Aviation Human Factors Industry News

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Hello all,
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NTSB issues preliminary report for East River helicopter crash

The NTSB has issued its preliminary report on the March 11 crash of a Liberty Helicopters Airbus AS350 B2 helicopter in New York City's East River.

The aircraft was being operated on behalf of FlyNYON as a doors-off helicopter photo flight when it made a forced landing to the East River, then overturned in the water. The pilot, who was wearing only the aircraft's normal restraint system, managed to escape. The five passengers — who were wearing supplemental harnesses provided by FlyNYON — were unable to free themselves and drowned.

The NTSB's preliminary report includes an extensive summary of the agency's interview with the accident pilot. According to the pilot's account, the aircraft was proceeding slowly along the eastern side of Central Park at an altitude of approximately 2,000 feet when the front seat passenger "turned sideways, slid across the double bench seat toward the pilot, leaned back, and extended his feet to take a photograph of his feet outside the helicopter.

"As the pilot initiated a right pedal turn, he observed indications of power loss and believed he had experienced an engine failure. After ruling out Central Park as a landing area because there were "too many people," he turned toward the East River and extended his autorotative glide in an attempt to make the water.

At this point, the pilot told investigators, he attempted to restart the engine twice, with no positive indications of a successful restart on the instrumentation. When he was sure he could clear the buildings and make it to the river, he activated the floats at an altitude of about 800 feet above ground level (AGL).

The pilot was now "committed to impact," and reached down for the emergency fuel shutoff lever. That's when he realized that the lever was already in the off position, and a portion of the front seat passenger's tether was underneath the lever.

As the helicopter continued to descend through 600 feet AGL, he said, he positioned the fuel shutoff lever to the on position and attempted to restart the engine. He observed positive indications on the engine instruments immediately, but realized as he descended through 300 feet that the engine "wasn't spooling up fast enough," and continued the autorotation.

Passing through between 100 and 50 feet, the pilot began a cyclic flare but "did not get a lot of RPM back." The aircraft impacted the water in a five- to 10-degree nose-up attitude and quickly began listing to the right.

By the time the pilot unbuckled his restraint, he said, he was fully underwater. He managed to pull himself out through the doorframe and surfaced about four feet away from the nose of the helicopter, then crawled onto the belly of the aircraft to wave for help.

Examination of the aircraft revealed that the snapwire or "witness wire" between the fuel shutoff lever and engine control housing was broken at its lower end where it was normally secured through a hole in the control housing. The NTSB did not find evidence of pre-impact engine abnormalities.

Evaluation of the emergency float system revealed that the floats installed on the left landing gear skid appeared to be more inflated than the floats on the right skid. The emergency floats' left pressurized gas cylinder gauge indicated zero psi, while the right gauge indicated 4,000 psi.

According to the NTSB's report, a functional test of the float actuation system found that the trigger mechanism was smooth with no evidence of binding.

"Continuity of the float system control was established between the trigger, dual cable block, and the activation cable clevis connection," the report states. "When the trigger was released, the dual cable block returned to its normal position (via spring within the junction box) but the upper and lower turnbuckles remained in their actuated positions."

The complete report can be found on the NTSB's website.

Safety Management Versus Safety Leadership

Management and leadership are not synonymous. A manager's job is to plan, organize, and coordinate, while a leader inspires and motivates. Austrian-born American Peter Drucker—credited as the founder of modern management—best described the difference: “Management is doing things right; leadership is doing the right things.” In aviation and other highly regulated hazardous industries, this matters most as it relates to creating a good safety culture.

Other academics, ranging from James Reason to Andrew Hopkins, will agree that a manager is more likely to accept status quo, whereas a core characteristic of a mindful leader is to continually challenge and improve systems and culture. The mindset of a leader is one of “chronic unease.” Likewise, really good leaders should be preoccupied with the potential for failure or possibility of a major accident.

In a recent presentation, NTSB chairman Robert Sumwalt linked safety culture and leadership by saying, “Safety is not a status you attain, but a never-ending process. It’s not a destination, but a journey. And the journey begins with leadership.”

Today, safety management systems (SMSs) are commonplace, and the universally accepted framework, using ICAO guidance, involves four pillars and 12 underlying elements. The first pillar—safety policy and objectives—is the foundation of the system and highlights management’s commitment and responsibilities, resource allocation, emergency response planning, documentation, and the roles of the accountable executive, among others.

