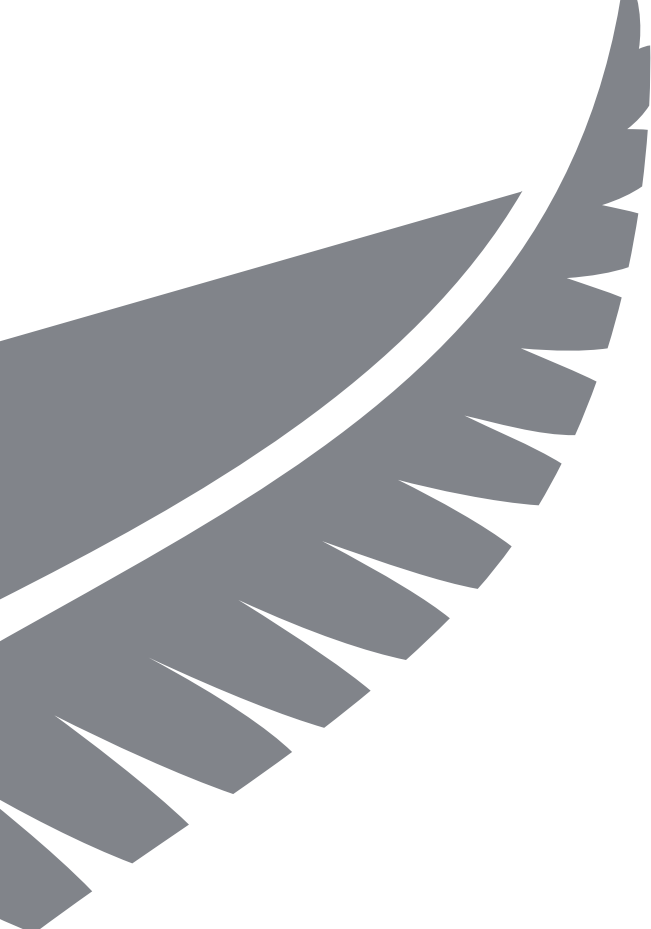


# 03

## IMPLEMENTING SAFETY MANAGEMENT SYSTEMS GUIDELINES FOR SMALL AVIATION ORGANISATIONS

CIVIL AVIATION AUTHORITY OF NEW ZEALAND  
BOOKLET THREE





# PREFACE

The Civil Aviation Authority published Advisory Circular AC 00-4 'Safety Management Systems' in December 2012 to provide comprehensive guidance material to support organisations implementing a safety management system (SMS).

This booklet contains information designed to help aviation organisations that are certificated under the Civil Aviation Rules mentioned in AC 00-4 and any other small aviation organisations keen to proactively improve their safety systems, implement an effective Safety Management System; one that is built-for-purpose, without being difficult or resource-intensive. This booklet has been written specifically for organisations that have a small number of staff and/or non-complex organisational activities. CAA Advisory Circular AC 00-4 'Safety Management Systems' gives more specific definitions of what may constitute a 'small organisation'.

This booklet may be read in conjunction with the other CAA Industry Resource Kit booklets:

- **BOOKLET ONE** – Safety Management Systems (SMS): an introduction
- **BOOKLET TWO** – From Quality Management Systems to Safety Management Systems: an enhancement guide
- **BOOKLET FOUR** – Aviation Risk Management; an introduction.



# TABLE OF CONTENTS

## IMPLEMENTING SAFETY MANAGEMENT SYSTEMS FOR SMALL AVIATION ORGANISATIONS: AN OVERVIEW

06

Purpose of an SMS	06
Scaleability – What Does it Mean?	08
Defining Your SMS Implementation Objectives	08
Building Confidence	08

## UNIQUE FEATURES OF SMALL AVIATION ORGANISATIONS

10

Personnel Resources	10
Size and Complexity	10
Structures and Processes	10
Communication and Education	10
Resources Available to You	10

## SCALING THE IMPLEMENTATION OF SMS

11

Having a Mix of Proactive and Reactive Processes and Activities	11
Alignment with Existing Processes	12
Focusing on Effectiveness	12
Finding Creating Ways to Achieve a Scaled SMS	12

## GUIDANCE FOR IMPLEMENTATION

13

## STAGE 1: GAP ANALYSIS

14

Review Elements and Requirements of an SMS	14
Identify What You Have	14
Consider a Gap Analysis	14

## STAGE 2: DESIGN AND DEVELOPMENT

16

Work Through Each Element to Develop or Confirm	16
Document Your SMS	16

## STAGE 3: INTRODUCTION AND ROLLOUT

18

Get Your People Involved	18
Communicate the Changes	18
Set a Realistic Timeframe	18

## STAGE 4: IMPROVEMENT AND MEASUREMENT

19

Gather Feedback	19
Measure Performance	19
Continue to Improve Your SMS	19

## WHERE TO GET ASSISTANCE

21

# IMPLEMENTING SAFETY MANAGEMENT SYSTEMS FOR SMALL AVIATION ORGANISATIONS: **AN OVERVIEW**

## PURPOSE OF AN SMS

A SAFETY MANAGEMENT SYSTEM (SMS) IS SIMPLY AN ORGANISED APPROACH TO MANAGING SAFETY.

