiation, before signature of the grant agreement. Proposals not fulfilling this criterion will not be funded.

ENV.2012.6.2-4 Management and potential impacts of litter in the marine and coastal environment ('The Ocean for Tomorrow')

SSH Relevant Scientific Field: Economics, Sociology

Topic Description:

The Marine Strategy Framework Directive (MSFD) describes marine litter as one of the 11 descriptors for determining Good Environmental Status (GES). The Commission Decision on the criteria and methodological standards on good environmental standards of marine waters requires Member States to assess the distribution, properties and quantities of marine litter. Litter enters the marine environment from numerous sources and is dispersed throughout the seas by winds and currents. Evaluations of sources alone are not sufficient to measure the various negative impacts caused and long term monitoring in the marine environment is required. Working at the European scale will be essential for litter evaluation in the marine and coastal environment and for measuring the degradation processes using standard protocols.

To address this need the project should aim at providing estimates of the quantities of marine litter discarded into the marine and coastal environment, describe the composition and distribution of litter, including rates of fragmentation to micro-particles (in particular microplastics). It should also aim to provide a better informed answer to the scale of the physical and chemical impacts on marine organisms. The topic will contribute, in a harmonized way for the four regions identified in the MSFD, to further developing and testing indicators (referred in the Commission Decision on GES), especially those relating to biological impacts and to micro-particles (in particular micro-plastics) and ***for the assessment of their potential social, economic*** and ecological harm.

The project shall also contribute ***to (i) the development of management strategies and management measures*** taking into account the role of industry and relevant stakeholders, (ii) ***the development of environmental integrated impact assessments (including economic and social aspects)*** in order to adapt the management practices, (iii) ***the identification of barriers (socio-economic and legislative)*** related to the marine litter that prevent the achievement of the GES, (iv) ***the provision of a set of policy options for the relevant authorities***. Furthermore the project should propose and demonstrate the utility of innovative monitoring systems capable of providing data, on a range of related parameters, efficiently and effectively, that may be used as indicators of good environmental status. This will be done taking into account the on going process of cooperation between Member States, stakeholders and the Commission on the implementation of the MSFD on marine litter.

Funding Scheme: Collaborative Project

Additional Information:

- The requested EU contribution per project shall not exceed EUR 3 000 000
- Up to one proposal can be selected.
- ***Expected impact****:* An improved knowledge base for the management of litter in the marine environment in the context of addressing major societal challenges. The knowledge generated and its transfer will support the implementation of EU policies such as in particular the requirements of the Marine Strategy Framework Directive (MSFD) and associated Commission Decision on Good Environmental Status (GES) and more broadly the Integrated Maritime Policy (IMP), the Thematic Strategy on the Prevention and Recycling of Waste, the Common Fisheries Policy (CFP). Enhanced European leadership in innovation in the field of marine environment monitoring tools.
- ***Specific feature****:* The participation of SMEs is encouraged particularly with regard to the development of the monitoring systems.
- *Additional eligibility criterion:* Projects will only be selected for funding on the condition that the estimate EU contribution going to SMEs is 15% or more of the total estimated EU contribution for the project as a whole. This will be assessed at the end of the negotiation, before signature of the grant agreement. Proposals not fulfilling this criterion will not be funded.

ENV.2012.6.4-1 Improving the resilience of society to catastrophic natural hazards through new risk-management partnerships

SSH Relevant Scientific Field: Finance, Risk Assessment and Management

Topic Description:

Climate change is expected to induce modifications in frequency, severity and duration of hydro-meteorological hazards and extremes. This may lead to increasing changes in vulnerability and thus induce new risk situation for society over time. Furthermore in the field of geo-hazards characterized by low probability - high consequence events, Europe is also at threat of catastrophic events which can hit the growing densely populated urban areas or several sectors of the increasingly interlinked European economy, with very high economic impact. The disastrous effects of the recent earthquake and tsunami in Japan are an evident example. The research challenge is now ***to strengthen the economic and societal resilience to potential disasters*** and to improve preparedness, prevention and mitigation through more appropriate ***risk assessment and new management schemes***.

Dynamic vulnerability or exposure patterns – inter alia due to climate change and ***economic development*** - will need to be assessed in relation to the occurrence of potential catastrophic events in Europe. In this context, considering key representative geological and/or hydro-meteorological hazards, the research should ***develop new probabilistic hazards and risk scenarios and improve the methodologies for risk assessment and for estimating disaster impacts***. On this basis, the research should elaborate ***improved risk governance and management responses***, with the key goal to improve or redefine the respective roles or possible forms of partnerships between the private sector (including the (re)insurance and finance sectors), the relevant authorities and stakeholders. This will contribute to produce innovative risk management solutions combining a cost-effective variety of risk reduction measures such as risk transfer and financing, adaptation and mitigation.

Funding Scheme: Collaborative Project

Additional Information:

- The requested EU contribution per project shall not exceed EUR 6 000 000
- One or more proposals can be selected.
- ***Expected impact*****:** Contribution to a new pan-European harmonised risk assessment for disaster management scheme and to the elaboration of a new risk management governance approach. Support to EU relevant policies and to the UN Risk Reduction Hyogo framework for action. Reduction of risks of major economic losses through innovative non-structural mitigation measures and new public-private partnerships on financial and insurance schemes.
- ***Specific feature*****:** Partnership with relevant private and public key actors in risk management is highly recommended. Projects selected under this topic will be linked through a coordination mechanism that will be defined during the negotiation stage.

ENV.2012.6.5-1 Developing community-based environmental monitoring and information systems using innovative and novel earth observation applications[3]

SSH Relevant Scientific Field: Economics, Psychology

Topic Description:

New and innovative environmental monitoring and information capabilities can enable effective participation by citizens in environmental stewardship, based on broad stakeholder and user involvement in support of both community and policy priorities. The objective is to develop 'citizens' observatories' using innovative earth observation technologies. These 'citizens' observatories' should include community-based environmental monitoring, data collection, interpretation and information delivery systems.

[3] This topic will explore new approaches to complete the global network of in-situ sensors necessary to monitor the environment complementary to the actions conducted in the GMES initiative (Global Monitoring for Environment and Security).

This will require the development of highly innovative monitoring technologies, (e.g. low-cost reliable micro-sensors), which can be embedded into large numbers of instruments, including highly portable devices. Citizens should be able to effortlessly collect environmental data on a range of parameters, automatically transmit this data to suitable data repositories and exchange their knowledge and experience within a citizens' observatory framework, (e.g. using smart phone applications), thereby enabling citizenship co-participation in community decision making and co-operative planning. Advanced data management strategies, based on open e-collaboration, should enable the sharing of data and information, whilst addressing questions of privacy, data standards, quality and reliability. Suitable pilot case studies and ***acceptance activities should be included to test, demonstrate and validate: the concept of 'citizens' observatories'; the direct transfer of environmental knowledge for policy, industrial, research and societal use; the possibilities for a comprehensive implementation and application of the technology*.** Possible examples of pilot case studies could include: civil protection agencies and wide-scale flooding; estimation of personal exposure within various microenvironments (health sector); air quality and noise levels; the identification of flora, birds and wildlife, their habitats and migration paths; the surveillance of invasive alien species and their pathways of introduction and spread; illegal dumping of hazardous materials, etc.

Funding Scheme: SME-targeted Collaborative Project

Additional Information:

- The requested EU contribution per project shall not exceed EUR 9 000 000
- One or more proposals can be selected.
- ***Expected impact:*** Empowerment of citizens and citizen's associations, allowing them to contribute to environmental governance processes in the domains of transparency, knowledge management, accountability and responsiveness. The provision of models for decisionmakers, facilitating connections to governance and global policy objectives.
- ***Specific feature:*** SMEs are expected to play a major role in addressing the goals described, including the development of innovative sensor technologies, data management strategies and new applications to facilitate the exploitation of the data and processed information for policy, industry and society at large. The consortia will be required to cooperate within an open e-collaboration framework to establish common methodologies and standards for data archiving, discovery and access within the GEOSS framework. The data collected should be made available through the Global Earth Observation System of Systems without any restrictions. Projects selected under this topic will be linked through a coordination mechanism that will be defined during the negotiation stage.
- ***Additional eligibility criterion****:* Proposals will only be selected for funding on the condition that the estimated EU contribution going to SMEs is 30% or more of the total estimated EU contribution for the project as a whole. This will be re-assessed at the end of the negotiation, before signature of the grant agreement. Proposals not fulfilling this criterion will not be funded.

Programme: TRANSPORT (INCLUDING AERONAUTICS)

Call's Objectives:

Based on technological and operational advances and on the European transport policy, develop integrated, safer, "greener" and "smarter" pan-European transport systems for the benefit of all citizens and society and climate policy, respecting the environment and natural resources; and securing and further developing the competitiveness attained by the European industries in the global market.

Socio-economic dimension of research

A new approach has been adopted for Work Programme 2012 (WP 2012), reflecting the new political context and the priority given to the Innovation Union. This new approach is based on focusing on major socio-economic challenges and responding to societal concerns. The work programme is structured accordingly to these challenges and addresses the innovation cycle in its integrity, while respecting the rules of competition (see below in section I.0.3 the innovation dimension of the activities).
Based on the policy context, to achieve critical mass, leverage effect and EU added-value, the strategic research and innovation priorities for WP 2012 will focus on three major socioeconomic challenges:

1. Eco-innovation – The decarbonisation of the transport system and an efficient use of natural resources, i.e. eco-innovation in all transport modes and the further development of clean vehicles and vessels.
2. Safe and seamless mobility – The optimisation of the global efficiency and safety of the transport system (by application of Intelligent Transport Systems and logistics), making efficient use of infrastructure and network capacity9, with the aim of offering safe and seamless transport and mobility to all European citizens, as transport is also crucial for social inclusion.
3. Competitiveness through innovation – The strengthening of the competitiveness of European transport industry through innovation, as competition from developed and emerging economies is intensifying in a global economy.

There are 4 open calls with relevant topics:

Call identifier: FP7-AAT-2012-RTD-1
Date of publication: 20 July 2011
Deadline: 1 December 2011
Call Information:
http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-AAT-2012-RTD-1

Call identifier: FP7-SST-2012-RTD-1
Date of publication: 20 July 2011
Deadline: 1 December 2011
Call Information:
http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-SST-2012-RTD-1

Call identifier: **FP7-TPT-2012-RTD-1**
Date of publication: 20 July 2011
Deadline: 1 December 2011
Call Information:
http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-TPT-2012-RTD-1

Call identifier: **FP7-TRANSPORT-2012-MOVE-1**
Date of publication: 20 July 2011
Deadline: 1 March 2012
Call Information:
http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-TRANSPORT-2012-MOVE-1

List of relevant topics:

Call Identifier: FP7-AAT-2012-RTD-1
AAT.2012.3.3-4. Human factors (under Area: AIRCRAFT SAFETY)
AAT.2012.3.4-5. Human factors (under Area: OPERATIONAL SAFETY)
AAT.2012.4.3-4. Human factors (under Area: AIR TRANSPORT SYSTEM OPERATIONAL COST)
AAT.2012.7-1. European Air Transport System scenario elaboration and trend assessment capability
AAT.2012.7-8. Attracting young Europeans to future careers in the field of aeronautics
AAT.2012.7-25. Assessment of the potential insertion of unmanned aerial system in the air transport system

Call identifier: FP7-SST-2012-RTD-1
SST.2012.3.1-1. Research actions regarding the accessibility of transport systems
SST.2012.3.1-3. Take-up of transport innovation in urban and regional transport
SST.2012.3.1-4. Automated urban vehicles
SST.2012.4.1-1. Human element factors in shipping safety
SST.2012.4.1-3. Large scale naturalistic driving observations for safe and sustainable transport
GC.SST.2012.1-3. European strategy for rare materials and their possible substitution
GC.SST.2012.3-3. Platform for continuous intermodal freight transport strategic research and innovation

Call identifier: FP7-TPT-2012-RTD-1
TPT.2012.1-2. Transport infrastructure impact on international competitiveness of Europe
TPT.2012.1-3. Prospects for transport evolution: challenges for the competitiveness of the European transport sector in the long term
TPT.2012.3-2. Bringing innovative products and services to the market: analysis of pathways and best conditions for innovation

Call Identifier: FP7-TRANSPORT-2012-MOVE-1
TPT.2012.1-1. Forum to help implement the future orientation of the overall transport system as defined by the White Paper
GC.SST.2012.1-7. Demonstration of Urban freight Electric Vehicles for clean city logistics

List of further topics with economic/financial aspects (not included in this document):

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

SST.2012.3.1-2. Innovative design and operation of new or upgraded efficient urban transport interchanges
SST.2012.2.4-2. The role of rail in the European transport system in response to major disruptions
SST.2012.3.1-3. Take-up of transport innovation in urban and regional transport
SST.2012.4.2-1. Priorities for road safety research in Europe

Call identifier: FP7-TPT-2012-RTD-1

TPT.2012.2-2. Reduction of the vulnerability of the European Transport System to extreme weather events and natural disasters

Call Identifier: FP7-AAT-2012-RTD-1

AAT.2012.3.3-4. Human factors (under Area: AIRCRAFT SAFETY)

SSH Relevant Scientific Field: Cognitive Science, Ergonomics, Psychology, Sociology
Content and scope:
Advanced concepts to enable ***improved human centred design*** of cockpit displays, ***training of crews and flight control systems***; methods and techniques for improved understanding of the human factor (e.g. ***state of mind, response to the stress***) in support of human-machine interaction, ***crew performance*** in the cockpit and ***crew behaviour*** when managing information from different ends such as cockpit, ATM, ground control (when ATM related aspects are addressed, close coordination with SESAR must be ensured).
Funding Scheme: Level 1 - CP-FP or CSA-CA

Additional Information:

- The requested EU contribution shall not exceed EUR 5 000 000

AAT.2012.3.4-5. Human factors (under Area: OPERATIONAL SAFETY)

SSH Relevant Scientific Field: Crisis Management, Psychology, Sociology
Content and scope:
Advanced concepts and techniques in support of increased consideration of ***human behavior*** in the conceptual design of the air transport system, in particular with regard to the mission of the crew and maintenance personnel, with ***special consideration of abnormal situations and crisis management***.
Funding Scheme: Level 1 - CP-FP or CSA-CA

Additional Information:

- The requested EU contribution shall not exceed EUR 5 000 000

AAT.2012.4.3-4. Human factors (under Area: AIR TRANSPORT SYSTEM OPERATIONAL COST)

SSH Relevant Scientific Field: Pedagogy, Psychology, Human Resources Management
Content and scope:
Advanced concepts and techniques, including training, to support the ***acquisition and retention of skills and knowledge of personnel*** in the whole air transport system (design, production, maintenance and airport operation).
Funding Scheme: Level 1 - CP-FP or CSA-CA

Additional Information:

- The requested EU contribution shall not exceed EUR 5 000 000

AAT.2012.7-1. European Air Transport System scenario elaboration and trend assessment capability

SSH Relevant Scientific Field: Economics, Sociology
Content and scope:
The study will develop a methodology to elaborate scenarios for the European Air Transport System with a holistic approach, i.e. encompassing aspects such as competitiveness, intermodality, security, environmental impact, energy, regulations, ***policy and societal acceptance***. The modelling approach will include analysis tools to evaluate the impacts and consequences of a scenario. ***A limited number of scenarios will be developed and analyzed in the view of providing and recommendations guidance to policy makers for the most promising concepts***. The study will take into account the findings of EU-funded projects such as CONSAVE 2050 and MONITOR.
Funding Scheme: CSA-SA

Additional Information:

- The requested EU contribution shall not exceed EUR 600 000
- ***Expected impact***: Development of a European Air Transport System scenario assessment capability; identification of the most promising long-term concepts.

AAT.2012.7-8. Attracting young Europeans to future careers in the field of aeronautics

SSH Relevant Scientific Field: Pedagogy, Psychology, Sociology
Content and scope:
Today, young people want to learn science through real life applications. However; teachers have not always the knowledge, training and experience to put theoretical lessons into practice and in the context of the latest research developments. Proposals should contain actions to ***enhance the interactions between the aeronautics research community and the teaching community (primary and secondary schools)***. Actions could be built at regional, national or European level and include among others studies, events, teaching material, competitions, awards, organization of activities.

Funding Scheme: CSA-SA

Additional Information:

- The requested EU contribution shall not exceed EUR 600 000
- ***Expected impact***: Studies show the likelihood of a shortage of scientists and engineers in aeronautics research and industry in the near future. Proposals should contribute to raising the interest of young Europeans for engineering activities in the field of aeronautics with the aim of attracting them at a later stage to scientific and technical careers in the aeronautical sector.

AAT.2012.7-25. Assessment of the potential insertion of unmanned aerial system in the air transport system

SSH Relevant Scientific Field: Business Management, Sociology

Content and scope:
The study should establish the minimum requirements in terms of standards equipments and regulations to allow the safe insertion of UAS in the civil airspace. It should also anticipate the steps required for the certification and the validation of the insertion. In the light of this, the path to exploitation will be investigated: ***market trends***, adaptation of infrastructures and investments, ***obstacles to social acceptance***. The consortium should gather a representative group of stakeholders including among others manufacturers, regulators, air navigation ***service providers, and customers***.

Funding Scheme: CSA-SA

Additional Information:
- The requested EU contribution shall not exceed EUR 600 000
- ***Expected impact***: Proposals should demonstrate contributing to analyse and assess the innovation steps needed to allow the insertion of Unmanned Aerial Systems (UAS) for civil application in the air transport system.

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

SST.2012.3.1-1. Research actions regarding the accessibility of transport systems

SSH Relevant Scientific Field: Business Management, Psychology, Sociology

Content and scope:
Research will aim at ***integrated approaches covering the planning, implementation, monitoring and evaluation of measures supporting accessibility of transport systems for all citizens, particularly vulnerable groups, such as older people, children and the disabled***. It should include both ***policy oriented*** and technical or technological solutions. Links with land use planning and with ***societal challenges such as the ageing society*** should be established. Suggestions for improved minimum requirements and standards should be included. A comprehensive concept of accessibility should be considered, including physical barriers as well as sensory, cognitive and psychological constraints.
A link to previous and on-going research activities (e.g. MEDIATE, ACCESS TO ALL, AENEAS, ASK-IT and CIVITAS) should be established.
The following research actions should be covered:
- Validation and take-up of innovative practices to improve quality of mobility solutions taking into account the user's need for accessible seamless travel, e.g. total quality management in public transport, walkability and cycling audits.
- Developing an analysis, monitoring and reporting mechanism, including quality indicators, for the accessibility of the transport system and for services from the end user's point of view, e.g. to measure the impact of traveller information systems, to assess the accessibility of vehicles and infrastructure.
- Examining innovative solutions to address accessibility issues arising from urban design and infrastructure, and land use plans in need of adaptation due to demographic change.

