

# Aviation Human Factors Industry News

*Volume XI. Issue 09, May 03, 2015*



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

Hello all,

To subscribe send an email to: [rhughes@humanfactorsedu.com](mailto:rhughes@humanfactorsedu.com)

In this weeks edition of *Aviation Human Factors Industry News* you will read the following stories:

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## Why Don't We Just Follow the Rules?

Submitted by Gordon Dupont

With permission from *D.O.M. Director of Maintenance* magazine

I read with great interest Patrick Kinane's article in Just Plane Culture published in Director of Maintenance magazine. Ok partly because the words "Dirty Dozen" were mentioned but also it is a great article on "looking past the man" to find the root causes. Please note. The Dirty Dozen are contributing factors **and NOT root causes**.

They are so very important because as we said in my first article, "they train the person on how to avoid the error they don't ever intend to make." I agree with Patrick 100% and look to Safety Management System's (SMS) to guide a company's culture towards what Patrick is advocating. Thus the next article will be on Just Culture – The Foundation of Any SMS. Now back to the promised topic.

There is an old saying: "*Rules are made to be broken.*" Those who follow this philosophy soon end up **in a lot of grief**. Yet, we all have broken the odd rule from time to time. Some may have been inadvertent while others may have been a willful violation.

Let's look at the most common rule broken every day all around the world - the speed limit. If someone tells me that he/she has never broken a rule, they are either a saint or a liar and I would suspect the latter. If the speed limit sign says 50 mph, then it doesn't mean 51 or 52 or higher. Yet the average driver will be between 5 and 10 mph over the speed limit unless the weather is bad, there is a police officer close by or your mother-in-law is in the car with you.



So why do we do it? While some of us may think that our above average driving skills preclude us from having to follow the rule (tell that one to the judge) the answer is actually very simple. **We foresee no negative consequences** in doing so and the positive consequence of getting home sooner serves to justify the rule breaking.

Rule-breaking at work goes along the same lines. No negative consequences and at least one positive consequence.

Let me give you a true example that involved yours truly a lot of years ago. I started work for a company that had a lot of DC8s that were getting “long in the tooth” (between 40 and 50 thousand hard worked hours) Thus, they were getting to be high maintenance aircraft.

The ramp crew I joined had the reputation of always getting their aircraft out on time for which there were a lot of “atta-boys”. However, to accomplish this there were times on midnight shift when some things had to be “deferred” in order to make the timeline. By “deferred” I meant less important things were “signed off” (ok pencil-whipped) and caught the next night. I felt that I was a professional and would never sign for something I had not done. Not a problem, just initial “MM” for Mickey Mouse or “DD” for Donald Duck. Now, this didn’t happen often, but when there were more snags than could be cleared in the time we had, “MM” or “DD” signed out the time consuming tire pressure checks.

After all, how often do you check your car tire pressures? So, what’s the big deal? The aircraft left on time, which was the positive consequence, and there were no negative consequences that I or my fellow crew could foresee.

If you go to our website at [www.system-safety.com](http://www.system-safety.com), click on **Safety Videos** and open & read the case study of “*Death of an Airline.*” That is a negative consequence **that I could have been** responsible for. That is also why that was the first training video I produced. The picture you see is of the accident DC8 with what is left of 261 persons scattered in it. A blown up picture of this hangs on my office wall as a reminder of what **a simple human error can do.**



Just one tire with low pressure and 261 persons paid the ultimate price. But it did leave on time. Had that occurred at our home base after “MM” had signed for the tire pressures, just how many “atta-boys” would have been handed out? Criminal negligence causing death comes to mind, but no court could ever punish me as much as I would myself. How does one live knowing that their action took the lives of 261 persons?

A violation is simply **intentional rule breaking** for whatever reason with a positive consequence foreseen or expected to occur.

These violations are generally placed into three classifications: Situational, Routine and Exceptional. See if you recognize which category my violation fits into.

**Situational violation** occurs when the person sees that the end goal cannot be met without a violation. They are usually time pressured and not often repeated. The situation appears to justify the violation. For example: The last remaining item on the task card calls for the 45 nuts to be torqued to 25 foot pounds, but the only calibrated torque wrench available is being used by another crew and the aircraft is scheduled to depart in 20 minutes. The “Armstrong” wrench is used and only you know about the violation.

