Aviation Human Factors Industry News

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From the sands of Kitty Hawk, the tradition lives on.

Hello all' From the sands of Kitty Hawk, the tradition lives on.

To subscribe send an email to: <u>rhughes@humanfactorsedu.com</u> In this weeks edition of Aviation Human Factors Industry News you will read the following stories:

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Mixture Cable Failure May Have Caused Hawaii Helo Accident

Two People Slightly Injured When R22 Went Down, Mechanic Says He Is To Blame

The mechanic who worked on a Robinson R22 which went down in Honolulu, HI, May 8th says he is to blame for missing an incorrectly installed mixture cable which may have caused the accident. Brant Swigart said he saw the broken cable as the aircraft



sat in a hangar after the accident. The two people on board, the pilot and a photographer, were only slightly injured in the accident, but Swigart told the Honolulu Star Advertiser "in my mind they're both dead, and I can't get it out of my mind." He said a backup spring also failed.

Swigart led a team that conducted an overhaul of the R22, and he personally conducted the test flight before the helo left the shop. But while Swigart did not actually rig the cable which broke, he still takes responsibility for the accident. "The guy who actually put it together is inexperienced," Swigart said. "I'm not laying blame on him. I missed it."

While Swigart has come forward to take the blame for the accident, he has not yet been interviewed by the NTSB, which has not yet released a preliminary report for the accident. Board spokesman Keith Holloway said that Swigart may be interviewed as the investigation continues.

Swigart doesn't see accepting responsibility as being particularly noble, though he says he's heard that from may people. He said he is concerned about what might have been. The aircraft impacted a car when it came down, and there is a lot of pedestrian traffic in the area where the accident occurred. "I have to wonder what everybody would be saying if there were a bunch of dead people," he commented to the paper.

FAA Warns On Improperly Installed 737 Classic Hose Clamps

Clamps improperly installed during maintenance visits have been tied to at least three serious in-service fire and smoke incidents on Boeing 737 Classics, prompting the FAA to warn operators and encourage compliance with a Boeing-suggested fix.

The FAA's Safety Alert for Operators, approved earlier this month and released this week, says that 279 737 Classics inspected in 2010-2012 turned up 71 incidents of improperly oriented flight deck ceiling/side panel gasper air duct hose thumb clamps. The three most serious incidents caused chafing, arcing, smoke, and a fire that damaged more than 50 wires, FAA reports. One of the



incidents occurred in flight; the other two were on aircraft parked at gates.

This new alert suggests that part of the problem is design-related. The clamp is difficult to tighten when installed in the correct orientation, the agency explains. Flipping the clamp 180 deg. makes it "much easier to install," the agency notes.

Unfortunately, that also creates the hazard scenario most likely to trigger these incidents.

In late April, Boeing issued a service bulletin recommending operators replace metal clamps with plastic ties at the next maintenance visit.

The FAA suggests that operators follow the bulletin and warn mechanics and maintenance providers of the problem.

http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo/all_safos/ media/2013/SAFO13006.pdf

NJ Man Accused of Selling Rejected Airplane Parts

A New Jersey man has been charged with running a scheme to sell airplane parts that had been scrapped or rejected.

The U.S. attorney's office says Edgewater resident Gideon Vaisman and others bought scrapped airplane engine parts and created fake paper trails to hide the fact the parts had been rejected by licensed repair facilities. Authorities say the parts were cleaned and sanded at a facility in Suffern, N.Y., and were sold to aircraft owners.

It's unknown if any of the parts contributed to any airplane accidents.Vaisman appeared in federal court in Newark on Tuesday to face a wire fraud conspiracy charge that carries a 20-year maximum sentence. He was released on \$1 million bond, secured by equity in his home. His attorney has declined to comment.



Cowls missing from both engines on BA A319

investigators have opened an inquiry into the British Airways Airbus A319 incident at London Heathrow which resulted in substantial damage to both engines. Images show that the fan cowl doors on both engines have been torn away, with clear discoloration on the rear of the starboard International Aero Engines V2500 powerplant.

