PRISM

A member of the SGS Group

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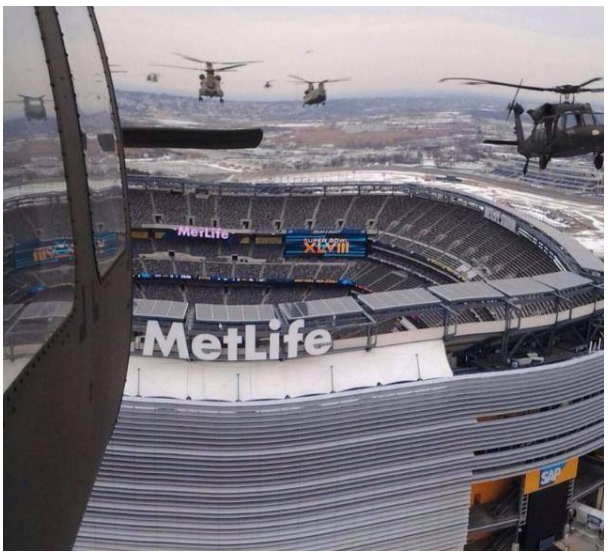
SAFETYWIRE

When Safety Cultures Stumble

(Source: Paul Bertorelli, originally published in AVweb, December 10, 2021)

I have a love-hate relationship with the notion that we analyze and report on aviation accidents as a means of preventing more from happening. It's apparently not working very well because the accident rate is more or less static and pilots keep digging smoking craters for the same reasons, most of which are related to bad judgment. What we don't do much of is reporting on clearly questionable judgments that could have been accidents, but weren't because the tiny little slice of risk margin was enough. Just. Raising these as a point in the risk matrix is sometimes swatted away as just the safety weenies again spoiling all the fun.

Exhibit A this week is this video, which appeared on news broadcasts about three weeks ago. It was an Army helicopter flyover of Nissan Stadium in Nashville prior to an NFL game. Given the altitude, it was more like a fly through since the fans in the upper stands were at eye-level or a little above the lowest helicopter. The reporting on the incident made it to the upper reaches of the Army command structure. I asked former Army helo unit commander Jim Viola, who now oversees Helicopter Association International, if the display was viewed as a problem. A definite yes to that, on several levels, he said. No one he talked to liked it nor did they want to discuss it publicly. No one star or three star or however high this got likes a phone call with the question, "Did you see this?" Nor does a professional piloting community like being viewed as hot dogging it, the sideways winks and nods notwithstanding.



While helicopters have more liberal altitude guidelines than fixed-wing airplanes, they don't get a blank check. Helicopters can legally operate below fixed-wing altitude limits, but with this provision … "If the operation is conducted without hazard to persons or property on the surface." This is where it gets hinky. When would a low pass like this become too low? Another 10 feet lower? Another 50? Reverse that and ask this: Would it be safer for the fans if the flyover happened at 500 feet? My answer is yes, it would, while still delivering on the flyover mission.

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Viola's command experience is in special operations helo work, which involves even more risk than mainstream military helicopter operations. Like professional aviators of all stripes, Army pilots are mission oriented sometimes to a fault and Viola says more than once he had to forcefully say no, not doing that because the risk isn't worth the gain. And yes, this sometimes applies to combat operations, too.

In this interesting post, several military helicopter pilots said the flyover wasn't as risky as it looked. Probably that's true, but it's also true that it's not as safe—de-risked as the MBAs might say—as it could have been with 500 feet (or more) between the aircraft and the spectators. I suspect the national command-level review of this incident that's underway will raise that issue.

Like everyone in aviation, the military struggles with the definition of safety culture. The more I try to define it, the more confused I get. But as I understand it, a safety culture is an organizational philosophy that, among other things, teaches and encourages people to recognize when risky decisions are scraping the guard rails and to steadfastly take another course. It sometimes means saying no when everyone else is voting an enthusiastic yes.

The Army will have to decide if this flyover came out of a safety culture that's working as it should. Viola tells me the Army accident rate could stand improvement so I'd be surprised if the decision tree that led to this is a signpost on the road to fewer wrecks.

