

THE

MOBILITY FORUM

THE MAGAZINE OF AIR MOBILITY COMMAND | WINTER 2020-2021

Back to Basics:

Operating in
an Unorthodox
Environment



AMC Welcomes New Leaders

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AIR MOBILITY COMMAND
Gen Jacqueline D. Van Ovost



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ON THE COVER

SrA Sara Gutherie, 911th Aircraft Maintenance Squadron Instruments and Controls Technician, adjusts her headset to communicate with maintainers inside a C-17 Globemaster III during an inspection at the Pittsburgh International Airport Air Reserve Station, PA, Sept. 17, 2020.

USAF photo by Joshua J. Seybert

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Happy Holidays

from Gen Van Ovost

The holiday season offers an opportunity to pause, reflect, and be grateful for the blessings of family, friends, and purpose—the difference we made in ourselves, in each other, and in our command. With a glance to our past and strong focus on our future, I could not be more proud to be a Mobility Airman!

From the very first day of the year, AMC was projecting decisive strength as we rapidly delivered the 82nd Airborne's Immediate Response Force to United States Central Command to combat Iranian aggression. Shortly thereafter, we responded to a very different threat—a global pandemic that rapidly changed the world as we knew it. COVID-19 challenged us to operate in a contested environment, from taking care of our families, to balancing risk to mission and force, to operating around the globe in a pandemic that changed hourly—we were put to the test. But make no mistake, your determined, resilient, and innovative spirit prevailed. Regardless of the threat, Air Mobility Command continued to project decisive strength and deliver hope around the world.

This year, our lift was heavy and challenges great, but you met them head on and delivered! As we enter the holiday season, please take time to rest and reconnect with friends and loved ones. Because we have been physically distant, it is important to reinforce those connections that may have atrophied. Keep your fellow Airmen in mind and extend a hand to those who may not have the opportunity to be with family. To our deployed Mobility Warriors projecting and sustaining the Joint Force downrange, you are in our thoughts and prayers—thank you for your service and sacrifice during the holiday season. We are here for your family in your absence and eagerly await your return!

Next year will be action packed as we get laser-focused on our priorities and accelerate our integration into new Joint warfighting concepts. We must build the Mobility Air Force we need through developing multi-capable and digitally adept Airmen while energizing rapid capability development in order to deliver credible capacity to the Joint warfighter. During the next few weeks, I ask that you dedicate some time for personal reflection to think about your goals for the new year, both personally and professionally, and then be ready to execute.

Thank you for your continued commitment to our mission, our Air Force, and especially to each other. Your leadership, irreproachable character, and bias for action are the strength of this command and deeply appreciated. I wish you all a restful and joyous holiday season.



Gen Jacqueline D. Van Ovost

This year, our lift was heavy and challenges great, but you met them head on and delivered! As we enter the holiday season, please take time to rest and reconnect with friends and loved ones.



It Is Good to Be Home!

BY CMSGT BRIAN P. KRUZELNICK, AMC COMMAND CHIEF

As my family and I rolled through the gate at Scott Air Force Base, IL, on Aug. 1, 2020, the first thought that crossed my mind was, *It is good to be home!* I am and have always been a Mobility Airman at heart, regardless of my duty position. The flightline was my office, and the world of aircraft generation, my teacher. To say it is an honor and a privilege to become the Air Mobility Command (AMC) Command Chief is a complete understatement and far exceeded any personal expectations.

I came from the mean streets of New Jersey, struggling to survive in the world in which I lived. I lacked basic physical and psychological needs, from shelter to a feeling of belonging. With no other place to go, I found myself at an Air Force recruiter's office on the recommendation of a friend, Ed Thomas. He spent four years as an active-duty aircraft maintainer and

transitioned to the Air National Guard. His insight motivated me to enlist as an aircraft maintainer, and after signing the paperwork, I was in Basic Military Training within a week.

It was hard to correct my undisciplined and unstructured background to meet military expectations, which led me to be a less-than-desired Airman. Living in "survival mode" for so long made me combative and stopped me from developing healthy relationships. Although I did have a strong work ethic, my behavior was not acceptable. In time, however, I found solace in the allure of the flightline, pride in generating aircraft, and small pockets of acceptance in teammates that filled an unconscious void. Within months of arriving at my first duty station, I deployed to support Operation DENY FLIGHT followed by Operation PROVIDE PROMISE, the longest sustained humanitarian airlift in

U.S. Air Force history. That is where I witnessed AMC flat out delivering hope to those in need!

I spent my time from Staff Sergeant to Chief in AMC, growing as an Airman and as a person on every flightline around the world. I feel very comfortable leading Mobility Airmen because I had similar experiences and can relate to their trials and tribulations as well as their successes. The strength of this command lies in our people and families, making it imperative to invest in connections.

We need to connect our Airmen to the service they joined, their assigned command and unit, their peers, and us as leaders. For our diverse Airmen to reach their full potential, we need to invest in them and take the time to know and understand their personal stories so they can connect to the rich history of the unit. We all have



CMSgt Brian Kruzelnick and his family. Left to right: son, Javonni, age 10; Kruzelnick; daughter, Jahni, age 15; daughter, La Talya, age 11; and his wife, Karen Kruzelnick.

past experiences—good and bad—from childhood to where we stand today, forming whom we have become. Therefore, we must have patience, empathy, and compassion for our differences and celebrate the individual uniqueness we each bring to the fight.

In our ranks are those driven and meek, strong and vulnerable, carefree and overwhelmed. As leaders, we can decide *what* matters but never *who* matters because everyone does. We must have a curious nature to create opportunities to bond with one another.

In current times of inclusion and resilience issues, coupled with the contested environment surrounding COVID-19, connections are more important than ever. AMC specializes in delivering humanitarian relief and global security to those in need worldwide, but we must also look inside our own command for equally needful individuals. We must look internally at our force, take action to improve our unit culture, clearly define our daily purpose, and strengthen our unity. We rise together.

I am not only your AMC Command Chief but also a father and a husband. I strive to treat every AMC Airman just like the individuals living in my house and have a great appreciation, care, and love for all those in our command. No matter what occupational badge you wear, you are important—critical to the mission and valued as a person.

I challenge us all to invest in one another: reach out to those you have not seen, strengthen your connections, and lean on one another when needed. Our fellow Mobility Airmen are family, AMC is our home, and it is good to be home! 🇺🇸



Members of the 62d Aerial Port Squadron, McChord Air Force Base, WA, throw a cargo net over palletized material during Operation PROVIDE PROMISE.



CMSgt Kruzelnick, taking a selfie with Airman Leadership School students at Misawa Air Base, Japan.



CMSgt Kruzelnick works alongside Airmen on Misawa Air Base, Japan, who showed Kruzelnick an engine roll back on an F-16 during Exercise Cope North, March 7, 2019.

AMC Welcomes New Deputy Commander

Lt Gen Brian S. Robinson is the Deputy Commander of Air Mobility Command (AMC), Scott Air Force Base, IL. The command serves as the U.S. Transportation Command's air component, executing the Air Mobility mission in support of the Joint Force, allies, and partners with a fleet of nearly 1,100 aircraft. The command encompasses 18th Air Force, the U.S. Air Force Expeditionary Center, the 618th Air Operations Center, and 17 wings and two groups, which provide rapid global mobility from more than 100 locations worldwide. Nearly 107,000 active duty, Air National Guard, Air Force Reserve Airmen, and civilians comprise the Air Mobility total force, providing command and control of inter-theater and intra-theater airlift, air refueling, aeromedical evacuation, global Air Mobility support, and presidential and senior leader air transport in support of national interests.

Prior to assuming his current role, Robinson served as the Director of Operations, Headquarters U.S. Transportation Command, where he was responsible for directing the all-domain command and control and deployment of forces and the distribution of supplies and equipment for humanitarian, peacetime, and wartime operations for the Department of Defense, including joint training and exercises.



Lt Gen Brian S. Robinson

Robinson has held staff assignments at Joint Staff, Headquarters Air Force Staff, AMC, and the U.S. Air Forces Central 609th Air Operations Center (AOC). He has commanded at the squadron, wing, operational, and global 618 AOC levels.

Robinson is a native of Philadelphia, where he earned his Bachelor of Science degree in Computer Science from Philadelphia University in 1987. He received his commission from Air Force Officer Training School in 1987 and attended undergraduate pilot training, later serving as a T-38B first assignment instructor pilot before moving on to a series of operational assignments in the C-130 E/H/J and the C-17A, which represent the full range of tactical and strategic airlift and aerial delivery. Robinson is a weapons officer and command pilot with more than 4,400 hours in airlift and trainer aircraft. 🇺🇸



Gen Maryanne Miller, former Commander of Air Mobility Command, applauds as Maj Gen Kenneth T. Bibb, Jr., assumes command of 18th Air Force from Maj Gen Sam C. Barrett during a change of command ceremony, Aug. 18, 2020, at Scott Air Force Base, IL.

USAF photo

18th Air Force Changes Command

BY 18TH AIR FORCE PUBLIC AFFAIRS

Maj Gen Kenneth T. Bibb, Jr., took command of 18th Air Force during a change of command ceremony Aug. 18, 2020, at Scott Air Force Base, IL.

Bibb, who most recently served as the Director of Strategic Plans, Programs, Requirements, and Analyses at Headquarters Air Force Materiel Command at Wright-Patterson Air Force Base, OH, took command from Maj Gen Sam Barrett, who is Pentagon-bound after commanding for two years.

“Today it is my honor to hand the guidon from one mobility sage to another,” said Gen Maryanne Miller, then Air Mobility Command Commander.

Miller recognized Bibb’s impressive resumé and highlighted how his extensive experience has prepared him for this job.

“This command is running hard, and it takes a leader of your caliber and your skill to keep strong under today’s stressful security environment,” she said.

After symbolically passing the guidon, the in-person crowd applauded and welcomed 18th Air Force’s newest commander.

“It is true that we stand on the shoulders of those who have come before us,” Bibb said before mentioning the names of the former leaders of 18th Air Force.

Bibb noted community support as an essential aspect for the success of 18th Air Force wings.

He praised the warriors of 18th Air Force as being the people who make the command successful.

“Our future is not decided, but I’m confident we can live up to the high bar [that] Gen Miller, Gen Van Ovost, and other senior leaders have set for us,” said Bibb, who is now responsible for ensuring readiness and sustainment of 36,000 Airmen who span 12 wings and one standalone group across the world.

He promised to give his all in command and stated that, together, 18th Air Force will continue to sacrifice and serve.

The ceremony featured a small in-person audience due to COVID-19 mitigation measures. Ceremony participants also practiced social distancing, and audience members wore masks to ensure the safety of all in attendance. 

U.S. Air Force Expeditionary Center Welcomes New Commander

BY MAJ GEORGE TOBIAS, U.S. AIR FORCE EXPEDITIONARY CENTER PUBLIC AFFAIRS



Maj Gen Mark Camerer

Leadership of the U.S. Air Force Expeditionary Center was officially passed to its newest commander, Maj Gen Mark Camerer, on Sept. 23, 2020.

Camerer's more than 30-year career has included various positions at the squadron, group, wing, major command, and combatant command levels. Prior to his current command, he was the Director of Strategic Plans, Requirements, and Programs, Headquarters Air Mobility Command (AMC), Scott Air Force Base, IL.

"Gen Camerer is all about developing Airmen and building the force that will compete, deter, and win today and tomorrow—he is absolutely the right person to lead the Expeditionary Center into the future," said AMC Commander Gen Jacqueline D. Van Ovost, who presided over the ceremony. "I have absolute faith and confidence he is the perfect leader to build upon [Maj Gen John Gordy's] foundation and accelerate this command into the future."

During the ceremony, Camerer addressed the nearly 14,000 Airmen of the Expeditionary Center and laid out his commitment to the men, women, and families of the Expeditionary Center who support its vital mission to AMC and the U.S. Air Force.

"I assume command, ... they are more than three ceremonial words," said Camerer. "They represent the commitment to the men, women, and families of the Expeditionary Center that I make today. They instantly and profoundly link Julie and I to an awesome military organization."

Camerer's extensive operational and command experience will further the Expeditionary Center's strategic importance to rapid global mobility.

"The Expeditionary Center puts the rapid in Rapid Global Mobility; we are the power projection platform with strategic military locations across the globe. Our Airmen have built the key relationships with the Army, the Navy, the Marine Corps, the Space Force, and our international partners that allow us to rapidly move anything to any destination on the planet," Camerer said, adding that the Airmen of the Expeditionary Center "provide our nation with the strategic advantage that is coveted by our senior leaders, respected by our allies, and cannot be matched by our adversaries."

Camerer concluded his remarks stating, "I am humbled to join this amazing team ... I understand the responsibility that I am shouldering, and I know the strategic importance of the Expeditionary Center. Together we will continue to put the rapid in Rapid Global Mobility as we deliver air power ... from the ground up!"

The Expeditionary Center, located at Joint Base McGuire-Dix-Lakehurst, NJ, is the Air Force's center of excellence for Rapid Global Mobility and expeditionary Agile Combat Support training and education. It is also responsible for providing direct oversight for the Global Air Mobility Support System and installation support, contingency response, and partnership capacity mission sets within the global mobility enterprise. 🇺🇸



Checklist Discipline: Preventing Little Mistakes from Becoming Big Ones

A Review of ASAP #14266

BY MR. JAMES BUSBEA,
C-5M MFOQA FLIGHT DATA ANALYST

Aviation Safety Action Program (ASAP) #14266 documents an engine flameout and the subsequent “hot start” that was induced by an interruption in the engine shutdown checklist. Like any good ASAP submission, ASAP #14266 provides an opportunity for our community to learn something from another crew’s experience. Hopefully, we can glean some nuggets of wisdom to prevent a similar lapse in checklist discipline or, at the very least, trap the error earlier in the chain of events.