Developing advanced methodologies for cost-benefit analysis from a system perspective, in view of establishing cost-effective solutions to ensure mobility for a heterogeneous but growing group of travellers.

Funding Scheme: Level 2 - CP-FP

Additional Information:

- ***Expected impact***:
  - Wide-scale testing and take-up of integrated approaches to accessible transport planning and operations.
  - Contributing to a more accessible transport system and reducing the dependency on special services and vehicles, thus contributing to more attractive and seamless door-to-door mobility services bringing more transport efficiency in view of traffic fluidity, cost reduction and reduced carbon footprint.
  - More opportunities for disabled and elderly people to access jobs, healthcare, education and training, as well as leisure facilities, in line with the European Disability Strategy 2010-2020 'A Renewed Commitment to a Barrier-Free Europe' launched in 2010.

SST.2012.3.1-3. Take-up of transport innovation in urban and regional transport

SSH Relevant Scientific Field: Finance, Pedagogy

Content and scope:

Technological and organisational innovation is a key factor to address today's challenges in urban and regional transport. While innovation is an integral part of European and national transport research, so far only few projects have addressed the concrete transfer and up-take of promising new solutions for urban transport and mobility.

The support action will address this by refining existing methodologies for the transfer and up-take of results from research and innovative practices. It will build on the results of previous projects that have dealt with these issues (e.g. NICHES and NICHES+, CIVITAS, CURACAO, PRESTO, CVIS and IN-TIME).

The action will support European cities and regions to team-up on urban transport innovation.

It will provide an ***innovative range of methods and tools for training and guidance*** targeted at cities and regions interested in implementing innovative transport and mobility concepts.

Outcomes will include concrete implementation plans to enhance take-up in selected cities and regions. Active dissemination and synergies with existing projects and websites are encouraged.

The action will address the key challenges for the future of urban and regional mobility in Europe (e.g. energy efficiency and decarbonisation of transport, impact of demographic change on urban and regional mobility, ***while adjusting to new economic and financial conditions***, etc.). The following research actions will be covered:

- ***New financing models or pricing measures*** to increase the cost-efficiency of urban transport.
- Strategies to increase the opportunities for non-motorised transport in the urban context to reduce short car trips, taking into account safety considerations and addressing society's demographic changes, e.g. the ageing society.
- Integration of advanced network and traffic management to support advanced traveller information systems for the end user including personal, intermodal and integrated information.
- Advanced vehicles.
- Measures to improve public transport organisation.

Funding Scheme: Level 2 - CSA-CA

Additional Information:

- *Implementation and management*: Cooperation of EU Member States and Associated States with accession countries and neighbouring countries is encouraged. This topic is complementary to the Topic Energy.2012.8.8.1: Strategic sustainable planning and screening of city plans (FP7-ENERGY-SMARTCITIES-2012), which supports the implementation of the Smart Cities and Communities Initiative of the SET-Plan. In this context, the European Commission may ask the projects, during the negotiation, to establish strong links, where appropriate, with the projects funded under the topic Energy.2012.8.8.1 as well as with other relevant R&D projects at EU, national or regional level.
- ***Expected impact:***
    - More favourable climate for cities and regions to integrate innovations into their urban mobility policies and increased acceptance and take-up of new urban transport solutions and technologies.
    - Actions will help cities and regions to address common challenges in a collaborative and integrated way - supporting the framework of Sustainable Urban Mobility Plans (SUMP) - and to shorten the implementation path to the deployment of innovation.
    - More cost-efficient mobility policies in economically challenging times, increased use of non-motorised transport while improving road safety, more inclusive urban transport systems with access for all, optimised performance of the urban mobility network, increased energy efficiency and reduced CO_2 pollutant emissions and noise.
- Smart Cities and Communities Initiative: http://setis.ec.europa.eu/about-setis/technology-roadmap/european-initiative-on-smart-cities

SST.2012.3.1-4. Automated urban vehicles

SSH Relevant Scientific Field: Behavioural Sciences, Business Management, Communication Research, Political Sciences

Content and scope:

The aim is to develop a real scale test and validation platform showing that automated urban transport systems have the potential to become a self-sustaining service which can really attract car users and be an efficient passenger transport solution which is complementary to conventional public transport. A link to previous and on-going research activities (e.g. CITYMOBIL, CIVITAS, CYBERCARS II, EDICT, HAVE-IT and INTERACTIVE) should be established. The proposals should also consider the European ITS communication architecture. The following research actions will be covered:

- Implement a large-scale pilot platform for technical and ***socio-economic*** test and validation in an urban environment.
- Perform research activities using the pilot demonstration test bed; research into technical, ***financial/funding, and cultural aspects***, ex-post evaluation, ***behavioural research (accessibility, pricing elasticity, preferences)***, effects on land use, ***effects on policy*** and how new systems could fit into existing infrastructures, the development of a common evaluation methodology, and ideally, investigation into how different system options could fit in different environments, e.g. Ground Rapid Transit (GRT) and Personal Rapid Transit (PRT) in new towns, historic, large and small cities, etc.
- Carry out ***awareness campaigns***. Awareness campaigns are seen as an integral component of the research to develop automated and space-efficient transport systems in order to promote the sustainability benefits of such schemes.

Funding Scheme: Level 2 - CP-IP

Additional Information:

- ***Expected impact***:
  - Demonstrate financial and economic feasibility of automated urban transport.
  - Demonstrate a reduced car-use and projected reduction of car-ownership rate in the long term.
  - Demonstrate a rail-standard safety level for road transport.
  - Development of a proposal for a European directive regulating the circulation of automated vehicles on roads.
  - Clarification of the legal and institutional procedures and approvals needed for planning, operations and safety certification of automated and space-efficient transport schemes.
  - Standardisation of vehicle and infrastructure technology for automated transport systems to make them interoperable.
- See also study on Definition of necessary vehicle and infrastructure systems for automated driving (http://ec.europa.eu/information_society/activities/esafety/studies/ongoing/index_en.htm)
- European ITS communication architecture: http://www.etsi.org/WebSite/Technologies/CooperativeITS.aspx

SST.2012.4.1-1. Human element factors in shipping safety

SSH Relevant Scientific Field: Management, Psychology, Sociology

Content and scope:

The crucial influence of the human element on safety, security and environmental protection has been recognised by the International Maritime Organisation (IMO), including its "Vision, principles and goals" for the human element, as set out in resolution A.947(23) [IMO, 2004]. The combined and integrated effects of human error and intervention have shown to be a major consideration in the estimation of the probability of structural failure. Activities will include:

- Multi-disciplinary, human centred design optimizations, including:
  - Framework for integrating human factors in ship design projects
  - Tools and methodologies for integrating human factors in ship design projects and optimization
- Goal setting approaches for future application of complex human-centred systems, including:
  - Development of error-free Human-Machine-Interfaces, e.g. in the context of the development of e-navigation or e-maintenance/e-diagnostics.
  - Development of principles for ensuring system resilience through people.
- Significance of management options and organisational factors
  - preventing fatigue onboard
  - roadmap for integrating training and crewing into prevention of human errors
  - exploring development of safety culture and capabilities of human beings in the processes
- Novel concepts for integrating human performance and physical capabilities with advanced technical means in risk-based inspection approaches.
- Operation, maintenance and intelligent evacuation concepts, including:
  - Research on the complexity of team operations in extreme environments (harsh weather conditions, heavy traffic in close areas, parallel or remotely controlled operations).
  - Research on productive leadership in vessel operations.

- Novel concepts for integrating human performance and physical capabilities in riskbased inspection approaches.
- Tools based on behavioural sciences for evacuation optimisation.
- Managing the interfaces between land coordination and vessel operations.
- Research on optimum risk and safety management in extreme environments.

Funding Scheme: Level 1 - CP-FP

Additional Information:

- The requested EU contribution shall not exceed EUR 3 000 000
- *Implementation and management*: The consortium will take appropriate measures to ensure that methodologies and technologies developed in other transport or industrial sectors are taken into account. Cooperation with other sectors should be envisaged. Pre-normative activities should be included in the proposals.
- ***Expected impact***: Improvement of safety of the maritime transport through new systems and concepts.

SST.2012.4.1-3. Large scale naturalistic driving observations for safe and sustainable transport

SSH Relevant Scientific Field: Behavioural Sciences, Psychology

Content and scope:

In order to succeed in reducing the number of fatalities and injuries on European roads it is of great importance to ***understand and adjust human behaviour*** with respect to modal choices (e.g. driving, walking, cycling), risk taking (e.g. drink-driving, mobile phones, distraction, speeding), eco-driving (e.g. driving style, route choice), adapting to new technologies (e.g. in-vehicle and cooperative safety systems). The aim of the research is to ***address the role of driver performance and behaviour in traffic safety, traffic management and sustainable road transport***. This includes developing an understanding of how the driver interacts with, and adapts to, the vehicle, traffic environment, roadway characteristics, traffic control devices and the environment.

Large-scale naturalistic driving observations will be developed collecting data from several parts of Europe to take into account physical, climatic and cultural differences in road user behaviour. The key new feature of naturalistic driving observations is the ability to record video and data logs of accidents as they occur naturally, and to subsequently provide a validated understanding of accident causation and pre-crash behaviour. Experiences from ongoing research on naturalistic driving in the US, Japan and in Europe and relevant EU projects have to be considered. Research on a large European scale will focus on:

- ***Road user behaviour*** in normal conditions, near miss accidents and crashes in order to provide quantified risk factors and to identify potential risk countermeasures.
- Driver/vulnerable user interactions in traffic taking into account the mutual attention to and understanding of each other's intentions and constraints.
- Road user behaviour related to emission levels (eco-driving), in order to identify relevant and effective communication, training, and vehicle design measures steering towards sustainable attitudes.
- Road user behaviour related to road design and road network characteristics, in order to identify the essential elements needed to evoke desirable behaviour (e.g. self-explaining road design).
- In-depth analysis of the effects of fatigue and drowsiness on driving; identification of impairment symptoms to be kept under control.
- Setting safety and environmental performance indicators for monitoring developments over time.

Funding Scheme: Level 2 - CP-IP

Additional Information:

- ***Expected impact***:
  - Better understanding of all factors that are likely to contribute to ***unsafe and inefficient behaviour of drivers and other road users*** (e.g. driver's interaction with, and adaptation to, the vehicles, information and communication devices (mobile phones, navigation), invehicle information systems, road characteristics, traffic and weather conditions, traffic control devices, etc.).
  - Naturalistic Driving data that support the identification and development of new and more efficient safety and sustainability measures related to vehicles, road design, education, regulation enforcement, etc.
  - Support the development of tools such as driver models and traffic simulations by providing validation data and a basis for calibration.
- Relevant EU projects: such as PROLOGUE, Fot-Net, HumanIST, EuroFOT, TeleFOT, DriveC2X, eCoMOVE, eCodriver, DaCoTA, 2BeSafe and INTERACTION.

Call identifier: FP7-TPT-2012-RTD-1

TPT.2012.1-2. Transport infrastructure impact on international competitiveness of Europe

SSH Relevant Scientific Field: Economics, Sociology

Content and scope:

This action will analyse qualitatively and quantitatively the relationships between transport infrastructure, competitiveness and ***economic growth***. The links between infrastructure investments and the impacts on economic growth have been the subject of e.g. new economic geography, but they have not been understood in depth in relation to the assessments of different investments. When such impacts are not included in assessments, there is a tendency to underestimate the value of the investment. There is thus a need to better understand the relationships, and to quantify the impacts on competitiveness and economic growth as well as to be able to include them into the assessment methodologies.

Funding Scheme: CSA-SA

Additional Information:

- *Implementation and management*: Activities funded under this topic should be aware of the current transport policy developments (e.g. 2011 Transport White Paper, 'Strategic Transport Technology Plan') and other related policy initiatives that may affect this analysis.
- ***Expected impact***: This action will provide a better understanding of the relationships between transport infrastructure, competitiveness and economic growth. It will help policymaking, particularly for the comparison of policy interventions to promote the competitiveness of Europe.

TPT.2012.1-3. Prospects for transport evolution: challenges for the competitiveness of the European transport sector in the long term

SSH Relevant Scientific Field: Business Management, Political Sciences

Content and scope:

The time scale for research and innovation cycle in the transport sector, as well as the time in service of aircraft, trains, vessels and infrastructure is measured in decades. A long term forward-looking activity has to be developed aiming at exploring and trying to anticipate key drivers of change and the related ***socio-economic aspects***, which will affect the

competitiveness of the European transport sector. This support action should focus on the following issues:

- Assessing the present situation of European transport research per mode regarding e.g. the ***impact of European transport-related policies*** on the global competitiveness of the European transport industry.
- Evaluating the impact of upcoming innovations on the global competitiveness of European industrial sectors.
- ***Analysing the demand and market drivers for new products and services*** related to the transport sector taking into account possible constraints (energy, raw materials and environment).
- Developing identified scenarios at successive time horizons for 2030 and beyond, while taking into consideration different societal trends and challenges.

Funding Scheme: CSA-SA

Additional Information:

- *Implementation and management*: Activities funded under this topic would liaise and coordinate as appropriate with pertinent activities of Transport-related national/European Technology Platforms and other relevant activities.
- ***Expected impact***: This support action will provide a better understanding of the global position of the European transport industry and the definition of strategic options for European transport research policy, in a context where efficient technologies and operational measures are needed to help reduce drastically, or even eliminate, greenhouse gas emissions and other environmental impacts, as well as confronting serious constraints coming from the scarcity of raw materials and energy, and meeting societal challenges such as ageing, land use or urban mobility.

TPT.2012.3-2. Bringing innovative products and services to the market: analysis of pathways and best conditions for innovation

SSH Relevant Scientific Field: Business Management, Finance, Law

Content and scope:

This action should focus on innovation mechanisms for the transport sector i.e. how to bring more efficiently and quicker innovative products and services to the market. The action will target the innovation process in 1) EU-funded Framework Programme research projects, 2) SMEs and 3) establish a selected number of 'Innovation Networks' involving, in particular, regions of Europe where links between actors of the innovation chain are weak.

1) The project should ***analyse how, and to what extent, research and development projects have led to innovative products and services*** and compare results and approaches based on sound field work, including, but not limited to, research projects funded by the EU Framework Programmes. Specific actions (e.g. workshops) should be carried out to help project partners to exploit results and bring innovative products and services to the market. The action should also identify a selection of EU funded research projects with high innovation potential and assist them in developing a sound plan for the use and dissemination of results. In particular, support will be provided to identify potential obstacles along the innovation line, including aspects that are not related to research and technology such as, for example, certification, standards, regulations and financing.
2) Studies show that only a small percentage of SMEs (~1%) currently acquire novel technologies through their own research or contract research. The action should analyse how SMEs in general acquire new technologies and identify the bottlenecks along the innovation pathway. The role of regional, national and European initiatives in this field will be studied. Recommendations to make the research and innovation area more attractive to SMEs will be made, taking into account the socio-economic context.

Close coordination with ongoing actions supporting the participation of SMEs in the Framework Programme in the 'Transport' theme will be ensured.

3) A selected number of cases will be identified where the untapped potential of new solutions, new technologies and new combinations of technologies could be exploited to create new business opportunities. 'Innovation Networks' should be established gathering key actors of the innovation chain (e.g. universities, research centres, industry, ***specialists of IPR, regulation and standardisation bodies, funding agencies***) to create a streamlined, integrated and dynamic environment for entrepreneurship and innovation. The networks will involve preferentially regions of Europe where links between actors of the innovation chain are weak.

The partners of this action will have a demonstrated experience in the field of innovation.
Proposals can address one, two or all three targets (bullet points) mentioned above.
Funding Scheme: CSA-SA

Additional Information:

- ***Expected impact***: This support action will 1) enhance the capacity of EU-funded Framework Programme projects in the field of transport to be at the source of innovation and help them to transform research results into products and services; 2) identify difficulties faced by SMEs, propose specific solutions and recommendations to improve their innovation capacity; and 3) set-up innovation networks involving, in particular, regions of Europe where links between actors of the innovation chain are weak.

Call Identifier: FP7-TRANSPORT-2012-MOVE-1

TPT.2012.1-1. Forum to help implement the future orientation of the overall transport system as defined by the White Paper

SSH Relevant Scientific Field: Economics, Management, Sociology
Content and scope:
Transport is a series of systems comprising many actors covering areas such as research, technology, planning and scheduling, operations, energy, infrastructure, transport sector as defined in the White Paper on Transport will demand a change of the direction of the overall transport system. This will require all involved actors moving jointly towards the same goals. The Commission therefore proposes to set up a forum to foster discussions and joint actions between actors. This action will:

- Identify relevant actors to be involved in the Forum.
- Select at least 3 relevant topics in line with goals of the White Paper. Notably goals 1, 3, 4 and 8 of the White Paper require concerted action of stakeholders and the activation of different policy measures.
- Organise meetings and working groups with actors on identified topics to discuss and propose joint recommendations and potential roadmaps for their implementation.

The Forum and its working groups should give special attention to the research and innovation activities, in addition to any coordination and support measures needed, to meet the goals of the White Paper. Of particular relevance is the target for the transport sector to reduce GHG emissions by 60% below 1990 levels by 2050.
Funding Scheme: CSA-SA

Additional Information:

- *Implementation and management*: Activities funded under this topic would liaise and coordinate as appropriate with on-going related activities (e.g. Technology Platforms, 'European Green Cars Initiative' and 'eSafety Forum') and should help implement the 'Strategic Transport Technology Plan'.

- ***Expected outputs and impact***:
  - A forum for actors representing the whole transport system and relevant stakeholders to discuss how to achieve relevant goals defined in the White Paper.
  - Recommendations and roadmaps based on inputs from stakeholders on joint actions required to meet these goals.
  - A detailed strategic outlook into the future European transport system envisaged by the White Paper, influencing the development of concrete policy proposals.

