



SASI 2004-2009

The man in the street has the mistaken impression that air transport is the least safe means of transport. On the other hand all aviation professionals hold a totally different opinion. However, how can one manage to persuade the man in the street, who is the ultimate stakeholder in aviation, that the professionals are right when the media brings news of another accident? From a biased ATCO point of view, one could say that many aviation accidents are not ATM-induced or related but this is of little consolation to the victims.



On 10th September 1976 overworked controllers, using old equipment and uncertain coordination techniques had the misfortune of causing a mid-air collision where 176 people died over Zagreb. As the new millennium approached, ATM-induced collisions were only a nightmare of the past, or so many people thought. Unfortunately the nightmare became grim reality on 1st July 2002 when two aircraft collided over Überlingen with over 70 people dead. How could this be? Worse it came less than a year after another major accident where ATM was a contributing factor - Linate, with more than 190 persons dead.

What was happening in Europe? Why did these accidents happen? Wasn't Europe supposed to have a safe (if not the safest) airspace? Wasn't congestion the only major problem of European airspace? Could it be that European airspace was not as safe as it was thought to be?

The 260+ victims of these two accidents certainly showed that something was not right in European ATM. One might be tempted to associate such types of accidents with undeveloped countries lacking modern ATC tools and resources but it was not so. The European public demanded an answer.

EUROCONTROL, as the European Organisation for the Safety of Air Navigation, was in the forefront of the institutions trying to understand what had gone horribly wrong. In both cases the primary causes were evident but, unfortunately, they pointed out that there were serious latent defects in the ATM system.

Though aviation professionals maintained that air transport was the safest means it seemed that safety was not always afforded top priority. From the survey that EUROCONTROL conducted it emerged that Safety Management Systems (SMS) had been implemented only in a handful of Air Navigation Service Providers (ANSPs). In addition, this implementation was not uniform.

At the time of survey, some of the EUROCONTROL Safety Regulatory Requirements (ESARRs) had been around for a couple of years but many states were struggling to transpose these requirements into national law and apply them. EUROCONTROL had set minimum as a baseline compliance with regulatory requirements. This was considered to be an important and relevant part of implementing a Safety Management System but it would still be a minimum that could be improved considerably. Consequently it was decided that minimum compliance was only 70% of the job done. Unfortunately the survey had revealed that the average score was much, very much lower than the 70% baseline.

SSAP

The Status of ATM Safety Management System in Europe



Maturity Scores of ANSPs, January 2003



Something had to be done and EUROCONTROL had already responded by drawing up the Strategic Safety Action Plan (SSAP), the first step of which was to carry out the survey mentioned earlier. The SSAP identified eight high-priority areas, namely

1. Safety related human resources in ATM*;
2. Incident reporting and data sharing*;
3. ACAS*;
4. Ground-based safety nets;
5. Runway safety*;
6. Enforcement of ESARRs and implementation monitoring *;
7. Awareness of safety matters;
8. Safety and human factors research & development (R&D).

* Areas of Immediate Focus

Clearly now there was scope for more detailed plans. One of the objectives was to raise the all European ANSPs safety maturity to the baseline 70%. Thus in April 2004, Gilles Le Galo put forward to Safety Team, the proposal for Support to ANSPs for SMS Implementation (SASI) project aimed at addressing SSAP Area 7.

The objective of the SASI project was to provide **direct and pragmatic support** to ANSPs to gradually implement the elements of their Safety Management Systems.

This proposal was accepted, and, the first SASI working session was held at EUROCONTROL Headquarters, Brussels, between 11 and 15 October 2004. Nine (out of 13 contacted) ANSPs responded positively to the invitation by EUROCONTROL DAP/SAF to participate to this first Session on Safety Policy.



Delegates and Speakers in SASI first Working Session - October 2004 Brussels

SASI Management adopted a three-pronged strategy to achieve the Project's objective:

- **Initial development** of material (framework of procedures, awareness material and training needs), through working sessions involving Safety Managers,
- **Local deployment** in individual ANSPs organisation by the Safety Manager, with possible support for DAP/SSH,
- Continuous improvement, based on feedback from Safety Managers, in order to improve the overall efficiency of a given procedure.

