

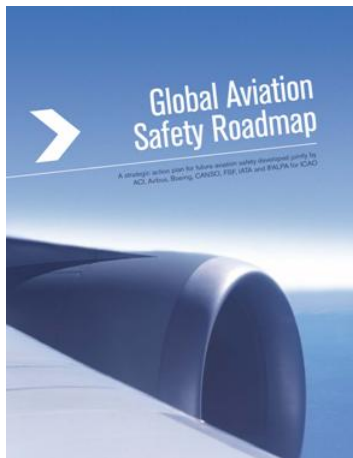
Practical implementation of an integrated SMS

David Mawdsley, Aviation Safety Advisor to Superstructure Group

“Leadership in Safety requires an understanding of the situation, an acceptance of responsibility, a commitment to action and clear strategies and targets. The attainment of a safe system is the highest priority in aviation. The moral imperative for action to reduce the accident rate still further is self evident, the operational benefit is immense, and the business case highly compelling.”



The Roadmap to Integrated SMS



I wrote the above statement as the opening paragraph to the Global Aviation Safety Roadmap, widely known as the “Safety Roadmap” which is now essentially the ICAO’s Global Aviation Safety Plan. The Safety Roadmap points to the key “roads” focusing on SMS, and the reporting and analysis of errors and incidents. It urges that these roads be followed in a new government and industry partnership aimed at reducing the global accident risk in commercial aviation.

Set more deeply in the Safety Roadmap are some profound objectives for mitigating risk which are as relevant to the Boardroom as they are to the safety, security, quality, environmental and enterprise risk managers in the organization. One such objective is the need to define interface points between industry focus areas and to develop a plan for SMS integration across all interfaces.

SMS with its safety reporting culture is now locked in to the “Safety Roadmap” for the next decade, so we had better get down to it. I am talking about implementing the silo busting kind of SMS, the one which is integrated across all interfaces.

Corporate Performance Expectation

The Roadmap rightly declares safety as a performance expectation. From its former negatively orientated, reactive stance, which relied on accidents and incidents to let the organisation know where threats existed, SMS has moved to a systems approach. Risk assessment and management concepts have been adopted. Operational safety has teamed up with Quality Assurance and unleashed the power of data and process to address system errors. This requires that organisational management, not just the safety officer, take responsibility for the company’s safety programme with clear accountabilities for safety mapped out across the organisation. The system must be fully documented with clear performance criteria established. A robust SMS must have targets and metrics against which performance can be measured.

As a CEO or Accountable Executive, if you do not preside over a robust SMS then you are vulnerable.

In the United States the Sarbanes-Oxley and Basel II rulings have reinforced corporate officer accountability for both financial and operational results along with accurate reporting to investors. An even more stringent performance bottom line is the UK’s new Corporate Manslaughter and Corporate Homicide Bill which took effect on 6 April 2008. It supersedes a statute that tasked juries to consider if corporate actions were ‘so negligent as to be criminal’. The new law threatens to penetrate further and questions whether the conduct of management ‘falls far below what could reasonably have been expected’. This

sends a clear message. When it comes to safety management and practices in the UK no company can afford to be below average. Clearly Safety is a performance expectation, not only morally and operationally but legally too!



Undoubtedly the accountable executive has the dilemma of balancing the resources required for protection and production, or those required to minimize the risk of catastrophe and bankruptcy – Professor James Reason’s so called Maximum Resistance Space. A crucial part of this resistance is the SMS and the effective use of data to inform risk management decisions.

Data Driving SMS

Like many of my counterparts in the airlines, I believe that the key to effective SMS is a generative safety culture employing a voluntary employee reporting system which analyzes data and shares information. The process of unlocking the value in the data and turning it into useful information is largely achieved by having the right tools and the expertise.