GC.SST.2012.1-7. Demonstration of Urban freight Electric Vehicles for clean city logistics

SSH Relevant Scientific Field: Behavioural Sciences, Business Management, Public Management and Governance

Content and scope:

The objective of the project is to demonstrate logistic solutions with electric vehicle applications to optimise urban logistics efficiency to improve transport flow management and reduce environmental impact in urban areas. Fleets are expected to include autonomous road vehicles with differing drive-train technologies, provided that electricity for the electric drive can be taken from the grid. The project time-frame should consider the latest technological developments in EU-funded or national and regional programmes. Fuel cell electric vehicles are not included here, as they are covered by the Fuel Cells and Hydrogen JTI. The project will address the following issues:

- Assessment of the state of the art of city freight movements and ***development of new governance models***, based on real and close co-operation between public bodies, retailers and distributors. These can be used in order to deploy sustainable policies able to assure environmental improvements with ***economical sustainability***.
- Demonstration of urban and logistics solutions with electric vehicle fleets with the aim to validate the feasibility of logistics solutions on the basis of electric vehicle applications.
- Demonstration of required ICT for final users and fleet managers.
- ***Assessment of public acceptance of demonstrated new delivery systems***.
- Assessment of the impact on urban transport and delivery market such as size of deliveries, frequencies and vehicle types.
- Assessment of the impact on energy, environment, overall efficiency and cost.

Funding Scheme: CP

Additional Information:

- *Implementation and management*: A typical consortium will include cities, logistics fleet operators, vehicles and equipment manufacturers, utilities, research centres and universities. The project should have a predominant demonstration component. The marginal cost associated with the innovation element compared to state-of-the-art vehicles will be considered as eligible cost. This demonstration project should take into account the first results of projects under topic GC.SST.2011.7-5 (Urban – interurban shipments).
- ***Expected impact***:
  - Optimisation of urban logistics efficiency to improve transport flow management and reduce environmental impacts (noise, CO2 emissions and pollutants) as well as typical congestion in urban areas.

- Contribute to the clarification of the safety, economic and technical viability of electrical vehicles for clean city logistics applications.
- Input for further deployment of clean logistics systems technologies through the European Investment Bank instruments.

GC.SST.2012.1-3. European strategy for rare materials and their possible substitution

SSH Relevant Scientific Field: Finance, Political Sciences, Sociology

Possible limitations of lithium for advanced energy storage systems have recently been discussed at length, and will be subject to research on battery cells. Mass production of electric vehicles however will also strengthen the demand for some other essential materials that are not abundant, or of limited supply, for European companies, primarily for electric and electronic components. Examples include rare earths, such as neodymium, and noble or other scarce metals. Essential for motors, neodymium-iron-boron alloys are the strongest permanent magnets available on earth. The reserves of neodymium are about 8 million tonnes. However, the world production is about 7 000 tonnes per year, 97% of which being concentrated in China. Also the demand for more common metals with appropriate conductive and electrolytic capabilities will increase: cobalt and nickel are used as electrode materials in storage cells, or gold, silver, palladium for any kind of electronic circuits, indium used in transparent electrodes of liquid crystal displays and touch screens, etc.

Content and scope:

The development of new technologies for the electric vehicle needs to be complemented by developing a European strategy for rare materials and their possible substitution.

The Support Action will focus on the following:

- Prediction of the long term needs of the European electric vehicle industry for strategic materials.
- Access to alternative supply.
- Alternative materials and technologies for electric traction and energy storage.
- Options to replace rare earth materials by new electro magnetic systems (motors, driver electronics, sensors, etc.).
- Recycling and reuse options.
- ***Economic, social and environmental risks of shortages***.
- ***Political situation and development of solutions at a global scale***.
- Assessment of the total landed cost associated with the use of new materials.
- Options for ensuring sufficient resilience for a given level of efficiency of the supply chain of new materials.

The above aspects should be covered only to the extent necessary in relation to existing EU level initiatives in order to ensure complementarity and to minimise duplication. During negotiations, complementarity with work performed in response to topic 'NMP.2012.4.1-4. Substitution of critical raw materials: networking, specifying R&D needs and priorities' will be ensured.

Funding Scheme: Level 2 - CSA-SA

Additional Information:

- ***Expected impact***: A small and well focussed project within the European Green Cars Initiative that includes input from all relevant stakeholders, which will deliver a materials roadmap and recommendations for strategic plans to solve the specific long-term materials issues for the Electric Vehicles sector.

GC.SST.2012.3-3. Platform for continuous intermodal freight transport strategic research and innovation

SSH Relevant Scientific Field: Business Management, Finance, Political Sciences
Content and scope:
The objective of this coordination action is to stimulate discussion and consensus-building amongst main public stakeholders, market players and researchers in the intermodal and freight logistics domain to turn knowledge and research into investment in innovation. The coordination action will address the following:

- Raising the profile and understanding of new intermodal and freight logistics technologies and business processes.
- ***Identifying policies, regulatory measures, financial mechanisms and socio-economic aspects that are required in support of their market penetration***.
- Encouraging greater involvement in and acceptance of innovations in the public as well as private sector.

Funding Scheme: Level 2 - CSA-CA

Additional Information:

- *Implementation and management*: Related initiatives in the area, such as the Intelligent Cargo Forum and Logistics4Life will have to be taken into account.
- ***Expected impact***:
    - Assessment and consensus building amongst, and between, industry and authorities on intermodal logistics market developments.
    - Identification of standardisation, harmonisation and innovation requirements.
    - Accelerated exploitation of research results and innovations in the domain of intermodal and freight logistics.

Programme: SPACE

Call Identifier: FP7-SPACE-2012-1

Call's Objectives:

The objective of the FP7 space work programme is to support a European Space Policy focusing on applications such as GMES (*Global Monitoring for Environment and Security*), with benefits for citizens, but also other space foundation areas for the competitiveness of the European space industry.

The space sector provides a stimulus to innovation and growth in the European economy, and thus space research is expected to contribute significantly to the Europe 2020 priorities, especially with regard to Smart and Sustainable Growth and Innovation.

The context for the 2012 call is particularly shaped by the "Innovation Union" Initiative (delivering more innovative products, processes and services) and by the "European Space Policy".[4]

Publication Date: 20 July 2011

Deadline: 23 November 2011

Call information:

http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-SPACE-2012-1

Relevant topic:

SPA.2012.3.5-01 Studies and events in support of European Space Policy

SPA.2012.3.5-01 Studies and events in support of European Space Policy

SSH Relevant Scientific Field: information experts, Innovation Experts, Political Sciences

Topic Description:

The Europe 2020 flagship initiative Innovation Union links R&D funding in the EU strongly to innovation. In view of this, the Space Work Programme 2012 supports studies focusing on the ***implementation of the European Space Policy.*** Of particular interest are ***studies related to the link between space and innovation*** (forming the basis for a series of brainstorming sessions or workshops with industry representatives and the different

[4] COM(2007) 212 final, 26 April 2007, "Communication from the Commission to the Council and the European Parliament : European Space Policy. Further relevant communications are: COM(2010)614, 28 October 2010, "An Integrated Industrial Policy for the Globalisation Era – Putting Competitiveness and Sustainability at Centre Stage"; COM(2011) 152 final, 4 April 2011, "Towards A Space Strategy for the European Union that Benefits its Citizens"

innovation actors in Europe leading finally to a roadmap for space and innovation), and ***the socio-economic benefits attached***.

Furthermore, the implementation of a European Space Programme requires organisational and governance issues to be resolved through dialogue with all stakeholders contributing infrastructure elements. The definition of harmonised ***information exchanges***, data handling processes, operational interfaces and best practices need to be agreed upon. Coordination and support actions contributing to such efforts can be supported. Proposals will have to demonstrate how they will contribute and add value to specific implementation processes already taking place at European level.

Funding Scheme: Coordination and Support Action projects (supporting or coordinating)

Additional Information:

- Upper eligibility limit of EUR 500 000 requested EU contribution per project.
- Note: Limits on the EU financial contribution apply. These are implemented strictly as formal eligibility criteria.
- ***Expected impact****:* Projects are expected to contribute to the coordination and organisation of space activities as part of a European Space programme. They should add value to specific implementation processes already taking place at European level, and contribute to ensuring coherent and effective approaches.

Programme: SECURITY

Call Identifier: FP7-SEC-2012-1

Call's Objectives:

The objective of the Security theme is to develop the technologies and knowledge for building capabilities needed to:

- ensure the security of citizens from threats such as terrorism, natural disasters and crime, while respecting fundamental rights including privacy,
- ensure optimal and concerted use of available and evolving technologies to the benefit of civil European security,
- stimulate the cooperation of providers and users for civil security solutions,
- improve the competitiveness of the European security industry and
- deliver mission-oriented research results to reduce security gaps.

Further theme specific information:

Attention must be given to the ***societal impact*** of the proposed solutions. Respect for fundamental rights and compliance with European societal values, including privacy issues, need to be embedded in each proposal and foreseen in the proposal's work plan. Proposals should consider possible side effects of technological solutions to security problems and assess alternatives with the least intrusive effects on privacy and freedom. ***A holistic approach to security will take the perception of citizens into account and focus on dimensions such as perceived security, while being aware of the fact that security risks can be unevenly distributed within and between societies***. ***Proposers are encouraged to develop solutions strengthening societal resilience and active participation of citizens as security enhancing resources***.

Gender aspects in planning, decisions, and funding must always be taken into account, both as integrated research activities and as diversity in workforce. The pursuit of scientific knowledge and its technical application towards society requires the talent, perspectives and insight that can only be assured by increasing diversity in the research workforce. Furthermore sometimes security needs to be balanced against the accessibility needs of persons with disabilities. Therefore, ***a balanced representation of diverse branches of knowledge and of women and men as well as person with disabilities where relevant at all levels in research projects is encouraged, including in evaluation groups*** etc.

Publication Date: 20 July 2011

Deadline: 23 November 2011

Call information:
http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-SEC-2012-1

List of relevant topics:

SEC-2012.1.3-1 Less than Lethal Handling of PBIEDs

SEC-2012.1.5-1 CBRNE Demo Phase II

SEC-2012.1.6-1 Digital, miniaturised, operational tool for investigation

SEC-2012.4.1-1 Preparedness for and management of large scale fires

SEC-2012.4.1-2 Psycho social support in Crisis Management

SEC-2012.4.2-2 Situational awareness guidance and evacuation systems for large crowds, including crowds unpredictable behavior

SEC-2012.4.2-3 Post crisis lesson learned exercise

SEC-2012.6.1-1 Methodologies to assess the effectiveness of measures addressing violent radicalisation

SEC-2012.6.1-2 Tools and methodologies, definitions and strategies for privacy by design for surveillance technologies, including ICT systems

SEC-2012.6.1-3 Use of new communication/social media in crisis situations

SEC-2012.6.3-1 Developing an efficient and effective environmental scanning system as part of the early warning system for the detection of emerging organised crime threats

SEC-2012.6.3-2 Criteria for assessing and mainstreaming societal impacts of EU security research activities

SEC-2012.6.4-1 Fight against corruption

SEC-2012.6.5-1 Legitimacy and effectiveness of legal measures against security threats

List of further topics with Crisis Management aspects (not included in this document):

SEC-2012.4.2-3 Post crisis lesson learned exercise

SEC-2012.4.3-1 Next generation damage and post-crisis needs assessment tool for reconstruction and recovery planning

SEC-2012.1.3-1 Less than Lethal Handling of PBIEDs

SSH Relevant Scientific Field: Ethics, Sociology

Topic Description:

Suicide bombing has been seen in a number of EU Member States/Associated Countries, and could occur in any Member State/Associated Countries. This research should identify means of dealing with that threat.

The task is to ***determine ethical and socially acceptable technical measures*** to deal with a person suspected of carrying a person-borne improvised explosive device (PBIED) when close to the intended time and point of attack, balancing safety to the public, safety of first responders and security personnel, and the rights of the individual.

Research must consider and develop measures to contain/minimise the potential injuries and fatalities, prevent the suspected bomber from triggering the device, prevent the device from activating or being activated, and removing the threat without resorting to use of lethal force.

Funding Scheme: Collaborative Project (small or medium-scale focused research project)

Additional Information:

- ***Expected impact***: Limit the attractiveness of suicide attacks and increase the security of European citizens and security forces.

SEC-2012.1.5-1 CBRNE Demo Phase II

SSH Relevant Scientific Field: Economics, Political Sciences, Psychology

Topic Description:

Accidental or deliberate CBRNE events are widely considered as low probability events that might however have a big impact on the citizens and the society. Whenever and wherever they happen, they usually deserve a gradual (regional, national, European) and multi-facetted approach as they tend to provoke severe and unexpected physical, ***psychological, societal, economical and political effects*** that might also easily cross the borders inside as well as outside the EU.

Successful CBRNE resilience of the society require therefore a similarly multi-facetted system-of-systems approach, covering most of identified hazards and all effect levels along the whole CBRNE security cycle (threat assessment, prevention, preparedness, detection, response, recovery). This approach involves many relevant stakeholders. Among them, first responders (e.g. fire brigade, health services, police, operators…) and their competent national authorities are expected to be the main end-users.

Proposals should take into account as much as possible relevant, existing, past or ongoing projects (for example earlier phase I projects on the same subject). This large demo phase II will cover the whole cycle of CBRNE aiming at developing and ensuring the resilience capacity of the EU society. All demonstration efforts will be aimed at both integrating and coordinating existing EU capacities and competences.

This demo should develop a "system of systems" that will provide EU-tailored solutions able to improve CBRNE resilience and allow enhanced interoperability between CBRNE operators. The coherent ensemble of demonstrations should cover at least multiple hazards (C, B, R, N, E), multiple phases of the security cycle (prevention to recovery), multiple tiers of effect (regional, national, European) and multiple stakeholders (end-users

in particular first responders, authorities, industry, R&T platforms). Preferably, demonstrations should take place in a (semi-)operational context, including testing and validation, as well as simulation if required.

The institutional end users are those in the best position to define and assess the performances of the future system of systems to be demonstrated, particularly in terms of capabilities to provide improved security solutions. These should be experimented in a pre-operational scenario, to be defined by representatives of institutional users belonging to different MS.

Possible locations for demonstrations activities:

The different CBRNE demonstrators and procedures will be tested in selected cities and/or locations and/or sensitive infrastructures of the European Union, considered of high relevance, such as open places (city main squares, touristic spots, border checks, cross border rivers...) or confined infrastructure like transports hubs, large stadium, theatres, food or water supplies. Due to the sensitivity and scale of CBRNE live or real time demonstrations, a careful attention will be paid to their preparation, organisation and communication to the public, involving local and/or national and/or EU authorities wherever and whenever necessary.

Links with other CBRNE activities:

Given the cross-cutting character of CBRNE, linkages with other ongoing or completed Research activities and studies (across all FP7 Themes and other national or European funding schemes, Instrument for Stability, European Framework Cooperation, etc.) should be carefully considered to ensure complementarities, integration and avoid duplications.

Indeed, no single technological solution exists with the capability to meet the variety of operational requirements. No equipment and information system in operation or under deployment (even for defence needs) is currently able to respond to all the above requirements. However, in a few years from now, significant technical and knowledge progress is expected from all ongoing security projects, (national R&D programs, FP7, EDA,…) combining for example different sets of CBRNE sensors and platforms, heterogeneous data processing and fusion, communication and crisis management tools, new methodologies for protecting first responders and advanced forensic protocols. They should therefore be usefully integrated to build up an innovative EU CBRNE system for national, regional and European missions to efficiently provide CBRNE applications in public area as well as critical infrastructure.

Ultimately, any demonstration proposal should clearly identify and demonstrate the real EU added value of each CBRNE demonstration compared to existing capabilities, competences and systems. A key accent will be put on cross border cooperation, interoperability, standardisation and certification, EU-coordination and communication. The proposal should have a clear eye for inclusion of multi-usability of CBRNE capabilities to make them affordable. ***An appropriate balance between R&D investment, expected market benefits and impacts on the EU society should be reached***.

Funding Scheme: Collaborative Project (large scale integrating project)

Additional Information:

- ***Expected impact***: Solutions will demonstrate the added value of large scale integration of CBRNE counterterrorism improving effectiveness, efficiency, coherence, and cooperation/coordination at the national and European level. Member States and their response organizations will be better equipped by improved integration and information sharing in countering the CBRNE threat. As a result EU society will be more resilient to the CBRNE threat.

In particular, this could be reflected qualitatively and quantitatively, for example, through the following non exclusive achievements:

- Shortening time to response (after an event occurs)
- Improving mass gathering/events security
- Enhancing the protection of sensitive or critical infrastructures
- Achieving a European lead in CBRNE sampling, detection, proficiency testing and forensics
- Boosting the EU civilian CBRNE market
- Reinforcing technological, ***societal and psychological resilience*** of the EU society

SEC-2012.1.6-1 Digital, miniaturised, operational tool for investigation

SSH Relevant Scientific Field: Ethics, Sociology

Topic Description:

Investigations on the activities of ***criminal organizations*** (related with drugs or human trafficking, terrorism, or any other forms of organized crime) usually require Law Enforcement Agencies (LEAs) to use electronic equipment for legal recording, retrieving and monitoring of criminal activities in a safe and unnoticed way, while keeping for both the sensors part and the monitoring station all the legal, integrity and chain-of-custody requirements that will enable the presentation of evidences obtained this way at the Courts of Justice.

Requirements for these equipments are very different from those offered by available commercial devices. Depending on the operation, the periods of time that these electronic devices have to work can range from days to months or in real time. Access to the device could be limited or impossible. Secure remote operation over radio channel (or other type of communication channel) should be possible. Other requirement may apply like small size for easy concealment, low power consumption for extended time life, robustness and selfprotection in addition to strong authentication mechanisms for operators and protection of the communication channels.

The task is to develop new type of sensors, monitoring station and their associated communication channel for LEA operation on the field according to their specification and subject to their validation at the end of ***the project taking into account the societal acceptance of the proposed solutions***.

Proposers for this topic should look for an enhanced SME participation as described in Part I of the Work Programme.

Funding Scheme: Collaborative Project (small or medium-scale focused research project)

Additional Information:

- ***Expected impact***: This action is directed to the substantial improvement of existing technologies and the development of new ones, and their direct and practical application to day-to-day needs that Law Enforcement Agencies are not able to realize efficiently with available commercial products including testing, validation and demonstration as justified. Participation of LEAs in the definition of requirements and validation of results is essential, as only end-users are familiar with the challenges they frequently have to face in real operations within criminal investigations.

