



FAB EC NEWSLETTER

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FAB Europe Central:

Results FAB EC study: truly innovative

'Truly innovative' and 'far-reaching'. Bernard Martens, chairman of the FAB Europe Central Steering Group, used these upbeat qualifications of the preliminary results of the nearly finalized feasibility study for FAB EC at the ATC Global 2008, event that took place from 11 to 13 March in Amsterdam. In front of an international audience, Mr Martens explained that the remaining work consists in designing a legal framework to enable political decision-makers to turn FAB EC into a reality soon.

At the conference in Amsterdam, Mr Martens described relations between the seven ANSPs participating in the FAB EC study as very good. 'The ANSPs like to work together. All participants really think FAB now', he explained. Martens called the deliverables of the Operational and Technical Working Groups very promising, emphasizing substantial improvements in performance for the users: the airlines. He stressed that the operational concept for FAB EC is ready, as is the design for its airspace structure. He also mentioned the 'very ambitious' model that has been developed for the cooperation of civil and military partners.

The FAB EC feasibility study is now starting its final phase (final analysis and evaluation). The Institutional Working Group will present to the decision-making authorities a preferred legal structure for three cooperation models: 'contractual' (where ANSPs remain fully autonomous), 'alliance' (where certain support functions will be integrated), and 'Single ANSP' (full integration, including ATS provision). The Financial Working Group will produce a cost-benefit analysis for each of the three models. Mr Martens indicated that an institutional model with a progressive increase in cooperation could be a serious option.

In the third phase (April-June 2008), after all the results of the feasibility study have been consolidated, the States, together with the ANSPs, have to decide whether FAB will be implemented and under which institutional model. The six governments are working on a Declaration of Intent to be signed before the end of 2008.

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Answering questions from the audience, Mr Martens explained at the ATC Global Conference that the work of air traffic controllers will be distributed in a completely different way once FAB EC becomes reality, adding a great



From left to right: Pablo Mendes de Leon, Professor at the Aviation Faculty of Leiden University, The Netherlands; Alex Hendriks, Deputy Director ATM Strategies, Eurocontrol; Bernard Martens, chairman of the FAB Europe Central Steering Group.

deal of efficiency. Air traffic management will become centred on cross-border activities, with air traffic sector families created according to traffic flow rather than national boundaries.

Currently there are eight FABs under construction under the umbrella of the European Commission's Single European Sky (SES) Programme.

EUROCONTROL's Deputy Director ATM Strategies, Alex Hendriks, said in Amsterdam that EUROCONTROL is aiming at the role of facilitator of the various FAB initiatives. Mr Hendriks explained the need for cross-border arrangements between FABs in order to obtain a seamless ATM environment.

Hendriks also tried to reassure airlines which feared that FABs will not deliver enough benefits: 'What matters is that a big step has been set forwards with ANSPs that are now willing to work together because they really start to trust each other.' Hendriks therefore foresees an enormous potential for far closer cooperation, leading to more substantial reductions at a later stage.

Impression of the Customer Consultation Workshop, 27th of February.



Customer Consultation workshop: Positive feedback

More than 65 representatives of major European airlines, the military, commercial and general aviation, the States and the ANSPs involved in FAB EC met on the 27th of February for the second Customer Consultation Workshop. In a constructive atmosphere they exchanged their views and expectations from FAB EC. Despite a lot of specific requests the overall feedback for the work already done was positive.

The workshop was divided into two parts. In the morning an overview of the project was presented and detailed information about the first results of the Operation Working Group were given. This briefing was followed by a report on technical aspects and the cost-benefit analysis.

The slot after lunch was reserved for the view of the customers. In detailed presentations and statements they stated their expectations. These focused mainly on operational aspects such as direct flight profiles (vertical and horizontal). In addition, the airline representatives asked for a stronger cost reduction and for the customer to be positioned in the centre of system-wide information management. The military representatives stated their need to "train as they fight". They therefore requested large portions of airspace with, for instance, a length of 100 nautical miles and a width of 60 nautical miles. A dynamic use of these portions of airspace would enable civil/commercial operations to also be accommodated.