**Routine violation** occurs when there appears to be a better way to do a task and no one recognizes any negative consequences. This is what we often call a norm and sometimes comes from what started once as a situational violation. If the organization knows and condones or at least tolerates the violation, they can be further broken down into “organizational” violations. The classic routine (organizational) violation can be seen on the maintenance #12 “Norm” Dirty Dozen” Safety poster. 273 persons would pay the ultimate price for the norm of using a forklift to remove and replace the wing engines on their DC10s. Interestingly, they all would have survived if the Captain had not adhered to the rule of lowering their airspeed to the best two engine rate of climb speed in the event of loss of engine power. That speed was below the stalling speed of a wing with the leading edge slots retracted, which is what had occurred on the left wing that lost the engine, severing the hydraulic lines that kept the slots extended. I do not fault the pilot or the rule, because for every accident that occurs as a result of following a rule or regulation, there is likely at least 100 that result from NOT following a regulation or rule.



**Exceptional violation** occurs when there appears to be no other way to accomplish the task. For example: The manual calls for three persons to be used at all times when moving an aircraft. Joe is off sick, so it is decided to push it out carefully using the only two available persons.

Whatever the violation, they are all carried out with no intent to harm or damage. So what's the answer? Very easy. Ask yourself this one question: *"Does what I (we) am (are) doing enhance or detract from an established Safety standard?"* If it doesn't enhance, then don't do it. If you need a second question to convince yourself about what to do, ask yourself this one: *"How many people will there be thanking me if something goes wrong?"* You won't need your toes or even second hand to count.

Anytime a person commits a violation the risk of a human error occurring goes up. Is that positive consequence really worth the possible negative consequence? I expect that it's not.

Trust me. You will never want to pay the price of a mistake no matter what the reason was that seemed to make sense at the time.

In the next article I'd like to discuss **"Just Culture"** and what part you play in it. A Just culture is the foundation of any successful SMS. Without it no SMS can reach its full potential in reducing human errors.

Think about what you would have done as CEO of the company if you found out that I had signed for the tire pressures without checking them. What would a Just Culture do?

## **Wildlife Strikes to Civil Aircraft in the United States 1990 – 2013**

The U.S. Department of Agriculture, through an interagency agreement with the Federal Aviation Administration, has compiled a database of **all reported wildlife strikes** to U.S. civil aircraft and to foreign carriers experiencing strikes in the USA.

Over 150,000 strike reports from about 1,850 USA airports and 280 foreign airports for January 1990 through March 2015 have been compiled. About 12,000 of these occurred in 2014. Examples from throughout the USA demonstrate the widespread and diverse nature of the problem.

For a detailed analysis of the strike data [click here](#)

## **NTSB Releases Video Safety Alert on Importance of Preflight Checks to Catch Flight Control Problems**

A Video Safety Alert highlighting the extra vigilance that pilots should take in doing [preflight inspections prior to a first flight after maintenance work](#) was released today by the National Transportation Safety Board.

The video also addresses the [crucial role that mechanics have](#) in ensuring that a plane's flight control system is rigged correctly after maintenance activities. It features an airborne close-call - an inflight emergency on a general aviation airplane that occurred near St. Louis in December 2014. The 14-minute video features interviews with two college-aged pilots struggling to maintain control of a small single-engine airplane on its first flight following maintenance work. The pilot flying the Cessna T-182T talks about how he was able to figure out that the flight control trim system had been reversed, and how he remedied the situation in time to land the plane safely.



In another interview, the highly experienced mechanic who did the work on the Cessna, shares his perspectives on how the [maintenance error](#) that led to the flight control problem occurred. He also offers advice to other aircraft maintenance professionals on how they can avoid a similar mistake.

"Improving safety in general aviation has been one of our Most Wanted List items for the last several years," said NTSB Chairman Christopher A Hart. "These safety alerts are [important tools to share the lessons learned](#) from our many investigations. In this instance, tragedy was averted. It is our hope that pilots and mechanics will take these lessons and apply them and avert future tragedies."

