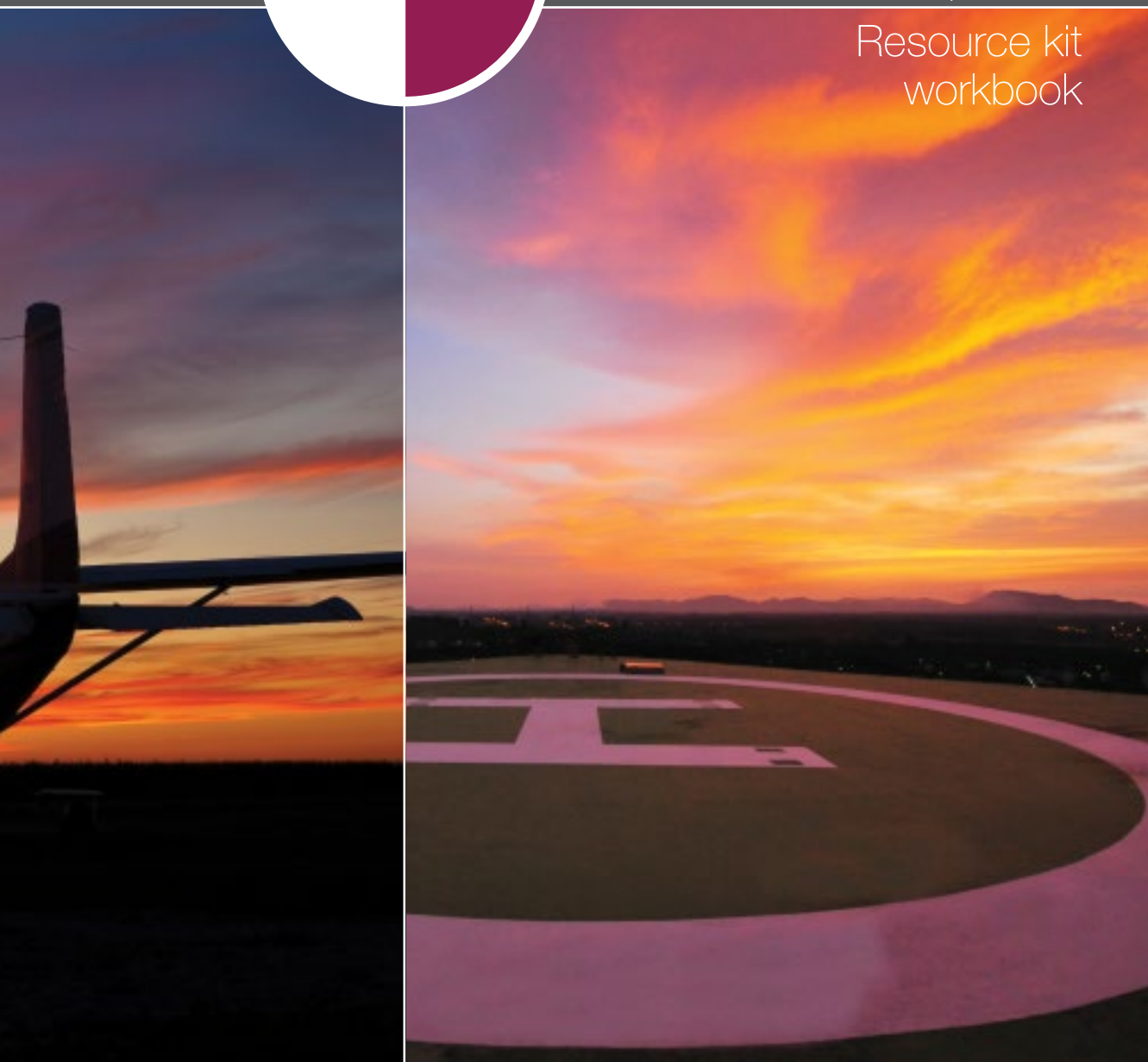
Australian Government
Civil Aviation Safety Authority

