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The SAAA Safety Management System (SMS) Guide

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Revisions

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1. INTRODUCTION

The SAAA Safety Management System (SMS) Guide is both called for and supported by the related SAAA policies & procedures (refer References section of this document). The purpose of this guide is not to re-produce the entire content of the relevant police & procedures, hence reference to the documents is required to ensure familiarity with all aspects of the SMS delivery.

The principal objective of the SMS is to provide for actions that aim to improve the safety outcomes for SAAA Members, and ideally also non-SAAA affiliated aviators who build and operate similar classes and categories of aircraft to those of SAAA Members. It is also the expectation that by definition the SAAA SMS will actively contribute to objectives held jointly with the Australian Regulator, CASA, to protect members of the public and public infrastructure.

The SAAA does not carry out investigations. When incidents occur, we encourage those involved to recount their experience and make suggestions so that others can benefit in the future. The SAAA endorses a "Just Culture" and would never support inappropriate punitive action.

The SMS is all about responding to known and new identified risks, taking practical steps to continually identify and mitigate these risks, promoting awareness of general and specific causes of risk exposure and mitigating actions, and promoting the awareness of the role that human factors can play in increasing risks. Beyond prevailing tools and processes and their routine supporting activities, the SMS must be regarded as an evolving system responding to the four pillars of the SMS being:

1. Risk assessment and identification
2. Occurrence reporting
3. Safety promotion
4. Human factors

All framework / process established to manage the SMS takes the form of three phases. The general content and actions associated with each phase are summarised in the "SAAA Safety Management System (SMS) Framework" chart

1. "**RISK IDENT**" (Risk identification)
2. "**ARM**" (Assess, Respond and Mitigate)
3. "**ACT**" (Awareness, Check and Training / Support)

The SAAA's SMS philosophy is consistent with current modern safety practice in aviation. It is useful to consider the following concepts in implementation of the SMS. These concepts are in widespread use and can help to inform good safety practice:

- James Reason's "Swiss Cheese Model" illustrates how the alignment of multiple factors can lead to accidents
- "Normalisation of Deviance" shows how unsafe practices can be become "normal"
- The proposition that "….*many aviation regulations have been written in blood…*" is a warning not to become cynical about regulations
- "Just Culture" underpins a healthy safety culture