As a practical means, the professional safety practitioner will understand that most of the real day-to-day “action” takes place in the remaining three pillars—safety risk management, safety assurance, and safety promotion—but without establishing a >

solid foundation, the system will fail. That same individual will also recognize that the attributes of a good safety leader are rarely defined. The days of “I’m in charge, therefore I’m a leader” are long gone. That concept predates the jet engine.

In the U.S., the FAA's Part 5 regulation (“the SMS rule”) is very prescriptive and provides details about managing the system. The regulation clearly defines safety assurance, safety objectives, safety performance, safety policy, and safety promotion, along with safety risk management, but doesn’t get into the art of safety leadership.

Today’s mindful leaders will find opportunities within this regulation to project safety leadership throughout the organization from management to the frontline employee. One of the most obvious avenues is a solid safety policy per FAR 5.21; at a minimum, it must outline an organization's safety objectives, commitment to safety, promotion of its employee reporting system, and define unacceptable behavior.

Equally important, a safety policy must be fluid and should be routinely updated to accommodate changes to the system. A good example on an emerging issue—in this digital age—would be a clear statement on data usage and protections.

Beyond policy, the mindful leader also has an opportunity to effect cultural change by encouraging good relations between management and employees. In this case, action is far more powerful than rhetoric. Soliciting feedback from employees, or better yet inclusion in the safety process, will help build trust in the system. That’s a pretty tall order.

Of importance, it must be understood that this is a two-way street. Labor plays a critical role in building a strong safety culture, because employees must buy into it.

A leader must also demonstrate and support a good safety mindset. Remember, a leader must inspire and motivate. Employees at all levels should be empowered to speak up and report hazards discovered in the operation. At some level, these concepts will begin to filter from the top down to the frontline employees. That’s a healthy environment and is the point where a leader begins to realize the ultimate goal of creating a good safety culture.

Human Factor Extra: Top-of-Descent Landing Assessment

Listen to a two-member flight crew make a top-of-decent assessment in this bonus episode of **AIN**'s *The Human Factor.*Topics the bonus episode will cover:

- Safety
- Landing in bad weather
- Top-of-descent landing assessment

Listen to podcast

How to Tell the Human Factors Story Using Accidents and Events

BY DR. BILL JOHNSON

Trainers are always looking for examples of human or organizational performance that contributed to an incident/event. Dr. Bill Johnson characterizes and shows example events that provide the best opportunity to learn.

Background

I started teaching human factors contribution to accidents around 1980. With a fresh Ph.D. diploma, I was teaching an accident investigation course at the University of Illinois.

I could not have imagined that I would be so fortunate as to still be “telling accident stories” nearly 40years later. Of course, the example cases have changed as aviation safety has evolved. The hardware failures have diminished the increasing attention to human error as a contributing factor. Pre-1980 accidents, like the Hindenburg may have historical value and even human factors examples. However, the old accidents lack necessary modern relevancy. Dual engine failure on a 777, fuel exhaustion and dead stick landing on an A330, flight controls on a Beech 1900 commuter, or AS 350 helicopter, strike closer to home with today’s learners. What kind of events are best for maintenance human factors learning environment?

Characteristics of a Suitable Learning Example

First and foremost, we know that many events resulted in loss of lives. Always acknowledge that fact at the outset of post-event analysis. Second, company names are associated with events. A negative event must be fact-based and is not usually directly associated with the overall continuing quality and safety of parties involved. Mention that at the outset of a discussion. Third, assume that parties to the event may be in your audience. From experience, I have learned to ask that question before getting into the details of an accident. I have had audience members who serviced and or flew the event aircraft, knew the crew members, were at the accident scene, and may have lost family members or colleagues. For these reasons it is ideal to find accident examples where there were no injuries or fatalities. Further, surviving crew and aircraft can detail the circumstances surrounding the accident leading to the best understanding of contributing factors.

In a perfect world use an event directly matched to your audience. General aviation mechanics want to hear about GA accidents; airline mechanics want airliners, pilots want flightcrew-related contributing factors; and managers/executives need to hear about organizational factors. Because of the accident chain, one accident often addresses many audiences. Human error and organizational factors are generic. Safety culture is generic. Issues like failure to follow procedures, fitness for duty, and crew communication cross all industry segments.