SEC-2012.4.1-1 Preparedness for and management of large scale fires

SSH Relevant Scientific Field: Behavioural Sciences, Communication, Crisis Management, Economics, Law, Psychology, Sociology

Topic Description:

Large scale fire events have become in recent years a recurrent phenomena resulting in deaths, ***major economic loss and long lasting effects on communities***. Fire fighting techniques have evolved over the years, introducing fire propagation models, fire retardant materials, air fighting among others. These tools needs to be adapted to the reality of people living in what used to be only forest, what makes the "safety barriers" smaller and at the same time the fires more violent and more frequent. There is also need to integrate into the fire fighting arena tools such as air and land space observations, as well as ***information to the public affected by the phenomena***. Health aspects of the incident and the fire fighting as well as the environmental aspects (including the dispersal of toxic materials, held in facilities affected by the fire) have to be studied. The ***legal and ethical aspects of the measures used in the management of the incident*** (e.g. mandatory evacuation, and the use of force to enforce this evacuation) have to be highlighted. Since this type of incidents often requires international cooperation, interoperability issues both in equipment as well as in common operations procedures (between countries) should be studied, and standardisation activities suggested.

Three major scenarios for such events might be considered:
(1) Fires that damage critical infrastructure or industrial facilities
(2) Forest fires (including fires spread outside of the EU)
(3) Fires that can spread in dense urban areas (“city fires”)

Areas to be addressed in research (for all three types of events):
(i) Real time risk analysis
(ii) Fire monitoring
(iii) Disaster management, operational and tactical response
(iv) Innovative passive and active protection measures, with emphasis on active fire protection
(v) Predictive models for fire propagation and fire control

Critical infrastructures to be considered:
(i) Transport (airports, railway terminals, metro and tunnels)
(ii) Communication (TV and mobile transmitters, internet hubs, large computer rooms)
(iii) Energy (power plants, including nuclear, oil refineries, chemical plants)

Objective:
- To develop better tools for fighting mega-fire (especially mega bush fires threatening the public and their livelihoods). These tools should include – modelling tools, monitoring tools and technologies, fire fighting technologies and tools, standard operating procedures, ***information to the public***, ***public behavioural models***, health risks (from the fire retardant materials, to the responders, general public), ***ethical and legal aspects***, environmental impact.
- To develop advanced monitoring tools over large forest areas in order to fast detect and accurately locate fire;
- To develop modelling tools to estimate the progress of a fire (wind and meteorological conditions are of paramount importance in the model) and to indicate highest probability of fire focal points
- To develop situational awareness tools for the command room and the field forces
- To develop methods and procedures to effectively plan and supervise international forces collaboration (including coordination of aerial fleet over relatively small areas). Seamless coordination of the aerial operation and the ground operation is mandatory.

Funding Scheme: Collaborative Project (large scale integrating project)

Additional Information:

- ***Expected impact***: Better methods for fighting mega fires will make the European citizens safer. Having a comprehensive tool for the management of mega fires (including, health, environmental, legal and ethical aspects), should increase the efficiency of the management of this type of incidents. Besides the project should improve preventative measures, enhance the use of predictive modelling ensuring greater resilience, enabling better response, and addressing issues of standardisation and interoperability across Europe.

SEC-2012.4.1-2 Psycho social support in Crisis Management

SSH Relevant Scientific Field: Crisis Management Psychology, Psychological Trauma

Stakeholders: Response forces, Crisis management personnel and authorities, Decision makers

Topic Description:

Affected public and crisis responders have to deal with ***different forms of stress and other psycho-social strains and trauma***; in order to reduce the short-, mid- and long-term consequences of the various forms of stress and psycho-social strains, psycho-social support should be provided in a timely and professional way. Responders will be confronted with injured, mutilated, traumatised persons and probably also fatalities. External circumstances such as the extent of the devastation, suddenness, force and brutality of the incident, or suspected contamination, may intensify impressions. However, the community in a larger sense and society itself may be affected and suffer from the event which might bear larger cultural, societal consequences and losses, for which support should also be provided.

Thus ***psycho-social support*** is not only relevant during the crisis itself, but also afterwards during the recovery phase, sometimes even for the long-term, and may have to extend well beyond the persons directly impacted, such as first responders and the victims and public on the scene, and those indirectly impacted such as family members and para-medical and medical personnel, to a larger audience who might be witness to the incident through media and internet reports. The immediate impact and effect over time of stress and traumatic stress on ***response forces and crisis management personnel and authorities*** should also be taken into account. All these elements may have an effect on the dimension, magnitude, duration and repercussions (including delayed repercussions) of a crisis.

Research should identify coping mechanisms and methods to be used by decision makers and responders to minimise effects of stress on themselves and the affected public. The proposers should also develop scenarios for the deployment of ***effective scenarios of medical and psycho-social intervention forces***. Following an analysis of existing approaches and best practices, effective intervention strategies and related support should be developed.

Bottom-up strategies - built up on the capabilities and know-how present on the ground – and effective intervention techniques using adequately trained laypersons instead of professional personnel - who might be scarce - should also be developed.

Objective:

- To ***develop effective methods and tools for medical and psycho-social intervention for victims, intervention forces and volunteers*** as well as for the larger community during and after a crisis situation, including

- ***Immediate/post-immediate psychological support*** (acute stress reactions),
- Treatment of ***long-term consequences*** (trauma and PTSD - Post-Traumatic Stress Disorder);
- To improve ***psycho-medical*** preparedness for crisis situations (contingency planning for the early interventions, readiness of medical supplies and hospital facilities, determining training and intervention strategies to deal with stress during preparation, response and recovery phases,
- To develop tools able to ***assess the relationship between the level of stress of the Crisis Managers and the effectiveness of the whole Crisis Management System***;
- ***To develop technologies and effective methods to provide social support to large numbers of people***;
- ***To develop assessment tools for psychological fitness of crisis management personnel and authorities***;
- To 'help the people help themselves', that is: ***to validate and support efforts at local level***;
- ***To identify longer term psychological, societal and cultural impact of crises***.

Funding Scheme: Collaborative Project (small or medium-scale focused research project)

Additional Information:

- ***Expected impact***: Improved psycho-social preparedness of the public and of decision makers, first responders for crisis situations, effective interventions and appropriate treatment of people affected by psycho-traumatic problems resulting from disasters, societal recovery from, and cultural integration of, traumatic events.

SEC-2012.4.2-2 Situational awareness guidance and evacuation systems for large crowds, including crowds unpredictable behavior

SSH Relevant Scientific Field: Behavioural Sciences, Psychology

Topic Description:

Guiding people out of dangerous areas safely is one of the first priorities in cases of a dangerous incident. As such situations are commonly characterized by uncertainty regarding both the source of danger and ***human behaviour***.

Persons involved in a crisis suffer from limited situational awareness (SA). SA involves being aware of what is happening around you to understand how information, events, and your own actions will impact your goals and objectives. Lacking SA or having inadequate SA has been identified as one of the primary factors in accidents attributed to human error.

The situation awareness system should harness various sensors to perceive the situation, to calculate the development of the situation, and to guide people away safely from the source of danger. Thereby, human behaviour during an evacuation has to be considered.

Incidents typically involve also reactions of society which are difficult to predict let alone control. Mass hysteria may heavily complicate any incident, especially when unconventional and invisible materials such as chemicals, radioactive substances and pathogens are involved.

Objective:

- To develop a situation aware evacuation system that is able to adapt dynamically to changing situations.
- To develop integration of multiple information sources leading to enhanced situation awareness to be available to command posts as they are usually not disseminated to deployed intervention personnel.

- To develop a system that will enable sharing all relevant multi-media data – video (including 3D), pictures, voice, force locations, plans, orders, messaging etc. between all operating personnel, including the integration of information, with their command posts and headquarters. The user interfaces, devices and communication should be appropriate for deployed personnel in urban environments.
- To develop a system applicable to a broad range of areas (e.g. large gatherings on fenced/confined outdoor areas, office buildings, underground stations, airports) and to various incidents (natural and man-made as well as terrorism). Therefore the equipment and devices have to be mobile. Furthermore, the system should be capable of providing situational data to first responders and to the general public involved in various forms.
- To develop respective optimal evacuation strategy.

Funding Scheme: Collaborative Project (large scale integrating project)

Additional Information:

- ***Expected Impact***: A system and evacuation strategy which guides people from the dangerous situations. A system that enhances the effectiveness of forces responding to crisis can, reducing time, human error, and collateral damage in restoring security as a crisis unfolds.

SEC-2012.6.1-1 Methodologies to assess the effectiveness of measures addressing violent radicalisation

SSH Relevant Scientific Field: Finance, Political Sciences

Topic Description:

This topic aims at developing a viable, ***practical approach and methodology to facilitate the measuring of the effectiveness of measures and policy responses to address the phenomenon of violent radicalisation***. Since the adoption of the 2005 EU Strategy for Combating Radicalisation and Recruitment there has been no thorough evaluation of the measures and policy responses mostly due to the lack of appropriate evaluation methodologies.

Interventions can be different in nature and approach, and may therefore need also custom-tailored evaluation. There is a need for guidance in and an overarching approach to carrying out this process, which start at the moment a possible radicalisation issue is identified, and interventions are developed and implemented.

Proposals should take into consideration previous (empirical) work concerning interventions and their effectiveness, as well as work concerning measuring effectiveness in general. The resulting approach should be applicable at both the strategic and operational levels.

The proposal should address not only the process of measuring effectiveness, but also how best to implement knowledge management of lessons learned and best practice.

Given the transnational nature of the phenomenon and in order to avoid duplications of efforts among the EU Member and Associated States, research at the European level is appropriate. ***Though the ultimate goal is to improve society's ability to address threats to public security posed by violent radicalisation, proposals should take into account any potential negative societal impact in terms of violations of ethics, civil liberties or human rights***.

Funding Scheme: Collaborative Project (small or medium-scale focused research project) or Coordination and Support Action (coordination action)

Additional Information:

- *Expected impact*: This research should allow for a more standardised modus operandi for measuring effectiveness and evaluating interventions. Thus it should make possible the selection and implementation of more appropriate response measures, and the designing of better and more focused policy, while respecting civil liberties and human rights.

SEC-2012.6.1-2 Tools and methodologies, definitions and strategies for privacy by design for surveillance technologies, including ICT systems

SSH Relevant Scientific Field: Anthropology, Law, Sociology

Topic Description:

The balancing between increasing security and enhancing security measures on the one hand and ***preserving the fundamental rights of citizens for privacy, justice and freedom on the other***, should be the driving force for any investment in security.

Due to the increasing pace of technological development, citizens experience a sense of opaqueness and loss-of-control with regard to the capabilities of new technologies and systems. Moreover, the concept of private (vs public) is evolving over time, and there is a different apprehension of this concept depending on the individual situation ***(sociological dimension), on cultural and surrounding environmental factors (anthropological dimension) and on the legal situation (legal dimension)***. A definition of the concept of privacy versus public is therefore needed in order to better understand as to when (from a sociological, anthropological, and legal point of view) a certain space or situation are considered private (versus public).

Based on a definition of the notion "private vs public", the aim is then to develop tools, methodologies and strategies to support the application of knowledge about privacy during the design phase of technologies and systems.

Privacy is a property that has to be designed into surveillance technologies and systems; it does not emerge by itself. As such, the concept of privacy by design - including data protection by design - should be an inseparable part of the wider concept of security by design.

Funding Scheme: Collaborative Project (small or medium-scale focused research project) or Coordination and Support Action

Additional Information:

- *Expected impact*: A technology that is developed on the basis of privacy by design, for which a better understanding of the evolving concept and notion of public and private is needed, would make it more acceptable to citizens and thus enhance their trust in new surveillance technologies and systems.

SEC-2012.6.1-3 Use of new communication/social media in crisis situations

SSH Relevant Scientific Field: Communication, Finance, Psychology, Sociology

Topic Description:

The aim is to explore the rapidly expanding ***new communication media*** (smart phones, mobile phone applications and functionality, Twitter, social networking sites - such as Facebook, etc) in order to give guidelines for the most efficient and effective ways to

enable and encourage users of these new media to contribute to the security of the citizen in crisis situations and for search and rescue actions.

This topic would not only examine the potential to establish ***better communications between the police/law enforcement agencies/first responders and among the public***, but should also investigate opportunities stemming out of the proliferation of hi-tech and mobile devices to gather local information (e.g. location, sent messages, etc). The topic also includes communications in both directions. Social media have proven to have high impact when it comes to citizens sharing their observations, opinions and emotions. The topic further examines the role of the public as a participant in the process of emergency communication and in this context the ethical dimension should be taken into account.

Opportunities stemming out of the application of new technological opportunities such as crowd mapping, visualisation analytics, remote sensing, processing real time image of the local situation, information mining, etc should be taken into account.

The proposal should complement on-going research in this area and look for an enhanced international cooperation as described in Part I of the Work Programme.

Funding Scheme: Collaborative Project (small or medium-scale focused research project) or Coordination and Support Action

Additional Information:

- ***Expected impact:***
  - More rapid response to the benefit of the ordinary citizen.
  - Better linkages between prevention, detection, reporting, and rescue.
  - More effective and efficient police and law enforcement agencies as well as for first responders and medical personnel

SEC-2012.6.3-1 Developing an efficient and effective environmental scanning system as part of the early warning system for the detection of emerging organised crime threats

SSH Relevant Scientific Field: Criminology, Law, Foresight

Topic Description:

The aim is to conduct research into technologically-/actor-driven systems and tools which support environmental scanning to enable the rapid ***identification and qualification of new Organised Crime (OC)*** threats within the ***policing and law enforcement environment***.

Strategic Early Warning Systems increasingly use environmental scanning techniques to systematically monitor the external environment for the detection of “weak signals” of upcoming opportunities and threats.

The detection of those signals enables the strategic decision makers within the organisation (or externals) to counterbalance detected upcoming threats before they materialise.

Using concepts such as ‘Criminal Hubs’, ‘Indicators’ for OC groups and ‘Facilitating Factors’ for OC activities, it is possible to map changes within the OC situations that impact the security of the European Union (EU) Member States.

The EU and National Policy Cycles have foreseen continuous environmental scanning functions performed by policing bodies and/or criminological institutes. This function is

designed to scan the environment to feed new and emerging threats into the serious and organised crime threat assessment processes.

Research is required to identify a combination of technological resources and human actors that serves to improve the process of ***detecting and selecting new OC threats*** that warrant EU-level analysis and EU-wide responses.

Funding Scheme: Collaborative Project (small or medium-scale focused research project)

Additional Information:

- ***Expected impact:***
  - Demonstrating the feasibility and testing new systems.
  - Increasing the effectiveness of the National Police Forces, criminological institutes and private businesses.
  - Providing more effective information into foresight to fight against terrorism, drug trafficking and all sorts of organised crime.
  - Providing a better understanding of the new and upcoming technologies and trends, leading to the strategic planning into security issues of all stakeholders.

SEC-2012.6.3-2 Criteria for assessing and mainstreaming societal impacts of EU security research activities

SSH Relevant Scientific Field: foresight

Topic Description:

The aim is to provide tools, such as guidelines and recommendations, on how to ***assess and mainstream societal impacts*** of EU security research activities in the future.

The work should include ***an overview of the current state of the art on societal security, including present good practices.*** The work could be done by desk research and workshops. It should also aim at creating a pool of expert in this field, which could provide assistance to the Commission in implementing the recommendations. The outcome should include a roadmap on how to implement these aspects in the next framework programme for research and innovation.

Funding Scheme: Coordination and Support Action

Additional Information:

- Policy related action: the management of any resulting contract(s) will not be externalised to the REA.
- ***Expected impact***: To ensure a better integration of the societal dimension of security research activities already from the start of new EU projects, activities and programmes.

SEC-2012.6.4-1 Fight against corruption

SSH Relevant Scientific Field: Criminology, Governance, Law

Topic Description:

Corruption, as defined by the UN and endorsed by the EU, is the "abuse of power for private gain". It is an insidious crime that undermines trust and ***societal resilience***, no country in the world being immune to it. Its consequences can be far reaching and corrupt

decisions may negatively impact on future generations. Corruption is as well an obstacle to development and the EC is taking a number of measures to tackle graft in the countries which receive EC technical assistance and aid. By mainstreaming anti-corruption measures the EC seeks to build institutional capacity and thus, ideally, reduce fiduciary risks or misuse of funds.

Corruption cannot be addressed in isolation but rather as part of the overall support to democratic governance reform processes. Taking into account the international and European context (e.g. UN Convention against Corruption, Stockholm Programme), the aim is to ***develop tools and methods to facilitate the prevention, the detection and the repression of corruption***. It will also include networking activities, exchange of best practices and dissemination activities to and between the stakeholders. **Legal aspects** (e.g. restriction to exchange of information between national authorities), within the EU or at international level will have to be addressed. Targeted training activities could be envisaged.

The activities should complement on-going and planned research in this area, for instance with the SSH theme.

Funding Scheme: Coordination and Support Action

Additional Information:

- ***Expected impact***: To provide law enforcement agencies with better tools and methods to fight more efficiently corruption in Europe and internationally.

SEC-2012.6.5-1 Legitimacy and effectiveness of legal measures against security threats

SSH Relevant Scientific Field: Law, Sociology

Topic Description:

Today, the discourse on counterterrorism is a lively field, covering a wide array of international and national political initiatives. In Europe, the controversy focuses on the regulatory scheme with which the EU attempts to address seemingly new forms of terrorism.

Anti-terrorism policies respond to real threats, but also to perceived needs for action. New ***legislation*** purporting to combat terrorism is frequently legitimated by a reference to the improvement of security for the citizen. However, it is often not clear, from a sociological perspective, whether the legislation in question is effective at all, calling, from a legal point of view, into question the proportionality of the given measure.

Moreover, new counter-terrorism policies have led to legislation that often departs from traditional patterns, such as the clear distinction between prevention and punishment. It is very difficult to define in precise legal terms when a preventive measure based on an actuarial risk-assessment is legally required or permitted. If the risk is considered complex and the potential damage substantial, the line between legitimate intervention and the illegitimate intrusion in the citizens' rights are not easy to draw.

- The aim is **to integrate sociological and legal research on the legitimacy and efficiency of counter-terrorism measures on a European level and on the level of the Member states with research in the field of security studies that often neglects social and legal aspects of counter-terrorism measures.** The following questions should be examined: Comparatively, how have European anti-terrorism measures been transposed into legislation in the Member States?

Sociologically, what is the state of art in determining the effectiveness of anti-terrorism legislation, and how do selected legal instruments perform when analyzed as to their effectiveness and impact? Normatively, what are the consequences when assessing the legitimacy of the various legal measures which may intrude into the lives of the citizens?

Funding Scheme: Collaborative Project (small or medium-scale focused research project) or Coordination and Support Action

Additional Information:

- ***Expected impact***: Provide feedback to (administrative and legislative) experts about state-ofthe-art research on the effectiveness of anti-terrorism legislation. Provide examples of bestpractice and failures of implementation. Make an empirically informed contribution to the ongoing debate on the relationship between security and freedom on the European level.

