

**WORK PROGRAMME 2009**

***Cooperation***

**THEME 7**

***TRANSPORT (INCLUDING AERONAUTICS)***

*(European Commission C(2008)4598 of 28 August 2008)*

## FP 7 Cooperation Work Programme: Transport

This work programme for 2009 concerns only Galileo, SESAR (Single European Sky Air Traffic Management Research), and the contribution of the Transport Theme to the general activities for 2009. All calls for proposals financed through the 2008 and 2009 budgets are covered by the 2008 work programme. The next calls for the Transport Theme will be issued in the 2010 work programme.

The budgetary tables (pages 3, 4 and 5) give an overview for the financing of:

- all calls for proposals under this Theme which use the 2009 budget, including calls for proposals issued in the 2008 work programme,
- other activities for 2009.

**Indicative budget for Transport (including Aeronautics) Theme for 2009 work programme**

**A. DG RTD 2009 budget**

European Commission's DG Research	Total calls	2008 (million EUR) for WP 2008 activities	2009 (million EUR)* for WP 2008 activities	2009 (million EUR)* for WP 2009 activities	Total 2009 (million EUR)*
<b>1 - Calls included in the 2008 Work programme drawing on 2009 budget</b>					
FP7- AERONAUTICS and AIR TRANSPORT (AAT) – 2008- RTD-1	203.51	80.42 **	123.09	-	
FP7- SUSTAINABLE SURFACE TRANSPORT (SST) – 2008- RTD-1	225.31	102.22**	123.09	-	
<b>Total for RTD calls</b>	<b>428.82</b>	<b>182.64</b>	<b>246.18</b>	-	
<b>2 - WP 2009 activities</b>					
General activities (cf. Annex 4)		-	-	4.19	
<b>Estimated total budget allocation</b>		<b>182.64</b>	<b>246.18</b>	<b>4.19</b>	<b>250.37</b>

## B. DG TREN 2009 Budget

European Commission's DG Transport and Energy	2009 (million EUR)* for WP 2009 activities
General activities (cf. Annex 4)	0.38
Other activities:	
Galileo	62
Sesar	55
Evaluations and monitoring (M€)	0.5
Programme impact assessment	-
Information/ communication	-
<b>Estimated total budget allocation</b>	<b>117.88</b>

\* Under the condition that the preliminary draft budget for 2009 is adopted without modifications by the budget authority.

\*\* These lines include an indicative amount for ERA-NETs – See Annex 4 (Table 2 – Overview of Activities and Topics mentioned in Cooperation Themes which are part of the FP7-ERANET-2008 –RTD joint call). ERA-Nets in work programme 2008 for Transport (including Aeronautics) theme are:

- AAT.2008.7.10 Co-ordination of national research programmes for further developing the European Research Area in the field of Aeronautics and Air Transport (up to EUR 2 million), and;
- SST.2008.6.8 ERA-NET ROAD II (up to EUR 1.5 million)

**Summary of RTD budget allocation to general activities for 2009 (cf. Annex 4)**

<b>European Commission's DG Research</b>	<b>2009 (million EUR)*</b>
Cordis	1.1
Eureka/Research organisations	0.03
COST	3.04
ERA-NET	0.02
RSFF	-
Total	4.19

**Summary of TREN budget allocation to general activities for 2009 (cf. Annex 4)**

<b>European Commission's DG Transport and Energy</b>	<b>2009 (million EUR)*</b>
Cordis	0.37
Eureka/Research organisations	0.01
COST	0
ERA-NET	0.006
RSFF	-
Total	0.38

\* Under the condition that the preliminary draft budget for 2009 is adopted without modifications by the budget authority.

## **SESAR**

The SESAR initiative aims to develop the new tools and technologies needed to sustain air traffic growth in Europe for the next 20 years in an economically and environmentally sound way. The target operational concepts, as well as the associated research programme, are being developed in the SESAR definition phase, which is a cooperative, industry-led effort. In order to rationalise and organise ATM research so that it leads to actual operational and industrial implementation, all ATM research in the 7<sup>th</sup> Framework programme will be undertaken within the SESAR initiative. In order to manage consistently and in a rationalised manner the research activities avoiding duplication of efforts, a joint undertaking has been established by a Council Regulation<sup>1</sup>, under Article 171 of the Treaty. This Joint Undertaking will coordinate the SESAR programme with other aeronautical research activities in order to maintain a consistent system wide approach for the entire air transport system.

