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Safety Management Systems for aviation: a practical guide

SMS 5

Safety promotion

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The Civil Aviation Safety Authority is responsible for the safety regulation of Australia's civil aviation operators, and for the regulation of Australian-registered aircraft outside Australian territory.

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Safety promotion

Safety promotion is an important part of an SMS, setting the tone for the organisation, building, and encouraging a robust positive safety culture and helping to achieve safety objectives.

Effective safety management cannot be achieved solely by management mandate or strict adherence by personnel to documented policies and procedures. Through effective safety promotion you can influence both individual and organisational safety behaviours, enhance shared knowledge and provide a valuable system that openly and actively supports and promotes safety efforts.

Safety promotion helps to foster improved safety performance through the combination of technical competence being enhanced through safety training and education, effective communication and information sharing on lessons learned, broader safety information and the distribution of the SMS manual and safety procedures in the organisation.

Under the ICAO SMS structure, safety promotion is divided into **two** elements:

1. safety training
2. safety communication.

Both are vital to the ongoing success of your SMS. Your personnel need to be trained and competent to perform their roles in your SMS, and you also need strong lines of communication at all stages of your SMS implementation and maintenance.

Aviation organisations need trained and competent personnel. Competency goes beyond the simple completion of a course or even a skills check. It includes confirmation that the practiced behaviours match the intended outcomes of the initial training. It is also fair to say that one size does not fit all, so training programs should meet the needs and complexity of your organisation. How much safety training each employee receives should depend on their involvement in the SMS.

You also need to establish processes and procedures that facilitate effective two-way communication throughout all levels of your organisation. This includes a clear strategic safety management direction from the top of the organisation and the enabling of bottom-up communication which encourages open constructive feedback from all personnel.

SMS Component	Element
Safety promotion	Safety training and education
	Safety communication

Safety training and education

Providing appropriate training to all personnel, regardless of their level or role in the organisation, gives them a better understanding of your SMS and helps to make them part of your safety goals. The level of safety training each employee receives should be tailored to their involvement within the SMS. The quality and effectiveness of training significantly influence the attitude and professionalism your employees will demonstrate every day. It also shows management's commitment to an effective SMS.

It is important wherever possible, to include third-party contractors and service providers in your safety training program. Third-party contractors can then add to the organisation's SMS by reporting any hazards or incidents through your safety reporting system. This training is required whenever you have third party contractors performing any operationally safety-critical roles within or on behalf of your organisation.

Your training program needs to include both initial and recurrent training with content covering:

- individual safety duties, roles, responsibilities, and accountabilities
- how your SMS operates
- human and organisational factors that can influence safety behaviours and safety outcomes, including
  - just culture
  - human factors elements with the intent of reducing human errors.

For more information of human performance and human factors elements relevant to safety training see Book 6: *Human factors and human performance.*

Organisations also need to establish a process to measure the effectiveness of their safety training program and to take appropriate action to improve subsequent training activities. It should be clearly understood that competency is not proven simply by issuing a certificate that training has been completed. Achieving appropriate levels of competency for personnel and enabling the consistent application of their skills and correct safety behaviours, is critical to an improved standard of safety performance.

Your safety training program needs to specify responsibilities for development of training content and scheduling as well as training and competency records management.

Smaller organisations might prefer to contract external trainers for their SMS training. However, it is still valuable to understand what process these external providers should follow, and what you require, while ensuring that they have tailored the training to be relevant to your organisation. Ask:

- What training do we need? And how much of this needs to be tailored to our organisation?
- Who needs to be trained?
- Who can we get to develop and deliver this training?

If you are a larger organisation, you may do your own training in-house, or chose to include safety training within your training and checking organisation.

The importance of safety training

Safety training is as vital as safety itself. Training enables management to ensure all workers are aware of the required safety standards for their role. Training assists personnel to recognise safety hazards and how to report them and enables an understanding of best safety practises and the organisation's expectations of them in relation to safety behaviours.

Beyond compliance, safety training is just a good idea and is essential if you want to increase your organisation's safety performance. Think of safety training like any other technical training needs, you wouldn't expect someone who has been a passenger on an aircraft to just know how to operate the plane – so why would you expect your personnel would just know your safety procedures.

It's often argued safety training is unnecessary because employees have many years of experience, either within the organisation or from previous aviation roles. However, years of experience will mean they most likely know how to perform their tasks, but do they know how to ensure they are performed safely? Do they know what the organisation expects of them if they identify a hazard? How can you expect personnel to report hazards and demonstrate safety behaviours if you don't train them on your SMS processes, procedures, and acceptable safety behaviours?

Effective safety training is also another element that demonstrates management commitment to safety. To promote your SMS and safety performance you need to allocate adequate resources and time to the development and delivery of safety training. You cannot expect personnel to take the time to be involved in your SMS if you don't take the time to effectively train them on it.

The need for safety training is continuous, as circumstances within the organisation and the broader industry change you need to ask:

- How do these changes affect safety?
- How do I keep my personnel engaged in the SMS and demonstrating acceptable safety behaviours?

Recurrent or refresher safety training is also important as it continues to demonstrate management commitment to safety, ensuring personnel remain aware of the SMS and their role within it, while ensuring they are aware of any changes to SMS procedures since their last training. Refresher training also provides you with an opportunity to demonstrate the effectiveness of your SMS and to ensure personnel can see what safety performance improvements have been made since they were last trained.

Like all elements of your SMS, safety training cannot be a set and forget function. You need to ensure your training is relevant and kept up to date. When you implement new risk controls in response to personnel hazard and safety reports it's important all employees can see this has occurred. Your safety training is a prime opportunity to promote why employee engagement within the SMS is critical and how their hazard and safety reporting aids in improving safety performance.

Training needs analysis

As you begin to implement your SMS, you should identify what safety training all levels of personnel need by doing a training needs analysis (TNA). All your personnel will need basic introductory SMS training; however, you will need to identify any personnel who may also need specialised or enhanced safety training. Depending on the size of your organisation this may include the chief executive officer, senior or executive managers, safety manager, line managers or supervisors and your operational safety-critical personnel.

While safety training is critical to effective SMS performance, training does represent a substantial cost to organisations, therefore valuable training time should be spent on the most important training priorities. TNAs improve outcomes by making training processes more efficient and effective, and when your TNA is risk-based it ensures training focuses on addressing relevant human performance related safety risks. The results of your TNA will also help reduce unnecessary training, so you are spending your time and money where it counts.

A TNA ensures there is a clear understanding of the operation, the safety duties of personnel and the available training.
A TNA should consider:

- the roles within the organisation that require safety training
- the safety knowledge and competencies required for those roles
- a gap analysis of existing knowledge and competencies compared to those roles
- the safety training required to achieve and maintain desired levels of knowledge and competence.

Most employees in the organisation will have some direct or indirect relationship with aviation safety, and therefore have some SMS duties. This applies to any personnel directly involved in the delivery of products and services, and personnel involved in the organisation’s safety committees. While some administrative and support personnel will have limited SMS duties, they will still need some level of SMS training, as their work may have an indirect impact on aviation safety.

The main purpose of the safety training program is to ensure all personnel across the organisation maintain their competence to fulfil their safety roles. Therefore competencies, and any identified gaps, should be reviewed on a regular basis.

For more information on conducting a TNA see the toolkit at the end of this booklet.

Image: Adobe Stock | Have a nice day

Documenting the SMS training plan

After having conducted a TNA, you should use the results to develop a training plan and associated documents. Your SMS training plan documents will include:

- a list of your personnel requiring SMS training, including third-party personnel
- a training syllabus for each safety training course by role and type
- the timing and type of each personnel member's specific safety training courses
- safety induction courses for personnel with no previous SMS training
- SMS induction training for all third-party service providers
- recurrent safety courses for all operational safety-critical personnel
- a method for determining when each employee is due to undergo specific safety training courses
- a method of determining training having been provided or completed for each employee
- a means of evaluation of your safety training effectiveness.

You should also establish and maintain an SMS training register. This includes individual training records so you can track who has been trained, what your personnel have been trained in, what they have yet to complete, and when they are due for their next training. In some organisations, this may be part of an established training or personnel records system, while, in others, this may be a previously unrealised need.

Training delivery methods

Within your safety training plan, it's important to identify the appropriate method for training delivery.

You do not always have to deliver training lecture-style, face-to-face in a classroom, there are other options. However, small organisations have the advantage that face-to-face training is often easier to organise and deliver. Personnel are on site, and rosters may not be as complex, making logistics easier.

Larger organisations may wish to reduce face-to-face training costs, and could consider using:

- an intranet system for online computer based training or virtual videoconferencing classrooms
- self-paced workbooks or learning modules
- additional knowledge based educational materials or libraries.

