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SAFETYWIRE

FAA Calls on General Aviation Operators To Adopt SMS

(Source: Kerry Lynch, AIN, December 16, 2024)

The FAA is encouraging all organizations to incorporate safety management systems (SMS). In an Information for Operators (InFO 24014), the agency noted its recent release of SMS requirements for charter, certain air tours, and manufacturers earlier this year.

That rule, which expanded Part 5, did not address other organizations such as fractional ownership and Part 145 repair stations, the agency pointed out. However, the International Civil Aviation Organization has established an international standard for general aviation operators flying large and jet aircraft (Annex 6 Part 2, Section 3). Further, the FAA added, repair stations operating with EASA Part 145 authorization are required to have an SMS program by December 2025.

According to the ICAO standard, general aviation operators of aircraft weighing more than 12,500 pounds and jet aircraft must maintain an SMS “commensurate with the size and complexity of the operation and meet the criteria established by the state of registry.” The SMS should include a process to identify safety hazards and assess the associated risks; a process to implement remedial action when necessary; and provisions for continuous monitoring and regular assessment of safety management activities.

The FAA stressed that “a successful SMS implementation will require more than writing a manual” and suggested that aviation organizations could use third-party providers to assist in developing and implementing their SMS. But operators should determine what compliance is acceptable in the countries of their intended operations.

“An SMS integrates risk management into normal day-to-day business practices. Safety is managed as a core business function where the organization treats safety in the same way it manages other functions (e.g., financial, quality, marketing),” the agency said, adding that organizations, “regardless of type of aircraft operated,” should implement such programs.

A Novel Investigative Approach Helps Operators Chart a Path to a Brighter Future.

(**Source:** Chris Hill; USHST Fall 2024 Newsletter; **Contributing authors:** Glenn Shields and Ronnie New, STAT MedEvac, Pittsburgh, PA; **Attribution:** Klein, G. (2009). Streetlights and Shadows: Searching for the Keys to Adaptive Decision Making. Cambridge: The MIT Press.)

Introduction

In an industry where safety is paramount, helicopter operators constantly seek ways to protect their teams, passengers, and operations. Traditionally, this focus has involved post-mortem investigations, where a tragic accident prompts rigorous examination to identify failures. But what if helicopter operators could gain similar insights without the tragedy? That's the promise of a "premortem" exercise—a proactive approach to safety that's already proving valuable for companies like STAT MedEvac.

The Journey to Prospective Hindsight

For STAT MedEvac, the adoption of premortem exercises was a turning point that began unexpectedly. "Midway through a typical leaders meeting," Glenn Shields recalled, "our President and CEO, James Houser, interrupted the discussion and redirected us. He said, 'I want to talk about everyone going home to their families every night.' After a few moments of silence, one manager voiced, 'Perhaps we are not talking about the right things.'"

Recognizing the significance of this moment, Glenn suggested they try a premortem exercise. Based on Dr. Gary Klein's work in prospective hindsight, a premortem asks team members to imagine an accident has already happened and work backward to determine what might have led to it. Despite the difficult nature of the conversation, the leadership team agreed that it was necessary. Soon after, STAT MedEvac held a Safety Stand-Down and a companywide premortem exercise.

A Culture of Collaboration and Safety

The premortem approach brings together team members from all areas—pilots, maintenance crews, and administrators—and encourages them to voice their concerns openly. Unlike a post-mortem, which often brings blame, the premortem is a collaborative, blame-free environment. Shields describes it as "harnessing the power of prospective hindsight." The process allowed STAT MedEvac's team to discover new risks and recognize strengths, creating a shared sense of purpose in safeguarding each operation.

Delivering the Desired Outcome

During their premortem exercise, STAT MedEvac simulated an accident scene (complete with a realistic-looking overhead shot), producing 734 responses and identifying potential causal factors that continue to inform their safety protocols (see images provided).

Figure 1: STAT MedEvac Premortem Artifacts Shown Clockwise – A simulated accident scene; 734 sample responses generated; potential "accident" causal factors identified and categorized.

Consider Incorporating a Test of the Emergency Response Plan

An added benefit of the premortem exercise is the opportunity to stress-test the company's ability to respond effectively despite the chaos that inevitably accompanies a tragic accident. We all acknowledge that plans often change in once the "first bullets start flying," but try responding with no plan at all. A written emergency response plan (ERP) can offer some welcome calm during the storm. These plans are critical, yet they often lack the attention they deserve until an emergency uncovers how woefully inadequate one is – if it even existed. Although STAT did not activate their ERP during their premortem exercise, Glenn acknowledges that it would have provided an excellent opportunity to test their response without the consequences of plan breakdowns.

