Taking the Plunge!

While the aviation sector is relatively new to Safety Management Systems, a range of industries have been using them for some time now. What can we learn from those industries, and just how important has leadership been?

If the aviation business is all about keeping people comfortable and secure at height, the opposite could be said of bungy jumping.

Despite the inherent risks of throwing people off high things, AJ Hackett Bungy is renowned for the safety record they’ve built over 30 years.

So good is their record, the Code of Practice they created has become an industry standard in New Zealand and Australia, and is used as a guideline throughout the world.

AJ Hackett Bungy Health and Safety Officer, Malika Rose, knows the value of embedding a safety culture throughout an organisation. So much so, her email signature reads ‘Safety… Did it, done it, doing it tomorrow!’

“Safety does have to come from the top down, but it also comes from every angle,” says Malika.

“Our Board embraces it and wants everybody to be proactive. We’ve also got a strong health and safety committee, which is empowered to do good things.”

Not only is the health and safety committee empowered, but it is also given the resources and funds to make good ideas happen.

“A couple of our supervisors went out and researched mental health, and ended up running a presentation through the whole business. Their training was adopted across the company, and everybody was able to see the positive results,” says Malika.

New staff inductions include a strong health and safety component from day one, which is then repeated 30 days into the role. After 60 days new staff have to give the induction back to the person who inducted them.

AJ Hackett also encourages a strong reporting culture, making it easy for crew to report occurrences through an online interface.

“We talk to the crew and reinforce that reporting is key, rewarding good culture.

“We really push the reporting of near misses, and we investigate them and smaller occurrences. We look for patterns, and regularly give feedback to the crew.”

Just Culture is a key tenet of any good Safety Management System, and AJ Hackett are believers. While swift and decisive action is important, so too is fair and just treatment.

“Somebody having a near miss will be drug and alcohol tested, stood down, and retrained if necessary. There’s no stigma around that, as long as people have followed process,” says Malika.

“If people aren’t sticking to procedure, we also question whether the procedure is still correct.”

And that’s another key to implementing a good SMS: Constantly seeking to improve, and measure success. It’s hard to measure accidents that aren’t happening, but there are other things you can look at.

“We try and measure our adherence to procedures, and audit how our people are working. We observe them doing their job, and talk to them.

“Last year we went through a gap analysis, from the café to bungy making. We asked, ‘what do we do that could hurt people?’”

Watching Generational Change

The local maritime industry, too, has been using Safety Management Systems for more than two decades. Maritime New Zealand’s National Compliance Manager, Bruce McLaren, says he’s seen real generational change.

“It’s really interesting to see a second and third generation in the fishing sector taking SMS on board, without question, while their fathers may have resisted it. There is far less tolerance for risk today, and they’re far more open to doing something about it.

“Rather than say, with arms crossed, ‘I’m safe all the time’, which is what their fathers may have said, the new generation is saying ‘I’m as safe as I can be in this high-risk environment, here is the evidence to prove it, and we’re constantly looking at ways to improve on this.’”

In 2014, Safe Ship Management (SSM) was replaced by the Maritime Operator Safety Systems (MOSS) – each a mandatory form of Safety Management System. More than 1500 commercial operators are currently in MOSS, and must satisfy Maritime New Zealand that they’re meeting its requirements.

“People are often enthusiastic to begin with, and things are put in place, including policies, procedures, training, and supervision. But, a lot of systems fall over at that point. That’s as far as they go,” says Bruce.
“To close that loop, you must have monitoring, implement an audit process, or ensure there are checks to make sure the people who are meant to be doing things are actually doing them. The lessons learned from those internal checks must be assessed and applied within the SMS.”

Bruce stresses the need for strong leadership.

“Chief executives and boards not only have to buy into the SMS, they have to lead it, communicating to the rest of the organisation, ‘Hey, we are serious about our Safety Management System and we expect you to be too.’

“The introduction of ‘Officer’ duties in the new Health and Safety at Work Act 2015 has really helped reinforce this key principle.”

**The Importance of Leadership**

Francois Barton, executive director of the Business Leaders’ Health and Safety Forum, says the advantages of embracing SMS are far-reaching.

“Many CEOs take safety walks around their company to signal to their people that safety is a priority – which is great. But increasingly, many business leaders are doing it to actually learn, not just as a signalling exercise – doing it as a genuine commitment to learn something.

“Take a deep breath and listen to your people. You will learn a lot about your business – what’s helping and what’s hindering performance… not just health and safety.”

Compliance is only one reason why health and safety is important.

“Compliance is a reality, but if it’s your only goal, you could easily waste time and money – chasing compliance by looking at compliance only can be a mirage,” he says.

“The legislation is quite deliberately not prescriptive. People think there are a bunch of boxes to check and a bunch of accreditation labels to possess, and therefore that equals safety. A phone book of paper is not going to keep people safe,” says Francois.

“It’s critical there’s buy-in from the top. Leadership drives culture and culture drives performance. What interests the boss fascinates the team.

“But make sure leadership focus is on people and managing the risks to keep them safe - don’t just tick a box.”
The Changing Role of the Senior Person

Some characteristics sought by the CAA in a Senior Person remain constant – experience, knowledge, and integrity among them. SMS means a Senior Person will also need to demonstrate a proactive and energetic approach to safety.

