

## Measure 17: Single European Sky

### First page:

<p><i>Policy package:</i> <b>3A: Air liberalisation and harmonisation</b></p>
<p><i>Measure 17:</i> Single European Sky</p>
<p><i>What is the problem being addressed ?</i> According to the motivations put forward in COM(2001) 123 final/2 to introduce the action programme on the creation of the Single European Sky, in 1999 air traffic delays reached catastrophic proportions. Despite the improvement of the situation since 1999, it has been noted that air traffic management is still operating in an environment shaped back in the '60s, and then highly compartmentalised, despite harmonisation and integration developed within Eurocontrol, the intergovernmental organisation which now covers almost the whole of Europe in the geographical sense. However, it is true that the delays are not entirely attributable to dysfunctions in air traffic control: nearly half of the delays have been attributed to this, but airports and airlines also play a part; this is the reason why the White Paper includes also measures to improve practices in other parts of the systems (capacity at airports, user rights for air passengers etc.)</p>
<p><i>Measure's costs and/or benefits:</i> Airspace controlled by EUROCONTROL States is subject to a common route charges system established by a multilateral agreement. Common principles include provision for either full cost recovery over a three year cycle or an independent economic regulation scheme leading to a price-cap mechanism. With regards to terminal charges, EU Member States do not apply any harmonised rules except general ICAO recommendations. According to the evaluations supporting the Commission proposal on the creation of the Single European Sky in the year 2001, the measure is designed to improve the efficiency and effectiveness of air traffic management, to reduce delays and raise productivity through increased automation. In a recent study, a quantification of the economic benefits of the Single Sky package was refined, taking into account the provisions of the actual regulations, which lead to an overall benefit of 5,9 billion euros over 20 years as compared to direct costs of about 2,5 billion euros over 20 years.</p>
<p><i>Legislative implementation at the EU level:</i> This measure collects four regulations of the European Parliament and of the Council of 10 March 2004:</p> <ul style="list-style-type: none"><li>• Regulation N° 549/2004 laying down the framework for the creation of the single European sky</li><li>• Regulation N° 550/2004 on provision of air navigation services in the single European sky</li><li>• Regulation N° 551/2004 on the organisation and use of the airspace in the single European sky</li><li>• Regulation N° 552/2004 on the interoperability of the European Air Traffic Management network</li></ul> <p>The Single Sky Regulations adopted on March 10, 2004, have entered into force on April 1, 2004 and the first implementing measures are expected by the end of 2004. A review is planned by April 20, 2007. Certification and designation of air navigation providers will not arrive before April 2005. The definition of configuration and subdivisions of EUIR (Europe Upper flight Information Region) will be produced by April 1, 2006. Essential requirements (safety, communication, surveillance, man-machine interface specifications) are expected to be defined by October 20, 2005 and to enter service gradually by April 2011. National legislation cannot be modified and implemented before the milestones indicated have elapsed.</p>
<p><i>What are the objectives ?</i> The overarching goal of the entire set of regulations is to remedy the current deficiencies in the field of air navigations by increasing <b>safety</b>, <b>capacity</b> and <b>economic efficiency</b> in air traffic management infrastructure and services and, hence, reducing the factors disrupting air traffic, such as flight delays and other obstacles (sub-optimum flight paths). This goal has to be achieved through:</p> <ul style="list-style-type: none"><li>• the reinforcement of the trend towards more business oriented provision of air navigation services and cost reduction;</li></ul>

- the creation of a framework for consolidation of air navigation service provision and the restructuring of the number of air control centres;
- a better use of airspace, with an uniform organisation and management of airspace which will make it possible to strike a balance between civil and military interests;
- the availability of a process for designing, developing and validating air navigation equipment and systems, which will give service providers the means to guarantee the safety standards, and the installation of air navigation equipment and systems planned at the European level;
- the definition of the conditions to be met in order to achieve interoperability within Community territory between the different systems and constituents of the air traffic management network.

Another important positive impact expected from this measure is the strengthening of the position of manufacturers of the equipment and systems on the European and world markets.

*Interactions with other WP measures:*

There is an obvious connection with the measures in other parts of the air transport system aiming to support air traffic growth and to reduce flight delays, as those addressing the future of airport capacity and management (Measure 19).

Air transport management in Europe is also connected to the rest of the world, so there is an important link with the measure setting the EU external relations in the field of transport (Measure 78)

Finally, a rational expectation is that the single European sky package of measures will further strengthen the trend of fast growth of air travel, hence counteract measures aimed at revitalising railways. To avoid negative interactions of this type it is desirable that these measures be adopted jointly with measures aiming to integrate different modes, in particular enhancing rail transportation to airport and subdivision of fast links between high speed trains and airlines.