II. IDEAS

Objectives

The objectives of the ERC are to reinforce excellence, dynamism and creativity in European research and improve the attractiveness of Europe for the best researchers from both European and third countries, as well as for industrial research investment.

In order to fulfil these objectives the ERC funds research of the very highest quality at the frontiers of knowledge thus feeding into the innovation chain and supporting the EU's Europe 2020 strategy for smart, sustainable and inclusive growth and the EU's flagship Innovation Union initiative.

Three types of ERC grant will be available in 2012. The two established schemes will remain as the core of the ERC's operations for the duration of the 7th Framework Programme.

- The ERC Starting Independent Researcher Grants (ERC Starting Grants) boost the independent careers of excellent researchers by providing adequate support at the critical stage where they are starting or consolidating their own independent research team or programme.
- The ERC Advanced Investigator Grants (ERC Advanced Grants) encourage substantial advances at the frontier of knowledge by supporting excellent, leading advanced investigators to pursue ground breaking, high-risk/high gain research.
- The ERC Synergy Grants will enable small groups of Principal Investigators (with a designated Lead Principal Investigator) and their teams to bring together complementary skills, knowledge, and resources, in order to jointly address research problems at the frontier of knowledge going beyond what the individual Principal Investigators could achieve alone.

Social Sciences & Humanities Panels:

SH1 **Individuals, institutions and markets**: economics, finance and management
SH2 **Institutions, values, beliefs and behaviour**: sociology, social anthropology, political science, law, communication, social studies of science and technology
SH3 **Environment, space and population**: environmental studies, demography, social geography, urban and regional studies
SH4 **The Human Mind and its complexity**: cognition, psychology, linguistics, philosophy and education
SH5 **Cultures and cultural production**: literature, visual and performing arts, music, cultural and comparative studies
SH6 **The study of the human past**: archaeology, history and memory

ERC Starting Grant

Call Identifier: ERC-2012-StG_20111124

Publication Date: 20 July 2011

Deadline: 24 November 2011

Call information:

http://ec.europa.eu/research/participants/portal/page/ideas?callIdentifier=ERC-2012-StG_20111124

Call's Objectives:

The objectives of the ERC are to reinforce excellence, dynamism and creativity in European research and improve the attractiveness of Europe for the best researchers from both European and third countries, as well as for industrial research investment.

In order to fulfill these objectives the ERC funds research of the very highest quality at the frontiers of knowledge thus feeding into the innovation chain and supporting the EU's Europe 2020 strategy for smart, sustainable and inclusive growth and the EU's flagship Innovation Union initiative.

The ERC complements existing funding schemes at the national and European levels. By establishing world class benchmarks of excellence in its evaluation and in the research it funds the ERC will raise the status, visibility and attractiveness of European frontier research and provide a powerful dynamic for driving up the quality of the overall European research system. In this way the ERC supports research excellence across the whole of the European Union and associated countries.

ERC Starting Grants boost the independent careers of excellent researchers by providing adequate support at the critical stage where they are starting or consolidating their own independent research team or programme.

SSH Relevant Scientific Field: any discipline

Topic Description: Bottom-up approach.

Funding Scheme: Basic research.

Additional Information:

- Budget: up to 1,500,000 Euro for up to 5 years (extra 500,000 Euros can be added in certain cases).
- Eligibility:
  - Researchers from independent legal entity established in a Member States or an associated country.
  - Evaluation is based on the sole criteria of excellence (researcher and project idea).
  - See eligibility criteria in the work programme section 3.4.
    Normally, the Principal Investigator must have been awarded their first PhD at least 2 and up to 12 years prior to the publication date of the call for proposals of the ERC Starting Grant. However, Principal Investigators who were awarded their first PhD more than 12 years prior to the publication date of the call may still be eligible in certain properly documented circumstances such as maternity.

- Due to the ground-breaking nature of frontier research projects, it is expected that all projects start within 6 months from the award of the grant. ERC reserves the right to cancel a grant if the proposed start date goes beyond this limit

ERC Advanced Grant

Call Identifier: ERC-2012-AdG

Publication Date: 16 November 2011

Deadline: 11 April 2012

Call information: Call information will be online after the publication date. Topics related to this call are published in the Ideas Work Programme available at http://ec.europa.eu/research/participants/portal/page/ideas?callIdentifier=ERC-2012-StG_20111124

Call's Objectives:

The objectives of the ERC are to reinforce excellence, dynamism and creativity in European research and improve the attractiveness of Europe for the best researchers from both European and third countries, as well as for industrial research investment.

In order to fulfill these objectives the ERC funds research of the very highest quality at the frontiers of knowledge thus feeding into the innovation chain and supporting the EU's Europe 2020 strategy for smart, sustainable and inclusive growth and the EU's flagship Innovation Union initiative.

The ERC complements existing funding schemes at the national and European levels. By establishing world class benchmarks of excellence in its evaluation and in the research it funds the ERC will raise the status, visibility and attractiveness of European frontier research and provide a powerful dynamic for driving up the quality of the overall European research system. In this way the ERC supports research excellence across the whole of the European Union and associated countries.

ERC Advanced Grants encourage substantial advances at the frontier of knowledge by supporting excellent, leading advanced investigators to pursue ground breaking, high-risk/high gain research.

SSH Relevant Scientific Field: any discipline

Topic Description: Bottom-up approach.

Funding Scheme: Basic research.

Additional Information:

- Budget: up to 2,500,000 Euro for up to 5 years (extra 1,000,000 Euros can be added in certain cases).
- Eligibility:
  - Researchers from independent legal entity established in a Member States or an associated country.
  - Evaluation is based on the sole criteria of excellence (researcher and project idea).
  - See eligibility criteria in the work programme section 3.4.

ERC Synergy Grant

Call Information: ERC-2012-SyG

Publication Date: 25 October 2011

Deadline: 25 January 2012 17.00.00 (Brussels local time)

Call information: Call information will be online after the publication date. Topics related to this call are published in the Ideas Work Programme available at http://ec.europa.eu/research/participants/portal/page/ideas?callIdentifier=ERC-2012-StG_20111124

Call's Objectives:

The objectives of the ERC are to reinforce excellence, dynamism and creativity in European research and improve the attractiveness of Europe for the best researchers from both European and third countries, as well as for industrial research investment.

In order to fulfill these objectives the ERC funds research of the very highest quality at the frontiers of knowledge thus feeding into the innovation chain and supporting the EU's Europe 2020 strategy for smart, sustainable and inclusive growth and the EU's flagship Innovation Union initiative.

The ERC complements existing funding schemes at the national and European levels. By establishing world class benchmarks of excellence in its evaluation and in the research it funds the ERC will raise the status, visibility and attractiveness of European frontier research and provide a powerful dynamic for driving up the quality of the overall European research system. In this way the ERC supports research excellence across the whole of the European Union and associated countries.

ERC Synergy Grants are intended to enable a small group of Principal Investigators and their teams to bring together complementary skills, knowledge, and resources in new ways, in order to jointly address research problems.

The aim is to promote substantial advances in the frontiers of knowledge, and to encourage new productive lines of enquiry and new methods and techniques, including unconventional approaches and investigations at the interface between established disciplines.

The peer review evaluation will therefore look for proposals that demonstrate the synergies, complementarities and added value that could lead to breakthroughs that would not be possible by the individual Principal Investigators working alone.

SSH Relevant Scientific Field: any discipline, preferably inter-disciplinary.

Topic Description: Bottom-up approach.

Funding Scheme: Basic research.

Additional Information:

- Budget: up to 15,000,000 Euro for up to 6 years (pro rata for projects of shorter duration).
- Eligibility:
  - Groups applying for the ERC Synergy Grant must be made up of a minimum of two and a maximum of four Principal Investigators.
  - One of the Principal Investigators must be designated as the Lead Principal Investigator. The leader will be evaluated by the same evaluation criteria and will coordinate the project.

    - All members of the group should submit track record. There is no description of "starting" or "advanced" researchers.
- Applications are expected from a group of innovative and active Principal Investigators.
    - New types of joint effort may be needed (perhaps built around specialized infrastructure, allow new combinations of skills and disciplines or bringing together researchers from different institutions, sectors or countries).
    - It is expected that in most cases ERC Synergy groups will be interdisciplinary, often using multidisciplinary approaches.
    - It is expected that all the members will be physically located in the same place for significant periods of "core time" over the course of the project.
    - **However**, any group which can demonstrate the synergies, complementarities and added value that will make the whole greater than the sum of the parts in order to promote substantial advances in the frontiers of knowledge will be considered.
- With the focus on the Principal Investigators, the concept of an ERC Synergy group is fundamentally different from that of a network or consortium of undertakings, universities, research centers or other legal entities. Proposals of the latter type should not be submitted to the ERC.

Call for proposals to support ERC monitoring and evaluation strategy (gender aspects)

Call Identifier: ERC-2012-Support-1

Publication Date: 12 October 2011

Deadline: 12 January 2011 17.00.00 (Brussels local time)

Call information: Call information will be online after the publication date. Topics related to this call are published in the Ideas Work Programme available at

http://ec.europa.eu/research/participants/portal/page/ideas?callIdentifier=ERC-2012-StG_20111124

SSH Relevant Scientific Field: Psychology, Sociology

Topic Description:

The focus of the studies should be *on* ***gender aspects in career structures and career paths of male and female ERC grantees and non-successful ERC applicants as well as of potential applicants that never apply as a control group***. The studies could be limited to, but should include, researchers relevant for the Starting Grant Life Science domain. Furthermore it should be ***longitudinal studies including all stages of the careers from the university degree to the current position of ERC grantees.*** The studies may include:

- Differences in terms of publications, invitations to conferences, citations, positions, teaching, funding, or recruitment;
- Differences in mobility behavior and international networking;
- The career impact of work balance, family background or specific support measures of ERC host institutions (e.g. spouses, child care, moving allowances etc.);
- Career breaks and unconventional career paths;
- Future career perspectives taking into account national research systems;

Project durations could be of up to one year. It is foreseen that a range of different methods could be appropriate, recognising that different approaches may be appropriate

for different disciplines. In all cases, the expected output of the studies should have an impact on the ERC's operations and should not be of a theoretical nature.

Funding Scheme: Coordination and Support Action

Additional Information:

- Budget: up to 150,000 Euro for 2012.
- At least one independent legal entity established in one of the Member States, or one of the Associated countries (in the case of the participation of more than one legal entity the participants are not obliged to establish a consortium agreement).
- Coordination and Support Actions are open to legal entities situated in Member States, or Associated countries. Applications from International European Interest Organisations (such as CERN, EMBL, etc.) or the European Commission's Joint Research Centre, and legal entities established in third countries are also eligible. Legal entities established in third countries can receive funding if their participation is essential for carrying out the action.
- The minimum participation is one independent legal entity (CSA-Support).

III. PEOPLE (Marie Curie Actions)

Programme: INTERNATIONAL RESEARCH STAFF EXCHANGE SCHEME (IRSES)

This action will provide support to research organisations to establish or reinforce long-term research cooperation through a coordinated joint programme of exchange of researchers for short periods.

Target Group:

Research organisation that will be a member of the partnership that contributes directly to the implementation of the joint exchange programme, by seconding and/or hosting eligible researchers.

Call's Objectives:

This action aims to strengthen research partnerships through staff exchanges and networking activities between European research organisations and research organisations from countries with which the European Union has an S&T agreement or is in the process of negotiating one16, and countries covered by the European Neighbourhood policy17.

Call Identifier: FP7-PEOPLE-2012-IRSES

Publication Date: 20 July 2011

Deadline: 18 January 2012

Call information:

http://ec.europa.eu/research/participants/portal/page/people?callIdentifier=FP7-PEOPLE-2012-IRSES

Topic: any topic is acceptable, bottom up system

SSH Relevant Scientific Field: any discipline

Requirements and Length of the Project:
Participants will submit multi-annual proposals for joint programmes dedicated to exchanges of research staff. Technical and management staff may also participate in the exchanges.
Financial support will be provided for a period of **24 to 48 months**, to joint programmes aiming at trans-national mobility of researchers, technical and management staff.
For organisations in Member States and associated countries, the mobility must be towards the other third country partners, and vice-versa. The duration of exchanges for each researcher or technical/management staff will be for a **maximum of 12 months**.

Programme: INITIAL TRAINING NETWORKS (ITN)

The goal of this Marie Curie Action is to make research careers more attractive to young people.
The Initial Training Networks (ITN) offer early-stage researchers the opportunity to improve their research skills, join established research teams and enhance their career prospects in both public and private sectors.
This is achieved through a trans-national networking mechanism, aimed at structuring the existing high-quality initial research training capacity throughout Member States and associated countries. Direct or indirect involvement of organisations from different sectors, including (lead-) participation by private enterprises in appropriate fields, is considered essential in the action. In particular, the action aims to add to the employability of the recruited researchers through exposure to both academia and enterprise, thus extending the traditional academic research training setting and eliminating cultural and other barriers to mobility.

Experienced researchers looking for young recruits for training

Target Group:

At least three participants joined together to propose a coherent programme for an ITN. The participants can be universities, research centres or companies (large or small).

Call's Objectives:

The action is implemented by supporting competitively selected networks of organisations from different countries engaged in research training. The networks will be built on a joint research training programme, responding to well identified training needs in defined scientific or technological areas, with appropriate references to interdisciplinary and newly emerging supra-disciplinary fields.

Call Identifier: FP7-PEOPLE-2012-ITN

Publication Date: 20 July 2011

Deadline: 12 January 2012

Call information:

http://ec.europa.eu/research/participants/portal/page/people?callIdentifier=FP7-PEOPLE-2012-ITN

Topic: any topic is acceptable, bottom up approach

SSH Relevant Scientific Field: any discipline

Requirements:

The call designed for three types of networks:

Multi-partner ITNs (ITN)

At least three participants established in at least three different Member States or associated countries. Above this minimum, the participation of other third countries and of international organisations is possible under the conditions provided by the FP7 Rules for Participation. Participation of the private sector is highly encouraged.

- This type of ITN can also recruit experienced researchers (with possession of a doctoral degree or have at least four years of full-time equivalent research experience but less than five years of full-time equivalent research experience)- to a limited extent.

Innovative Doctoral Programmes (IDP)

A sole participant established in a Member State or associated country, typically universities or research institutions offering innovative doctoral programmes ensuring an international, interdisciplinary and intersectoral training.
Collaborations with a wider set of associated partners, including from the private sector, as well as innovative elements of the proposed training addressing the needs of the Innovation Union flagship initiative, will be taken into account during the evaluations.

European Industrial Doctorates (EID)

Two participants: one academic institution and one participant from the private sector, established in two different Member States or associated countries. The academic participant can be either:

- An institution entitled to deliver doctoral degrees and recognised as such by the relevant authorities of the country concerned.
- A research institution associated with a university that will deliver the degree.

Early stage Researchers

Target Group:

Scientists and scholars of all nationalities and disciplines, at the beginning of the academic career (completed doctorate in the last four years)

Call's Objectives:

Offer early-stage researchers the opportunity to improve their research skills, join established research teams and enhance their career prospects in both public and private sectors, by joining an already funded Initial Training Network (ITN).

Job vacancies are published on a designated website.

Publication Date & **Deadline**: accepted continuously, no application deadlines.

Call information: http://ec.europa.eu/euraxess/index.cfm/jobs/index

Topic: there are existing networks in all disciplines.

SSH Relevant Scientific Field: any discipline

Requirements:

- Research experience: At the time of recruitment by the host organisation, the early-stage researchers must be in their first four years (full-time equivalent research experience) of their research.
- Mobility: at the time of the recruitment by the host organisation, researchers must not have resided or carried out their main activity (work, studies, etc) in the country of their host organisation for more than 12 months in the 3 years immediately prior to the reference date.

Project Length: Support for early-stage researchers is limited for periods of 3 to 36 months, the support for experienced researchers is limited to 24 months maximum within a network.

Programme: COFUND

COFUND is a Marie Curie Action under the FP7 People Programme that co-funds regional, national and international fellowship programmes for research training and career development.

Fellowship programmes supported by COFUND are labelled "co-funded by Marie Curie Actions". They are selected through transparent and independent peer review after evaluating them (among others) on fairness and transparency of the recruitment process and on working and employment conditions that they provide for researchers.

Researchers who receive a grant from co-funded fellowship programmes are considered as Marie Curie Fellows. To be eligible, researchers have to demonstrate transnational mobility (incoming, outgoing or re-integration) and must have at least 4 years of research experience or be holders of a doctorate. Detailed information of working conditions and financial contribution of each fellowship programme can be found in the table below under "Programme Summary".

Funding organisations execute co-funded fellowship programmes independently from the European Commission and the Research Executive Agency. Typical funding organisations can be ministries, research academies or agencies, international organisations or other bodies with a public mission, including universities or research organisations.

Erwin Schrödinger Fellowships including a return phase

Target Group: Young and especially highly qualified scientists of any discipline

Call's Objectives:

- Promotion of scientific work at leading foreign research institutions; gaining experience abroad during the postdoc-phase
- Facilitation of access to new scientific areas, methods, procedures and techniques so as to contribute - following return to Austria - to the further development of science in Austria

Publication Date & **Deadline**: accepted continuously, no application deadlines.

Call information: http://www.fwf.ac.at/en/projects/schroedinger.html

Topic: any topic is acceptable, bottom up system

SSH Relevant Scientific Field: any discipline

Requirements:

- Completed doctoral studies
- International scientific publications
- Invitation from the foreign research institution
- If a return phase is requested: confirmation of the Austrian research institution

Project Length: 10 to 24 months without return phase respectively 16 to 36 months including return phase (return phase = 6 to 12 months)

Humboldt Research Fellowship for Postdoctoral Researchers

Target Group: Scientists and scholars of all nationalities and disciplines, at the beginning of the academic career (completed doctorate in the last four years)

Call's Objectives:
A Humboldt Research Fellowship for postdoctoral researchers allows you to carry out a long-term research project (6-24 months) you have selected yourself in cooperation with an academic host you have selected yourself at a research institution in Germany.

Publication Date & **Deadline**: accepted continuously, no application deadlines.

Call information: http://www.humboldt-foundation.de/web/humboldt-fellowship-postdoc.html

Topic: any topic is acceptable, bottom up system

SSH Relevant Scientific Field: any discipline

Requirements:
- Doctorate or comparable academic degree (Ph.D., C.Sc. or equivalent)
- Academic publications reviewed according to international standards
- Confirmation that research facilities are available and mentoring agreement and adetailed expert's report by an academic host at a research institution in Germany.
- Expert references from the doctoral supervisor and two other academics qualified to give well-founded comments on the applicant's eligibility
- Language skills: scholars in the humanities or social sciences and physicians must have a good knowledge of German if it is necessary to carry out the project successfully; otherwise a good knowledge of English
- The applicant may not have spent an extended period in Germany prior to application.