There’s a new Senior Person role – that with special responsibility for Safety Management Systems.

The role will incorporate some of those associated with the era of internal quality assurance, such as overseeing an audit programme and management reviews. But the focus of the position will be overseeing the organisation’s Safety Management System, including proactively identifying hazards and ensuring their associated risks are controlled.

“The sort of person we’re looking for,” says Mark Hughes, CAA’s Deputy Director Air Transport and Airworthiness, “will have a sound understanding of safety management, including finding aviation safety hazards, mitigating risks, safety performance, and monitoring and measurement.

“It differs from quality assurance in that with QA, one person was the go-to for safety, and the various line managers would say, ‘You assess my part of the organisation, you tell me what’s wrong and how to fix it’.”

But, Mark says, a fundamental of SMS is that everyone is responsible for applying it in their particular area.

“In a Part 119 air operation, for instance, you have a chief executive, then a Senior Person for flight and ground operations, a Senior Person for training and competency assessment, one for security, and one for investigating occurrences.

“All those Senior Persons have to have knowledge of SMS, and promote associated safety behaviours within their area. The Senior Person responsible for Safety Management Systems then makes sure the overall SMS ‘machinery’ is working.”

Resourcing

In assessing the suitability of a candidate to be a Senior Person, of any hue, the CAA examines the time the individual will have available for the role.

“People often hold multiple roles within an organisation, or multiple roles within industry,” says Mark. “With SMS now an integral part of the Senior Person role, the CAA needs to be convinced they will have enough time to be effective in all those roles.

“For instance, will they spend enough time on site? Will they dedicate enough time to the job? We need confidence that not only is the candidate capable, but they’re actually going to be dedicating sufficient time to their responsibilities.

“The chief executive, of course, is responsible for providing sufficient people, resources and facilities so their employees can carry out their work effectively.

“But a candidate for Senior Person should also be assessing whether they have the time to do the job they’ve been employed or contracted to do.

“If the answer is ‘no’, they should be having a talk with their chief executive before their application gets to the CAA.”

Mark says in a smaller organisation, a part time role may be appropriate, but in a larger one the Senior Person may need to be full time.

“Senior Persons don’t have to be on site all the time. In the Skype and mobile phone era, a certain amount of time can be spent away from the base of operations. But if they’re in a supervisory role, it’s very hard to promote change, and to monitor the organisation completely, from afar.

“Vague commitments of, ‘Oh well, I’ll be monitoring my phone’ do not demonstrate the hands-on supervision needed, nor give the CAA confidence that the Senior Person applicant can be effective in their important safety role.”

Use or Lose It

Mark says the CAA is always interested in the ongoing ability of the Senior Person to do their job.

“For instance, what they are doing in terms of professional development. Are they keeping themselves updated? Are they attending user group meetings, are they up to play with rule changes, are they totally across exposition changes in their company? So all those things they need to do to keep themselves ahead of the game, that’s part of the role too.

“They should never think, ‘Hey, I’ve got through the gate, now my job is done’. Continuing to meet the fit and proper person requirements is an ongoing obligation. It’s definitely not just ‘once every five years, I tick a box’.”

“Genuine Commitment”

The CAA also assesses the approach to safety of a candidate for Senior Person. This is especially important to achieve the benefits of SMS. Is there a genuine commitment to safety for its own sake, or is the bar they’re shooting for, minimum compliance?
Mark Hughes says that’s critical for him.
“An attitude is demonstrated in behaviour, so we’re looking for behaviours that would illustrate they’ve got a positive, proactive and constructive approach to safety.

“We’re also keen to assess their level of communication, with us, the regulator, and with their own people.

“Is it open and two-way? What is their attitude to employees reporting errors? To their employees offering quality improvement suggestions? To reporting occurrences to the CAA?

“In an interview, I might ask something like, ‘If you had a serious occurrence or deficiency at your organisation, who would you talk to about that?’

“Given the critical nature of these supervisory roles in fostering a safety culture, it’s important the candidate is prepared to go beyond simple compliance with the rules, and describe how they intend to raise the bar at their organisation.”

The Basics
While knowledge of SMS, and a willingness to work with it, is new to the Senior Person interview, the longstanding fundamentals of a successful application remain the same.

“They have to do their research before applying,” says Mark.

“They’re accountable to the Director, so they need to know their way around the Act and the rules. They need to know their organisation well, its exposition, and its particular hazards and risks, and how they are to be managed.

“An attitude is demonstrated in behaviour, so we’re looking for behaviours that would illustrate they’ve got a positive, proactive and constructive approach to safety.


Read More
See the various sections on personnel requirements in Part 119 Air Operator – Certification. For further guidance, read AC 119-1 Air Operator Certification.

Go to www.caa.govt.nz, “Quick Links > Forms > Fit and Proper Person Process” for guidance on the role.


Andrew Crawford, Senior Person, Sounds Air

“Once I changed my mindset from a QA-based approach to one based on the principles of Safety Management Systems, it was relatively straightforward to pass on to staff.

“They learn more willingly and effectively from the people they know and trust. Yes, it takes time and perseverance, but it was crucial that adoption of SMS was done from the inside of our organisation.

“We are already seeing a quantum shift in thinking, and people taking genuine responsibility for SMS.”

