Single European Sky: working towards an improved European aviation sector

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Working towards an improved European aviation sector

by Dr S. Kallas

The aviation sector in Europe is not functioning as efficiently and safely as it potentially could. Vicepresident of the European Commission, S. Kallas, explains the efforts that the Commission is currently undertaking in order to improve the European aviation industry through an initiative called Single European Sky.

Inefficiency in European Aviation

Aviation is a key sector for the European economy. Every year it enables some 800 million passengers to travel across our skies and, apart from crisis years like the ones we faced recently, in the long term it is expected to grow at a rate of 3% a year. The sector employs 3.2 million workers and in 2008 represented about 1.5% of the European Union's GDP, which in coming years is expected to rise to 5%. However, the sector is being precluded from reaching its full potential due to the European airspace which is highly fragmented among the 27 EU Member States, therefore preventing the coordination of technology implementation and the most efficient use of airspace and air navigation services. Every year this leads to preventable delays of some 2.5 million hours, costing Europe €800 million. The average flight travels an extra 49 kilometres and emits an additional 4.8 million tonnes of CO_2 emissions. On a yearly basis this unnecessarily costs an additional €1 billion. On top of these unnecessary costs caused by the fragmented service provision (such as suboptimal productivity, overlapping overhead costs, uncoordinated procurement) overall, the costs of inefficiencies of the European airspace are estimated to be about €4 billion a year. Europe cannot afford to waste money on this scale, which is why the European Commission was asked to act.

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Single European Sky initiatives

With the Single European Sky initiatives the Commission has been leading efforts to ensure cooperation between Member States in Air Traffic Management (ATM) within the framework of the EU.
The first package of the Single European Sky (SES I) was adopted in 2004. SES I laid down the necessary foundations for the Single European Sky. With its four basic Regulations and associated implementing Rules, it created a new institutional framework at European and national levels and secured the involvement of stakeholders. One of the first measures was to ensure the separation between the Air Navigation Service Providers and the regulatory functions in all Member States. Other important outcomes were the establishment of more transparency in air navigation charges, the adoption of implementing rules on interoperability to already improve the use of airspace, and the settlement of the conditions for a technological leap materialised in the *Single European Sky ATM Research Programme* (SESAR) concept. SES I was about putting in place sound governance, ensuring transparency of decisions, ensuring the involvement of industry in the decision-making and setting a level playing field between stakeholders with clear and enforceable rules. By doing so it paved the way for a second package.
Consequently the Commission launched a second package (SES II) in 2009, this time aiming to achieve a truly Single European Sky, both better performing and more sustainable.
The goals of the SES II Package are to protect and if possible increase safety, to allow a tripling of the current capacity without increasing delays, to reduce the environmental impact of aviation and to halve the unit costs of service provision. In order to achieve these objectives the SES II is structured in five coherent and interrelated pillars, which are outlined below: The Regulatory, Safety, Technology, Airports and Human factor pillars.

Five pillars of SES II

The **Regulatory pillar** contains three main features. First, by introducing a performance scheme that sets binding performance targets for Member States and their Air Navigation Service Providers to meet. These targets are divided in four *Key Performance Areas* (KPAs): safety, which is the top priority; environment, by stimulating a better flight efficiency; capacity, which will allow to cut delays significantly; and cost-efficiency, which will reduce the cost of service provisions and in the end will save passengers and companies a lot of money. On 29th July, EUROCONTROL was nominated the European Organisation for the safety of air navigation, and thereby nominated to exercise the duties of *Performance Review Body* (PRB), to assist the Commission in the implementation of the performance scheme.

Secondly, the *Network Manager* Functions Regulation will enhance the cooperation among Member States through a network approach of the use of airspace. A European Network Manager shall monitor and contribute to the implementation of the performance scheme in accordance with the performance Regulation. This manager will develop a Network Strategy Plan, as well as an integrated European Route Network Design, and provide support for the network crisis management. This is only a starting point as the Commission may decide to entrust the Network Manager with additional functions. The adoption of the Network Management Functions Regulation and the nomination of EUROCONTROL to exercise the task of Network Manager are foreseen for February/ March 2011.
The third component of this regulatory pillar is the creation of nine Functional Airspace Blocks (FABs) among all the EU Member States and a number of third countries. Its main purpose is to defragment the EU airspace by easing collaboration among States and ensuring the pan-European dimension of the SES. The FABs must be effectively set up and enter into force before by 4th December 2012. The process shall be facilitated by a FAB systems Coordinator (Mr Georg Jarzembowski) nominated by the Commission on 29th July 2010. The governance of the FABs will be reinforced by an Implementing Rule and Guidance Material provided by the Commission.