The UK Air Accidents Investigation Branch says it has started a probe into the event



involving the aircraft (GEUOE) which had just taken off as flight BA762 to Oslo. While there is no immediate indication over the cause of the dual cowl door loss, the A320 family has been involved in multiple incidents of doors being lost as a result of failure to latch them shut after engine maintenance. The aircraft operated several services on 23 May. BA has yet to confirm whether the A319's departure to Oslo, on 24 May, was its first flight of the day. Nor BA has indicated whether any engine maintenance was conducted on the aircraft beforehand. It has attributed the incident to a "technical fault." ... Airbus noted 18 instances of fan cowl loss, of which 13 had been on V2500s, in a subsequent bulletin in 2007. But it has been reluctant to pursue a warning system for pilots, opting instead for simpler alternative strategies..

Pilots Speak Out on Automation in EASA Survey

Basic manual and cognitive flying skills decline because of a lack of practice actually flying the aircraft, according to 80 percent of 151 respondents to a European Aviation Safety Agency survey about cockpit automation. That same number also believe pilots' feel for the airplane can deteriorate significantly when they don't hand fly the aircraft often enough.



Seventy-two percent of pilots surveyed agreed it is difficult to regain control of an aircraft when the automation reaches its operational limits before disconnecting. When that disconnect does occur, according to 68 percent of respondents, the tasks required by pilots to get the aircraft flying again could be beyond their capabilities. Fully 90 percent of respondents agreed with the statement: "Unexpected automation behavior such as engagement or disengagement in an inappropriate context or uncommanded transition may lead to adverse consequences."

Finally, nearly all pilots surveyed agreed that diagnostic systems aboard advanced aircraft today are limited when it comes to dealing with multiple failures.

Of the 151 respondents, 149 said training that improves basic airmanship and manual-flying skills would be useful.

AB Avia Solutions Group : Aircraft upset – a call for the aviation industry

Almost a year has passed since the French authorities released their final report on the Air France Flight 447 crash in the Atlantic Ocean in June, 2009. According to the issued report, the pilots had lacked the understanding of how to address aircraft stall. During 1979-2009, inappropriate crew responses contributed to over 46% of all Loss-Of-Control (LOC) accidents causing more than 2800 fatalities. Unfortunately, dangerous aircraft conditions like aircraft upset cannot be avoided or resolved solely by new cockpit technologies, regardless of how sophisticated and technologically advanced these might be. Once again the attention must be re-directed to the issue of human factor in aviation. According to a Boeing report, LOC accidents remain the main critical factor in the commercial aviation, corresponding



to approx. 33% of all fatalities. One of the main factors which may lead to LOC is aircraft upset, i.e. when an aircraft exceeds safe parameters of operation. For instance, aircraft upset takes place when the pitch attitude becomes greater than +250 and -100 or the bank angle remains greater than 450.

'Unfortunately, Full-Flight Simulators are still incapable of modulating a realistic simulation of several critical situations such as aircraft upset. Of course, modern aircraft, including Airbus A320, are stuffed with the latest technologies which avert major correlations of the aircraft attitude, regardless of whether these are intentional or not. However, there is an industry concern that while cockpit systems are taking over the overall control of an aircraft (thus minimizing the human factor risk), pilots may actually lose some of their practical skills, which are vital in critical situations,' comments Skaiste Knyzaite, the CEO of AviationCV.com.

According to the French Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile (BEA), the recognition of the stall warning, even when associated with buffet, assumes that the crew assigns a minimum degree of «legitimacy» to the alarm. This in turn assumes sufficient prior experience with stall conditions, at least some cognitive availability and understanding of the situation. The Air France Flight 447 crash was caused by a set of events, including the crew's inability to properly react in a critical situation. The report stated that '... a review of pilot training did not provide convincing evidence that the associated skills had been correctly developed and maintained.'

Such fatal accidents once again raise such issues as human factor and the accumulation of practical experience by the pilots. Airline and training industries, as well as aviation authorities should encourage a more active discussion of the topic within the global aviation community.

The exchange of experience between the older and the younger generations of pilots, further development of both aircraft and simulation technologies and relevant practical training programs based on the industry-wide standards - these are the measures which have the potential to significantly lower the impact of human factor in aviation. However, they require the involvement of the entire industry.