Building a Future-Oriented Safety Culture

Engaging in "what if" scenarios allows helicopter operators to uncover insights that can prevent future incidents. By using premortem exercises to adopt a forward-looking mindset, operators like STAT MedEvac are shifting from unfocused reaction to proactive prevention. "The method shows the team that authentic dissent is valued," Shields said. "It's a collaborative process that continues to guide our safety efforts and reminds us that every voice matters."

For helicopter operators considering this approach, premortem exercises offer a powerful tool to strengthen safety culture and anticipate risks. STAT MedEvac's experience demonstrates that foresight and collaboration can provide the insights needed to ensure every team member goes home safely, every night. We may not be able to predict our future, but with some honest self-reflection and a little collaboration, we can sure help make it a lot brighter."

NTSB Probes Top Safety Concerns in Part 135

(Source: Stuart “Kipp” Lau; Contributor – Safety, AIN, December 2, 2024)

The NTSB highlighted several safety issues with Part 135 in a recently published aviation special investigation report (AIR-24-03). The report revealed the findings of a study of 116 fatal and 460 non-fatal accidents over 12 years (2010 to 2022). As a result of those findings, there is now a fresh set of safety recommendations that could lead to significant changes for Part 135 operators.

Safety issues identified in the July report included operational control and flight locating deficiencies, weight and balance concerns for single-engine aircraft, the importance of implementing organizational risk management strategies such as scalable safety management systems (SMS), and the use of flight data monitoring (FDM) programs. In addition, the report identified a need for improvements in the collection of flight activity data for Part 135 certificate holders.

Over the years, the NTSB has become frustrated with making recommendations to the FAA; some are acted on, while many others are ignored. The Safety Board, following the issuance of this report, has issued three new and reiterated two existing recommendations to the FAA.

The new recommendations include improving operational control by using certificated dispatchers for nearly all Part 135 operators, new weight and balance requirements for single-engine aircraft, and improved methods of gathering data that relate to the flight activities for Part 135 certificate holders. Older recommendations include strengthening organizational risk management by implementing proactive SMS and FDM programs.

According to the report, “Historically, accident rates for Part 135 operations have fluctuated year-to-year but have remained higher than the accident rates for Part 121 commercial airline operations, which are subject to the FAA’s highest level of regulation and oversight.”

One goal of the report and subsequent recommendations, according to the NTSB, is to close the gap in accident rates between Part 135 and Part 121 operations without hindering the operator’s ability to provide services.

Certificated Dispatchers

The NTSB’s recommendation is to require all Part 135 operators (except single-pilot and single-PIC operators) to use certificated dispatchers who hold joint responsibility with the PIC for the safety and operational control of flights.

On-demand charter, helicopter air ambulance (HAA), scheduled commuter, and air tour operators currently employ personnel to perform various flight support duties. Terms or titles such as flight follower, flight monitor, flight coordinator, operational control agent or specialist, flight locator, and flight scheduler are commonly used, but none of these individuals are required to hold an FAA-issued dispatcher certificate, and their duties are not defined by current Part 135 regulations.

In contrast, Part 121 domestic and flag operators use certificated dispatchers who hold joint responsibility with the pilot-in-command for the safety and operational control of flights and whose responsibilities include pre-flight planning such as fuel planning and weather; flight dispatch, release, and cancellation decisions; and active flight monitoring.

Dispatcher certification requires the completion of an approved training course and passing scores on knowledge and practical tests. In addition, there are recurrent training and competency checks. A certificated dispatcher is inherently more accountable for their performance since their certificate can be suspended or revoked if they perform in an unsafe manner.

Former GrandView Aviation president Jessie Naor agrees with the NTSB’s recommendation to require certificated dispatchers in charter operations but feels there are alternatives and best practices within the industry that work well; although, she stresses, those would need to be codified.

“As an industry, we cannot keep sending flight crews on trips and leave them with zero operational oversight,” said Naor, the host of The VIP Seat podcast. “Many professional Part 135 and management companies already understand this and have a process, but not all, particularly when flying Part 91. Every flight and every significant change to a flight needs the approval of another set of experienced eyes beyond the flight crew. Too often, the pilot or pilots do all the flight planning and are permitted to make go/no-go decisions on their own.”

