

Air transport: Joint Undertaking to develop the new generation European air traffic management system SESAR

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In June 2006 the Council adopted conclusions that stressed the European importance of the SESAR project and requested the Commission to begin the preparatory work needed in order to set up the SESAR Joint Undertaking. It also asked the Commission to take stock of the SESAR project, and in particular, progress made within the definition phase. The purpose of this Communication is to report to both the Council and the European Parliament on the state of progress with SESAR and industry's participation in the project during the development phase. SESAR forms an essential component of the Single European Sky and is considered the only successful way of bringing about the technological revolution needed to complete the Single European Sky.

To recall, the SESAR project will be established according to different phases:

Definition Phase 2005-2007. During this phase a plan for the modernisation of air traffic management in Europe will be drawn up. The Joint Undertaking is to be established before the end of the definition phase. Funding will be split evenly between the EU and Eurocontrol.

Implementation Phase 2008-2020. This phase will consist of two successive stages.

Firstly, **Development 2008-2013.** This phase will set the ground for the deployment stage the new system, the purpose being to install and implement the related functions of SESAR. Funding during development will be split equally between the Community, Eurocontrol and Industry.

Secondly, **Deployment 2014- 2020.** Funding during the deployment of SESAR will stem exclusively from industry. The Joint Undertaking is expected to transform itself into an essentially private body.

Progress with SESAR Definition Phase: Responsibility for the Definition Phase rests largely with Eurocontrol, the European Organisation for the Safety of Air Navigation, although it is being part financed by the European Community (EUR 30 million from the budget for trans-European transport networks). In November 2005 a contract was signed with a consortium of thirty companies from the European aviation community for work involved in the definition phase. Staff representatives and military authorities are involved in the work of the consortium as are non-European companies such as Honeywell, Boeing and Rockwell, all of whom have a particular interest in the definition phase of SESAR.

The definition phase has been divided into six milestones. For each milestone the consortium holds a seminar the purpose of which is to present its work to the entire aviation community. So far two reports have been published dealing with societal, economic and operation issues of aviation in European and a precise definition of performance criteria for the development of the new generation of control systems. In this later report, industry set ambitious targets for the design of the new systems – namely a three-fold increase in capacity, a halving of unit costs and an increase in safety by a factor of 10. After one year of existence and following a start-up phase over 600 people are involved in the definition phase. The Commission notes that all reports were delivered on schedule.

Elements of the SESAR operational concept: The new SESAR structure will be structured around the following elements: Operations based on better forecasting (e.g. collaborative decision-making

procedures; better sharing of meteorological information; merging of the different “trajectory” representations into a single one established by on-board computers; and effective monitoring of the scheduled “trajectory”): Establishment of an efficient telecommunications network: (e.g. replace the current system of radio contact with an efficient network of ground-to-air links); Optimisation of the use of airports (e.g. to promote a number of operational technologies and procedure which make it possible to manage airport movements more efficiently); and the Increased automation of air traffic control tools to assist operators (e.g. to use automated tools and systems to produce all the trajectory negotiation planning or for cockpit tools for the visualisation of surrounding traffic).

Preparatory activities for the establishment of the SESAR Joint Undertaking: The Commission has made initial contacts with a number of potential members and has started preliminary discussion with Eurocontrol on the establishment of the Joint Undertaking. Eurocontrol is a founder member and has agreed to a provisional financial contribution of EUR 700 million. As far as industry is concerned, the Commission has received twelve expressions of interests from industry in becoming a member of the SESAR Joint Undertaking. The cumulative investment in SESAR envisaged by industry amounts to a preliminary total of EUR 900 million to EUR 1 300 million – broadly corresponding to the expected contribution. In addition, a number of non-European parties have expressed an interest in joining SESAR.

Allocation of intellectual property rights: The property rights arising from the results of the development phase will belong to the Joint Undertaking. Each member will be entitled to access these results exclusively for research, development and validation activities. Given the public-sector investment involved, rights of access to the development phase may be granted to the Member States for strictly non-commercial purposes.

To conclude its report, the Commission remarks: it can be asserted that, thanks to SESAR, the process of rationalisation of air traffic control research has begun. SESAR is arousing much enthusiasm and a strong commitment within the European aviation community. The definition phase, which has been entrusted to Eurocontrol and an industrial consortium, is meeting the objectives assigned to it and is yielding promising results.