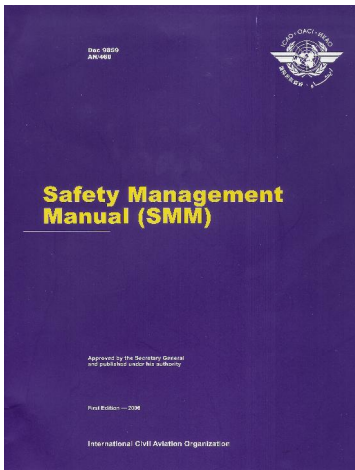
Today’s powerful data management systems enable the risk exposure to be mitigated not only in the operational safety arena but across the aviation enterprise as a whole. Such data-driven integration is vital to the implementation of an SMS. It reduces complexity, crosses organizational boundaries, improves business efficiency, reduces costs, and saves lives.

Before being appointed Director Safety at IATA I was Head of Corporate Safety at Cathay Pacific Airways. Not only did I gain the practical experience of helping to develop one of the world’s most admired airline safety management systems but as Director of Safety at IATA I launched the STEADES (Safety Trend Evaluation Analysis and Data Exchange System) programme, a global air safety reporting system involving some 60 airlines. From this platform I worked closely with the airlines on the development of SMS implementation guidance material aligning with the operational safety and risk management expectations of IOSA - the IATA Operational Safety Audit.

Now, as Aviation Safety Advisor to the Superstructure Group I am committed to contributing more deeply to the industry wide implementation of SMS in the data analysis and sharing arena in accordance with the ICAO plan and IATA best practice both at the regulatory and service provider level. Additionally, I teach SMS at Cranfield University and I am pressing to ensure that the right message of “integration” during SMS implementation is communicated from the safety training arena.

SMS Requirements

There is no excuse for not knowing what is prescribed for States and service providers in terms of SMS requirements. This has been set out in the ICAO Safety Management Manual Document 9859 issued in 2006 and in SMS documentation produced by leading Regulatory Authorities. Whether the word “should” or “shall” is used to communicate the need to have an SMS in place, there is undoubtedly a strong expectation amongst the regulators of the world that 2009 will be a year for implementing SMS and the pressure is on.



Accompanying the much increased top down focus on safety oversight, airlines and their supporting enterprises will not only be expected to “implement” SMS but they need to ensure that it is “integrated” with the business as a whole. 2009 is therefore a time for implementing and integrating SMS and for leaders to understand how this might best be done.

In 2009 the aviation community will continue to shift holistically from a prescriptive approach to aviation safety to implementing the performance based “integrated” SMS.

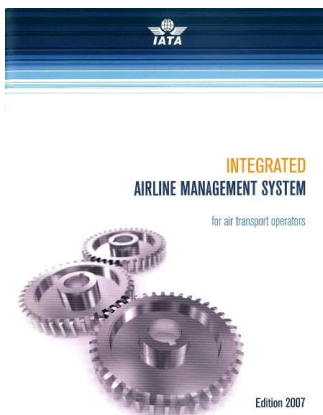
Implementation

To provide guidance on SMS implementation IATA has issued two documents, the first of these in 2005 entitled: “Safety Management Systems – the Senior Airline Manager’s Implementation Guide”. The second guide was released in 2007 and entitled “Integrated Airline Management System for air Transport Operations”. The latter work, which is rather ahead of its time, employs an interactive toolkit which advances the “integrated” management system (iAMS) approach applied by IOSA.

This is essentially an integrated SMS for airlines and IATA has therefore helped to set the bench mark for the performance of SMS around the world by “mandating” IOSA for all of its 260 airlines. This integrated SMS concept embraces not only SMS but Risk, Quality, Security and Supplier management thinking. Some excellent guidance material has also been released by the leading regulatory authorities including Transport Canada, the UK CAA, the Australian CAA and the FAA. Overall, however, it is the experience of actually installing and resourcing a performance based, integrated SMS, complete with its software tools, which is still rather limited and where there is scope for further guidance of a more practical kind.

Integration

With implementation comes the need to integrate. An air carrier organization is composed of a “system of systems” which are integrated and intra-supportive. Airlines and their supporting enterprises will not only be expected to “implement” SMS but they will need to ensure that it is “integrated” with the various cultures in their operations and support areas, and indeed at the wider interfaces such as the CAA, Airport Authorities and ATC Service Providers.



