

THE EXCEPTIONAL RELEASE

ER

The Retrograde of Air Force WRM from Afghanistan

By: Capt Joshua DeFrank and

Major Paul Cancino

Summer 2015

Strategic Thinking for the Logistician

MG Andre F. Piggee, USA



Missile and Munitions Maintenance Officers: The Air Force's Real Secret Weapon

Col Kim R. Brooks

Standardization... Key to Sustaining the ICBM

Lawrence S. Kingsley

Toxic Followership:

Who & What is it?

Major Michael Boswell

KC-46 Pegasus: A New Paradigm for Sustainment

Col Shawn D. Harrison

Contributing Authors: Mr Francis P. Crowley

Dr Robert I. Marx

A Professional Military Journal

THE EXCEPTIONAL RELEASE

Summer 2015 - CONTENTS



LOGISTICS OFFICER ASSOCIATION
Professionals Shaping the Military Environment

EXECUTIVE BOARD:

PRESIDENT

Ms. Emily Buckman, Col (ret)
president@loanational.org

VICE PRESIDENT

Lt Col Chris Boring
vp@loanational.org

CHIEF FINANCIAL OFFICER

Mr. Brad Leonard
cfo@loanational.org

CHIEF INFORMATION OFFICER

Ms. Lynn Arias
cio@loanational.org

EXECUTIVE SENIOR ADVISOR

Lt Gen Judith Fedder

EXECUTIVE STAFF:

Chief Operations Officer
Mr. JD Duvall, LtCol (ret)
webmaster@loanational.org

Chief Learning Officer
Col Dennis Dabney
clo@loanational.org

Symposium Chairs
Col Eric Ellmyer &
Mr. Rick Duggan, Col (ret)

Chapter Ambassadors
Capt Carrie Kerner &
Mr. Lance Winner

Membership Development
Maj Alex Mol &
Maj Ernest Cage

Business Development
Lt Col Tricia Van Den Top &
Mr. Louis Littleton

Total Force Integration
Maj Camille LaDrew

Grant Officer
Maj Marc Torosian

The Exceptional Release Editor

Lt Col Jim Dorn
editor@loanational.org

Assistant Editor

Ms. Mary H. Parker, Col (ret)
assteditor@loanational.org

ER Worldwide Staff

Mr. Robert Bosworth Maj Tim Dodson
Maj Dara Hobbs Capt Scott Mano
Capt Montanna Ewers 1Lt David Loska

LOA NATIONAL

PO Box 2264 – Arlington, VA 22202 Issue No. 134 – Summer2015
www.loanational.org

President's Log.....1

From the E-Ring.....5

Lt Gen Judith Fedder

Senior Leader Perspective.....8

Col Kim R. Brooks

Joint Matters.....15

Maj. Gen. Aundre F. Piggee

SES Speaks.....20

Lawrence S. Kingsley

Focus on a Chapter Leader.....31

Capt Kelly Womble

Focus on a CGO.....34

2LT Kellie Dowling

**The Retrograde of Air Force WRM from
Afghanistan**37

Capt Joshua DeFrank and Major Paul Cancino

Toxic Followership: Who & What is it?43

Major Michael Boswell

KC-46 Pegasus:

A New Paradigm for Sustainment.....50

Col Shawn D. Harrison, Mr. Francis P. Crowley and
Dr. Robert I. Marx

President's LOG (ISTICS)



Emily A. Buckman, Col, USAF (ret)
President, LOA



Colonel (ret) Emily Buckman

Hello LOA!

This quarter your National Board is focused on the upcoming Symposium (19-22 October 2015 in Crystal City, VA), highlighting the Hill AFB Chapter accomplishments after another visit to the Chapters in the field, and paying special tribute to our amazing founder and loyal supporter, Senior Advisor and friend, Luke Gill, who passed away on Friday, May 8th, after complications suffered from his battle with Leukemia.

We are in full gear as we prepare for the Symposium in October. Our theme this year is L.I.V.E....Leadership, Innovation, Velocity and Excellence. There will be something exciting going on for all levels of our Logistics Enterprise. We will bring back LOA University on 19 October, followed by two and half days of amazing leaders and inspirational speakers coupled with break out sessions. Our Capstone event will be our Annual Awards Luncheon. We are inviting many leaders from across the DoD Log Nation including AF, Joint, and Industry players. Please know; we are also aggressively working on gaining final approval from the AF

to host our event and look forward to hearing good news soon. Please look for registration information in the coming month.