The main objective is that on completion of training personnel are competent to perform their SMS duties.

Safety training content

The safety training program should specify the content of safety training for support personnel, operational safety-critical personnel, managers and supervisors, senior managers, and the accountable executive.

Initial safety training content should, at a minimum, cover the following topics:

- your organisation's safety policies and objectives
- roles and responsibilities related to safety
- basic safety risk management principles, including hazard identification and risk assessment procedures
- organisational hazard and safety reporting systems
- the organisation's SMS processes and procedure
- human factors and safety behaviours.

Recurrent training should focus on any changes to SMS polices, processes and procedures, while also highlighting any specific safety issues or risks relevant to the organisation and lessons learned.

Training content should be tailored to the needs of individual roles within the SMS and developed in line with risk-management principles. Greater detailed content in the following topic areas should also be provided dependant on the role:

- the use and application of specific SMS processes
- hazard identification and risk management procedures
- change risk management
- operational risk management.

For example, the level and depth of training for managers involved in safety committees will be more extensive than for line operational personnel such as engineers, pilots, or cabin crew. While personnel not directly involved in the operations may require only a high-level overview of the organisation's SMS.

For more guidance on safety training content and plans see the toolkit at the end of this booklet.

Accountable executive and senior managers

You should develop specific safety training for your accountable executive and senior managers that clearly highlights their SMS accountabilities and responsibilities. The training should also ensure they understand the importance of the SMS and maintaining a positive safety culture supported by management, for the enhancement of safety performance.

Your accountable executive and senior management safety training would ideally cover the following topics:

- SMS accountabilities and responsibilities
- the importance of compliance with the organisation's safety requirements and any legislative requirements (i.e., CASA and workplace health and safety)
- the importance of management commitment in the SMS
- the allocation of resourcing, for both implementation and maintenance of the SMS
- the promotion of safety policies, a positive safety culture and the SMS
- effective interdepartmental safety communications
- the organisation's safety objectives, safety performance indicators and targets
- acceptable and unacceptable safety behaviours
- positive safety culture and just culture elements, including identifying human error for remedial actions and system learnings comparative to safety violations for disciplinary actions.

Specialised safety functions

There will be several specialised safety-related tasks or functions within your SMS that will require specifically trained personnel. It's important personnel enacting these functions have received adequate training in the specific methods and techniques involved in those safety functions. This specialised safety function training would be seen as beyond the basics of your SMS safety training program and may require your specialist safety personnel to undertake externally provided training qualifications.

These functions and tasks include:

- investigating safety events or incidents
- monitoring and analysis of safety performance
- conducting risk assessments
- managing and maintaining safety databases
- conducting safety audits
- developing safety training programs.

Depending on the depth of specialised training required and the level of existing expertise in safety management within your organisation, it may be necessary to obtain assistance from external experts or specialists to achieve these functions until your specialist safety personnel have undergone specialised training.

Safety training assessments

Safety training programs within an effective SMS should be competency based and not compliance based. In a competency-based training program, individuals gain the knowledge and skills that they need to be able to perform their work. The training is based on what employees at work are expected to do and the standard of performance expected in the workplace. Knowledge is important in a competency-based program, however equally important is being able to apply that knowledge and the skills at work. These skills must also be matched with the enduring safety behaviours that your training is designed to achieve.

To ensure learning has taken place as a result of safety training you need to assess each individual who has undertaken the training. To assess individuals, you need evidence of their level of basic safety knowledge as well as expected on the job or performance skills relating to safety. Safety training is only effective if each individual can not only show knowledge about your SMS and its processes but can demonstrate they have the skills required to perform their safety related functions within the SMS. An example of this would be demonstrating knowledge of what a hazard or safety report is used for and being able to demonstrate how to submit a report.

This means your safety training program needs to have a process in place that evaluates the individual's competence and takes appropriate remedial action when necessary if they are unable to demonstrate appropriate competencies.

The main purpose of the safety training program is to ensure all personnel develop and maintain their competence to fulfil their safety roles. Therefore, competencies of your organisation's personnel should be assessed and reviewed on a regular basis.

Any safety training assessment of personnel should focus on finding evidence that the individual:

- understands how they contribute to system performance within their role and the operational implications of safety behaviours in performing their day-to-day duties
- demonstrates that they can use this safety knowledge to monitor and adjust their own behaviours to improve safety outcomes.

Any assessment method used should allow you to identify both achievements of required safety awareness, knowledge, and skills development, as well as identify areas of deficiencies in the uptake of training competencies. This allows for both confirmation of achievement of learning outcomes as well as areas for improvement to address any identified deficiencies for each person undertaking safety training.

Individual training assessments can occur during or shortly after training to encourage consolidation and retention of knowledge. Assessments can be carried out using various methods including:

- short answer or forced choice (multiple choice) exams
- observation of tasks (this may form part of a competency assessment)
- demonstrations during practical exercises within class
- informal assessment of participation and behaviours by the instructor.

Individual training assessments should be focused on learning and building expertise, rather than on rote memorisation of facts, rules, or procedures. Your training assessment should assist in clarifying individuals' roles and responsibilities in ensuring they continue to reflect best safety practices and behaviours based on lessons learned, and to build engagement with the SMS.

For more information on types of training outcomes see *Guidance on training outcomes* in the toolkit at the end of this book.

Evaluating training program effectiveness

Not only do you need to evaluate individuals' learning and competence within the safety training program, but you need to evaluate how effective your overall training program is.

Training should always be provided with an intended purpose or outcome. Just as safety objectives have associated safety performance indicators, so too should training have some way of assessing achievements against the desired outcomes, ultimately measuring the effectiveness of your training.

This can be a relatively simple process, such as asking participants what they thought, or may require more time and resources to gather the information.

There are four possible levels of evaluation, from simple to more complex:

- Level 1: what participants thought of the training (individual reactions and engagement)
- Level 2: what participants learned (knowledge learning uptake)
- Level 3: how the learning applies to operational tasks (competencies or knowledge application)
- Level 4: measurable benefits for the organisation (organisational safety benefits or results).

When first implementing your safety training program you should start with level one and two evaluations. However, as your SMS and training program matures, and time and resources allow, you should move to levels three, and four in that order.

Level 1: participants complete brief surveys or questionnaires at the end of their training course. They give feedback on whether the training was useful and relevant, and the content interesting and practical. This allows you to evaluate individual reactions to the training as well as their level of engagement.

Level 2: involves assessing the individual learning or knowledge uptake from the training content delivered. This is your individual safety training assessment. These can be designed to be as simple as a quiz or exam completed at the end of training to evaluate a pass or fail knowledge assessment.

This assessment can be more complex and have participants complete specific attitude and knowledge questionnaires before and after training to measure what impact the training has had.

The results of the pre-training survey gives a baseline for comparison with the after-training survey, ideally completed six months after the training. You can then use this information to highlight broad operational problems or issues and to identify training needs.

Level 3: this level takes the evaluation process one step further. It measures the change in participants' on-the-job behaviour and safety competencies resulting from attending the training program.

The evaluation attempts to answer the question: 'How well are participants applying the desired skills, knowledge, or attitudes in their operational environments?' Arguably, this is the most accurate method of measuring a program's effectiveness.

However, this type of measurement is complex. It is hard to predict when changes in behaviour will occur, and how long they are likely to last. As with any evaluation, it is also difficult to establish a direct link between training and results. You can assess these results by having trained observers assess the work performance of operational personnel against a set of relevant behavioural markers.

These evaluations work best in strict 'non-jeopardy' conditions, under which employees are not penalised if shortcomings are observed (as long as these are errors, and not deliberate violations). Trained observers make anonymous, confidential, and non-punitive assessments of performance for groups of employees.

Level 4: this level identifies tangible organisational benefits that come from a training program. This level is the most important as it determines whether a program has achieved material results and demonstrates how valuable the program is to the business, identifying benefits such as improved safety, increased productivity, or quality, decreased operating costs, and higher return on investment.

The best approach is to use several separate levels of program evaluation. All organisations should be able to use level 1 (participant questionnaires) and level 2 (knowledge evaluations) with minimal difficulty and cost. While you need significantly more effort and resources for level 3 and 4 evaluations, they can bring substantial added benefits for your organisation.