Single-Pilot Airline Operations Studied

A study funded by the European Commission and involving 35 aviation and government groups is taking a serious look at single-pilot operations for airliners. Advanced Cockpit for Reduction of Stress and workload(ACROSS) will spend more than \$40 million studying creating an electronic copilot to keep the human pilot flying correctly. The project is being coordinated by Thales Avionics. Airbus and Boeing are also taking part in the project. At first, the electronic gear will be aimed at allowing crew rest periods or to take over in case of pilot incapacitation but there seems little doubt about where this is heading according to



Forbes contributor Matthew Stibbe. He opines that the initiative may lead to better safety gear for airliners but he wonders whether the flying public is ready for just one warm seat up front.

http://www.across-fp7.eu/

FAA Names Surprising 'Top' Lifesaving Technologies

The FAA this week sent out a general aviation safety "fact sheet" identifying several technologies the agency says can help significantly curb the fatal accident rate.

While the list includes several of the typical technologies we think of as promoting safety such as Nexrad weather receivers, traffic and terrain awareness systems and ballistic parachutes, the agency singled out two devices in particular as having "the greatest likelihood of improving safety."Can you guess what they are? We'll give you a hint: They aren't included in very many general aviation airplanes today (which is



maybe why they topped the FAA's list). The somewhat surprising safetyenhancing technologies the FAA named are: seatbelt airbags and angle of attack indicators.

The FAA has set a goal of reducing the GA fatal accident rate by 10 percent by 2018. Loss of control accidents – mainly caused by stalls – are responsible for 40 percent of fatal GA accidents, the FAA notes. No surprise there. The proposed rewrite of Part 23 regulations governing aircraft certification will seek to enhance safety while slashing certification costs by up to 50 percent. Part of that effort involves identifying technologies that can improve safety. Some are already slated for adoption (think ADS-B) while others are still under consideration.

One technology that is almost certain to be included in the new Part 23 rules is AOA. The FAA says it has streamlined the approval of angle of attack indicators for GA aircraft and is working "to promote the retrofit of the existing fleet." Angle of attack indicators give the pilot a visual indication as a stall approaches. The debate over their usefulness in the cockpit is far from settled, at least in the minds of some GA pilots who may need more convincing, but there's little question they are coming.

Seatbelt airbags, on the other hand, no doubt can enhance safety under certain circumstances – although not in the classic stall/spin accident with its extremely high impact forces.

But won't AOA indicators and airbags be expensive? The FAA says they don't have to be. "Previously, cost and complexity of [AOA] indicators limited their use to the military and commercial aircraft," the agency wrote in its safety fact sheet. "The FAA is also streamlining the certification and installation of inflatable restraints with the goal of making all GA aircraft eligible for installation."

So there you have it. The FAA wants every GA airplane to have seatbelt airbags and an AOA indicator, in addition to other safety gear. If you doubt that the technology can be added to your airplane cheaply, there might be a silver lining: The agency says it is focused on reducing general aviation accidents through "a primarily non-regulatory, proactive, and data-driven strategy to get results." In other words, no mandate, and they'll show you the numbers backing up why they believe these technologies indeed can save lives.

http://www.faa.gov/news/fact_sheets/news_story.cfm?newsId=13672

Blind To The Big Red Flag

I broke my leg and had been out of the AME shop for the past six months. When I returned to my shop I was anxious to get back to work. The AME shop was scheduled to reinstall four GRUEA-7 ejection seats in an EA-6B Prowler after completing a 364-Day inspection. A few things remained before we were ready and I was happy to help. I never expected that I was about to make the biggest mistake of my career.

Arming an ejection seat is a two phase process. The first phase is to "Bottom Arm"



the seat which is done in the workcenter. The second phase is "Top Arming" which is completed only after the seats have been installed in the aircraft. The AME shop had finished bottom arming the seats before I came to work. Once at work, one of the PRs asked me to help switch the seat pans between seats. Removing and replacing seat pans is a routine maintenance function. As long as the seats are not "Armed," the task does not even require an ordinance qualification. Eager to help, I went over to a seat, assuming it was "De-Armed." I failed to notice the "Armed" warning flag on the upper ejection handle when I removed the Manual Override Release (MOR) handle safety pin and pulled the MOR handle—the same way I had hundreds of times before. However, this time the seat was "Armed!" The guillotine CAD fired off, shooting the guillotine blade into the guillotine body. To my horror, I had just inadvertently discharged a CAD!