Twelve accidents were identified in the NTSB report that highlighted operational control or flight locating deficiencies; these accidents killed 45 people and resulted in 13 serious injuries. Often the pilots of these accident flights were unsupervised, lacking operational support from their company. Accordingly, these deficiencies could all be addressed using certificated dispatchers.

In one accident, a HAA flight operating under VFR encountered IMC and crashed in Ohio, fatally injuring the pilot and two medical personnel. The company operated 17 aircraft from 15 different bases and employed 70 pilots and 12 operations control specialists. The duties of the operations control specialist included analyzing weather information to determine marginal or hazardous conditions.

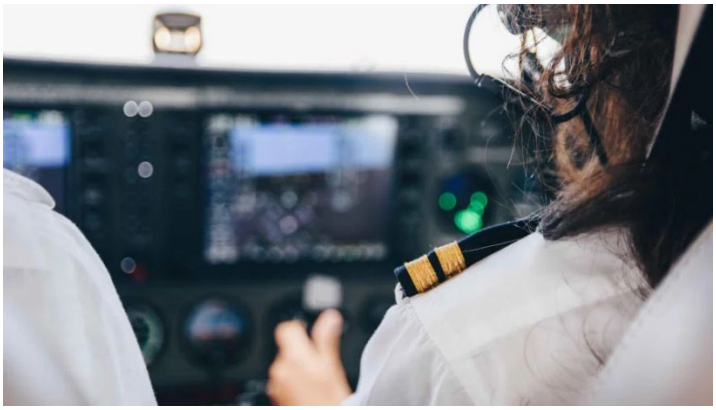
Investigators found that company procedures did not include elements such as en-route weather risks or refusals of previous requests for flight (known as weather turndowns) from other operators. The operations control specialist for the accident flight did not fully use the weather tool available for pre-flight and in-flight planning; the accident pilot spent only 28 seconds reviewing the weather information. As a result, crucial meteorological risks were overlooked including snow, icing, and reduced visibility along the accident flight route.

Sean Mulholland, a former director of safety for a large HAA operator, believes employing a certificated dispatcher for every flight could be challenging for some operators. “I have always been an advocate of third-party flight following and flight planning assistance. However, these capabilities often come at great financial cost. While a certificated dispatcher for every flight might improve the margin of safety, this approach would likely create a financial barrier insurmountable for smaller, simpler operations,” he said.

“Operators implement processes and controls that effectively manage risk without them,” he continued. “A threshold of operational complexity that includes fleet size, type of operation, and a comprehensive risk profile should be established based on safety data and analysis to determine the appropriate triggers for any certificated dispatcher requirement.”

During Naor’s tenure at GrandView, she was deeply involved in building a large flight operations organization that included business jets and helicopters. Naor provided some additional insight into current practices for operational control and certified dispatchers, saying, “In smaller departments, it’s as simple as a director of operations or their designee, like base captains or other pilots with experience in the aircraft looking at the weather and runway conditions at each field, en-route weather, fuel planning, and the flight risk assessment for each leg before departing.”

She added, “When we look at accident reports, many could have been avoided if someone else had stopped the flight or modified the planning. Pilots have added pressure from the clients on the ground, the desire to get home to the family overnight, and other forces that need a stopgap, and operational control is supposed to be just that. But the use of operational control varies widely—some chief pilots will only look at a flight risk assessment, and if the score is low enough, they approve the flight to depart. That’s not good enough; the entirety of the flight plan needs careful review and support, which is why the NTSB is suggesting certificated dispatchers.”



As an organization grows, employing certificated dispatchers can be beneficial, Naor agreed. “As our business grew, it became impossible for a single person, or even the entire 119 management personnel team, to carefully review every flight leg and change daily. Suppose the company does not have the infrastructure to do this. In that case, a licensed dispatcher or similar must be considered, either employed by the company 100% of the time or shared across multiple operators.”

Naor believes that it takes more than just hiring a dispatcher: an organization must have processes in place to ensure operational control. She further pointed out, “It’s important to note that it’s not only the dispatcher or approver that matters, but the process of approving the flight. Just checking the weather and the duty times of the flight is minimal; the approval process should be as in-depth and detailed as the pilot’s flight planning, and the dispatcher must understand the company’s operating procedures, the experience of the flight crew, the aircraft, and many other factors.”

Single-engine Aircraft/Weight and Balance

The next recommendation is to expand the applicability of load manifest and recordkeeping requirements to include Part 135 single-engine aircraft operations. Current regulations (CFR 135.63(c)) require operators of multi-engine aircraft to prepare and retain a load manifest for each flight—this is not the case for single-engine aircraft. Single-engine aircraft employed in Part 135 operations are now larger and more complex than in the past.

