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

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PURPOSE: to develop a new generation of European air traffic management through the creation of a Joint Undertaking, SESAR.

PROPOSED ACT: Council Regulation.

CONTENT: projections for the development of air traffic in Europe show that it should more than double in the next 20 years, or even triple in some regions, particularly in Central Europe. Air transport contributes EUR 220 billion to European gross domestic product and employs 3.1 million people. Developing an efficient, fully-integrated and inter-operable air transport infrastructure is therefore becoming a major European priority. One of the key areas in which Europe needs to maintain safety standards as well as innovation relates to air traffic management. The current air management structure is characterised by out-dated equipment based on varying, national norms. This has an impact not only on the EU's ability to compete with its major industrial competitors such as the United States, but in the long-term could impact on safety issues relating to air transport. Further, the cost of continuing with the *status quo*, would be significant. The cost of the European air traffic control system currently runs at about EUR 7 billion per year. If the predicted doubling or even tripling of air traffic should be realised then, under a simple trend-based scenario, air traffic control could cost between EUR 14 billion and EUR 18 billion per year in 2020.

In order to address the challenges relating to air traffic management, the Commission is presenting this Council Regulation, the purpose of which is to set up a Joint Undertaking to be known as SESAR, based on Art 171 of the TEU. The specific objective of SESAR is to develop the new generation of European air traffic management system. Under this mandate, it will be responsible for developing the kind of technologies needed to establish a fully functioning European air traffic management system. At the same time it will be responsible for developing methods of organisation and industrial components that are capable of ensuring the safety and fluidity of air transport in the next 20 years. Given the scale and the ambition of the task, the Commission proposes that SESAR be compared to other major industrial projects with high technological value such as GALILEO (satellite radio-navigation) and ITER (nuclear fusion). As with GALILEO and ITER, SESAR will combine research efforts, as well as acting as a catalyst for Europe's innovation capacity.

A further feature of SESAR will be its role in making European air traffic control infrastructure the most modern and high-performance infrastructure in the world. In addition, SESAR will allow for the pooling and rationalisation of a modernised air traffic control system, which upstream, creates economies of scale and downstream, brings significant benefits in terms of the operation and maintenance of these systems. The technological lead conferred by SESAR on the European aeronautics industry will put it in a position of strength on export markets. It will also allow European aircraft to compete with their foreign competitors. Nor, must the impact of SESAR on safety be underestimated. The current fragmentation of systems and operational procedures combined with ageing technologies are not sustainable. A modern, safe, standardised and reliable air traffic control infrastructure will bring significant benefits in terms of the safety of air transport. An additional advantage is the positive impact the deployment of SESAR will

have on the environment. It has been estimated that the savings in terms of the reduction of greenhouse gas emissions could be between 4% and 6% - even though this needs to be set off against the expected significant increase in the number of flights.

Having carefully considered all the available options, the Commission is proposing that SESAR be set up as a Joint Undertaking (please refer to accompanying document). The establishment of SESAR as a Joint Undertaking will give it a flexible and reactive structure with a legal personality so that it can conclude the contracts required to develop the European air traffic control system. A Joint Undertaking is in line with the Lisbon Agenda in that it allows for public and private resources to be combined for a joint objective, the idea being that the programme will gradually and irrevocably be taken over by industry.

In order to bring the project forward, the creation and establishment of SESAR is foreseen in a number of stages. The first being the **Definition Phase 2005-2007**. During this phase a plan for the modernisation of air traffic management in Europe will be drawn up. The different technological steps needed will be defined as will the priorities for modernisation and the timetable for operational implementation. Significantly, the Joint Undertaking will be set up before the end of the definition phase so that it can appropriate the modernisation plan being drawn up and prepare the resulting work programme. The following step will be the creation of the **Implementation Phase 2008-2020,** which will consist of two successive stages, namely **Development 2008-2013** and **Deployment 2014- 2020**. Under the deployment stage the new system will be installed with a widespread implementation of the related functions.

The splitting up of the project into phases is significant in that it has an impact on the funding of SESAR. For example, during the Definition Phase, funding will stem from both the EU (EUR 30 million) and from Eurocontrol (EUR 30 million). During the Development Phase funding will be split equally between the Community, Eurocontrol and Industry – or in other words each will contribute EUR 100 million between 2008-2013. Lastly, during the Deployment Phase SESAR should be fully funded though industry, at which stage the Joint Undertaking will be required to transform into an essentially private body. As far as the Community funding is concerned is will be sourced from both the EU's RT&D Framework Programmes as well as from the trans-European networks programmes. After the Definition Phase, however, the Community's financial contribution is strictly limited to the duration of the new financial perspective, 2007-2013.

To conclude, a number of studies have clearly shown that the only solution in Europe for developing the new generation of air traffic control systems is to pool energies in a major industrial project. SESAR will represent real progress in terms of efficiency by making technologies available, which will optimise the capacities of machines and people. In addition, SESAR will allow for the extensive standardisation and inter-operability of the systems installed. On a final point, SESAR will greatly increase the safety of air transport, which is currently threatened by the obsolescence of equipment and the lack of standardisation of air traffic control in Europe.