Image courtesy of Sounds Air.
SMS Certification for Chief Executives

Some companies become certificated in Safety Management Systems with seemingly little trouble. What do the CEs of those companies have in common?

A robust safety management system should flow through an entire operation in a positive way, influencing the safety-linked behaviour and values of each employee. But it is the attitude of just one person – the chief executive – who largely drives whether the actual process of becoming SMS certificated is filled with hooks and hiccups, or is smooth and straightforward.

And it’s apparent to the CAA that the companies which have become SMS certificated on their first attempt have chief executives who share a similar approach.

“They’re already trying to build as strong a safety culture as possible,” says Adrian Duncan, a CAA safety management systems technical specialist. “They have this goal of their business operating smoothly and safely, and their bottom line untroubled by the potential expense of having to deal with an accident.

“Then, before they do anything else, they’ve come to a thorough understanding of what SMS is all about. They’ve read AC100-1, researched creditable sources on the internet, and consulted other operators. They’ve checked out the CAA’s sector risk profiles, and they’ve attended a CAA safety management system workshop.

“None of this stuff is rocket science. They’ve taken the time to learn the fundamentals, and they’ve led the organisation through the introduction of their SMS.

“In learning those basics,” Adrian says, “the CEs have realised that SMS is not just Quality Assurance. Nor is it occupational health and safety at the exclusion of operational safety. Organisations that typically fail in SMS have put all their energy into ensuring their workplace is safe, but haven’t given due consideration to the management of their operational risks, which is the primary purpose of an SMS.

“And a safety management system is not just documentation either. The key word here is ‘system’. There are 13 elements to an SMS, and ‘the manual’ is just one of those. Those CEs recognised that ‘producing a manual’ on its own and submitting it to the CAA wouldn’t make much of a difference to safety, and therefore wouldn’t be enough to meet SMS certification requirements.”

British safety management systems specialist, Neil Richardson, who led a Wellington workshop for CEOs in April 2017, agrees SMS is more than just paperwork.

“The reality of ‘doing safety’ must extend beyond the manual, matrices and risk registers, and play out in the decision making and behaviour of people throughout the organisation on an hour-by-hour basis.

“Safety is fundamentally behavioural.” Only when those CEs fully understood what SMS was, why it’s a requirement of ICAO, and what it meant for their business, in both obligations and benefits, did they begin to put something concrete in place.

“That first task,” says Don McCracken, CEO of Oceania Aviation, “is to appoint a good safety officer who understands what SMS is, what it entails, and why it’s beneficial to the organisation.
“Then the leadership needs to support the safety manager’s decisions as they put risk reduction systems in place, and provide them with the resources to do that.”

Adrian Duncan says that the CAA has no problem with chief executives getting in external consultants to assist in the design of an organisation’s SMS. But, he says, some of those organisations fail in their first attempt to become SMS certificated, because the consultant has used almost a generic ‘template’, which proves to be a poor fit for that particular operation.

“CEs who’ve hired a consultant and said to them ‘build me an SMS, don’t take up my time with it, just get it done and into the CAA’ were disappointed when their application invariably failed.

“The chief executives who got the most out of their consultant’s fees worked closely with that person to make sure that what they came up with made sense to the CE, and would work well for their operation. This is the concept of ‘scalability’, where the system corresponds to the size of the organisation, the nature and complexity of the activities the organisation undertakes, and the hazards and associated risks inherent to those activities.”

Neil Richardson agrees that each SMS should be tailored for individual operations.

“Keep it pragmatic,” he says. “Make it work for you.”

A constant refrain from those who’ve become certificated is that preparing for SMS implementation is more straightforward than it first looks.

Don McCracken admits that the hardest part was “slowly coming to the realisation of how simple it could be”.

“Some people with practical intelligence might regard the SMS concept as obscure and difficult to put into place. But in fact, they are already practising safe behaviour to a high level every day. SMS is really just about formalising that practice.”

Neil Richardson agrees about keeping it simple.

“SMS can be surrounded by mystery and clouded by jargon, but once you grasp its intent of reducing and controlling safety risks, it makes perfect sense.”

But what does all that mean in a practical sense?

“Tool box meetings,” says Don McCracken. “Daily updates on projects can identify opportunities for improvement and possible future risk.

“Everyone should be involved in reviewing existing known hazards, identifying new ones, and trying to imagine the future to determine what may be up ahead.

“Writing down any possible outcomes, preparing for the unknown event, creating a Plan B, and mitigating what can be mitigated.”

That sort of commitment by every employee is led and modelled by the chief executive, not just to achieve certification, but also because there are benefits to SMS other than those surrounding safety.

“It gives CEs a really clear understanding of the way their business works,” says Adrian, “and where the holes are. Weaknesses that maybe, weren’t obvious before SMS, suddenly became apparent, and can then be addressed.”

“Creating and sustaining the sort of culture that makes SMS part of daily business takes leadership,” says Neil Richardson.

“But if fully embraced, the wider business benefits of ‘being safe’ can be realised through improved harm protection.

“Who wouldn’t want that?”

The Director of Civil Aviation, Graeme Harris, regards the introduction of SMS as a potential solution to the very poor safety performance, in international terms, of elements of commercial general aviation in New Zealand.

“For many years, the prescriptive civil aviation safety regulatory system applied around the world has lagged behind the more demanding performance-based approach taken in the occupational health and safety field in many countries.

