nimbl

SMS

Getting it done:

A Guide to Easy and Practical SMS Implementation

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Table of Contents

Introduction

The FAA is planning to make SMS required for Part 135 operators.

However, Part 135 or not, required or not, everyone knows that having an SMS can help you become a better and safer operator.

So now what?

First, let's look beyond SMS theory to see what it actually means, in the real world, to have an SMS.

What it means to have an SMS

Having an SMS means you have a more structured process for identifying and managing the risks you might face.

You have likely seen this in your training as the four components of SMS. Here is that theory translated into plain language.

Component 1
Safety Policies and Objectives

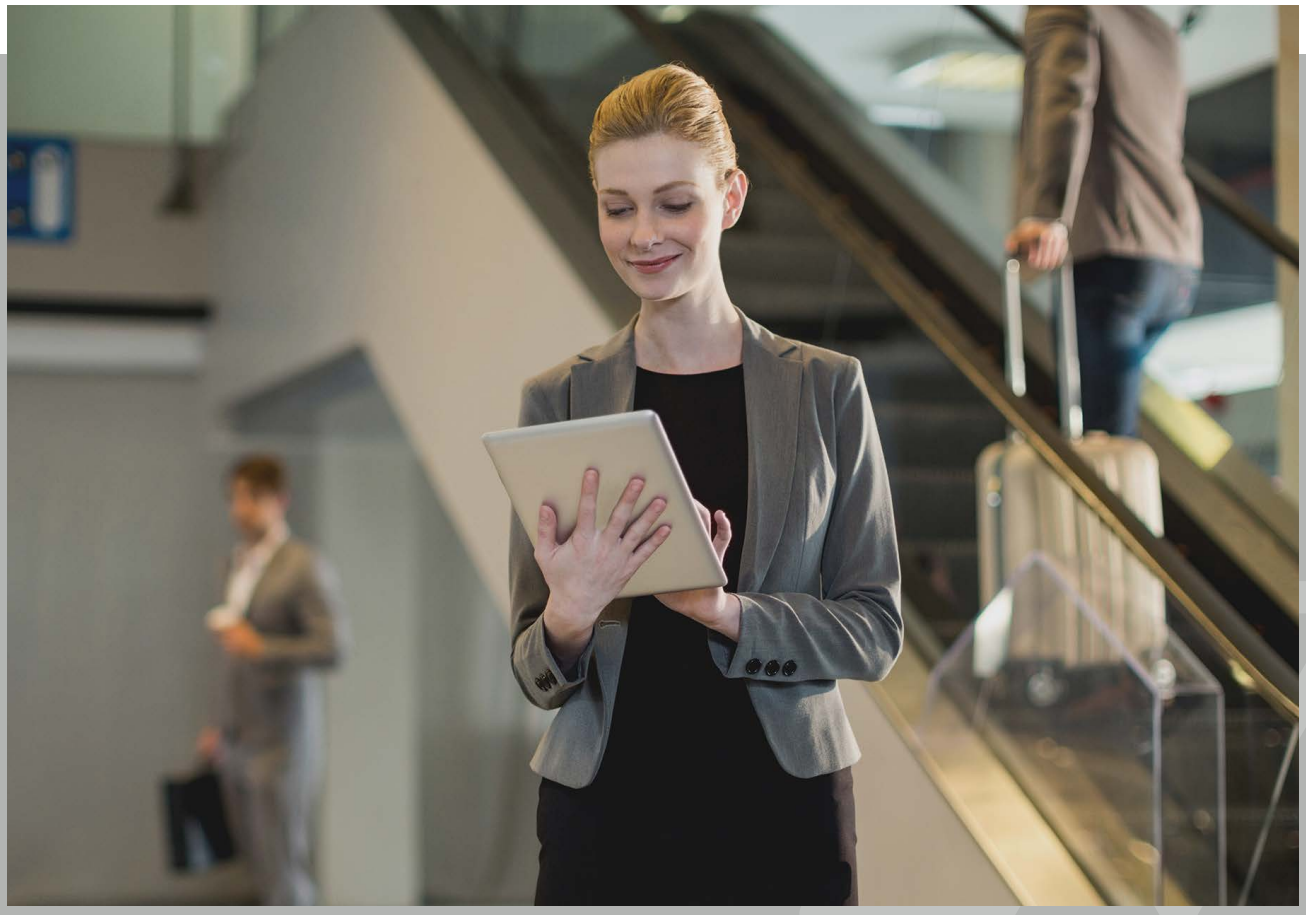
FAA Definition:

Establishes senior management's commitment to continually improve safety; defines the methods, processes, and organizational structure needed to meet safety goals.