During the investigation, Quality Assurance found that there were no steps in the publication to remove the seat pan while the seats are out of the jet and mounted on seat dollies. A Technical Publication Discrepancy Report (TPDR) was submitted requesting this addition to hopefully keep this from happening again.

It could have been much worse; the guillotine blade could have come all the way out and hit someone, causing a serious injury or possibly killing a fellow Sailor nearby. Before breaking my leg, I had been a CDQAR and had trained and worked on these seats for over six years. I never imagined that complacency would have led me to make such a dangerous mistake. It's pure luck that no one was hurt and luckily my mistake only caused damage to the seat and wasted man-hours. This all could have been avoided except for a momentary lapse of situational awareness. That is all it takes for something to go wrong...

The key to doing better work is to reflect on what went wrong.

The beginning of a new year, new project, or new season is a time for reflecting, right? How about trying something a little different: Once a year, take note of your past mistakes and take action to avoid repeating them... and maybe even consider making a mistake or two on purpose.

Reflecting on your mistakes doesn't mean beating yourself up or wallowing in your imperfections. It means, at a slight distance, sizing up what didn't go according to plan, figuring out why, and determining what you want to do differently. Remember that everyone makes mistakes, but not everyone makes them



worthwhile by using them to get better. Here's how you do it. Free up an hour or two. Find a quiet place (I found that walking on the beach, if possible, is a great environment for doing this exercise). Reflect back on the things that didn't go the way you'd planned.

See if there are patterns to the mistakes. They will often fall into one of these categories:

1. Sloppiness or carelessness. None of us likes to think of ourselves as sloppy or careless. Yet we are over-committed, over-scheduled, and managing over-flowing email boxes. This can result in unintentional sloppiness: forgetting a meeting, overlooking an action item, or not returning a phone call. It's easy to forgive ourselves for these types of mistakes—we are so busy, after all. But they look bad to others and demonstrate a lack of commitment to the task at hand. At worst, sloppy or careless errors can lead to big problems or even disasters.

If there's a pattern of sloppiness in your work, you'll have to dial back the "overs." Trying harder won't do it—that will likely make the problem worse. Find a way to reduce your commitment load. Go to fewer meetings. Filter your email. Push back on your boss when she overcommits you. For those commitments you do take on, take them seriously. Use a system like Getting Things Done or the Action Method to make sure you don't forget anything.

2. Playing to your weaknesses. We are always told to play to our strengths, but the opposite happens, too. There are parts of our jobs that we haven't mastered yet or just aren't well-suited for. I was once responsible for sales planning at my company, and found that I was hopelessly over-optimistic in my forecasting, resulting in a series of plans we didn't meet. In a case like this, there are three options. Management textbooks (and the four-hour work week guy) would tell us to delegate tasks we're not good at. Fine advice, but not everyone has a subordinate they can readily delegate to, or the cash to outsource lots of tasks.

You can also work to improve the weakness. Training, self-development, and working with a mentor can all help here. But be cautious in trying to improve too many areas at once. A final approach is to compensate for the weakness through collaboration with a teammate. Find someone who is very strong in your weak area and work together to complete the task. For example, the CEO of Mazor Robotics assigned one of his managers to be a "devil's advocate" to ensure their revenue forecasts had "humble enough assumptions."

3. Making errors under pressure. Many of us don't work well under pressure; we rush, we try to meet stated and unstated expectations—our company's and our own. Examine where the pressure is coming from. Are there ways to alleviate the pressure, such as renegotiating deliverable dates, reducing the scope of the work product, or collaborating with a colleague? Essential to this exercise is understanding where the value is in your work. What is directly customer-affecting versus internally focused? If you know what's most valuable and what isn't, you will be able to spend more time on the top priorities and less time (or no time) on the others.

Now What?

Look at each of the patterns you find and decide on one specific action that could help address it. Make the action as simple as possible (hint: "always" or "never" actions are easier to implement and stick to than more nuanced ones). Here's an example:

I had a pattern of responding very quickly to colleagues' emails. Those responses were often sharply worded and not well thought-through. Needless to say, my responses caused quite a bit of conflict. To address this, I decided that I would not respond to any email unless at least 30 minutes had passed, which would give me time to calm down (if agitated) and think about how I wanted to respond. This was more actionable for me than, "Try to be more thoughtful and careful when you respond to email."