Continued over »
“The ICAO mandate for the introduction of SMS recognises the need for a significant improvement in safety performance. That means a move from minimum standards in the form of civil aviation rules, to what is close to a ‘best practice’ standard required to manage risks to an ‘all reasonably practicable steps’ standard.”

Graeme notes that assessing what is ‘reasonably practicable’ must be done in the context of international practice – not simply what is done in New Zealand.

“I see safety management systems as offering the opportunity to improve GA’s relatively poor safety performance. I encourage operators to engage early with the CAA during the SMS certification process and to take every opportunity to learn from their colleagues who are already certificated.

“Those colleagues will be able to provide valuable advice on how best to develop the robust risk reduction strategies needed for SMS certification.”

Some Tips

‘Group 2’ participants should be working on and submitting their implementation plans now. The cut-off date for getting those plans into the CAA is 30 July 2018.

There’s a wealth of information on the internet, and particularly on the Skybrary – Safety Management International Collaboration Group – site, which puts out plenty of readable material, good for organisations of all sizes.

Check out the Sector Risk Profile of Parts 135 and 137 at wwwCAA.govt.nz, “Aviation Info > Safety Info > Safety Reports”. Compare what the profile says about risk with what your organisation is already doing about that risk.

If you decide to get in a consultant, ask around first. Who did other, successfully certificated, organisations use?

The CAA web site has a range of resources to help with SMS implementation. Go to wwwCAA.govt.nz/sms.

There’s also good material at wwwzeroharm.org.nz and at wwwdeloitte.comnz/healthandsafety/.

If you want to email the CAA’s SMS team, it’s sms@caa.govt.nz.

Applications need to be with the CAA no later than 60 days prior to the organisation’s implementation date (refer AC100-1).

The application needs to include:

» An appropriate certificate-type application form, eg, 24119/01, 24137/01

» Amended exposition/SMS manual and associated matrices

» Completed form 24100/02 Evaluation Tool

» Senior Person FPP application(s).

Part of assessing whether an organisation has sufficiently robust risk reduction strategies to become SMS certificated includes an onsite visit by the CAA. That includes an interview with the nominated safety manager, the chief executive, and discussions with staff at all levels.

The CAA team will test that the ‘elements’ of the SMS are in place and are suitable for the organisation, but what’s also important are discussions with people throughout the organisation. The team will be testing their understanding of that organisation’s SMS, and their involvement in it. It’s finding out about the culture and the leadership, and the buy-in of every employee.”
Taranaki-based Ice Aviation, and Rotor Force in the Hawkes Bay are two ‘early adopters’ of a Safety Management System. Both ‘Group 2’ organisations*, they are the first two helicopter operations to become SMS-certificated.

Here, Jim Finlayson from Ice Aviation, and Tracey Campbell, the SMS Manager for Rotor Force, give their top tips for SMS certification success.

It’s Not That Hard

Tracey: It really isn’t that difficult, particularly if you already have a good QA system. Don’t reinvent the wheel. Use what you already have, just upgrade it to match what’s needed.

Jim: Don’t be daunted. It’s not that onerous. Break it down into little segments, review what you already have and then look at what you need to add.

Where to Start

Tracey: Do the gap analysis first. That will identify what you already have, and what you need to meet the new requirements. Focus first on your critical operational risks, the high consequence events.

Jim: Most companies with a robust QA system will already be identifying hazards and managing risk and conducting safety investigations. Assess that first. You could find that all that needs to happen is for it to be properly written down. In today’s world, you need to have something concrete for the auditor to assess.

Staff

Tracey: One person cannot do this alone. Joe Faram (CEO of Rotor Force) called all his contract pilots in for a day to explain what SMS was about and how they would be involved.

The system is only as good as the organisation’s safety leadership and culture. Joe is really proactive in this area. His contractors respect him and if he believes in it, and walks the talk, they will too.

It would be a waste of time if somebody in leadership treats it as a box tick.

Jim: I have only one staff member – me. That made composing the implementation plan more difficult. I had to tailor guidance, obviously aimed at larger organisations, to my tiny business. That was the biggest challenge for me.

Now What?

Tracey: We’ll be continually reassessing and improving Rotor Force’s SMS, establishing and reviewing key safety performance indicators, making changes where required, and identifying trends by looking for reoccurring types of events, common causes or risks.

Jim: You have to keep at it. SMS is not about ‘the manual’. It’s not about certification. It’s about on the ground, day-to-day, ongoing safety measures. There’s only me in my operation, but to get a fresh eye, I have a safety manager who’s a very experienced helicopter pilot and who has a background in safety management. My flight examiner is the safety manager for another heli company. So both are very focused on safety and neither is hesitant to tell me when they think I need to do something differently.

“Focus first on your critical operational risks, the high consequence events.”

Where to Get Help

Tracey: Joe brought me in to prepare an implementation plan because I have a background in system creation and management, as well as in workplace health and safety.

If you can’t do it yourself, get someone in to do it for you. Ask other operators who they got in, what that person’s background is and their experience, and what the operator thought of the implementation plan.

Jim: I was convalescing after a shoulder operation so could put the time into the implementation plan, myself. It took me about two weeks, full time.