Look for events where there are supporting pictures, graphics, or videos. In today’s YouTube world a trainer must be judicially selective about appropriate and legally available content. Published accident report data is usually the best source and publicly available. If it is in a government report it has cleared the hurdles of fact-checking, language appropriateness, and public-use suitability.

Example Learning Events that Work for Maintenance

The accident reports described below are easy to find via a quick Google search.

Example 1: Airbus A319, London Heathrow, May 24, 2013

The flight took off with unlatched cowlings on both engines. At take-off speed the cowlings detached damaging the fuel line on the right engine. The cowling damage leaking fuel was visually detected by passengers and reported to the cabin crew. This information was not adequately transmitted to the flight crew, badly affecting flightcrew decision-making. The left engine operated normally, with cowlings opened and no fuel leaks. On return to Heathrow the right engine caught fire and was shut down. The aircraft landed without further event and passengers disembarked through emergency exits. From takeoff roll to landing the time was nearly 24 minutes. See Figure 1 for open cowlings and emergency evacuation.

The A319 accident report, published by the CAA Air Accidents Investigation Branch, is about 120 pages long. This was a maintenance accident because, for a multitude of reasons, the maintenance crew did not secure the cowlings. The ground and flight crews also failed to notice the unlatched cowlings, an issue that created numerous previous events on this aircraft type.

Many of the maintenance actions leading to the event were associated with failure to follow procedures. They were working overnight on line maintenance. Lacking all necessary tools, aboard their truck, they postponed a service for later in the shift. Contrary to procedures, they left the cowlings opened and did not properly placard that condition in the aircraft. When they returned to the task, later in the shift, they went to the wrong aircraft. Noticing that the doors were closed they assumed that someone else completed the task. They double checked the work and closed the cowlings. The cowlings remained open on the first aircraft they had serviced.

The report outlines a number of organizational procedural errors, committed on a regular basis at that location. Further, the report suggested that the work schedules of the maintenance crew left them prone to fatigue and associated errors.

It is a report worth reading and noting the errors by mechanics, ground crew, cabin crew, and pilots. It is an ideal learning tool for any human factors class.

Example 2: Eurocopter AS350, Near Las Vegas, NV, Dec. 7, 2011

The helicopter, on a sight-seeing tour with a pilot and four passengers, crashed about nine minutes after takeoff. It crashed into a canyon after complete loss of control due to a failed flight control attachment for a primary servo. The nut, bolt, and locking mechanism were not found at the crash site. Serviced the night before the crash, it appeared that a self-locking nut was improperly reused and the additional locking split pin was not installed as per the procedures (See Figure 2). Neither the post-maintenance check pilot nor the pilot that flew two revenue flights, prior to the accident flight, noticed the missing locking hardware.

The contributing factors to this maintenance accident were the mechanics and inspector's failure to follow maintenance procedures regarding locking mechanisms for critical flight controls. The NTSB concluded that there was a likely fitness for duty issue due to the altered work schedules of the mechanic and the inspector (See Figure 3 for actual work schedule). NTSB attributed blame to the quality of the organization's work cards, which did not contain sufficient detail. Finally, NTSB recommended that all of the maintenance workforce participate in human factors training.

Figure 3. The work schedule affecting mechanic and inspector fitness for duty.

Personnel	Normal Shift	Shift Originally Scheduled for Dec. 6	Actual Dec. 6 Shift
Mechanic	1200 to 2300	Off Duty	0550 to 1846
Inspector	1200 to 2300	Off Duty	0550 to 1846

Example 3: B-737, Air China 120, August, 2007, Okinawa, Japan

While taxiing to the gate after landing, ground staff observed fuel leaking from No. 2 engine pylon. Once stopped away from gate, the leaking fuel ignited. Passengers evacuated via emergency exits. Aircraft burned to total destruction.

The 737-800 has four slats installed on the leading edge of each wing. Each slat rides on two auxiliary tracks. The slat tracks are housed in a track can, which extend into an aluminum housing in the fuel tank. At the fuel tank end of the main track is a downstop bolt that stops the track when it is extended fully forward.

For this event the bolt was installed, in the field about 30 days prior to the accident, without the necessary washer to ensure that it stayed in place. The maintenance crew had failed to install the washer. See Figure 5. When the downstop assembly fell out of place it was pushed to the back of the track can and punctured a hole in the fuel tank. This failure to follow procedures error, for a small washer, lead to the aircraft loss.