For civilians, the value is to look at the flyover and ask yourself if your safety culture would do the same. I have to admit it's marginal for me. It's not exactly a wild-eyed crazy stunt for skilled, trained pilots. But I'd feel compelled to tilt the balance away from the momentary thrill and toward more airspace for the unsuspecting fans.

So yes, God help me, I may be turning into a safety weenie.

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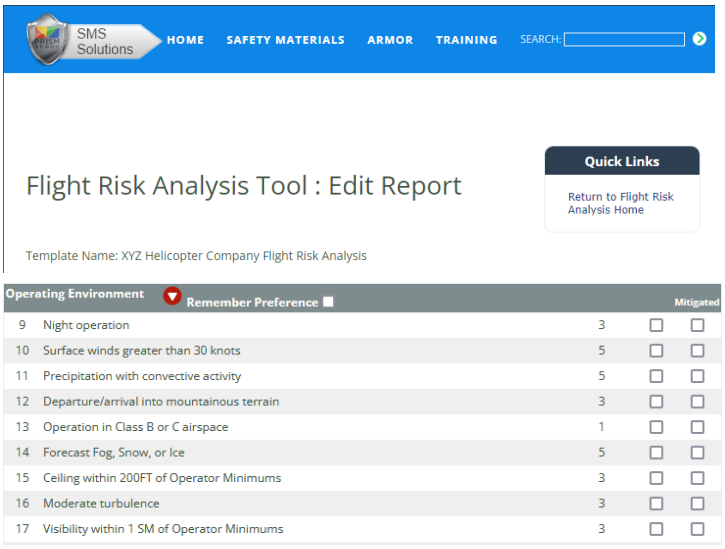
PRISM Safety Analyst Opinion:

(Source: Rhodri Norton-Quick)

The previous article was about the military's struggle with safety and mission completion. But we have all been there. Air ambulance, 135 charter, cargo, you name it. Even the Part 91 corporate flight departments have had to balance completion with risk. Use of your Safety Management System (SMS) tools can help sort this out, well before the heat of the moment.

For example, SMS requires System Analysis of your organizations operations, including flyovers. A well thought out step - through of the Safety Risk Management process with respect to flyovers should lead to the organization establishing minimum altitude criteria for various mission profiles. If that has not been accomplished yet, there is another SMS Tool that can function as a last line of defense, a Flight Risk Analysis Tool (FRAT).



Use of a quality FRAT tool, can help your line user put all the pieces together and look at the birds eye view, separate from the hazard of completion bias. Yes, that trip is important; but maybe an alternate is a better option? Perhaps the weather is LEGAL, but when you combine it with three days of max duty, maybe it's better to assign a new crew? Or postpone the flight until tomorrow? These are the types of conversations the FRAT tool is supposed to generate. The ideal aspect of this tool is that it can be completely customized to your operational needs. By stimulating these conversations you will enhance your safety culture.

Speaking of safety culture, as was highlighted in last months Safety Managers corner, the safety culture survey is a powerful tool. There is no better way to find out why a culture is stumbling, or in fact how to prevent a culture from stumbling than to talk to the boots on the ground. We've all been in the room when someone from management asks "So, how we doing?". That awkward silence and the nervous giggles, someone inevitably speaks up and says "Good, I think we're doing good".

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There's normally a smattering of affirmations, and some smiles. But are you? Unless your safety sensitive employees feel comfortable answering those questions you'll never know. To be fair, and also receive honest feedback it's imperative that the Safety Culture Survey is anonymous. Take the results and put together a final report that allows you to see how your flight department is doing. Think of it as a management FRAT. How do you manage change? How is your style of safety management translating to real world actions? Most importantly, how does your communication of safety culture get translated to the rank and file?

That's probably the biggest unsung hurdle as it were. We are all safety minded individuals for the most part. But, what we struggle with is turning that individual mindset into a collective course of action. As a former charter pilot, I was **VERY** invested in my own safety. How then do you get **ME** to affect **YOU**? That's where communication comes into play. Do you publish your safety issues and instigate conversations about it?

