CIVIL AVIATION AUTHORITY
OF NEW ZEALAND

Summary of Public Submissions Received on

NPRM 15-02 — Safety Management Systems

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General

Notice of Proposed Rule Making (NPRM) 15-02 was issued for public consultation on 7 May 2015, with a submission close-off of 19 June 2015. The purpose of NPRM 15-02 was to introduce new rules to improve New Zealand's aviation safety performance in a way that embeds an effective safety culture in aviation organisations; and to ensure New Zealand meets its international obligations as a signatory to the Convention on International Civil Aviation.

A copy of the NPRM was sent to the Ministry of Transport and the Aviation Community Advisory Group.

The NPRM was published on the CAA website with links from the Policy and Rules page, and from the Safety Management Systems page.

Notice was sent to subscribers to the automatic alert service for all of the affected certificates, and subscribers to the Safety Management Systems page.

Affected certificate holders were advised by email of the Consultation Forums that were conducted by the CAA in Palmerston North, Auckland, Christchurch, and Queenstown during the consultation period.

An online survey was also available for completion during the consultation period.

Submitters

Submissions were received from

Air Hawkes Bay Ltd	Hamilton Aero Maintenance Ltd
Air Milford 2000 Ltd	John Marshall
Airways NZ	Kiwi Balloon Company
Airwork	Liviu Avionics and Instruments Services Ltd
Aviation NZ	Martin Aviation Services Ltd
Aviation Safety Management Systems Ltd	Mike Sawyer
Boeing Commercial Airplanes	NZ Airports Association
Central Aero	NZALPA
Graham Marsh	Skywork Helicopters Agricultural Ltd
Griffin Ag Air	Skywork Helicopters Ltd

A total of 20 submissions were received. Of these, 17 submissions were from organisations, and 3 from individuals.

The Consultation Forums generated 60 oral questions or concerns; and the online survey elicited 16 responses.

The feedback received will be addressed in three sections:

Section 1 – responses regarding the proposed rule wording:

Section 2 – responses regarding the draft advisory circular:

Section 3 – responses regarding implementation.

Submissions

Section 1 – Rule

General

Two submissions stated that the proposals were acceptable without change. One submitter suggested that the regulator should get on with the implementation; that those resisting change were incapable of change; and that if it couldn't be accomplished within the allotted time then it reflected on their inability to effectively conduct their business.

CAA Response: The CAA agrees that implementation is a priority and is working to achieve delivery of the final rules to the Ministry of Transport on schedule. However; some modification of the proposal is necessary as noted below, and the CAA is confident that it can be accomplished within the time allowed.

One submitter was concerned that without addressing the protection of persons, information, and data under a just culture, then the proposals for the introduction of safety management system requirements were not acceptable.

CAA Response: The CAA agrees that just culture concepts are necessary to foster open and meaningful reporting of essential safety-related information within the context of a safety management system. The CAA also agrees that those concepts would be best placed in the Civil Aviation Act; this is being addressed in the Act Review currently being led by the Ministry of Transport. However, the CAA believes that it would be negligent to defer the introduction of SMS while waiting for a Civil Aviation Act amendment.

Another submitter commented that being "proactive" with risk management relies heavily on "Just Culture" to generate safety data/information. CAA currently has a large repository of safety information through its CAA005 and ARCs process and needs to reciprocate this information back to industry in a structured and informative format. If CAA advocates a "Just Culture", then information generated internally and externally should increase and become accessible to all stakeholders and correspondingly enhance SMS outcomes. To facilitate this, CAA will not only need to need to subscribe to "Just Culture", it will also need to upgrade its IT system at the expense of the Ministry of Transport's budget (Public Good) and not industry."

CAA Response: The CAA agrees that the flow of safety information needs to be open and useful to both the industry and the CAA. The issue of capability is also acknowledged and the need to establish mechanisms to develop useful safety information from the stored data that can be shared with industry. The CAA recognises that a voluntary reporting system would be a useful source of proactive safety data.

One submitter noted that the CAA underestimated the cost impact, particularly for small organisations, by at least 40%.

Online survey respondent's estimations of implementation costs varied between "minimal" or "negligible" because they were already implementing SMS, and "considerable" or "a

few thousand". One respondent estimated $10,000 for training and $15,000 for implementation. However, most could not quantify the potential cost.