This video follows the release of four Safety Alerts that the NTSB issued on April 7, all of them focused on general aviation. Two of those Safety Alerts, "Pilots:

Perform Advanced Preflight After Maintenance" and "Mechanics: Prevent Misrigging Mistakes" summarize the key findings presented in the video.

The Video Safety Alert released today, and eight others previously issued, are available at <http://go.usa.gov/3ZYDH>.

The PDF versions of all the Safety Alerts are available at <http://go.usa.gov/3ZYDh>.

[www.nts.gov](http://www.nts.gov)

## **'Human Factor' A Probable Cause In MH370, Experienced Aerobatic Pilot Says**

The MH370 disaster “is most probably because of the pilot - a human factor, either the pilot committed suicide or he was being controlled by someone else”, says Datuk Halim Othman “Toogoo”, team leader of the 1Malaysia Kris Sakti Aerial Display Team in an interview with Malaysian Digest. Commenting on the infamous MH370 flight that disappeared on 8 March 2014, Halim believes that human related factors could include several explanations. “Human factors can include suicides, the pilots, or someone forcing the pilot. There’s always either of two reasons for a plane crashing, human related factors or engineering/mechanical factors where the system fails.



“For MH370 I think it is a human factor. It can be the pilot, the people asking you to fly a certain different route, or it could be because of remotely controlling the plane from elsewhere. There was most likely no failure on the part of the airplane.”

Regarding the current search area, the former veteran RMAF pilot believes that the plane or the remains are unlikely where the designated search area is, and acknowledges that is a slim possibility for a suicide to have happened.

“There’s two pilots in the cockpit, so there’s a slim chance for suicides, but the more important question is why, if it was so. The other failure is that we didn’t have our fighter jets intercept the plane at the time”.

On future safety features of planes, Halim commented on the outdated black box technology.

“Aviation is safe, in the world. Incidents happen everywhere, and aviation is a regulated process.

“But the failure to find the black box, that is something. The recording and transmitting of the black box should be continuous, and also because of satellites and ground based radars we can download and track flight information to the other data keepers and not necessarily have the data kept only in the aircraft.

“We must use that technology to monitor what happened to the aircraft”.

Halim’s observation [echoes that of other experienced pilots and flight safety experts worldwide](#) who believe the flight was doomed because of human-related errors.

## **Engine power loss blamed for 2013 Bearskin crash**

The Transportation Safety Board of Canada (TSB) released its investigation report into the fatal 2013 crash of a Bearskin Airlines flight near the Red Lake airport.

Investigators found that the crew of the Fairchild SA 227 Metro III experienced a near total loss of power in the left engine at 500 feet above ground level due to a failure of an internal engine component.





The crew [was unable to identify the nature of the engine malfunction](#), preventing them from taking timely action to control the aircraft.

Two members of the flight crew and three of five passengers died when the aircraft crashed just south of the airport near a highway.

On Nov. 10 2013, the aircraft was on final approach to the airport, five miles out, when the crew declared an emergency. The aircraft struck trees and power lines, and was destroyed by a post-impact fire. Two passengers escaped with non-life threatening injuries.

In their report, investigators said the aircraft's landing configuration generated higher drag which, combined with the engine malfunction, resulted in the aircraft losing airspeed in an asymmetric power state. As the aircraft slowed, the crew lost control at an altitude from which a recovery was not possible.

After the incident, the TSB said Bearskin [revised its single engine and engine failure procedures](#) to ensure that the propeller on a malfunctioning engine does not cause excessive drag.

Honeywell, the engine manufacturer, increased the inspection frequency on fuel nozzles and clarified inspection procedures. Transport Canada issued a Civil Aviation Safety Alert regarding issues with the negative torque sensing (NTS) system on Honeywell TPE-331 engines, to emphasize the need to feather and secure propellers during engine power loss events.

## **Metal fatigue causes Jämijärvi plane crash**

Investigators have determined that a fracture resulting from metal fatigue caused the crash that claimed the lives of eight parachuters in Jämijärvi in April 2014, reported news agency Xinhua.

Eight of the 10 parachuters on board the small passenger plane were killed in the crash in Jämijärvi of southwest Finland on April 20, 2014.