The **Safety pillar** is in the hands of the *European Aviation Safety Agency* (EASA), the specialised EU Agency created in 2003 to cover the safety of aircrafts, operations and systems. Under SES II, its competences have been extended to cover air traffic management and airports as well. In this way, the EASA is now responsible for all aspects of the aviation safety chain, which is in itself a defragmentation and a safety improvement. EASA has started to develop safety rules in the ATM domain while respecting the existing regulations and the existing consultation mechanisms. The EASA will also play a role in providing assistance to National Supervisory Authorities in safety oversight and collaborating with the European Commission on the safety aspects of performance.

The development of the *Single European Sky ATM Research Programme* (SESAR) is the milestone of the **Technology pillar**, which will improve Air Traffic Management by focussing on all Research and Development efforts and developing the technology of the future in a coherent and synchronised way. SESAR is a public-private partnership between the Commission, EUROCONTROL and the industry, The Development phase was launched in 2008 and is expected to end in 2014. The Deployment phase will then allow the concrete implementation of the results and deliver the technological leap supporting the expected improvements in ATM performance.

As airports play a crucial role in aviation, the creation of an **Airport pillar** was therefore equally necessary. Increasing airport capacity through >

About the author

Dr S. (Siim) Kallas was born in Tallinn on 2nd October 1948. He gained a Master's degree in Budget and Finance and a PhD in Economics of environmental protection, both at the University of Tartu. He simultaneously worked as a Lieutenant in the military department of the university. He fulfilled several financial and management positions and was a Member of the Supreme Council of the Soviet Union from 1989 until 1991. For a number of years he then served as President of Eesti Bank, the national bank of Estonia. Between 1995 and 2002 he served as Minister in the departments of Foreign Affairs and Finance, and became Prime Minister of Estonia in 2002. In 1996 he was Chairman of the Committee of Ministers of the Council of Europe. Since 2004 Dr. Kallas has been representing his home country Estonia in the European Commission, therefore being the first Commissioner for Estonia. Since 2004 he has been serving as Vice President of the European Commission. He is currently also Commissioner for Transport.

technical and operational improvements is key in achieving overall SES objectives. The Airport Observatory created by the Commission has started to focus its work on stimulating the participation of airports in the Performance scheme. Work is about to commence on the development of key performance indicators for the provision of air navigation services at airports. The most important initiative in 2011 will be to adopt measures for the coordination of ATM and airports' slots management. As far as SESAR and technology are concerned, airports will have to take their share of responsibilities by investing in the appropriate technology in a coordinated and synchronised manner.

Finally, the SES will not be achieved if we do not also take the **Human factor** into account. This is why the last pillar is aimed at ensuring the consultation and dialogue with all social partners and stakeholders involved in the modernisation of ATM, both at national and European levels. In order to improve safety, it will also be necessary to promote an open (non-punitive) reporting culture and to develop competencies and training for the entire sector.

Rule-making process

The Commission leads the process towards achieving the Single European Sky. But this can only be reached with the full involvement of Member States. Their cooperation and input is ensured through the rule-making process that all SES Regulations and provisions follow:

The *Single Sky Committee* (SSC), ensures representation, both civil and military, of all the SES Member States (the 27 EU states plus Norway, Iceland and Switzerland as non-voting Members), and is the body where decisions are submitted for Member States' formal opinion. In addition, stakeholders' consultation is ensured through the Industry Consultation Body (ICB) where all European aviation stakeholders (service providers, airspace users, staff associations, manufacturing industry, airports, and military representatives) are invited to express their coordinated opinion before any decision is taken.

This rather complex process ensures political legitimacy and industry's buy-in of the Commission proposals through appropriate involvement of Member States and key aviation players. Tackling the defragmentation of the European airspace requires a very close collaboration since it touches upon States' sovereignty and their security and defence requirements.

Since aviation is by its nature an international sector, the SES has a strong pan-European and international approach. This can be seen in the development of FABs, which include many non-EU States from Europe but also two North African countries. Furthermore, the extension of the SES is addressed in various international agreements with non-EU countries in the EU's neighbourhood.

Conclusion

The Single European Sky is a very ambitious initiative which the Commission considers as one of its highest priorities. Its success requires a big change in how European air navigation services are being provided. Both the recent economic downturn and the volcanic ash cloud crisis in spring 2010 have added a sense of urgency to these efforts. The European Aviation Summits held in Madrid in February 2010 and Bruges in October 2010 allowed to show clearly to everyone involved in aviation that the integration of the EU airspace foreseen under the SES is crucial for the future of the aviation sector in Europe. In addition, a more performing and sustainable management of European ATM will bring benefits to our European society as a whole, facilitating the mobility of citizens and goods and increasing the competitiveness of our industry. This challenge is one of the most fascinating and exciting that remains to be tackled. I am confident that during my mandate as Vice President of the European Commission, in partnership with the industry and the Member States, we will succeed in building a truly single European sky. ■