Safety training checklist

- ☐ All operational safety-critical personnel, including third-party contractors, have been identified as requiring safety training.
- ☐ A training needs analysis (TNA) has been undertaken for all personnel in the organisation.
- ☐ Documentation has been developed to support the SMS training plan including an SMS training register showing what training everyone has had, and their current level of competence.
- ☐ An appropriate safety induction course has been developed for all personnel, ensuring new personnel are trained within a short time frame of joining the organisation. This course is tailored and relevant to your operations.
- ☐ There is a refresher training course, and all training courses are regularly updated and improved.
- ☐ There is an accountable executive and senior management specific training course covering the principles on which the SMS is based and their responsibilities in supporting it.
- ☐ Specialist safety training is documented and made available for personnel undertaking specific safety-related functions (e.g., investigations, audits etc.)
- ☐ Adequate time and resources are allocated for safety training and to implement what was learned in training afterwards.
- ☐ Individuals are assessed after training to see if the training has been successful in meeting its objectives.
- ☐ Third-party contractors, temporary workers and part-timers are given the training they need depending on the roles they perform within your organisation.
- ☐ Feedback is obtained from attendees and suggestions for improvement incorporated into training programs as appropriate.

Case study

Image: Civil Aviation Safety Authority

BUSH aviation and training

As part of their SMS, Bush Aviation implemented a new computerised hazard and safety reporting system. To ensure all personnel are aware of the new system, how to access it and the steps required to fill in and submit the electronic reports, the safety officer conducts face to face training for all personnel during their monthly personnel meeting. She also adds this training to their training plan as part of the initial safety training for all personnel, with a shorter refresher version to form part of their recurrent safety training every two years.

To help promote and further encourage safety reporting, the safety committee decide to display posters promoting effective safety reporting. They are printed, laminated, and fixed on the walls in the lunchroom, hanger, and briefing rooms. The posters are designed to encourage more active and effective safety reporting to help Bush Aviation enhance their safety risk management capabilities and achieve safety objectives. These posters form an additional safety promotion to coincide with the roll out of training on the use of the new safety reporting system, along with an article written by the CEO in the monthly safety bulletin encouraging and endorsing hazard and safety reporting to improve safety performance.

Bush aviation and training safety communication poster

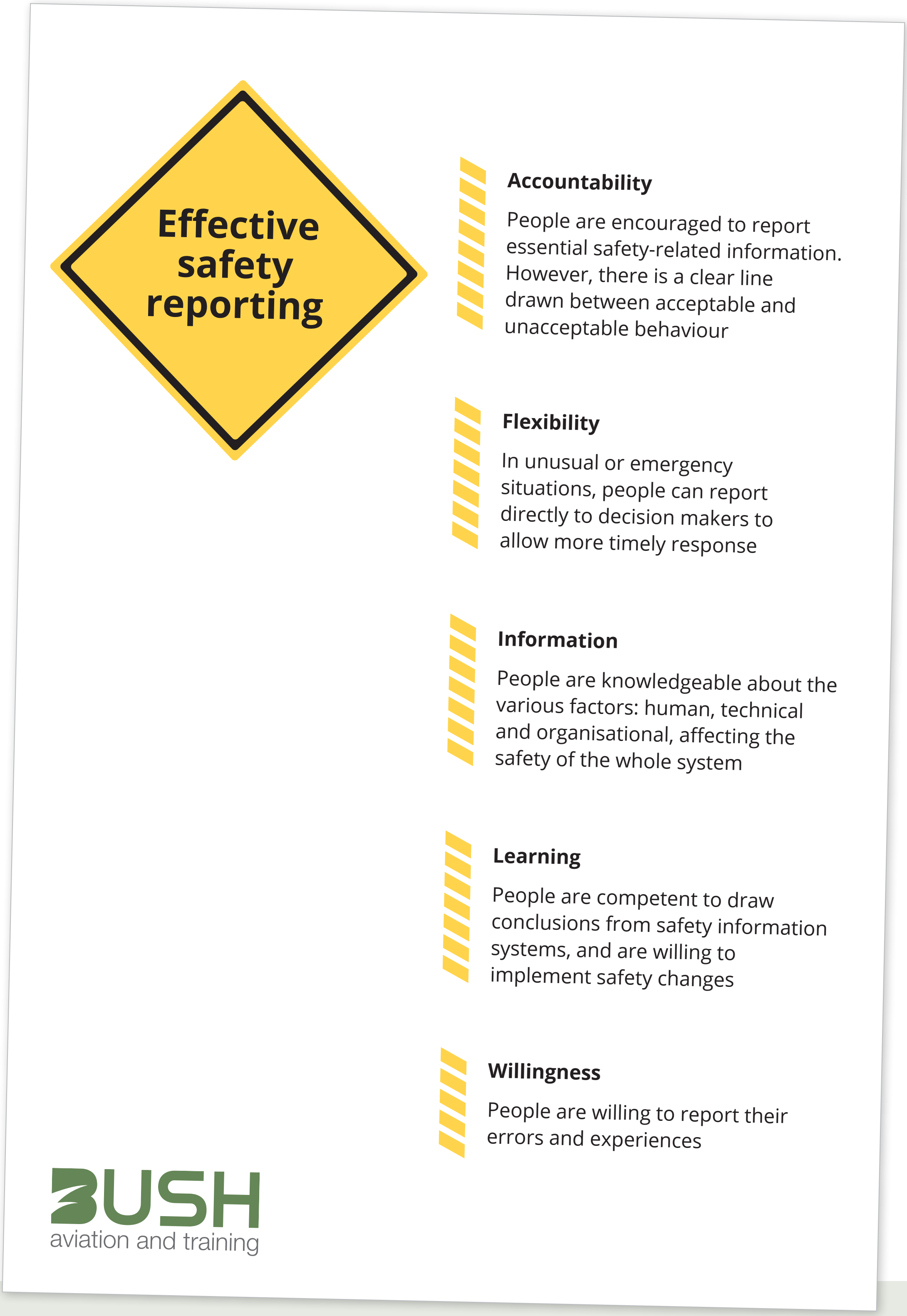

Image: Civil Aviation Safety Authority

Safety communication

Safety promotion through communication is essential for building and maintaining the effectiveness of your SMS. Two-way communication is required ensuring you inform personnel fully about your SMS and capture and act upon their feedback where appropriate. This is vital to the success of your SMS. If personnel report safety issues and do not receive timely feedback or see no evidence that their reporting is making a difference, they will soon stop reporting. Like every complete communication cycle, feedback is vital to keep communication lines open.

Communication needs to be from management towards front-line employees (top-down) but also from employees to management (bottom-up). Lateral (side-ways) communication is also important, encouraging the exchange of information amongst colleagues at the same level within the organisation or in similar roles.

At a minimum, your safety communication should:

- ensure all personnel are fully aware of the SMS and the SMS processes
- convey safety-critical information
- explain why particular actions are taken
- explain why safety procedures are introduced or changed
- give timely feedback to those who make safety reports.

Your safety communication is also valuable for communicating 'good-to-know' safety information, to build a more robust safety culture.

The 4 key elements to effective safety communication are:

1. **Interactivity**: safety communications flow both ways. You speak about safety, and you listen to employee's concerns and suggestions.
2. **Informative messaging:** it tells employees what they need to know to work safely under all conditions and ensures they understand their safety obligations.
3. **Positivity:** communications focus on the exchange of ideas and information to improve safety and prevent accidents and incidents. Your messages don't just focus on what has gone wrong when there have been incidents but on how to prevent future occurrences.
4. **Productive:** your communication method allows you to interact successfully with all employees and spread your safety message to all who need to hear it. This may mean you need to use multiple communication methods for the same message to ensure personnel across all work locations and roles receive it.

Communication methods can vary, and a good SMS will utilise several methods and diverse means to communicate safety information according to the importance and urgency of the message. Internal safety communication methods can be either active or passive, as indicated in the below table.

Active communication methods	Passive communication methods
• regular safety-related meetings • safety seminars and workshops • senior management conveying strategic safety information, goals, and objectives • general personnel informing management of safety issues in their department areas • team briefings or toolbox talks.	• safety magazines, newsletters, or posters • safety bulletins and notices • videos or short electronically recorded messages • web-based presentations e.g., an intranet safety page • emails or memos.

Your refresher safety training is another method for delivering safety information, allowing two-way communication if it is face-to-face training or more passive communication of information if conducted online.

Depending on the size of your organisation, some of the ways of communicating safety information will be more relevant than others.

Keep in mind the location and roles you are communicating to, there is no point in sending out a safety communication email about baggage loading if your baggage handlers are not routinely in front of a computer to receive it and the email gets lost in a sea of unread emails.

You can also promote and communicate safety information externally by means such as:

- meetings, workshops, and networking
- websites, online forums, and email distribution lists
- magazines, posters, videos, and other publications.

Safety lessons learned external to your organisation are as important as those learned firsthand. Given this, don't forget to find ways to source and disseminate external safety information, this could be from ATSB investigation reports, industry safety notices and safety publications, such as the Flight Safety Australia magazine.

Continuous flows of safety information to personnel will ensure your SMS is not an afterthought – but a proactive, visible, and tangible part of daily business. The goal of safety communication is to foster a learning culture through the sharing and exchanging of information. This motivates personnel, encourages a reporting culture, and enhances engagement with the SMS.