CAA Response: The CAA thanks the submitters for the information, and acknowledges that a number of factors make it difficult to quantify the costs for aviation participants to implement risk management systems. These include:

- *the size, scope, and complexity of an organisation;*

- *the development of a participants existing management system;*

- *an organisation's current level of compliance with all relevant regulations; and*

- *the degree of proactive risk management already undertaken by the organisation.*

In discussion with one stakeholder, it was commented that there are potential costs that are difficult to foresee, and despite best efforts they underestimated the impacts in time and cost associated with their own SMS implementation efforts. As such, the costs outlined in NPRM 15-02 were indicative only.

Applicability

One submitter commented that Part 100 SMS is not fit for purpose in agricultural aviation. The submitter believes that Part 100 does not have any practical benefit for agricultural aviation and may in fact negatively affect safety by focusing attention on process thereby taking precedence over safety. The submitter also notes agricultural aviation is a unique aviation activity that is increasingly burdened by bureaucracy (SMS included); that its safety culture and safety record is improving anyway; and that he would only support the use of a S.M.S. into Ag Aviation if its sole use was to promote Operational Flight Safety.

CAA Response: The CAA acknowledges the submitters comments in as much as SMS will require documentation and the introduction of systematic processes; and a consequential administrative impost, certainly during establishment of the operator's system.

Following agreement by Cabinet in April 2013, the CAA released a consultation document to seek feedback on the proposal to introduce mandatory risk management systems for both domestic and international certificated aviation operations. Consultation confirmed that the majority of respondents were supportive of a move to a risk-based approach to aviation safety management, and did not identify any significant issues. Feedback also identified that there was a desire from operators for New Zealand safety regulation to be consistent across the entire commercial aviation system, and to reflect global best practice by complying with international requirements.

It is worthy of note that, SMS is scalable and the principles can be applied in a number of business contexts with its primary purpose in an aviation context being to proactively manage operational risks.

Part 100

One submission was received stating: "As written in the proposal, the regulation cannot be fully complied with and still meet the continuous improvement intent of SMS and as required by 100.3(a)(3)(iii) (as described in AC 100-1, Section 2.9). That is, ensuring hazards are identified insinuates that all hazards are identified, which is impossible and inconsistent with the reactive, proactive, and predictive approach to SMS." The submitter went on to propose the following changes to rule 100.3:

    (a)   An organisation to which this Part applies must have a system for safety management that includes—

        (1)   a safety policy on which the system for safety management is based; and

        (2)   a process for risk management that ~~ensures~~ *identifies* hazards to aviation safety ~~are identified~~, and associated risks are evaluated and managed; and

        (3)   *a* safety assurance ~~measures~~ *system* that ~~ensure~~ *monitors that* —

            (i)   hazards, incidents, and accidents are internally reported and analysed and action is taken to prevent recurrence; and

            (ii)   goals for the improvement of aviation safety are set and the attainment of these goals is measured; and

            (iii)   there is a quality assurance programme that includes conducting internal audits and regular reviews of the system for safety management; and

        (4)   training ~~that ensures~~ *for* personnel ~~are trained and~~ *to be* competent to fulfil their safety responsibilities.

    (b)   The organisation must document all processes required to establish and maintain the system for safety management.

    (c)   The organisation*'s* ~~must ensure that the~~ system for safety management *must* ~~corresponds~~ to the size of the organisation, and the nature and complexity of —

        (1)   the activities undertaken by the organisation; and

        (2)   the hazards and associated risks inherent in the activities undertaken by the organisation.

CAA Response: The CAA has reviewed the proposal and incorporated most of the suggested changes. The suggested change to (a)(3) will not be reflected in the draft final rule as the proposed wording is considered satisfactory in achieving our intended outcomes.

Part 139

One submitter noted a series of errors in rules 139.55(a), 139.55(a)(1), 139.55(a)(2a), 139.77(a)(1) and (8), 139.127(b)(1), 139.401(b)(1)(i), 139.401(e)(1), 139.403(b)(1)(i), 139.403(b)(2), 139.403(e)(1), and 139.405(a). The submitter also commented on the lack of internal quality procedure requirements in proposed rule 139.405.