The engine shutdown checklist item at the center of this ASAP is Pilots’ step 8A/Flight Engineer’s step 12A Fuel ISO Valves—“OPEN” (E).

Prior to this step, the engines are suction feeding fuel from their respective main tanks at very low pressure (2–5 psi). The sump box for each outboard main tank is located below the associated engine pylon;

therefore, suction feed from these tanks is impossible when the fuel isolation valves are open. So why do we open them?

Each engine-driven fuel pump is mechanically driven by the engine’s high-pressure compressor (N2) and will continue to generate pressure as the engine spools down. We open each fuel isolation valve to provide a path for this pressure to dissipate as the high-pressure fuel shutoff valve is commanded closed at engine shutdown. This procedure prolongs the life of critical engine fuel system components by preventing trapped fuel pressure from exceeding fuel manifold design limits as the engines shut down.

A known risk is that an engine flameout may be induced by prolonged operation with the fuel isolation valves open. Therefore, the engine start switches should be placed to STOP immediately after the fuel isolation

Photo above: A C-5M Super Galaxy loaded with cargo and personnel headed to Naval Station Rota, Spain, takes off Jan. 16, 2019 from Travis Air Force Base, CA, in support of a multimodal stage mission.

USAF photo by Heide Couch

valves are opened. In response to ASAP #14266, Air Mobility Command’s Standardization and Evaluation Division bolstered the existing flight manual procedural amplification to further emphasize this hazard.

There is a reason **Fuel ISO Valves—“OPEN” (E)** was written as a challenge-and-response checklist item. This verbal checklist convention is meant to compel crew coordination between the pilots and the flight engineer. The challenge (i.e., Fuel ISO Valves) announces that the pilots are ready to shut down the engines. The verbal response (i.e., OPEN) not only reports completion of the action but also alerts the pilots that the flight

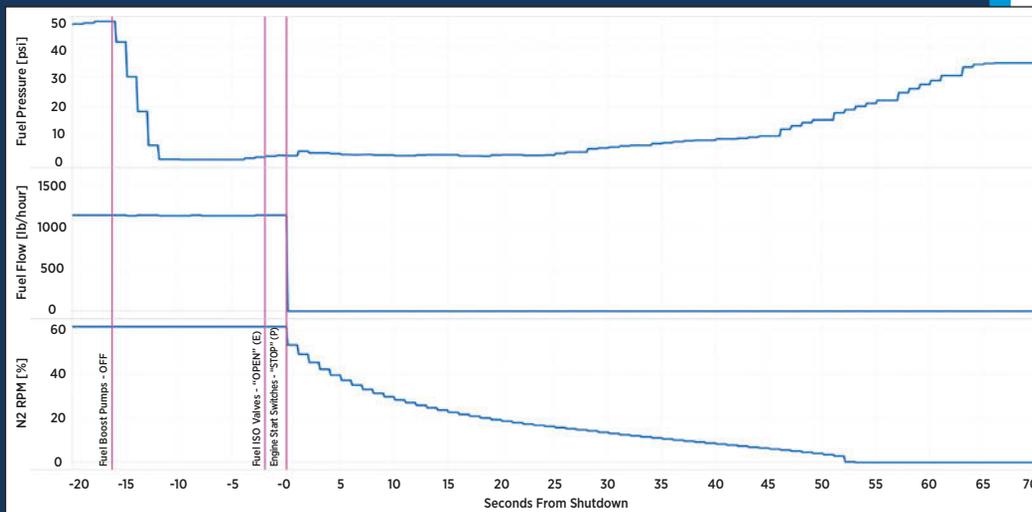


Figure 1. Normal Engine-Shutdown Parameters. No perceptible drop in fuel pressure as the isolation valve is opened because the engine is shut down immediately, as the flight manual prescribes.

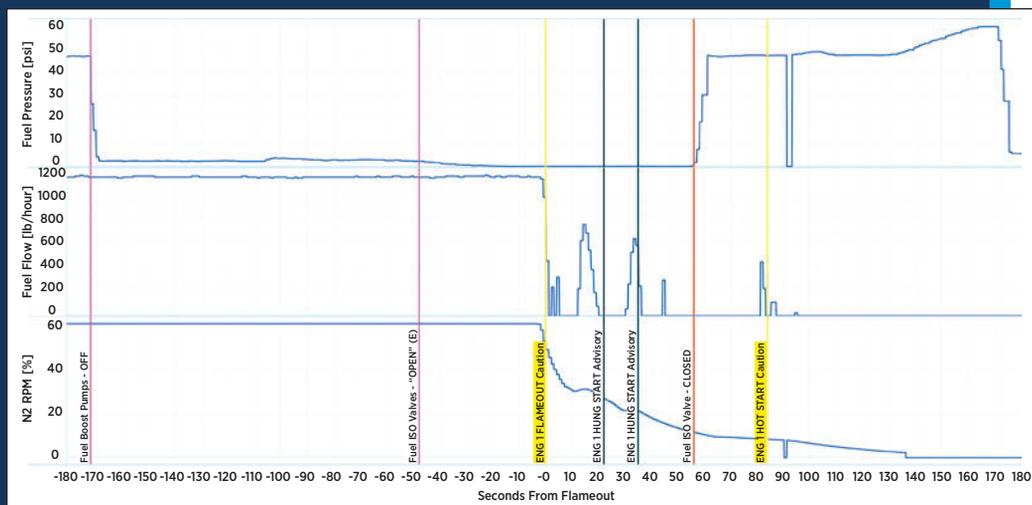


Figure 2. Engine-Shutdown Parameters Associated with ASAP #14266.

engineer is ready for the next checklist item: Engine Start Switches—“STOP” (P).

Figure 1 shows a normal engine shutdown. No perceptible drop in fuel pressure occurs as the isolation valve is opened because the engine is shut down immediately, as the flight manual prescribes.

Figure 2, on the other hand, shows the engine-shutdown parameters as recorded for the flight in ASAP #14266. The ENG 1 FLAMEOUT caution message displayed about 50 seconds after the fuel pressure decay associated with opening the isolation valve occurred. The Electronic Engine Control (EEC) then automatically transitioned to start mode as soon as the N2 dropped below 61 percent. The subsequent

two ENG 1 HUNG START advisory messages and associated fuel flow spikes were indicative of the EEC attempting to restart the fuel-starved engine without starter assistance. When steady fuel pressure was restored by closing the fuel isolation valve with less than 10 percent N2 rotation, a different type of stalled start event—the ENG 1 HOT START—occurred.

Mission complexity, distractions, and external threats are relentless. We ALL succumb to them eventually, and mistakes happen. So how do we contain a lapse in checklist discipline to keep small errors from becoming big ones? First, acknowledge the slipup to yourself and your crew. Then, move forward to correct the mistake as a team. Resist the impulse to reverse your actions or improvise your way out of the situation. Except for bold-faced items, there is never a reason to respond to a caution,

warning, or advisory message without direct reference to the checklist. The appropriate crew response for an ENG 1 FLAMEOUT caution while on the ground is to place the engine start switch to STOP.

If you are using ASAP #14266 for a Hangar Fly discussion, take the reported scenario to a logical conclusion. What action is required if fuel flow is observed and the engine does not reach N2 idle? (Answer: Motoring for 30 seconds.) Where is that requirement written? (Answer: Starting engines checklist.) What are the potential consequences if this action is not taken? (Answer: Tailpipe fire.) What would that look like? (Answer: Heavy, dark smoke coming from the tailpipe.) What checklist would you run then? (Answer: Tailpipe fire checklist.)

Airlift Tanker Association Virtual Convention: Connecting Mobility Warriors in the Digital Age



BY MS. KIM KNIGHT, STAFF WRITER

The 2020 Airlift Tanker Association (A/TA) Virtual Convention was held on October 27-29 with the theme “Connecting Mobility Warriors in the Digital Age: Big Data/AI and the Roaring 20s v 2.0.” The Chairman of the Airlift Tanker Association, retired Gen Duncan J. McNabb, kicked off the event by welcoming attendees to the 52d annual convention. McNabb said the theme seemed appropriate because so much in our environment is virtual and added, “What a challenging year, but in this time and in this space, we come together to celebrate what we do. We come together for a myriad of reasons, and despite the COVID-19 pandemic, hurricanes, wildfires, earthquakes, and unrest, all of you continue to answer the call to serve. To raise your hand for freedom and give hope to people in need.”

McNabb highlighted several major Air Mobility Command (AMC) accomplishments that occurred over the last year, which included the transport of the Army 82d Airborne Division to Central Command (CENTCOM) in response to Iranian

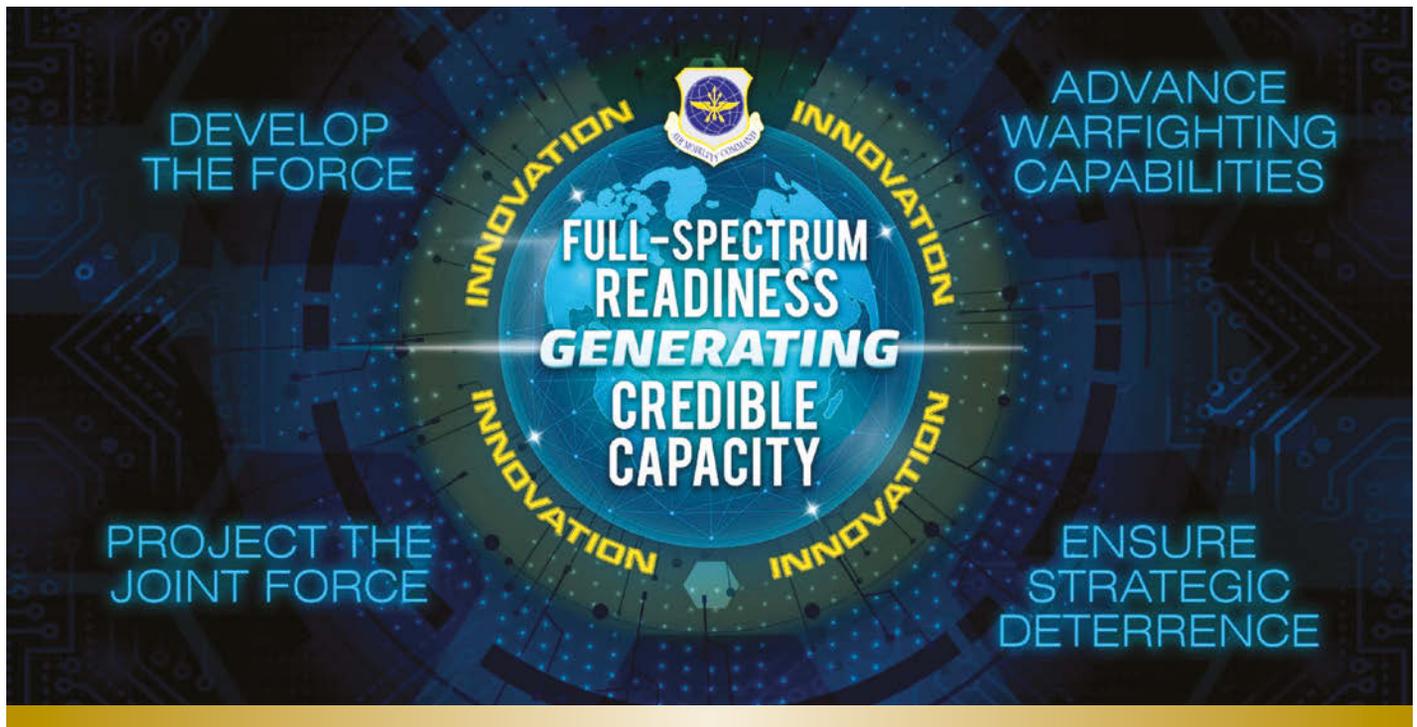
aggression; technological advances in Joint All-Domain Command and Control and Advanced Battle Management System; the first KC-46 oceanic coronet; constructing the largest C-130J formation in history; delivering COVID-19 personal protective equipment across the world and transporting patients for care; delivering humanitarian aid to Beirut after the explosion that rocked the country, to the Caribbean in the wake of a hurricane, and to Columbia following the Venezuela refugee crisis.

Although the online platform was a new experience for all involved, McNabb welcomed attendees to navigate uncharted airways together with the all-star lineup of keynote speakers that included the Honorable Shon J. Manasco, the Assistant Secretary of the Air Force for Manpower and Reserve Affairs, Pentagon, VA; Gen Charles Q. Brown, Chief of Staff of the Air Force, Pentagon, VA; Gen Stephen R. Lyons, Commander of United States Transportation Command, Scott Air

Force Base (AFB), IL; Lt Gen Michael A. Loh, Director of the Air National Guard, Pentagon, VA; and Lt Gen Richard W. Scobee, Chief of the Air Force Reserve, Arlington, VA.