Managing communication

In some circumstances, there is a legal duty to pass on information, or to coordinate activities with others. Some communication rules are common to all organisations, whether large or small, simple, or complex.

- To be effective, communication must be two-way. It must go up, as well as down, your organisational structure to ensure everyone understands the organisation's risk management activities. Managers must get their safety message across, and employees, who are at the coal face, must have their safety concerns heard and acted upon – the feedback loop must be closed.
- Communication should focus on raising awareness of potential hazard and risk issues.
- Regular discussion about the contributing factors for incidents and near-misses will foster a learning and ongoing reporting culture.

Effective safety communication is vital in motivating employees so that they both understand, and act upon, safety messages. Propaganda which merely tells individuals to avoid making mistakes and errors, or to take more care, the 'bumper sticker' approach to safety, does not work. Individuals do not want to make mistakes, they like to be professional, and to be treated as such. Communication is about explaining and understating, as such it must be robust, create a sense of involvement and interest, and be relevant to management and employees alike.

You should be sharing safety information with all personnel in a targeted way and tailoring this to suit the audience. For example, sharing a safety report purely to raise awareness when that report hasn't yet been analysed to identify risks or any potential risk controls does not provide any meaningful safety education.

Select safety topics for safety promotion campaigns in your organisation, basing your communication on the mitigation of:

- past events or near-misses
- identified and potential hazards, especially those reported by employees, thus reinforcing the value of reporting
- observations from routine internal safety audits.

In smaller organisations, where gathering of data can be an issue, topics for safety promotion could be based on relevant ATSB reports, or safety issues common to your area of aviation operations or even other safety critical industries.

Distributing safety information

Your employees are your main target audience, and therefore a critical one, so you must communicate your safety messages well to inform and motivate them. All methods of safety communication, be it the spoken and written word, or visual communication, require talent, skill and experience to be effective.

Communication can be defined as achieving shared meaning, and to be effective, requires four elements working together.

1. The individual sending the message must present that message clearly, with the necessary detail, and must have credibility. Talking about safety but not walking the talk will not help your credibility.
2. The person receiving the message must be prepared to, and decide to, listen, ask questions if they don't understand something and trust the person sending the message.
3. The delivery method must be appropriate to the needs of both the sender and receiver.
4. The content of the message must resonate and connect, on some level, with the receiver's already-held beliefs.

It is basic journalism that stories should always contain answers to six questions: What? Who? Why? Where? When? How? This also applies to communication generally, so when you are planning safety communication, ask what, who, why, where, when and how questions as a guide.

- **What** messages are you communicating? 'At Bush Aviation and Training, we're committed to safety', or 'Report all incidents'.
- **Who** is your audience? Pilots, engineers, cabin crew, or ground handling personnel? What you are saying needs to be appropriate to your audience, expressed in plain English and using terms relevant to their knowledge and culture.
- **Why** are we doing this? What do we hope to accomplish?
- **Where and when** should we be doing this? What are the best venues or sites for this information, and how frequently should these messages be communicated?
- **How** will we communicate these safety messages? What is the best format to use to inform employees and raise awareness? A regular e-newsletter because employees work in several regional sites. A poster in the lunchroom/hangar/operations room? Videos? Podcasts? An online safety library or a centrally located safety library? A toolbox talk, or safety briefing, face-to-face?

Effective communication will use both verbal and visual elements (words and pictures), working together to attract attention and highlight your messages. Often, less is more, especially in an era when we are all bombarded by information. Make your communication simple, direct, inclusive, and relevant to your audience.

Watch out for communication barriers, as unfortunately there are numerous obstacles that cause safety communications to break down. For example:

- If too much information is being communicated all at once, it can be hard for individuals to absorb all those different messages at the one time.
- If your message lacks clarity, is confusing or ambiguous, then what someone hears may be quite different from the message you intended to send.
- If expectations are not clearly defined, you may be unpleasantly surprised by the results. It is important to know and express what you expect to happen because of your communication.
- If you communicate a safety message without taking the time to listen to employees responses carefully then your communication is incomplete, and you are just talking at them and not with them. Remember you have to speak and listen for communication to be successful.

If you don't take employees safety concerns and priorities into account, they may not listen to what you have to say. Why would you listen to someone when they clearly don't want to listen to you?

Safety communication checklist

- ☐ You have a forward planned safety communication strategy that allows for safety-related information to be actively and routinely communicated.
- ☐ There is a set standard for safety communication based on risk potential, allowing for planned safety messages to be targeted to greatest risk areas.
- ☐ Safety communication is actively and routinely promoted through various active and passive methods, such as a safety newsletter, web site, safety briefings, posters, videos etc.
- ☐ Various mediums are used to convey key information, e.g., written, oral and visual communication, which are all tailored and appropriate for the audience.
- ☐ Sufficient time is allocated for communication, particularly at shift handovers.
- ☐ There is a clear two-way communication strategy that's encouraged and supported, with both the giver and recipient of the information taking responsibility for accurate communication.
- ☐ The organisation freely and openly shares safety-related information with employees, with lessons learned from both internal and external sources incorporated. This information is shared fully and accurately, and in a timely fashion.
- ☐ There are concerted efforts to continually raise awareness of potential hazards and risk issues in the workforce.
- ☐ Feedback is provided to safety reporting in a timely fashion and changes made in response to safety reporting is openly communicated.

Outcomes-based and PSOE considerations

To move from compliance-based safety promotion to become outcomes-based, organisations cannot simply document the elements of this component. Instead, you need to consider how your documented elements will be displayed, monitored, and evidenced as being a live safety management process.

For example, conducting safety training and sending out safety communication notices is a compliance-based approach. To ensure an outcomes-based approach, check that your training has been tailored to specific roles and is relevant to their environment for hazard identification and risk management and that training is assessed to determine uptake of learning and application of safety procedures.

The overall outcomes-based approach strives for constant promotion of safety both through training and communication strategies to make safety performance a part of everyday considerations, seeking to embrace best practices and proactive safety management at all levels.

As your SMS moves from implementation, to operational and through to maturing the Present, Suitable, Operating and Effective (PSOE) evaluation of your safety promotion should also naturally shift, as shown in the examples below.

Safety promotion				
Evaluation				
Implementing	**Present**	**Suitable**	**Operating**	**Effective**
Safety promotion activities are in draft format but not fully developed.	There is a documented training program that identifies all roles for training, a training syllabus, delivery methods and assessment requirements. There is a documented safety communication strategy in place.	Safety training is tailored for applicable roles, with assessments covering awareness, knowledge and the skills competencies needed. Safety communication strategies are tailored to meet audience needs and maximise visibility.	All personnel are trained and assessed as competent to undertake their roles within the SMS. Several mediums for communicating safety information are used to disseminate both lessons learned as well as risk management initiatives.	The organisation invests considerable resources and effort into training its personnel and publicising its safety culture and other safety information. The organisation routinely monitors the effectiveness of its safety promotion.

See Booklet 8: *SMS resources kit* for the SMS evaluation tool to assist with evaluating this element of your SMS using PSOE.

Toolkit

Image: Civil Aviation Safety Authority

Booklet 5 – Safety promotion tools

This toolkit contains the following:

- [ ] Toolkit purpose and use
- [ ] Conducting a training needs analysis
- [ ] Example: Safety training plan
- [ ] Guidance on training outcomes
- [ ] Delivering engaging, effective training online
- [ ] Ways to promote safety
- [ ] Effective safety communication tips
- [ ] Sample: Safety information bulletin
- [ ] Guidance for safety briefings and toolbox talk
- [ ] Case study: Aviation safety toolbox talk
- [ ] Example: Safety briefings and toolbox meeting attendance form

Toolkit purpose and use

Contained within the following toolkit are examples of ways an organisation can develop certain elements within the safety training and promotion component of an SMS. These are examples only to assist in building overall SMS knowledge, being compiled from various sources, and are in no way a CASA recommendation regarding templates or standards to meet regulatory compliance.

Conducting a training needs analysis

A typical TNA will start by conducting an audience analysis and includes the following steps:

Step 1. Analyse the roles

All personnel will be affected by the implementation of the SMS, but not in the same manner or to the same degree. You need to identify each personnel grouping and in what ways their roles will interact with the various safety management processes, inputs and outputs and their specific safety duties.