In summary:

Write down a description of your SMS.

This will include defining policies and objectives to show that your organization sees safety as a top priority, telling each person how they are expected to participate in ensuring safety, describing how your SMS works (including who is responsible for what), and describing what should be done in an emergency. Even if "everyone just knows what to do" and you haven't had any incidents, defining your policies and objectives will help to refine and improve them. In short, making everyone part of becoming safer.



Component 2
Safety Risk Management

FAA Definition:

Determines the need for, and adequacy of, new or revised risk controls based on the assessment of acceptable risk.

In summary:

Keep an eye out for risks and, when you find them, decide what you will do to fix, reduce, or avoid them.

You will use the processes described in the Component 1 — Safety Policies and Objectives step to actively begin managing your risks. This will include not only reactive management (such as responding to incident reports), but also proactive and predictive management (e.g., completing a preflight risk assessment, monitoring safety reports for trends, etc.).

It is important to ensure you have processes in place for your entire department (not just the pilots) to submit forms, review them, and act upon potential hazards, risks, and shortcomings. Everyone is familiar with a Flight Risk Assessment Tool (FRAT) by now, but have you considered implementing a similar tool for your maintenance or ground personnel?

Component 3
Safety Assurance

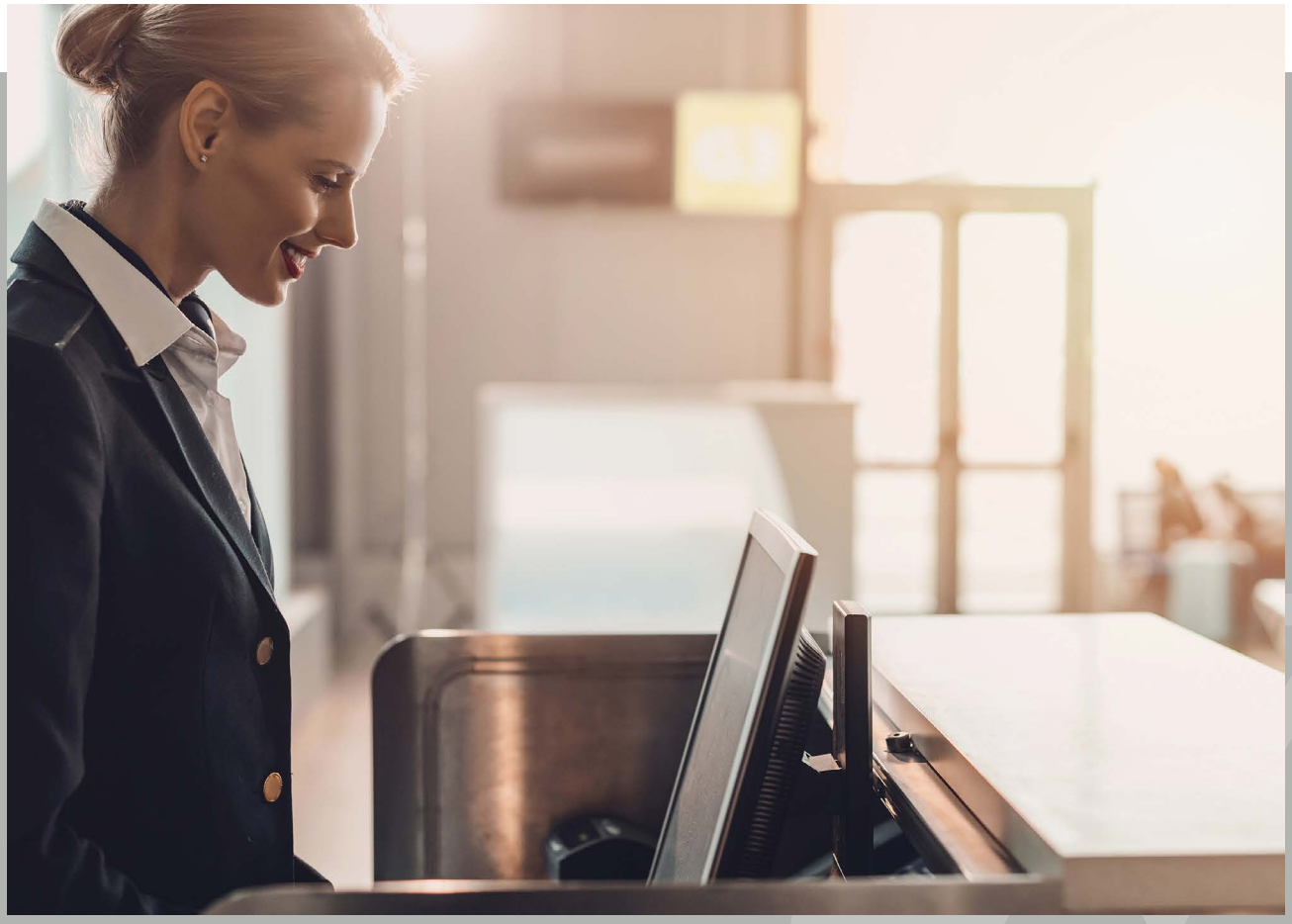
FAA Definition:

Evaluates the continued effectiveness of implemented risk control strategies; supports the identification of new hazards.

In summary:

After you have identified a risk and did something to fix, reduce, or avoid it, double check to make sure that what you did actually led to an improvement.

Write down your mitigation strategies and fixes. Periodically monitor them to ensure the fixes are working as expected to improve safety. Understanding if the fixes and mitigations are working can be as simple as reviewing resolved SMS reports at an annual Safety Meeting to ensure that the actions taken were, and still are, effective. Discuss any new or recent issues related to the resolved reports and how that may change risk control strategies. This is also commonly accomplished via internal checks (internal audits) and Safety Performance Indicators (SPIs), which are time-based metrics that monitor progress against an established safety target.



Component 4
Safety Promotion

FAA Definition:

Includes training, communication, and other actions to create a positive safety culture within all levels of the workforce.

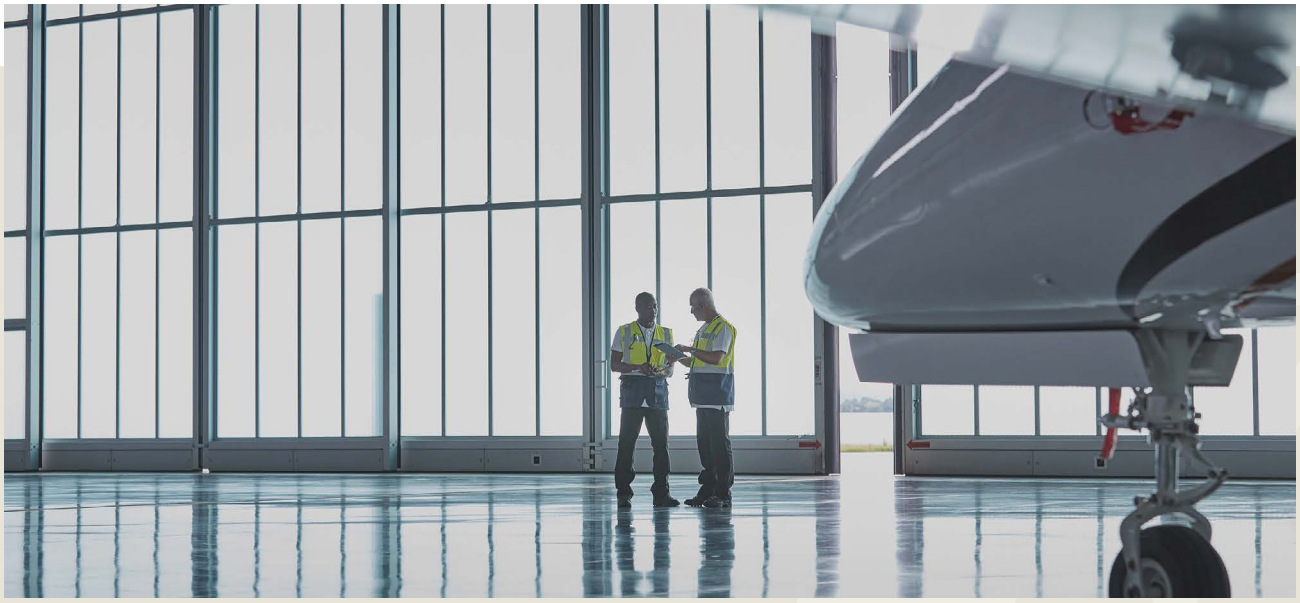
In summary:

SMS only works if it's a part of the company culture, so you need to get the safety message out regularly and need to get everyone involved.