The opening keynote address was delivered by the Commander of AMC, Gen Jacqueline D. Van Ovost, Scott AFB, IL. Van Ovost rolled out the way forward for the command as she said, “Our new priorities are to develop the force and advance warfighting capabilities to maximize full-spectrum readiness and generate the credible capacity required to project the Joint Force and ensure strategic deterrence.”

“While we focused on combat operations in the Middle East for 30 years, our adversaries developed the warfighting concepts and weapon systems specifically designed to defeat our capabilities,” Van Ovost said. “Now, rapid advancements in technology and the increasingly low cost and ease of diffusion have increased our adversaries’ lethality and accelerated the timelines for when they can threaten our global presence and operational capabilities.



New priorities laid out by Commander of AMC, Gen Jacqueline D. Van Ovost.

AMC must accelerate change now to compete, deter, and win. If we don't change quickly, Air Force wargaming suggests the country could experience significant losses in future high-end conflicts involving attacks on military and commercial logistics networks, preventing the United States from projecting quick and decisive power."

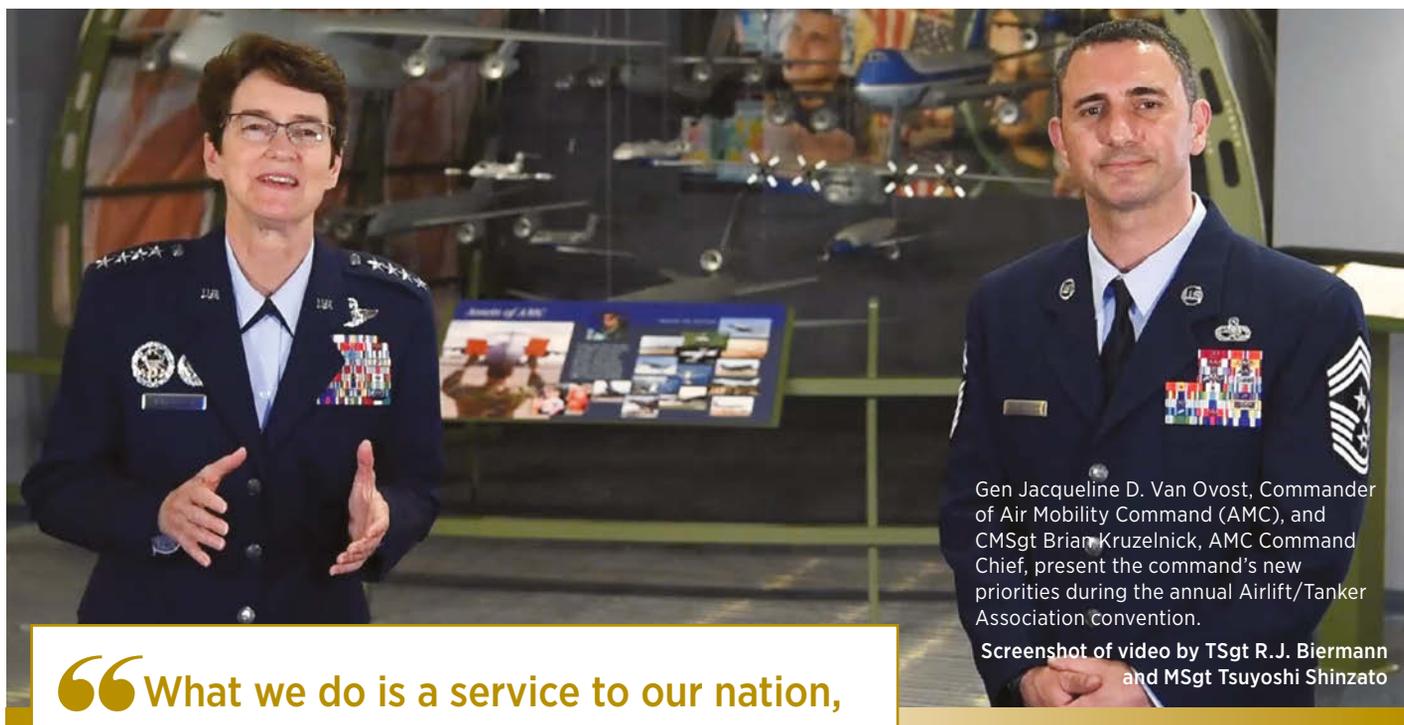
Air Force Chief of Staff Gen Charles Q. Brown further discussed the need to rapidly advance the Air Force's capabilities, outlined in his paper, *Accelerate Change or Lose*. Brown is no stranger to commanding in the toughest posts around the globe and stressed that our advantage as a global superpower is being challenged, so we must accelerate change because we as a nation have a lot to lose. He stressed that as a fighting force, failure is not an option.

After defining why change is needed, he laid out what to change with action orders that are as simple as A, B, C, and D: Airmen,

Bureaucracy, Competition, and Design Implementation—the key aspects to where the Air Force is heading. He added a major factor that will accelerate change is increased innovation. "We need to be in innovation, and we can't be risk-averse to get there. Innovation is hard and often met with resistance. We need to foster an environment of creativity and empower Airmen and champion their ideas. We need an environment where Airmen aren't afraid to bring up and push their ideas and also be willing to fail." Brown added, "Here is what I ask all of our leaders to do: Are you deliberately working to engage innovation in your unit? Are you willing to take a little bit of risk ... and reward failure? Those that actually tried and failed versus those sitting on a bench watching and critiquing. How are you recognizing those mavericks?"

In the closing address, CMSgt Brian Kruzelnick, AMC Command Chief, reiterated the need for accelerated change and spoke of the new command priorities. He said developing the force and advancing warfighting capabilities is what AMC does every day by training and ensuring that all assets are in place while projecting the force and ensuring strategic deterrence is what AMC can bring to the fight. The foundation that ties all the new priorities together is full-spectrum readiness, which means Airmen have the proper training and are prepared at a moment's notice for any adversary. Because of constant readiness, AMC can generate credible capacity to deliver a product that can be counted on. Innovation encompasses all of the AMC priorities, and every Airman is responsible for executing them.

For those unable to watch the live stream of the speakers and presentations during the virtual convention, videos are available at <https://www.atalink.org/>.



Gen Jacqueline D. Van Ovost, Commander of Air Mobility Command (AMC), and CMSgt Brian Kruzelnick, AMC Command Chief, present the command's new priorities during the annual Airlift/Tanker Association convention.

Screenshot of video by TSgt R.J. Biermann and MSgt Tsuyoshi Shinzato

“What we do is a service to our nation, and many of us have a passion to serve. When we can make things better for others, not just for ourselves, it is an inherent satisfaction of making a difference. In the end, we are here for each other.”

“You are not a military global power just because you can move something from Texas to California. ... You are a military global power because you can touch any part of the world at any time. Nobody can move at the speed of relevancy like AMC. We project the Joint Force combat capability on our shoulders, on our backs,” he said.

Kruzelnick stated that the unexpected circumstances of 2020 have left many socially distant and disconnected. Before this year, resilience and diversity were an issue, but “I see a string that attaches all the challenges we are facing. It all centers around connectiveness. ... In time, we have atrophied our muscles connecting people to people, people to the unit, and people to the mission. As leaders, we need to connect people to the

service that they joined, people to the command, people to their peers, and people to us as their leaders,” he said.

When speaking of incentives for innovative Airmen, Van Ovost said, “What we do is a service to our nation, and many of us have a passion to serve. When we can make things better for others, not just for ourselves, it is an inherent satisfaction of making a difference. In the end, we are here for each other.” She added that monetary awards were not available for every idea, but that “every idea makes you better, makes your Airmen better, makes the Air Force better.”

She reflected on the negative pressure conox that was used to transport COVID-19 patients safely and how determined Airmen worked

tirelessly to take it from concept to implementation within 90 days—and effort that saved lives. It was an incredible feat and a driving force for inspiration. “That’s what drives me. The passion to take care of others, make them great, and help them achieve their goals,” Van Ovost said.

“Let me tell you who inspires me. You do. The Airmen getting out there every day and making the mission happen. It gives me joy to visit at the different wings and say thank you to Airmen. It makes the long hours and the hard decisions worth it.”

Kruzelnick added that an individual’s contribution to the Air Force is tied to impact, not to an Airmen’s rank or career field. He said, “Every day that you get up and get after it and try to make the organization you work at a better place makes you a highly impactful player. We are saving lives; I don’t know how much more we could incentivize you than being able to say that you have saved a life. You are making a better place for those who follow us to grow up in, which is the true measure of your impact.” 

Back to Basics: Operating in an Unorthodox Environment

BY LT COL ADAM KING,
HQ AMC FLIGHT SAFETY

The entire field of aviation is an extremely dynamic operating environment, with an overabundance of complex variables, which in and of itself ensures a high level of complexity. Couple that with a worldwide pandemic, instability in multiple areas of responsibility, and an ever-increasing operational demand, and the result is an ever-changing and unorthodox environment. When presented with such challenges, get back to basics of training, instructing, and prioritizing tasks.

The first challenge is usually identifying when you are operating in a degraded state, such as task saturation. The Aeronautical Decision-Making section of the Federal Aviation Administration (FAA) Aeronautical Information Manual describes task saturation as, “The first effect of high workload is that the pilot may be working harder but accomplishing less. As workload increases, attention cannot be devoted to several tasks at one time, and the pilot may begin to focus on one item. When a pilot becomes task saturated, there is no awareness of input from various sources, so decisions may be made on incomplete information and the possibility of error increases.”¹

Whether task saturated, operating at reduced capacity, or presented with novel challenges, Airmen commonly revert to their core

training, frequently referred to as “muscle memory.” An article in the October 2005 *Journal of Neuroscience* describes the phenomenon of muscle memory: “There is strong evidence from studies involving the physical practice of movements that an important physiological component of behavioral performance gains is a lasting change of local cortical movement representations, a kind of motor memory. ... Although most motor skills are acquired through physical practice, the mere observation of movements has also been shown to lead to subsequent specific performance gains.”²

To build good muscle memory, it is imperative to train with repetition to build resilient habit patterns but also to incorporate realism in order to observe a complete system in action. Summed up simply by Gen George S. Patton, “You fight like you train.” For every opportunity, it is essential to maximize training potential through dedication and accuracy. This requires the commitment of time, even when it is inconvenient or undesirable. An example would be executing multiple approaches and landings on Friday night local sorties when the majority of the crew would rather terminate early and go home. Precision is equally important to ensure accurate habits. For example, while training approach proficiency, be vigilant to maintain stabilized approach criteria all the way to touchdown. By applying these tenets, training can be optimized, thereby preparing you for adversity.

“ In aviation, we hear a lot about proficiency and about the difference between being current and being proficient. Currency means you meet the letter of the regulations. Proficiency helps keep you and others alive. It’s that simple.”

The core of any solid training program or sortie is the instructor. Although the instruction can be given and received by anyone, designated instructors (such as Instructor Pilots and Craftsmen) bear the greatest weight of that responsibility. They are relied on to be experts in their professions, facilitate deliberate practice, and execute thorough feedback—all designed to improve skills mastery and individual motivation.

A 1993 *American Psychological Association* article, “The Role of Deliberate Practice in the Acquisition of Expert Performance,” notes, “... studies have already shown that experts carefully schedule deliberate practice and limit its duration to avoid exhaustion and burnout. ... By viewing expert performers not simply as domain-specific experts but as experts in maintaining high levels of practice

¹ https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/media/O4_phak_ch2.pdf, page 2-24

² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6725701/>

and improving performance, we are likely to uncover valuable information about the optimal conditions for learning and education.”³

No matter how exceptional your instruction or habit patterns are, uncertainty is sure to find you. The worldwide pandemic has generated unique tasks and challenges. Aside from the potential medical impact of being infirm, some examples of obstacles to a traditional operating environment are facial coverings, changes to local policies, additional personal protective equipment, reduced enroute services, restriction of movement, prolonged deployments, reduced training sortie frequency, contingency lodging, additional operating procedures, medical screening, self-isolation, and emotions from the uncertainty of the future, to name a few. All these examples present possible conditions to which muscle memory derived from training or instruction likely does not exist.

Before entering any operating environment, be honest to those around you about your proficiency versus your currency. The FAA summed this concept up well in 2010, “In aviation, we hear a lot about proficiency and about the difference between being current and being proficient. Currency means you meet the letter of the regulations. Proficiency helps keep you and others alive. It’s that simple.” The

³ [http://graphics8.nytimes.com/images/blogs/freakonomics/pdf/DeliberatePractice\(PsychologicalReview\).pdf](http://graphics8.nytimes.com/images/blogs/freakonomics/pdf/DeliberatePractice(PsychologicalReview).pdf)

Air Force has robust Risk Management strategies, tools, and processes, but what ensures their efficacy is the willingness of individuals to be candid about their proficiency with fellow crew and coworkers.⁴

When handling an abundance of traditional or novel obstacles, loss of situational awareness is a common outcome, and remaining calm, thinking rationally, and prioritizing tasks are paramount to reducing stress and increasing the capacity to execute tasks safely. A common adage for aircrew is “Aviate, navigate, and communicate.” While airborne, assessing and overcoming issues that happen at rapid speed is unavoidable, but on the ground, slowing down to prevent unnecessary risk acceptance is often an ideal course of action. In such incidents, it is essential to remember the “Slow is smooth, smooth is fast” concept because moving fast

⁴ https://www.faa.gov/news/safety_briefing/2010/media/SepOct2010.pdf

(or rushing it) is reckless and can potentially be fatal. If you move slowly, carefully, and deliberately, however, you are actually moving as fast as you can without needlessly increasing risk.

