

SUMMARY OF COMMENTS AND RESPONSES

	Commenter	Comments	Responses
1	<p>Bob Milburn</p> <p>Safety & Quality Director CHC EO.</p>	<p>If the ANO requires AMOs to have an SMS for maintenance of components, how would this work for an operator who has components maintained in various parts of the world? Should we assume that the ICAO requirement will force all Part-145 approved organisations to have an SMS?</p>	<p>Whilst it is expected that each ICAO contracting State will implement the ICAO Standard from 1 January 2009, the operator should ensure that their own SMS provides for the inclusion of the extension of oversight should they use an unapproved contractor or organisation. The operator should therefore ensure that the process of placing such contracts addresses their obligations to satisfy themselves under their SMS system. The fact that an organisation may have its own SMS does not alter that obligation.</p>
2	<p>Neil Broughton</p> <p>Quality Assurance, Health & Safety Manager B/E Aerospace Leighton Buzzard</p>	<p>BE Aerospace hold a Part-145 approval covering component maintenance and are therefore directly affected by this proposal.</p> <p>Broadly, it will be possible for B/E to comply with this requirement. A Safety Management System is already in place within the company. We would however take issue with a number of details in the consultation document as presented:</p> <p>Description and scale of key monetised benefits by ‘main affected groups’: Implementation of an SMS will reduce incident, accident and injury rates. No evidence is given as to how and why a SMS will reduce incident rates. They may reduce rates but having a formal SMS is in itself no reason one way or the other for incident rates to change.</p>	<p>FODCOM 23/2008 paragraph 2.1 states "To improve on existing levels of aviation safety...additional measures are needed...one such measure is SMS". At the core of an SMS lies the principle of hazard identification and analysis that permits an organisation to assess safety risks. Risks are the consequence of hazards and if an organisation cannot identify hazard and assess risk then it cannot manage safety. Regulation provides a baseline for safety; SMS raises the organisation above the baseline when it has identified its hazards and put suitable mitigation in place to manage its risks. If SMS improves existing levels of safety then it follows that there will be a decrease in whatever metric is used to measure safety where the SMS is functioning properly.</p> <p>However, each organisation must as part of its SMS identify the metrics that most</p>

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		<p>No indication is given as to the application of a SMS to an AOC directly involved with operating an aircraft, a maintenance operation performing line maintenance, or a component maintenance organisation. Particularly in the case of the latter it is not possible to write off an entire aircraft, and particularly not at least once every ten years. The costs of non-compliance are thus massively over-estimated, whilst the costs of compliance remain the same.</p> <p>It is not possible to comment on the vague generalisation in the proposed change to the ANO to "implement a safety management system acceptable to the Authority". What level of SMS is likely to be acceptable, what controls are in place to prevent this becoming an onerous requirement which is disproportionate to the benefit accrued?</p>	<p>appropriately allow it to monitor the effectiveness of its SMS and operating systems, as defined by its operating philosophy, the nature of its activities and organisational complexity. This includes the contribution to the higher-level risks that an operator may face if a component, supplied by a component maintenance organisation, fails.</p> <p>The FODCOM is not intended to provide the theory and practice of SMS. This can be found in the ICAO Doc 9859 Safety Management Systems Manual and associated training material. The CAA Safety Management System Guidance material, written for AOC holders and Maintenance providers contains guidance on what the CAA would expect to see in a functioning SMS. It is expected that organisations will be fully aware of the SMS principles and practices contained in these documents which will then support the statement regarding an SMS acceptable to the Authority.</p>
3	Francis Mok	<p>I am relatively new to the aviation industry, so please do excuse any ignorance on my behalf. Firstly, I would like to say I am fully in favour of the proposed amendments, in fact I was initially quite shocked to hear that an acceptable Safety Management System (to its regulator) has not always been compulsory for operators (Please do correct me if I am wrong). Of course this may have been hugely dependent on the operator, aerodrome etc but I believe even if it is a small privately owned airstrip (or field) it should still be compulsory to have sufficient SMS in place. This is in the benefit of not just the users of the landing strip but to the people in close proximity to the landing, in</p>	<p>In practice, an SMS will need to be suitable for the scale and complexity of the organisation of which it forms a part. It must also be in compliance with any Regulations or Requirements in place at the time.</p> <p>The European Aviation Safety Agency's (EASA) Implementing Rules on Safety Management Systems, and any associated guidance, will form the basis of this Requirement in the future and provide the necessary degree of European</p>

