

Safety management system

[Business](#), [Management](#)



By recognizing the organization's role in accident prevention, SMSs provide to both certificate holders and the national aviation authority e. g. (CAAS): A structured means of safety risk management decision making A means of demonstrating safety management capability before system failures occur Increased confidence in risk controls through structured safety assurance processes An effective interface for knowledge sharing between regulator and certificate holder A safety promotion framework to support a sound safety culture Safety begins from both the top down and the bottom up.

Everyone from the receptionist, ramp worker, pilot, manager, and CAAS Inspector has a role to perform. SMS is all about decision-making. Thus it has to be a decision-maker's tool, not a traditional safety program separate and distinct from business and operational decision making. Why do we need SMS? We are now in a position where the "common cause" accidents are diminishing in number. While it's a major success story, it's not a place to rest.

When we find a cause that affects all or part of a large population of operators or other aviation participants, we can address risk through rulemaking - a risk control that applies to everyone to address risks to which everyone is exposed. There will always be some of these risks and work will continue to find them and address them. Many accidents that occur, however, are due to the unique aspects of the operating environments of individual operators of narrow segments of the aviation community.

The causal factors of these accidents aren't common to everyone; they must be found and addressed with methods that are sensitive to the nuances of

the individual operator's situation. One of the defining characteristics of an SMS is its emphasis on risk management [within the individual operators' environment and situation] - it's a gap filler between the common cause risk factors that are addressed by traditional regulations and those that are more elusive. Hypothetical Scenario Demonstrating the Need for SMS A well-designed aircraft with a history of reliable service is being prepared for a charter flight.

Employees tow the aircraft from the hangar to the terminal. One employee sees wetness on the right tire as he unhooks the tow bar. However, he does not give it attention, as he is very busy and has three other aircraft to move in the next 15 minutes. At the same time, a safety inspector is walking through the hangar when she encounters a hydraulic oil spill on the hangar floor. She notifies a Janitor to clean up the slip hazard as she leaves. While cleaning the spill, the Janitor wonders aloud where the spill came from. Afterwards, both the inspector and the Janitor continue with their respective jobs.

Meanwhile, the Chief Pilot assigns the charter flight to a new pilot with the company. While new to the company, the pilot is well trained and prepared for the flight. He is also eager to do a good job and to impress the chief pilot. The chief tells him that the passengers and the aircraft are waiting at the terminal, and the new pilot has to get over there right away to keep the clients happy and on schedule. The flight requires a little more fuel, so a fuel truck is called. While the aircraft is being filled, the fueler notices a small puddle of reddish fluid under the right main landing gear.

He sees the pilot walking out to the aircraft, but before he can say anything, his supervisor calls and tells him to get right over to another aircraft.

Recently, the fueler was criticized by his supervisor for taking too long to finish his work, so he quickly jumps in his truck and drives off to the next job without saying anything to the pilot. The pilot, wanting to make a good impression on his passengers and the chief pilot, personally escorts them to the aircraft and begins his preparation for the flight.

One passenger asks him a brief question as he is on the right side of the aircraft. In a moment of distraction, he does not bend down to inspect the right hand main landing gear. During taxi, the pilot feels the aircraft is taking the bumps a little hard, but continues to the runway for take-off. Meanwhile, up in the tower, an air traffic controller, who happens to like this particular model of aircraft, picks up her binoculars to take a look at the taxiing aircraft. She notices a "wet spot" on the right main tire and radios the pilot.

The pilot tells the controller that he probably ran over a puddle and asks for his clearance. At the destination airport, the pilot executes a perfect landing and applies the brakes. The leaking hydraulic fluid heats up and ignites. The right main landing gear is engulfed in flames. The controller notifies the pilot and then calls the crash fire rescue squad. The pilot calmly and proficiently manages the situation, successfully evacuating everyone from the aircraft without injury. The pilot and passengers watch from a safe distance while a perfectly good aircraft burns to the ground. How could this have happened? "wonders the pilot. Soon afterwards, the pilot is fired for failure to perform an adequate preflight inspection. Six months later, an aircraft is being towed

out of a hanger. One of the employees sees wetness on the left main landing gear tire as he unhooks the tow bar... Evolution of Safety Management

Safety Management Systems (SMSs) are the product of a continuing evolution in aviation safety. Early aviation pioneers had little safety regulation, practical experience, or engineering knowledge to guide them.