As our proud Air Force personnel operate undeterred through an unorthodox operating environment, it is imperative to nail the fundamentals: train in a way to prepare for adversity, and deliberately prioritize tasks. Remember, never become complacent because you are part of a team that defies gravity. 🇺🇸

A C-130 Hercules pilot assigned to Air Mobility Command prepares the cockpit of her aircraft before taking off to conduct high-altitude air drop missions and static line troop drops from Little Rock Air Force Base, AR.

USAF photo by SSgt Kenny Holston



Retired Air Force Chief of Staff Gen Ronald Fogleman

Talks About Life and Leadership



Retirement portrait of Air Force Chief of Staff Gen Ronald Fogleman

BY MS. KIM KNIGHT, STAFF WRITER

“**W**hen I was in high school, I got into a little bit of trouble and ended up in a situation where I had to report [to authorities]. In rural Appalachia, we didn’t have a probation officer, so I had to report to the district attorney a couple of times a month,” said retired Air Force Chief of Staff Gen Ronald Fogleman in a recent interview for *The Mobility Forum*.

It was 1958, and, as he waited for a meeting with the small-town attorney, Fogleman noticed a bronze star citation from World War II hanging on the wall. When the war veteran appeared, he asked Fogleman if he had ever thought of military life before and said, “They’ve got this new place out in Colorado called the Air Force Academy, and our congressman owes us a favor.”

Although the conversation was brief, it changed the entire course of young Fogleman’s life. He applied to the Academy, was notified of his acceptance in May, and reported in June.

“My family didn’t have the money to get me out there, so my grandfather,

who was a retired railroader, took me to Denver on a railroad pass. My grandfather had only one experience with the military. In August of ‘41, he sent his youngest son off to the Air Corps, and my uncle was in the Philippines when the Japanese attacked on the 8th of December. He was a B-17 crew member when the aircraft was destroyed by the Japanese, and he died in a POW camp in 1942,” he said.

No doubt, the loss of a loved one in battle weighed heavily during the bittersweet parting in Denver. From there, he took a bus to the Academy to begin a long, prestigious career. Although he had made mistakes in his youth, he rose to lead the entire Air Force, an excellent role model and a shining ray of hope for those who come to the service from humble or imperfect beginnings.

During the Vietnam War, he served two tours, flying 315 combat missions and logging 806 hours of combat fighter time. As a Misty FAC (forward air controller), he was part of a tactical fighter squadron that flew F-100F FACs low over hostile territory

searching for enemy targets. Due to the extremely dangerous missions, more than 30 Misty planes were shot down. He said, “I was shot down while flying a close air support mission out of Biên Hòa. As a Misty, we got to do some interesting things flying over North Vietnam and Laos. The problem there was trying to stop what was flowing south from North Vietnam along the Ho Chi Minh Trail.”

After the war, the band of brothers remained close, and, in February of 1992, Fogleman got a call from a fellow Misty, the then Air Force Chief of Staff Gen Tony McPeak. He said, “Congratulations, Fogleman, you’re going to be a four-star. You are going to Scott [Air Force Base, IL], and you are going to be Commander in Chief of U.S. Transportation Command [USTRANSCOM] and Commander of Air Mobility Command [AMC].”

“It was kind of a shock to everybody that a fighter pilot was being parachuted in to take command at Scott,” Fogleman said.



Misty FACs in 1969. Standing second from the left is Maj Tony McPeak, who became the USAF Chief of Staff from 1990-1994. Standing third from the left is Capt Ron Fogleman, who became USAF Chief of Staff from 1994-1997. Kneeling second from the right is 1 Lt Charles Lacy Veach, who became an astronaut and logged more than 400 hours in space.

USAF photo

He proved to be the perfect man to build AMC from the ground up as the entire Air Force underwent an organizational, operational, and fundamental renovation to meet the defense demands of the post-Cold War era. Pioneering leaders outlined the way forward for the command in a document called *Global Reach, Global Power*.

“In the past, MAC [Mobility Air Command] had all the airlift, but they didn’t have the tankers. With the new structure, the tankers came. We started building with tankers and airlift at a time in which the country was looking at becoming a CONUS [continental United States]-based contingency—meaning, we are going to have fewer people stationed overseas, and, in order to respond to a contingency, you are

going to need AMC. Without it, the national defense plan would not work.”

As a fighter pilot who had refueled three or four times a day to complete demanding missions during conflict, he fully understood the importance of tankers. He was unversed, however, in the behind-the-scenes operations that enabled the fuel stations to appear magically in the sky when needed, as well as the elements of worldwide airlift operations. Therefore, he called on the best in the business when being schooled on the operations and extending the technology and capabilities of the Tanker Airlift Control Center (TACC). Gen John Handy and Gen Walt Cross (both of whom went on to serve as the Commander of USTRANSCOM and Air Mobility Command [AMC]) took

what AMC inherited following the Gulf War and modernized TACC to contend on a global scale.

As a dual-hat commander, Fogleman had the task of introducing the C-17 to the powerful Air Force fleet. There were problems meeting milestones, however, due to several difficulties and delays. One issue, in particular, was the certification for parachuting because the Army parachute test team had refused to jump from the new aircraft due to experiencing occasional tears in their chutes during the test. After speaking with leading experts from within the command and confirming that the issue was not out of the ordinary, Fogleman got the VII Airborne Corps Commander on the phone. Fogleman told him that there was nothing wrong with the



Air Force Chief of Staff Gen Ronald Fogleman (Ret.), speaking to local dignitaries and Air Force guests during the dedication of the Medal of Honor Monument at Lackland Air Force Base, TX, Sept. 24, 1996.

U.S. National Archives Photo

aircraft and the failure to complete the parachute test was putting the entire C-17 program at risk. The VII Airborne Corps Commander agreed with Fogleman's assessment but stated that, because it was a perceived safety issue, he could not order the test team to jump if they thought it was unsafe. Fogleman then proposed that he and the Corps Commander jump out of the aircraft to demonstrate their belief that it was safe. After getting recurrent at Fort Bragg, Fogleman and the Corps Commander flew to Edwards Air Force Base, CA, and led the test team in a jump from the aircraft. After the jump, the Corps Commander called the test team together and explained that the Army had changed the parachute manufacturer and they were seeing the small tears in some chutes in all their operations. The leader's actions had more impact on the C-17 program than anything that could have been said in a speech or have written in a commander's message.

Fogleman was well known for his four pass or fail rules for which he held the commanders accountable:

1. **No rule through fear:** Never act as a tyrant, threat, or try to exercise power over people because it creates a climate that is not conducive to participation. Have respect for others, and they will foster new ideas.
2. **Never lose your temper in public:** Leaders need to be calm, cool, and collected in a crisis. Self-discipline is a prerequisite to command a squadron.
3. **Never tolerate any breach of integrity:** When Airmen swear to protect and defend the Constitution of the United States against all enemies, foreign and domestic, it means that lives will be put on the line if need be. It is an oath with an unlimited liability clause.

4. **Zero tolerance for any kind of sexual harassment, or any kind of prejudice based on race, religion, ethnic origin, or age:** If an individual is denigrated, then they do not reach full potential, which means no one reaches full potential. Collectively, there is no growth.

"They were simple, and I held people to it," he said.

As Chief of Staff, he introduced the Air Force Core Values: Integrity First, Service Before Self, and Excellence in All We Do. Today, the timeless and enduring values still epitomize the profession at every level. Fogleman stood firmly dedicated to each value until he retired in the summer of 1997 after 34 years in the Air Force.

When asked if he had words of wisdom for the next generation of leaders, he said, "I used to tell the troops, 'Look, you don't have to have stars or bars on your shoulders to be a leader. You can start at any level. Being a leader is a state of mind. The essence of leadership is to understand your vision and role. The troops will forgive nearly anything in a leader, except the failure to lead.'" 

A Civil Unrest Personal Safety Checklist

BY MS. LAUREN SCHATZ, STAFF WRITER

Civil unrest can happen anywhere. Regardless of stances on civil unrest, most people can agree on the importance of personal safety when navigating precarious situations. Preparing for various scenarios that you may encounter can help you navigate out of harm's way. The following are a few ways to stay safe when civil disorder occurs.

To avoid being caught in an unexpected situation:

- › Use the news for more than background noise.
 - The news plays a vital role in helping you stay aware of current events. Collect information from multiple news sources to ensure a greater exposure to outside happenings.¹
- › Note in advance the importance of staying calm.
 - Try your best to stay calm in any scenario you encounter. The situation may be overwhelming, but panicking can only make it worse. Being calm will allow you to strategize your next move safely.
- › Always have more than one plan.
 - Although cliché, it truly is essential to have a "Plan B." When plans backfire, those

without contingency plans often feel regretful for their lack of forethought. Account for all possible outcomes and envision how you would successfully navigate each one.

These rules of thumb are helpful in any situation. If you know ahead of time where you will be when civil unrest occurs, however, please note the specific safety qualifications for the location and follow a more detailed preparation approach. Whether you are traveling outside your home or staying in, creating a safe plan of action is always crucial.

If you plan on traveling outside your regional location when a dangerous situation arises:

- › Avoid standing out.
 - Blending into the crowd can significantly increase your security.²
- › If necessary, take cover and hide.
 - Being unseen increases the possibility of achieving a safe outcome. Stay on guard, however, in the event that self-defense becomes necessary.³
- › Avoid fences and walls.⁴
 - When reaching safety in a large crowd, it is critical to avoid areas where you can be

trapped—specifically fences or walls, where injury or death can more likely occur. Research the areas that may have security structures in advance and lay out optional routes.

- › Keep essential supplies with you.
 - Before you go out, make sure to bring keys, a wallet with identification, and any items that could be used as a means of protection.

If dangerous situations are occurring outside your home:

- › Secure your home.
 - If you plan on staying at home, make sure to secure it by keeping doors locked and windows shut. Designate a safe room to stay in if civil disorder poses a threat.
- › Stay inside.
 - Avoid going outside your home, if possible.
- › Assess the situation.
 - If any glass windows in your home are broken, or your smoke alarm is sounding, your home may no longer be a safe place to stay.⁵ Plan escape routes in advance, and have a safe secondary location to seek refuge.

This checklist will likely help you be safe if danger arises during civil unrest. Keeping these tips in mind can help you quickly make smart decisions. 

^{1, 2, 3, 4, 5} <https://thesurvivalmom.com/15-tips-for-staying-safe-during-time-of-civil-unrest/>

PREPARING FOR Winter Weather LIKE A PRO

Preparation is a crucial component of safety. In a year with ample crises, our nation has learned the imperative nature of preparation and how a little strategizing goes a long way. Placing preparation at the forefront of crisis management can help minimize the damages of emergency situations.

The winter season has its fair share of hazardous scenarios and hosts many chilling threats, such as extreme temperatures, power outages, slick surfaces, excess time indoors with your children (think Disney's "Let It Go" replaying indefinitely), and more. Take the lessons 2020 has revealed and apply them to your home this winter—you will be thankful you thought ahead!

Use this guide as a reference in navigating the "winterization" of the outside and inside of your home—remember, staying inside also comes with risks and does not guarantee safety. 

Electric companies act quickly on power outages; however, this work can take time. It is wise to have **food on hand that does not need refrigeration**—the bread and milk you panic bought can only last so long.



Keep an accessible, up-to-date **emergency kit** that includes useful items (such as battery-operated flashlights and a first aid kit).



Have an **emergency kit in your car** as well. According to <https://www.ready.gov/car>, here are some items to include:

- › Jumper cables
- › Flares or reflective triangle
- › Ice scraper
- › Car cell phone charger
- › Blanket
- › Map
- › Cat litter or sand (for better tire traction)



Keep cat litter, sand, or salt on hand to sprinkle on **icy outdoor walkways**. This precaution is essential to preventing injuries—and embarrassing "trying not to fall" jigs.

Obtained from: <https://www.cdc.gov/nceh/features/winterweather/index.html>

Make sure you have ample water stored as well. According to <https://www.fema.gov/txt/library/f&web.txt>, a rule of thumb is to calculate the **amount of water you and your family would drink in 2 weeks** and have that put aside.



“Winterize” your home—install **weather stripping, insulation, and storm windows.**



Test smoke detector batteries monthly, and replace them twice a year. Have a plan of action in mind—identify escape routes for all members of the household. In case of fire, exit the house immediately and call 911.

Carbon monoxide (CO) is an odorless, colorless gas that can be deadly. In fact, more than 430 people die in the United States from accidental CO poison annually. To prevent potential injury or death, it is highly recommended to—



- Keep grills, camp stoves, and generators out of indoor areas (at least 20 feet from the house).
- **Install a CO detector and routinely check batteries.**
- Exit your house immediately if your CO detector alarm sounds and call 911.

Obtained from: <https://www.cdc.gov/nceh/features/winterweather/index.html>

Know the dangers of power lines—**if lines fall, call 911 immediately, and stay away—**do not touch.



Prepare your young ones. **Teach your children to enjoy winter weather safely.** For starters, you can share with them the following tips:

- Use the buddy system;
- Do not build snow forts without adult supervision—although fun to build, the snow can collapse and cause suffocation;
- Take extra caution when crossing roads—it may be harder for the driver to see you and stop for you;
- For this same reason, do not sled near roads (and always sled lying on your stomach to avoid potential injuries);
- Do not assume it is safe to walk on a frozen lake or pond—falling through the ice can quickly occur and be deadly.