When you've totaled it all up, you'll end up with five to ten things you could do. Now think about how many of these things you can successfully implement. It's better to make one change that sticks than five changes that don't. Decide (decide!) on which ones you will do, write them down, and pin them to the wall behind your monitor. Set a reminder in your calendar for every two weeks, to review the list and make sure you are progressing.

Disasters: <u>http://www.telegraph.co.uk/news/worldnews/asia/china/8980879/</u> China-bullet-train-crash-caused-by-design-flaws-and-sloppy-safety.html

Getting Things Done: <u>http://www.davidco.com/about-gtd</u>

New Book Reveals How Aviation Crashes are Investigated and What Goes on Behind the Scenes to Improve Air Safety

Dr. Alan Diehl presents an insider's account of how events actually unfolded in the organizations responsible for protecting everyone who flies.

The U.S. major airlines recently passed an almost unbelievable milestone – literally going a full decade without a single passenger dying in a crash. Other segments of aviation, including the regional carriers, general aviation, and the military have made significant, albeit less dramatic, improvements in recent years. But whenever a crash occurs air safety investigators are dispatched to discover why it happened and to recommend countermeasures for preventing future tragedies.



Air Safety Investigators explains the fascinating story of how this process really works, and what people can do to protect themselves while flying. Dr. Diehl was a pilot who narrowly survived an accident himself, which convinced him to make aviation safety his life's work. Employed by aircraft manufacturers, the National Transportation Safety Board, the Federal Aviation Administration and the Air Force, he helped solve some of the most mysterious crashes while initiating many safety enhancements.

This book also describes how Diehl battled the bureaucracy to save lives. Federal officials hired him to prevent an anticipated bloodbath from airline deregulation. He soon introduced innovations such as Crew Resource Management. The training dramatically reduced accidents and he was assigned to teach these concepts to Air Force One crews. However, when he exposed officials lying to Congress, they used the sky marshals to harass him. They then ignored his other programs, which caused countless unnecessary deaths, including that of JFK, Jr. He was finally fired for blowing the whistle on the Pentagon cover-up of the worst fratricide since Vietnam. But Congress and other important organizations soon sought his advice on civil and military aviation problems.

This landmark expose' provides readers with the definitive description of these remarkable events, vividly told through the eyes of a working air safety investigator. John Nance of ABC News wrote the book's forward to explain how one maverick scientist's insight, candor, and courage significantly improved aviation safety.

Can You Catch Up on Lost Sleep?

Sleep Binge

Getting eight hours of shut-eye each night is generally recommended, but many people don't. As the week rolls from Monday to Friday, they accumulate a sleep debt. Spending a few extra hours in bed on a Saturday morning, people assume, will help them "catch up" on lost sleep. They're likely right. "Nobody knows how long the horizon is, probably a few nights, but studies show that recovery sleep in the short term does work," says Dr. Winter, a member of the American Academy of Sleep Medicine. "But the all-nighters I pulled in my residency 15 years ago? That's gone."

Sleep Banking

Recent data suggests that banking sleep in advance of a long night can actually offset upcoming sleep deprivation. "If you knew you were going to give birth on a particular day, for example, you could sleep for 10 hours a day for multiple days before the event, and be fine," he says. Just plan ahead.'Social Jet Lag'

Experts refer to the effects of changing sleep habits from weekdays to weekends as "social jet lag." When you've revved up until midnight for five nights and then recover sleep until noon on Saturday, the body is confused. "It's like you've traveled six time zones, and you feel terrible," says Dr. Winter. While many sleep extenders complain of grogginess and dull headaches, subjectively they are better at performing tasks: "I



would much rather be in the passenger seat with [a driver] who's made up the sleep than someone who's simply sleep deprived." That just-woken-up daze? It passes in a few minutes, but the benefits of extra sleep last for hours, he says.

Routine Naps

A scheduled nap is healthier than catching up on or banking sleep. "Because sleep extension can make you feel groggy, I always recommend a short nap, at the same time, every day," if a person feels they need it, says Dr. Winter. He adds that 25 minutes is ideal. He tracks his alphawaves and sleep quality with a Zeo device, and sets his Sound Oasis machine to wake him after 25 minutes. "When you schedule a short nap, your body anticipates it and slows down, without falling into a deep dream sleep," he says. That refreshing, scheduled break is better than an occasional, disruptive weekend lie-in. "The body likes routine," he says. "When it's prepared, it works more efficiently."