SMS 8

SMS FOR AVIATION–A PRACTICAL GUIDE | 2ND EDITION

Resource kit workbook



Contents

How to use this kit 01

Management commitment and responsibility 02

Safety policy 04

Safety policy template 05

Safety objectives and planning 06

Safety culture 08

Safety accountabilities and responsibilities 10

Appointing safety management personnel 11

Implementing an SMS—the gap analysis 12

Hazard identification 13

Risk assessment and mitigation 14

Safety assurance 15

Management of change 16

Human factors integration 17

Human factors issues at Bush Aviation 18

Safety promotion 19

© 2014 Civil Aviation Safety Authority. First published July 2012; fully revised December 2014 (2nd edition)

For further information visit **www.casa.gov.au/sms**

This work is copyright. You may download, display, print and reproduce this material in unaltered form only (retaining this notice) for your personal, non-commercial use or use within your organisation. Apart from any use as permitted under the *Copyright Act 1968*, all other rights are reserved. Requests for further authorisation should be directed to: Safety Promotion, Civil Aviation Safety Authority, GPO Box 2005 Canberra ACT 2601, or email **safetypromotion@casa.gov.au**

This kit is for information purposes only. It should not be used as the sole source of information and should be used in the context of other authoritative sources.

The case studies featuring 'Bush Aviation and Training' and 'Outback Maintenance Services' are entirely fictitious. Any resemblance to actual organisations and/or persons is purely coincidental.

How to use this kit

Size does matter. Safety management systems (SMS) are just as relevant for small charter organisations as they are for airlines, and can be scaled to suit the size and complexity of the organisation.

Small organisations may feel they are at a disadvantage when it comes to implementing a safety management system, but SMS is scalable—so not all elements of SMS will look the same in all organisations.

CASA has updated the SMS resource kit with a greater focus on small, non-complex organisations to assist these organisations in setting up and maintaining an SMS. SMS elements for a complex or non-complex organisation do not change—their complexity and detail do, therefore they should be scalable and flexible:

» Management commitment and responsibility for safety

» Safety objectives and planning

» Safety culture

» SMS implementation plan

» Safety training and communication.

The SMS workbook is part of a resource kit which also includes:

» Comprehensive, but accessible material on SMS—seven booklets covering

- an introduction to SMS
- the four key components of SMS
- human factors and how it integrates with SMS
- SMS for small, non-complex organisations

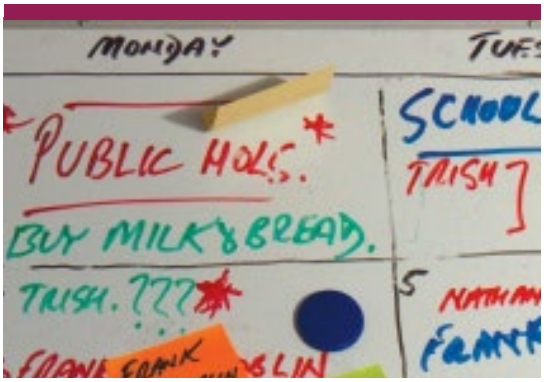
» A CD containing copies of the booklets, further reading, and a set of templates to assist in SMS documentation

» A DVD containing two dramas: *SOS* and *SMS* which feature a fictitious regional charter and training organisation, Bush Aviation and Training, as the boss makes some critical decisions. The DVD also showcases a wide range of industry specialists in a series of interviews, 'What the experts say'.

Small organisations can use the resources to guide their SMS development and promote discussion, while larger organisations may incorporate them into their existing training agenda, or organise special self-contained sessions.

Management commitment and responsibility

For an SMS to be successful, the CEO of the organisation must drive and champion it. This senior management commitment is the single-most important factor in the success of an SMS.