Five related accidents in the study resulted in 11 fatalities and six serious injuries. Most of these accidents were in remote areas of Alaska where there are many additional challenges.

In one accident, a single-engine float-equipped airplane operating as an on-demand charter flight entered an aerodynamic stall and crashed after takeoff; the pilot was fatally injured, and the two passengers were seriously injured.

As the pilot prepared for departure, the cargo load weighed 800 pounds (200 pounds greater than anticipated) and consisted of masonry mortar bags, food, stores, two propane tanks, and a utility sink.

As the aircraft taxied for takeoff, witnesses noted that the aft portion of the floats was deep underwater. The aircraft failed to get airborne during its first takeoff attempt. During the next takeoff, the airplane slowly lifted off, attained a nose-high attitude, cleared some trees, rolled left, and crashed.

Post-accident analysis revealed the aircraft was loaded about 76 pounds over maximum gross takeoff weight with a center of gravity near the aft limit.

Organizational Risk Management Strategies

Additionally, the NTSB applauded the FAA's recent requirement for Part 135 operators to develop, implement, and maintain appropriately scaled SMS. The NTSB has classified its previous recommendation to require all Part 135 operators to establish SMS programs as "Closed—Acceptable Action" because the FAA will now mandate SMS. Part 135 operators must provide the FAA with a declaration of compliance (14 CFR 5.9) by May 28, 2027.

Mulholland is now the director of safety for Magnifica Air, a new Part 121 airline, but in the past has participated in industry safety events such as the NTSB's "roundtable" discussion on implementing SMS in small to midsized operations.

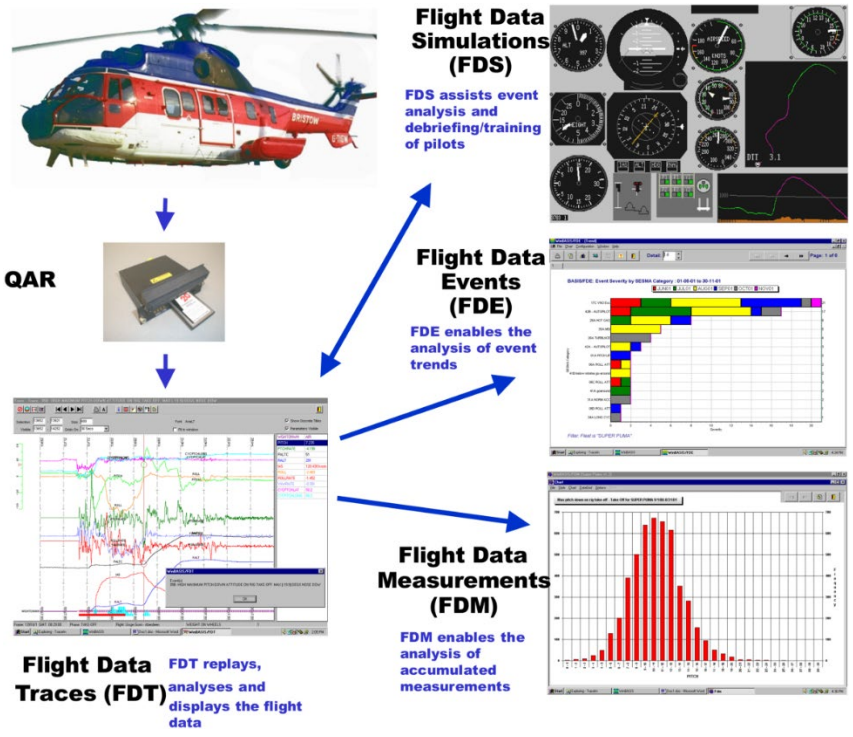
Mulholland believes Part 135 operators are ready to meet the SMS mandate, saying, "I believe that the Part 135 community is ready for the SMS mandate. SMS has been in place at large and small Part 135 operators for over a decade. Many colleges and universities include SMS as part of their curriculum, creating a pool of prospective employees with the knowledge and capability to implement the program. Also, many third-party providers of software and consulting services, as well as industry consortiums and foundations, offer reasonably priced tools and expertise for those who need them. There is no shortage of resources in the market to help any Part 135 operator subject to the SMS mandate to implement a Part 5-compliant program that meets the needs of their operation."

Naor concurred: "While an SMS may initially seem overwhelming to an operator, once you understand what it is, it's not nearly as intimidating and can be very simple to implement. The terminology is the biggest hurdle to overcome. There are plenty of free online programs and even more paid consultants to help set up your SMS and train you.