CAA Response: The CAA will correct the errors and inconsistencies that were observed. Regarding rule 139.405, the proposed transition requirements merely reflect the existing internal quality requirements (so that the amended rule does not need to refer to an obsolete rule over the transition period). The CAA had no intention of requiring, on a transitional basis, more than which currently exists.

Personnel requirements

Two submitters commented that proposed rule 145.51(b) separates "personnel authorisations" and "safety management" unless otherwise accepted by the Director; and notes that currently the function of internal audit may be undertaken concurrently with other functions by one person. Other submitters made the same comment on rules 19.317, 115.51, 146.51, and 148.51. One of those submitters suggested qualifying the requirement by referring to the size of the organisation.

> *CAA Response: The introduction of the proposed requirement was intended to standardise that requirement across all certificate types – most of which have had that provision since the original issue of those rule parts (including rule 115.51(b)(1) which is unchanged in this proposal). There was no intent to change any existing structure. However, in light of the concerns raised, the CAA will recommend restoring the status quo in rules 145.51(b), 146.51(b), and 148.51(b).*

> *Note: The intention to standardise organisational requirements across the rules, while well intentioned is probably not appropriate in terms of amending rules where there is no apparent problem, and thus imposing an unnecessary administrative burden on the industry to update their expositions. All such 'standardisation' changes have been reverted to the status quo.*

Senior person qualification

One submitter suggested that there should be a training requirement for the senior person responsible for the system for safety management in order to achieve consistency across the industry; and that training provides more value than almost any other management system inputs.

> *CAA Response: Part 100 requires training that ensures personnel are competent to fulfil their safety responsibilities. This requirement is for all personnel including senior persons. As the training should be commensurate with the size, nature and complexity of an organisation it is for organisations to establish the training needs for personnel based on their safety responsibility. To assist organisations develop training needs assessments for individual personnel, the CAA will provide additional guidance material in the AC that will include a description of key competencies required for the person responsible for the system for safety management and a suggested training syllabus in the context of SMS functions.*

Transition rules

In regard to the time allowed for transition, most believed that the implementation time allowed was adequate. However, 2 submitters felt that it was too short – both were working in areas that were mainly Part 135 operations, but had a small element of Part 125 operations that would require the shorter transition period. This, they felt was unachievable; and in one case the submitter suggested that Part 125 operations should be allowed the longer transition to match Part 135.

One submitter suggested dropping the transitional rule that requires a transitional plan by a fixed date, as it appears nearly impossible to enforce in a meaningful way. The submitter questioned the CAA's intention if the CAA does not agree with an implementation plan? The submitter was of the view that as long as a plan is submitted, regardless of its content, the rule has been met. The intent of this rule may well be better achieved by other means, such as the anticipated timelines the CAA expects it will take to process an application for an exposition change that includes a SMS.

CAA Response: The CAA has reviewed the proposed transitional provisions and came to the following conclusions:

- *The timing of the proposed implementation stages has been examined and found that 1 year for the first group and 3 years for the second group would be unreasonably short considering the following:*
  - *the number of affected certificates;*
  - *non-validated data on the level of proactive implementation already undertaken by organisations; and*
  - *an untested SMS certification process.*

  Therefore, while still under consideration pending further review of information from other States who have already been through this process, the times are expected to be extended.

- *The decision by CAA that organisations submit an implementation plan was informed by current best practice and that other States have done likewise. To ensure that the organisation's SMS is properly developed within the required timeframe, some measure of additional oversight is necessary. Therefore, the final rules will be drafted to require that an implementation date is agreed between the organisation and the CAA; and that the implementation plan must be approved.*

  One of the acknowledged sources of hazards is change in an organisation's operation, and it is one of the reasons that effective change management practices be applied at the outset. Therefore, any changes to the implementation plan and SMS will be documented and submitted to the CAA for approval. If a change is required, the CAA may provide additional guidance to the organisation to ensure that the SMS remains in compliance with the SMS rules and is implemented within the specified period following the effective date of the final rule.

  The final draft will also be explicit in requiring that, at the end of the implementation period (i.e. the implementation date), the SMS is acceptable to the Director.