The aircraft was a Comp Air 8 built from components [purchased as a kit](#) from the US manufacturer.



The hobbyist builders in Finland had made changes in the wings [without asking for a written permission](#) from the Finnish Transport Safety Agency, according to the final investigation report published on Thursday.

The fatigue-based fracture had formed over a longer period of time and [could not be detected](#) in regular maintenance.

While the leading investigator Ismo Aaltonen said on Thursday the accident was not the fault of the pilot, it was believed the pilot had only limited experience in flying an efficient turbo prop and had not received enough training.

The pilot and two parachuters were able to exit the aircraft before it crashed, but eight others were killed in what was considered the deadliest air crash in this Nordic country in the last 30 years.

News agency STT adds: The Safety Investigation Authority has issued five recommendations after concluding investigations into the Jämijärvi plane crash.

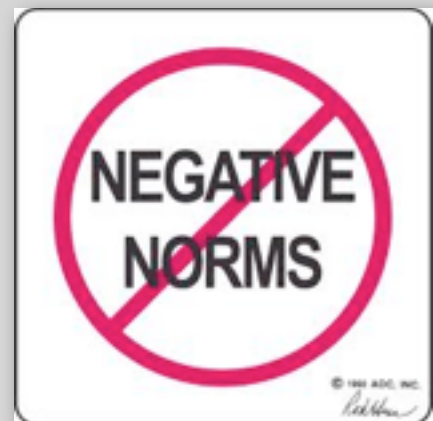
The Transport Safety Agency-Trafi has been advised to limit, if necessary, the seating capacity of aircraft built for recreation and the use of parachutes.

## **Fatal Katz crash pilots ignored check on 99% of trips**

Investigators of the private-jet crash that killed billionaire Lewis Katz discovered that the sports mogul's personal pilots [almost never performed the required pre-flight safety checks](#) when shuttling their boss around the country.

There were only two occasions out of the last 176 trips of Katz's Gulfstream IV in which the pilots bothered to fully test the flight controls before takeoffs, according to preliminary reports released Wednesday by the U.S. National Transportation Safety Board.

While the NTSB isn't yet ready to assign definitive blame for the cause of the crash, the hundreds of pages of documents it released paint a picture [of two pilots repeatedly failing to follow basic safety procedures](#).



That includes on their final voyage May 31, which ended with the plane skidding off a Boston- area runway and bursting into flames, killing the pilots, a flight attendant, Katz and three other passengers.

"One of the main reasons that aviation is as safe as it is today is [because of rigid checklist adherence](#)," said John Cox, a former airline pilot who is now president of consulting company Safety Operating Systems. "It is vitally important. The fact that a crew would not do that is disappointing."

The documents show that the aircraft made by Gulfstream, a unit of General Dynamics Corp., is also under scrutiny. The plane's [flight controls were locked during the takeoff](#) and the company had designed its plane so that it should have been impossible to attempt a takeoff in that condition. The company acknowledged to NTSB that the system didn't perform as designed, according to the documents.

Gulfstream didn't immediately respond to a request for comment.

### Partial checks

Testing whether a plane's flight controls are working is one of the most elementary safety checks, with pilots making sure all their controls can move normally and completely before beginning every takeoff. Katz's pilots had done so [only about 1 percent of the time](#), according to the NTSB.

In addition to the two full tests of the flight controls, the pilots [did partial checks](#) 16 times out of 176 flights examined, the NTSB said. Those checks were logged by a computer that recorded flight data.

Without the check, the pilots [didn't realize](#) it was impossible to lift the nose during takeoff because the controls were locked. The first indication they had that they couldn't lift off came 29 seconds after they began accelerating as they reached about 150 miles (241 kilometers) an hour.

### 'Lock On'

"Lock is on," Michael De Vries, who was at the controls, said, according to a transcript of the plane's cockpit recorder. He repeated the comment six more times as they sped down the runway.

The crew waited 10 more seconds and reached a maximum speed of about 185 mph before trying to stop, according to NTSB data.

"I can't stop it," De Vries said seven seconds before final impact.