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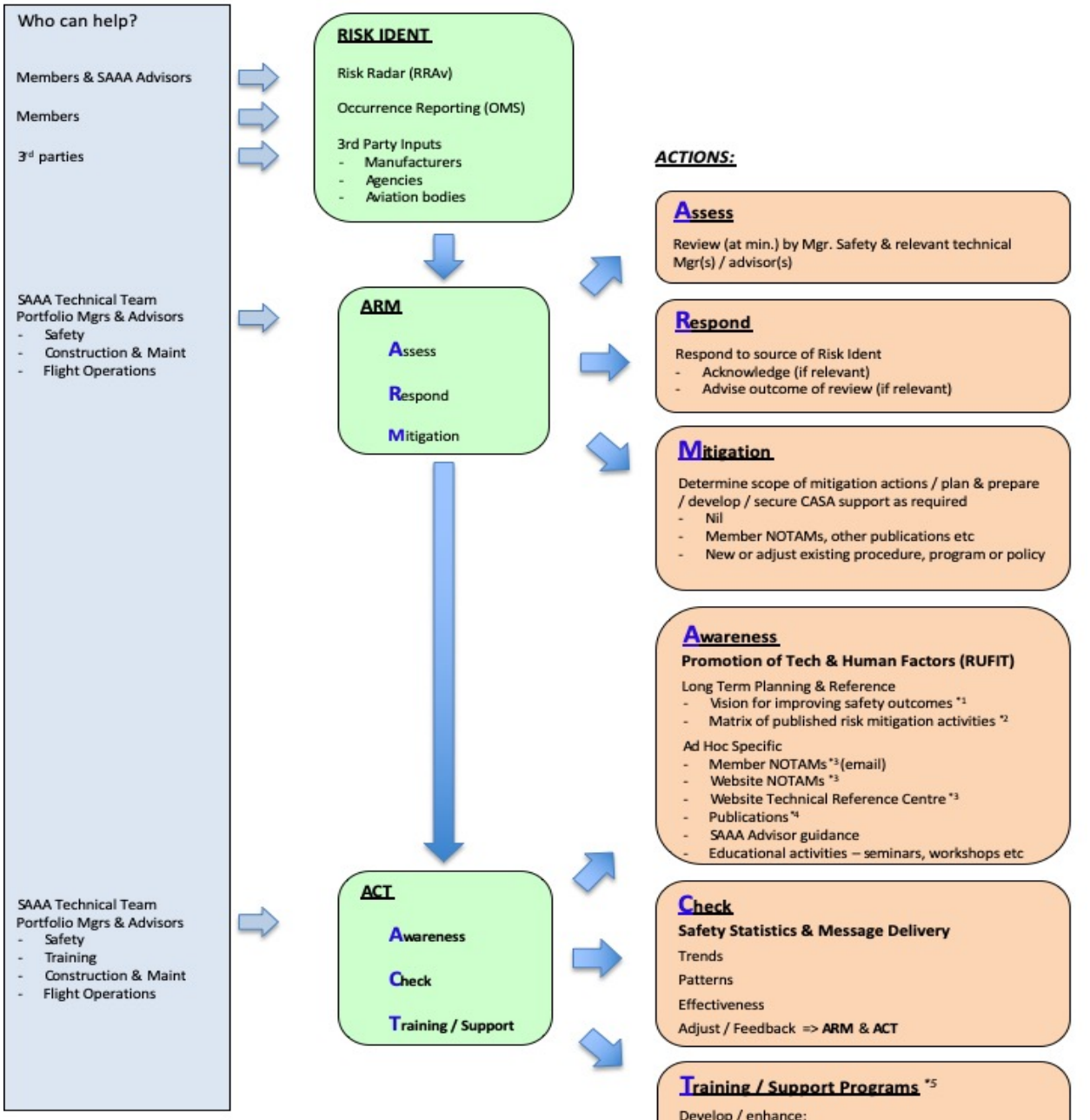
Plan Wise – Build Well - Fly Safe

The SAAA Safety Management System (SMS) Framework



Notes:

1. SAFE 2.1-001 Vision for Improving Safety Outcomes for VH-Exp Category Aircraft; July 2018
2. SAFE 2.2-001 Matrix of SAAA Risk Mitigation Activities; July 2018
3. Combination of Safety Bulletins (incl. RUFIT messages) and Technical Bulletins – all of which in common are delivered by email to Members and published to the SAAA website posts & SAAA website Technical Reference Centre
4. AirSport
5. As at 2019, principally comprising Member Support Program (MSP). Technical Advisors, Flight Safety Advisors (FSAs), Technical Counsellors (TCs), Authorised Persons (APs), Maintenance Procedures Course (MPC), Weight & Balance (W&B) Course, Flight Training and Safety Support Program (delivered IAW FTSM) and knowledge delivered by a variety of educational activities in the form of workshops, seminars and skills demonstrations

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Critical to the success of the SMS is ongoing looping through the "**ARM**" and "**ACT**" phases – in essence, checking that the desired outcomes are being achieved and, if they are not, returning to assess and frame how to improve delivery of the intended objectives.

The SAAA Safety Manager has overall custody of and responsibility for the implementation of the SMS. And all SAAA advisors and Members must share in the responsibility to contribute to the SMS implementation. Members especially have a responsibility to assist with the process of identifying and letting others know of incidents, events or observations they come across during the conduct of their own build and flying activities – the key principal being "don't let something untoward that happens to you or you observe, happen to someone else – you might have been lucky or just had a close shave, but others may not be so fortunate".

By definition, the SMS is an evolving system and must be actively responsive to changing conditions and circumstances. Everything that SAAA does to support its Members -beyond social, event and broader industry support activities - is the output of our evolving SMS.

Some tangible recent examples of the SMS application would include the development of the Risk Radar (RRAv) tool in 2013 and its update in 2016, the re-development of the Members Support Program in 2017 and the Flight Training & Safety Program in 2018. A number of other initiatives are current as at 2018 / 2019 including 2-person Phase 1 Operations procedures and development of maintenance skills training. All these initiatives emerged from the application of the SMS and are designed to improve safety outcomes. No doubt, other initiatives will emerge in response to changing circumstances and conditions.