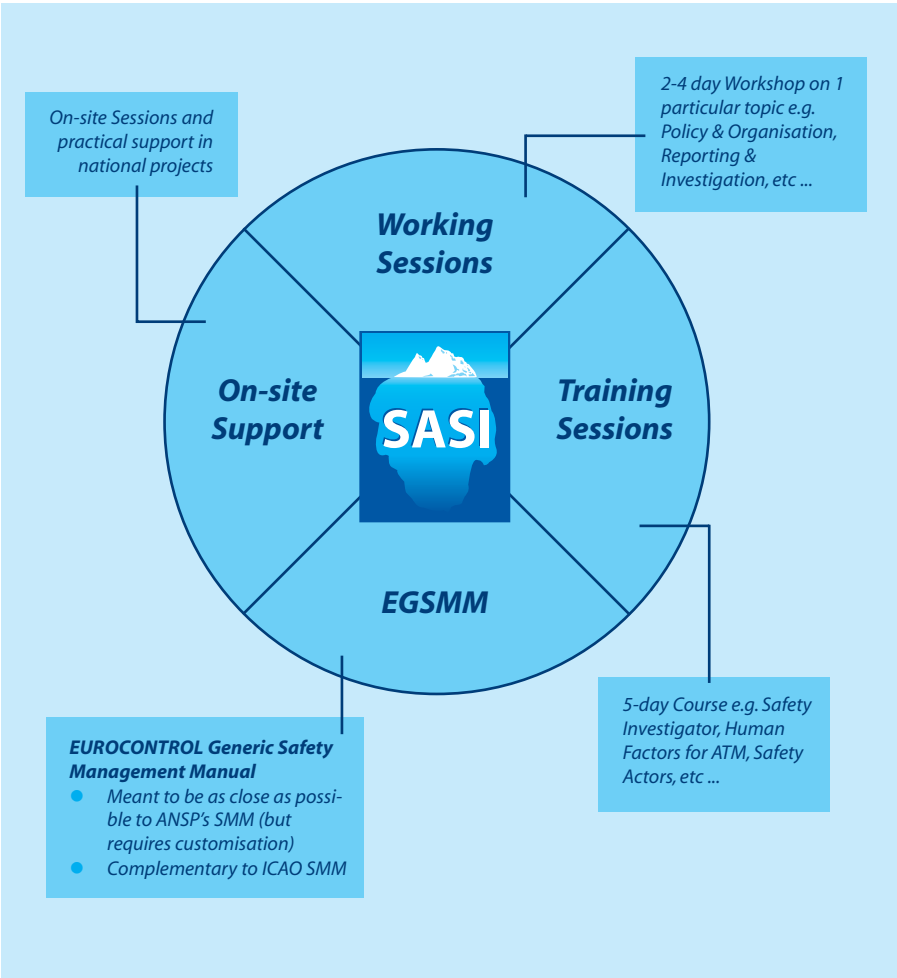
The tactics to implement this strategy were:

- Working Sessions
- Training Sessions
- On-site support
- EUROCONTROL Generic Safety Management Manual EGSM

Each of these methods combines smoothly with the SASI Approach. There is no one-size-fits-all SMS. Each Safety Management System has to be tailored to suit the ANSP's and State's safety maturity, constraints and culture.

The working sessions address SMS topics in a generic manner, usually outlining the EUROCONTROL perspective and general best practices from other ANSPs. The training sessions could either be of two types. Some of them are of a theoretical nature i.e. courses on specific subjects (usually held at IANS Luxembourg) or practical coaching after the students have completed their theoretical training. Such sessions could also be part of the on-site support, although SASI Experts would also help with local SMS projects and activities. Finally the EUROCONTROL Generic Safety Management Manual was developed to outline the general SMS procedures and to be used as template so that ANSPs could customise it to their needs.

As the safety maturity of an ANSP improves, the SASI team works extensively with the local experts to customise the generic SMS to the particular country.