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		<p>fact the same principles as a Public Safety Zone should apply. Why should anyone have the benefit of flying when SMSs are not in place to ensure the safest flight possible, considering most aviation accidents occur upon landing or take-off.</p> <p>One point of discussion I noticed was 'To improve on existing levels of aviation safety in the light of the continuing growth of the industry additional measures are needed. One such measure is to encourage individual operators to introduce their own SMS'. I do not believe this to be the best route to take. I was always under the impression that at a European level harmonisation / integration was a key strategy in ensuring best practise is shared. Having worked in the nuclear industry, one prime example is the building of the fleet of Magnox reactors (UK is built up primarily of Magnox reactors). Each site reactor was built without due regard to the other sites and basically operates on its own accord i.e. own way of handling waste, discharging etc. Although there is a strong front stating that Magnox reactors share best practises there is still a sense of 'we operate the way we want and think is best', and hence what really is best practise is often pushed to one side. I am by no means saying that the above discussion point will not work, as I do understand the practicality of achieving an Integrated SMS is indeed very difficult. I feel that it should not be too hard for the CAA to actively encourage and provide support in developing a UK SMS that in some ways follows that on a universal level (provided the resources are available).</p>	<p>standardisation. The EASA Implementing Rules for SMS are based on an International Civil Aviation Organisation standard that is worldwide and has been used to develop the CAA's Guidance on Safety Management Systems.</p> <p>There is no question of an organisation developing its own SMS that would significantly differ to that adopted by another organisation within the aviation sector, as the Requirements are quite prescriptive. However, one size of SMS does not fit all and organisations will be required to demonstrate how their particular SMS is in compliance with the Requirements thereby maintaining standardisation.</p> <p>Therefore the phrase "their own SMS" means one suitable for the scale and complexity of the organisation while at the same time being in compliance with the Regulations and Requirements.</p>

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4	<p>David Curgenvan</p> <p>Quality Manager Global Supply Systems Ltd.</p>	<p>FODCOM 27/08 states that a Safety Management System is required from 01 Jan 2009, yet FODCOM 23/08 para 3.2 says that it is required by 01 Jan 2011. Every operator to whom I have spoken has read that FODCOM and interpreted it to mean that the process has gone back by two years. If that is not the case, could you please let me know as we will have to "get our skates on" to have it completed in 5 months time.</p>	<p>FODCOM 23/2008 should be relied upon as to the requirements for an SMS. Paragraph 3 'Implementation' explains the requirements and 3.1 states that:</p> <p>"an exemption from the requirement for full compliance as at 1 January 2009 has been agreed, subject to the submission of an acceptable implementation plan for an SMS, showing full commitment to its adoption within a timescale agreed by the CAA."</p> <p>Therefore, before 1 January 2009, you are required to submit to the CAA your implementation plan and:</p> <p>The senior management will be required to declare their commitment to adopt an SMS through agreed phased compliance plans in their operation manuals and/or maintenance expositions leading to the implementation of a fully compliant SMS by 1 January 2011, or earlier if directed by European Commission regulation."</p>
5	<p>Dr Jim Gautrey</p> <p>Continuing Airworthiness Manager National Flying Laboratory Centre School of Engineering Building 83 Cranfield University</p>	<p>Having looked at the compliance costs in section 6.3.1, I would like to make the following points.</p> <p>Since a SMS is a continually evolving device, there will be a requirement to continually review and update the SMS on an annual basis at most, and probably more often. Therefore I suspect that large organisations may need to permanently employ personnel to administer the SMS, and those people will be required on a permanent basis, i.e. after the introduction period to which you refer. In addition,</p>	<p>The CAA feels that in this case, it would be wrong to produce an 'anybody's SMS', as the Authority sees the introduction of SMS as an opportunity to assess the competency of AOC holders to secure the safe operation of aircraft. The commentor should appreciate that the argument is about the competence of AOC holders and how that has to be demonstrated to the CAA.</p> <p>While there will be an increment in</p>