“The key for operators is not to let the system just sit unused once it’s created; the three-year implementation period means a functioning SMS that has data, reports, and findings in it, so don’t wait until year three; you need to be using it and putting information in it now,” she noted.

Another longstanding NTSB recommendation is for all Part 135 operators to install flight data monitoring devices capable of supporting a flight data monitoring program. The NTSB again reiterated this recommendation in its special investigative report.

When asked about FAA-mandated FDM programs for Part 135 operations, Naor responded, “FDM is a natural extension of SMS—SMS data is observational and contributed by humans, which can be messy and inconsistent, while FDM is pure data from an aircraft."



She further maintained, “Once a company has fully embraced just culture in their SMS, pilots feel comfortable sharing mistakes company-wide, and management is transparent in handling and using the data, the next phase is FDM. Just like SMS, you uncover information you would have never learned without it, and I have heard many reports from large operations that the maintenance cost savings well exceed the cost of running the programs. However, the mountains of data from these systems must be organized; focus on one or two in the beginning, such as stabilized approaches. You’ll quickly discover your higher-risk airports that might need additional training time in the simulator. The possibilities are endless.”

Mulholland, while supportive of FDM programs, has a different view on whether the industry is ready. “In my opinion, the Part 135 industry is not yet ready for an FDM mandate. There are still major challenges in terms of easy access to system-generated parametric data, portability of data, as well as costs associated with hardware, software, analytical expertise, and data legal protections,” he said. “This is not to say that there are currently no options for gathering data from camera-based systems, electronic flight management systems, flight data recorders—when present—or even portable systems such as tablet computers.

"Given the lack of uniformity in Part 135 aircraft fleet avionics, there are many challenges in turning disparate data sources into cohesive analyses and actionable information. There are also financial barriers for which operators, especially smaller ones, are not prepared. Investments in hardware, software, technical expertise, and an emerging trend of equipment manufacturers monetizing safety data can keep FDM capabilities out of reach."

Naor and Mulholland both had similar concerns about data usage and protection. Naor said, "You'll also have to contend with the legal implications of having this data, and this is where FAA oversight gets tricky. Once you have this data, you need to use it and do something with it; do not turn on an FDM system unless you have someone who can make meaningful observations and corrections to the operation. We need to ensure the data is protected and isn't used punitively. I'm not sure how the FAA will handle this as a regulator whose job is to enforce laws and how their approach will vary from inspector to inspector."

Mulholland further expanded on data protection and the cost of implementing an FDM program. "Many operators also express concerns about legal liability and enforcement exposure associated with FDM data. Without the data protections of a formal, FAA-approved flight operations quality assurance (FOQA) program, many operators choose not to pursue FDM. Such approvals can be time-consuming and expensive. Operators must choose where best to make safety investments that are right for their operation.

"A mandated FDM program may force an operator to limit investment in other areas, which may be more effective in managing their risk. Operators should be encouraged to rely on the outputs of their safety management system to guide their safety dollars rather than by imposed mandate. The regulator could also help by simplifying the FOQA program approval process to reduce the barriers of time and complexity, thereby encouraging more to pursue this avenue of safety assurance within their SMS."

There are several significant changes on the horizon for Part 135 operators. On the heels of the new FAA SMS mandate, a few new recommendations could further impact these companies. As an example: excluding the smallest operators, there are more than 1,300 charter operators in the U.S. If the FAA acts on the proposed certificated dispatcher requirement, the industry could be overwhelmed with training and hiring so many dispatchers. Other pending requirements such as an FDM mandate could add further challenges for the charter industry.

SAFETY MANAGER'S CORNER

PRISM SMS: Users - FAQs

How do I edit or suspend a user in PRISM SMS?

In the Account Manager in PRISM SMS, you can edit and/or suspend an existing user by following the steps below:

1. Click on the user's name.
2. Click the edit icon on the top right-hand side of the page.
3. Make changes to username, email address, etc. or click the Suspend toggle switch.
4. Then click Update.

All suspended users will appear at the end of the user list with an S under Status. Suspended users will no longer have access to your account in PRISM SMS. They will also no longer appear in any of the lists within the tools in PRISM SMS. If you would like to completely remove a user or if a user asks for their information to be deleted, please contact PRISM Support to have them deleted.

Where can I find someone's username?