Talk is good. Get your newest members thinking about it so when they become your senior members the culture is strong.

As the industry rebounds at a rate that no one in the rational world thought probable, and looks to continue for the next while. We encourage you to take the temperature of your culture. Lets make sure that all our safety cultures have the tools to survive the strain that is put on them daily.

PRISM ARMOR

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FLYING IN FOG

(Source: NOAA)
(Intro: PRISM)

Its getting to be that time of year again. The birds are singing, the temperature is climbing at a tantalizing rate, pretty soon we will be walking to our aircraft surrounded by a misty sea of white. In preparation of fog season, or spring as it were; here are some foggy day tips from NOAA's website.

Flying in fog is quite challenging, even for the most experienced of pilots. For pilots that are not as skilled, fog is an extremely dangerous and potentially deadly hazard. Each year, around 440 people are killed due to weather-related aviation accidents including the conditions of low visibilities and ceilings. If you are planning a flight and it's foggy or will potentially be fog, follow these safety guidelines:

- Get the latest forecasts, advisories and observations to help make your flight safe from NOAA's Aviation Weather Center.

Figure 18. U.S. Low-Level Significant Weather Prognostic Charts.

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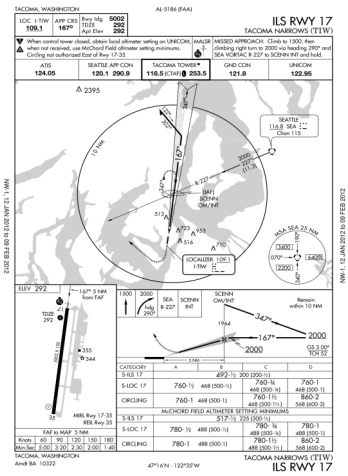
- Consider changing your plans to avoid flying in fog.
- It is imperative that you specifically follow the Federal Aviation Administration mandated guidelines and flight rules for the specific flight category based on visibility and ceiling height. The ability to operate in fog depends on three factors: the capability of the pilot (i.e., instrument rating), the capability of the aircraft, and the capability of the airport. Flight categories are:

  ⇒ **Instrument Flight Rules (IFR)** or **Instrument Meteorological Conditions (IMC)**: Ceilings below 1,000 feet AGL and/or visibility less than 3 miles.



  ⇒ **Marginal Visual Flight Rules (MVFR):** Ceilings, 1,000 to 3,000 feet AGL and/or visibility 3 to 5 miles.

Weather Overlay	Color coding
Flight Category	LIFR: Magenta. Ceiling less than 500 feet and/or visibility less than 1 mile. IFR: Red. Ceiling 500 to less than 1,000 feet and/or visibility 1 to less than 3 miles. MVFR: Blue. Ceiling 1,000 to 3,000 feet and/or visibility 3 to 5 miles inclusive. VFR: Green. Ceiling greater than 3,000 feet and visibility greater than 5 miles; includes sky clear.