Sleep Types

There is some evidence to suggest that young people are more likely than older people to bounce back from long nights through recovery sleep, as the ability to shrug off deprivation wanes with age, says Dr. Winter. The effects of recovery may also have a lot to do with chronotype, which is genetic, and refers to whether you're a day person (lark) or night person (owl). (Most people fall somewhere in between.) "If you're a night owl, you may do better than a morning person with an unusual schedule, so sleep-extending can be a great tool," he says. A sleep binge is a less effective option for true morning people, who may not be able to sleep much past dawn.

<u>CDC Data on Drowsy Driving Highlights Need to Treat</u> <u>Sleep Illness</u>

New drowsy driving data from the Centers for Disease Control and Prevention (CDC) emphasize the importance of seeking treatment for an ongoing sleep illness such as sleep apnea, reports the American Academy of Sleep Medicine.

In the largest survey ever to examine the topic of drowsy driving, the CDC found that 4.2% of 147,076 respondents reported having fallen asleep while driving at least one time during the previous 30 days. Men were more likely to report drowsy driving than women. Statistical analysis found that sleeping for 6 hours or less per night and self-reported snoring each was related independently to drowsy driving."Drowsy driving is a serious risk to personal health and public



safety, and snoring is an important warning sign that should not be ignored, said AASM President Sam Fleishman, MD. "Loud and frequent snoring is a common symptom of obstructive sleep apnea, a sleep illness that often causes excessive daytime sleepiness."

The CDC analysis involved data from a set of questions about insufficient sleep administered through the Behavioral Risk Factor Surveillance System (BRFSS) during 2009-2010. US adults in 19 states and the District of Columbia were surveyed.

The CDC encouraged drivers to seek treatment for sleep disorders and noted that the actual prevalence of drowsy driving is likely to be higher. Drivers often are unaware that they have fallen asleep behind the wheel. The survey also excluded teens, who have a high risk of drowsy driving.

The public health implications of drowsy driving are clear: The AAA Foundation for Traffic Safety estimates that more than 16% of fatal crashes involve a drowsy driver.

To promote awareness of drowsy driving, the AASM released a free online presentation describing the signs, causes, and effects of driver fatigue and some strategies to manage it.

SAFE-D: Sleep, Alertness and Fatigue Education for Drivers is available at <u>www.aasmnet.org/safed.aspx</u>. The presentation also is on YouTube and Vimeo to share or embed. <u>drowsy driving data</u>

"Preventing Drowsy Driving Among Shift Workers" Employer Administrator's Guide

This guide will help you plan and implement a program to educate your shift workers about sleep-improvement methods and the dangers of drowsy driving. We recommend that you review the entire guide so you can determine which activities fit the needs of your organization. The guide includes the training and education sessions on PowerPowerpont.

<u>Click here</u> to download a printable version (PDF) of this document.

PowerPoint Training Better Sleep Video Workplace Posters Shift Worker Brochure Better Sleep Tip Card Brochure for Shift Work Families

60% of Employees Haven't Gotten Useful Feedback From Boss in 6 Months

Surviving Work

Since 2008 and the recession, employees have gone into survival mode. They are surviving work. This means doing what it takes to make a buck and stay afloat. Sometimes that means losing their home to foreclosure in order to pay their other bills, moonlighting at a second job, or working at a crappy job that didn't give a damn.

And employers have gotten away with that, getting lazy, believing that their employees had to have that job eliminating employee benefit programs like the company 401(k), annual increases, and continuing education programs at work.

In 2012, the Cornerstone OnDemand Survey showed us that 21 million employees would change jobs costing US employers \$2 trillion in lost work productivity and other costs associated with



employee turnover. The good news is that this year, turnover overall according to Cornerstone's research is on the decline by nearly 10 percent down 2 million to just 19 million job hoppers in 2013. That doesn't get managers and companies completely off the hook as their findings have uncovered plenty of areas of opportunity when it comes to employee retention.2013 Trends Include Providing Employee Feedback & Skills GapCornerstone just released their 2013 U.S. Employee Report along with a super-snazzy infographic. Check out the full report and take a look at the highlights that resonated with me most below.