SESAR activities will be organised around the following themes:

### ***New air traffic management tools and systems***

The challenge is to automate air traffic management systems in order to enable human operators (air traffic controllers, pilots) to concentrate on high added value tasks. This research area will deal with all phases of the flights in all operational environments (flight preparation and planning, ground movements, airborne phases, approach and landing and take-offs, in all weather conditions), and take into account all categories of actors, including air traffic controllers, flow managers, pilots, dispatchers, etc.

### ***New technologies for air traffic management***

The objective is to develop new technologies which can support air traffic management development, including more aircraft autonomy such as:

- advanced telecommunications, enabling system-wide, seamless and efficient communications, data sharing and collaborative decision making for all relevant ATM actors (ATC, aircraft, AOC, airports, military, etc.)
- improved aeronautical meteorological forecast
- full integration of satellite navigation technologies (EGNOS-GALILEO)
- advanced devices to increase airport/ATM capacity (for example wake vortex prediction/detection)
- advanced devices and planning criteria to optimise air space use in terms of minimising the environmental impact of operations (e.g. to lower contrail or cirrus cloud formation where appropriate).

### ***Integration and validation projects***

The objective is to assess the new technologies and concepts in a realistic environment, which, depending on the maturity of the technologies and systems, can be simulated or tested in a pre-operational context. These activities will enable the transitional arrangements which need to be foreseen in order to implement the new systems to be precisely defined.

The Commission will provide annual contributions from the 7th Framework Programme to the SESAR Joint Undertaking (JU) for a total estimated amount of EUR 350 million over the entire programme, and the JU will carry out the activities in the relevant areas indicated in the

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<sup>1</sup> Council Regulation (EC) N° 219/2007, of 27 February 2007, J.O. L64/2.3.2007

work programme. For this purpose, an amount of EUR 55 Million will have to be transferred to the SESAR JU for the year 2009 in order to fund research and development activities in the following indicative areas:

- R&D programme management support including verification of R&D overall consistency
- Validation infrastructure adaptation and integration
- En-route operations
- En route/approach ATC
- Airport operations, including Terminal Manœuvre Area (TMA) operations and airport systems
- Airlines Operations Centre
- Network operations
- Information management, Network Information Management System (NIMS) and System Wide Information Management (SWIM)
- Avionics and equipment
- Non avionic Communication Navigation Surveillance
- Innovative long term research & development.

The activities related to SESAR will be implemented by separate mechanisms and the details will not be elaborated in this work programme.

## **GALILEO**

The European Global Navigation Satellite System, encompasses Galileo and EGNOS, and provides a worldwide positioning and timing infrastructure.

In parallel to the development phase, that is demonstrating the technical feasibility and the European capacity of implementing an independent satellite navigation infrastructure, the deployment of the full Galileo satellite constellation and the associated ground segment starts in 2008. The procurement activities include full system validation and are foreseen to lead in 2013 to an operational infrastructure owned by the European Community.

The main objective of the deployment phase is to procure and set up the various elements that constitute the Galileo infrastructure, in particular the completion of the space and ground infrastructures, system support tasks, launch and operation of services, as well as the development of external interfaces for the future service/application systems and test receivers. Beyond manufacturing of equipments, the procurement activities encompass trade-offs and analysis, simulations, testing, demonstration, in-orbit validation, and other activities that increase competencies of European companies in satellite navigation.

According to the European GNSS Regulation<sup>2</sup>, the financial envelope foreseen to implement the above activities (EUR 3.4 billion for EGNOS and Galileo) includes the sum of 400 million euros made available from the 7<sup>th</sup> research and development framework programme for the period 2007-2013.

A delegation agreement between the European Commission and the European Space Agency will be concluded in the course of 2008, pursuant to Article 54(2) of the EC Financial

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<sup>2</sup> Council Regulation xxx/2007

Regulation, allowing ESA to procure the Galileo deployment in the name and on behalf of the Commission. For this purpose, an amount of EUR 62 million will have to be transferred to ESA for the year 2009 in order to fund activities in the following indicative areas:

- Activities on EGNOS and Galileo where the European Space Agency acts as design agent
- Industrial contracts for EGNOS and Galileo that contain research and development elements, elements of non-recurrent engineering, elements of qualification and/or accreditation, and/or elements of innovation, system development, or system upgrading
- Procurement of performance monitoring facilities or services, either by ESA and/or the Commission
- Studies.

The implementation of the above activities will not be detailed in this work programme. Finally, the Commission will procure performance monitoring facilities.