Both civil and military users were aware that it would be impossible to fulfil all requests, but they agreed that one solution might be new concepts for a more flexible use of the airspace, like MVPA, which has already been tested in northern German airspace.



In a final panel all participants mentioned three major aspects:

1. The core of FAB EC is the airspace. It is the starting point for any other initiative.
2. The first results are promising, but further efforts have to be taken.
3. To make FAB EC a reality, brave decisions have to be taken fast and the States have to lead in this.

Safety Working Group: High safety standards

If there is one thing you need when you are planning to build a new aircraft, it is time. A lot of time. The development of the A380, for example, took more than ten years. Many crucial questions had to be addressed at the very beginning: what is the maximum wing-span? How many wheels will it take to bear the weight? How can more than 550 passengers be evacuated within the prescribed time? Are there any other risks that cannot be mitigated? Had it been determined that suitable escape slides could not be designed, for instance, the A380 would never have been built.

Right now, the FAB Europe Central (FAB EC) project is at the stage where the Airbus A380 project was in the late 90s. It is not yet clear exactly what a common airspace in Europe will look like. But even though there is no blueprint yet, the first features can already be discerned and the results of the feasibility study will be published this summer. FAB EC, however, can be established only if the current high safety level can definitely be maintained, despite the increasing traffic volume.

The Safety Working Group's results for the feasibility study are very promising. First of all, the six FAB States, namely Belgium, the Netherlands, Luxembourg, Germany, France and Switzerland, as well as the Maastricht UAC, harmonised their slightly different safety assessment methods. Then the actual analysis was begun. Possible risks were discussed with representatives of the operational and technical working groups, air traffic controllers and pilots, and possible risk mitigation strategies were considered.

In the course of this, the safety experts identified numerous risks. Following a detailed assessment, the risks were either deemed irrelevant or suitable mitigating mea-

asures were found. Five issues remained which have yet to be resolved. How do unmanned aerial vehicles, which are mainly used for military purposes, affect airspace safety? What would happen if aircraft self-separation were established? Will dynamic sectorisation cause communication problems? What approach will be taken with regard to military jets intercepting civil aircraft? And what about emergency descents?

'Those five issues have been identified as potential risks,' says Job Brügggen, Chairman of the Safety Working Group. 'That does not mean that they are a no-go at this stage. By lack of further detail in the operational concept it is simply not possible to find remedies for them. The five issues are merely a reminder that we must be careful before implementing those elements into the operational concept.' But he also stresses that these are not FAB-specific problems. UAV or self-separation - even without FAB EC - would have to be analysed by the ANSPs to see what these developments mean for safety and to identify a way of dealing with them.

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The results of the safety assessment are currently being reevaluated by the Belgian air navigation service provider. At the same time, investigations are underway to determine how safety management can be implemented in a FAB. This FABEC SMS Implementation Plan is due to be completed by the end of March. According to Brügggen, the most important result can already be summarised as follows: 'We have provided an assessment of the feasibility of the FAB EC according to which it can be made safer than the situation without a FAB EC.'

'The seven partners worked extremely well together', says Brügggen, praising the Safety Working Group. 'The cooperation with the other FAB working groups was equally excellent, with a coherent set

Job Brügggen,
Chairman of the
Safety Working
Group.



of project members and very short lines of communications. No project runs without some setbacks of course, but we were always able to solve them.'

The results of the Safety Working Group are still rather abstract at present. But that is to be expected considering that the common European airspace, which is being developed step by step, is still at a very early stage. There are rough sketches but no exact plans. 'For the feasibility study, we cannot make a full safety case in the classical sense', says Brüggem. 'Before the implementation of the FAB EC, we will have to provide another, more detailed safety case.'



LIST OF ABBREVIATIONS

ANSP	=	Air Navigation Service Provider
ASM	=	Airspace Management
ATC	=	Air Traffic Control
FAB	=	Functional Airspace Block
FAB EC	=	Functional Airspace Block Europe Central
SES	=	Single European Sky
MUAC	=	Maastricht Upper Area Control Centre
MVPA	=	Military Variable Profile Area
SMS	=	Safety Management System
UAV	=	Unmanned Aerial Vehicles

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