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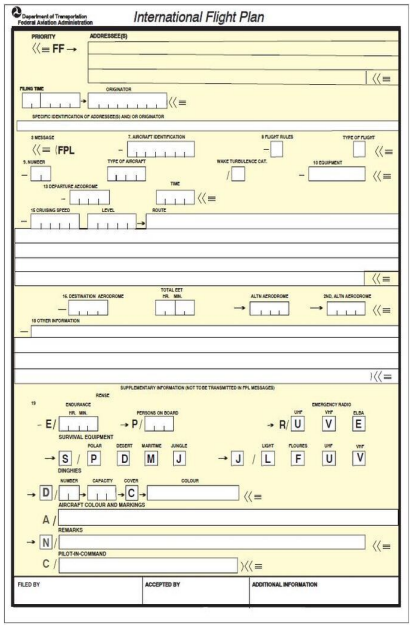
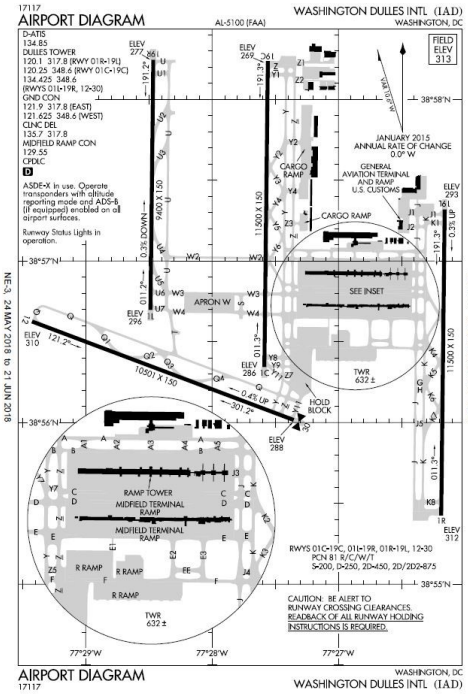
⇒ **Visual Flight Rules (VFR)** or **Meteorological Conditions (VMC)**), MVFR is considered VMC: Ceilings: greater than 3,000 feet AGL and visibility greater than 5 miles.



- If you must fly, it is important to know the layout of the airport you are departing from or arriving to, including the length and orientation of the runway, as well as the entire flying area.
- Be aware of the potential for freezing fog. If temperatures are at or below freezing and fog is present, a thin layer of ice may form on the plane.
- Always file a flight plan.
- Take the free training courses offered by the COMET program, sponsored in part by NOAA. These classes can help you learn more about flying in fog and how other weather phenomena impacts aviation.



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Internal Evaluation Program: Who, What, When, Where

(Source: Rhodri Norton-Quick)

An Internal Evaluation Program (IEP) is a requirement of a fully implemented Safety Management System (SMS). The idea is that you audit your organization against your own processes/procedures to see if you are doing things the way you say you are. You can build a perfect organization on paper but when you throw people into the daily operational mix, your organization is almost certainly going to experience "practical drift",

Use of internal audit checklists will help you identify practical drift, assess it through the safety risk management process, and either correct the drift or change your baseline to synch up with the drift (not all practical drift is bad). During your internal audits, you may also discover some "latent conditions", which are seemingly harmless conditions that, under thing right circumstances, can lead to a very negative outcome. Discovering these latent conditions well before the perfect storm of conditions line up and a major accident happens, is obviously a tremendous benefit of internal auditing.

In the PRISM ARMOR software, there is a tool called the IEP Manager, where you can manage your internal auditing program. The rest of this article will step through the who, what, and when of internal auditing.

WHO: Theoretically anyone can perform an audit. Give a person a clipboard and a pencil, a whiff of authority, and chances are they'll do one anyway whether you asked them to or not. Much to the chagrin of their fellow employees. The truth is, that's a terrible idea. They should be trained. We aren't suggesting you fork out real money and send them away for something, all though the rockstars among you very well may. What we are suggesting is that whoever is assigned to conduct these checklists knows the operation, and what is expected from the process, as well as the method of compliance. This isn't a report on some ones work after all, this is a method of tracking your safety net. More on that to follow.

So lets talk elephants. The main one is conflict of interest, While a "go getter attitude" is something to admire, perhaps assigning your sales department to audit the safety and security of the flight operations would raise some eyebrows. Not to say that sales isn't invested in the safety of the employees, just to say that the overall investment isn't the same. That's just an example of course. I'm sure that there are many fine purveyors of wares in your operation.

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The next example goes without saying, but must be said anyway. Avoid assigning someone to audit their own work. We all loved those tests in high school where we “graded our own papers” and of course, none of us waited until after the time was completed and just filled in the answers. None of us. Right? Right. Having said that, sending a pilot to audit the maintenance department is akin to sending a toddler to college. Wide eyed, excitable, and completely overwhelmed. Make sure your selection for these positions is knowledgeable and trained. That’s what I’m getting at here.