**Second page:**

*Output indicators:*

The output of the single European sky measures can be monitored using the following key implementation indicators:

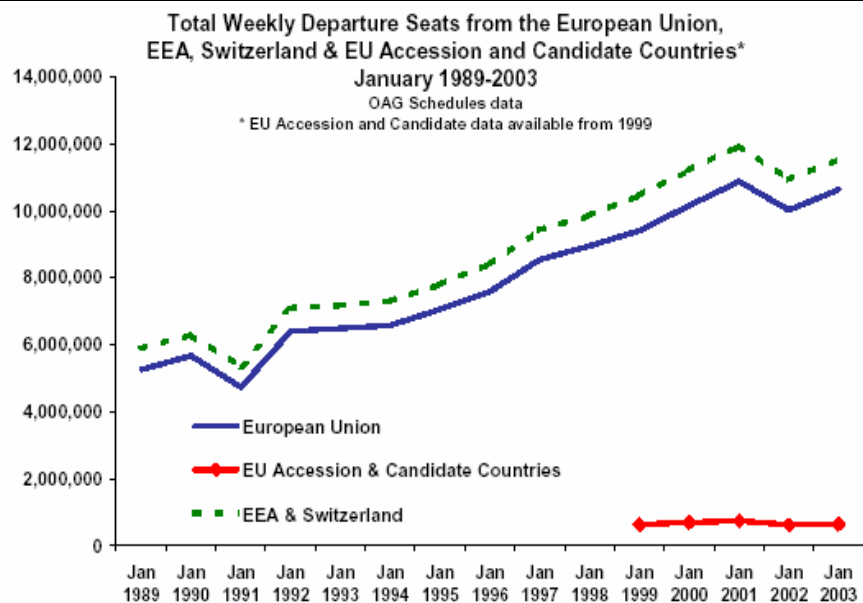
- Implementation of the Flexible Use of Airspace Concept in the upper airspace and, at a second stage, in the lower airspace in the Member States (0 = non implementation; 10 = full implementation);
- Number of air navigation systems and equipment declarations of conformity submitted to national supervisory authorities in the Member States.
- Number of air traffic controllers and their mobility within Europe: the shortage of air traffic controllers is expected to become more acute in the years ahead, due to the age pyramid in this profession. Data on the number of controllers are provided in the EUROCONTROL reports

*Outcome indicators: intermediate impacts on transport markets*

The following are the key market indicators whose trends will be affected by a full realisation of the single European sky:

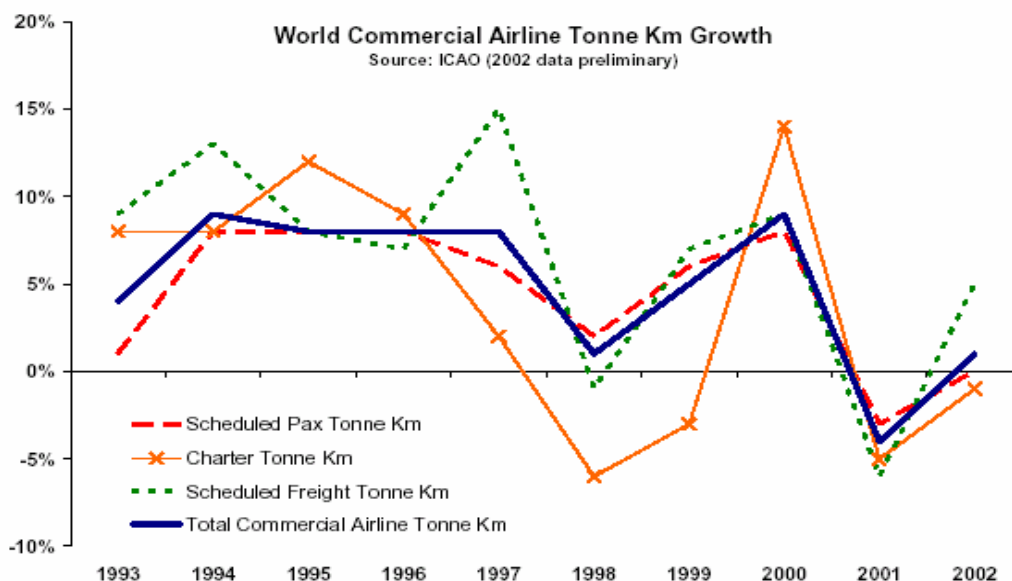
- Air passenger transport capacity: data on available seats are available from OAG, a leading independent source of flight schedule information.

European aviation capacity has expanded steadily over the course of the last fifteen years, with some notable interruptions caused by a combination of economic and political developments. Following the previous Gulf War, capacity was cutback sharply in 1991. There was also a major reduction in the year 2001, following the events of September 11<sup>th</sup> and a more general economic slowdown. There is some evidence that the recovery was slower in 2002 than from the previous Gulf War in 1991. Despite a 6% year on year rise, by the start of 2003 EU capacity was still 2,2% below the level achieved in January 2002.