2. RISK IDENTIFICATION "(RISK IDENT")

All information gathered from the "**RISK IDENT**" (Risk identification) process feeds into the "**ARM**" (Assess, Respond and Mitigate) and "**ACT**" (Awareness, Check and Training / Support) elements of the SMS; refer also "SAAA Safety Management System (SMS) Framework" chart.

The information gathering flows from pro-active and re-active processes. The SAAA Mgr. Safety has a very specific responsibility to ensure that the information gathering occurs effectively, and that the gathered information is acted upon – via the "**ARM**" and "**ACT**" phases of the SMS.

2.1. PRO-ACTIVE – IDENTIFY THE RISK EXPOSURE BEFORE FLIGHT

The principal pro-active SAAA tool is the Risk Radar (*RRAv*). *RRAv* aims to identify airframe and pilot capability risk exposures in respect of specific aircraft and pilots is the *RRAv* tool. The tool is presently required to be completed prior to the obtaining a SCoA, and is highly recommend for use from early planning (including aircraft selection) of a build / refurbishment project, annual maintenance, and ongoing pilot capability assessment (typically on the occasion of a flight review).

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Completion of *RRAv* reports by Members and reviewed with their advisors provides the obvious opportunity learn from observed trends and similar – for example:

- A pattern may emerge where certain elements of an aircraft build are routinely below standard – thus suggesting new or enhanced training
- With the increasing availability of higher performance aircraft, there is likely to be an emerging trend of increased difference between "*pilot capability*" and "*the challenge that an aircraft presents to a pilot*"

2.2. RE-ACTIVE – REPORTING OF SPECIFIC INCIDENTS, STATISTICS AND TRENDS

The principal re-active SAAA tool is the Occurrence Management System (OMS). The OMS is essentially an information gathering system. It provides for the reporting of conditions or circumstances that have presented as a threat or have resulted in an incident, whether related to a construction, operational, equipment or other matter. SAAA members are to be actively encouraged to use the OMS as the reports are the "eyes and ears" required to head off untoward events.

The concern aired by many around submitting such reports is acknowledged and hence the SMS needs to be sensitive to these concerns and explore means to mitigate these concerns.

Other important sources of information that identify risk come from wider knowledge, such as various third-party publications and sources. These comprise typically specific safety / technical related bulletins, statistical reports and reports / papers surrounding safety programs or related initiatives such as may be promulgated or published by aviation agencies, manufacturers and aviation member organisations.

3. ASSESS, RESPOND & MITIGATE ("ARM")

The "**ARM**" (Assess, Respond & Mitigate) process is largely self-explanatory, but some key points need to be observed:

1. It is critical to not "*jump the gun*" and that a technically sound and considered assessment of information is conducted. Without this step being completed properly, confidence in the entire process will likely be undermined, or worse
2. Responses to those who have taken the trouble to submit occurrence reports or offer suggestions or information gleaned from their parties that have the potential to improve safety outcomes must be delivered. If not acknowledged, the flow of such information will very likely be compromised – in other words potentially fostering views words to effect "why offer information which to all intents and purposes just goes into a black hole", thus also undermining the entire SMS. Such response should also ideally contain an indication at least of what actions will follow, such as but not limited to:
    a. "*A Safety (or Technical) Bulletin" will be published…."*
    b. "*The appropriate authority will be contacted, advised of the issued and ….."*

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c. "*The incidence of the occurrence you have experienced or observed suggests that … procedures (or polices) need to be changed…. or new / enhanced training is required …. etc. Planning to implement has commenced …..*"

3. The mitigation scope may be limited to preparing a succinct "Safety (or Technical) Bulletin" or preparing letter, for example, to the regulator or other agencies, or an airport operator. Alternatively, the mitigation may be far more involved – such as, for example, what followed from the identification of the need to develop a plan to reduce the risk of flight incidents due to inadequately supported or trained pilots. This led to the development of the Flight Training & Safety Manual and has also involved and required the support of the regulator, CASA, to complete all elements; almost a 2-year project. Critically though – the mitigation "material" must be prepared and delivered, as otherwise - again confidence in the SMS will diminish.