In 2006 the European Safety Programme (ESP) took over from the SSAP. However, SASI was retained in the new programme becoming part of its Activity Field 1 (Implementation and Support of European Safety Legislation/Regulation). The project, in addition, provided input and assistance to Activity Field 3 (Risk Assessment and Mitigation in Day-to-Day Operations) and Activity Field 5 (Safety Management Enhancement)

SASI started late 2004 holding 1 session, the one that launched the project, where there were 15 participants from 9 states. As SASI progressed more and more sessions were held. The table below shows a breakdown of the sessions held over the years and the attendance figures

		2005	2006	2007	2008	Totals
Sessions	WS	3	5	5	6	19
Attendance	WS	142	138	102	322	704
Sessions	TS + IANS	2	11	17	25	55
Attendance	TS + IANS	241	273	113	194	821

It is estimated that about 1000 individuals benefitted directly from these sessions because they attended one or several of them.

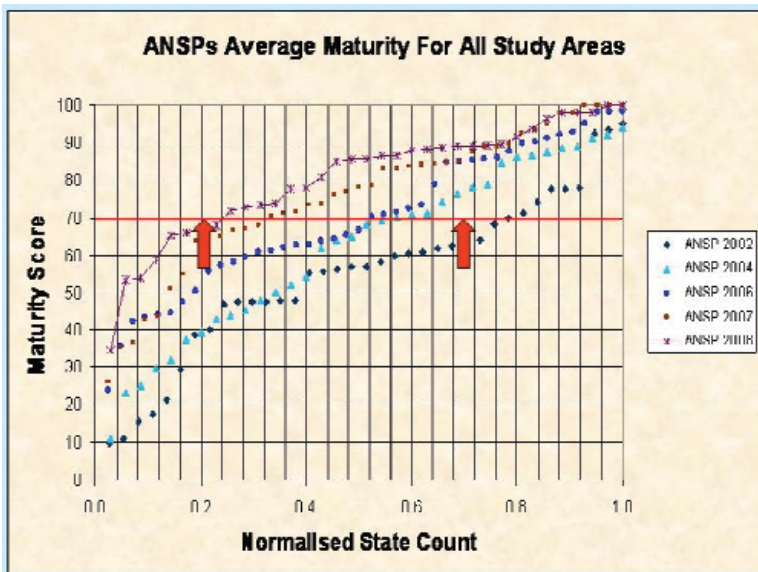
We gained a lot from the project; it really helped us to construct a solid SMS framework. We very much liked the flexibility of managing the project. The scheduled activities and sessions are very good for planning purposes, but having open slots for ad hoc consultations proved also very important for ANSPs providing sufficient flexibility that is essential for ANSPs. The personal connection, the network of experts which developed during the project is also very important for harmonised approach to safety and to raise the overall safety level in Europe. HungaroControl is proud to be the part of this cooperation called SASI, and we also hope that we can help others build and maintain safety in their ANSP.

Mihaly KURUCZ Director ATM Safety Dpt. HungaroControl Pte. Ltd. Co.

Jane's Awards at ATC Maastricht have recognised excellence within the air traffic management industry and have raised awareness of significant contributions to air traffic safety, capacity and efficiency for many years. In 2007 EUROCONTROL received the 'The Contribution to European ATM Award' for its work on the SSAP and ESP, with particular mention of SASI.



Erik Merckx, Deputy Director ATM Programmes, and Peter Stastny, Head of the Safety Regulation Unit with the ESP and SASI Teams at ATC Maastricht 2007



ANSPs Average Maturity 2008

We can declare that ARMATS is one of the ANSP's who really built its SMS based on SASI, from almost the start up to mature level. The project was started exactly on time and was constructed in a very sufficient way to satisfy both CAA's and SP's needs. Under SASI umbrella we did our first serious Safety Assessment of MLAT System deployed in Armenia, which is still not easy task.

We had SASI team support even in the negotiations processes with some of our "not easy" suppliers concerning safety aspects. During the project activities we always felt the kind support from SASI team members.

The SASI team members are really experts as for Safety as well as for Operational aspects.