On the night of the May 31 crash, Katz's group was delayed and the attempted departure from Bedford, Massachusetts, for Atlantic City, New Jersey, didn't happen until 9:39 p.m. The pilots [began to move the plane without unlocking the flight controls](#), including panels at the rear of the jet that lift the nose at takeoff, according to the NTSB.

As they taxied out to the runway, the pilots got a warning light indicating that the rudder at the back of the plane wasn't working, which would have made side-to-side control of the aircraft more difficult. While the pilots commented on the alert, according to the crash-proof cockpit voice recorder, [they didn't bother to investigate](#).

### Gulfstream advisory

In addition to the regular flight-control check, Gulfstream also advises pilots to perform a second test of the device that lifts the nose, known as the elevator. Once a plane on a runway reaches 69 miles (111 kilometers) an hour, pilots should ensure that it works. [That also wasn't done](#), according to the NTSB.

James McDowell, 61, of Georgetown, Delaware, was the chief pilot and director of maintenance for the company that operated the plane. He had been associated with the owners of the plane for 27 years. The night of the accident, he was acting as co-pilot.

The captain was De Vries, 44, of Marlton, New Jersey. He had worked for the company for 12 years.

The plane was owned by SK Travel LLC of North Carolina. Katz was listed as a manager along with Emil Solimine.

A contract pilot who had occasionally flown with De Vries told the NTSB [he didn't bother with checklists during his flights](#). Checklists are required at various times during a flight, such as before takeoff, to ensure that pilots don't forget anything.

### Plane design

A factor that may have contributed to the pilots' actions is Gulfstream's design of the plane, which the company said [wasn't properly certified](#).

Like most aircraft, the Gulfstream IV has a device that locks the flight controls while the plane is on the ground to prevent damage from wind.

It's known as a gust lock.

Because an attempted takeoff with the flight controls locked can be catastrophic, Gulfstream was required to make it impossible for such a mistake to occur. It did so by preventing the throttles from moving if the gust lock was engaged.

The NTSB found during the investigation it was possible in some cases to get increased power from the engines with the flight controls locked. [The manufacturer didn't test the gust lock to ensure that it would work properly, according to NTSB.](#)

NTSB Documents: <http://dms.nts.gov>

<http://registry.faa.gov/N121JM>

[NTSB Identification: ERA14MA271](#)

## **Salt Lake Community College Wins Borescope at Aerospace Maintenance Competition**

Last week's Aerospace Maintenance Competition provided [an inspiring look](#) into the future of aviation and aerospace maintenance. Fourteen teams competed in the School Division of the 2015 Aerospace Maintenance Competition (AMC), a skills-based event that took place during last week's 2015 MRO Americas.



Zack Wessels, one of RF System Lab's aviation borescope experts, was onsite at AMC for the duration of the event and was extremely impressed with the caliber of teams competing, especially the college teams. "It was great to see such a [high-level of teamwork and problem solving skills](#) from the teams in the school division...



it was an exciting look into what to expect from future AMTs/AMEs," said Wessels. RF System Lab sponsored the event and also donated a VJ-Advance video borescope to the winning college team. [After a grueling two-day competition](#), Salt Lake Community College was crowned the winning team for the School division. In addition to earning the title of First Place Team in the School division, Salt Lake Community College took home several prizes, including the high-quality VJ-Advance articulating video borescope.

RF System Lab would like to congratulate Salt Lake Community College on their victory, as well as all the other teams who came out to compete in this year's AMC!

## **Boeing Patents Upright Sleep Support System**

Airplanes have been trending toward [incorporating more sleep-friendly features](#) but most of those have been for business and first class passengers.

But Boeing may be bringing airplane better sleep to economy passengers in the future. Boeing received a patent for a [“transport vehicle upright sleep support system”](#) that resembles a front-worn backpack with a face relief aperture similar to a massage table. Boeing’s patent describes it as: “An upright sleep support system incorporates a head cushion having a face relief aperture to receive the eyes, nose, mouth and chin of a passenger placing his or her face against the head cushion with a hinged support structure for angular adjustment, sleeves that open in front to support the passengers arms, and a chest cushion on the back of the device. The chest cushion receives the passenger’s chest in a forward leaning position. The head cushion is deployable from a backpack and the chest cushion is integrated into the back of the backpack.”