WHAT: So now we’ve discussed who can do these, what are they? Why should we do them? In short an IEP is a self audit of various aspects pertaining to the operation as a whole. Basically a rolling safety check up conducted by the designated auditor, white latex gloves and all. There are many benefits to these internal audits.

Not only do they allow you to keep track of the progress or god forbid lack of progress towards safety in a given department, they ensure that you will be constantly in compliance with whatever standard you subscribe to I.E. ARGUS, IS-BAO, etc.
This doubles down in benefits to efficiency. Following the checklists and making sure that things like your records, practices, and products are up to snuff promotes pride, which promotes drive, this in turn promotes efficiency. We all love efficiency.

When: PRISM publishes a monthly checklist. These roll around every two years. Confusing right? Not really. Basically this is a revolving two year cycle with checklists published every month. So, 24 in total, for example: Ops-1 in January of 2020 would roll around in January of 2022. You can do it in whatever sequence you would like. The main thing here is that the process is ongoing and constant. You ideally want to space the checklists out to measure progress and, depending on the topic you may want to preform a certain checklist more than once in a cycle. There are no rules here. Just guidelines, other than the FAR’s, which are most definitely rules.

Where: The PRISM basic suite of 24 best practices Operations and Maintenance checklists are provided by the ARMOR software to all ARMOR subscribers in two ways:

(1) **Print friendly layout** - old school where you print them out hard copy and hand write in your answers
(2) **Electronic layout** where you enter your answers electronically and the checklists are stored there

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If using the First method above (hard copy), you will find the last three months of those by clicking on the Safety Materials tab on the top right, then select “Internal Evaluation”. Incidentally on that same page you will find the schedule of when PRISM will push each of the 24 checklists and a link to print a pdf of that schedule. From that page you can also directly transfer the hard copy version into your Safety Locker using the link in the upper right corner.
If you use the second method above, electronic, you do them through the IEP Manager located under the ARMOR menu.

We also send an IEP Checklist announcement email each month to the designated people in your account, usually the Safety Manager and whomever else you have asked us to designate. That email will contain the hard copy version and a link to the IEP Manager in ARMOR for the electronic version.

If you need a refresher, or are a new safety manager please feel free to reach out to us and we will schedule a web meeting orientation with you. They don’t cost you anything, and we honestly love answering questions. It’s the one time of day we get to sound intelligent.

Hopefully this helps break down what these are, and some of their benefits. If you need anymore information, or would like to schedule one of those demo’s just shoot us an email by clicking on the “Contact us” button at the top of the home page on the right hand side. Easily missed, but very useful. Much like the IEP checklists.

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SAFETY MANAGER'S CORNER

Internal Evaluation Program Checklists:

Our monthly hard copy printable IEP's are located "HERE"

	2022	2023
January	Maintenance 8. Maintenance Records	Maintenance 2. Maintenance Personnel
February	Operations 8. Cabin Crew and Survival ALSE	Operations 2. Safety Management Performance
March	Maintenance 9. Fueling and Service	Maintenance 3. Quality Assurance
April	Operations 9. Scheduling	Operations 3. Flight Operations
May	Maintenance 10. Maintenance Manuals	Maintenance 4. Inspection
June	Operations 10. Charter and Supplemental Lift	Operations 4. Pilot Records
July	Maintenance 11. Facilities	Maintenance 5. Maintenance Training
August	Operations 11. Security and Dangerous Goods	Operations 5. Pilot Hiring
September	Maintenance 12. Stores and Shelf Life	Maintenance 6. Maintenance Control and Planning
October	Operations 12. Operational Control	Operations 6. Pilot Training
November	Maintenance 1. Maintenance Management	Maintenance 7. Aircraft Condition

This is an example of our monthly schedule, left column is 2022, right column is 2023