Obtained from: https://www.caringforkids.cps.ca/handouts/winter_safety

When temperatures drop, heating systems can provide warmth and comfort to your living space; however, there are risks associated with incorrect usage. Make sure to have your **heating system(s) serviced** professionally at the start of the season.



Air Distribution Enterprise Next Modernizes Aerial Port Operations

BY MS. KIM KNIGHT, STAFF WRITER

What is Air Distribution Enterprise Next (ADEN)?

If you are in the aerial port community, you have probably heard that ADEN is an aggressive modernization effort that will rapidly transform the Air Transportation culture, capabilities, workforce, infrastructure, processes, and stakeholder management.

What spurred the need for ADEN?

Although Port Dawgs are world renowned for unwavering dedication and safety when processing passengers and cargo, many practices and procedures of the career field have been in place for decades. Mr. Michael Courtney, Branch Chief, Innovations, Systems, and Futures (A4TI), Scott Air Force Base (AFB), IL, said, "Our processes and our procedures are really Generation 1, and we have Generation 5 aircraft flying in the system that we support. We need to get our processes to Generation 5 and keep pace with them as they progress."

To keep pace, tech-savvy Airmen on the flightline will soon be introduced to the Digitally Optimized Geospatial Tactical Airfield Guide (DOGTAG). The power of this ecosystem of technology is harnessed in one hand-held device that feeds a variety of aerial port functions, including the Air Terminal Operations Center, cargo and special handling, ramp services, fleet services, passenger service, and load planning/capabilities forecasting.

Another application that will soon be available for Airmen is the Team

“The modernization of our Aerial Ports is long overdue. Our team is working hard to provide innovative and integrated solutions to maximize velocity and flexibility in moving people and cargo to better support our nation’s warfighters. We are excited to execute this strategic effort to connect our people, policies, and processes with modernized technology to change the overall culture of our Aerial Port community, improve the lives of our Airmen, and drive readiness to support rapid global mobility operations. I am extremely proud of the progress our team is making on behalf of our Airmen across AMC,” said Brig Gen Richard Gibbs, AMC/A4, Director of Engineering, Logistics, and Force Protection, Scott AFB, IL.

Awareness Kit (TAK). TAK is already being used by Special Forces in the Department of Homeland Security for real-time command and control at their fingertips. In February 2020, TAK was put to the test at Joint Base Elmendorf-Richardson, AK, and passed with near-flawless results. In the near future, this cutting-edge technology will be in the hands of Airmen at Joint Base McGuire-Dix-Lakehurst, NJ, followed by the 521st Air Mobility Operations Wing (AMOW), Ramstein Air Base, Germany, and the 515 AMOW, Joint Base Pearl Harbor-Hickam, HI, for further testing. The technology is expected to be fully implemented in the next three to five years.

What are the benefits of aerial port modernization?

The ability to move passengers and cargo more efficiently and effectively will save Airmen an abundance of valuable time. For example, if there is a simple aircraft divert, with passengers and cargo, it can take roughly 27 minutes to coordinate with the receiving location. This daunting task includes numerous phone calls, which is a thing of the past in this day and age. With the updated system, the process will take only 30 seconds because everything will be geo-tracked, and the information will be available almost instantly on hand-held devices for those who need it.





Members of the 436th Aerial Port Squadron, Dover AFB, DE, and Army's 622d Movement Control Team, Joint Base Langley-Eustis, VA, engage cargo pallet locks on a 60-ton K-loader Jan. 10, 2020, on Dover Air Force Base, DE. In a scheduled joint partnership training event, 16 members from the 622d MCT came to Dover AFB for cargo and personnel processing training.

USAF photo by Roland Balik

The modernization will not only benefit the Airmen doing the heavy lifting but it will also benefit AMC's Rapid Global Mobility mission. Ultimately, in times of crisis, when people desperately await humanitarian aid—every second matters. When the warfighter depends on supplies or equipment to continue a hard fight or is injured and requires swift, life-saving medical care—every second matters. When Port Dawgs load aircraft for these vital missions—every second matters.

How can you help?

"We recognize that it's a lot easier to just work harder in the moment to get the job done," said SMSgt Zachary Davis, Superintendent, Standardization and Resources Branch (A4TS), Scott AFB, IL. "We are asking folks to do the more difficult work, which is organizational effectiveness and process improvement, so we can

make improvements to the career field as a whole."

To lead the way for Generation 5 and beyond, the Agile Enterprise Growth-Innovation Steering (AEGIS) Team was established to recruit the best minds from across the aerial port community. "We want to take advantage of all the intelligent people we have out there in the career field. We have over 12,000 Total Force Airmen out there that have great ideas that move this mission day in and day out," Courtney said.

Those who step up and bring ideas to the AEGIS Team are heard. For

example, SSgt Santosh Devkota devised a system to process a passenger when the Global Air Transportation Execution System (GATES) goes down, without inputting the data manually, which saves valuable time. "We took Devkota and tied him in with the AEGIS Team. There's an application we are working on under DOGTAG that will revolutionize how we process passengers and get us more in line with how the commercial industry is doing business. With Devkota on the team, we are getting that application up and running." 🇺🇸

If you have an idea, reach out to the AEGIS Team at 2T2innovation@gmail.com.



ASAP:

Lessons Learned at 500 Feet Above the Ground

BY MS. ALLISON ELLIOT, STAFF WRITER

As a C-17 Instructor Pilot and the Pilot in Command (PIC), Maj Katherine Miller had an incredible responsibility to ensure the aircraft and everyone on board remained safe during a recent sortie. With the addition of variables such as a fini flight for a senior officer, deteriorating weather, and unexplained alert messages, she had her hands full managing the situation.

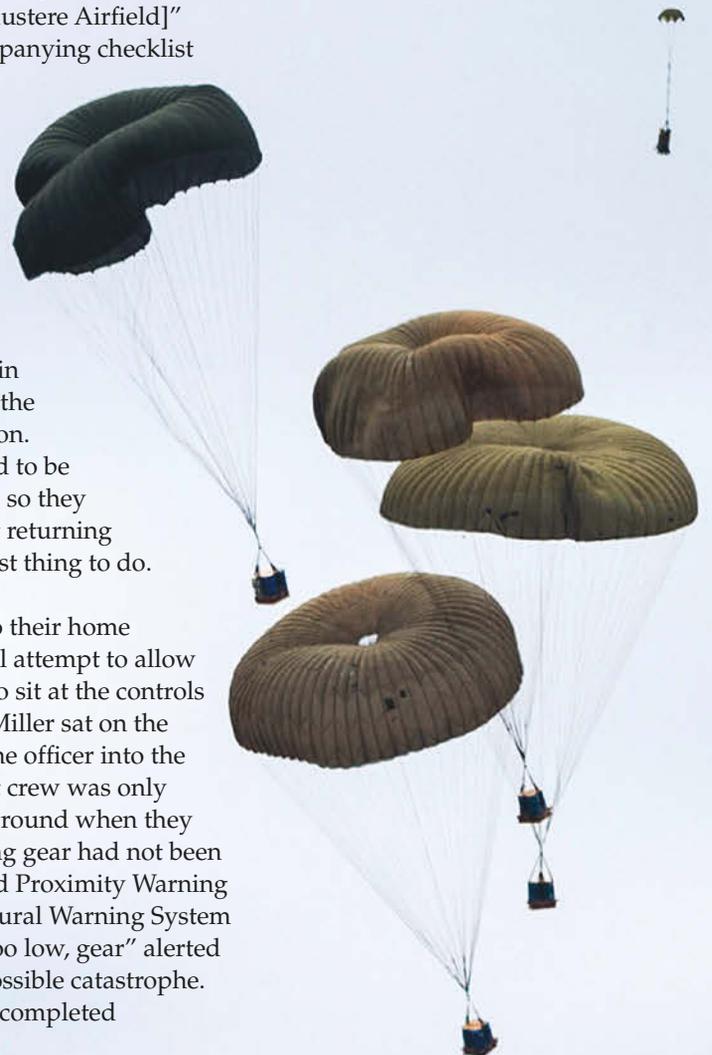
Although the senior officer on board for his fini flight was happy just to be there, Miller still felt pressure to make it a memorable experience out of respect for his many years of service. The first part of the flight, which included airdrop training, went well. All 30 jumpers and the airdrop cargo made it on the drop zone safely. Then the weather turned.

“We were unable to maintain VMC [visual meteorological conditions], which meant that our formation, just us and one other jet, would be unable to practice the visual maneuvers we had hoped to accomplish,” Miller said.

Miller’s C-17 and the second jet then “linked up” using the C-17 Formation Flying System data link for a short while but decided to scrap the rest of the plan and head home when the weather did not improve. It was the right call for the safety of the flight for both aircraft.

Also, with no apparent cause, the pilots in Miller’s jet received a flurry of messages that indicated “No CAT II, [Category II Instrument Landing System], No LAPES [low-altitude parachute extraction system], and No SAAF [Short Austere Airfield]” that had no accompanying checklist message. Because those error messages typically come with other indications that point to a checklist, Miller and the other pilot were uncertain when considering the next course of action. Everything seemed to be working normally, so they decided again that returning home was the safest thing to do.

On the trip back to their home station, in one final attempt to allow the senior officer to sit at the controls for his fini flight, Miller sat on the left and coached the officer into the landing. The flight crew was only 500 feet from the ground when they realized the landing gear had not been lowered. A Ground Proximity Warning System/Central Aural Warning System signal that said “too low, gear” alerted the pilots to the possible catastrophe. They also had not completed





the Before Landing Checklist. “I immediately took over and initiated a go-around maneuver. We reentered the radar pattern, swapped out the senior officer for my qualified copilot, and I landed the jet [and] taxied back to parking uneventfully,” said Miller.

“Habit patterns can be easily disrupted when doing nonstandard/unbriefed things, so extra attention must be paid to ensure checklist discipline is enforced and critical steps are not missed,” Miller said.

“I happened to work for this senior officer at the time, enjoyed working for him, and really wanted to make his C-17 fini flight a little special,” Miller said.

“Critical thinking must be applied when dealing with ‘dumb, dangerous, or different’ situations. Putting the SOQ in the seat was definitely different under the circumstances and, in hindsight, probably should not have happened,” Miller said. “Due to the circumstances explained above, and after a tiring day of multiple actual airdrops, we probably should have kept the fully qualified pilots in the seat and finished out the day, rather than trying to make something happen for the fini flight.”

With eyes on the future, Miller submitted an **Airman Safety Action**

“**Critical thinking must be applied when dealing with ‘dumb, dangerous, or different’ situations.**”

– Maj Katherine Miller

Program (ASAP*) report about her experience to prevent a similar mishap by other Airmen.

“I’ve sat through many, many safety briefings in my over eight years of flying the C-17, so I won’t say that everyone should ‘know their limits’ or ‘it can happen to anyone.’ Even though those things are very true and important to remember, the thing that really snuck up on me was how insidious all the little links in the chain of events were,” Miller said. “So, my advice would be, don’t ignore the little things because they add up. No flight is perfect, but there is certainly a point where things can

get a little too far off the game plan. Think about and discuss that point with your crews.”

As Miller notes, “flying is dangerous,” but her advice is not to stay on the ground. It is about making smart decisions on when to call it off or when to go ahead.

“Crews should talk about where that line is for that level of experience, for that training profile, for that mission. Even though we had a lot of experience on my jet, we still got into trouble because we just pushed through all the changes of [the] plan; we tried to make it work,” Miller said. 🇺🇸

ASAPs can be submitted on an aircrew’s electronic flight bag, at <https://asap.safety.af.mil/>, or by downloading the Airman Safety app on Apple or Android devices.

*ASAP submissions are identity protected. Names have been changed to protect the identity of those involved.

2020 Critical Days of Summer Wrap-Up

BY MSGT THOMAS NORTHCUTT,
HQ AMC OCCUPATIONAL SAFETY

It is over. The period between Memorial Day and Labor Day, which Air Mobility Command (AMC) recognizes as the Critical Days of Summer, has come to pass for 2020. This annual campaign highlighted the risks that summer and warm weather activities bring to our Airmen. Increased highway travel, high-risk recreational sports, and myriad other activities all pose a heightened impact for increasing mishap potential during summer. Due to the ever-present risks along with social distancing measures of COVID-19, outdoor risk management was all the more necessary for this year's campaign.

Tragically, AMC suffered one off-duty private motor vehicle fatality, and the Air Force lost a total of 16 Airman this summer. Private motor vehicle operations continue to be the leading cause of death this year, resulting in 11 of the 16 off-duty fatalities, with more than one-half involving motorcycles. Personal risk management and sound decision-making are critical to reducing and eliminating these motor vehicle mishaps.

This year's campaign theme was *Hindsight in 2020*, in which we encouraged our leaders to bring forth lessons learned from the past by our Airmen. We found it imperative to

Alcohol continues to be a factor in the majority of fatalities. It can make people feel confident, less inhibited, and more euphoric. Alcohol has an especially high and often negative impact on those who display unnecessary risk-taking and poor choice management.

look back on past mishaps and/or near-misses and share with others in order to prevent similar occurrences with our Wingmen. In doing so, we hope that the messaging from their stories resonated with our Airmen and played a part in preventing mishaps.