- 25 percent of employees have established career goals. If employees don't know where they stand, they are more likely to stray. I also believe that 99 percent of employees are motivated and want to do a good job. They just need feedback, engagement, and a formal plan. Otherwise, they stray looking for love, engagement, and opportunity at other places.
- Good managers are great for employee retention. Forty-eight percent of those surveyed said they would stick around because of a good manager followed by 46 percent that feel appreciated by their employer. Managers, let's start by sitting down with our team and asking about what makes a manager a good manager and what appreciation looks like to them. Create a plan from there.
- Employees need, want, and are demanding training. Problem is that the managers and companies aren't listening which is why turnover is so high. Seventy percent of employees didn't receive any training in the last year at their place of work. This no training is a hard pill to swallow especially when you hear about company's like Google's amazing death benefits and other awesome workplace perks. Invest in your employees and their skills gap and they will invest in you.

 I guess I'm not surprised if most managers are training their employees that they would actually be talking with them. We're busy filling out TPS reports, sitting on conference calls, and looking important which is why 60 percent of employees haven't gotten any useful feedback for 6 months. Let's sit down with our folks today and tell them what they need to do to be better at their jobs. Let's get to providing them employee feedback. Lack of communication is where the trouble with relationships begins. Ask anyone who's been divorced.

http://www.cornerstoneondemand.com/resources/research/survey-2013

Awesome workplace perks: <u>http://www.blogging4jobs.com/hr/top-company-perks-job-candidates/</u>

5S in Aviation Maintenance – Part II

5S provides the necessary organizational focus and method to reduce waste in the workplace. Shine

The face lift begins here. We paint and clean the area after we re-organize. Equipment may get a new coat of paint. Years of accumulated dust and dirt are washed off by liberal application of soap and water.

Floors are cleaned and, if necessary, repainted or re-conditioned. Areas that are set aside for remaining equipment will be repainted or outlined. In a shop



the application of paint on the walls and equipment can have positive effect on staff productivity. Broken equipment that survived the sort process must be repaired at this time. Time must be set aside to periodically clean and restore any improvements made.

Standardize

By now we have invested a lot of time and effort in the previous three processes. Now we train the work force to the new system. Procedures for shop cleanup and management of the new environment must be trained and enforced throughout the workplace. If a team was assigned to create the plan and implementation, they should carry out training of the work force. The 5S plan should include analysis of workstations. If identical work is performed in multiple locations, for example, nonstandard workstation layouts must be addressed so that one worker can use a location interchangeably with another. This analysis can be applied to hangar bays, back shops, and offices. The level of execution in this area can spell the difference in success or failure in the 5S effort. The organization will know if it falls short of its planned goals. These decisions will have to be made at the planning level so the effort doesn't falter over unplanned costs.

Sustain

We are here! We made it ...have a party and celebrate. You've achieved a great milestone. Afterwards go back and do it again. This is sustaining. If we fail to maintain, we just fall back to where we started. Most efforts fail here after clear success early in the process. There are lots of reasons. But they all result in gradual deterioration of the effort because the organization fails somehow to incorporate the changes into its corporate culture.

5S keeps providing dividends only by constant practice and application. The drive for excellence is tied to continuous execution. Our plan in the beginning must include the means we will use to sustain our success.

Part of the lean journey

The thing about 5S is that it fits very well with aviation maintenance. It speaks to all the disciplines involved with internal compliance standards. The following are some examples that respond well to 5S implementation:

- Hangar and shop standards (sort, shine, and standardize)
- Quality assurance (standardization, sustain)
- FOD control (sort, set in place, standardization)
- Production control (sort, set in place, standardize, sustain)
- Recordkeeping (sort, set in place, standardize, sustain)

Keep in mind that 5S is often part of a larger effort related to Lean implementation. But there is no rule that says it has to be. Also making these changes requires a top down and bottom up coordination to better mitigate the discomfort that change brings. Success is best achieved by starting small building on small continuous successes. Find an area whose improvement would be visible and make changes, then pick a new area and begin again. Keep in mind how small parts of the organization contribute to the whole. Be ready to fail, learn from failure, then try again and succeed. After all this is a journey; enjoy the ride.