> ***"The Single European Sky is a very ambitious initiative which the Commission considers as one of its highest priorities."***

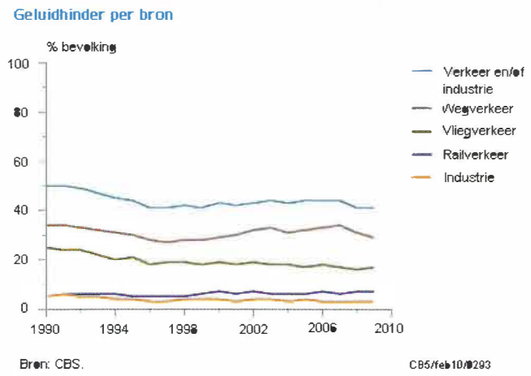
Geluidshinderbeleid in de luchtvaartsector

door dhr. Jan Jabben

Wie zich in het Schiphol dossier verdiept vindt een politiek/wetenschappelijke lijdensweg vol valkuilen en drijfzand in beide opzichten. Een objectieve genuanceerde schets van het dossier is daarom lastig, maar in dit artikel doe ik toch een poging, al was het alleen maar om aankomende bestuurders te informeren zodat zij straks misschien - waar mogelijk - zaken kunnen verbeteren.

Luchtvaartgeluid, het probleem

CBS Enquêtes laten zien dat 20% van de Nederlandse bevolking hinder ondervindt door luchtvaartgeluid. Dat percentage blijft nog fors achter bij de hinder door wegverkeersgeluid (30%). Echter is de geluiddeken door wegverkeer min of meer gelijkmatig over Nederland verdeeld, terwijl luchtvaartgeluid veel sterker rondom luchthavens geconcentreerd is, met name rondom Schiphol maar in mindere mate ook de regionale luchthavens. Problemen die men ondervindt zijn spraakverstoring buitenshuis, concentratie- en slaapverstoring en algemeen verminderd woongenot



De oorzaak

Het lijkt een open deur, maar toch, het gaat niet alleen om het lawaai van de in aantallen steeds toenemende vliegtuigpassages. De sterke economische groei die Nederland de afgelopen decennia heeft doorgemaakt heeft zich ook geuit in een sterke uitbreiding van verstedelijkt gebied en daarmee is een steeds groter spanningsveld ontstaan tussen enerzijds geluidbelast gebied en anderzijds oprukkende woonbebouwing.

Het milieubeleid; algemeen

Onze bestuursvorm is een democratie waarin diverse aspecten onderdeel vormen van onze besluitvorming en waarbij de ratio afhankelijk is van onze politieke voorkeur en - idealiter – los staat van het uitvoerende ambtelijke apparaat.

> ***"Ten slotte kent ook de burger een dubbele agenda in de zin dat deze uiteindelijk zelf de veroorzaker van de overlast is."***

Daarin spelen bestuurlijke en beleidsprocessen een rol, schematisch weergegeven in *figuur 1*. De afbeelding geeft een sterk vereenvoudigd beeld en pretendeert niet alle elementen systematisch uiteen te zetten, maar helpt desalniettemin om de belangrijkste *stakeholders* en hun onderlinge relaties te plaatsen. Milieuoverlast beïnvloedt de politieke agenda en beleidsmakers stellen wetten en regels op om de overlast te beperken. Onderzoekers en adviseurs monitoren de feitelijke ontwikkeling ten opzichte van normen en bieden opties voor maatregelen. Een aantal elementen bemoeilijkt echter de aanpak van het probleem. De politicus heeft te maken met conflicterende belangen, enerzijds milieukwaliteit, maar evenzeer economie en mobiliteit. Beleidsmakers worstelen met complexe wet- en regelgeving, toenemende milieudruk en hoge kosten van onderzoek en maatregelen. Onderzoeksinstanties en bureaus worden verondersteld de milieusituatie en ontwikkeling ervan nauwkeurig, onafhankelijk en betrouwbaar te kunnen volgen en te rapporteren, maar hun modellen, metingen en adviezen zijn niet vrij van onzekerheden en hun opdrachtgevers kunnen onderzoeksresultaten mogelijk beïnvloeden. Ten slotte kent ook de burger een dubbele agenda in de zin dat deze uiteindelijk zelf de veroorzaker van de overlast is.

Technisch intermezzo: maten voor geluidbelasting

Een ruimtelijk beeld van de geluidbelasting wordt vaak weergegeven in de vorm van kaarten die enigszins te vergelijken zijn met de temperatuurskaarten van het KNMI, waarbij de hoogtelijnen (geluidcontouren) de locaties met >