Conclusions

Accident reports present many learning opportunities. The three examples described here are but many that show multiple human factors issues not only in maintenance but also with other crew members. Example 1 and 2 were from the accident reports. Example 3 came from the FAA website: Lessonslearned.faa.gov. That FAA site includes accidents from airlines, general aviation, and rotorcraft.

http://www.aviationpros.com/article/12396371/Lessonslearned.faa.gov

Airshow Pilot Charged In Fatal Crash

Airshow pilot Andrew Hill, 53, whose 1955 Hawker Hunter crashed in August 2015, killing 11 men, has been charged with "manslaughter by gross negligence" in a British court. He will appear before a judge on April 19. The 11 who died were either in vehicles on the road or standing on the roadside, outside the airfield. Twelve others, plus Hill, were injured.

Hill had attempted to perform a loop during his airshow display, but failed to complete it, and crashed. He also will be charged with endangering an aircraft.Since the accident, warbird performances in the U.K. have been shifted to sites over water.

Hill, an experienced airshow pilot, hit the top of a loop 800 feet lower and 50 knots slower than required for the Hunter and was not able to recover.
Investigators said he had recently renewed his airshow performance permit on a Jet Provost, which has different performance characteristics than the Hunter, and "a possible error path was that the pilot recalled the wrong numbers, essentially mixing up the two aircraft."

https://www.avweb.com/avwebflash/news/Air-Show-Crash-Pilot-Might-Have-Confused-Aircraft-228595-1.html

https://youtu.be/pvHplYmh2f8

Drone operators for commercial use to quadruple by 2022: FAA

How drones could revolutionize the U.S. economy
Brandon Declet, Measure Aero CEO weighs in on drone production as a way to boost the economy.

The number of commercial drones and their users is expected to quadruple in the next four years, another positive sign for the ever-growing industry.**Data published by the Federal Aviation Administration** (FAA) last week projects that the industry will jump from more than 110,000 unmanned aircraft systems (UAS) in 2017 to 450,000. Based on its current forecast, regulators expect there will be about 300,000 new pilots needed for the remote aerial vehicles, up from 73,000 currently.

The forecast is based, in part, on the presumption that further easing of regulations on drone flying is likely. President Donald Trump's administration has been a proponent for easing constraints on drone flying.

Trump signed a memorandum last October that would create a drone integration pilot program allowing the Transportation Department to enter agreements with state, local and tribal governments as well as the private sector to build "innovation zones" to test operations of unmanned craft.

"[As drones become] operationally more efficient and safe, battery life expands, and regulatory constraints are reduced, new business models will begin to develop, thus enhancing robust supply-side responses," the FAA projects.

Both corporate and consumer applications of commercial drones could also have an impact on the American economy, according to data from consulting firm McKinsey. The organization estimates that the unmanned craft will have an annual impact of $31 billion to $46 billion on the nation's GDP.

Major businesses are entering the drone industry. Last week the e-commerce giant Amazon received a patent for an airbag that would protect a package if dropped from up to 25 feet by one of its unmanned aerial vehicles.

Walmart is getting into the drone business as part of its effort to compete with Amazon. The brick-and-mortar giant is applying for patents to pursue farm automation. Its plan is to use small drones for pollinating crops – making up for the shortage of bees – by having one UAS collect pollen from a first crop and then apply it to a flower in a second crop. Then, another drone, equipped with a sensor, would follow to make sure pollen was applied.

In its latest forecast, the FAA expects the use of recreational drones to increase, though not nearly as much as the rate it projects for the commercial sector.

The market for recreational UAS is likely to more than double – to 2.4 million units from the current 1.1