Section 2 – Advisory Circular

General

This section summarises submissions that related to the draft amendment to the Safety Management Systems advisory circular.

One submission was received recommending removal of the words 'education' and 'training' and simply using 'competent'. The recommendation was substantiated in the outcome-related context of having the appropriate qualifications, skills and aptitude towards activities. Employing this usage would simplify the requirements and bring the rules more closely in alignment with the proposed changes to Health and Safety legislation.

> *CAA Response: The CAA acknowledges that there is other legislation concerning employee competencies, and is also cognisant of existing operating rule requirements relating to qualifications and experience. The CAA will review the terminology used in the AC and address inconsistencies in the use of these terms.*

One submission stated that "training requirements for the safety manager and investigators are vague – this is a challenge as there is little training available. Need more guidance/resource."

> *CAA Response: To assist organisations develop training needs assessment for individual personnel, the CAA will provide additional guidance material in AC100-1 that will include a suggested training syllabus in the context of SMS functions.*

One submitter expressed the view that a 'disconnect' exists between the proposed rule and the AC relating to training requirements. The rule requires competence/knowledge; the AC refers to training that provides knowledge/competence. And the rules do not place a training requirement on investigators, but the AC implies training is required.

> *CAA Response: The CAA will align the language so that the AC is consistent with the rule. In addition, to assist organisations develop training needs assessment for individual personnel, the CAA will provide additional guidance material in AC100-1 that will include a suggested training syllabus in the context of SMS functions.*

One submitter suggested the definition of hazard be amended to: — **Hazard** *Source: ICAO **and FAA***
A~~n object or~~ condition ~~with the potential to cause injuries to personnel, damage to equipment or structures, loss of material, or reduction of ability to perform a prescribed~~ *function* **that could credibly cause or contribute to an aircraft incident or accident.**

> *CAA Response: ICAO has recently proposed changes to Annex 19 definition of hazard as:* **Hazard,** a condition or an object with the potential to cause or contribute to an aircraft incident or accident. *The CAA is also cognisant of other legislation that requires an interpretation of hazard, such as the proposed Health and Safety at Work Act. The CAA considers the ICAO version to be more suited for incorporation into the AC.*

One submitter suggested the AC could be clearer in terms of structure (move away from the 13 elements and align more directly with the rule) with some of the elements being sub-categories of others.

> *CAA Response: The CAA considers the current structure of the AC aligns best with ICAO standards and remains consistent with previously CAA published guidance material and best practice as exhibited by other States publications. Therefore the CAA does not intend to restructure the AC at this time.*

One submitter stated the information relating to complex and non-complex organisations appeared to add little value as there are no differential requirements or guidance relating to complex or non-complex operations, or indeed any further mention of the concept beyond the introduction in the AC. The same submitter also recommended that the AC provide guidance as to what comprises a material change and timeframes for the Director to accept such a change.

> *CAA Response: The CAA acknowledges the need for additional guidance material in Section 1 – Introduction and Section 3 – Implementing an SMS of the AC.*

Section 3 – Implementation

General

This section summarises, in general terms, the comments and submissions that related specifically to the implementation process. Most of these comments were made either in the online survey, or verbally at the Consultation Forums.

There was general acceptance that there will be benefits resulting from introducing SMS, including outcomes other than operational safety, such as improving the use of data and streamlining/standardising business practices. However, there were also negative comments such as increased administrative burden.

It was clear that the industry found it difficult to estimate the cost or resources necessary to implement SMS. Some provided estimates, but many did not have the data/experience to make an estimate (although there was optimism that it should not be problematic.) Subsequent discussions have highlighted that it is very easy to under-estimate the impact, even given the time to carefully detail the process.

Survey findings

In response to questions regarding the required effort to transition to SMS, and preparedness for that change, respondents felt that–

- They were mostly quite knowledgeable of SMS concepts and that their existing hazard and risk management processes are effective.

- Existing quality systems will need little or no change to accommodate the introduction of SMS.

- The high-level nature of the rule received a mixed response, but most thought that it was very or extremely helpful for scalability.

> · Staff training for implementation was not seen to be an issue for most; however, some commented that help (from the CAA) would be a benefit. Risk assessment training was an area flagged as needing attention.