Implementing an SMS is not a new initiative for aviation, and there may be a lot of things you are already doing. Here are some of the best parts:

- ***It's proactive*** – that is to say, it's forward-looking. With an SMS, small organisations no longer wait for something to happen to fix it, but see it coming.
- ***It's holistic*** – an SMS is designed to cover all parts of your organisation, and also fit with others you work with

(eg the aerodrome you're based on, the maintenance organisations you use).

- ***It helps develop a good safety culture*** – making safe decisions and safety-conscious behaviours become the norm in your business, rather than something you have to push for every day.

One of the important things you need to remember is that while you're primarily doing this for your own organisation, you're also doing it for the others you work with, and for the regulator, to gain and maintain confidence in the safety of your operations.

# WHY DO SMALL ORGANISATIONS NEED AN SMS? HERE ARE SOME BENEFITS

## FOR SAFETY REASONS

- ***It helps you proactively reduce the risk of accidents and incidents.*** Accidents and incidents often have complex causal factors. An SMS helps you identify these causal factors before they cause harm.

## FOR FINANCIAL REASONS

- ***It can save you money in lots of little ways.*** An SMS helps to prevent or minimise 'the little things' such as minor injuries that lead to a day or two 'lost time injury', damage that only causes minimal down time, legal costs, etc. It's the multitude of little things that can add up to pose a greater risk to your day-to-day operations.
- ***It improves your financial profile.*** Financial institutions and insurers are risk averse. They assess lending criteria on risk factors which they have built up over many years. Showing them that you understand and are managing your risks will give them greater confidence in your organisation.

## FOR REGULATORY REASONS

- ***It's a way to meet a number of different regulatory requirements.*** The need to comply with the law will always

exist, and an SMS can be a good umbrella for a number of legislative requirements, including your Health, Safety and Environmental (HSE) obligations. For example, if you have a reporting system that captures all of your hazards and risks, it's easier to meet all HSE reporting requirements as well. A good reporting system lets you address the known hazards.

## FOR MANAGEMENT OF ALL BUSINESS RISKS

- ***It can help you identify all risks, not just safety ones.*** Taking a risk-based approach to safety management gives you the opportunity to use the same systems and processes to identify, assess and control other types of risk. For example, a risk assessment on a new business opportunity may highlight safety risks, but can also identify risks to your reputation, to financial viability, etc.

## FOR OVERALL BUSINESS MANAGEMENT

- ***It can open up more business opportunities.*** Several small organisations in New Zealand have won contracts as a result of demonstrating they had an SMS. In turn, having an SMS facilitates more business opportunities as a result of being more efficient. These can be big advantages for a small company. An SMS can facilitate effective business practices.

## SCALEABILITY

### WHAT DOES IT MEAN?

There is no one-size-fits-all SMS. You can make your systems, processes and activities as small or large as required, as long as they meet SMS objectives. For example, a management review of your SMS effectiveness could take you half a day, and include a couple of pages of documented results; this wouldn't be the case in a large, complex organisation. Small aviation organisations around New Zealand have started implementing SMS (and some have finished); it absolutely is possible.

Scaling, or sizing your SMS doesn't mean that you pick and choose which elements of an SMS to implement. It's important that all elements of an SMS are in place for an effective outcome. However, being a small organisation, the size and scope of your implementation of these elements will generally be much smaller than for a large company.

## DEFINING YOUR SMS IMPLEMENTATION OBJECTIVES

The secret to success in starting to implement an SMS is to choose some realistic objectives. For example, you could start by reviewing Booklet One for an overview of an SMS, work out

what you don't have in place, and what you most likely need first. Make this your first objective and give yourself a timeframe to complete it. Start with actions that have the most impact, as this will be a good motivator.

## BUILDING CONFIDENCE

It's critical for you to remember that implementing a successful SMS is only possible with on-going effort and focus. You've got a lot of it in place already, so just choose what to tackle next, building your system step by step.