In early May, I had the opportunity to speak at Hill Air Force Base's Monthly Chapter Luncheon hosted by their President, Capt Mike Bergeron, and his Vice Presidents, Capt David Roth and Ms Jennifer Owen. Hill was our 2014 Medium Chapter Award Winner with 95 very active members. In fact, last month they hosted the LOA Chapter from Mountain Home AFB in Idaho and now they are gearing up for their annual scholarship fundraising Golf Tournament where the local industry fully supports this endeavor. I was truly impressed with the commitment and level of participation in LOA from all levels of leadership at the base from the LRS Commander, to Squadron Directors in the Air Logistics Complex, to their Group Commanders.

Brigadier General Carl Buhler also gave me the opportunity to see a few of his smart, hard-working, and focused professionals in action at the Ogden Air Logistics Complex. To start



off the day, Gen Buhler introduced me to his Software Maintenance Group led by Mr. Karl Rogers. I was extremely impressed with the internal synergy of this brilliant group. The work Jacob Wilde and his team have done to cross flow lessons learned with the F-16 to the A-10 is truly amazing. The Software group has truly embraced the Air Force Sustainment Center mantra as promulgated by Lt Gen Bruce

Litchfield--People, Processes and Resources are banded together to produce Excellence, Innovation and huge cost saving efficiencies. Everyone follows the proven leadership model, scientific methodologies, and standardized applications to get the right results the right way.

While visiting the Missile Maintenance Group, I was wowed as Col Eric Jackson and his Deputy, Ms. Sandy Fitzgerald, talked about a streamlining initiative that led to \$5M in cost avoidance. Later in the day, I visited the Equipment Maintenance Group led by Dr. Dave Hansen where he introduced me to a unique partnership between the Group and General Atomics who are sharing Predator and Grey Eagle workload. This was especially gratifying to see since a huge part of LOA's membership and ongoing supporters are industry leaders. This partnership ensures the successful sustainment of our Predator.

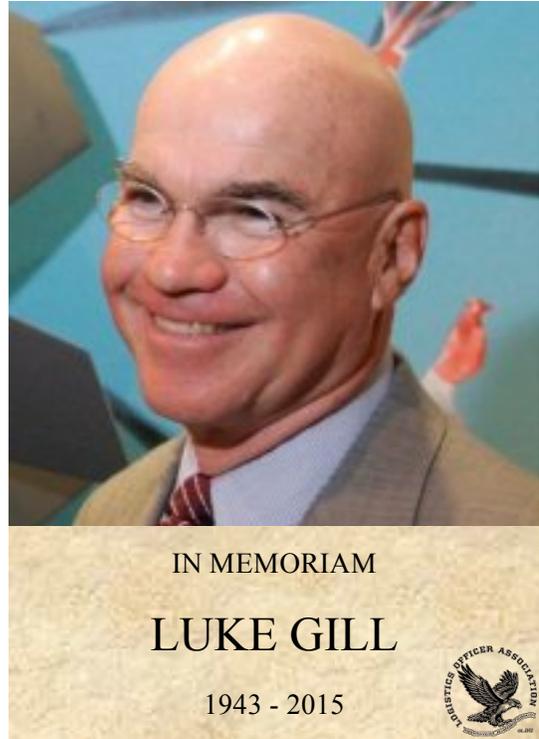


Finally, I ended the day in the ALC with Mr. Leroy Sykes, the F-16 Squadron Director in the Aircraft Maintenance Group, who proudly discussed how they were overhauling F-16s for the Indonesian Air Force. He said it was so rewarding to see the aircraft arrive in such poor condition by truck and then leave by air. Every person I met across the Complex loved their job, the mission, and the opportunity to serve. It reminded me why serving in LOA is so important. The logistics community is the backbone of our Air Force. We must continue to develop its

people together, highlight their successes, and support their endeavors. Thank you General Buhler for letting LOA gain more insight into one of the Air Force's logistics powerhouses.