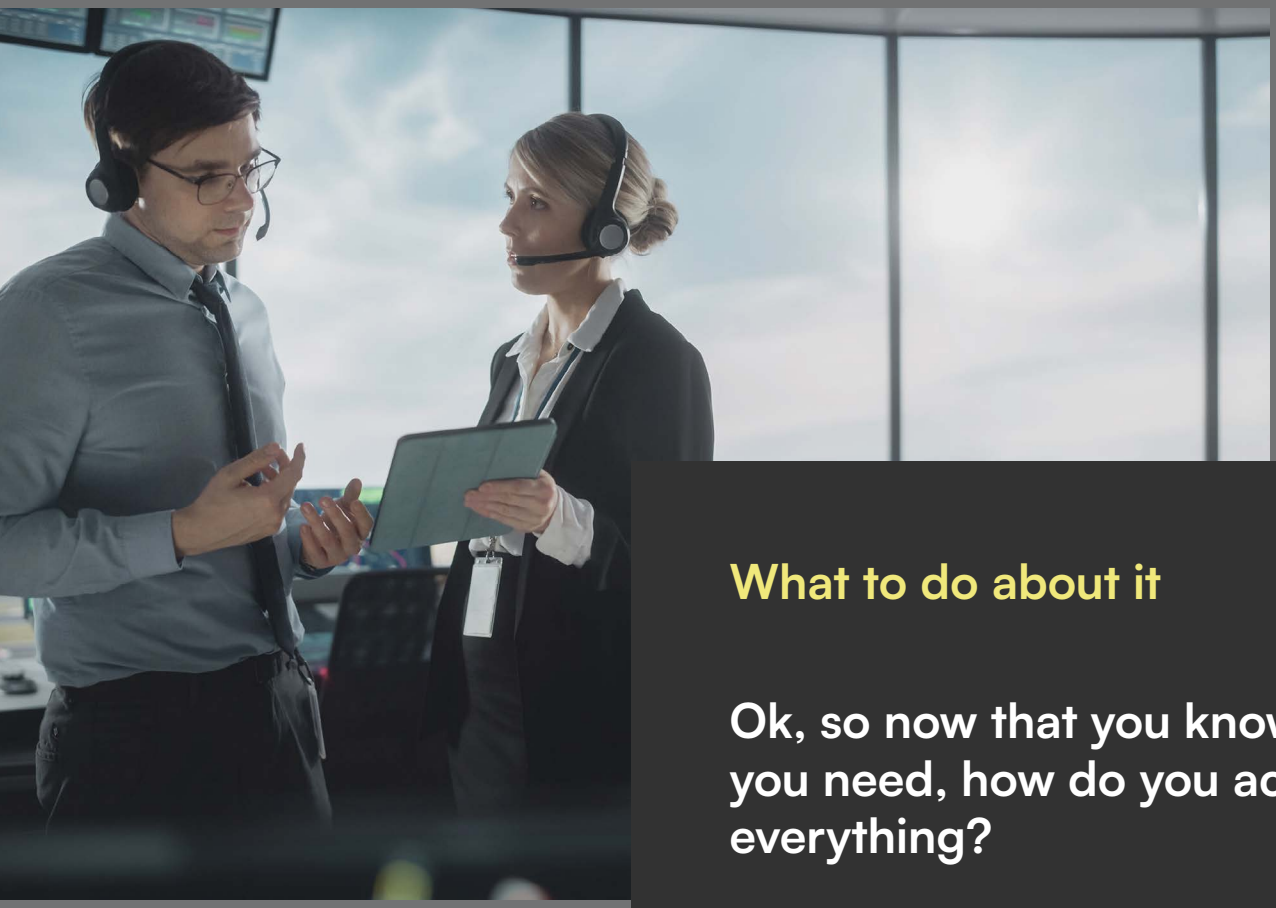
Make sure lines of communication are open and available and that everyone receives safety-critical information. Additionally, the highest level managers should clearly convey a positive safety message to increase team buy-in.

Ensure everyone has access to SMS forms, information, etc. as appropriate to their role. Actively encourage participation (submitting forms, attending Safety Meetings, discussing issues, etc.) from the entire company, not just pilots or maintenance. A dispatcher or office administrator that is always at the hangar will have a very different perspective on office and facility security than pilots who are rarely, or only sporadically there. To ensure your team can participate you will need to train all personnel on their role in the SMS, whether that is how to submit forms, process data, or handle any SMS-related responsibilities they are assigned.

Source: https://www.faa.gov/about/initiatives/sms/explained/components



Solutions



What to do about it

Ok, so now that you know what you need, how do you accomplish everything?