Consultation forum comments and questions

General

These were general questions and comments on various aspects. The main ones were:

· It appears to "reinvent QA"

· Is the implementation of SMS suitable for a 'one man band'?

CAA Response: The intention of the rule is to provide for scalability of the safety management requirement, specifically rule 100.3(c) requires:

> *The organisation must ensure that the system for safety management corresponds to the size of the organisation, and the nature and complexity of —*
>
> *(1) the activities undertaken by the organisation; and*
>
> *(2) the hazards and associated risks inherent in the activities undertaken by the organisation.*

This provides for the safety systems, processes and activities to fit the size and nature of activates of an operation.

· ICAO Annex 19 excludes domestic operations – why are we including them?

CAA Response: Whilst it is true that ICAO is aimed at international operations, they recommend most practices are applied domestically; and it is unreasonable for domestic operations to be isolated from safety improvement measures.

Certification/surveillance and capacity

This was a topic that was frequently raised. There was concern regarding:

> · the potential for extra cost of transition and subsequent audit

CAA Response: The first stage of the triennial funding review, focussing on the structure of the levies, fees and charges (who pays, and how), has been completed. The second phase proposals – determination of the actual level of payment - are now under consideration. Further details and a discussion paper on this topic may be found on the CAA web site.

> · there should be a non-chargeable phase due to resource constraints and therefore a lack of efficiencies

CAA Response: Noting the progress of the funding review above and support team activity described below.

> · consistency of audit

CAA Response: As outlined during the NPRM forum meetings, the CAA has formed a cross-functional SMS implementation team that will support the operational units with SMS certification and surveillance activity, through the provision of training, coaching and guidance material.

· whether the CAA focus would be on paperwork or operational safety

CAA Response: AC100-1 is being amended to provide further information on SMS Implementation. Initial certification will focus upon the required elements of the safety system being present and suitable. Subsequent surveillance activity will monitor the organisation's operational safety performance, to ensure that the system is maturing to operating and effective.

· the CAA's capability/capacity to undertake the additional load

CAA Response: Proposed changes to the transition period have been influenced by industry preparedness and include provision to agree certification dates across the two groups to provide for capacity load planning. This was a significant factor in redrafting the transition requirements.

· would the CAA use the same staff to audit SMS

CAA Response: Operational staff performing certification and surveillance of SMS will be supported by a cross-functional team, as described above.

· how would the CAA approach assessment of organisational risks

CAA Response: The CAA will perform performance based oversight of organisations, taking account of the particular sector risk profile. Such oversight would include a review of an organisation's risk management methodology.

WorkSafe / ACC relationship with SMS

This topic was also frequently raised as there are similarities of intent and method. There was concern regarding:

· is SMS separate from Worksafe

· HSE already covers most of SMS – potential for conflicting requirements

CAA Response: There are similarities between management system standards for occupational health (e.g. AS/NZS 4801, 4804), environmental management (e.g. AS/NZS ISO 14004) and quality management (e.g. AS/NZS ISO9001). This presents opportunities for integration with operational SMS in areas such as safety committees, hazard identification and risk assessment methodologies, safety assurance, and consolidated communication and safety promotion efforts. The main point of difference between SMS and Work Safe / ACC is that the former is focused upon operational safety (aircraft accident/incident) versus the latter where the focus is on occupational safety (harm to the person).

· are there case studies showing interaction between SMS and HSE

CAA Response: The CAA is not aware of any specific case studies showing interaction between SMS and HSE in New Zealand, but would encourage organisations to look at integrating management systems as discussed above.

Senior person

This topic indicated significant uncertainty which was driven by the lack of prescription in the proposed rule. There was discussion regarding:

Process

- that the lack of prescription in the rule favours the CAA (inconsistent application of discretion)
- the CAA getting more power over who could be the senior person for SMS
- does the CAA have any expectations of the senior person qualifications
- CAA consistency regarding senior person acceptability

CAA Response: The high-level and non-prescriptive rule principles adopted for Part 100 define the management outcomes that an organisation is required to bring about instead of focussing on prescribing the processes or actions that an organisation must take. As there is no one-size-fits-all system, this will provide the flexibility for organisations to scale SMS to their needs. Acceptable means of compliance and guidance material on how to meet the outcomes are provided in AC100-1 Safety Management. To assist organisations develop training needs assessment for individual personnel, the CAA will provide additional guidance material in the AC that will include a description of key competencies required for the person responsible for the system for safety management and a suggested training syllabus in the context of SMS functions.