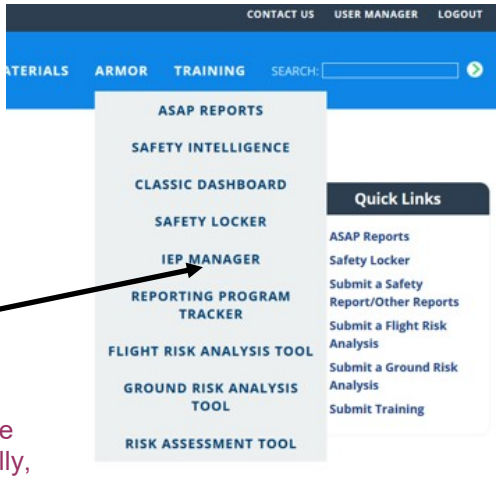
Paper backupcopies are provided here below if needed:

IEP Monthly Checklists:

- Drug and Alcohol Program (Part 135)
- FW Maintenance 7 - Aircraft Condition Part 91 (2021)
- FW Maintenance 7 - Aircraft Condition Part 135 (2021)
- RW Maintenance 7 - Aircraft Condition Part 91 (2021)
- RW Maintenance 7 - Aircraft Condition Part 135 (2021)
- FW Operations 7 - Flight Standards Part 91 (2021)
- FW Operations 7 - Flight Standards Part 135 (2021)
- RW Operations 7 - Flight Standards Part 91 (2021)
- RW Operations 7 - Flight Standards Part 135 (2021)
- FW/RW Maintenance 8 - Maintenance Records Part 91 (2022)
- FW/RW Maintenance 8 - Maintenance Records Part 135 (2022)
- FW Operations 8 - Cabin Crew and Service Representatives Part 91 (2022)
- FW Operations 8 - Cabin Crew and Service Representatives Part 135 (2022)
- RW Operations 8 - Life Support / Survival Equipment PART 91 (2022)
- RW Operations 8 - Life Support / Survival Equipment PART 135 (2022)
- FW/RW Maintenance 9- Fueling and Servicing PART 91 (2022)
- FW/RW Maintenance 9 - Fueling and Servicing PART 135 (2022)

We offer the checklist as a PDF as well. For those of us that prefer quill and papyrus.

- **24 month Cycle**
- **Updated annually for compliance**
- **Printable PDF and Online availability**
- **Multiple categories available**
- **Findings available in Safety Intelligence**
- **Ability to assign and track progress**
- **Part 135 and Part 91 versions**



If you want to use the checklist electronically, here is where the tool is to do that

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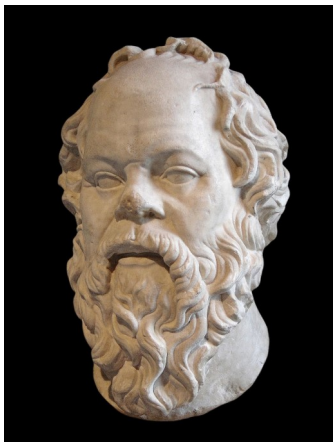
Quote of the Month

“Man must rise above the Earth—to the top of the atmosphere and beyond—for only thus will he fully understand the world in which he lives.”
– Socrates



The purpose of a fully functioning SMS is just that, to give the problems a top down view. Perhaps, if we are methodical and dedicated we may just be able to understand them enough to prevent them. In our pursuit of getting places faster, higher, and more efficiently the successful amongst us have been able to rise above the noise and the chaos to observe the operations from a position of detachment. From there, the problem lays out like a mat beneath our feet and the best route becomes clear.

On Short Final...

“Do you feel the need?”…...

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UPCOMING COURSES

Apr 18 to Apr 22, 2022—PROS Course
IOSA Auditor Training
Denver, CO

Aug 22 to Aug 26, 2022—PROS Course
Aviation Lead Auditor Training (ALAT)
Denver, CO

Sept 27 to Sept 29, 2022—PRISM Course
Safety Management System (SMS)
Denver, CO

Oct 3 to Oct 7, 2022—PROS Course
IOSA Auditor Training
Denver, CO

Nov 28 to Dec 2, 2022—PROS Course
Aviation Lead Auditor Training (ALAT)
Denver, CO

Dec 12 to Dec 16, 2022—PROS Course
IOSA Auditor Training
Denver, CO

Go to Upcoming Training Classes to register.