



SAFETY CORNER

CORPORATE AIR
NEWSLETTER

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NEXTGEN AVIATION SAFETY - STRATEGIES AND SOLUTIONS OF A SAFETY MANAGEMENT SYSTEM

FLYING THE ALASKA HIGHWAY

Flying the Alaska Highway is a challenge many pilots take on in the summer. The flight itself is about 1500 miles, but just to get to the starting point of the Alaska Highway could be another 2000 miles. Pilots make this trip in either a floatplane or landplane aircraft. Starting at Mile Zero in Dawson Creek, BC, the flight takes turns over prairie landscape, mountain valleys, and lakes and surrounded by majestic mountain peaks north to Fairbanks.

TRAINING

Training is a big chunk of aviation safety and a tool to ensure personnel are qualified to perform their duties. With ongoing training it could look like nobody is never fully trained. If someone is fully qualified and trained, then more training shouldn't be required. Training is therefore often looked at as being required for someone with lack of knowledge, qualifications and failure to perform. It couldn't be farther from the truth than that.

INSTILL KNOWLEDGE

It's a misconception that training only has one function of learning, and that this function is to become qualified. Human culture associates training with learning, where learning begins in preschool, graduates to kindergarten, then elementary, and finally to high school.

Each step is required as a level of learning to qualify for the next level. These are building blocks of learning moving from unknown to known. It's to instill knowledge in someone who didn't have that knowledge.



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- It takes years to build accountability and a just culture, but only a second to destroy it.
- An SMS system is fail-free since it's another layer of safety supporting the operational safety processes.



"Safety is just a circle. You never know where it ends."

TRAINING ENVIRONMENT

A training environment is the fruit of acquired knowledge, while learning is the bar of acceptance. Training has several other functions and cannot only be associated with learning, or lack of knowledge. Functions of training are associated with Human Performance, which again have multiple subsections. Some of these subsections are Human Behavior, Organizational Performance, Human Factors, Medical Performance, Aviation Performance, Optimal Operational Design, Interaction Modeling and more.

PROCESS DEVIATIONS

When applying the fact that training is associated with Human Performance, ongoing training becomes a tool to capture process deviations from performance parameters. Deviations from performance parameters are not lack of knowledge, but a process deviation to reach a common goal. Most standardized processes are arbitrarily chosen based on bias opinion of the person who established the process in the first place. This doesn't make the process wrong, bad, incorrect or dangerous, it's just the fact that someone established the process based on their experience and personal view of what to them made sense. From these processes, rules are derived to establish the lowest bar acceptable in aviation safety. As an example of a new rule is the Sterile Cockpit rule. This rule was implemented due to one notable accident which caused a crash just short of the runway conducting an instrument approach in dense fog. Training becomes a process to apply standardized procedures, capture deviations and excel in performance above the bar.

TRAINING IS TO EXCEL IN PERFORMANCE

The key to success is not in what was learned, but in the training of applied processes.

Training is not required due to lack of knowledge, but it is required to evaluate performance level against the bar, instill process control, correct process as applicable and assess Human Performance level at or above the bar. Training is to excel to levels that are above the trial and error method level.

THIS MONTH IN HISTORY

On August 6, 1966 Braniff Airways Flight 250 crashed near Falls City, Nebraska, enroute from Kansas City, Missouri to Omaha.

The flight departed Kansas City at 22:55 on an IFR clearance to Omaha at FL200, but the crew requested 5,000 feet because of the weather. The flight remained at 6,000 feet until it was cleared to descend to 5,000 feet. At 23:08 the crew contacted a company flight that had just departed Omaha. This flight reported moderate to light turbulence. About four minutes later the aircraft entered an updraft within an area of active squall line of severe thunderstorms. The aircraft violently accelerated upward and in a left roll. At this time the tail failed. The aircraft then pitched nose down and within one or two seconds the right wing failed.

The plane tumbled down in flames until entering a flat spin before impacting the ground. The probable cause was in-flight structural failure caused by extreme turbulence during operation of the aircraft in an area of avoidable hazardous weather.



Performance is unlocked by training.