Training

- could the required training be delivered by a Part 141 or 147 organisation

CAA Response: In principle, yes that would place a framework around the development and delivery of the training. CAA is currently developing the methodology as to how to include SMS training into the privileges of a Pt 141 / 147 approved organisation and consequential amendment of AC 141-1 will be required.

- can training be conducted internally to an organisation

CAA Response: Yes, as stated in the previous section, AC100-1 is being amended to include a suggested training syllabus in the context of SMS functions.

- does the CAA know of third-party trainers in NZ

CAA Response: Currently the CAA is not aware of SMS specific training providers for industry. The CAA would be reluctant to list training providers in the future as this could be seen as a form of endorsement.

Implementation

This subject got the most attention at the forums. There was discussion regarding:

Applicability

- SMS appears to be over-complicated

CAA Response: When it comes to SMS, there is no 'one-size fits all'. Each organisation has unique features relating to its operations and associated safety risks. Whilst the overall system is built upon a number of elements, each element need only be of a size and complexity as is suitable for the activities undertaken. Refer also to resource booklet 03 and AC 100-1.

- how does SMS work for Part 149 organisations

CAA Response: In response to industry feedback, a draft revision to Part 149 is being proposed that would require organisations with the privilege of authorising aviation events (rule 149.61) to identify hazards to aviation safety and evaluate and manage the associated risks. The draft rule 149.63 requirement to comply with rule 100.3 would be withdrawn in this case.

- how does SMS interface with Part 102 operations

CAA Response: There is no direct interface; however the SMS principles of hazard identification and risk management are embedded within the requirements of rule 102.11.

Process

- 1 year implementation is too short

CAA Response: This topic is covered in section 1 of this document under transition rules.

- gap analysis and its relationship to an implementation plan

CAA Response: The gap analysis is a fundamental step in the development of an implementation plan. Draft AC 100-1 is being revised to provide more detail on this topic.

- can SMS be implemented with certificate renewal

CAA Response: It is proposed under the revised draft transition rule that the certification date be agreed between CAA and the applicant once the implementation plan has been assessed. It is reasonable that the implementation plan would take renewal dates into account.

- will all of an organisation's certificates be assessed at the same time

CAA Response: As described within the NPRM 15-02 (SMS) it is expected that in the spirit of a holistic approach, an organisation would implement safety management across all of its certificates at the same time and in the same transition period.

· who decides what is complex

CAA Response: To assist organisations and CAA to make this determination, the section in AC 100-1 discussing scalability is being revised to provide more guidance on the topic. Once the implementation plan has been submitted for assessment, any further queries relating to complexity would be resolved prior to certification taking place.

Support

· will the CAA be producing a compliance matrix

CAA Response: The CAA will be updating operational compliance matrices to include SMS requirements; in addition, there will be an SMS evaluation tool available for both complex and non-complex organisations.

· will the CAA provide sample expositions

CAA Response: The CAA will not be providing sample expositions as the wide range of organisations and operations conducted does not lend itself to "one size fits all" sample manuals that are appropriate and applicable to individual organisations. Rather, it is envisaged that organisations will look to embed the SMS documentation into their existing manual suite or within an associated safety manual, in the same way that some organisations currently document their QMS within a quality manual.

· should we be setting our own safety targets, or should we wait for the CAA to come up with a goal
· can the CAA provide training around safety performance indicators

CAA Response: ICAO Standards require the establishment of an ALoSP [acceptable level of safety performance] both as part of a State's SSP and as part of operators' SMS plans. While the overall New Zealand safety targets are detailed in the CAA's Statement of Intent, as indicated in the SSP, certificate holders will be required to establish, within their SMS, acceptable levels of safety performance "expressed in terms of safety performance targets and safety indicators". As organisational SMS matures, including that of CAA, the SSP will be progressively updated with sector specific safety targets. Section 2.7 of AC 100-1 is being revised to provide further guidance on setting objectives, targets and indicators.