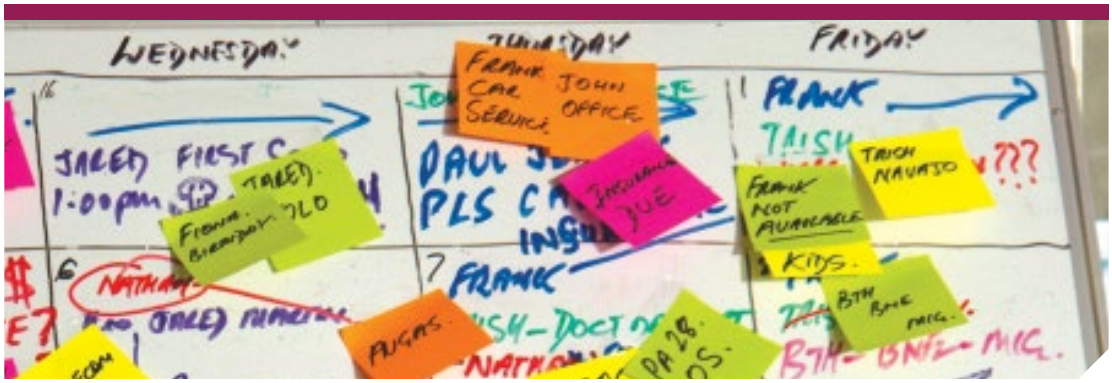
Exercises

Watch the drama *SOS*.

(Running time 16 minutes.)

1. How would you describe John's leadership style?

2. What impact does this have on Bush Aviation's safety and viability?



3. Think of a boss/leader you admire.
What are the characteristics of a good leader?

Safety policy

The organisation needs a safety policy, setting a clear, high-level direction so that the organisation can manage safety effectively. The organisation's accountable manager should sign the safety policy, which ideally will detail your safety reporting procedures; show clearly what constitutes 'unacceptable' behaviour; and highlight times when disciplinary action would not apply.

Refer to the section on policy on pages 18-19 in booklet 2 and page 03 in booklet 7:

1. The safety policy should be individual and reflect the organisation.
2. The safety policy should outline the organisation's fundamental approach to safety.
3. The safety policy should highlight a senior management commitment to safety.
4. The safety policy should show a commitment to provide adequate resources to manage safety effectively, and to manage risks to as low as reasonably practicable.
5. The safety policy should highlight responsibilities and accountabilities for safety for the whole organisation.
6. The safety policy should also foster the growth of the organisation's safety culture.

Exercise

1. Having read these, write a safety policy for Bush Aviation and Training

Safety policy template

INSERT LOGO

Vision

Goals

Insert Name

Chief pilot and owner
Company Name inserted here

Safety objectives and planning

The most effective SMS objectives are those setting specific safety goals reflecting the organisation's safety vision and senior management's commitment to the systematic management of safety.

a. Safety objectives should be SMART, that is they should be: specific, measurable, achievable, realistic and timely) so that you can measure their effectiveness.

b. You can document these safety objectives in terms of short, medium and/or long-term desired goals.

Exercises

1. Using SMART criteria, identify three short-term; three medium-term; and three long-term safety objectives for Bush Aviation.

Short-term

_____

_____

_____

Medium-term

_____

_____

_____

Long-term

_____

_____

_____

2. How would Bush Aviation monitor these objectives and ensure that they are meeting them?

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Safety culture

An organisation's safety culture is crucial to its safety achievement. The ideal safety culture supports staff and systems, recognises errors will be made and believes blaming staff will not solve problems.

A positive and supportive safety culture encourages open and honest reporting, seeks to learn from its failures and is open and fair in dealing with those involved.

1. Trust—an atmosphere of trust exists in the organisation.
2. Support—senior management openly supports, promotes and encourages an open and fair reporting culture and a positive and supportive safety culture.

Exercise

1. Based on the accident portrayed in *SOS*, and using the checklist in booklet 4, page 36, assess Bush Aviation's safety culture

Exercises

Watch *SMS*.

(Running time 7:11 minutes)

1. How do the changes/decisions John and Joan make in *SMS* affect Bush Aviation's safety culture?

2. What further steps could Bush Aviation take to improve their safety culture?

Safety accountabilities and responsibilities

The organisation must identify who will be responsible and accountable for implementing and maintaining the SMS (the accountable manager). The organisation also needs to document the safety 'who does what' and communicate these roles and responsibilities so that everyone knows.

1. You can delegate responsibility for safety issues; however, the accountable manager is always the one ultimately accountable for safety in the organisation.
2. The organisation should have an organisational chart showing the key positions with their responsibilities and the lines of accountability (this should include a direct reporting line from the safety manager/safety officer, or person responsible for maintaining the SMS, to the accountable manager).