# UNIQUE FEATURES OF SMALL AVIATION ORGANISATIONS

## PERSONNEL RESOURCES

Your ability to accommodate the additional management responsibilities of an SMS will depend on current company structure and systems. You may need to increase your staff to manage the SMS. However, this investment will bring efficiencies and safety benefits. You'll also find that an SMS helps structure the tasks of your staff and the relationships between them.

## SIZE AND COMPLEXITY

You could have very few staff and a rather complex organisation (eg with several certificates). In this case the benefits of implementing an SMS are even more pronounced, as the risk management aspects will help you keep a handle on the different types of operational risks and manage growth opportunities.

## STRUCTURES AND PROCESSES

Most small aviation organisations don't need complex, formal structures and processes; this is simply not how work gets done. Your SMS will add a few formalities, but it doesn't need to be overwhelming, and the benefits will outweigh the effort required to set up your system.

## COMMUNICATION AND EDUCATION

Internal communication in small organisations is generally straightforward. This will work to your advantage in promoting a safety culture and sharing safety critical information. There will also be fewer people to familiarise and train in the skills and knowledge they need.

## RESOURCES AVAILABLE TO YOU

There are lots of freely-available resources to help you implement an SMS. Carry out your own research, and use information and advice from the CAA and industry associations. Nobody understands your business and operations better than you so start with what you are already doing well and understand where you need to improve.

# SCALING THE IMPLEMENTATION OF SMS

There are some important considerations when deciding the size and complexity of your SMS.

## HAVING A MIX OF PROACTIVE AND REACTIVE PROCESSES AND ACTIVITIES

It's important to have both proactive and reactive elements in your SMS. **Here are some examples:**

EXAMPLES OF PROACTIVE PROCESSES AND ACTIVITIES	EXAMPLES OF REACTIVE PROCESSES AND ACTIVITIES
<ul style="list-style-type: none"><li>• Developing an Emergency Response Plan</li><li>• Risk management plan on new venture or operational activity</li><li>• Processing of safety reports about a hazard or risk</li><li>• Trend analysis to predict future safety risks</li><li>• Documenting your safety processes and activities so all staff can learn</li></ul>	<ul style="list-style-type: none"><li>• Activating an Emergency Response Plan to handle an occurrence</li><li>• Safety investigation</li><li>• Processing of safety reports about an incident</li><li>• Reviewing safety processes and activities that haven't been followed</li><li>• Communication of safety incidents and accidents</li></ul>

## ALIGNMENT WITH EXISTING PROCESSES

When deciding how you go about implementing an SMS, consider how any new processes and practices can be aligned with what you are currently doing. The following diagram illustrates the concept that you are building on what you have, not starting from scratch.



## FOCUSING ON EFFECTIVENESS

Do what works. There is a wide range of options for implementing the 13 elements; focusing on what's effective for your organisation is vital. Think about how you will know whether your SMS is effective and how you will demonstrate this (eg achieving your safety goals).

## FINDING CREATIVE WAYS TO ACHIEVE A SCALED SMS

The secret to an appropriately scaled SMS is finding the most cost-effective way to achieve a successful result. For example, it may not be necessary to invest in a complex electronic reporting system, when you could create a simple spreadsheet to capture information (even if this is just initially).

# GUIDANCE FOR IMPLEMENTATION

The following is a summary of the main considerations when implementing an SMS in a small aviation organisation. For more detailed information on these stages refer to the Advisory Circular (AC 00-4).

IMPLEMENTATION GUIDE		
STAGE 1	GAP ANALYSIS	Review elements and requirements for SMS Identify what you have Identify what you need Develop your Implementation Plan
STAGE 2	DESIGN AND DEVELOPMENT	Develop your SMS Work through each element to develop it or confirm it is already in place and effective
STAGE 3	INTRODUCTION AND ROLLOUT	Engage the organisation Formally introduce the plan Implement against realistic timeline
STAGE 4	IMPROVEMENT AND MEASUREMENT	Gather feedback Refine the System Measure performance Continue to improve your SMS

# STAGE 1: GAP ANALYSIS

## REVIEW ELEMENTS AND REQUIREMENTS OF AN SMS

Find out what an ideal SMS looks like and consider this in the light of your organisation. The following resources and actions should help.

### *Use the CAA SMS resources*

AC 00-4 has lots of useful information, and it's an amalgamation of the best parts of numerous pieces of guidance material from around the world. Put aside the time to read it thoroughly. If this seems too much, ask yourself whether 3-4 hours is too long to invest in a new management system for your organisation. Next, review Booklets One and Two once more for the highlights and practical advice.