But if you can’t do it yourself, and you can’t afford anyone else to do it, you can ask me, or people like me, for low cost – or, depending on the circumstances, even no cost – mentoring. I already have three participant operators that I’m advising. And Aviation New Zealand has put a call out to SMS-certificated operators to do something similar.

* To find out more about your obligations as a Group 2 organisation, go to www.caa.govt.nz/sms.
Special Tip

**Tracey:** If you’re not sure what’s required, my suggestion would be for someone from your organisation to go to a CAA workshop. I have a background in putting systems together but I still found the workshop useful. And it’s free!

**Jim:** After I’d drafted the plan, I tested one part out, to make sure it was useful. Your emergency response plan for instance: a little desktop exercise might uncover that in reality, it wouldn’t work, or wouldn’t be useful. It will also show the auditors when they come to assess you at the beginning that you know for sure the system you have designed does work.

Final Words

**Adrian Duncan** (CAA Team Leader Airworthiness, Helicopter and Agricultural): The SMS certification of Rotor Force was relatively straightforward, because management had taken responsibility for the development of SMS from the start. They had also tailored the system to fit the size of their organisation and the specific nature of the activities it undertakes.

**Joe Faram:** Embrace SMS, don’t resist it. View your safety management system as a tool to improve not just the safety, but the quality and control of your business. It will create efficiency, effectiveness, and profitability. With SMS you’ll be constantly in tune with your business and that of your clients.

Summary

- Don’t be daunted.
- Don’t reinvent the wheel.
- Do the gap analysis first.
- The system is only as good as the organisation’s safety leadership and culture.
- SMS is about on the ground, day-to-day, ongoing safety measures. It’s not about “the manual”.
- If you can’t do it yourself, get someone (who knows what they’re doing) to do it for you. Or contact Aviation New Zealand for SMS-certificated operators willing to mentor.
- Go to a CAA workshop, even if you think you know what to do.
- Test one part of your plan to see if, in reality, it works.
- Embrace SMS. It will improve not just the safety, but the quality and control of your business, its efficiency, effectiveness and profitability.
SMS – Your Deadline, Your Responsibility

A number of organisations are approaching the deadline for certification of their Safety Management System (SMS) and it’s critical they stick to it.

Organisations have begun submitting their SMS implementation plans, which tell the CAA what they’re going to do and when they’re going to be ready for certification.

The plans that have been approved will include a date for implementation approved by the Director. This is the date that an organisation’s SMS must be certified by.

Chris Lamain, the CAA’s SMS Implementation Lead, says individual organisations nominated a date when they would be ready to fully implement their SMS.

“Our plans told us how they are going to get there, the gaps that needed addressing, the timeline, and the resource required to do it,” says Chris.

“We’ve looked at the plan, its feasibility - the tasks, proposed resource, and timeline to implement – and the CAA’s ability to certify the organisation at the proposed date for implementation. Based on this information, the Director has approved a date for implementation for each organisation.”

He says there is a practical reason for that.

“We don’t have the capacity to process and certify all organisations at once on the final date for certification required by the rules.”

While the rules set a final date for certification, organisations should not make the mistake of thinking they have leeway if they nominated an earlier date.

“We can’t give extensions to all of these participants. There’s a regulatory date here - the date approved by the Director,” says Chris.

“We’ve never regulated this way before - normally it’s a fixed date. This time we said ‘you tell us how you are going to do it’. The CAA gave them some latitude.”

There is a regulatory process for managing participants who don’t meet their deadline.

For more information about SMS, including where to send questions, go to the CAA web site, www.caa.govt.nz/sms.
SMS Implementation

Implementation plans are flowing into the CAA for approval. If you’re still unsure how to go about yours, here’s some advice from two companies whose plans have been approved.

Getting Started

“This was the most difficult part,” says David Norris, Quality Assurance Manager for the Hamilton-based Kiwi Balloon Company. “But using the structure of Revision 1 of AC100-1 really helped. It breaks down the components of SMS and provides explanations. Setting up a table using the template from Annex D created a means of making a structured start to building the gap analysis.”

Assessing Risk

Tim Rayward, Manager of Flight Operations at Air Safaris, in the Mackenzie Country, says most aviation operations would have been assessing and managing risk for years.

“There’s no need to reinvent the wheel. We just looked at what we already had in our exposition, our SOPs, our training manuals, checklists and so on. It was almost all there already.

“The challenge for us was in documenting it in a coherent way, so anyone coming in from outside can quickly see what we are doing.”

David Norris kick-started his company’s process by looking at its existing health and safety hazard assessments which, in part, incorporated risks.

“I then added in risk scores for all stages. That included a risk rate for the hazard or risk, then a second risk rate, once controls have been put in place. I used the risk matrix from CAA SMS Booklet 4.”

The company also updated its safety policy to incorporate SMS. That has the added benefits of bringing up to date any documentation, for both the new health and safety legislation and SMS.

“Updating the policy also shows a commitment by the company to SMS,” David says.

Tailoring it for Your Company

David says using the gap analysis template, he worked through the Kiwi Balloon Company exposition to see what matched.

“Most of the body of SMS exists within the exposition. Start with the operational aspects because getting those into place and working gets the system nominally operational.

“Then I was able to assess where the shortfall was, what action or task was required and briefly summarise that, assigning staff members to those tasks.”

Tim believes rather than companies starting with the SMS documentation and looking at how they already comply, they should do it in reverse.