Such an approach may suggest an increase in the complexity of implementation. But by phasing the implementation of enterprise risk management in manageable steps and building on that which is already in place it is possible to execute the changes efficiently. The choice of software tools with the capability and flexibility for integration is vital. Most importantly, the changes must be backed by clear corporate communication and the whole process supported by guiding actions from the top.

It is the silos and power struggles which have the greatest potential to increase complexity. I have found the best way is to integrate on a basis of equal partnership and respect. For the medium and small airlines especially,

I strongly recommend an early transition to the integration of the different risk-related cultures (safety, quality, security, environmental, etc) and the business as a whole. The need to data-drive all risk-related activities across the enterprise is of paramount importance. This for me is the primary means by which a static, perhaps cumbersome SMS becomes efficient, responsive and dynamic.

The plans and integration templates of others should be used with caution. They are potentially helpful to look forward to assess where, for example, integration of data management systems may best be applied but it is for the organisation as a whole to decide which components of an integrated SMS should have priority for introduction, and always with the aim of keeping it simple.

SMS implementation is taking place in a new era of enterprise risk management and here again, we had best understand this approach, and get on with it.

Enterprise Data Management

With these remarkable changes taking place in safety management the reporting process along with its performance measurement indicators will need to be sufficiently smart and compelling to influence the decisions and indeed the behaviour of all accountable executives concerned with risk mitigation in the company. Not only will it be necessary to capture data from the traditional safety arenas but also from the other risk-related activities in the enterprise as a whole. I therefore urge implementers and integrators to design their SMS with the data requirements of enterprise risk in mind. I have seen volumes of prescriptive SMS documentation, indeed some of which profess to point the way to SMS implementation, which ignore the technology for data capture, analysis and sharing across the enterprise. I maintain that this is the key to not only SMS data management but also to projecting efficiently and speedily the corporate risk management dashboard representing all of the risk-related activities in the enterprise.

Leadership in Integrated SMS Implementation

At a time when there is major concern in the industry about managing growth and operational complexity, I see the task of SMS implementation and integration as very much a leadership challenge. Leading airlines point to SMS as a simple concept and urge that it is not allowed to lose its way in a world of processes and rigid regulatory requirements. Managing safety ultimately comes down to managing risk. There are very few airlines, certainly amongst those in IATA, that do not manage their safety risk. Most already have an SMS or at least the principal elements of an operational risk management system in place. There is a natural tendency to point to the gaps when the pressure comes on to implement and the transition can become very negative and complicated all too quickly. It is for the leaders to execute this change demonstrating a clear commitment to the SMS implementation plan.

If enterprises are not to be overwhelmed by the plethora of SMS policy and guidance, leaders at the sharp end from the CEO down must themselves make the time to “understand the situation” and the way in which SMS is being implemented and integrated in their organization.

A Vision for Integrated SMS

My vision is for “integrated” SMS processes to be applied not only in the enterprise itself but in a global data knowledge framework. I refer to the intelligent proactive and predictive data driven solutions now available to the enterprise which are also able to provide the knowledge framework for an integrated global information sharing system. I am deeply committed to applying the power of process and risk management through integrated SMS support software, such as that provided in Superstructure Group’s AQD safety and risk management system.

Simplifying the business of SMS

I am currently preparing an integrated Safety Management System Guide which, unlike any of its predecessors, takes a very practical approach and goes deeper by capturing the experience of colleagues in the industry who are using AQD to implement and integrate their SMS. The integrated SMS approach recognizes that an airline or aviation enterprise comprises management systems that are complex and inter-related. Therefore, the simple, straightforward, and practical integration of these management systems is essential to both mitigate safety hazards and realize financial benefits from enhanced operational efficiencies. The Guide aims to capitalize on the experience of implementing and integrating SMS while harnessing the capability of AQD to simplify the business of SMS.

Unlike other prescriptive material addressing the “what” of SMS, the Guide will focus on the performance aspects of an SMS and the role which the AQD integrated safety and risk management software plays in addressing the “how”, an aspect which is so vital to understanding the practical dynamics of an integrated SMS.

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