Project Length: long-term research project (6-24 months)

Programme: INDUSTRY-ACADEMIA PARTNERSHIPS AND PATHWAYS (IAPP)

Stronger cooperation between universities and business via staff exchange will encourage entrepreneurship and help to turn creative ideas into innovative products and processes that can efficiently address European and global societal challenges.
The action will be implemented through targeted and flexible support for human resources interactions within cooperation programmes between at least two organisations, one from each sector and from at least two different Member States or associated countries.

Target Group: one or more research organisations (e.g. universities/research centres) and one or more commercial enterprises, in particular SMEs,

Call's Objectives:

This action seeks to enhance industry-academia cooperation in terms of research training, career development and knowledge sharing, in particular with SMEs, and including traditional manufacturing industries.

Call Identifier: FP7-PEOPLE-2012-IAPP

Publication Date: 19 October, 2011

Deadline: 19 April, 2012

Call information:

http://ec.europa.eu/research/participants/portal/page/people?callIdentifier=FP7-PEOPLE-2012-IAPP (will be available online after the publication date)

Topic: any topic is acceptable, bottom up system

SSH Relevant Scientific Field: any discipline

Requirements and Length of the Project:
Exchange of research staff can be for early-stage or experienced researchers' level and can also include technical and research managerial staff. To be eligible for exchange, staff members of a participant institution must have been active continuously for at least one year (full-time equivalent) at that institution. The support granted to eligible researchers will be for periods of **2 to 24 months**. The participant from which the exchanged researchers originate will have to secure by contract the commitment of its researchers to return after the exchange for at least one year in order to further develop the acquired knowledge.
Newly recruited staff from outside of the partnership must be experienced researchers. They will be recruited for a period of between **12 and 24 months**.

Programme: CAREER INTEGRATION GRANTS (CIG)

The action is designed to support researchers in the first steps of their European research career and to attain lasting professional integration in the ERA. By providing researchers with a substantial research budget, the action is intended to improve considerably their prospects for long term integration, thus contributing to the success of their research career.
This action should also allow the transfer of knowledge that the researchers have acquired prior to the Career Integration Grant, as well as to the development of lasting co-operation with the scientific and/or industrial environment of the country from which they have moved.
This action has a particular emphasis on countering European 'brain drain' to other third countries.

Target Group:

Host organisation of a Member State or associated country that will be provided with financial support to allow the researcher with the best possible conditions for establishing herself/himself in a long term research career.

Call's Objectives:

The objective is to reinforce the European Research Area (ERA) by encouraging researchers to establish themselves in a Member State or in an associated country, thereby attracting and retaining the best talents in Europe.

Call Identifier: FP7-PEOPLE-2012-CIG

Publication Date: 20 October 2011

Cut-off Date: 6 March 2012

Call information:

http://ec.europa.eu/research/participants/portal/page/people?callIdentifier=FP7-PEOPLE-2012-CIG (will be available online after the publication date).

Topic: any topic is acceptable, bottom up system

SSH Relevant Scientific Field: any discipline

Requirements and Project Length:
Eligible researchers: this action addresses researchers of any nationality who, at the relevant deadline for submission of proposals, correspond to the definition of experienced researchers, and who comply with the mobility rule.
A researcher who has benefited or is benefiting from a reintegration or career integration grant (including IRG and ERG grants under both FP6 and FP7) is ineligible for funding under this call.

- The application is made jointly by a researcher and a host organisation.
- Applicant host organisations must be active in research and located in a Member State or an associated country.
- Projects must be for a period of up to 48 months (full-time equivalent).
- For further details concerning these conditions you must refer to the core text of the work programme.

Programme: INTRA-EUROPEAN FELLOWSHIPS FOR CAREER DEVELOPMENT (IEF)

This action is to support the career development, or restart, of experienced researchers at different stages of their careers, and seeks to enhance their individual competence diversification in terms of skill acquisition at multi- or interdisciplinary level and/or by undertaking intersectoral experiences

Target Group:

Host organisation of a Member State or associated country that will be provided with financial support to allow the researcher with the best possible conditions for establishing herself/himself in a long term research career. The researcher must come from another Member State or associated country.

Call's Objectives:

The aim is to support researchers in attaining and/or strengthening a leading independent position, e.g. principal investigator, professor or other senior position in education or enterprise.

Call Identifier: FP7-PEOPLE-2012-IEF

Publication Date: 13 March 2012

Deadline: 16 August 2012

Call information:

http://ec.europa.eu/research/participants/portal/page/people?callIdentifier=FP7-PEOPLE-2012-IEF (will be available online after the publication date).

Topic: any topic is acceptable, bottom up system

SSH Relevant Scientific Field: any discipline

Requirements and Project Length:
This action provides financial support for advanced training and trans-national mobility, for a period of **12 to 24 months** (full-time equivalent), for individual projects presented by experienced researchers active in Member States or associated countries in liaison with a host organisation from another Member State or associated country.
The action addresses experienced researchers who are at a stage of their career when they can benefit from a life-long training and career development measure. This includes researchers with a more senior profile in terms of experience as well as those who wish to resume their research career after a break. Researchers must be experienced researchers at the relevant deadline for submission of proposals.

Programme: INTERNATIONAL OUTGOING FELLOWSHIPS FOR CAREER DEVELOPMENT (IOF)

This action aims to reinforce the international dimension of the career of European researchers by giving them the opportunity to be trained and acquire new knowledge in a high-level organisation active in research, established outside of Europe, in other third country (outgoing phase). Subsequently, these researchers will return with the acquired knowledge and experience to an organisation in a Member State or associated country.

Target Group:

This action provides financial support to individual mobility projects presented by experienced researchers in liaison with host organisations in the Member States or associated countries.

Call's Objectives:

The projects under this action are to contribute to significant steps/changes in the careers of the best and most promising European researchers, specifically adding different and/or complementary research competences at an advanced level, in the process of reaching and/or reinforcing a position of professional maturity, by exposing them to a research training experience outside Europe.

Call Identifier: FP7-PEOPLE-2012-IOF

Publication Date: 13 March 2012

Deadline: 16 August 2012

Call information:

http://ec.europa.eu/research/participants/portal/page/people?callIdentifier=FP7-PEOPLE-2012-IOF (will be available online after the publication date).

Topic: any topic is acceptable, bottom up system

SSH Relevant Scientific Field: any discipline

Requirements and Project Length:
This action provides financial support for advanced training and trans-national mobility, for a period of **up to 36 months** (full-time equivalent), for individual projects presented by experienced researchers active in Member States or associated countries in liaison with a host organisation from another Member State or associated country.
The action addresses experienced researchers who are at a stage of their career when they can benefit from a life-long training and career development measure. This includes researchers with a more senior profile in terms of experience as well as those who wish to resume their research career after a break. Researchers must be experienced researchers at the relevant deadline for submission of proposals.
The researchers shall be selected on the basis of a proposal submitted in liaison with a return host organisation in a Member State or an associated country. The researchers will be in a situation of secondment during the outgoing phase of training in the partner organisation in the other third country.

Programme: INTERNATIONAL INCOMING FELLOWSHIPS (IIF)

This action aims to reinforce the research excellence of the Member States and the associated countries through knowledge sharing with incoming top-class researchers active in other third country to work on research projects in Europe, with the view to developing mutually beneficial research co-operation between Europe and other third country, links with European researchers and organisations active in research in their future research career.

Target Group:

This action provides financial support to individual mobility projects presented by experienced researchers in liaison with host organisations in the Member States or associated countries.

Call's Objectives:

It aims to encourage incoming researchers to plan their period of international mobility within the framework of a coherent professional project and thus enhances the possibility of future collaborative research with Europe.

Call Identifier: FP7-PEOPLE-2012-IIF

Publication Date: 13 March 2012

Deadline: 16 August 2012

Call information:

http://ec.europa.eu/research/participants/portal/page/people?callIdentifier=FP7-PEOPLE-2012-IIF (will be available online after the publication date).

Topic: any topic is acceptable, bottom up system

SSH Relevant Scientific Field: any discipline

Requirements and Project Length:
The action provides financial support to individual research projects presented by the incoming experienced researchers in liaison with a legal entity ('host organisation') in a Member State or an associated country, as well as possibly with a 'return host organisation' if the researcher was active in an International Cooperation Partner Country before the incoming phase.
The researchers shall be selected on the basis of a proposal submitted in liaison with a host organisation in a Member State or associated country, as well as with a 'return host organisation' if appropriate.
The grant agreement will be concluded with the host organisations of the Member States or the associated countries for a total duration of between **12 and 24 months**.

IV. CAPACITIES

Programme: RESEARCH INFRASTRUCTURE

Call Identifier: FP7-INFRASTRUCTURES-2012-1

Call's Objectives:

The work programme 2012 has been designed to support the implementation of the Innovation Union initiative and in particular to bring together research and innovation to address major challenges. It constitutes a significant change to the approach in earlier work programmes and can contribute to the innovation objectives in two ways:

1. By supporting the development of a consistent world-class eco-system of research infrastructures that will enable researchers to generate knowledge which can lead to new and more innovative products, processes and services, and can help ***addressing societal challenges***. The focus on innovation is reflected in the description of the objectives and scope of the specific topics, as well as in the expected impact statements. The innovation dimension of the proposals will be evaluated under the evaluation criterion 'Impact'.
2. By increasing the potential for innovation of research infrastructures, in particular by reinforcing links with companies that drive innovation. Funded projects will include activities to reinforce the partnership with industry e.g. transfer of knowledge and other dissemination activities, activities to foster the use of research infrastructures by industrial researchers, involvement of industrial associations in consortia or in advisory bodies.

Publication Date: 20 July 2011

Deadline: 23 November 2011

Call information:

http://ec.europa.eu/research/participants/portal/page/capacities?callIdentifier=FP7-INFRASTRUCTURES-2012-1

List of relevant topics:

Proposals must address all the 3 categories of activities of the I3 model:

INFRA-2012-1.1.1. Research infrastructures for the study of poverty, working life and living conditions

INFRA-2012-1.1.2. Research infrastructures for the assessment of science, technology and innovation policy

Proposals must address all the 3 categories of activities of the I3 model

INFRA-2012-1.1.1. Research infrastructures for the study of poverty, working life and living conditions

SSH Relevant Scientific Field: Sociology

Topic Description:

Improved employability and social cohesion are among the main objectives of the EU2020 strategy. The aim of this integrating activity is to ***bring together research infrastructures serving European and international research in the fields of poverty, working life, including safety and health at work, and living conditions***. By doing so, this activity will contribute to understanding how vulnerable groups face economic changes and cope with it. This integrating activity will provide inventories of national or EU data sources covering this topic and of national or EU programs to fight poverty (including through social innovation). ***It will compile historical data, produce metadata and provide training to researchers interested in using these data sets***. It should also provide instruments for the analysis of ***the effects of employers' behaviour and the evaluation of labour market and social policies targeted to these vulnerable groups*** as well as offer training to researchers interested in the use of these instruments.

Funding Scheme: Combination of Collaborative projects and Coordination and Support Actions (CP-CSA)

Additional Information:
- The requested EU contribution shall not exceed EUR 10 million
- Proposals must address all the 3 categories of activities of the I3 model

INFRA-2012-1.1.2. Research infrastructures for the assessment of science, technology and innovation policy

SSH Relevant Scientific Field:

Topic Description:

European Science, Technology and Innovation policy is a growing research field in the EU and beyond. Existing infrastructures appear to be fragmented and uncoordinated. There is need for improved European data infrastructure for European and international comparative research and for representative studies that have a large scope and are not restricted in few country cases. The aim of this integrating activity is to ***bring together organizations and institutions with different expertise and data in the field of science, technology and innovation (including social innovation)***. By doing so, it will work as a catalyst for improving the data quality. It will explore the possibilities to follow up in time the behaviour of actors in the innovation system and to link data from difference data sources at the industry level, at the regional level or at the individual level and it will support the opening up of the skills and data to the wider community in this field.

Funding Scheme: Combination of Collaborative projects and Coordination and Support Actions (CP-CSA)

Additional Information:
- The requested EU contribution shall not exceed EUR 10 million
- Proposals must address all the 3 categories of activities of the I3 model

INFRA-2012-1.1.3. Research infrastructures for archaeological datasets and related technologies

SSH Relevant Scientific Field: Archaeology, Conservation and Heritage Research

Topic Description:

Archaeological research frequently poses questions which cross over modern political boundaries which were irrelevant for most of the archaeological past. Archaeological data are often the primary record of excavated sites, and are increasingly born digital, comprise a rich variety of data types, and are vulnerable to loss. This activity will focus upon ***integrating datasets and facilitating cooperation pertaining to all fields of archaeology (from prehistory to contemporary society) and including the archaeology of Europe, as well as European archaeology abroad***. The action should ***promote closer collaboration between researchers, policy makers, and other stakeholders by providing a framework for dialogue on key archaeological, conservation and heritage issues***. The activity may promote the development and dissemination of good practice for digital data preservation, interoperability (including metadata and data standards). The activity may also include the development of integrating technologies, including but not limited to Geographical Information Systems, data mining, and Linked Data applications. It will ***promote open access to archaeological data (both above and below ground) for researchers, professionals, and the general public***.

Funding Scheme: Combination of Collaborative projects and Coordination and Support Actions (CP-CSA)

Additional Information:

- The requested EU contribution shall not exceed EUR 10 million
- Proposals must address all the 3 categories of activities of the I3 model

Programme: SCIENCE IN SOCIETY

Call's Objectives:

In the terms of the Seventh Framework Programme, activities in the field of Science in Society aim to "stimulate, with a view to building an open, effective and democratic European knowledge-based society, the harmonious integration of scientific and technological endeavour, and associated research policies in the European social web, by encouraging pan-European reflection and debate on science and technology and their relationship with the whole spectrum of society and culture".

Call Identifier: FP7-SiS-2012-1

Publication Date: 20 July 2011

Deadline: 22 February 2012

Call information:

http://ec.europa.eu/research/participants/portal/page/capacities?callIdentifier=FP7-SCIENCE-IN-SOCIETY-2012-1

List of relevant topics:

SiS.2012.1.1.1-1: Governance frameworks for Responsible Research and Innovation (RRI)
SiS.2012.1.2-1: Mobilisation and Mutual Learning (MML) Action Plans: mainstreaming SiS actions in research
SiS.2012.1.2.1-1: International Coordination in the field of Responsible Research and Innovation (RRI)
SiS.2012.1.3.3-1: Scientific data: open access, dissemination, preservation and use
SiS.2012.2.1.1-1: Ensuring equal opportunities for women and men by encouraging a more gender-aware management in research and scientific decision-making bodies
SiS.2012.2.2.1-1: Supporting actions on Innovation in the classroom: teacher training on inquiry based teaching methods on a large scale in Europe

SiS.2012.1.1.1-1: Governance frameworks for Responsible Research and Innovation (RRI)

SSH Relevant Scientific Field: Governance, Humanities

Topic Description:

Responsible Research and Innovation (RRI) is a transparent, interactive process in which societal actors and innovators become mutually responsive to each other with a view on the ***ethical acceptability, sustainability and societal desirability*** of the innovation process and its marketable products. The first activity (5.1.1/Area 5.1.1.1. of this Work Programme) concerns a research activity which focuses on the development of a normative model for the governance of RRI. The second activity (5.1.2/Area 5.1.2.1. of this Work Programme) is to ensure the presence of European partners in international networks on the subject matter (coordination action). Ideally, a European model for RRI to be developed within the SiS research context could be advocated at the international level by a coordination action.

Innovation used to be thought of linear process being centrally orchestrated and focused on single particular technologies. Recent research findings indicate that the innovation process is more complex, and that ***successful innovations often are dependent on the cooperation among various actors in society: e.g. academia, business operators, civil society organisations, governmental bodies etc. Knowledge produced, used and disseminated by all those actors eventually shapes a socially robust and shared knowledge basis. This knowledge base enables innovations in comprehensive societal systems, such as the health or the agricultural system. Societal actors are involved throughout the whole innovation process.*** It assumes the existence of research collectives, consisting of, for example, public research institutes, pharmaceutical companies and patient organisations. Another example of more user-centred, open innovation is demonstrated by the introduction of open source software.

RRI can only materialise in governance frameworks which take into account ***ethical***, health, safety, environmental and ***human rights*** considerations in a transparent way. RRI thus refers to the "product" dimension on the innovation process, e.g. the type and quality of the products, and to the process side of the innovation process in terms of, among other, stakeholder involvement, transparency and accountability to citizens. Under this topic, research should focus on models for RRI as well as on a comparative analysis of existing frameworks for responsible innovation at national, European and International levels. How should a governance framework for RRI at the European level look like? Research should take into account the role of various actors, such as ***legislative, standard setting and certification bodies, regulatory bodies, civil society organisations, research***.

Funding Scheme: Collaborative Projects (Small or medium-scale focused research project)

Additional Information:

- Up to 2 proposals are expected to be funded
- The requested European Union contribution shall not exceed EUR 3.5 million.

SiS.2012.1.2-1: Mobilisation and Mutual Learning (MML) Action Plans: mainstreaming SiS actions in research

SSH Relevant Scientific Field: Economics, Humanities, Psychology, Sociology

Topic Description:

The European Research Area is targeting efforts in research and innovation on the ***current challenges faced by society***. They are complex, multidimensional and require the engagement of different actors alongside researchers.

The Mobilisation and Mutual Learning Action Plan (MMLAP) creates mechanisms for effectively tackling research and innovation related challenges by proactively forging partnerships between different actors (policy makers, industry, civil society, etc.) with complementary knowledge and experiences. The MMLAP therefore develops forms of dialogue and cooperation between science and society at different stages of the research and innovation process. The MMLAP will contribute to further incorporating Science in Society issues into the systems of research (public engagement, ethics, gender perspectives, young people's participation, two-way communication). The partners pool experiences and knowledge and better focus their respective efforts to shape research in emerging science, technology and innovation in response to the views and needs of society.

The MMLAP proposed under this topic must address one of the following Specific Challenges that are relevant to the Europe 2020 Strategy and where a more structured dialogue and cooperation between research organisations and other stakeholders is sought. The proposal must state clearly which Specific Challenge it addresses:

Specific Challenge 1: Responsible Research and Innovation (RRI) in Synthetic Biology

Synthetic biology, broadly understood, is the engineering of biological components and systems that do not exist in nature and the re-engineering of existing biological elements. It holds significant promise for new vaccines, drugs and biofuels, as well as for designing novel organisms with completely new functions. Notwithstanding its great potential, currently there are no synthetic biology products on the market and the public is not yet much aware of this field.