### *Work together: industry and Regulator*

Work with similar or partner organisations and industry groups to compare and contrast your understanding of what's required. Don't aim for a cut-and-paste solution though; it won't work well and may actually waste time and effort. The CAA is happy to answer your questions and suggest other resources.

IMPLEMENTATION GUIDE	
STAGE 1	GAP ANALYSIS
STAGE 2	DESIGN AND DEVELOPMENT
STAGE 3	INTRODUCTION AND ROLLOUT
STAGE 4	IMPROVEMENT AND MEASUREMENT

## IDENTIFY WHAT YOU HAVE

While you are reading through AC 00-4, jot down some notes about what you already do, and particularly what you do well. Use the language your organisation understands in your SMS. You don't need to use new or long-winded terms.

## CONSIDER A GAP ANALYSIS

Here's the part where a lot of organisations feel initially overwhelmed by all the things they may not have in place (and then promptly fail to start the gap analysis!). If you follow these steps, you'll end up with an easy, manageable list of actions to focus on.

A gap analysis doesn't have to take too long or be overly complex – you could even do an initial pass as you read through the AC.

**On the next page is an example of a simple table to capture results.**

NO.	ELEMENT	WHAT WE HAVE	WHAT WE DON'T HAVE	ACTIONS
1	Safety policy and accountability	<ul style="list-style-type: none"> <li>• Quality Policy (with safety mentioned)</li> <li>• HSE rep</li> </ul>	<ul style="list-style-type: none"> <li>• Safety commitment statement</li> <li>• Safety objectives for 2014</li> </ul>	<ul style="list-style-type: none"> <li>• CEO to develop and sign commitment statement</li> <li>• Workshop</li> </ul>

Now you need to do it for the other 12 elements (see Booklet One).

## 01. SET SOME SAFETY PERFORMANCE MEASURES

You can read all about safety performance measures in AC 00-4, but essentially they're tangible ways to measure how well you are doing. It's important to set them now, so you have a yard-stick later on when you're evaluating effectiveness.

## 02. REVIEW THE ACTIONS IDENTIFIED, AND PRIORITISE THEM

Come up with sensible timeframes and then include these actions in your Implementation Plan. It's also useful to do a quick sensibility check, to ask yourself, 'do I really need everything I've identified to achieve a successful system?' This is a good time to see if your actions sufficiently address the gaps identified.

# STAGE 2: DESIGN AND DEVELOPMENT

In this stage, it will be important to involve the person you've designated as your SMS manager or coordinator. If it's just you, consider seeking help or support from a partnering company or industry association.

## WORK THROUGH EACH ELEMENT TO DEVELOP OR CONFIRM

Using the action item list from the gap analysis, go through and introduce all underdeveloped or absent elements. Be sure you keep telling your staff what's happening and what their role is in implementing the SMS.

### Just a few things to consider while you do this:

- **Think about each action** – does it require the development of a philosophy (eg, safety goals), a process (eg, safety reporting system) or a practice (eg, risk assessment tool)? It can help to differentiate these to make sure you have the philosophies sorted out first
- **You don't need to have everything up and running straight away** – based on your priorities from stage 1, develop a plan to implement the actions in a phased manner

IMPLEMENTATION GUIDE	
STAGE 1	GAP ANALYSIS
STAGE 2	DESIGN AND DEVELOPMENT
STAGE 3	INTRODUCTION AND ROLLOUT
STAGE 4	IMPROVEMENT AND MEASUREMENT

- **Go with what works** – don't try and force a process or activity that clearly has no place in your business. For example, if you are developing a risk assessment process, think about how complex you want to make this process; make it practical and keep a focus on what you're trying to achieve (eg, identifying the safety and business risks for a new venture).

## DOCUMENT YOUR SMS

You need to document the processes and activities you currently carry out, and the ones you plan to introduce. A sensible approach is to add your SMS processes and activities to the documentation you already have, such as your Operations Manual.





# STAGE 3: INTRODUCTION AND ROLLOUT

## GET YOUR PEOPLE INVOLVED

No matter how small your organisation, failing to get your people involved is generally a showstopper. So be sure your people are on-board and understand what you're trying to achieve. A clear safety policy and commitment from the Chief Executive is the best place to start. A good safety culture begins with the Chief Executive 'walking the talk'. A few one-on-one discussions go a long way.

## COMMUNICATE THE CHANGES

Let your staff know about the changes, why they are being implemented, the benefits they are designed to bring, and, of course, their own roles within the SMS.