In closing, I'd like to pay tribute to Mr Luke Gill. Luke was a career maintainer, Lifetime Achievement Award winner, MOA (now LOA) founder, life-long MOA/LOA member, Senior Advisor, Aerospace & Defense Executive, and good friend to many including me. During some of LOA's bleakest days under sequestration, we didn't know how we would keep LOA going. Luke was encouraging, a guide, and a staunch supporter. I will miss his wonderful teaming and backing. LOA will miss him deeply. Our thoughts and prayers go out to his family.

Emily A. Buckman, Col, USAF (ret)
President, LOA





Fellow Airmen, civilian members, contract and industry partners...if you will indulge me a bit. At the end of May, I concluded over 34 years in the US Air Force and all that comes with serving in uniform. If you have already experienced a transition away from

something you consider your life's work then you are familiar with this nostalgia. If you haven't yet taken a leap like this, I hope you get here one day and have the same treasured memories I do of the people, challenges and successes that make the work we do so incredibly rewarding.

When you get to this point, people will ask all kinds of thoughtful questions, like 'What made you choose to be an Airman? What did you like best about your career in maintenance and logistics? What will you miss the most?'...all good prompts for what I'd like to summarize here—my thoughts on those things you and I shared as logisticians with a cause, endeavoring to do our best to fulfill our Air Force, joint service, and National defense mission requirements.

First and foremost, we shared a common bond. Being associated with great Airmen and civilian team members is hands-down the most intrinsically satisfying part of what we do and is the reason I chose to be an Airman. It was the opportunity to be with highly motivated and successful people and to strive to be as good as they were. While at the Aircraft Maintenance Officers' Course at Chanute AFB, IL in 1980, I learned the nuts and bolts of maintenance with a

largely prior-service class of former maintainers...all very knowledgeable and savvy. For a dietetics major like me, it should have been more intimidating than it was, but what I sensed was a great deal of camaraderie and mutual support to get everyone through the course and out to a real flightline, where we all wanted to be.

That camaraderie still runs rampant in every hangar and shop across Air Force logistics. For many reasons—including the leadership you supply every day—the Air Force is chock-full of those who relish in the satisfaction of banding together to do some of the toughest and most demanding things we ask of any Airman or civilian. Moving cargo, fixing complex electronics, issuing tool boxes...logistics and maintenance can be just plain taxing. And yes, there are enduring issues—usually with constrained people/money/time—but we'll always have some of that in this business. Still, seeing the confident face of a young Airman who just launched his first aircraft or the pride of a Chief who watched her SNCOs solve a tough problem...that's what keeps us going. I'll never forget a conversation with a young vehicle operations Airman at Moody a few years ago; we were discussing why he joined the Air Force and contrasting that to the work he did before he enlisted. During the conversation he grabbed the lapel of his ABUs and said, "this is the best business suit you could ever wear." That stuck with me as an example of the kind of dedicated people we get to work with, who really know the value of their service.

The Air Force offers many opportunities to do all kinds of things while contributing to our ultimate objective to fly, fight and win. People bring a host of amazing talents that have changed the way we provide air and space power—that is certainly true looking back over my career. But as I look across all career fields, I cannot imagine any that would have provided me greater satisfaction than serving with you. As noted, this kind of work can be trying—some harsh environments, long flying windows, frequent deployments or time in missile fields, and

bursts of requirements that ramp up activity levels and encroach on family life or other personal time. However, there is no question that all who understand the Air Force mission know the extent to which we rely on you. Just listen to leaders in operations and other support functions...as well as the Secretary of the Air Force and Chief of Staff...and their recognition and praise for Ammo, Port Dawgs, Fuels teams, Crew Chiefs, and the many others who take care of our core business. It's the challenge and the criticality of the work that makes such a difference, and I am thankful I got to be part of it for a time such as this.

The easiest question I get is 'what will you miss the most?' Without question, that will be the interaction with all of you and the opportunity to see you in action anywhere across the globe. But I take great satisfaction in knowing there is another side to that—getting to watch the next generation of young leaders step into different roles and drive Air Force logistics to meet big new demands and challenges. The Air Force's new Deputy Chief of Staff for Logistics, Engineering, and Force Protection—Lieutenant General John Cooper—is exactly the right person for this job and I am truly delighted to have passed the reins of AF/A4 to a colleague and friend. His leadership will enable Airmen and civilians in this business to be even more capable and more ready. Guided by a common Enterprise Logistics Strategy and spectacular leadership, you...and our Air Force...are indeed in good hands.