Most usernames in PRIMS SMS are FirstNameLastName (no spaces) but an account admin can look up usernames by going into the Account Manager in PRISM SMS and clicking on the user. Once they are on the User Details page, they can click the edit icon on the top right-hand side of the page to view the user's information like username, email address, or phone number.

How do I change or reset someone's password?

Anyone can change or reset their password by following the steps below:

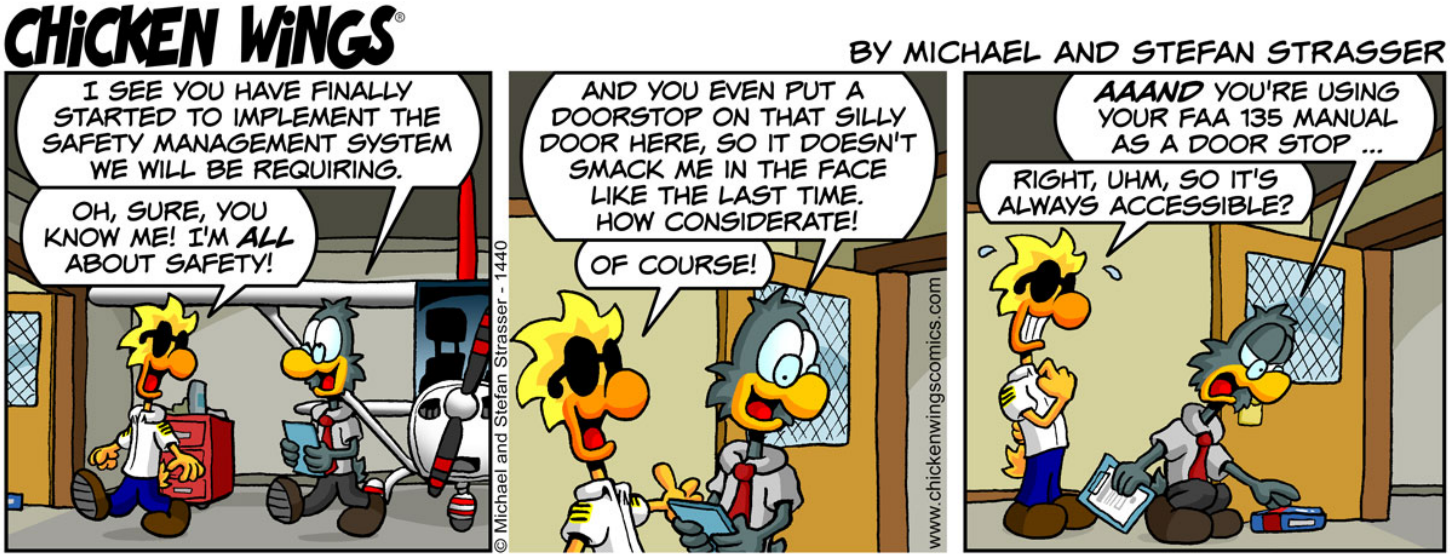
- Go to the Log In screen: https://prismsms.argus.aero/login.
- Select "Forgot Password".
- Enter the username.
- An email will be sent to the user.
    - The email will include a link and information to reset your password.

Quote of the Month

The new year stands before us, like a chapter in a book, waiting to be written. We can help write that story by setting goals.

BY: Melody Beattie

The turn of the calendar in January is a great time to establish some new goals that give us all something to strive for in the never-ending quest to achieve...something. From an aviation safety perspective, goals are critical and should always be two things: measurable, and achievable. For a safety goal to be measurable, specific data must exist. A typical example could be reducing unstabilized approaches. Many operators choose a numeric value for the goal. For instance, in 2024 they had 25 unstabilized approaches so in 2025 their goal is to have 5 or less. This is great but a rate is better because it more accurately portrays your risks. For example, in 2020, operators flew a lot less due to COVID. As a result of flying less, they had less events. When we look at the example of unstabilized approaches, in 2020 an operator may have only had 5 unstabilized approach events but they only flew 50 hours that year. Whereas, in 2024, they had 25 unstabilized approach events but they flew 5000 hours. If you look at the numeric value, there is cause for concern because of the number of events but if you were to look at this as a rate, you can see that 2024 was actually a much safer year when compared to 2020 for unstabilized approaches. In addition to setting a measurable goal, you also need to determine what tactics will be employed to affect the goal? Just because someone says it or wants it does not make it so. Different training or SOP changes might be required to reduce unstabilized approaches. Achieving a goal demands commitment, usually in both resources and personal involvement. In other words, it's no easy thing, attaining a goal, therefore they must be set carefully and correctly.



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