- Air traffic growth: regular data are available from ICAO.

The global aviation industry transports passenger, freight and mail on either scheduled or charter services. In 2002, passenger accounted for 69% of all tonne.km transported, with the vast majority of passenger volume flying on scheduled services. The longer term trend (1993 – 2002) shows unsteady growth for the sector as a whole, with a decline in 2001 due to September 11<sup>th</sup> events. Scheduled passenger traffic and scheduled freight broadly follows the overall trend picture, with charter traffic growth very erratic (and strongly dependent on the evolution of tourism flows):



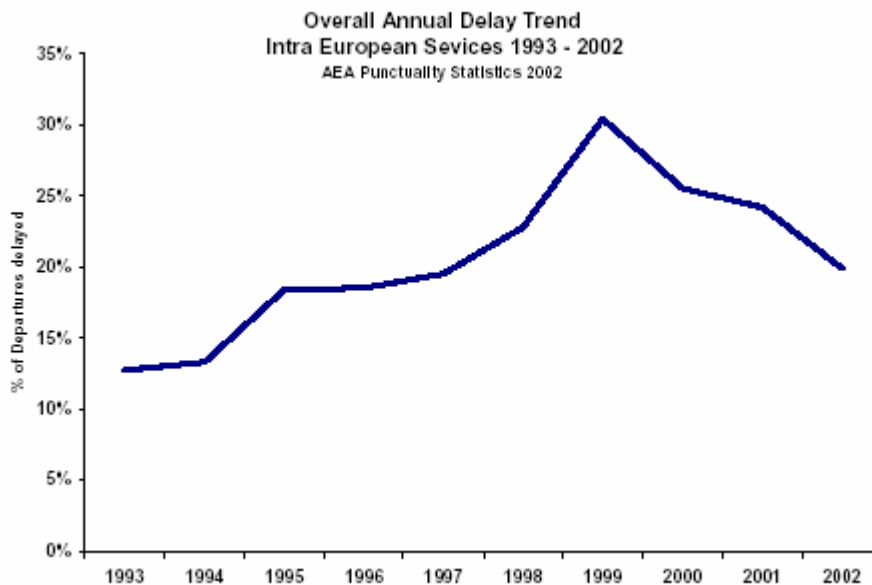
- Air navigation services enterprises, employment and turnover: yearly data for air traffic management service providers organisations, airline operators, airport operators and manufacturing industry covering both third party software and hardware component suppliers can be collected at national level in the Member States. EUROSTAT publishes the data for air transport enterprises, employment and turnover at selected years.
- Improved utilisation of air fleets: the Association of European Airlines (AEA) monitors the productivity of a number of airlines. The AEA includes most major full service airlines and its

membership is a good proxy for the sub-sector of full service scheduled airlines as a whole. Members of AEA have improved their output efficiency – measured as Revenue.Passenger.Km carried per flight – considerably over the last 27 years. This has come in three forms: i) improved load factor, from 56% in 1975 to its current peak of 74% in 2002; ii) larger average aircraft size and greater number of passengers per flight, from 58 in 1975 to a peak of 88 in 2000; iii) greater average stage length. An improved ATFM can contribute to improve the overall productivity of airlines, although the impact can be marginal.

*Outcome indicators: final impacts on transport users and non users*

The main aim of the measure is to make air transport more regular and safer and to reduce air traffic delays. Therefore, the most relevant outcome indicators are:

- Flights delays: delay statistics are regularly published by EUROCONTROL. Indicators elaborated by EUROCONTROL on a monthly base include: i) percentage of flights delayed for more than 15 minutes due to Air Traffic Flow Management (ATFM) regulations; ii) average ATFM delay per movement; iii) average ATFM delay per delayed flight; iv) distribution of total flights by length of delay. The Association of European Airlines (AEA) report on departure delays amongst their members at 28 European airports until 2002. For the third successive year since 1999 there were improvements in punctuality:



In 2002 the EUROCONTROL average en-route ATFM delay was 1,8 minutes per movement. In 2001, this key performance measure was 3,1 per movement. It is estimated that cost of en-route ATFM delays to airlines was between € 0,7 – 1 billion during 2002 (down from between € 1,1 – 1,7 billion in 2001. Contributory factors to the improved performance were the introduction of reduced vertical separation minima (which increased capacity in upper air space) and the reduction in flights (following the aviation industry downturn).

- Air transport safety: victims in aviation accidents over EU territory by any operators are published by EUROSTAT; however, more detailed data on critical flights events are in principle more significant, and might be collected at national level (although these data are presumably confidential).
- Emissions of air pollutants: the reduction of congestion and sub-optimal flight routes is expected to reduce the emissions from air transport per passenger.km. However, this positive effect might be partially or fully offset by such “rebound effects” affecting the overall traffic volumes and environmental impacts.