In a [YouTube video](#) (embedded above), PatentYogi refers to it as a “cuddle seat.”

[https://www.youtube.com/watch?feature=player\\_embedded&v=apxuGUwTr58](https://www.youtube.com/watch?feature=player_embedded&v=apxuGUwTr58)

## The luxury cabin crew beds that beat first class! New plane design unveils individual pods where staff can sleep in-flight

Economy passengers have long wished they were in first class with lie-flat beds and nice meals, but now it seems there is someone else to envy - [the cabin crew](#).

A new plane design has revamped the areas where cabin crew can enjoy from rest and relaxation in flight, and it seems they have more space than any passengers. A slick bunk bed design has been unveiled by Zodiac Galleys Europe, giving staff a bed each and some privacy for [a little shut-eye during long-haul flights](#). Drawing on the help of 30 flight attendants from four different continents, their lower deck designs reveal an area designed to feel spacious, private and with maximum personal comfort.



Every bunk is equipped with a personal service unit (PSU) offering crew with individual comfort features such as an in-flight entertainment and air conditioning system.

In order to [maximize the sense of space](#), innovative materials and lighting solutions were designed and implemented. The Zodiac Aerospace concept was revealed Aircraft Interiors Expo in Hamburg last week, which aimed to showcase the latest developments in aircraft manufacturing.

The company has been creating Lower Deck Mobile Crew Rests for Airbus A330/A340 since the '90s and is the market leader for this area.

They aimed to start from a clean slate in order to create a new concept for sleeping areas, and conducted extensive market research to achieve this.

'The goal was not only to improve on quantitative aspects such as cost and weight, but [also to enhance the user experience](#),' a spokesperson for Zodiac Aerospace stated to Skift.

'In every step of the process users were involved.

'The extensive research provided a [thorough understanding of the factors](#) which influence how users experience crew rests.'

Last year other rare photographs revealed the tiny space quarters afforded to flight attendants on Boeing 787 Dreamliners.

Unlike the Aerospace lower deck areas, the Boeing Crew Rest Departments (CRCs) can be located in a compartment at the top of the plane, or in a hidden section of the same cabin as passengers.

On a Cathay Pacific 777-300ER there is a concealed staircase leading to the CRC at the rear of the plane.

Attendants have to duck to get through it, but there is room for eight flight staff with six foot bunk beds with heavy curtains for [blocking out noise](#) from other crew members.

Instructions state that one crew member can be on a bunk at a time, and never during taxi, take off and landing.

When not in use, the [secret door](#) must be closed and latched to avoid passengers wandering in.

## **Book Review: "Jet Blast"**

by Stephen Carbone

A wide-body jet is nearly lost in the Pacific Ocean, the cause: unknown. Since there was no accident, National Transportation Safety Board (NTSB) management decides against an investigation.

\*\*\*\*\*



John Goglia

"Yes, this book put me right back into those days at the NTSB. It is by far the [most realistic rendering of how aviation accident investigations are handled](http://jetblast.tateauthor.com/), the politics, the pressures, the infighting. And how there are still some dedicated, heroic and unsung heroes in those agencies, fighting the good fight to make air transportation as safe as possible for the flying public."

*-John Goglia, former NTSB Board Member from the Foreword for Jet Blast*

<http://jetblast.tateauthor.com/>



**Fatigue Accident/Incident Causation Testing System (FACTS™)** is an expert, web-based system that objectively and scientifically calculates the probability that a person was impaired by fatigue at the time of an accident.

**Fatigue Accident/Incident Causation Testing System (FACTS™)** is an expert, web-based system that objectively and scientifically calculates the probability that a person was impaired by fatigue at the time of an accident.

**FACTS enables you to:**

- Determine the fatigue causation probability for all incidents/accidents
- Analyze and track fatigue-related incidents/accidents
- Collect operational fatigue risk data
- Calculate the true cost of fatigue
- Benchmark and measure the impact of your fatigue-management initiatives
- Customize FACTS for your operation's unique needs

**Answer your fatigue questions with FACTS**

**START MY FREE  
TRIAL NOW**

[http://facts.circadian.com/?utm\\_source=facts%20email&utm\\_medium=email&utm\\_campaign=facts%20email](http://facts.circadian.com/?utm_source=facts%20email&utm_medium=email&utm_campaign=facts%20email)

## **Leading yourself: A Baker's Dozen of Things to Master**

You can't lead others if you can't lead yourself. Here are a baker's dozen of things to master if [you want to lead yourself well](#) and get on the road to becoming the best leader you can be.