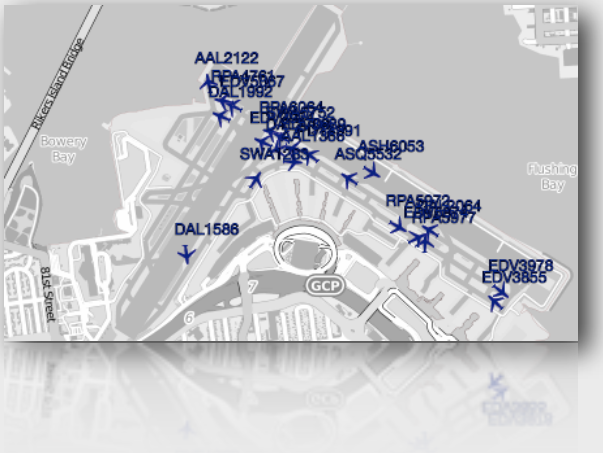
https://www.faa.gov/data_research/aviation/aerospace_forecasts/media/Unmanned_Aircraft_Systems.pdf

http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1&u=%2Fnetahtml%2FPTO%2Fsearch-adv.htm&r=1&f=G&l=50&d=PTXT&S1=(%229,914,539%22.PN.)&OS=PN/

http://images2.freshpatents.com/pdf/US20180065749A1.pdf

Airportviewer

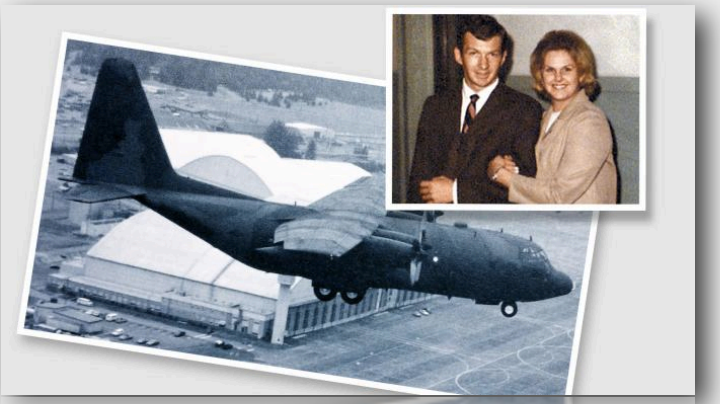
You get a whole page of airports, click one on and it gives you a map of the place. In the upper left corner is a gear, click that and two things appear, data block and. From there you can select all kinds of things, like AC number, speed, etc. And its real time at the selected airport.



try https://www.airportviewer.com

Divers To Search For Stolen C-130 In The English Channel

Mechanic Reportedly Took The Plane In 1969 In An Effort To Fly Home To Virginia



In May of 1969, military mechanic Sgt. Paul Meyer is reported to have stolen a C-130E transport plane from Mildenhall, Suffolk in an effort to fly home to see his wife Jane. But according to the BBC, Sgt. Meyer had been drinking, and the plane went down with Meyer aboard in the English Channel.

The official police report from the incident indicates that Sgt. Meyer escaped from police custody after a night of heavy drinking, impersonated an officer to have the airplane fueled, and then took off for the United States. The police report describes his action as a "highly irrational act", saying he was "under considerable emotional stress." He had been serving in Vietnam, and had been refused leave to go home to see his wife, according to the report.

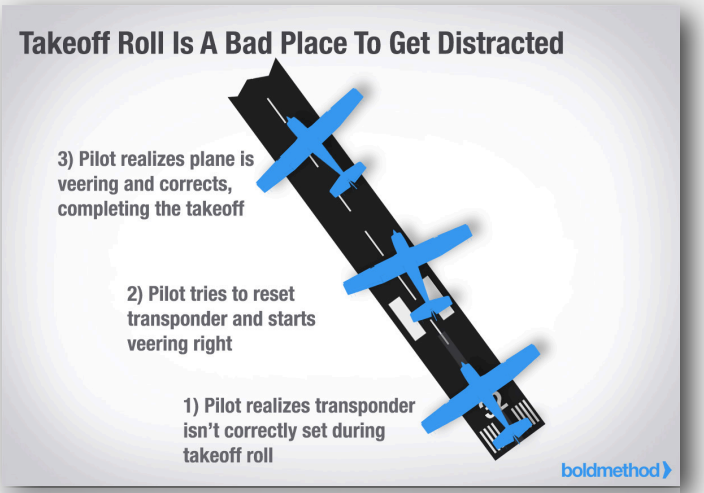
Sgt. Meyer was not a pilot. It is not clear what caused the accident, but researchers give him a lot of credit for even getting the Herc off the ground.

Now, a group of salvagers thinks they have a good chance of locating the wreckage of the plane at the bottom of the English Channel. Deeper Dorset says they have "five good targets" in a 10-square-mile area about 30 miles off the coast of Portland Bill. They have launched a crowdfunding campaign with a goal of about $8,400, and plan to begin searching using side-scan sonar later this year.