Start by looking at specific documentation which describes the role or job, such as position or role descriptions, current duty statements, or performance reviews and key performance indicators. Normally groupings of individuals will start to emerge that have similar learning needs. Consider the following for each role:

- identify any SMS functions or tasks expected of that role.
  - For example, at a minimum for all roles within your organisation reporting hazards and safety incidents is a standard SMS function.
- Identify any SMS tools, processes or systems used to perform the role.
  - For example, personnel need to use the hazard and safety reporting form and associated system to be able to submit a hazard report.
- Understand the context in which the tasks are performed.
  - For example, in what situations would personnel need to be able to submit hazard reports, i.e., online or paper reports and when.
- Identify the safety knowledge and skills required to perform these SMS tasks.
  - For example, to submit a hazard report basic knowledge required would include what is a safety hazard, the need to report hazards and why. The skills would be how to find the hazard report and how to complete all parts of the report form.

Identify phrases which specify key skills, processes, or areas of knowledge. Also consider whether the job has changed. This may result in new tasks being considered, and a new duty statement being required.

For example: cabin crew members must:

- immediately communicate critical safety information to the flight crew
- follow the organisation's safety guidelines to minimise risk and maximise safety
- report all safety hazards and safety incidents.

Step 2. Identify required knowledge and competencies

You need to identify the knowledge and competencies required to perform each safety duty and for each grouping of personnel. Then conduct an analysis to identify the gap between the current safety skills and knowledge across the workforce and those needed to effectively perform the allocated safety duties.

Formulate a 'list' of areas where some training would be required to improve the effectiveness of the roles in question. You need to decide whether there is a gap in the skills or knowledge, or whether some revision is required to improve the general skill set.

You could consider asking a small but representative sample of personnel doing this job which areas they consider need addressing.

Review any current safety risks or reporting data that indicates specific safety processes or behaviours as being lacking or essential for safe performance. This way you identify tasks you may have missed or refine tasks so that the training can be more effective.

Another consideration here is if any of your SMS policies, processes or procedures have changed since safety training was last conducted. If so, how have you imparted this knowledge to your personnel and determined they are aware of these changes and the impacts to their role.

Step 3. Identify training solutions

This involves finding out the best way of closing the skills or knowledge gaps you identified in the previous step. There may be many different options available such as:

- one-on-one training or coaching in the workplace
- self-directed learning e.g., using written instructional material, read and sign safety procedural updates, written guidelines, or instructions
- short-term one-off training courses, internal or externally delivered
- long-term courses e.g., certificate, diploma, degree, or higher degree courses
- mentoring.

Overall, you need to identify the depth of training required to address the identified gaps in required safety knowledge, skills, and competencies. Regardless of whether you determine the training solution to be a one-off short term internally delivered course for a specific role you also need to determine to what level of knowledge this needs to be imparted. This may be something as simple as a high-level introduction of how to find and fill in a hazard and safety report to something as in depth as how to conduct a full safety risk assessment. Again, the training solution is specific to the role and any identified gaps in the required safety knowledge.

Step 4. Evaluate performance after training

Once the training has been completed, consider whether the tasks can now be completed competently. You can achieve this by:

- asking the employee to evaluate their own effectiveness in the task
- asking whether the performance gaps that drove the reasons for training still exist
- looking at the work area to determine whether there is still evidence of a deficiency in skills or knowledge.

If the performance gap still exists, you have some more work to do. Was the training solution selected appropriate for the identified problem, or is there another performance issue that needs addressing?

This step can be assisted by evaluating the uptake of knowledge at the end of training through individual assessments. However, even if personnel are successfully passing individual assessments this may not correlate with improvements in safety performance and competencies within the role. This could indicate that while an individual may have learnt the knowledge element of your safety training, they have either not developed the required competencies to perform their safety duties, or the training has not resulted in an overall behavioural change.

Example: Safety training plan

The following table outlines a basic safety training plan which covers some suggested syllabus content and assessment tailoring for safety training for:

- non-operational safety critical personnel or support personnel
- management personnel
- operational safety-critical personnel
- safety personnel.

This example training plan covers content and assessment basics only – what you will need will depend on the size of your organisation.

Role and type of training	Sample syllabus content	Assessment

Non-operational safety critical personnel (with indirect, minimal or no contact with operational personnel).
 	
Online eLearning training required as part of:
• induction training *(within 2 months of starting)*
• refresher training every 2 years.
	• safety philosophy, safety policies and safety standards including:
	  – approach to 'safety culture'
	  – not apportioning blame
	  – difference between acceptable and unacceptable safety behaviours
	  – internal safety investigation policy and procedures
	• high-level overview of the SMS framework and rationale for it
	• organisational roles and responsibilities of personnel in relation to safety
	• procedures for hazard and safety reporting
	• organisational safety management programs (e.g., reporting systems, internal audit program etc.)
	• requirement for ongoing internal assessment of organisational safety performance (e.g., employee surveys, safety audits and assessments)
	• lines of communication for safety matters
	• feedback and communication methods for disseminating safety information
	• safety awards programs (if applicable)
	• safety promotion and information dissemination
	• emergency response.
		Knowledge/ awareness assessment, with an 80% pass mark required.

<table>
<tr><th>Role and type of training</th><th>Sample syllabus content</th><th>Assessment</th></tr>
<tr><td>Operational safety-critical personnel.

Modules tailored to specific roles i.e., flight crew, cabin crew, engineering, or ground handler.

Full modular training required as part of:
• induction training (prior to commencing any safety-critical activities)
• refresher training every 2 years.

Hybrid delivery method used for induction training using online eLearning supplementing classroom training.

Refresher training delivered via online eLearning.</td><td>• safety philosophy, safety policies and safety standards including:
– approach to ‘safety culture’
– not apportioning blame
– difference between acceptable and unacceptable safety behaviours
– internal safety investigation policy and procedures
• high-level overview of the SMS framework and rationale for it
• importance of complying with the safety policy and with the standard operating procedures that form part of the SMS
• organisational roles and responsibilities of personnel in relation to safety
• organisational safety record, including areas of systemic weakness
• procedures for hazard and safety reporting
• organisational safety management programs (e.g., reporting system, internal audit program etc.)
• requirements for ongoing internal assessment of organisational safety performance (e.g., employee surveys, safety audits and assessments)
• lines of communication for safety matters
• feedback and communication methods for disseminating safety information
• safety awards programs (if applicable)
• safety promotion and information dissemination
• procedures for reportable matters (immediate and routinely)
• specific safety initiatives, such as: threat and error management (TEM), crew resource management (CRM), approach and landing accident reduction (ALAR), maintenance error decision aid (MEDA), and line operations safety audit (LOSA)
• seasonal safety hazards and procedures (weather-related operations etc.)
• emergency procedures and response
• current and recent safety situations
• safety promotion, communication and information dissemination.</td><td>Knowledge/awareness assessment, with an 80% pass mark required.

Skills and practical application assessment required.</td></tr>
</table>

Role and type of training	Sample syllabus content	Assessment

Management personnel.
 	
Online eLearning training required as part of:
• induction training *(within 2 months of starting)*
• refresher training every 2 years.
	• safety philosophy, safety policies and safety standards including:
	  – approach to 'safety culture'
	  – not apportioning blame
	  – difference between acceptable and unacceptable safety behaviours
	  – internal safety investigation policy and procedures
	• high-level overview of the SMS framework and rationale for it
	• the manager's role in shaping the safety and reporting culture, including a 'just culture'
	• manager's responsibilities and accountabilities for safety
	• the safety risk management processes
	• procedures for hazard and safety reporting
	• manager's legal liabilities under CASA and WHS legislation
	• requirements for ongoing internal assessment of organisational safety performance (e.g., employee surveys, safety audits and assessments)
	• lines of communication for safety matters
	• feedback and communication methods for disseminating safety information
	• safety awards programs (if applicable)
	• safety committee's risk assessment and root cause analysis
	• safety promotion and communication and information dissemination.
		Knowledge/ awareness assessment, with an 80% pass mark required.

Role and type of training	**Sample syllabus content**	**Assessment**
Safety officer/safety personnel. Hybrid modular training required as part of: • induction training *(within 2 months of starting)* • refresher training every 2 years. Hybrid delivery method used for induction training using online eLearning supplementing classroom training. Refresher training delivered via online eLearning.	• safety philosophy, safety policies and safety standards including: – approach to 'safety culture' – not apportioning blame – difference between acceptable and unacceptable safety behaviours – internal safety investigation policy and procedures • high-level overview of the SMS framework and rationale for it • procedures for hazard and safety reporting • monitoring safety performance • conducting risk assessments • current and recent safety situations • seasonal safety hazards and procedures (weather-related operations etc.) • managing the safety information system (database) • performing safety audits • understanding the role of human performance in accident causation and prevention • procedures for reportable matters (immediate and routinely) • investigation of reportable matters and hazardous events • crisis management and emergency response planning • feedback and communication methods for disseminating safety information • safety awards programs (if applicable) • safety promotion and information dissemination.	Knowledge/ awareness assessment, with an 80% pass mark required. Skills and practical application assessment required.