During the project we extend also our communication with our colleagues from different region of the Europe.

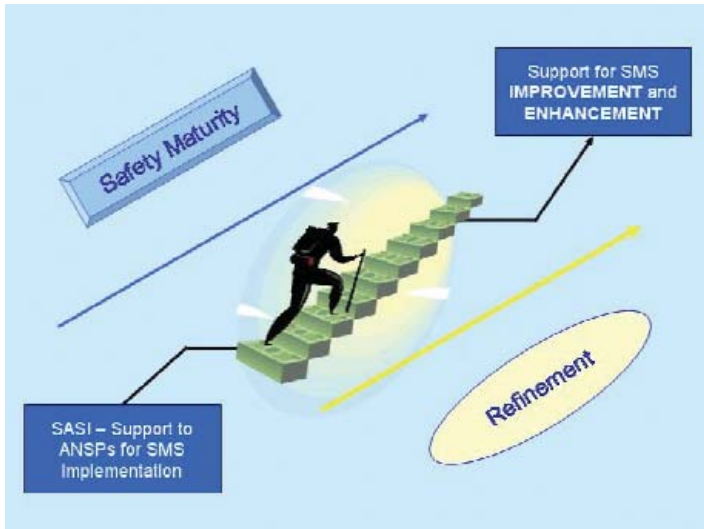
With SASI we tremendously improve SP safety from chaotic preoccupation to balanced systematic approach and ARMATS got quite valuable safety rating.

Future project existence is still required with carefully analyzed and reorganized.

Aram TUNYAN Head of Safety Department ARMATS CJSC ARMENIA

Soon SASI would celebrate its fifth anniversary. The ANSPs that have benefitted from this project had several words of praise for its support. A good number of them have reached and passed the 70% baseline.

Today SASI has been recognised as one of the most successful EUROCONTROL projects. In fact EUROCONTROL has been asked by the European Commission to provide SASI-type support to EU neighbouring states under such TEN-T projects as EUROMED and EMAC. In addition an approach similar to SASI has been employed on another EU Project, namely TRACECA.



Since the very beginning SASI programmes had a major impact on ROMATSA Safety training. It gave us substantial assistance for developing a Safety Management System. We have to underline the adaptability of the yearly programmes to the ANSP current needs and how beneficial it was for the Certification process (as per EC 2096/2005) The Knowledge of experts providing and assisting this support was of utmost professionalism.

Voinea Florin GUNTA Head of Safety & Investigation Department ROMATSA Romania

The success of this project does not mean that SASI would stop its work; rather it spurs the project team to meet a basic requirement of any SMS - continuous improvement. The SASI vision for the future sees a progression from basic implementation to continuous safety improvement - SASI-Enhancement.



SASI brought together the ANSPs to discuss, learn and share experiences. The individual connection, assistance from the team of experts and relationships that developed resulted in improvement of the maturity of the SMS of the individual states participating in the project. Such a positive initiative deserves praise and encouragement to continue with the process of delivering, discussing and sharing of knowledge in the Safety domain of the ANS provision. MATS support the project and hopes that it will continue to function since the objectives of learning and sharing on safety is ongoing.

Francis BEZZINA Head Safety & Quality Malta Air Traffic Services Ltd

WEBSITEinfo www.eurocontrol.int/esp

For more information contact :

EUROCONTROL

CND/COE/Safety

Telephone: +32 2 729 37 21

Fax: + 32 2 729 90 82

www.eurocontrol.int/safety/public/standard_page/sasi.html

Published by :

EUROCONTROL

General Secretariat Directorate

96, rue de la Fusée

B - 1130 Brussels, Belgium

© The European Organisation for the Safety of Air Navigation (EUROCONTROL)

March 2009

This document is published by EUROCONTROL for information purposes. It may be copied in whole or in part, provided that EUROCONTROL is mentioned as the source and to extent justified by the non-commercial use (not for sale). The information in this document may not be modified without prior written permission from EUROCONTROL.

The use of the document is at the user's sole risk and responsibility. EUROCONTROL expressly disclaims any and all warranties with respect to any content within the document, express or implied.