**Master your smartphone.** Your smartphone is the Swiss Army Knife of the Digital Age. There are calendars, reminders, and apps that will help you be more productive.

**Master checklists.** Checklists will help you do routine things routinely so they don't get in the way of accomplishing big things.

*Sharpen the Saw means  
preserving and  
enhancing the greatest  
asset you have - you.*

Stephen R. Covey



Checklists are usually situational. You may have one for the start of the day and the week and one for the end. Use them for special situations like going on vacation and returning to work. Checklists are easy to create, use, and modify and they pay off big time.

**Master scorecards.** Keep score on how you're doing. Sam Walton used a "beat yesterday" book when he started his first WalMart in Rogers, AR. He was still keeping those books when he died.

**Master routine meetings.** They set the cadence for your team and make sure things are on track. Consider daily stand-up meetings with the team. Have weekly one-on-ones with every team member.

**Master incremental improvement.** Make a little progress every day.

**Master the art of concentration.** If you want to do significant work on important projects, you need large blocks of uninterrupted time.

**Master the off button.** When you need to concentrate, block out interruptions. Turn off your phone and your email. Sometimes, the "off button" is a door you can close or a place you can hide while you work.

**Master the art of capturing ideas.** If you don't they will flit away like butterflies on the wind.

**Master the reading habit.** Leaders are readers, plain and simple. Read.

**Master the art of review and reflection.** Take time every day and every week to assess your performance and your progress and your ideas.

**Master the art of letting go.** Take time off from work for other things. Let go of control when you don't need it. Most of the time you don't.

**Master the art of planning.** You need just enough. Too little and you set yourself adrift. Too much and you sacrifice agility for conformity.

**Master the art of relationships.** Cultivate your relationships with friends and loved ones. In the end they will matter more than accomplishments.

Above All...Safer Skies



## ***The Aviation Consulting Group***

[www.tacgworldwide.com](http://www.tacgworldwide.com)

### **SMS Basic Implementation Course (virtual)**

Anyone, anywhere, with a computer, can now have quality SMS training, with a real instructor, in real-time!



**COURSE NAME:** Safety Management System Basic Implementation (virtual)

**COURSE DESCRIPTION:** This is a basic implementation course (delivered virtually, in real-time, with a real instructor) that will allow the attendee to understand Safety Management principles as well as how to implement a functional Safety Management System at his/her own organization.

Topics for the 3 day course include Safety Management System development, implementation, and ongoing operation as well as how to conduct a GAP analysis and develop your own customized SMS manual (template included in course). Attendees will also receive an SMS software demonstration with the option to purchase software through our world-class SMS software partner SMS Pro. The first 2.5 days consist of SMS training, followed by a half a day of open discussion, personal guidance, and questions and answers.

**WHO SHOULD ATTEND?** Those people responsible for the implementation of their organization's SMS.

**DATE:** August 3-5, 2015 (Mon-Wed)

**COURSE DURATION:** 24.0 hrs. (3 days @ 8 hrs. per day)

**TIME:** 8:00am-5:00pm daily (New York Time...GMT/UTC - 4) (includes one hour lunch break)

**COURSE INSTRUCTOR:** [Dr. Bob Baron](#), President/CEO of The Aviation Consulting Group.

**INCLUDED IN COURSE:**

- Course slides
- SMS Manual Template (to help create your own manual. Most of the work has been done for you)
- Handouts
- SMS electronic library
- Certificate of Training

**COURSE TOPICS:**

- Introduction to Safety Management Systems
- Policy
- Safety Risk Management
- Safety Assurance
- Safety Promotion
- SMS Planning
- SMS Operation
- Phased Approach to SMS Implementation
- Implementation Plan
- GAP Analysis
- Making the SMS Manual Yours (template included in course)
- SMS Software Demonstration
- Case Studies