An essential challenge for Synthetic Biology is ***to establish and maintain open dialogue between the different stakeholders: scientists, industry, Civil Society Organisations (CSOs), policy makers, and also the general public.*** It is equally important to ***ensure co-creation of this innovative field, as well as collaborative shaping of regulatory frameworks, aligned with societal needs and expectations***.

Regulatory challenges include for example new risk assessment needs, biosecurity and dual use monitoring, intellectual property rights and promoting responsible conduct in research and innovation. As synthetic biology research and its impacts occur globally, the MML should also include perspectives from outside Europe, in particular from dominant players in this field.

Specific Challenge 2: Responsible Research and Innovation (RRI) for engineering the brain and body: human enhancement

The cognitive sciences are making more and more inroads into the human psyche, behaviour and morality. Using the insights coming from the cognitive sciences, as well as from robotics, the life sciences and ICT, human enhancement technologies are being developed to not only enhance the physical abilities of humans, but also their cognitive and

emotional abilities and performance. ***Creating "better than well" options within our healthcare will pose societal and ethical challenges regarding, among others, what it means to be 'healthy', blurring the distinction between enhancement and therapy, and in terms of creating disparities between those who would opt in or would opt out of enhancement***. On a deeper level, better knowledge about the human brain and body and means to model and intervene in it, affect our understanding of personal responsibility and behaviour.

What expectations and research agendas drive these developments in Europe? To what extent is society ready and prepared to accommodate the transformative impacts that the envisaged developments may have? The MML should elaborate on a European research agenda and explore policy issues that will need to be addressed in order to ensure that this field develops in accordance with fundamental values such as ***human dignity, equality, individual freedom and solidarity***.

Specific Challenge 3: Healthy and active ageing

The Europe 2020 Strategy identifies ageing as a long-term societal challenge. Action under EU 2020 core priorities for ***smart, sustainable and inclusive growth requires promoting a healthy and active ageing population to allow for social cohesion and higher productivity***. By 2025, more than 20% of Europeans will be 65 or over and the number of citizens over 80 will increase particularly rapidly. This major demographic trend will affect all Member States in many ***policy areas, from pensions' reform to disease prevention and social care***. At the same time, the ageing population has to be seen as a productive section of society and as an active and demanding consumer force. Hence, the prevailing deficit model of old age must give way to a more holistic approach focusing on active and dignified wellbeing. Mostly, at the European level this new approach requires to ***deepen the knowledge on the demographic dynamics of ageing (health, life expectancy, family) especially as determinants of activity and well-being at older age***. Even more importantly, it requires the coordination and coherence of efforts among various actors and across many areas in order to ***facilitate social innovation*** and maximize the impact of the efforts undertaken.

The proposed MML invites stakeholders from at least 10 countries, from various sectors (i.e. researchers of different disciplines, older people organisations, national, regional and local authorities, health managers, industry) to set up frameworks of collaboration that combine technological and social approaches. These frameworks will have a strong multiplier effect, function as incubators of responsible social innovation and explore new market opportunities for the development of products, models and services in response to the needs of older people. In particular, this MML should include actions that: - ***Raise awareness of the value of active ageing and of the useful contribution older people make to society and economy;***

- Connect local actions and networks of reference, creating a European social innovation incubator network;
- Identify and disseminate good practices;
- Identify the scale and scope of opportunities for social innovation that mobilize the potential of older people to participate in developing their own solutions;
- Develop, where appropriate, inclusive innovative design processes for smart products and services that are usable by all population categories without the need for age-specific design;
- Address the physical and mental health related challenges of the ageing population in a transparent and ethical manner by e.g. age and gender specific clinical trials and the inclusion of older people's associations and other relevant Civil Society Organisations (CSOs) in the health care decisions.

Funding Scheme: Coordination and Support Actions (Supporting Actions)

Additional Information:

- Content of the MML Action Plan: The partners implement the proposed MMLAP in an integrated, systemic and trans-disciplinary way to address the questions raised under the selected Specific Challenge. The MMLAP activities may take place at different stages of the research cycle (defining research agendas, during the course of research, or exploiting research results). They encompass public engagement in research (PER), such as participatory processes involving citizens and CSO's. The MMLAP activities may also include ethical issues, the development of expertise in support of policy-making, gender issues in science and/or young people's participation in science. The forms of dialogue and cooperation between the partners should be based on a participatory and mutual learning approach. Particular attention should be given to making accessible to the MMLAP participants the various types of knowledge concerned (capacity-building, training, etc.). The MMLAP communication strategy and activities (including exhibitions and audio-visual materials) should carefully take into account the different targeted audiences and actively involve the various partners.
- The MMLAP activities are implemented at local and/or regional and/or national level and should include transnational networking and exchange of best practice. The MMLAP consortium should include relevant expertise / experience to implement the planned actions and efficiently manage the whole Plan. The proposal should include and describe a methodology for impartially assessing the actions implemented, throughout the duration of the project, in relation to their objectives and expected impacts.
- Participants: The project partners should include research organisations, industry / businesses and Civil Society Organisations7 as well as other types of actors from different perspectives as relevant for the selected Specific Challenge such as:
    - Cities and local / regional or national authorities;
    - National or regional parliamentary advisory offices for science and technology;
    - Research funding agencies;
    - Private organisations conducting and/or supporting research;
    - Education establishments;
    - Science academies;
    - Museums, science centres and science festivals;
    - Media organisations;
    - Professional organisations;
    - Science shops or similar intermediaries between CSO's and research.
- The proposed consortium may comprise a more ambitious range of partners, for example, organisations which deal with scientific knowledge, businesses or organisations which fund research.
- Since the MMLAP must address SiS issues, the partnership must include relevant expertise in these fields.
- It is expected to fund three proposals. It is expected to fund at least one proposal from each Specific Challenge.
- The requested European Union contribution shall not exceed EUR 4 million per proposal.
- The proposal must clearly indicate which one of the three specific challenges is addressed.
- The proposed project must have a minimum duration of 3 years.
- The consortium must consist of at least 10 independent legal entities established in at least 10 different EU Member States or Associated.

SiS.2012.1.2.1-1: International Coordination in the field of Responsible Research and Innovation (RRI)

SSH Relevant Scientific Field: Economics, Humanities, Sociology

Topic Description:

Responsible Research and Innovation (RRI) is a transparent, interactive process in which societal actors and innovators become mutual responsive to each other with ***a view on the ethical acceptability, sustainability and societal desirability of the innovation process and its marketable products***. The first activity (5.1.1/Area 5.1.1.1. this Work Programme) concerns a research activity which focuses on the development of a normative model for the governance of RRI. The second activity (5.1.2/Area 5.1.2.1 of this Work Programme) is to ensure the presence of European partners in international networks on the subject matter. The latter concerns coordination actions. Ideally, a European model for RRI to be developed within the SiS research context could be advocated at the international level by a coordination action.

Innovation is taking place in an international context, whereas policies for supporting innovations process are mainly national. This leads to a variety of approaches. Currently, only a few initiatives in the world exist to create a network of interested parties to foster a process of responsible development in new fields of research and innovation such as synthetic biology, nanotechnology and security and Information and Communication Technologies.

Coordination projects on RRI should link up to existing international networks of RRI with a view to articulate and communicate a European model for RRI and propose approaches for fostering RRI at the global level. It is an asset if the consortium would consist of international partners from the US and/or the Asian region.

Funding Scheme: Coordination and Support Actions (Supporting Actions)

Additional Information:
- Up to 2 proposals are expected to be funded.
- The requested European Union contribution shall not exceed EUR 1.5 million.

SiS.2012.1.3.3-1: Scientific data: open access, dissemination, preservation and use

SSH Relevant Scientific Field: Law

Topic Description: As an environment designed to be conducive to technological, **economic and societal progress**, the European Research Area must support seamless and transparent access to, use and re-use of, and trust in scientific data. In order to favour the development of this type of environment, policies addressing the complex area of scientific data are required.

Based on the approach that "publicly funded research data should in principle be accessible to all" and that "access to and dissemination of scientific information […] are crucial for the development of the European Research Area", the present topic calls for co-ordination and support actions that move forward policy development in the area of scientific data. Proposals should address open access to and dissemination of scientific data, and ideally preservation and curation of scientific data and/or use and re-use of scientific data (including intellectual property issues).

This topic calls for proposals bringing together actors concerned with the broader area of "open data". **It aims to enable the exploration and analysis of the relevant scientific**

ecosystems and legal/ethical contexts with a view to developing an international, comprehensive framework for a collaborative data infrastructure. Proposed actions should aim at co-ordinating policy, research and/or dissemination activities. For example, they may include the exchange and dissemination of good practices, or the definition, organisation and management of joint or common policy activities.

The following actions are particularly welcome:

- actions using a comparative approach (e.g. cross-national, cross-disciplinary);
- actions aiming at creating networks of one type of not-for-profit actor or structure (e.g. funding bodies, libraries, repositories, universities) from different EU Member States, Associated Countries or other third countries that are interested in exchanging good practices and exploring common policy development;
- actions proposed by consortia representing different stakeholders (e.g. national research funding bodies, libraries, repositories, universities, publishers, industry users of publications).

Where appropriate, ***financial aspects*** of continuation of activities or structures after expiration of the grant agreement must be addressed.

Funding Scheme: Coordination and Support Actions (Supporting Actions)

Additional Information:

- Up to 2 proposals are expected to be funded.
- The requested European Union contribution shall not exceed EUR 1.5 million.

SiS.2012.2.1.1-1: Ensuring equal opportunities for women and men by encouraging a more gender-aware management in research and scientific decision-making bodies

SSH Relevant Scientific Field: Economy, Gender Science, Law, Sociology

Topic Description:

"Structural change" initiatives aim at encouraging institutional changes and transforming institutional practices and culture in research and scientific decision-making bodies, to better support gender diversity and equal opportunities between women and men.

In 2012, to address the continuous ***underrepresentation of women in science***, the EU will support common actions by research organisations, including universities, as to identify the best systemic organisational approaches to increase the participation and career advancement of women researchers. The ultimate objective will be to ***create a sound management approach providing effective and transparent mechanisms to abolish gender imbalances and to contribute to the improvement of the working conditions of women and men***.

The focus will be on partnerships between research organisations and universities that have already implemented effective actions on gender-aware management and others that are seeking to gain experience in this area.

Proposals should contain a self tailored Gender Equality Plan per each participating institution aiming at implementing the necessary structural changes on the basis of each specific situation and challenges. Action plans will be accompanied by an implementation roadmap containing a clear description of: (1) the challenges existing in ***achieving gender equality among the organisations concerned and the scientific leadership bodies***; (2) innovative strategies to ***address barriers to recruitment, retention and advancement of women careers***, beyond the lifetime of the grant. The Gender Equality

Plans will serve as a management tool to help achieving the objectives of the call. They could address among others:

- ✓ Recruitment, promotion, retention policies;
- ✓ Leadership development;
- ✓ Work/ life balance, including at particularly difficult life transitions;
- ✓ Supporting policies for dual career couples;
- ✓ Enhancing networking opportunities;
- ✓ Returning schemes after career breaks;
- ✓ Drafting guidelines for other interested institutions and disseminating best practices to the broader academic community at regional, national and/or international level;
- ✓ Influencing the content of curricula and research;

In addition, key points to tackle include:

- ✓ Assessment standards of research excellence;
- ✓ Accountability of evaluation policies.

Consideration should be given to the involvement of local or national social partners (trade unions and/or employers' associations), wherever appropriate. The proposal should include a methodology for impartially monitoring and assessing – throughout the duration of the project – the effectiveness and the anticipated impact of the actions proposed, as well as the institutional progress gradually achieved.

In the course of the evaluation process, the following elements will be considered, among others: (1) Innovative nature and sustainability of the actions; (2) Learning process/ expertise exchange among the organisation involved, including during the designing of the Gender Equality Plans and the Implementation Roadmaps; (3) Activities to disseminate broadly the accomplishments of the project; (4) Evidence that the Plans can and will continue to be implemented in the medium/ long term and thus that the activities have the full support of the highest management structures of the institutions concerned.

Funding Scheme: Coordination and Support Actions (Supporting Actions)

Additional Information:

- Up to 2 proposals are expected to be funded.
- The requested European Union contribution shall not exceed EUR 4.4 million.
- The duration of the project must be between 3 and 5 years.
- The minimum participating condition for the Coordination and Support Action is three independent legal entities from three different European Union Member States or Associated Countries.
- The proposals will be assessed against the background of the gender equality plan.
- Rate of co-financing: The EU contribution will not exceed 70% of total eligible costs.

SiS.2012.2.2.1-1: Supporting actions on Innovation in the classroom: teacher training on inquiry based teaching methods on a large scale in Europe

SSH Relevant Scientific Field: Education, Psychology, Sociology

Topic Description:

Promoting excellence in education and skills development is one of the key elements within the "Innovation Union" Flagship Initiative under Europe 2020. The 'Innovation Union Communication recognizes that weaknesses remain with science teaching. The skills for future responsible innovators/researchers as well as of "science-active" citizens have to be built starting from early age (scientific reasoning, as well as transversal competences such as critical thinking, problem solving, creativity, teamwork and communication skills). An

appropriate science teaching methodology such as the Inquiry Based Science Education (IBSE) can strongly contribute to the development of these skills.

This topic will support actions to ***promote the more widespread use of problem and inquiry-based science teaching techniques in primary and/or secondary schools as well as actions to bridge the gap between the science education research community, science teachers and local actors (including providers of informal science education) in order to facilitate the uptake of inquiry-based science teaching***. The actions are intended to complement school science curricula and should particularly focus on teacher training activities (pre-service and in-service) and the promotion of European teachers' networks. The actions proposed should be open to the participation of entities seeking to gain experience in the area of problem and inquiry based science education techniques.

The ***training of the teachers*** should include actions that contribute towards the following: securing basic knowledge, developing a task culture, learning from mistakes, cumulative learning, autonomous learning, experiencing subject boundaries and interdisciplinary/trans-disciplinary approaches, considering between girls' and boys' interests and promoting pupils' cooperation. The actions aimed at here shall already have proven their efficiency and efficacy. Furthermore, training activities should be realistic and feasible in terms of the participation of teachers and the opportunities offered to them by their employers or education authorities. If the proposed training activities are to take place outside of normal school hours, measures to facilitate participation should be considered. The corresponding impact on the grant support requested should be identified.

While each EU Member State is responsible for the organisation and content of its education systems, there are advantages at EU level on common issues related to science education. The challenges faced in this field are common and urgent in all the European countries: traditional schooling has been mainly about teaching and testing, producing knowledge and skills for a model of industrial society which is now quickly declining. EU Member States share the urgency of addressing the young people's lack of interest for science and technology, ***the need to attract more young people to science and technology careers and the need to equip all young people with the skills and knowledge needed to future responsible innovators/researchers and "science-active" citizens***. The EU level and support allows better sharing of research results, good practices, teaching material and the building of a real community of stakeholders.

Funding Scheme: Coordination and Support Actions (Supporting Actions)

Additional Information:

- Projects are expected to have a broad coverage of EU Member States and Associated Countries - in order to generate a European impact (see in the Call Fiche in section III). In addition to this during contract negotiation links will be established between financed projects and SCIENTIX - The Community for Science Education in Europe (www.scientix.eu)
- The proposal should include and describe a methodology for impartially assessing the actions implemented, throughout the duration of the project in relation to their objectives and expected impacts.
- Up to 3 proposals are expected to be funded.
- The requested European Union contribution shall not exceed EUR 8 million.
- The minimum participation condition for the Co-ordination and support action (supporting) is at least 10 independent legal entities, established in at least 10 different European Union Member States or Associated Countries.
- Each proposal must have a minimum requested EU contribution of EUR 2 million.
- The duration of the project must be a minimum of 3 years.

V. OTHER ERA INITIATIVES

ERA-NETs

The ERA-NET Scheme

The objective of the ERA-NET scheme is to develop and strengthen the coordination of national and regional research programmes through two specific actions:

- 'ERA-NET actions' - which provide a framework for actors implementing public research programmes to coordinate their activities.
- 'ERA-NET Plus actions'- which, *in a limited number of cases,* can provide additional EU financial support to facilitate joint calls for proposals between national and/or regional programmes.

Under the ERA-NET scheme, national and regional authorities identify research programmes they wish to coordinate or open up mutually. The participants in these actions are therefore programme 'owners' (typically ministries or regional authorities defining research programmes) or programme 'managers' (such as research councils or other *research funding* agencies managing research programmes). **Research organisations or universities which are not programme owners or managers are not eligible partners for ERA-NET actions.**

For the full list of ERA-NETs projects, please refer to:
http://cordis.europa.eu/coordination/projects.htm
http://cordis.europa.eu/fp7/coordination/home_en.html
http://netwatch.jrc.ec.europa.eu/nw

A number of new ERA-NET Actions **addressed to programme owners and managers** are launched in the ERA-NET call of the FP7 Work Programmes 2012:

Call Identifier: FP7-ERANET-2012-RTD (including **Appendix to *Call Fiche FP7-ERANET-2012-RTD)***

Publication Date: 20 July 2011

Deadline: 28 February 2012 (But for the topic under the ICT theme a), c), d): FP7-ICT-2011-8 Deadline: 17 January 2012)

Call information:

http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-ERANET-2012-RTD

A significant number of ERA-NETs, once established, **launch joint calls for research funding, that might be of interest for researchers from the socio-economic sciences and humanities.** Even though an ERA-NET action is itself funded through FP7, the joint calls launched by an ERA-NET are not part of FP7 and will apply different rules of participation.

Open Calls launched by already established ERA-NETs with relevance to researchers from socio-economic sciences and humanities are listed in the following.

ERA-AGE2 - Open Call: Active and Healthy Aging Across the Life Course

Call's Objectives:

The call is dedicated to the achievement of enhanced and healthy ageing and, in particular, to address the major priority established by the AHAIP (Active and Healthy Ageing Innovation Partnership) of a 2 year increase in healthy life expectancy in the European Union by 2020.
Twelve funders in nine countries have committed €4.2 million to fund research projects of up to three years. This is Europe's first joint call for ageing research and follows the second round of ERA-AGE's post-doctoral fellowship programme, FLARE (Future Leaders of Ageing Research in Europe).