Here are some guidelines.

Component 1
Safety Policies and Objectives

Take stock of what you are already doing and write it down

A lot of operators are already doing some basic elements of SMS, like using a flight risk assessment for example. Think through what you already do to ensure a safe operation. Write down any activities, policies or procedures so that you can formalize them and incorporate them into your SMS process. If you are already doing something and it works then there is no reason to change it. You just need to make sure it's formalized.

Some things you should consider are:

01 How do you decide whether a flight is safe to dispatch or not?

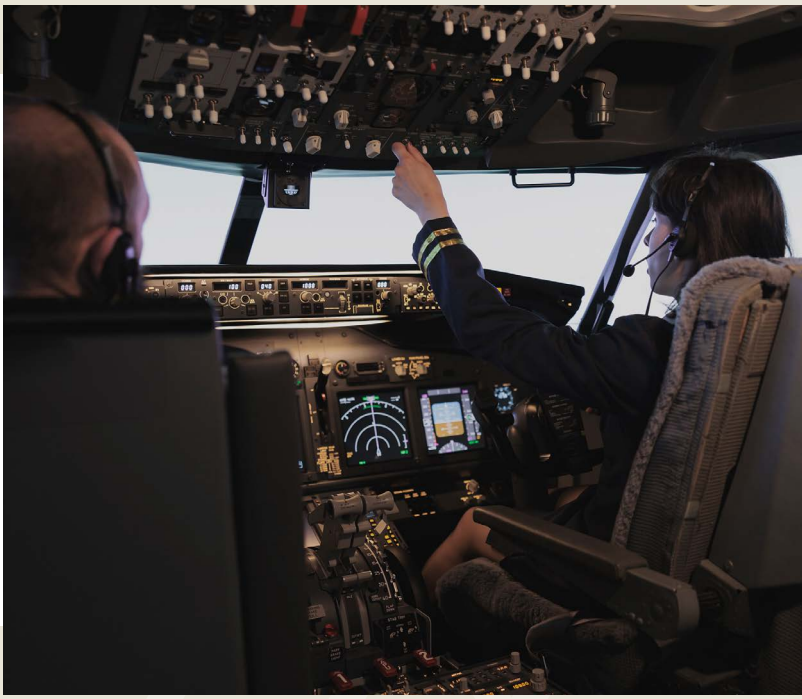
02 Are there any safety checklists you currently use?

03 What are you doing if weather or your flight plan changes?

04 What have you been doing when someone gets sick?

05 What checks are you doing to return an aircraft back to service?

Go back through previous trips and think about what your team did to ensure the trip was planned appropriately and executed safely and effectively. Also, consider times when things did not go according to plan and what you and your team did to improve things for the future. Be sure to discuss all aspects of the trip (scheduling, recordkeeping, passenger handling, ground support, etc.) and not just flight or maintenance related issues. You may also think back to previous positions and departments you worked at for ideas on what did or did not work, best practices, etc.



Component 1
Safety Policies and Objectives

Create a Safety Policy

This is the verbalization of your company's commitment of officially making safety a priority for your organization. It explains what your employees are expected to do and what the company is expected to do to promote and ensure safety. You want to set behavioral and performance expectations for all employees, all the way to the top of the organizational chart.

Consider policies addressing the following:

01 Coming up with solutions to safety issues collectively by inviting input and ideas from all team members.

02 Ensuring all events are appropriately investigated for root cause.

03 Creating a system that does not punish those who bring up safety concerns, excluding willful or negligent behavior.

04 The safety standards the company will hold itself to, whether those are self created or come from a 3rd party such as ICAO.

05 What actions managers will take to support safety.

Come up with your safety objective

Now that you have officially made your commitment to safety, the safety objective is where you describe how you will demonstrate that it is actually a priority.

To develop your safety objectives, consider what you want to achieve from a safety perspective. Include your entire team when determining what actions could improve safety at your department. Keep an open mind.

These objectives are essentially your goals, so you will want to make sure they follow the S.M.A.R.T. method.

SMART Method

A tool that provides criteria to aid in the development of clear and understandable goals and objectives.

S — Specific
M — Measurable
A — Achievable
R — Relevant
T — Time-bound

Component 1
Safety Policies and Objectives

Safety objectives should be set and reviewed on no less than an annual basis.