Guidance on training outcomes

To achieve your safety training program objectives and levels of safety competencies you need to consider the different categories of trainee competencies that can be achieved. These are your desired training outcomes and include:

- **Awareness**: awareness should introduce the basic safety and SMS concepts and provide a common 'language' and frame of reference for knowledge and skill development.
- **Knowledge:** development of knowledge should focus on safety and SMS knowledge relevant to specific practical applications and skilled performance.
- **Skills:** skills are the tools and techniques focused on treating or mitigating areas of increased safety risks, human errors, or severe consequence. They are initially developed through practise and feedback, followed with reinforcement at a later stage through recurrent training and assessment.
- **Attitudes:** attitudes play an important part in determining overall safety behaviours and performance. Aspects relating to operational practices, desirable professional attributes, and dispositions conducive to professional performance can be considered under this heading. Attitudes have been strongly emphasised in the role of appropriate attitudes in sustaining and implementing safe and effective operational practices.

For effective safety training outcomes to enhance your SMS, awareness and knowledge competencies should be achieved for all personnel. Skills and attitude outcomes are more relevant to operational safety-critical roles, who can have a higher impact on safety performance and tactical risk management processes.

Delivering engaging, effective training online

Many training courses can be as effectively delivered via an online version as they can through in-person classroom style training. However, there is a difference to delivering engaging and effective training when conducting online training compared to face-to-face. There are two types of online training delivery methods:

- self-paced computer-based training (CBT)
- virtual classroom training.

Before we review some techniques to improve effectiveness and engagement practices for online training, you need to remember that it is fundamental that your audience feel the training content is relevant and interesting to them regardless of the delivery method. We mustn't forget learning is a deliberate and voluntary act, you can make attendance at your training mandatory, but you cannot force individuals to learn. So, make sure you ask yourself, is my training content and message relevant to my audience and will they leave this training with more knowledge and skills then when they came in? If your content is not relevant and engaging the delivery method will be of no help to overcome this – boring irrelevant content that wastes someone's time is not more engaging or effective if it is delivered face-to-face then online.

Computer based training (CBT)

Training content delivered via self-paced CBT methods is normally supported by a learning management system that can be designed as a simple read and learn structure or to be a more interactive learning style, including written text, audio recordings, videos, and activities. CBT is also referred to as eLearning.

Given the independent passive nature of CBT this style of training is best used for simple awareness and knowledge-based outcomes such as recurrent or refresher training designed to build on previously learned content. CBT can also be used within a broader plan to supplement classroom (virtual or in-person) training allowing for you to deliver basic introductory information via CBT that you then expand upon within the classroom.

Techniques to improve engagement and effectiveness of CBT include:

- **Set time expectations:** One frustrating aspect of taking an eLearning course is not knowing how long it will take to complete. If you set expectations up front, your audience can plan for the time it will take, increasing the chance personnel will complete your eLearning course.
- **Using graphics and multimedia:** An important and simple step to improving eLearning content is to replace most of your written text with graphics or multimedia such as audio recordings, videos, or animations. Providing content across a mixture of media elements creates a more stimulating learning environment and reduces trainee's boredom.

  By reducing or removing text from a slide you impose one less task the learner needs to process. It is more effective to narrate a graphic or table then have someone read text at the same time as having to process the graphic.

  However, you need to be careful not to overload learners by making them read text, listen to audio and look at graphics all at the same time. There needs to be a staggering between the various media elements to be engaging but to not overload with too much being presented all at once.
- **Create smaller modules:** If you have a large amount of eLearning content for a course consider breaking it up into smaller modules. This allows learners to complete the training in stages, spreading out the entire course over time rather than as one large package. This is especially relevant when personnel find it difficult to take an hour or more out of their day to complete eLearning. So, rather than making them rearrange other obligations, you can create a flexible online training schedule that gives them control of when they complete all elements of the online course.

  Segmenting content into modules also reduces the likelihood of learners becoming disengaged with the content and just clicking to get through it quicker. Allowing for self-paced breaks between modules reduces boredom and apathy.
- **Using activities and quizzes:** While using quizzes at the end of modules or courses allows for testing knowledge, you can also use mini non-assessable quizzes throughout your content to further engage learners.

  For example, in a traditional eLearning course, a learner views or listens to slides presenting a concept, then takes a quiz to assess their level of knowledge on that content. However, you can begin a section with a non-graded drag-and-drop exercise to present a concept or an ordering assessment to present a process. Exercises like this can be set to allow for multiple attempts giving your audience a chance to make mistakes until they figure it out. No one said quizzes must come at the end of a section or should always be used as an assessment of learning. Creating activities like this within your content increases participation and interactivity with the content which enhances learning uptake.

- **Update training content:** It's important to ensure you are routinely updating your eLearning content. Especially if the content is used as part of your recurrent training plan. There is nothing worse to learners than to be presented the exact same content every single time they are completing eLearning. Something as simple as going in and changing graphics, activities or even rearranging modules within the training can make it appear new.

  If your training includes role or operational specific examples or case studies within the eLearning content these should be reviewed and updated between each recurrent training cycle to remain both relevant and engaging to learners.

Virtual classroom training

Virtual training delivery is becoming more common but one of its biggest challenges is keeping learners engaged and participating. In a virtual setting there are more distractions and participants can become fatigued faster due to having to actively sustain their attention which reduces engagement and learning outcomes. Techniques to improve engagement and effectiveness of virtual training include:

- **Set expectations in advance:** Some participants will be old hands at the online world including virtual learning, while others may be entering this space for the first time. Set your training up for success by outlining the shared expectations for your time together. As you kick off the session, let learners know that they should plan to actively participate throughout the program. Encourage them to turn off notifications and close other applications on their browser. You have limited time together, and they'll make the most of it by focusing.

  This information is also helpful to include in a pre-event email. It sets the tone for the training and reminds the audience to focus and allows them to identify any issues they may have with accessing required technology for the virtual event.

Image: Adobe stock | Yingyaipumi

- **Use different modes of instruction:** Mix it up to keep learners on their toes and engaged. Virtually delivered material can be supported in many differing ways and does not just have to be slides, it can include videos, breakout rooms, group discussions, mini skits or short demonstrations, short quizzes, polls or voting activities. By delivering content across different methods, it assists with engagement and increases participation across the course.
- **Avoid lecturing and build in participation:** It's easy to fall into the trap of simply delivering material like a lecture when you have a virtual class. However, doing this will result in learner's eyes glazing over, and your learning outcomes will not be achieved.

  Wherever possible try to keep your camera turned on and not just be sharing your screen to present slides. Regularly stopping to ask questions, encouraging participants to discuss content and their real-world experiences, or triggering other activities can assist with this. Have these types of group interactions built into your lesson plan so you don't just read through your content.

  Simply asking participants 'any questions' at the end of every few slides is not active participation nor is it effective in engaging learners. In your lesson plan see where opportunities exist within the context of the content to break into groups for discussions or to undertake activities. Routinely ask open-ended questions to check for understanding and application of the content and avoid asking closed questions like 'does that make sense' or 'any questions at all' as these will elicit very little response.
- **Create frequent engagement:** To keep learners engaged throughout the virtual session aim to engage them every 10 minutes or so. While this may seem like a lot, it doesn't have to be formal or forceful, but can be casual and designed to be more conversational and interactive. This cadence will keep learners paying attention and more prepared to interact on the topic. Some examples of more casual engagement techniques are:
  - How many of you have experience with this topic? Share in the chat.
  - On a scale of 1 to 10, how much do you already know about this subject?
  - What is the first thing that comes to your mind when you think about this topic?
  - Raise your hand if you've done this before.
  - Do any of you have any experiences with this having occurred to you either at work or in another setting? Do you want to share that with us?
  - What is your biggest takeaway from this section?
  - How can you envision using this in your day-to-day work?

  Sometimes, you may have learners who are difficult to draw out or who are more reserved in a virtual setting. If you ask for participation and don't receive responses, you'll need to wait until someone responds or directly prompt individuals to increase their participation. If you just move on without a response, you are telling participants that they don't have to answer your questions and they will quickly shut off.
- **Use breakout sessions:** These are a great way to drive participation in virtual training. As some personnel don't feel comfortable speaking up in larger groups, so breakout rooms or sessions give everyone an opportunity to participate within a smaller group.

  Breakout sessions are great to use with case studies or scenarios, giving smaller groups the opportunity to work as a team to solve a problem or apply the content.

For a case study or scenario, you can give groups some basic facts and have them work together in their breakout to use what they know from the case as well as the content you have already covered to work out next steps or ways forward for your case. Then bring all groups back together to compare notes before providing your supervised outcome or best solution. This can encourage both small and larger group discussions and is also more representative of what they are likely to experience in their workplace.