Who else may benefit from knowing that you have an SMS in place? For example, as a small operator based on an airfield, you will need to coordinate your Emergency Response Plan with the airfield operator and your reporting system may have safety information that's worth passing on to them.

It's worth letting the CAA know; this will help build the regulator's confidence in your organisation.

IMPLEMENTATION GUIDE	
STAGE 1	GAP ANALYSIS
STAGE 2	DESIGN AND DEVELOPMENT
STAGE 3	INTRODUCTION AND ROLLOUT
STAGE 4	IMPROVEMENT AND MEASUREMENT

## SET A REALISTIC TIMEFRAME

Be sure to space out your implementation activities over a reasonable timeframe. Even for small organisations, it will take time to implement your SMS and longer for it to mature. Do one or two things at a time. Make sure these are in place and working before moving to the next step in your plan.

Keep checking your progress. For example, if you've implemented a new safety reporting process but haven't received (or submitted) any reports, find out why.

# STAGE 4: IMPROVEMENT AND MEASUREMENT

An important part of implementation is seeing whether your actions have worked. This stage focuses on what you can do to determine this. Do frequent reviews during your initial development; you can increase the interval as your SMS matures.

## GATHER FEEDBACK

To understand what's working and what isn't, consider getting both an internal and external perspective.

### INTERNALLY:

- Review AC 00-4 again, and compare your thoughts now with what they were when you first read it
- Use your initial gap analysis to identify what may need updating – have things changed? Review what's been achieved against your initial objectives
- Get together with your people to see what they think.

### EXTERNALLY:

- Check in with your partner organisation or industry association
- Consider having an independent evaluation done
- Ask for feedback from CAA auditors.

IMPLEMENTATION GUIDE	
STAGE 1	GAP ANALYSIS
STAGE 2	DESIGN AND DEVELOPMENT
STAGE 3	INTRODUCTION AND ROLLOUT
STAGE 4	IMPROVEMENT AND MEASUREMENT

## MEASURE PERFORMANCE

This is a step that many small aviation organisations may find difficult. It all depends on your yard-sticks, the ones you set in stage 1. Use them to see how far you've come, and tell your staff about the progress made.

## CONTINUE TO IMPROVE YOUR SMS

The previous stages should give you an indication of what can be improved. Refining and enhancing your SMS doesn't stop. If you think you've done all you can, just remember that continual improvement is fundamental to your SMS. Your implementation is successful when SMS becomes embedded in your day-to-day activity, works consistently, and is effective. This won't happen overnight, but with time you'll see the system maturing and your confidence growing.



## WHERE TO GET ASSISTANCE...

It's recommended that you seek out and use different resources and points of contact to help you out.

**Here are some specific suggestions:**

### READING

- AC 00-4 Safety Management System
- The CAA Implementation Strategy
- Industry Resource Kit booklets
- Vector magazine articles (SMS special features)
- CAA safety reports
- CAA SMS website: [www.caa.govt.nz/SMS](http://www.caa.govt.nz/SMS)

### INDUSTRY KNOWLEDGE COLLECTION

- Aviation safety libraries and information sites
- ICAO's website ([www.icao.int/Safety/Safetymanagement](http://www.icao.int/Safety/Safetymanagement))
- ICAO Safety Management Manual (Doc 9859)
- Industry body resources
- SKYbrary articles, especially from the Safety Management International Collaboration Group (SM ICG)  
([http://www.skybrary.aero/index.php/Safety\\_Management\\_International\\_Collaboration\\_Group\\_\(SM\\_ICG\)](http://www.skybrary.aero/index.php/Safety_Management_International_Collaboration_Group_(SM_ICG)))

### WHO TO SPEAK TO

- Your CAA Aviation Safety Advisors
- Other companies who've got a mature SMS
- Risk and safety specialists.

### HOW TO UP-SKILL IN SMS

- Industry training
- Diploma Safety Management Systems
- Diploma Risk Management
- Diploma Regulatory Oversight and Governance.

### EVENTS AND MEDIA

- SMS Forums and other CAA road shows
- Safety management and risk management conferences
- SMS related studies and reports.

This booklet is based upon CAA Advisory Circular AC 00-4,  
Safety Management Systems, Version 1.0, 19 December 2012.

**FOR MORE INFORMATION CONTACT CAA STAFF AT**

Email: [sms@caa.govt.nz](mailto:sms@caa.govt.nz)

Web site: [www.caa.govt.nz](http://www.caa.govt.nz)





**“EITHER WE WILL MANAGE  
HUMAN ERROR OR IT  
WILL MANAGE US”**

— PROFESSOR JAMES REASON

03