During your review you will want to consider the following:

01 Which objectives have you met?

02 Should any incomplete objectives be modified to better fit your organization?

03 Are the policies and procedures put in place to support the objectives having a positive impact on progress?

04 Are the objectives you set still relevant for your organization?

Examples of safety objectives

If you are just starting with SMS, then getting started is the objective, so consider simple things like:

- Implementing an SMS
- Set a benchmark for your safety data
- Complete a risk evaluation of the department (a Safety Risk Profile)
- Conduct a Safety Culture Survey to assess the current safety culture in your department
- Conduct SMS training for all personnel, as appropriate to their role
- Schedule Safety Meetings (typically quarterly)

Component 1
Safety Policies and Objectives

If you are further along in your SMS journey, then consider developing your objectives based on your benchmark data and how you want to affect those factors. For example:

01 Reduce the occurrence of unstable approaches year-over-year

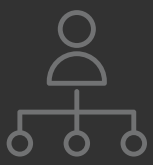
02 Provide a response within 10 working days to the initial submitter on at least 95% of SMS safety reports

03 Reduce flight planning errors to two or fewer per quarter

04 Reduce cases of lost tools or equipment after aircraft servicing to three or fewer per year

Define roles and responsibilities

SMS is a process that affects every department of your organization, so you need to define the expectations for participation in safety for every role. From top to bottom everyone should be expected to have some responsibility.



Managers

The priority for managers is leading the charge and making sure the team has what they need to execute your SMS. This may include things like ensuring the organization has an appropriate safety culture that is non-punitive; the required personnel, training, and financial tools are in place to support your SMS; management is leading by example; and you have a tool to help you monitor the day-to-day processes of your SMS.

Safety Manager

Every organization should have a Safety Manager, but don't worry, this is not necessarily someone you need to hire. The Safety Manager is just the official designation used for the person responsible for overseeing safety in your organization, or your safety champion. For one-person operations this means you; for more complex operations this may be the responsibility of an existing member of your team. In addition, the role does not need to be filled by a pilot and could even be a rotating position.

Pilots, Maintenance, Dispatchers, and Administrative Support

These departments are the front lines of SMS. They are responsible for the day-to-day execution of your SMS and will likely be the first to identify risks and offer mitigation suggestions. Everyone should be on the lookout and report safety hazards, potential risks, and non-normal operations. It would also be useful to discuss circumstances where a report is required (unstabilized approach, food poisoning, slip and fall, etc.).

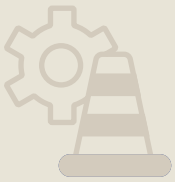
Component 2
Safety Risk Management

Determine your SMS process

Here is where you will explain how you will manage safety. You will want to describe how you will identify and record risks and what you will do about them.

How will you identify risks?

You are already doing this when you notice something out of place on the hangar floor, discover that weather has changed, deal with broken equipment, etc. The only difference is now you need to record it. The method and form of recording risks is unique for each department, but there are a few common tools that most operations start with.



Risk Assessment

Whether it is for a flight or related to maintenance work, this type of assessment records the level of risk for a particular activity. Chances are you are doing this already, just make sure you are saving the assessments, preferably in a format that you can easily and quickly analyze later. The harder this is the less likely it will be used.

Safety Risk Profile or Operational Risk Assessment

This is a tool used to evaluate the risks associated with your operation as a whole, rather than an individual trip or activity. Once completed, it is generally updated annually or anytime your business goes through a significant change.

Incident and Hazard Report

This should be a form available to everyone in the department in either print or digital format. It will give you a standardized way to gather information and document specific unsafe events, observed or perceived hazards, safety topics, potential safety issues, or a suggestion to improve safety.

Component 2
Safety Risk Management

What will you do about these risks?

Once a team member has identified a risk, your SMS process flow is initiated. This should be scaled to fit the size and complexity of your department (some departments use SMS software, some have a Safety Committee instead of just a Safety Manager, etc.); however, the basic flow is as follows:

01 Identify the hazard, topic, potential safety issue, or suggestion to improve safety.

02 Fill out your Incident and Hazard Report to record the finding.

03 Determine the severity of the outcome should the risk occur and the likelihood of the risk occurring.

04 Determine the root cause of the issue. Oftentimes the root cause is deeper than is readily apparent.

05 Discuss the best way to reduce or avoid the risk.

06 Record the steps you take to address the risk.

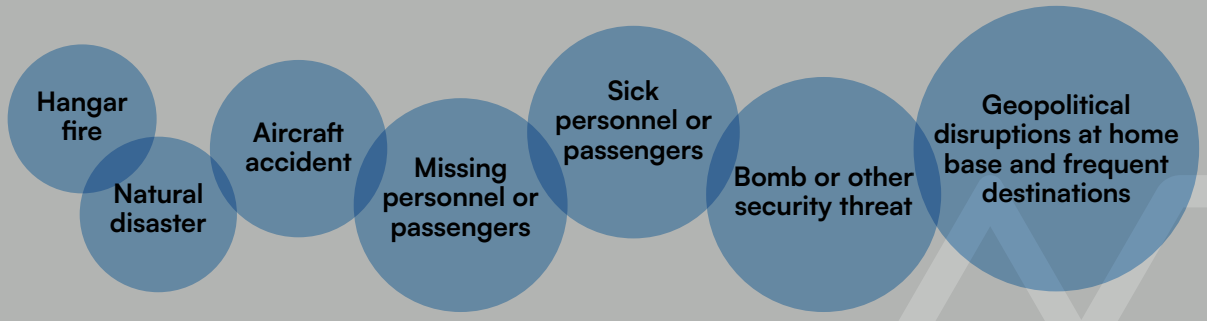
07 Within a reasonable period of time, take a look at the corrective action or mitigation to see if it worked.

What will you do when things go wrong?

When things do not go according to plan, everyone needs to know what to do. Decide your actions ahead of time and document them in an Emergency Response Plan so you are ready to respond immediately without having to think about everything in the heat of the moment.

Brainstorm event scenarios taking into consideration your type and location of operation.

This may include items like:



Decide what needs to be done in each of these situations. Be sure to write your plan in a way that anyone in the department can understand and execute, since you can not be sure who will be available during an emergency.

Component 3
Safety Assurance

After you have started to record risks and what you did to reduce or avoid them, you need to review this information periodically to make sure what you are doing is improving safety. You want to ensure that the actions you took to mitigate the risks have made the desired improvements to your operation. Typically, departments will review the submitted information throughout the year (monthly, quarterly, etc. as appropriate to the item being analyzed). Look for trends such as:

01 Risks that often occur together

02 Risks or incidents that have occurred more than once

03 Additional incidents that occurred after implementing changes to mitigate a certain risk

04 New risks that appeared after implementing a mitigation

Be sure to continually involve your team. Do they feel like things are improving? Are there new concerns that they have? This will also tie into the Safety Communication component of SMS (discussed later).

Consider additional measures like monitoring safety performance indicators and internal or external audits. These measures give you objective standards to compare safety data against to help you make the most effective decisions.

Collecting data and using it to make informed decisions and plans is great, but if you do not make sure that what you are doing is working, then you haven't fully implemented SMS yet.