“You could lose your way a bit starting with SMS requirements. It’s better to look first at what you have in play, then match it to the SMS material.

“For instance, to comply with the rules, we have fuel management policies to manage the risk of running out of fuel. So that’s all in place. Really, it’s not like we need to do anything more.”

Working With the CAA

David Norris says he enjoyed working with the CAA staff on the implementation plan.

“I think we’re all learning and everyone needs to share knowledge and experience.

“It’s far better for people in the aviation industry to see CAA as a facilitator rather than a regulator policing the rules. Too many people regard ignorance of what SMS entails as a defence.”

Other Bits

Both companies made use of the evaluation tool, which provides key indicators and means of compliance acceptable to the CAA.
David Norris advises that companies really take their time working through the evaluation tool. “You cannot take shortcuts with this. The CAA will be looking for the detail of ‘Element 0’ which is in the evaluation tool, to appear in your application with the gap analysis.”

The evaluation tool (CAA form 24100/2) is at www.caa.govt.nz, “Forms”.

David says one set of risks every operator needs to think about is ‘what if I cannot run the business or fly the aircraft?’ “The risk that needs to be considered in an SMS is what action will be taken if, say, a pilot leaves during the peak of the business operation. SMS is also about sustaining the business.”

David says the SMS implementation plan should include how long the company estimates it will take for each SMS task to be completed. He also says included in the thinking about SMS should be the consideration of the cost to move to a Safety Management System.

**Up and Running**

David says once the operational side of SMS is in place, he’ll concentrate on the management aspects, including monitoring. “SMS cannot be put on a shelf to gather dust. Whether or not the SMS hazard and risk documentation has been part of an internal review will be a key part of any CAA audit. The documentation may not need to be changed, but it does need to be reviewed.

**Building a Culture**

Tim Rayward says apart from the nitty gritty of keeping documentation and procedures updated, there is a ‘big picture’ approach that will keep SMS fresh. “You can have a Safety Management System sourced in your exposition and other safety documentation, and there is nothing wrong with that,” he says.

“But you can go further and make your SMS your safety ‘umbrella’, and take it into every aspect of your operation. For instance, with active staff involvement, with regular round table staff meetings about safety, with a robust reporting system, with the QA pilot and manager talking about safety every single day.

“At Air Safaris, risk and safety is not something ‘added on’ to our business-as-usual. It forms the basis of our business-as-usual. “For us, SMS will be a way of thinking, not just compliance.”

**The Assessment**

The CAA says the Kiwi Ballooning Company clearly identified the current state of the organisation, where it wanted to be and therefore where the gaps were. “David identified what was needed under SMS,” says CAA’s SMS team member Adrian Duncan. “He looked at what the company needed to meet those requirements. And crucially, he documented everything.

“Then he took the information he’d gathered about the ‘gaps’, assigned time and resources and people to them, and that showed a clear plan of how the company was going to get there.”

SMS team member Austin Healey says Air Safaris’ implementation plan was impressive in that it provided an overall picture of how they intended to proceed, supported by a clear and logical timetable of activities, risk management and governance.

“It was just what we were looking for to give us confidence that the plan could succeed,” he says.

For more information about SMS, go to www.caa.govt.nz/sms.

To keep up to date with developments in SMS, subscribe to our email notifications at, www.caa.govt.nz/subscribe

For free booklets on implementing a Safety Management System, email sms@caa.govt.nz.

Tim Rayward, “SMS will be a way of thinking, not just compliance.” Photo courtesy of Air Safaris.
Risk – Where to Begin

Implementing a Safety Management System for your organisation is now a rule requirement for most organisations. For some of you, there’s not much more than 16 weeks to have SMS plans in to the CAA for approval.*

What’s in it for you?

Establishing a Safety Management System (SMS) provides a simple and co-ordinated approach to preventing undesirable events, including accidents.

No ‘undesirable event’ is without cost, so a robust SMS leads to a more profitable business. There’s an old saying, “If you think safety is expensive, try having an accident.”

A good safety record enhances the reputation of your organisation, and a safe working environment helps to minimise staff turnover, which is another cost saving.

Start by Identifying Hazards

Hazards are objects or conditions that could cause injuries to staff, damage to equipment or structure, loss of material, or a reduction in the ability to perform a function.

Hazards are as varied as fatigued pilots, inadequately completed tech logs, and insufficient staff chasing tight deadlines.

Under SMS, staff proactively identify hazards, rather than only dealing with their effects after the event. That can be done by analysing occurrence data for instance, or surveying all employees, or holding a brainstorming session with key staff.

Mike Groome, the Chief Executive Officer of the Taupo Airport Authority advises organisations still developing their SMS that it’s critical all possible stakeholders are engaged in the process.

“This isn’t necessarily only those directly involved in your operation, but anyone who is affected, or affects safe outcomes. Get them all in a room and talk!”

Managing Risk

Risk management is not the same as hazard identification. A hazard is something that can cause harm, and risk is the potential outcome of that hazard. For example, an uneven runway surface would be considered a hazard, but the risk comes from operating on that runway.

Risk is the likelihood of something happening, combined with the severity of the consequences if it does. One way of assessing risk is to design a matrix, such as that on page 9.

A matrix doesn’t need to be drawn up for all organisations however. Smaller scale operators might just rank their risks according to what they believe is the highest.