**TECHNICAL REQUIREMENTS:**

- Desktop computer, laptop, tablet, or iPad
- High speed Internet access
- Microphone
- Webcam
- Headphones (optional)

**Operating System:**

- Windows XP or later
- Windows 2003 Server or later
- Mac OS X 10.7 (Lion) or later

**Web Browser:**

- Google Chrome v39.0 or later
- Mozilla Firefox v34 or later
- Internet Explorer v8.0 or later
- Safari v6 or later

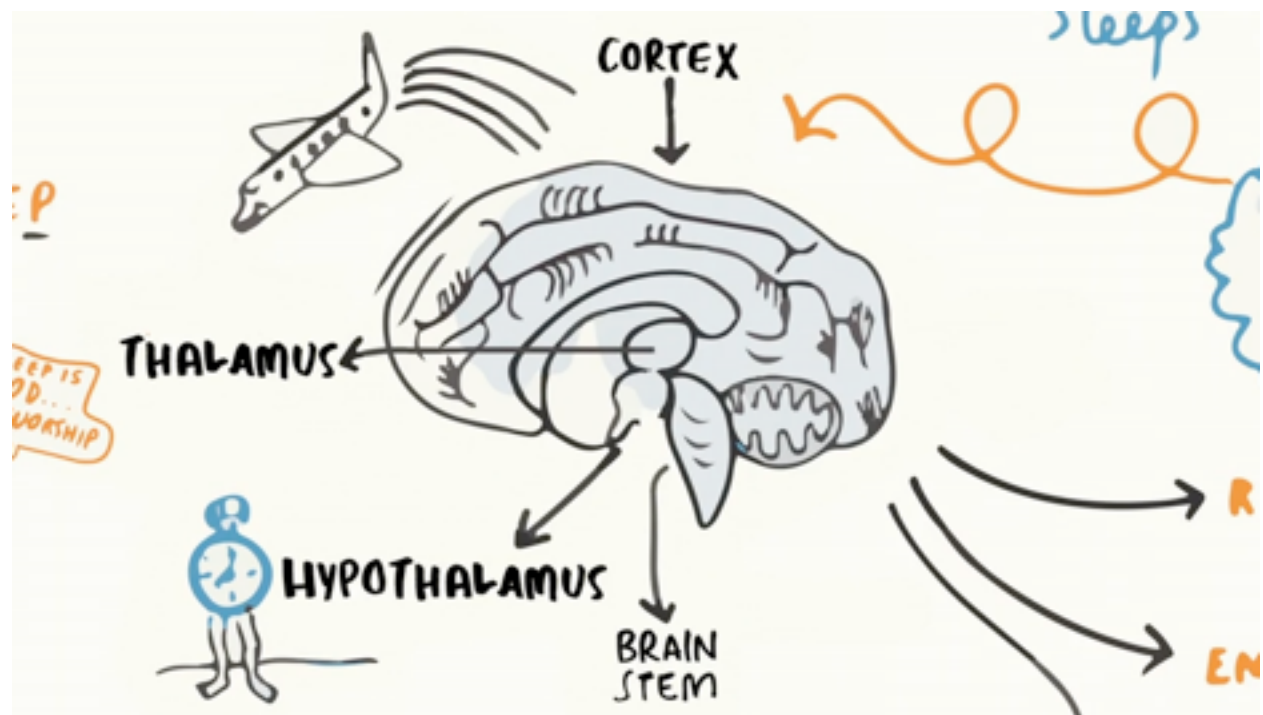
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## TED: Ideas Worth Spreading

### **Russell Foster: Why do we sleep?**

Russell Foster is a circadian neuroscientist: He studies the sleep cycles of the brain. And he asks: What do we know about sleep? Not a lot, it turns out, for something we do with one-third of our lives. In this talk, Foster shares three popular theories about why we sleep, busts some myths about how much sleep we need at different ages — and hints at some bold new uses of sleep as a predictor of mental health.



[https://www.ted.com/talks/russell\\_foster\\_why\\_do\\_we\\_sleep](https://www.ted.com/talks/russell_foster_why_do_we_sleep)