A few tips for effective breakout sessions are:

- Provide clear and detailed instructions so each group knows exactly what to do during their breakout time. Sometimes providing this in written format in the chat function so they can refer to it once in their rooms helps.
- Appoint a leader for each group to avoid any awkwardness at the start of discussions or activities. You may want to select someone at random and change this up each time you send them to the breakout room for further activities.
- If groups are working on a task, it can be helpful to give participants time to think in advance of a group discussion. Try five minutes of solo preparation, 15 minutes of group discussion and 10 minutes of sharing insights with the whole group.

- **Taking breaks:** While it is easy to take mini breaks in face-to-face classes when you start to notice individuals getting restless this can be missed when delivering virtually. When delivering virtual classes, you will need more frequent but shorter breaks. Plan additional short breaks into your virtual schedule to allow for individuals to stretch and to better absorb knowledge.

  Individuals need frequent breaks otherwise it can be difficult for them to stay focused and retain information.

  Not only do virtual learners need breaks to eat lunch, have coffee/tea and go to the bathroom, they also need a chance to relax and rest their mind as well as their eyes from the dedicated screen time.

  The longer an individual is sitting at their computer and staring at it, the more difficult it becomes for them to focus, this difficulty will only increase as time passes by. This makes taking breaks in virtual training even more relevant, especially if your audience are personnel who do not spend a lot of time routinely sitting at a computer, for example engineers and cabin crew.

  For a 2-hour class, for example, take a 5-minute break every 30 minutes or so to allow learners to look away from the screen and move around. It's harder to focus attention on a small screen than on a whole person in a classroom.

Ways to promote safety

Safety promotions can be awareness materials, actual promotion items, kick-offs, program-specific promotions, or incentives. The purpose of the safety promotion is to bring awareness to the subject. If you recently conducted safety training, your safety promotion can become part of your follow-up plan to reinforce the training topic.

Here are some ways to promote safety:

- Safety awareness materials: These are your posters, banners, table tents, bulletin boards, and break room monitors. Always update these regularly and rotate the locations of your posters. The brain is attracted to new information, the more you change them, the more likely they are to get noticed.

- Personalise your safety promotions: Add in a safety section to the company newsletter or have a safety newsletter. Include training information and how they can take your latest safety meeting topic and apply it at home. Make your articles relatable to the work they are doing, and they are more likely to read it.
- Safety celebrations: Annually, quarterly, or monthly celebrate how safe they are working. Don't apply numbers to it, such as when we hit 100 days, we're going to have a party; this hurts morale and hides safety problems. But just celebrate safety. You can do it based on compliance with safe work practices if you want to give them a goal or celebrate when personnel demonstrate safety behaviours and going above and beyond. But unexpected safety celebrations go off well too.
- Kick-offs and targeted promotions: Whenever you have a new program or following your latest safety training, promoting it will reinforce your training. In marketing, they say that you need to show the customer the information seven times before they will buy into it. That goes for safety programs too.

As you are planning your regular tasks or during your safety meetings, work in how you will promote safety. This could be a monthly task to change safety posters, an article in the personnel newsletter, or a promotional kick off campaign. Just be sure you add something in routinely, otherwise, your safety training will be seen as just another checkmark on the regulatory requirements and not an effective behavioural change. You want your safety messages to be seen as a standard way of doing business and a basic expectation of all personnel, not just as a once off to meet regulatory requirements or posting of a safety incident.

Effective safety communication tips

Effective safety communication begins with your message, that is the safety information you want to transfer from your head into the minds and hearts of your employees. Here are some simple tips to help increase the effectiveness of your safety communications:

- Before you communicate, think carefully about what you want to say. Be as clear as possible about each of the points you want to make.
- Organise your thoughts into a logical sequence for communication.
- Consider your expectations. Do you expect employees to take some action because of what you tell them? If so, be sure to be clear about what that action is.
- Keep your communications simple. One safety message at a time, simply and directly stated, is more likely to be heard and understood.
- Be as precise as possible. Use concrete language and examples to explain what you mean so that you leave no room for misinterpretation.
- Be concise. Say only what needs to be said to get your point across. A lot of extra words will only confuse the issue.
- Demonstrate when appropriate. Employees generally learn better and retain more of the safety information they see and hear.
- Repeat your message as needed. Studies show that a safety message often needs to be repeated on several different occasions to get through to employees.

Sample: Safety information bulletin

Speak up!

Why reporting is important at Aviator Air

Bulletin reference: SB–001

Date 18/09/2022

This information bulletin is for Aviator Air employees

Aviator Air is committed to encouraging all employees, contractors, service providers, and clients to report any safety issues they see in Aviator Air's operation.

We believe that safety is everybody's responsibility, and that part of this responsibility is to report incidents, near misses and equipment and facility hazards. But we don't want to hear only the negative stories, but also any positive reports of safety interventions e.g., when someone noticed something amiss and intervened to prevent a safety issue.

Think how outcomes could have been different in the following cases.

Factual report – Airline AAA

In 1988 a landmark accident in ageing aircraft and metal fatigue occurred. About twenty minutes after take-off, a small section on the left side of the fuselage ruptured. The resulting explosive decompression tore off six metres of skin from the roof and cabin, exposing six rows of the cabin. A flight attendant was killed, while numerous passengers in the six exposed rows were severely injured.

The aircraft was 20 years old and had completed almost 90,000 flight cycles because of its short island flights.

A passenger told NTSB investigators that, while entering through the main door, she noticed a small crack in the side of the fuselage. It ran through a row of rivets just aft of the door. But, believing she would only be 'humoured' if she 'made a fuss', she made no mention of it.

Factual report – Airline BBB

If only someone had noticed, and reported, a very simple cleaner's oversight, it is possible 70 lives could have been saved. In 1996, an aircraft operated by an international airline, took off on the last leg of its flight. Not long into the flight the crew reported receiving contradictory serial emergency messages from the on-board computer and their basic flight instruments were giving false airspeed, altitude, and vertical speed data. This data conflicted with that provided by ATC, leading to compromised situational awareness.

This situation had come about because a cleaner had placed duct tape (and not the coloured approved tape) over the aircraft's three static ports on the left side to protect them before washing and polishing the aircraft.

Reporting incidents at Aviator Air

Personnel at the coalface, you, are the ones who have the best opportunity to know what's going on, to observe issues and report them. That is why we are trying to provide as many ways as possible for personnel to report issues or incidents. Because ours is a small operation, it is impossible to have anonymous reporting. However, we give a commitment to respect reports, and treat them as the vital intelligence they are.

We also give our commitment that reporting incidents will not lead to a blame game or individual finger pointing. Obviously this does not apply if the incident or accident involves pre-meditated or wilful acts of violence, or actions and decisions involving a reckless disregard for safety.

There are several ways you can report an issue or incident, near miss or risky situation:

- use the simple, check-box form on the shared safety drive on the hangar PC
- use the hardcopy form on the noticeboard in the lunchroom
- email the details to the safety officer
- bring it up in a quick 'safety huddle' at debriefing sessions or shift handovers.

In turn, at Aviator Air, we will give you feedback within two weeks, to let you know about what's happening with the report, and any action taken as a result.

The success of our SMS depends on effective reporting, gathering data to help identify any issues and tracking how our risk management is working. We are a relatively small organisation, so it is not as easy for us to collect as much useful data, but one of our safety objectives is to increase the number of reports by 25 per cent. Simply, we can't fix what we don't know about as without the data, the reports, we don't know what we don't know.