Not all risk can be completely eliminated, but it can be managed by ensuring it remains at an acceptable level. That involves reducing the likelihood of it occurring, or the impact of the consequences if it does.

Continued over »

When anyone asks me how I can best describe my experience in nearly 40 years at sea, I merely say uneventful … I have never been in an accident of any sort worth speaking about … I never saw a wreck and have never been wrecked, nor was I ever in any predicament that threatened to end in disaster of any sort.

Captain Edward John Smith, RMS Titanic

Also see ‘New Responsibilities for Worker Safety’ page 21.
Doing something about it

“I visited an operator recently,” says Steve Backhurst, a CAA Airworthiness Inspector, “and as we entered the hangar office, my host said ‘oh, mind the step’ indicating a step up into that area. They’d obviously identified that step as a hazard, but had done nothing about it, other than to tell people to ‘watch out’ for it.”

Once a hazard has been identified, it needs to be eliminated, or the degree of risk it presents minimised. In the case of the step, that could be done by building a ramp over the top of it, or by erecting a large and obvious sign next to it, or by the front edge being painted a bright colour.

“A Safety Management System is only as good as the degree to which hazards are dealt with,” says Mark Hughes, CAA’s General Manager of Air Transport and Airworthiness.

“If there’s little follow-up, everyone’s relying for safety on something that does not actually exist. They think everything must be okay because hazards have been identified.

“The SMS can even be nicely written down, but if it’s not enforced and practised, the end result is the same as if there was no SMS.

“In fact, it’s worse than knowing that you don’t have any kind of SMS, and need one.”

Dependence on Good Reporting

“A strong Safety Management System relies on data,” says Mark Hughes. “And that data comes from staff not just reporting the large incidents, but also the small things, like poor lighting in the maintenance area, constant disruption to tasks by having to answer the phone, or a pilot’s regular rushed fuel handling at the pump.

“Good reporting helps to identify weaknesses in the system. Conversely, someone who doesn’t report is depriving the organisation of the opportunity to prevent an accident. Everyone has an obligation to report.”

At Air New Zealand, reporting was made easier by the introduction of the Korusafe online database. All staff use the system for submitting safety reports. Reports are then collectively reviewed by the safety team, receive an operational risk classification, and actions are tracked to completion through the same system.

It’s also possible for the submitting staff to see the progression of their report through the database.

Encouraging Reporting

Staff are not going to report any genuine mistakes, or events arising from them, if senior management humiliate or penalise them for it. A management culture recognising that human errors occur, and that lessons can be learned from them, will encourage staff to report.

As Mark Hughes says, “In the same way that employees have an obligation to report, it’s the responsibility of management to create the right atmosphere for reporting.”

Risk is Dynamic

Identifying today’s hazards, and assessing and dealing with today’s risk, is not the end of the process.

Risk ebbs and flows, depending on the working environment: staff numbers fluctuate; an operation carrying little risk in summer might carry more in winter; the introduction of new technology presents higher risk if staff are not properly trained to use it. All such factors influence the nature, and degree, of risk to an operation.

Undertaking regular reviews of risk, as well as at high-risk times, will keep an SMS robust. Times of higher risk would include periods of major expansion, or major staff changes.
This type of risk matrix combines the likelihood of an event happening with the severity of the consequences if it does. Those potential events that score high on both are the ones that pose an intolerable risk. Those that score low on both can probably be lived with. Some that are high on one, and low on the other, or that are middling on both, should be reviewed regularly to ensure the risk they pose has not changed.

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<th>SEVERITY</th>
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<td>HIGH</td>
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Similarly, an ongoing exchange of safety information between management and employees will help everyone understand the state of safety in the organisation, and their role in maintaining it.

South Island-based Air Safaris, with 12 staff, has developed a company ‘safety culture’, led from the top.

“We have regular, formal safety meetings. But with a small close-knit team, we also use the opportunity to discuss, over our daily cuppa in the crew room, safety considerations and any new issues,” says CEO, Richard Rayward.

“Safety is embedded in the company ethos. It’s not just the pre-winter and pre-summer briefing, day-to-day safety practices are front and centre of every employee’s mind.”

Nil Desperandum

Paul Kearney, the Quality Assurance Manager for the Massey School of Aviation says operators should take heart that developing an SMS is easier than it looks.

“A lot of organisations may worry that there is an insurmountable amount of work in implementing an SMS. However, for those with Quality Management Systems already, it’s mostly done.”

And Stephen Burrows, Oceania Aviation’s former Group Quality Manager, says to keep it simple.

“Try to reduce the number of systems, processes and tools so you aren’t making things so complex, they’re unsustainable. Look around for what’s already out there that works and then tailor this for your use.”

Richard Rayward of Air Safaris agrees.

“SMS might at first look daunting but keeping it simple and practical for your company means staff will understand it and support it.”

Put someone in charge … but don’t leave them to it

Someone – appropriately qualified – needs to have oversight of the whole SMS. That doesn’t mean, however, only one person has responsibility for hazard identification, reporting, and risk assessment.

That obligation falls on all employees, from the CEO to the maintenance shop junior.