Exercises

1. Based on the situation depicted in *SOS*, draw up an organisational chart for Bush Aviation, (clearly showing who reports to whom).

2. Then, based on the changes John makes to his operation, depicted in *SMS*, draw up a chart for the new organisation.

3. How does the new structure affect the safety of Bush Aviation's operation?

Appointing safety management personnel

The organisation should have:

1. A person in the safety role to ensure continuous improvement of the SMS. This person should report directly to the accountable manager.
2. Regular meetings of staff and any third-part contractors to discuss safety-related issues. These can take the form of:
   a. Safety meetings
   b. Toolbox meetings
   c. Safety stand-down days.

Exercise

Write a job description for the safety manager/officer.

What additional responsibilities should a safety manager/officer have?

Implementing an SMS—the gap analysis

a. To implement your SMS first you need to identify which SMS components and elements you already have, and what you need to add or modify to meet SMS as well as regulatory requirements—in other words, you need to do a gap analysis.

b. Once you have completed and documented your gap analysis, the items identified as missing or deficient—the gaps—you can begin to flesh out your SMS implementation plan. You must tailor your SMS to suit your organisation's size and complexity; what you do; and the hazards and risks associated with your operations.

Phased approach

Your gap analysis is likely to identify deficiencies in your readiness to implement an SMS, so it makes more sense to have a phased approach to bringing it in. If you do take a phased approach, then your plan will need to include time lines for starting and completing each of the major SMS elements.

Exercise

Using the checklist in booklet 2, pages 24–29, do a gap analysis for Bush Aviation.

Hazard identification

A hazard is a source of potential harm, or a situation with the potential to cause loss. Hazard identification is fundamental to risk management—if a hazard cannot be identified, it cannot be controlled.

The organisation should demonstrate the following minimum:

1. Hazard identification is used regularly to assess changes within the organisation. These changes could be:
   - An organisational (structural) change
   - Rapid expansion or contraction
   - Whenever new equipment or procedures are introduced
   - Changes to key personnel positions
   - Whenever the organisation believes a new risk may be encountered.
2. To identify hazards, you should have a simple, confidential, convenient (and open and fair) safety reporting process.

Exercises

Bush Aviation is expanding its business. John has embarked on a new advertising campaign, and is about to introduce a new type to his fleet —the ex-Royal Flying Doctor Service King Air.

What hazards could these developments bring to the operation?

Risk assessment and mitigation

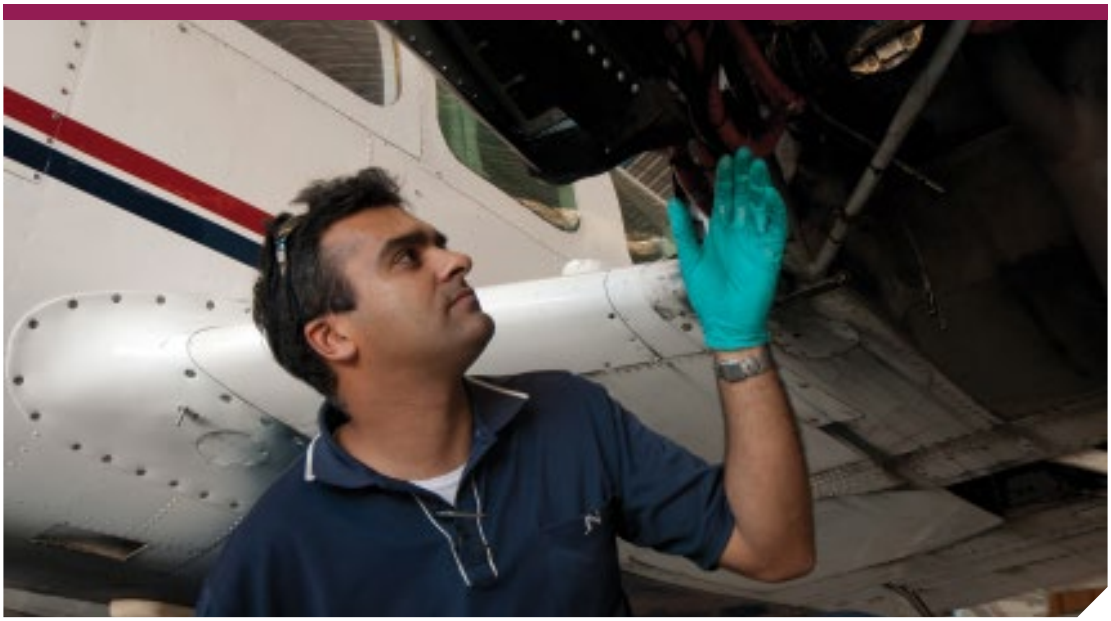
Risk assessment and mitigation—risk management—is an integral component of safety management and typically involves five necessary steps:

- Hazard identification
- Risk analysis probability
- Risk analysis severity
- Risk assessment and tolerability
- Risk controls and mitigation.

The key to risk assessment and mitigation is to keep the process simple.

Exercise

Assess the risk severity and probability of the hazards you have identified above in John's expansion of his business, using the charts and information in booklet 3, pages 6–7



Safety assurance

Internal elements of your safety assurance will include:

- Safety performance monitoring
- Internal safety investigation
- Change management
- Continuous SMS improvement
- Flight data analysis program (FDAP) (if required).

The organisation should do the following minimum:

1. Review how the organisation complies with SMS legislative requirements.
2. Verify that safety performance indicators are linked to safety objectives.
3. Assess how effectively the SMS procedures and processes described in the SMS manual (or SMS documentation) are implemented and practised.

The organisation should have the following as a minimum:

1. A simple, user-friendly reporting system.
2. Objective internal investigations: the focus should be on the 'what' and 'how' rather than on 'who' was to blame.
3. Review of all findings from incidents by the safety committee, or safety representative; recommendation/s for improvements/changes/amendments to the SMS, if required.
4. Dissemination of any lessons arising from investigations throughout the organisation, and (where possible) other similar organisations. This can be accomplished by:
   a. Toolbox meetings
   b. Email
   c. Company intranet
   d. Safety bulletins.

Management of change

Management of change should follow the same structured approach you use for ordinary risk assessment.

Exercise

Based on your hazard and risk assessment above, what change management plan would you put in place at Bush Aviation for the introduction of the new King Air to the fleet?

Human factors integration

Integrating human factors (HF) into your SMS means you can systematically identify and analyse HF issues, and act appropriately to address them. Applying HF in your SMS must be practical and methodical—it helps to ensure compliance and make the most of everyone's performance.

You should have the following minimum:

1. Be able to demonstrate that HF has been integrated into the organisation's SMS, for example:
    - Ensuring organisational processes and actions are transparent—staff know and understand who does what, and why
    - Involving staff—respecting and valuing their input. This is especially important in risk and change management.
    - Encouraging timely, relevant and clear two-way communication, by giving, for example, feedback from audits, safety reviews or safety reports
    - Ensuing fair treatment—with an open, safety reporting culture, demonstrated in, for example, timely incident follow-up and investigation findings.
2. Be able to demonstrate that HF training is being adopted by the organisation.

Human factors issues at Bush Aviation

Examples of typical human factors issues may include:

- Communication breakdown
- Lack of understanding
- Incomplete briefings
- Time pressures
- Environmental hazards (lighting, noise, weather etc.)

Exercises

To what extent can these HF issues be seen at Bush Aviation?

What other HF issues can you identify at Bush Aviation?

How do they affect safety?

Safety promotion

An SMS must include safety promotion, which includes SMS training and education, and SMS safety communication.

1. Safety training—organisations must ensure that their personnel are trained and competent to perform their roles within the SMS, and that the training programs are tailored to the needs and complexity of the organisation.
2. Safety promotion communicates the lessons learned, safety information, safety procedures, and key safety messages from senior management to foster improved safety performance.

Exercises

Outline the training employees at Bush Aviation would need.

Bush Aviation is a small organisation, with fairly direct lines of communication.

» What types of safety communication would be most appropriate for a small, non-complex organisation such as Bush Aviation?

» What subjects/topics would be most appropriate?

Further notes

Follow CASA on

YouTube CASAbriefing | @CASAbriefing | LinkedIn | www.casa.gov.au/sms