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		<p>I cannot see how an organisation can set up a meaningful SMS for £5,000 (maybe 10 to 20 man days of effort) unless they are given a populated SMS as a template and all they make are minor modifications to it.</p> <p>The cost of the continuation training may also be underestimated – the process of reviewing and documenting the risks to a level where it is very clear what has been decided and following up any required mitigation will be a significant task, let alone whatever training is required for a particular organisation.</p> <p>My feeling is that a better assessment of the annual costs will be similar to your implementation figure of £16,500,000 per year for a 10 year period, or a total of £165,000,000 over the 10 years.</p> <p>If we, as a small AOC operator, could set up a SMS for £5,000 and run it for £500 a year, I would be very surprised. When you look at the cost of paying for people with the required level of expertise to carry out a meaningful risk assessment and manage a SMS, that amount of money does not buy very much time.</p> <p>And if this goes the same way as Quality, where we are required to do more and more internal checking (which requires increasingly detailed audits) so that the authority do less and less, I am concerned that this may become a significant burden. I am not trying to detract from the apparent benefits of the SMS, I am just trying to get my head around the day to day running of it.</p>	<p>management time apportioned to the application of SMS there will also be savings to be made. As a particular SMS matures and the hazards posed by a particular operation are analysed, it will become clear that in some areas the steps taken may have been over cautious and can be reduced.</p> <p>It is not strictly true that SMS is continually evolving; it is the development of a methodology for dealing with hazards which will be evolving. What will happen is that with experience, operators will learn to use SMS more efficiently and will realise that their first efforts can be improved upon. They will take advantage of any lessons learnt and adapt their procedures and processes to be more efficient in the light of this experience.</p> <p>For a small organisation an SMS may be no more than adopting the core principle of a safety assessment and a risk management process. While QMS and SMS are complementary, in a small organisation one individual may perform both of these roles. The estimate of 10-20 man days is perfectly achievable for a small organisation.</p> <p>The key is to guard against excessive complexity and to recognise the scale and complexity of the organisation. It appears to the CAA that some consultants in SMS have tried to persuade organisations that a one size fits all approach works. The Authority does not agree with this and feels that such an approach will only scare people away from attempting an</p>

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			<p>SMS.</p> <p>The respondent is correct that a large organisation probably needs to have staff to manage the SMS since it generates intelligence that needs to be considered by management. This is needed as part of the Quality Assurance system, and the business or corporate governance mechanisms that such a large organisation needs in any case. The CAA also agrees that a small organisation could take the SMS requirements to the extreme and put additional staff, processes etc. in place which, if a more rational and structured approach to their normal business processes was taken, could be avoided. Adopting an SMS-based approach requires an organisation to take a more proactive stance with regard to potential hazards and risk. For a small organisation any competent manager/CEO should be able to include SMS elements into the normal business processes.</p> <p>In summary, an SMS is a company-wide philosophy, so once it is in place and running effectively the cost should be no more than doing business as normal. The rationale for this is that an effective SMS does not itself create change, it is the way in which the business approaches change that alters.</p> <p>The respondent's comments regarding Quality and the increasing cost associated with it are noted. His statement suggests, however, that his quality system is not working. Quality, like SMS, ought to be embedded in the company's</p>