We kicked off the campaign with small group discussions and guidelines, which were provided to our units in order to promote engaging conversations between supervisors and work-center personnel. These discussions got Airmen thinking about risk management in terms of their actions, and in the end provided them with the tools for adequate decision-making based on Deliberate and Real-Time Risk Management.

Finally, to complement the small group discussions, leadership teams were provided an avenue for story time during their Commander Calls in order to spread lessons learned from past personal experiences.

Alcohol continues to be a factor in the majority of fatalities. It can make people feel confident, less inhibited, and more euphoric. Alcohol has an especially high and often negative impact on those who display unnecessary risk-taking and poor choice management. Although it can be a great way to socialize or relax when used responsibly, alcohol can be an insidious enemy to our world-class Airmen and society at large when misused.

Now that the summer campaign has ended, we look forward to preparing our Airmen for the fall and winter seasons. This year has been unlike any other, so we need all Airmen to be aware of their surroundings, stay vigilant, and be focused to execute our global mission. Sound risk management in your decision-making process can lead to better choices and be the difference between life and death. Anyone, regardless of rank, can be a leader in safety, and right now we need as many leaders as possible to ensure effective mishap prevention both on- and off-duty. 

AMC FY20 Mishap Statistics Summary

FY20 AVIATION MISHAPS

AIRCRAFT	CLASS A	CLASS B	TOTAL AS OF OCTOBER 2020
C-5M	0	1	1
C-17A	2	2	4
C-130	0	0	0
KC-135R	0	0	0
KC-10A	0	1	1
C-40B	0	0	0
Total	2	4	6

FY20 FLIGHT SAFETY NOTES

CLASS A

Air Mobility Command (AMC) had two Class A aviation mishaps in FY20 (one of which was engine confined), equal to FY19.

C-17A Fire on Ground

During launch operations, the aircraft experienced a fire originating from the OBIGGS (On-Board Inert Gas Generating System). The fire was extinguished and the emergency terminated.

C-17 High Engine Temperature on Takeoff

On takeoff climb, the aircraft experienced high exhaust gas temperature to the #4 engine. The crew returned to base and landed uneventfully.

CLASS B

The total number of Class B mishaps was four, compared with three in FY19. Two of the four mishaps were engine confined, however.

C-17A Engine Loss of Thrust Inflight

During an oceanic flight, the crew experienced a loss of thrust on the #4 engine after activating engine anti-ice systems. The crew diverted and landed uneventfully.

C-5 Rejected Takeoff

Aircrew conducted a rejected takeoff in the high-speed regime, resulting in brake damage.

C-17A Engine Ingested Taxi Light During Start

During engine start, the #3 engine ingested a taxi light.

KC-10 Engine Blades Found Damaged

During an A-check, maintenance found several fan blades damaged in the engine.

MOBILITY AIR FORCE'S CLASS A MISHAPS

The following Class A mishaps from the Mobility Air Force were noteworthy.

C-130J Hard Landing

During assault landing training, the aircraft experienced a hard landing. The aircraft recovered uneventfully but sustained damage.

C-130H Aircraft Departed Runway

After landing, the aircraft departed the runway, stopping 600 feet past the runway end and impacted a concrete barrier. All 26 persons on board egressed with only a couple of minor injuries. The aircraft was destroyed.

C-17 Engine High Temperature on Start

After experiencing smoke and fumes inflight, the crew ran corrective actions and landed. When maintenance ran the engines afterward, #1 engine generated high temperature. Engine damage was discovered.

FY20 OCCUPATIONAL SAFETY MISHAPS

CATEGORY	CLASS A	CLASS B	TOTAL AS OF OCTOBER 2020
PMV 2 Wheel	2	0	2
PMV 4 Wheel	0	0	0
Sports and Rec	1	0	1
Gov. Motor Vehicle	0	0	0
Pedestrian/Bicycle	0	0	0
Industrial	0	0	0
Miscellaneous	0	4	4
Total	3	4	7

FY20 OCCUPATIONAL SAFETY NOTES

CLASS A

AMC had three Class A occupational mishaps in FY20, compared with two in FY19.

PMV 2 Wheel

A member operating a motorcycle was struck from the side by a car in an intersection and sustained fatal injuries.

A member failed to negotiate a curve, lost control of their motorcycle, and struck a guardrail, resulting in the fatality.

Sports and Recreation

A member was walking on a beach, fell into the water, and drowned.

CLASS B

AMC had four Class B occupational mishaps in FY20, compared with three in FY19.

Miscellaneous

A member was working with a table saw in his garage when his right hand contacted the blade, resulting in four amputated fingers.

A member was mowing a lawn with a push mower. The mower struck and ejected a sharp metal object, which struck the member's right eye, resulting in permanent vision loss in that eye.

A member was teaching his girlfriend how to shoot a shotgun, and she inadvertently shot him in the left calf.

A member was cleaning a firearm when the firearm discharged and struck the member's left pinky finger, resulting in amputation of that finger. 

ICE on the Ground Can Spell Trouble in the Sky

BY MS. ALLISON ELLIOT, STAFF WRITER

The Air Force operates from one end of the globe to the other. On the coldest day in Alaska in December 2019, the temperature dropped to minus 55 degrees Fahrenheit. Meanwhile, missions in Antarctica can involve a wind chill of nearly negative 100 degrees Fahrenheit. At those temperatures, prepping to fly an airplane involves deicing first to decrease the risk factors for flying. On the ground, loading the airplane can create perfect conditions for frostbite and falls. It is in this climate that the Air Force may be called to operate during an emergency.

As the Aircraft Owners and Pilots Association (AOPA) notes, icy conditions “destroy the smooth

flow of air, increasing drag while decreasing the ability of the airfoil to create lift.” Ice can form on multiple surfaces of an aircraft, causing anything from broken antennas to engine failure. The plane can change its behavior and maneuverability during icy conditions, making it more difficult for the pilot to operate. For those reasons, deicing is vital to missions conducted in a cold climate.

Deicing the plane involves running deicing trucks on the ground, and the people working on the ground in these cold climates can have the best ideas for safety precautions. For instance, at

Joint-Base Elmendorf-Richardson in Alaska, Mr. Jessie Mauldin, a heavy mobile equipment mechanic assigned to the 673d Logistics Readiness Squadron, saw that new deicing trucks had anchor points on top for the mechanics to secure themselves while working to keep the trucks running during deicing. Those anchor points help prevent falling off the icy trucks during cold weather or at least make the fall only a few feet. Seeing a need, Mauldin, with a team of engineers, designed and retrofitted the existing



Airmen assigned to the 732d Air Mobility Squadron deice an Alaska Air National Guard C-130H Hercules belonging to the 144th Airlift Squadron on Joint Base Elmendorf-Richardson, AK.

USAF photo by Alejandro Pena

fleet of deicing trucks to include these anchor points. It was a great solution that could likely prevent injuries and enable work on the trucks outside of the hangar.

Airmen are expected to operate in both day-to-day missions and unique situations that crop up in an emergency. As with any emergency, the best way to survive is to train before it happens. Training Airmen to navigate an icy world can help mitigate the risks associated with a cold climate. Falling and frostbite are two of the severe risks associated with the cold. Some of the key points to cover when preventing icy falls include:

- Clear walking surfaces of snow and ice after a storm.
- Wear proper footgear that can get traction, such as those with rubber soles. Add an insulated pair of boots for an extra layer of protection from the cold.
- Walk in short steps at a slower pace than usual.
- Avoid stairs and hilly terrain.
- Watch out for thick icicles and chunks of snow that could dislodge above you.

The 27th Special Operations Wing, Cannon Air Force Base, NM, along with a team of Special Tactics Airmen, trained for an emergency January 21-31, 2020. The situation simulated was creating a forward area refueling point (FARP) for F-22 Raptors assigned to the Pacific Air Forces' 3d Wing, in the event that the planes were low on fuel and in occupied territory. The 3d Wing sometimes operates in an extremely cold-weather environment at Joint Base Elmendorf-Richardson in Alaska, and that is where the simulation took place.

Not only did the Special Tactics team have to prepare for the cold weather with equipment but they also had to contend with operating with decreased dexterity and a new crew. Working in those conditions, the Special Tactics team secured the airbase, while an MC-130J Commando II team refueled the F-22 Raptors. That teamwork allowed for a successful training mission in a cold climate.

When icing occurs, frostbite is also a risk. According to the Military Health System website, in the 2017-2018 cold season, 84 percent of cold injuries in the Air Force were frostbite. For the "Port Dawgs" and maintainers who keep planes moving from the ground, dressing for the weather is essential to preventing frostbite. Keep your clothing dry and wear layers. Replace those layers if they get wet. Frostbite can occur in only 15 minutes, so limit your time outside as best as you can. Most important, know how to recognize frostbite and what to do if it does happen.

The first symptoms of frostbite include cold skin and a tingling feeling. Then the area goes numb, and the skin turns red, white, bluish-white, or grayish-yellow and can look hard or waxy. Joint and muscle stiffness can cause clumsiness, and, in severe cases, blisters may form after rewarming the skin, indicating frostbite.

The Ellsworth Air Force Base, SD, website has tips on what to do if frostbite occurs. First, take the affected person inside immediately and check for numbness or pain, especially in the fingers, toes, nose, cheeks, and ears. These outer extremities are more susceptible to early frostbite. After moving inside, be gentle (do not rub or massage the area) and move the body part to increase blood flow to that area. Warm any frozen area against the body; then soak the area in lukewarm water

When icing occurs, frostbite is also a risk. According to the Military Health System website, in the 2017-2018 cold season, 84 percent of cold injuries in the Air Force were frostbite.

for 15 to 30 minutes. Seek medical attention if the area does not improve with warming.

Whether in Alaska or Antarctica, Airmen are called on to carry out missions in extremely cold environments. Safety is a priority to prevent loss of life and injury in these conditions. From falls to frostbite and other cold injuries, the previous tips can help keep Airmen safe when the temperature drops. 



Still from a funny video highlighting the proper wearing of extreme cold weather gear, posted on social media with the following verbiage: "Warriors, take all necessary precautions and suit up!"

Video by SSgt Michael Reeves Jr., Grand Forks AFB, ND, Public Affairs

Learn from My Family and Prevent Slips, Trips, and Falls

BY MS. ALLISON ELLIOTT,
STAFF WRITER

Picture it: a fairly mild winter day for the Washington, D.C. area, a few icy concrete stairs, and—*bam!* I was on my back before I knew it. The small errand to bring in the recycling bins turned into a nasty bruise on my backside, but thankfully nothing more.

Slips, trips, and falls can cause much more painful and debilitating injuries than just a hematoma. They can result in death. According to “Injury Facts” (2017), 818 workers died in 2014 from falls. That is why the Air Force prioritizes training to prevent these types of injuries from happening.

Not only military personnel but their families and friends can also experience slips, trips, and falls. Spreading the information you learn here can save them suffering, time, and money.

What happened to me on that wintery day was a *slip*. While wearing the admittedly improper footwear for going outside, I rushed down a slippery surface and ended up on my back. Other than wearing slip-resistant shoes, I should have also checked the

It is essential to wear the proper gear to protect against falls and mitigate the risk of injury.

stairs for ice and spread out rock salt or sand once I saw they were icy. Slips inside can be caused by spills that have not been adequately cleaned. In this case, you need to be vigilant for checking where you or others are walking for spills, and clean up any liquid to prevent a slip. If you cannot clean it up right away, find a “wet floor” sign or a few cones to cordon off the area and warn others about the potential danger.

Sure, we have all tripped on an uneven sidewalk or after stubbing our toe on a piece of furniture, but you may not be aware that a trip can lead to more than just a gasp or scraped knee. My grandmother valiantly lived in her home by herself until she tripped on some loose carpeting and broke her hip. Unfortunately, this type of accident is commonplace among elderly people, and falls can result in more severe injuries as we age. In a construction site, a trip can leave you trying to catch yourself among sharp tools or other objects or in a ditch. What safety precautions can we take to prevent a tripping injury?

In my grandmother’s case, we should have inspected her home for any tripping hazards, such as that loose carpet. Securing the carpeting and flooring, checking for adequate light sources so she could see potential hazards, and making sure the hallways were clear of any clutter could have prevented her injury. On a construction site, having enough light sources for nighttime work and making sure walkways and aisles are clear are crucial to this effort.

I have many memories of holding the bottom of a ladder in place while my dad climbed to the roof of our house to do repairs. Looking back, I am not sure a 13-year-old was a good safety measure in preventing an adult man from falling. What is an effective way to prevent a fall? Using ladders properly by not standing on the top rung

or any rungs indicated by the manufacturer as being dangerous, making sure you set the ladder on an even surface, and making sure you unfold it completely before using. Do not lean from the ladder to work on something to the left or right. Grip the rungs (not the side rails) using both hands. If you have tools, use a tool belt rather than carrying them in your hands so your hands can be free to climb and support. Lastly, rather than rely on a 13-year-old, tie down the base of the ladder when using it outdoors.

Now that we have reviewed how to use a ladder or a step stool correctly, it is also important to emphasize not to use a chair, countertop, or table to reach something on a high shelf. It may be a pain to go and get one, but using a ladder properly is a safe way to work off the ground.