Ideally, it becomes part of the everyday routine of each employee. It does not stand apart from everything else, but is woven into the fabric of the company. For instance, regularly challenging staff about their understanding of the risks associated with the job they’re about to do, or incorporating risks and hazards discussions into regular meetings will help to make SMS part of business as usual.
Your SMS is Yours and Yours Alone

Your SMS needs to be tailored specifically to your operation to manage your risks and build a safety culture that works for you.

No two aviation organisations are quite the same. You might run a similar operation to your neighbour, but your staff, aircraft, premises, hazards, and associated risks may be totally different. That’s why your SMS needs to be tailored to your business.

“You can’t just pick up a template and insert your name and be done,” says Chris Lamain from the CAA’s SMS team. Developing an SMS plan is different from the ordinary process of writing an exposition.

Some organisations may make use of a consultant to develop their implementation plan (as part of the broader SMS implementation process) – and that’s fine, providing they really understand your business.

Most experienced consultants deal with safety across a range of codes of practice and legislation.

“Heart Consultants can be very valuable to your business but they need to spend time on site and talk with your staff. If they don’t, how can they best understand your business?” says Chris.

One consultant who works with several organisations on their SMS implementation is Heather Andrews. Understanding the organisation is her first priority.

“I need to thoroughly understand the organisation, including its goals and objectives,” says Heather. “What the company structure looks like; what certificates it has, and any codes of practice that may be relevant to the organisation.

“One I understand that, I do a ‘gap analysis’ against the relevant standard based on the organisation’s exposition. This helps the organisation identify the best way to close those gaps. From there, a work plan can be implemented with accountabilities.”

Heather says that the most important part of any SMS is commitment from senior management.

“There should be regular involvement of senior management, including the CEO, through attendance at safety committee meetings and training sessions,” says Heather.

“Cultural changes are difficult to achieve, so an effective implementation plan needs to provide plenty of time for training sessions and for people to become comfortable with the new processes.

“If staff see senior management interested in safety then they also will have more commitment to the SMS.”

Heather says that time management is another major advantage in using an external consultant.

“Planning SMS implementation takes time. Sometimes these projects get left to the last minute and may not get completed to a standard that reflects the organisation. Using an external consultant can mean these projects get addressed in a timely manner.”

Chris Lamain adds, “Your consultant needs to actively work with you, not just for you, to ensure your SMS truly is yours and yours alone – your ownership is vital to building and fostering a robust safety culture.”

Further Information

The rules mandating Safety Management Systems became effective on 1 February 2016. That means most organisations have to have a CAA-approved set of procedures and processes to identify hazards and deal with their associated risks.

“There’s no doubt that the introduction of SMS is one of the biggest improvements to safety in civil aviation, possibly since the Civil Aviation Act in 1990,” says Mark Hughes, CAA’s General Manager of Air Transport and Airworthiness.

“While compliance to rules has worked well in the past, things like an increasingly diverse mix, higher density of air traffic, and the complexity of some of the automation, is increasing risk in the sector. So if we just stay with compliance to rules, our safety record will get worse.”

So what is a Safety Management System and what do you do next?

“SMS is about asking ‘what are the hazards that could affect our operation? How can we manage their associated risks?’ It’s about reducing the risk of harm to people and property to as low as is practicable,” says Mark.

Many organisations will have elements of an SMS in place because it builds on an already-established Quality Management System.

For instance, does your organisation have a written-down, widely-communicated and well-maintained safety policy?

Before you start any new activity, do you identify safety hazards, and evaluate the risks that are involved?

If you say ‘yes’ to those questions, you already have the basics of an SMS in place.

“Otherwise, you could start by having a staff brainstorming session,” says Mark Hughes. “Get everyone to identify the hazards they’re aware of, because of where they work and what they do. Then consider the risk to safety that these hazards pose to the operation.

“Pull together all the data you have on occurrences in your operation. That will be one indicator of where you need to concentrate your time and energy. If you don’t have much of that sort of data, go to other operators and ask them about the hazards they’ve identified.”

The CAA has a series of booklets on building a Safety Management System, email info@caa.govt.nz for a free kit. CASA in Australia also has guidance – go to www.casa.gov.au/sms.

For more information about SMS, including Advisory Circulars, where to send questions, how to receive email updates, and training, go to our web site, www.caa.govt.nz/sms.

Who and When?

Existing participants under Parts 121, 125, 145 (those supporting 121 and 125 operators), 139 (those supporting international operations), and the 170 series are required to have their SMS Implementation Plans in to the CAA by 30 July 2016. Each of these operators will then propose a date they will be ready to fully implement their SMS. The final date they can propose is 1 February, 2018.

The CAA will then review the Implementation Plan and the proposed date. A confirmed date for implementation will then be set by the CAA, taking into account:

» the date proposed by the organisation
» the date the organisation’s certificate is to be renewed
» the capability and complexity of the organisation
» the risks inherent in its activities
» the workload of the CAA and the organisation.

Existing participants under Parts 115, 135, 137, 141, 145 (those supporting other than 121 and 125 operators), 139 (those not serving international operations), 146, 147, and 148 are required to have their Implementation Plans in to the CAA by 30 July 2018, and their SMS up and running by 1 February, 2021.

The same process applies to this group, in terms of getting a date approved for implementation, as to the first.

Applicants for a new organisational certificate submitted after 1 February 2016 should refer to Annex F, AC100-1 (Rev 1) for the options available to them.

For more about managing risk as part of a Safety Management System, go to page 7.