FMI: Original report

Distracted Pilot Loses Control On Takeoff Due To An Incorrect Transponder Setting

Something as small as an incorrect transponder setting can lead an accident if you allow yourself to become distracted. Here's how this pilot nearly lost control on takeoff, and what you can do to avoid the same mistake...



A Chain Of Distractions

In a NASA ASRS report, a Cessna 182 Skylane pilot described the circumstances surrounding a momentary loss of control during takeoff with an incorrect transponder setting:

"After receiving my IFR clearance, I was interrupted by a passenger question while I was setting the transponder code. This caused the transponder to be set incorrectly. I failed to notice this error during the remainder of the preflight. During the takeoff roll, I looked down and saw the incorrect setting of the transponder and allowed myself to be distracted. I reached down to set the transponder. At that time the airplane veered right. Upon noticing the problem I corrected and completed the takeoff.

Two things went wrong here:

1) The pilot became distracted by a passenger question at a critical moment: while entering IFR clearance information.

2) The pilot attempted to change transponder setting during a critical phase of flight: the takeoff roll.

What Could've Been Done Differently

It's easy to get distracted by passengers and their questions in any phase of flight - even on the ground. The best thing you can do is brief them about when and where it's appropriate to ask questions. If you're busy entering clearance information, let them know you'll get back to their question as soon as you're done.

Running the fine line between being perceived as rude or focused is tough. But if you explain to your passengers (before the flight) about good and bad times to talk, you'll reduce the chance of distractions at critical phases of your flight.

When You Realize Something Is Wrong

A skill pilots develop over time is deciding what's critical and what's not. Changing the transponder during the takeoff roll isn't critical to flight safety, so it's unnecessary at that moment.

Even with the passenger's distraction, this situation could've been avoided had the pilot waited to reset the transponder during climb. In most cases, ATC won't radar identify you until you're on with approach control or center, and that typically happens several minutes into the flight. And even if your transponder isn't set correctly, ATC will let you know so you can correct it.

It's far more important to focus on flying the airplane when you're at a high speed close to the ground (or on the ground).

Unless something directly affects your safety or the flight characteristics of your plane, avoid becoming distracted by unnecessary "fixes" during critical phases of flight.

Prepare for the Unexpected

The General Aviation Joint Steering Committee (GAJSC) has identified a number of fatal general aviation accidents that occurred following powerplant failure. Mismanagement of light, twin-engine airplanes in single-engine operations was of particular concern. The GAJSC believes that scenario-based training in emergency procedures will be effective in reducing these kinds of mishaps.

To learn more, see our #FlySafe fact sheet here: http://bit.ly/2GapDc8.

NATA Board Stresses Need for Code of Ethics

The National Air Transportation Association (NATA) board of directors is renewing its call to general aviation businesses to follow a code of ethics, issuing a statement yesterday underscoring the belief that following an industry-wide code will benefit aviation businesses on the whole. The release of the "Statement Regarding Ethical Conduct" is a follow-on to a Code of Ethics released in January 2013 and comes a month after the NATA board in February discussed a need for general aviation businesses to foster company values, promote fair business practices, and deter wrongdoing.

“NATA’s board of directors recognizes that many general aviation businesses have a code of ethics in place, but believes that all businesses should abide by the guiding principles set forth by a code to ensure the industry continues to prosper,” said Greg Schmidt, NATA chairman and president and CEO of Pentastar Aviation.

The statement highlights the need to uphold a code of ethics that involves four pillars: safety, integrity, accountability, and respect. “The heart of NATA’s mission is to empower general aviation businesses to act safely and with integrity,” said NATA president Martin Hiller. “It is these attributes that have historically been a key part of the success of the general aviation industry. NATA strongly encourages general aviation businesses to establish and enforce a code of ethics using these four guiding principles.”

http://ea.ecn5.com/Clicks/Vk0xNjAvWFRFYUR0bXFCT3I1WGduZEhUVlVwY3dZRm5nK0taTzVnelVheDJvcG9peU85S2Q5VzZiV1ZFRUJxai9pNWc0S1BpM0pGWkVudTlSZW5CU0E9PQ%3d%3d

Delta Air Lines is exploring wearable robotic suits to augment employee safety for some of its employees

The Atlanta-based Delta Air Lines is exploring the possibility of outfitting some of its employees with “wearable robotics.” The airline said Thursday in an announcement on its website. The new robotic suit technology would protect employees from injury by giving them an additional layer of strength and protection.