Ladders are not the only way a person can fall and be injured, however. Scaffolding and walkways in a construction site can also set up dangerous situations. It is essential to wear the proper gear to protect against falls and mitigate the risk of injury. This gear primarily includes harnesses and lanyards that are properly secured.

As we learned before, stairs can be tricky. Not only can they be icy, but they can also be uneven, improperly lit, and even broken or loose. Ensuring the stairs at home and your workplace are in good condition can prevent falls. Pro tip: add slip-resistant strips to your hardwood stairs to prevent slipping or sliding while wearing socks. Elsewhere, keep your eyes peeled for any potential mishaps, and be careful going up or down a set of stairs.

By using the above steps to prevent slips, trips, and falls, you can prevent injury, death, lost work hours, and expense to yourself and the Air Force—not to mention preventing the psychological impact of an injury. 🇺🇸



Combined
Air Operations
Center

Operation Allied Force: Kosovo 1999

BY MR. TERENCE MULLIGAN, STAFF WRITER

Just over 20 years ago, the North Atlantic Treaty Organization (NATO) conducted the first major military action against a sovereign country in the 50-year history of the alliance. Led by the United States, and the U.S. Air Force in particular, the operation relied exclusively on air power to stop Slobodan Milošević, then-President of the Federal Republic of Yugoslavia, from continuing his ethnic cleansing campaign against the Kosovo Liberation Army and Albanian civilians. Although not without controversy, the role of USAF included remarkable achievements in a variety of areas, from combat operations to humanitarian airlifts and rescue missions for two of our pilots.

Months of negotiations with the United Nations (U.N.) Security Council preceded the air war, but China and Russia refused to endorse a U.N. intervention, and the Yugoslavian leader refused to cease his campaign of genocide and forced evictions. In the 12 months leading to the NATO campaign, approximately half a million people had been displaced from their homes.

Operation Allied Force began on March 24, 1999, and it continued until the end of hostilities on June 10, 1999, after 78 days of continuous airstrikes. Milošević finally agreed to terms. Although some postwar critics point to a high rate of unintended civilian casualties (primarily due to a NATO mandate restricting bombers from flying below 15,000 feet), the mission ultimately met the humanitarian goal of rescuing the displaced civilians forced to flee to neighboring countries. Statistical comparisons suggest that fewer civilian casualties occurred than in other major air campaigns.

The U.S. portion of the campaign was dubbed Operation Noble Anvil, with USAF Lt Gen Michael Short commanding from the Combined Air Operations Center (CAOC) at Vicenza, Italy. On the first night, NATO flew 214 strike aircraft, including 112 from U.S. forces. Precision cruise missiles were launched from B-52 bombers flying out of Royal Air Force (RAF) Fairford in the United Kingdom, and, in their first combat operation, B-2 bombers of the 509th Bombardment Wing flew



Lt Gen Michael E. Short commanded NATO air forces in the theater.

round-trip sorties from Whiteman Air Force Base in Missouri to Yugoslavia. This mission entailed a 29-hour journey that required multiple aerial refuelings, enabling the B-2 bombers to strike with the new Joint Direct Attack Munition (JDAM). Other aircraft struck from Italy and Germany.

The Serbs launched at least a dozen MiG-29 fighters against the NATO forces during the first days of the campaign, but they were detected by NATO's airborne warning and control system (AWACS). Using AIM



Lt Col Darrell Patrick "Dale" Zelko, 8th Fighter Squadron F-117 pilot.

120 missiles, two USAF F-15 pilots from the 493d Expeditionary Fighter Squadron each shot down one MiG-29 on the first day, and two days later, another F-15 pilot, Capt Jeffery G.J. Hwang, shot down two more MiGs. A Dutch F-16 pilot also scored a hit during the first day. There were no NATO losses due to aerial combat. All the allied victories were achieved beyond visual range by using radar

and long-range missiles. NATO forces also destroyed an estimated 65 Serb aircraft on the ground by attacking Serb air bases, inflicting additional damage to enemy runways and air control facilities.

Aside from their MiG fighters and other combat aircraft, the Serbs fielded nearly 1,000 surface-to-air missiles (SAMs) and more than 400 pieces of anti-aircraft artillery. On the fourth night of combat operations, two SAMs took aim at a USAF F-117 Nighthawk. One of the missiles missed its target, but the second one hit the aircraft. Lt Gen Short had expected at least some air losses, but this one was unexpected because the F-117 was usually able to avoid enemy radar detection.

Fortunately, the F-117 pilot, Lt Col Dale Zelko of the 8th Fighter Squadron, was able to eject safely, leading to a rescue operation that involved the pilots and crews of A-10, MC-130, MH-53, and MH-60 aircraft, who circled overhead until they were able to locate him. Some of those aircraft flew more than 400 miles during a 9-hour period,

supported by KC-135 tankers while F-16s protected them. Finally, an A-10 pilot, Capt John A. "Buster" Cherry from the USAF 81st Expeditionary Fighter Squadron, located Zelko on the ground, allowing Capt Chad Franks to navigate his MH-60 Pave Hawk helicopter to retrieve the downed pilot. Both Franks and Cherry, along with Capt James L. Cardoso, who flew the leading MH-53 Pave Low helicopter, were awarded the Silver Star for their successful rescue mission.

Just after ejecting from his plane, Zelko recalled, "As I was tumbling through the air, myriad thoughts went through my mind: 'Nuts, isn't this inconvenient. My mom's not going to be happy with me, and I might not be able to call my daughter tomorrow on her birthday,' who would be turning 10. The good news is that I was able to call her. I estimate I was between 8 and 9 thousand feet when I first got under canopy. It was 19:40 Zulu, 20:40 local time. From pulling the handles to a fully inflated parachute, it takes 1.4 seconds. To me, it seemed like hours. I instantly went from this extreme



Col Jeff Hwang, 142d Fighter Wing Vice Commander, pauses on the ladder of his F-15C Eagle following his 'Fini Flight' with the Oregon Air National Guard, Sept. 19, 2014, Portland Air National Guard Base, OR. Painted on the Eagle are two green stars, which were added to his aircraft for his final flight in the Air Force and reference the two Mikoyan MiG-29's that he shot down over Kosovo on March 26, 1999.

USANG photo by TSgt John Hughel,
142nd Fighter Wing Public Affairs

violence and chaos to absolute calm when the canopy inflated.”

Breaking protocol, Zelko radioed for help while descending under his parachute. As he later explained, “We were adamantly not supposed to do anything other than take basic care of ourselves right after ejection. But all I had was a basic radio with no secure voice and no over-the-horizon capability. I knew that the best chance to get two-way contact was at altitude. I also felt it very likely that I could be quickly captured after hitting the ground, with no chance to get on the radio. I wanted to deny Yugoslavia the huge exploitation potential of having an alive-and-well F-117 pilot and our forces having no knowledge of my status.”

Only one other pilot, Lt Col David Goldfein (who went on to become the 21st Chief of Staff of the Air Force), was shot down while flying an F-16 in May. He was also rescued, but enemy fire

hit the helicopter as he was lifted off to safety, taking five bullets in the fuselage. “We never know when some young Airman is going to risk everything to come pull us out,” Goldfein said. “You become extremely humble. They get a bottle of scotch from me every year—a single-malt, good quality.”

Even while combat missions were still underway, a USAF C-17 airlifted humanitarian relief supplies to refugees. This assignment was part of an ongoing operation involving up to 400 daily takeoffs and landings called Joint Task Force Shining Hope, involving 930 Airmen from the 86th Contingency Response Group deployed to Tirana, Albania. Allied transports, including USAF C-5s, C-17s, and C-130s, airlifted more than 3,000 tons of food, medicine, tents, and other cargo to camps outside Kosovo. Ultimately, Air Mobility Command (AMC) flew 2,130 airlift missions between February and July of 1999, carrying more than

32,000 passengers and 52,645 short tons of cargo. During the same period, AMC executed 9,000 refueling operations with 175 tankers based at 12 different locations. The KC-10s and KC-135s delivered 348.5 million pounds of fuel to receiving fighters, bombers, and transports, including aircraft from NATO allies. April 10, 1999, NATO approved Operation Allied Harbor, an additional humanitarian effort to aid refugees from Kosovo.

At the end of the air war, Slobodan Milošević capitulated, and he was eventually tried for war crimes at The Hague in The Netherlands. His trial went on for four years, but he died while awaiting a verdict. Thanks to the USAF, along with the Navy and our NATO allies, a grave humanitarian crisis had successfully been resolved, exclusively through airpower, with no U.S. casualties. Hundreds of thousands of civilians were saved. Mission accomplished. 🇺🇸

Storing Chemicals the Right Way

BY MS. LAUREN SCHATZ, STAFF WRITER

A pair of explosions on Aug. 4, 2020, severely damaged Beirut, Lebanon. Felt by cities more than 100 miles away, the blasts shook Beirut to its core. Smoke billowed out of a warehouse in the Beirut port. Along with the reddish haze, cries of confusion and pain filled the air.

The explosions killed more than 150 people and thousands were left homeless from the incident. Much of the city's infrastructure was destroyed, which had obvious detrimental economic impacts.

The source of the explosions was an approximately 3,000-ton stockpile of ammonium nitrate stored in the warehouse. Ammonium nitrate is a chemical compound often used in fertilizer. The chemical is highly explosive—up to 40 percent as powerful as dynamite.¹

Officials are unsure of the exact cause of the blasts, but investigations immediately commenced to uncover whether it was intentional or accidental. If accidental, preventative measures, such as proper storage, may have been a key factor in averting this tragedy.

Accidents of this nature are a common phenomenon—more common than one may think. On a smaller scale, countless household fires and other incidents from the improper storage of chemicals occur annually.

Whether the chemicals are for your vehicle, boat, pool, lawn, or garden, dealing with various chemicals is a

frequent chore of homeownership. The garage is a common location where most people store a variety of chemicals, especially chemicals viewed as dangerous. Numerous risks are associated with this storage space, however, such as storing chemicals too close to items like water heaters or lawn mowers² that could create a spark.

Knowing ahead of time how to safely store chemicals is critical for keeping you and your loved ones safe. Taking precautions could help avoid a call to the fire station or even a trip to the emergency room.

The first measure to note is the importance of labeling. Be aware when purchasing chemicals that those containing the word "Caution" indicate a less toxic alternative to those labeled "Warning" or "Danger."³ Keep the product in its original container if possible, but if you remove the substance, move it to a properly labeled secondary container, which should be unbreakable or double containing, especially for liquids.⁴

This precaution aids in segregating all incompatible chemicals for safer storage. Remember that chemicals should always be stored away from heat and direct sunlight. In addition, they should be placed no higher than eye level and in an uncluttered area to prevent spillage.



Knowing ahead of time how to safely store chemicals is critical for keeping you and your loved ones safe.

The wrong chemicals mixed could release toxic gasses, causing an explosion or harm through inhalation. Inhalation of fumes can cause eye, nose, throat, and respiratory irritation, leading to injury or death.⁵

Ingestion of these substances also poses a threat to small children, pets, and others prone to the accidental ingestion of hazardous materials. Call Poison Control Centers immediately in this situation.

Familiarizing yourself with the proper handling and storing of chemicals can allow the chemicals to serve as a useful tool in home improvement rather than a dangerous threat. Sharing information on chemical safety with your loved ones can help ensure the safe use of chemicals in your household. 

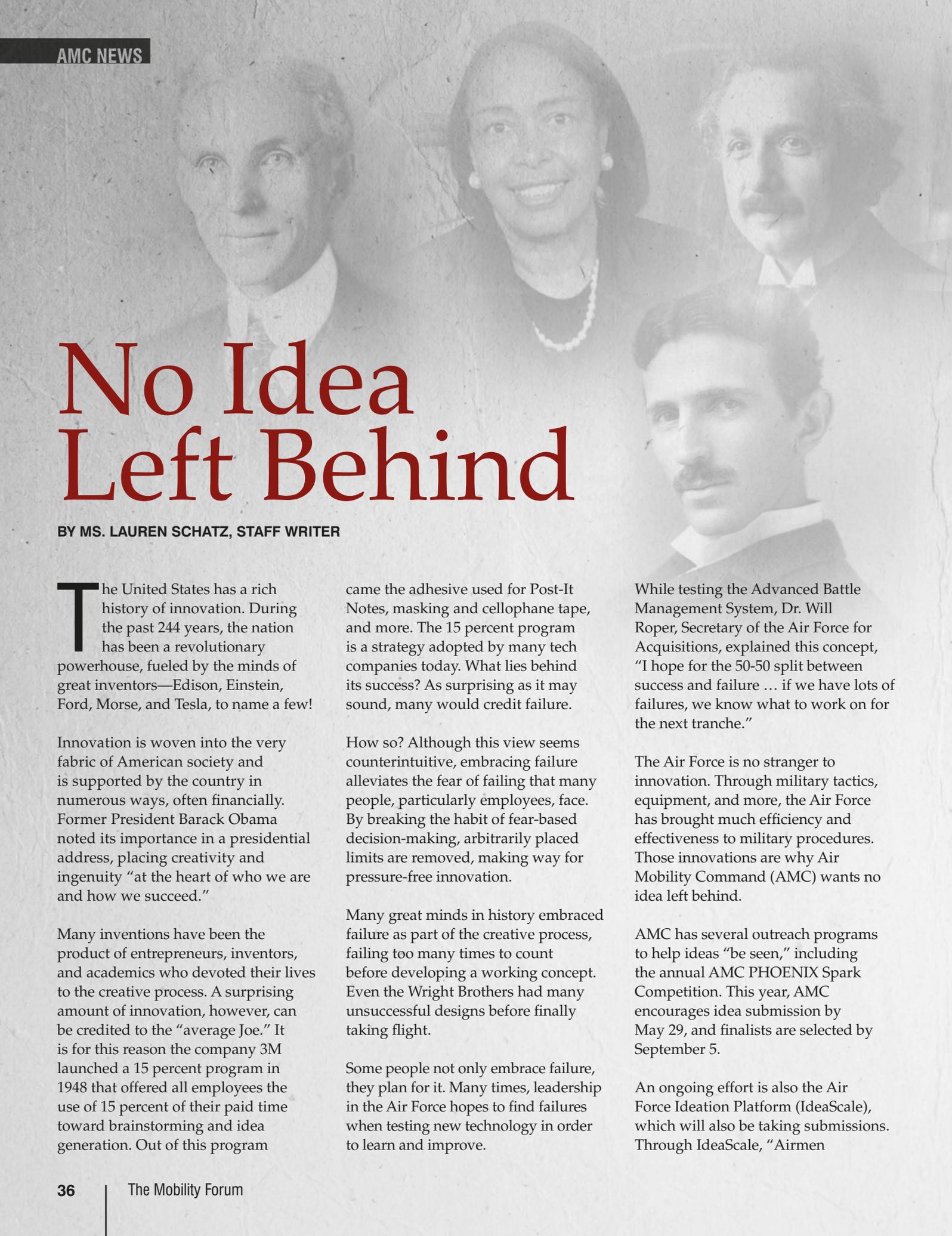
¹ <https://www.nytimes.com/2020/08/05/world/middleeast/beirut-explosion-what-happened.html>