4. AWARENESS, CHECK AND TRAINING / SUPPORT ("ACT")

The "**ACT**" (Awareness, Check and Training / Support) phase is at the heart of delivery. The messages need to be broadcast to SAAA Members and stakeholders (essentially CASA and ATSB), training and support programmes need to be put in place and delivered. Crucially – we need to check that the prior two steps of "**ACT**" are effective and that they are achieving the desired outcomes – in other words, be sure that the loop is closed. If not, a response would be required – and the "**ARM**" / "**ACT**" phases repeated.

The "Awareness" delivery (or Safety promotion") is divided into "Long term planning and reference", and "Ad hoc / specific" categories.

The former should include at minimum two key and evolving documents that do require periodic update and development:

1. The SAAA vision to improve safety outcomes – as at the date of this guideline, this vision is currently expressed in the SAAA document SMS 2.1-001 "Vision for improving safety outcomes for VH-Exp Category aircraft"; July 2018. The document is shared with CASA a) for their information and b) because many of the initiatives require CASA support / approval
2. The SAAA statement / matrix of risk mitigation actions and measures portrayed as date of this guideline in SAAA document SMS 2.2-001 "Matrix of SAAA Risk Mitigation Activities"; July 2018. This document is also shared with CASA to ensure they are aware of SAAA's specific risk mitigation actions.

As far as the "Ad hoc / Specific" category is concerned, all options available should be used to publish the various "materials" and should reflect specific responses to emerging issues as they arise or comprise ongoing routine reminders of certain matters – particularly those relating to human factors. Opportunities to communicate themes and specific information by way of educational activities such as seminars, workshops etc are an integral part of the message delivery.

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As far as “Training / support programs” are concerned, it is largely the responsibility of the operational portfolio managers of Safety, Construction & Maintenance, and Flying Operations to with the support of their teams to identify the need for any new, or adjustments to existing, training or support programmes. Once framed it becomes the responsibility of the Mgr. Training to manage the development and delivery of new, or adjustments to existing, SAAA sponsored education elements. The responsibility for developing support programs and tools, such as some of the recent examples already noted – *RRAv*, Member Support Program, Flight Training and Safety should be determined on a case by case basis depending on resource / skill availability, but in all instances under the direction of the relevant operational portfolio manager.

The “Check” process is self- explanatory, suffice to say that the key elements of this part of the process are to look for trends, patterns and effectiveness of all messaging & training / support program to test that the SMS actions are delivering the intended outcomes. Much of the “check assessment” may be intuitive but a combination of surveys combined with internal or third-party statistical reporting etc can be used to add an increased level of confidence to the check assessment process.

The “Check” process provides the evidence or otherwise of effective SMS closed loop implementation.

5. DEFINITIONS

TERM	DEFINITION
ACT	Awareness, Check & Training / Support Programs (a part of the SAAA SMS)
ARM	Assess, Respond & Mitigate (a part of the SAAA SMS)
CASA	(Australian) Civil Aviation Safety Authority
OMS	Occurrence Management System
RISK IDENT	Risk Identification (a part of the SAAA SMS)
RRAv	Risk Radar Aviation – aircraft and pilot risk assessment tool
RUFIT	Are you fit (to fly)? • Clear head? • Not sick? • Not tired? • Not stressed? • Medications? • Drugs n alcohol free?
SAAA	Sport Aircraft Association of Australia Inc
SCoA	Special Certificate of Airworthiness
SMS	SAAA Safety Management System

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6. REFERENCES

DOCUMENT NUMBER	TITLE
SMS 2.1-001	Vision for improving safety outcomes for VH-Exp Category aircraft; July 2018
SMS 2.2-001	Matrix of SAAA Risk Mitigation Activities; July 2018
OPNS 2.3.01-000	Safety Management System
OPNS 2.3.02-000	Occurrence Management System
OPNS 2.3.03-000	Aircraft and Pilot Risk Assessment System
OPNS 2.3.04-000	Human Factors
OPNS 2.3.05-000	Safety Promotion

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