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			<p>ethos, not treated as an add-on. A quality system ought to see the organisation's management taking control of routine activities so that, ideally, the quality audit function does not find anything at all. The reality is that many organisations leave it solely to the quality audit function to carry out both the quality control and audit element, and to fix what they find. In essence the Quality department is being tasked with the routine management of the organisation, which is not what quality or SMS is about.</p>
6	<p>Bob Simmons Director of Airworthiness and Safety Baines Simmons Limited</p>	<p>The ICAO believes that an objective, or output-based regulation, rather than a prescriptive compliance-based approach, will achieve a greater improvement in aviation safety standards than a prescriptive requirement. Whilst the Article wording will rightly allow an organisation to choose its means of compliance, the phrase “acceptable to the Authority” will lead to compliance with published guidance material as the default. A shift of regulatory style to focus on system effectiveness would, we feel, achieve greater safety benefits.</p> <p>Compliance with requirements alone will not guarantee improved safety. The cultural and Human Factor elements related to other accident prevention requirements have proven difficult to accommodate within legislative rules and frequently led to failure. The wide range of variables within the broad spectrum of affected organisations dictates that a shift to reproduce the ICAO intended focus on system output will, in our opinion, reap the greatest safety improvements.</p> <p>ICAO openly states that the most effective SMS will integrate both internal departments and external contracted / sub-contracted supplier's safety management systems to collectively mitigate risks. Clearly an Operator cannot</p>	<p>The use of 'acceptable to the Authority' allows the CAA a degree of flexibility in judging the acceptability of an organisation's SMS. An SMS has to fit into an organisation's operational business methodology and drive it to take a more meaningful regard for the management of hazards and risks. It has therefore to be proportionate, flexibly applied and offer scope for alternative means of satisfying the requirement.</p> <p>As a baseline for requiring organisations to have an SMS it is felt that the current wording is OK. The respondent's point really focuses on where CAA regulatory style moves into the area of risk-based oversight. That will change our approach to organisational oversight but does not require the baseline requirement to change to accommodate it.</p> <p>The point is raised about it having been difficult to accommodate human factor elements within the legislative rules. The CAA does not believe</p>

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		<p>manage the safety of its operation unless it has visibility of relevant internal and external organisation risks and has the ability to implement or influence mitigations as appropriate.</p> <p>The proposed amendment applies solely to organisations involved with the operation or continuing airworthiness of Commercial Air Transport or Public Transport aircraft. It is our understanding that a Safety Management System is required to be implemented by any entity involved in aircraft Operations, Continuing Airworthiness Management, Maintenance, Design, Production, Air Traffic Service or Aerodrome. In this case, a single Air Navigation Order Article applicable to all relevant organisations could promote a more cohesive and consistent approach to safety management across the United Kingdom aviation industry.</p> <p>In line with this position, we believe the following amended text would have a greater impact on safety standards and more closely meet the intent of the ICAO SARP. <i>(ICAO quotes are from Captain Miguel Ramos from the December 2007 EASA SMS Workshop)</i> Proposal option 1 (maintaining the same applicability as the original proposed text)</p> <p>Safety Management</p> <p>41 (1) The operator of an aircraft registered in the United Kingdom flying for the purpose of commercial air transport or public transport shall implement an effective safety management system, integrating suppliers as appropriate</p> <p>(2) A continuing airworthiness or maintenance organisation, shall implement an effective safety management system integrating</p>	<p>this to be the case. The rules are adequately provisioned for implementing human factors requirements on both individuals and organisations. What is at odds is our ability to assess the compliance or effectiveness of any such programmes and press for the cultural shift within an organisation to achieve this. This arises mainly from the fact that many organisations pay lip service to the principle of enacting the just culture to achieve effective control of human factor issues. SMS will help in this regard since it drives an organisation to review the HF related events, among other factors, and then to seek improvements to accommodate any adverse trend or analysis.</p> <p>The CAA agrees with the comment that an effective SMS will be driven by the operator. However, that is probably where the biggest weakness exists at present in the current system. An operator will often commit commercially to arrangements which fly in the face of proper management of the risks, for example, contracting an organisation on the basis of the commercial bottom line, and where the organisation does not have the capacity to take the aircraft on for maintenance. The operator has to realise that his SMS will need to be all-embracing, covering flight ops, maintenance management as well as ground services etc. That means the operator has to be more outward looking and embrace all organisations that interface with it, whether or not they are separately SMS compliant.</p>

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		<p style="text-align: center;">suppliers as appropriate</p> <p>Option 2: A single Article affecting all entities Safety Management 41 (1) An Operator, Continuing Airworthiness, Maintenance, Design, Production, Air Traffic Services or Aerodrome organisation shall implement an effective safety management system integrating suppliers as appropriate.</p> <p>In both cases, sub-paragraph 3) and Article 155 are acceptable.</p>	