² <https://www.familyhandyman.com/article/household-items-that-can-ignite-a-fire-if-put-together/>

³ <https://missouripoisoncenter.org/check-garage-common-hazards/>

⁴ <http://www.ehso.com/ChemicalStorageGuidelines.htm>

⁵ <https://voice.vumc.org/25561-2/>



No Idea Left Behind

BY MS. LAUREN SCHATZ, STAFF WRITER

The United States has a rich history of innovation. During the past 244 years, the nation has been a revolutionary powerhouse, fueled by the minds of great inventors—Edison, Einstein, Ford, Morse, and Tesla, to name a few!

Innovation is woven into the very fabric of American society and is supported by the country in numerous ways, often financially. Former President Barack Obama noted its importance in a presidential address, placing creativity and ingenuity “at the heart of who we are and how we succeed.”

Many inventions have been the product of entrepreneurs, inventors, and academics who devoted their lives to the creative process. A surprising amount of innovation, however, can be credited to the “average Joe.” It is for this reason the company 3M launched a 15 percent program in 1948 that offered all employees the use of 15 percent of their paid time toward brainstorming and idea generation. Out of this program

came the adhesive used for Post-It Notes, masking and cellophane tape, and more. The 15 percent program is a strategy adopted by many tech companies today. What lies behind its success? As surprising as it may sound, many would credit failure.

How so? Although this view seems counterintuitive, embracing failure alleviates the fear of failing that many people, particularly employees, face. By breaking the habit of fear-based decision-making, arbitrarily placed limits are removed, making way for pressure-free innovation.

Many great minds in history embraced failure as part of the creative process, failing too many times to count before developing a working concept. Even the Wright Brothers had many unsuccessful designs before finally taking flight.

Some people not only embrace failure, they plan for it. Many times, leadership in the Air Force hopes to find failures when testing new technology in order to learn and improve.

While testing the Advanced Battle Management System, Dr. Will Roper, Secretary of the Air Force for Acquisitions, explained this concept, “I hope for the 50-50 split between success and failure ... if we have lots of failures, we know what to work on for the next tranche.”

The Air Force is no stranger to innovation. Through military tactics, equipment, and more, the Air Force has brought much efficiency and effectiveness to military procedures. Those innovations are why Air Mobility Command (AMC) wants no idea left behind.

AMC has several outreach programs to help ideas “be seen,” including the annual AMC PHOENIX Spark Competition. This year, AMC encourages idea submission by May 29, and finalists are selected by September 5.

An ongoing effort is also the Air Force Ideation Platform (IdeaScale), which will also be taking submissions. Through IdeaScale, “Airmen

The Air Force is no stranger to innovation. Through military tactics, equipment, and more, the Air Force has brought much efficiency and effectiveness to military procedures.

Go to <https://usaf.ideascalegov.com/a/ideas/recent/campaigns/138> to submit ideas.

and civilians from across the enterprise are encouraged to submit innovative ideas and solutions to improve the AFMC [Air Force Materiel Command] mission.”

Ideas may be submitted for any mission area. The campaign, however, mainly focuses on gathering submissions with the following themes:

- › **Leadership:** How do we best develop people for the future?
- › **Culture:** What can we do to help move from a culture of risk aversion to one that embraces urgency and innovation?
- › **Infrastructure:** How can we improve our facilities to best support mission needs?
- › **Communication:** How can we better deliver information internally and to our customers?

- › **Agility Transformation:** How can we improve and streamline processes to be more agile in meeting the needs of the National Defense Strategy?

Team Pope’s MSgt Andrew Spaulding, Pope Field, NC, certainly did not shy away from submitting an idea. His idea for a shelter-in-place vent covering, which may be used while sheltering in place during a chemical, biological, radiological, or nuclear incident, earned him a place as a semi-finalist in the AMC Spark Tank innovation idea competition and could help Airmen preserve time in emergencies and ultimately save lives.

The 2020 Air Mobility Command Phoenix Spark idea that was selected to represent the command at the Air Force level in February is the Digital Aircrew Initiative submitted by Mr. Ward Walker, AMC/A6, HQ AMC, Scott AFB, IL; Capt Christopher Paegelow, 317th Operations Support

Squadron, 317th Airlift Wing, Dyess AFB, TX; Maj Justin Poole, 21st Airlift Squadron, 60th Air Mobility Wing, Travis AFB, CA; Maj John Cockburn, Commander’s Action Group, USAF Expeditionary Center, Joint Base McGuire-Dix-Lakehurst, NJ; and Maj Stephen Heptig, 305th Air Mobility Wing, Joint Base McGuire-Dix-Lakehurst, NJ.

Whether you feel you have the next great idea or even a concept that could spark future innovation, follow in the footsteps of great innovators and do not let the fear of failure hold you back. There is no real failure in innovation, only learning and growth. 🌍

Sources are available upon request.

Photos of great innovators, page 36: Henry Ford, Patricia Bath, Albert Einstein, and Nikola Tesla. Page 37: Katharine Burr Blodgett, Samuel Morse, Thomas Edison, Alexander Graham Bell, and Hedy Lamarr.



MISHAP-FREE FLYING HOUR MILESTONES

7,500 HOURS

4 AS, JB Lewis-McChord, WA

Lt Col Andrew Oiland

109 AW, Stratton ANGB, NY

Lt Col Thomas Esposito
Lt Col Carlyle Norman
MSgt Maurice Huard

6,500 HOURS

3 AS, Dover AFB, DE

MSgt Terry E. Langston

109 AW, Stratton ANGB, NY

Lt Col Dean Johnson

5,000 HOURS

3 AS, Dover AFB, DE

Lt Col William E. McDougall
MSgt Stephen G. Brown
MSgt Thomas E. McClanahan
TSgt Christopher A. Koch

4 AS, JB Lewis-McChord, WA

Lt Col Michael Albers
MSgt Stephanie Goodrich
MSgt Douglas Reimer

109 AW, Stratton ANGB, NY

Lt Col Blair Herdrick
SMSgt Daniel Swatling
MSgt Geoff Cerrone

3,500 HOURS

3 AS, Dover AFB, DE

Col Shannon E. Anderson
Lt Col Michael P. Mariotti

Lt Col Jeffrey J. Pedersen

Lt Col Jesse D. Stubbs
Maj Mathew C. Froehlich
Maj James C. Kovarovic
Capt Nathaniel J. Batts
Capt Blake L. Jones
CMSgt Douglas S. Kuhn
MSgt Shaun E. Flatter
MSgt Robert E. Hayes
MSgt Levy O. Menjivar-Sanchez
MSgt Jordan J. Rayman
TSgt Christopher C. Conklin
TSgt Ryan M. Page
TSgt Clinton G. Phillips

4 AS, JB Lewis-McChord, WA

Lt Col Jayvin Arbore
Lt Col Brandon Gorab
Lt Col Justin Wilson
Maj Matt Bolado
Maj Matthew Dearborn
Maj Dan Klepper
Maj Justin Pletcher
Maj Tyler Radford
Maj Jack Smith
Maj Eric Wahl
Maj Patrick Warfel
CMSgt Christopher Copans
TSgt Marc Failing
TSgt Jace McCorkle

109 AW, Stratton ANGB, NY

Maj Emery Jankord
Maj Thomas Pearsall
MSgt Mark Herdman

2,500 HOURS

3 AS, Dover AFB, DE

Col Michael J. Peeler
Lt Col Joshua M. Coakley
Lt Col Michael Z. Hershey
Maj Casey R. Boley
Maj Justin J. Brozzetti
Maj Charlton J. Coats
Maj Nicholas C. Fine
Maj Francis X. Furlong
Maj James B. Johnson
Maj John A. Kuconis
Maj Daniel J. Kudlacz
Maj Patrick R. Lasher
Maj Eric M. Miller
Maj Matthew W. Steele
Maj Brian A. Thalhofer
Maj Courtney J. Waltman
Maj Sean J. Waltman
Maj Albert Ye
Capt Matthew T. Johnson
Capt James R. Nichol
Capt Travis J. Whittemore
MSgt Bryan M. Harlan
MSgt Everett S. Smith
SSgt Jonathan D. Riera
SSgt Matthew R. Van Compernelle

4 AS, JB Lewis-McChord, WA

Lt Col Sean Burke
Maj Leighton Bagby
Maj Brittany Bean
Maj Eric Deist
Maj Mack Delgado
Maj Jon-Michael Farino

Maj Mike Fuja
Maj Matt Fullerton
Maj Jill Gorab
Maj Cohan Lammerding
Maj Doc Schumacher
Maj Ian Scott
Maj Derek Van De Wege
Capt Nicholas Cooley
Capt Neil Delaney
Capt Hatton Updike
MSgt Jeff Van Landingham
TSgt Kevin Banas
TSgt Jonathan Fabis
TSgt Tim Hampton
SSgt Joshua Doucet
SSgt Daniel Giusti

109 AW, Stratton ANGB, NY

Maj Nathaniel Dickinson
Maj Jacob Papp
Maj Brian Pustolka
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QUICKSTOPPERS

If an Approach is Unsafe ... Go Around!

BY MR. STEVE PANGER,
HQ AMC FLIGHT SAFETY

We aviators should know when an approach is not safe to continue. In response to a trend in landing mishaps and following the lead of the civilian airlines, Air Mobility Command established stabilized approach criteria for all Mobility Air Forces airframes several years ago to reduce the number of these mishaps.

If the parameters of a stabilized approach are not met, **AFI11-202V3 AMCSUP** guidance is for the aircrew to take immediate corrective actions to stabilize the approach. Ultimately, the pilot flying must initiate a go-around if the approach cannot be stabilized within 500 feet above touchdown.

Evidence (anecdotal and otherwise) suggests, however, that many aircrews continue to attempt to land out of unstable approaches. They are sometimes successful, but some end with negative consequences. A recent Class A mishap illustrated this when a crew did not go around even though they were clearly outside the required parameters. The aircraft departed the surface at the end of the runway and was destroyed. Thankfully the aircrew survived with only minor injuries.

Why do some aircrews ignore these criteria and continue an unstable approach? Many factors might come into play, but one could argue that a breakdown of Crew Resource Management is a primary cause due to normalization of deviance¹ and perceived pressure from the organization or from peers—even on the same crew. How many times has a pilot been allowed to continue an approach based on the “halo effect” because he/she has demonstrated outstanding airmanship skills and saved the day in the past? It only takes one event with the proverbial holes in the cheese lined up for things to go haywire fast.

The guidance is set for a reason: too many times we have experienced landing mishaps when they could have been avoided. Follow the guidance for everyone’s benefit and continue to fly safely! 🇺🇸

¹ Unacceptable practice or standards become acceptable. As the deviant behavior is repeated without catastrophic results, it becomes the norm for the unit/organization.



A U.S. C-130J Super Hercules aircraft assigned to the 37th Airlift Squadron flies low-level sorties in mountainous terrain during Thracian Summer 2020 in Bulgaria, Aug. 17, 2020. The 37th AS flew multi-ship formations and interfly missions with Bulgarian C-27J Spartan aircraft and MiG-29 Fulcrum aircraft.

USAF photo by TSgt Devin Nothstine

A DAY IN THE LIFE



Capt Christian Brechbuhl, an Assistant Flight Commander assigned to the 16th Airlift Squadron, holds up a mobile device displaying an application he developed to help aircrews study for annual certifications at Joint Base Charleston, SC, Feb. 7, 2020. The application was developed cost-effectively by Airmen from multiple bases who volunteered their time to write the code. It centralizes necessary study material for aircrew annual certification and is currently being utilized by three airframes throughout Mobility Air Forces.

USAF photo by SrA Joshua R. Maund