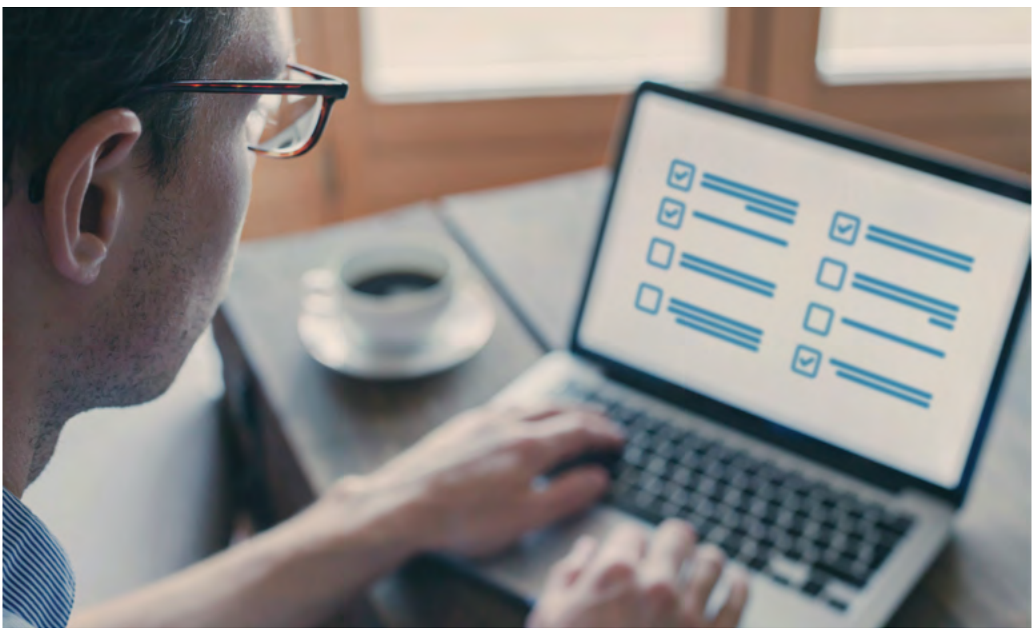

Image: Adobe stock | Song_about_summer

Guidance for safety briefings and toolbox talk

Introduction

Communication and consultation are sound ways to prevent incidents and reduce injuries at work. One of the easiest ways for managers to communicate the importance of safety on the job is through safety briefings, or 'toolbox talks', as many refer to them. You don't have to be a professional speaker to do this well.

The agenda

- Know your topic and plan your agenda so you are well prepared. Be able to present the talk without reading it and lead a discussion afterwards.
- Wherever possible use case studies, materials, and equipment from your operation to illustrate your points. A good subject would be issues your personnel have reported and giving feedback on what action has been taken, if appropriate.
- Collate hand-out literature or other material you intend to use at the talk.
- Limit the length of your talk. You know your business so you will be the best judge of how much time to set aside. Try to keep to half an hour as a maximum time. Allow for questions and answers afterwards.
- If possible, use visual examples. Workers can identify more easily with situations or equipment in their own workplace. For example, if you're talking about baggage carts, use one of your own so that you can point out problems and solutions, or take photographs around a hangar or workshop employees can relate to.
- When closing the briefing/toolbox talk, reinforce the important points discussed. Be sure to thank your personnel for their interest and enthusiasm.
- It is very important to document any action items arising from the toolbox meeting, who is responsible for completing the action items and by when.

The format

- Start the talk on a positive note. After welcoming your personnel, compliment them on a job well done, promote teamwork and explain how briefings/ toolbox talks not only provide valuable information, but also give everyone the opportunity to get together and exchange ideas.
- Include any feedback from past meetings and give a report on follow-up actions.
- Keep the talk informal. Even though you may be using this resource, as well as others, use your own words and style in promoting and leading the discussion.
- Invite individuals to participate and listen to their concerns, without being defensive. The purpose of any briefing/ toolbox talk is to start personnel thinking about safety problems. Include practical examples in the talk.
- Encourage workers to identify hazards and ask them to suggest possible solutions. Use open-ended questions to encourage discussion instead of questions that require only a 'yes' or 'no' answer.

The topic

- Choose topics related to recent developments in your hazard reporting and incident investigation policies, procedures, and forms.
- Review recent incidents or hazards identified:
  - What happened?
  - Why did it happen?
  - What could have been done?
  - What hazard did it create?
- Review upcoming work schedules:
  - What hazards are you concerned about?
  - What safety equipment should be used?
  - What procedures should be followed?

The place and time

- Hold the talk in the work area, at a time when the workday will be least interrupted, and the work area is relatively quiet.
- Schedule briefing/toolbox talks once a week, reinforcing your company's commitment to safety.

Sample topics for discussion

Hazard reporting

- Hazard reporting is required whenever somebody notices a potential problem that may affect the safety of individuals or equipment or harm the environment. Include the following as topic discussions:
  - introduce procedure
  - explain reasons for the hazard reporting procedure
  - go through the procedure step by step
  - introduce the hazard report form
  - show examples of previous reports and positive actions completed
  - allow for questions
  - record any issues and follow up
  - ask for suggestions about future toolbox talk topics.

Incident reporting

- We report and investigate incidents to obtain accurate information about the incident, what events led up to it, who was involved, did the procedures fail, or did a piece of material or equipment fail?
- Evidence can be lost if it is removed from, or altered, at the incident site before making any records.
- Evidence can be lost because personnel react to an incident rather than respond. Also, injured individuals may be moved, or removed from the site for treatment. Equipment and other items may be disturbed to assist in the treatment or rescue of an injured person, and to provide safe access and egress throughout the incident site.
- We all learn from incidents. The investigation helps to bring all the facts together. Your input and involvement will help ensure that corrective actions are taken to prevent similar incidents.
- Every effort should be made to detect existing hazards or unsafe activities. Report them to your supervisor immediately.
- Include the following as topic discussions:
  - introduce the safety investigation procedure
  - explain the reasons for the procedure
  - go through the procedure step by step
  - introduce event notification and reporting forms
  - go through recent incident investigations and lessons learned
  - allow for questions
  - record any issues and follow-up
  - ask for suggestions about future toolbox talk topics.

Image: Civil Aviation Safety Authority

Aviation safety toolbox talk

OUTBACK maintenance services

No. 1 – Shift handover introduction

Shift handover, as our recent incident shows, is one of the more challenging times during maintenance. Errors following poor or inadequate shift handover have been identified as contributing factors in several accidents and incidents, as in the following report from the US National Transportation Safety Board (NTSB).

> Departures from approved procedures included failures to solicit and give proper shift-change turnover reports, failures to use maintenance work cards as approved, failures to complete required maintenance/inspection shift turnover forms, and a breach in the integrity of the quality control. *NTSB AAR–92/04 Final Report*

In the 1988 Piper Alpha disaster, where a North Sea offshore oil platform exploded and burned, killing 167, miscommunication during shift handover was a causal factor.

Some of the challenges of shift handover include:

- a high demand for teamwork and well-developed communication skills
- having structured and standardised policies and procedures
- finding a location conducive to discussion and planning
- finishing workers are tired and want to leave
- training on procedures for shift/task handover.

Good communication is especially critical at shift handover, when a task and its responsibilities are handed over to another person or team and between different parts of an organisation within a shift (for example between pilots, operations and engineers).

There are three main parts of a good handover, one where task-relevant information is communicated accurately and reliably:

- the outgoing shift has time to prepare
- there is time for outgoing and incoming personnel to exchange task-relevant information
- incoming personnel cross-check this information as they take over responsibility for the task.

At Outback Maintenance Services, we believe that shift handovers should be:

- face-to-face
- two-way, with both participants taking responsibility
- a mixture of written and oral communication, with a written checklist of items to convey, and a position log to review (in other words, where the task is up to)
- based on what information the incoming shift needs to know
- given the necessary time and resources
- monitored periodically.

So, the rosters will be adjusted to allow a half-hour handover time. We have also set up a computer in a quiet corner of the hangar, so that the necessary handover paperwork can be completed and with your input, we will put together a checklist of things to be covered in the handover, which we'll try for a month, and then adjust any bits which aren't working.

Other things to consider:

- If someone is new to the job, or has been away from work for a few days, the shift handover may take longer, and need to be more thorough.
- We want to promote a culture where communication mistakes are expected, and efforts are made to avoid them, or mitigate their consequences. In this environment, you can expect to hear phrases such as 'good catch!'.
- Handovers are seen not only as error-prone, but also as potentially beneficial, where the incoming shift can see problems with fresh eyes, and both shifts can solve them together.

Example: Safety briefings and toolbox meeting attendance form

Use this form to document attendance for weekly toolbox meetings and for the manager to track issues and actions raised from these meetings. Each meeting must include a brief overview by the manager of any issues incurring in the previous week with a focus on corrective actions. This information is available from the incident management database.

Section 1 – Toolbox meeting details

Manager's name (print): Signature:	Area/workgroup/team:	Date: / /	Time: :
Toolbox topic name: (Include document number)			
Additional attachments: (or topics presented)			

Section 2 – Attendance (workgroup/team)

Print name	Signature
Print name:	Signature:
Print name:	Signature:
Print name:	Signature:
Print name:	Signature:
Print name:	Signature:
Print name:	Signature:
Print name:	Signature:
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Section 3 – Business arising from previous meeting

No.	Item/s	Action required	Status	Completed
1.				Date: / /
2.				Date: / /
3.				Date: / /
4.				Date: / /
5.				Date: / /
6.				Date: / /
7.				Date: / /
8.				Date: / /
9.				Date: / /
10.				Date: / /

Section 4 – New safety issues

No.	Item/s	Action required	Status	Completed
1.				Date: / /
2.				Date: / /
3.				Date: / /
4.				Date: / /
5.				Date: / /
6.				Date: / /
7.				Date: / /
8.				Date: / /

Section 5 – Comments

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