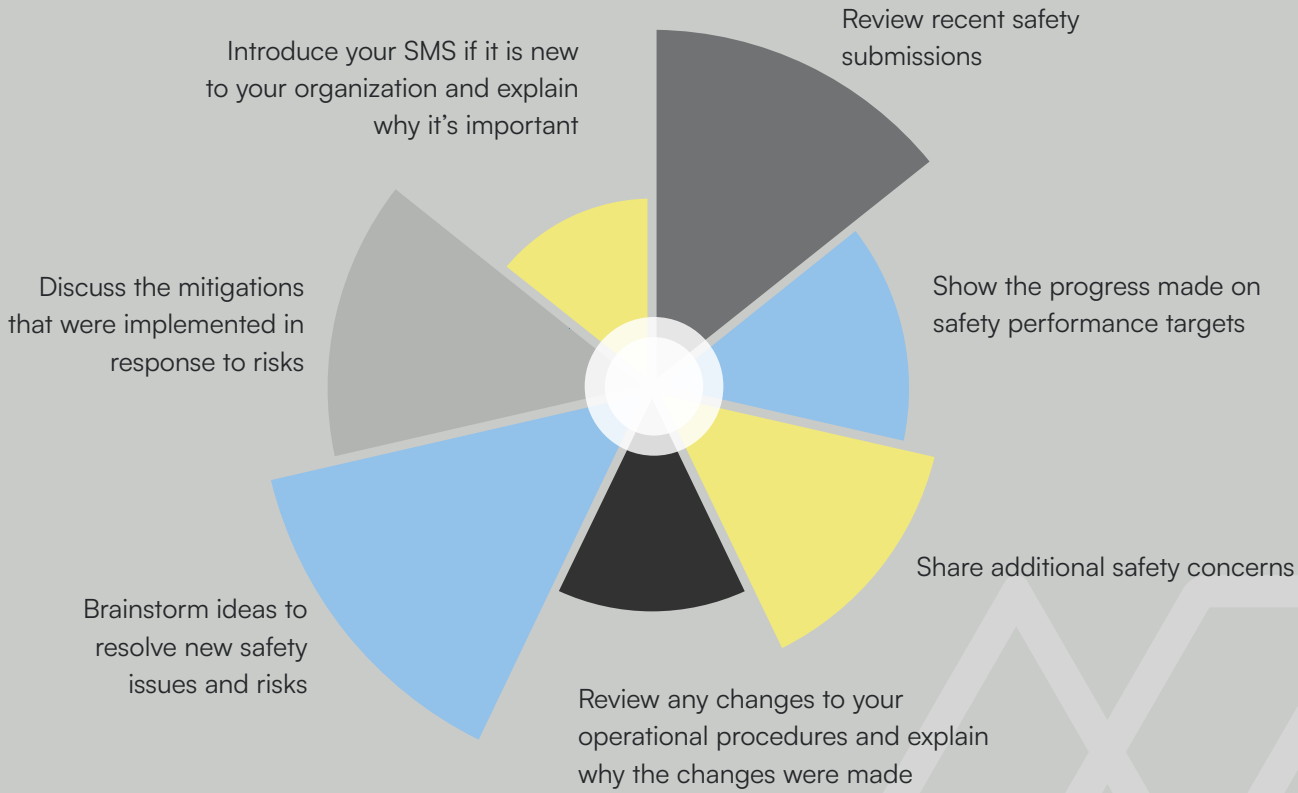
Component 4
Safety Promotion

To help increase employee buy-in and participation, it is vital to make safety an integral part of your organizational culture. This must start from the top, i.e., managers must demonstrate a strong commitment to safety.

Safety Communication
To make something a part of your culture you have to talk about it, a lot. There are a number of ways to do this, but here are some key tools to get you started.

Safety Meetings
Most operators should start with quarterly Safety Meetings. These meetings are when you formally communicate the importance of safety to your organization and the status of your risks.

You may cover topics including:



Component 4
Safety Promotion

Remember, culture takes time to build, but can erode easily. It is important to repeat things like values and goals regularly.

Recognition Events
To demonstrate that safety is valued by the organization you have to recognize and reward behaviors that promote safety. Hold a celebratory lunch, make a companywide thank you announcement, have a party, whatever fits your team culture best; just be sure to do something. Also, remember that simply closing the communication loop is also recognizing someone's efforts for submitting a safety report. Be sure to get back to submitters in a timely manner with a specific next step, even if it is just that you have scheduled the meeting to discuss the issue further with the appropriate parties. Just let them know they have been heard, that you take the suggestion seriously, and value their submission.

Safety Publications
Make sure safety-critical information is sent to your team. New processes and procedures should be distributed, and it is often helpful to explain what led to the processes or procedures being changed. These publications do not need to be overly complicated; a simple bulletin system or periodic safety email often work well.

Training and Education
For your team to execute your SMS they have to know what it is. Be sure everyone is trained on what SMS is, how SMS works in general, and what SMS at your particular organization looks like. You will also need to train each employee in their role so they know what is expected of them and how to utilize the department's SMS tools. For the Safety Manager and other management roles, you may consider a vendor for SMS training. However, in house training can certainly be conducted for other personnel.

Maintain a Strong Safety Culture
Reinforce the understanding that personnel will not be punished or judged for safety submissions and ensure you are following through on that promise. Employees need to feel comfortable when submitting safety data to your SMS to get the most honest and useful data. An anonymous Safety Culture Survey may be a good idea in order to get people's honest opinions. SMS can seem overwhelming, but when done correctly, it should not be. Take it step by step and be sure to develop something that is tailored to your operation's size and complexity; you should not make your operation fit into a standard SMS mold.

Other Useful References

01 **14 CFR Part 5 — SMS requirements for 121 carriers**
(https://www.ecfr.gov/current/title-14/chapter-I/subchapter-A/part-5)

02 **ICAO Annex 19 — Safety Management**
(https://store.icao.int/en/annex-19-safety-management)

03 **FAA Advisory Circular (AC) 120-92B - Safety Management Systems for Aviation Service Providers**
(https://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.information/documentid/1026670)

04 **How to set safety goals**
(https://gonimbl.com/resource/how-to-set-safety-goals/)

05 **What is a Safety Performance Indicator and why you should have them**
(https://gonimbl.com/resource/what-is-a-safety-performance-indicator-and-why-should-you-have-them/)

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