Publication Date: 01 June 2011

Deadline: 03 October 2011 (for pre-proposals)

Call information: http://era-age.group.shef.ac.uk/content/274/application-information

Topic:
Applications are invited from multidisciplinary research groups representing 3 to 5 funding countries. Stage-one pre-proposals can be submitted between 1 June 2011 and 3 October 2011 to investigate specific research questions related to these three objectives of the call:

- Generate new knowledge on the biological, clinical, **behavioural, social** and environmental factors that enable individuals to live actively and healthily into later life.
- Explore comparatively different models, methods, approaches and good practices in **societal responses to increased longevity which emphasise both social inclusion and sustainability**.
- Engage in effective **knowledge exchange activities** that will assist European and other countries to achieve the goal of increasing healthy life expectancy by 2 years by 2020.

Additional Information:

- Funding agencies from UK, Canada, Finland, France, Sweden, Israel, Luxembourg, Latvia, Romania are supporting the joint call. Funding is also available to support collaboration with Belgium.
- Applications are invited from multidisciplinary research groups representing 3 to 5 funding countries.
- For specific rules of participation and application, please refer to the information given on the call's website

ECO-INNOVERA - Open Call: 1st Call for transnational R&D proposals for Eco-innovation

Call's Objectives:

As a contribution to the new EU strategy stressing the role of eco-innovation for competitiveness, ECO-INNOVERA will fund transnational and multidisciplinary R&D projects considering social, environmental, market and technological issues.

Publication Date: 11 July 2011

Deadline: 30 September 2011

Call information: http://www.eco-innovera.eu/jointcall1

Topic:
The joint call focuses on resource efficiency as a main driver of eco-innovation including new business models and systemic approaches, addressing the following topics:

- **Paradigm change: Eco-innovation aims at the emergence of new types of sustainable production/consumption value chains using systemic approaches (life cycle thinking). Paradigm changes can e.g. be embedded in new business models.**
- Sustainable industrial processes and products: ECO-INNOVERA intends to support research for environmental improvements in industrial sectors with high impact on greenhouse gas emission, resource and energy efficiency, waste production or environmental pollution (water, air, soils).
- Recycling and waste re-use: The general outline of this topic is "Making more and better with waste: new products and better products with waste materials".

Additional Information:
- Funding agencies from Austria, Belgium, Finland, France, Germany, Luxembourg, Poland, Spain, Sweden, Switzerland, and Turkey participate in the call. Not all funding agencies support all call topics. The national specifications of the funding agencies need to be taken into account.
- For specific rules of participation and application, please refer to the information given on the call's website.

Article 185 TFEU (ex Article 169 TEC)

Article 185 TFEU foresees the participation of the EU in the joint implementation of research and development of national programmes. Implementing Article 185 TFEU in the FP7 Programme implies that the participating EU Member States integrate their research efforts by defining and committing themselves to a joint research programme, in which the EU promotes the voluntary integration of scientific, managerial and financial aspects by providing financial support.

Two potential initiatives under Article 185 TFEU (ex Article 169 TEC) are identified on the basis of the criteria set out in FP7.
Three of these are under the Cooperation programme of the Seventh Framework Programme:
- AAL - a joint research programme on 'Ambient Assisted Living';
- Bonus - a joint research programme in the field of Baltic Sea research;
- EMRP - a joint research programme in the field of Metrology (the science of measurement).

One is under the Capacities programme:
- Eurostars - a joint research programme for research-performing SMEs and their partners.

In this part, we will relate **only to the initiatives with current open calls.**

EMRP - a joint research programme in the field of Metrology (the science of measurement)

Target Group:

Potential JRP-Consortia must consist of a minimum of three funded partners from at least three different countries (countries participating in the EMRP). Additionally, where it is appropriate, other bodies are able to participate in the projects (without funding). A limited number of Researcher Excellence Grants (REGs) are available to the wider research community at this stage and should be applied for in association with the JRP proposal submission. Eligibility criteria for JRPs and REGs are detailed in the Eligibility Criteria document.

Call's Objectives:

The European Metrology Research Programme (EMRP) is a metrology-focused European programme of coordinated R&D that facilitates closer integration of national research programmes. The EMRP is jointly supported by the European Commission and the participating countries within the European Association of National Metrology Institutes (EURAMET e.V.). The EMRP will ensure collaboration between National Measurement Institutes, reducing duplication and increasing impact. The overall goal of the EMRP is to accelerate innovation and competitiveness in Europe whilst continuing to provide essential support to underpin the quality of our lives.

Deadline: 03 October 2011 (STAGE 2)

Call information: http://www.emrponline.eu/call2011/

Topic:

The aim of 2011 call is to advance measurement science and technology in the following areas:

- Metrology for Health
- SI Broader Scope
- Metrology for New Technologies

Requirements:

The call is structured in a number of stages.
Stage 1: Call for potential metrology research topics (PRTs), Now Closed
Stage 2: Call for proposals for Joint Research Projects (JRPs), with optional integrated Researcher Excellence Grant application
Stage 3: Researcher Excellence Grants (REGs) and Researcher Mobility Grants (RMGs).

Call 2011 - Health, SI Broader Scope & New Technologies – STAGE 2

The EMRP Committee has selected twenty research topics (SRTs) for Health, seventeen SRTs for New Technologies and thirteen SRTs for SI Broader Scope from the potential metrology research topics (PRTs) submitted at Stage 1.

Eurostars - a joint research programme for research-performing SMEs and their partners

Target Group:

R&D performing SMEs *(Research-performing SMEs are SMEs that dedicate at least 10% of their turnover or full-time equivalent (FTE) to research activities)*

Call's Objectives:

Eurostars Programme is a European Joint Programme co-funded by the European Communities and 33 EUREKA member countries. Eurostars aims to stimulate these SMEs to lead international collaborative research and innovation projects by easing access to support and funding. It is fine-tuned to focus on the needs of SMEs, and specifically targets the development of new products, processes and services and the access to transnational and international markets.

Publication Date: 22 September 2011

Deadline: 01 March 2012 (two submission deadlines each year)

Topic: any technological area with a civilian purpose, bottom-up approach

SSH Relevant Scientific Field: http://www.eurostars-eureka.eu/

Requirements:

In each participating country, different national funding rules apply. Applicants are advised to contact their EUREKA NPC for more comprehensive information on the national funding rules

Joint Technology Initiatives (JTIs)

ENIAC Joint Undertaking - Nanoelectronics Technologies 2020

The ENIAC Joint Undertaking (JU) was created in February 2008 in order to implement a Joint Technology Initiative (JTI) on Nanoelectronics - a research programme aimed at enhancing the further integration and miniaturisation of devices and increasing their functionalities.

The ENIAC JU is set up as a public-private partnership, bringing together the European Commission and European Member and Associated States with AENEAS, the association representing the main R&D actors in Nanoelectronics (companies, research centres and universities) in Europe.

The ENIAC Joint Undertaking is open to new members.

Call's Objectives:

Nanoelectronics create the essential hardware enabler for innovative electronic products and services in key growth markets for the European industry. In the statutes of the ENIAC JU, the Multi-Annual Strategic Plan (MASP) defines the strategy that the JU will follow to ensure that the Research Agenda (RA) can be executed under the most favourable conditions. The MASP identifies focussed and strategically decisive, application driven key areas of research and innovation in nanoelectronics that have the potential to strengthen the European industry. To this effect, ***the MASP identifies the most important challenges to address from the economic, societal and political viewpoint and selects the most promising ones in terms of market success and lasting impact***. The selected topics ensure a broad participation of the Member States. They encompass the complete value chain, from technology development to applications that would yield commercially successful products. In line with the objectives of a Joint Technology Initiative, offering the potential for larger Europe-wide initiatives, with more flexibility, increased efficiency, no restriction in duration or size, it is expected that large, integrated projects are launched having a significant industrial impact.

The work plan R&D - priorities for 2011

With the approval of the new MASP, which constitutes of the VMS (Vision Mission Strategy) document augmented with its annexes 2 and 4, the AWP (Annual Work Plan) can be much simplified. Goals in 8 domains, corresponding to the 8 chapters of part C of the MASP need to be tackled in order to fulfill the mission of ENIAC. Within these selected domains 25 Grand Challenges have been identified during the Spring Summit and approved by the ENIAC Governing Board. They have been described, analysed and road-mapped in terms of expected achievements and foreseen innovation in chapters X.3 of part C of the VMS document, where X is the chapter number. The AWP contribution by AENEAS will bring some focus for 2011 in this large, but relevant, "to-do list". The 8 identified domains in the VMS have been classified in application oriented domains and technology oriented domains in the table below. Of the 25 Grand Challenges, which have been identified in part C of the VMS document, 16 are application oriented and 9 are technology oriented. For the 2011 program of ENIAC 9 out of the 16 application oriented Grand Challenges of the VMS document have been selected. Also the 9 technology oriented grand challenges have been selected provided that the conditions as outlined in chapter 4.2 of annex 2 of the MASP are fulfilled. (At the very end of this AWP these conditions have been reproduced.)

Chapter #	Chapter	Grand Challenge
1	AUTOMOTIVE AND TRANSPORT	Intelligent Electric Vehicle
1	AUTOMOTIVE AND TRANSPORT	Safety in Traffic
2	COMMUNICATION & DIGITAL LIFESTYLES	Internet Multimedia Services
2	COMMUNICATION & DIGITAL LIFESTYLES	Evolution to a digital life style
3	ENERGY EFFICIENCY	Energy Distribution and Management – Smart Grid
3	ENERGY EFFICIENCY	Reduction of Energy Consumption
4	HEALTH AND THE AGING SOCIETY	Home Healthcare
4	HEALTH AND THE AGING SOCIETY	Hospital Healthcare
5	SAFETY & SECURITY	Securing the European challenging Applications
6	DESIGN TECHNOLOGIES	Managing complexity
6	DESIGN TECHNOLOGIES	Managing Diversity
6	DESIGN TECHNOLOGIES	Design for Reliability and Yield
7	SEMICONDUCTOR PROCESS AND INTEGRATION	Know-how on Advanced and Emerging Semiconductor Processes
7	SEMICONDUCTOR PROCESS AND INTEGRATION	Competitiveness through Semiconductor Process Differentiation
7	SEMICONDUCTOR PROCESS AND INTEGRATION	Opportunities in System-in Package

8	EQUIPMENT, MATERIALS, AND MANUFACTURING	Advanced CMOS – 1X nm & 450mm
8	EQUIPMENT, MATERIALS, AND MANUFACTURING	More than Moore
8	EQUIPMENT, MATERIALS, AND MANUFACTURING	Manufacturing

This AWP calls for projects that address one or more of the above mentioned Grand Challenges as their primary target. The reader is referred to the MASP to get a more detailed description about the Grand Challenges and the goals that should be reached. Where applicable the synergies with other domains (as defined in the MASP, part C, chapter X.6) and relations to results obtained in earlier projects must be identified respectively used. Consortia should be well aware of the policy guidelines given by the ENIAC PAB (Public Authorities Board) and reproduced in annex 4 of the MASP. This set of 25 guidelines set aims to enhance the competitive advantages of Europe in nanoelectronics. They also guide on the usage of European Funding Instruments (guidelines 19-24). This general guidance is interpreted towards a more operational level, usable for initial selection of funding tools by consortia in chapter 4 of annex 2 of the MASP.

Call Identifier: ENIAC-2011-2

Publication Date: 24 June 2011

Deadline: 15 September 2011

Call information: http://www.eniac.eu/web/calls/ENIACJU_Call5_2011.php

List of topics with socio-economics aspects:

- VMS, Part B, chapter 6.4:
  - 7.2.2 Delineation principles
- VMS, Part C, chapter 2.3:
  - 2.3.1 Grand Challenge 1: “Internet Multimedia Services”
  - 2.3.2 Grand Challenge 2: “Evolution To A Digital Life Style”
- VMS, Part c, chapter 4.3:
  - 4.3 Grand Challenges
- VMS, Part c, chapter 5.3:
  - 5.3.2 Grand Challenge 2 “Securing the European challenging Applications”
- VMS, Part C, chapter 8.3:
  - 8.3.2 Grand Challenge 2 “More than Moore”
  - 8.3.3 Grand Challenge 3 “Manufacturing”
- VMS, Annex 2, Chapter 4.2 and 4.3:
  - 4.2 Technology domain

Innovative Medicines Initiative IMI

Call's Objectives:

The Innovative Medicines Initiative Joint Undertaking (IMI JU) is a unique pan-European public private partnership aiming to foster collaboration between all relevant stakeholders including large and small biopharmaceutical and healthcare companies, regulators, academia and patients. IMI's overall goal is to build a more collaborative ecosystem for pharmaceutical R&D in Europe and to speed up the development of more effective and safer medicines for patients.

To reach this objective, IMI creates unique, large-scale networks of innovation in pharmaceutical research. Joining forces in the IMI research and training projects, competing pharmaceutical companies collaborate with each other and with academia, ***regulatory agencies*** and ***patients' organisations*** in order to tackle the major challenges in drug development.

The main challenges are:

- Industrial: insufficient R&D investment
- Scientific: technological complexity
- At European level: research in Europe is fragmented and tends to be located elsewhere.

To address these challenges, IMI will harness the know-how and expertise available across Europe's biopharmaceutical sector, by pooling competencies and resources from the public and the private domain.

The research activities, supported by the IMI, will be open to all research actors, provided that they are performed within Europe.

Call Identifier: IMI-JU-2011 (IMI 4th Call 2011 - Stage 1)
Publication Date: 18 July 2011
Deadline: 18 October 2011
Call information:
http://www.imi.europa.eu/content/stage-1-2. On this page you find information necessary to submit an **Expression of Interest** in response to the IMI 4th Call 2011.

List of topics with socio-economics aspects:

- EU MEDICAL INFORMATION SYSTEM
    1. A EUROPEAN MEDICAL INFORMATION FRAMEWORK (EMIF) OF PATIENT-LEVEL DATA TO SUPPORT A WIDE RANGE OF MEDICAL RESEARCH
    2. ETRIKS: EUROPEAN TRANSLATIONAL INFORMATION & KNOWLEDGE MANAGEMENT SERVICES
- CHEMISTRY, MANUFACTURING AND CONTROL
    3. DELIVERY AND TARGETING MECHANISMS FOR BIOLOGICAL MACROMOLECULES
    4. IN VIVO PREDICTIVE BIOPHARMACEUTICS TOOLS FOR ORAL DRUG DELIVERY
    5. SUSTAINABLE CHEMISTRY – DELIVERING MEDICINES FOR THE 21ST CENTURY
- TECHNOLOGY AND MOLECULAR DISEASE UNDERSTANDING
    6. HUMAN INDUCED PLURIPOTENT STEM (HIPS) CELLS FOR DRUG DISCOVERY AND SAFETY ASSESSMENT

Joint Programming Initiative "Agriculture, Food Security and Climate Change" (FACCE JPI)

Call's Objectives:

The goal of joint programming is to bring a new dimension to European research by aligning national programmes in participating countries around grand societal challenges, and thereby contributing to the development of the European Research Area.
The FACCE JPI seeks to address the challenge of food security in the context of demographic growth, global environmental changes, globalisation of the economy and dwindling natural resources such as fossil fuels, water and arable land.

Publication Date: 13 July 2011

Deadline: 07 September 2011 (Letter of intent, 1st stage)

Call information: http://www.faccejpi.com/

FACCE JPI pilot action call for "The FACCE JPI Knowledge Hub" on "A detailed climate change risk assessment for European agriculture and food security, in collaboration with international projects"

SSH Relevant Scientific Field: Economy, sociology

Topic Description (Excerpt from call-text):

The strategic objective of this action is to create a coordinated and visible European network bringing together the major European research groups to join forces, share expertise and data resources, and address this urgent action in a timely and concerted fashion. We expect that in addition to the scientific outcomes expected, the benefits of this pilot action will include:

- Fostering interaction and synergy between European modellers in the areas of crops, livestock and trade,
- Allowing long lasting and large base research and tools and methods for capitalizing results,
- Providing European critical mass in the international context and JPI branding,
- Establishing and reinforcing links between national programmes and supercomputing facilities.

It is expected that this FACCE Knowledge Hub will collaborate with international initiatives, such as AgMIP, through distributed climate-scenario simulation research activity for historical model inter-comparison and future climate change conditions. The results of agricultural model inter-comparison and improvement will allow the assessment and reduction of uncertainties in projections of climate change impacts on agriculture and food security that are at the centre of the questions being addressed by the JPI. This FACCE Knowledge Hub will constitute the European contribution to international efforts in this area.

This FACCE Knowledge Hub will develop protocols for crop, pasture and livestock model inter-comparison including the collection of existing high quality datasets at various scales essential for such analyses. It will provide guidance in selecting most suitable models for particular environment/scale, develop guidelines for up-scaling site-based models to larger scales, and evaluate benefits of using model ensembles for assessing uncertainty range in decision making for Europe. In order to address ***impacts on food prices, international trade and food security, this FACCE Knowledge Hub will consider representative***

agricultural pathways (or scenarios) for Europe that are consistent with IPCC socio-economic scenarios and with representative carbon pathways (RCPs). Coupled climate/economic and trade model simulations will be performed and the corresponding methods will be developed.

Special attention will be given to the development of adaptation scenarios, including:
- Changes in crop and pasture species traits (e.g. phenology…),
- Changes in agricultural practices (e.g. sowing dates, harvest dates, animal stocking density, fertilisation…),
- Changes in the geographic location of specific crops, pastures and livestock types,
- ***Adaptation triggered by changes in the prices of agricultural commodities and of farm inputs.***

Moreover, the FACCE Knowledge Hub will bring added value by addressing the most relevant regional farming systems in participating countries, including livestock farming and grasslands. If published in time, it will bring a key European contribution for consideration by the Fifth Assessment Report of the IPCC. This FACCE Knowledge Hub will be organised in three coordinated networks on:
- Crops
- Grasslands and Livestock
- Economics and trade

In each network, modelling activities will be performed building upon common protocols and further developing and adapting these protocols for Europe.
The activities that will be coordinated include:
- IT support (modelling platforms, data bases, data warehouse and portal),
- Experimental and observation data provision for modelling activities,
- Communication with stakeholders,
- Training and capacity building.

Finally, it is expected that the FACCE Knowledge Hub will provide to the FACCE JPI Scientific Advisory Board recommendations for the future development of experimental, observational and modelling infrastructures in Europe in this area.

Funding Scheme: FACCE Knowledge Hub

Additional Information:

- Please refer to the original Call text at http://www.faccejpi.com/ !
- Participating Countries: Austria, Belgium, The Czech Republic, Denmark, Estonia, Finland, France, Germany, Israel, Italy, The Netherlands, Norway, Poland, Romania, Spain, Sweden, The United Kingdom