The plan is part of the Exoskeleton Technical Advisory Group (X-TAG) that will think about the best ways to bring full-body, powered industrial exoskeleton systems to the workforce. The groups is led by Sarcos Robotics with other X-TAG members include Bechtel, BMW, Caterpillar, GE, Schlumberger and additional leading companies representing aviation, construction, heavy machinery and utilities.
Delta Airline is not a stranger to futuristic technologies. In May 2017, Delta invest $600,000 in four automated self-service bag checking kiosks, including one that will incorporate artificial intelligence and facial recognition technology. The airline claimed that facial recognition technology will be used to verify customer identity by matching customer faces to passport photos. Delta is an initial member in an Exoskeleton Technical Advisory Group (X-TAG) that will think about the best ways to bring full-body, powered industrial exoskeleton systems to the workforce. Led by Sarcos Robotics, other X-TAG members include Bechtel, BMW, Caterpillar, GE, Schlumberger and additional leading companies representing aviation, construction, heavy machinery and utilities.

In a separate company release, Sarcos Robotics announced the formation of an industry focused Exoskeleton Technical Advisory Group ("X-TAG"). The group is comprised of executives from leading companies across a variety of industries including industrial manufacturing, automotive, aviation and aerospace, construction, oil & gas, and utilities, the X-TAG is working with Sarcos and industry groups to identify key performance and safety requirements necessary to bring powered and quasi-passive, full-body industrial exoskeleton systems to the work force.

"There is no greater responsibility we have than to keep our people and our customers safe," said Gil West, Delta's Chief Operating Officer. "This X-TAG is an innovative opportunity to think about how fitting our employees with wearable robotics can build on our strong personal safety culture and further protect our people from injury by giving them an additional layer of strength and protection."

Sarcos is a global leader in producing robots that combine human intelligence and dexterity with the strength, endurance and precision of machines to improve efficiency and reduce occupational injuries for complex or non-repetitive tasks. The company' CEO announced the partnership during a WearRAcon talk where he shared the Sarcos' vision of using wearable robotics to safely support and protect the current workforce, not replace it.

“The opportunity to deploy powered, full-body industrial exoskeletons that reduce injury and dramatically enhance human strength, endurance and precision is more proximate than most people realize” said Ben Wolff, chairman and CEO of Sarcos Robotics. “Top innovators, thought leaders and industry experts across key industries have joined with us to create the safest, most productive and cost-effective workforce in the world and provide us with industry and safety requirements guidance to ensure we meet industry needs in advance of commercial deployment.”

https://news.delta.com/delta-explores-robotic-suits-augment-employee-safety-strength-front-lines

A record 965 million people flew last year, DOT says

A record 965 million passengers flew on domestic or foreign airlines last year, the Transportation Department announced Thursday.

Southwest Airlines carried the most passengers with 157.7 million, and American Airlines had the most international passengers, according to the bureau.

Atlanta Hartsfield-Jackson International Airport got the most passengers on planes with 50.2 million, despite a 0.5% drop from 2016, according to the bureau. New York's John F. Kennedy International Airport boarded the most international passengers.

The overall number of passengers represented a 3.4% gain from the 933 million in 2016, according to the bureau. There were 898.9 million passengers in 2015.

Navy Studies How Sleep Deprivation Affects Group Decision-making

The Navy is funding research into how sleep deprivation affects decision-making in a group setting, such as among a ship's bridge crew, according to *Stars and Stripes*.

The Office of Naval Research Global is sponsoring ground-breaking research by Professor Sean Drummond with the Monash Institute of Cognitive and Clinical Neurosciences in Australia.Little research exists on how and to what extent lack of sleep affects a group while its members are collectively analyzing data and making decisions, the Navy said Thursday in a statement. The effects of sleep deprivation on individual performance have been extensively documented.

"From high op-tempo Navy special warfare missions, to Sailors on extended watch on ships, to long-duration flights or Marines in theater, the issue of sleep loss is critical to the performance and well-being of our warfighters," Capt. Kevin Quarderer, ONR Global commander, said in the statement.

Get the full story at www.stripes.com