It was an incredible honor to serve with you!

Lt Gen Judith Fedder
Deputy Chief of Staff for Logistics, Installations, and Mission Support
Headquarters U.S. Air Force, Washington, D.C.



With Col Kim R. Brooks, Chief, Nuclear Weapons, Missiles and Munitions Division and 21M Career Field Manager, Headquarters Air Force Pentagon, Washington D.C

Missile and Munitions Maintenance Officers: The Air Force's Real Secret Weapon

I am a career munitions maintenance officer, now known by our Air Force Specialty Code, 21M. At the start, I received my letter stating something like, "Congratulations, you are to report to Dyess Air Force Base to assume duties as a nuclear munitions maintenance officer following training at Lowry AFB, CO." Now, I wish I could say that this was my dream come true, but it wasn't. First, maintenance, especially nuclear munitions maintenance, hadn't been on my "dream sheet" and certainly wasn't in my top 100 of choices. Second, I'd never been to either Texas or Colorado and therefore knew nothing about how to adapt to those climates (lesson one, snow chains are your friend). Needless to say, after endless frantic calls to the Personnel Center and final acceptance that due to reductions following the Space Shuttle explosion, "the need for aerospace engineers had decreased and therefore I was placed in a

technically-related career field,” I packed my bags and headed off to uncharted territory. I say all of this because I believe the territory remains uncharted for munitions maintainers and that’s a good thing as long as we don’t get comfortable and isolated behind the fence.

PAST: Explosive Safety Drives Independent Spirit

Munitions maintainers have been known for their isolation, as a result of the necessity to segregate munitions from the base populace. This drives independence in the munitions community, an “AMMO” spirit predicated on self-initiation, motivation, and teamwork that is often not witnessed by those outside of the munitions fence line, but must be cultivated by the munitions officers within. This munitions culture has persisted across time and can probably be tracked back to the very earliest stages of warfare. Although the culture remains, the contemporary Air Force munitions officer career field has experienced significant change.

I’ve seen the munitions maintenance career field go through several iterations just in the past twenty plus years. In the

The purpose of the munitions officer was to enforce maintenance discipline, munitions accountability, safety, resourcing, and training; and this applied to both conventional and nuclear locations

late 80s, we were very nuclear-focused and extremely regulated. The purpose of the munitions officer was to enforce maintenance discipline, munitions accountability, safety, resourcing, and training; and this applied to both conventional and nuclear locations. We shared (and continue to share) maintenance principles with our aircraft maintenance brethren, so it was a natural progression when the separate schools at Lowry AFB (munitions) and Chanute AFB (aircraft) were combined and moved to Sheppard AFB. Rumor was that the curricula were 80% similar, so many of my peers and I strove to one-day cross over into the aircraft side.

For a short period during the mid-90s, Logistics Group Commanders made an effort to expand career development for logisticians, cross-flowing supply, transportation, readiness, munitions, and maintenance officers as the Air Force became more expeditionary-focused. This was my shot, but complaints of diminishing expertise in specific functional areas made these cross-flow opportunities short-lived. At conventional munitions locations however, the urge for munitions maintainers to cross flow into aircraft maintenance positions remained strong due to an opinion that this was the only path to promotion and leadership opportunities.

The myth that the only path to a full maintenance career is the aircraft maintenance path still lingers today. There is a perception that there is no career progression for 21Ms beyond the company grade level, specifically within Missile Maintenance units. Many 21Ms at missile bases cross over to conventional units because they see more opportunities versus staying at

We must fight this myth in order to continuously attract and grow experienced munitions and missile maintainers who will solve the sustainment and life cycle concerns of our ICBM community.

ICBM units where it is perceived that more senior positions go to operators. Although this is only a myth, there is a basis for it since missile maintenance expertise had

operational beginnings and was not originally a direct accession career field. Missile crewmembers would transition to missile maintenance following their first tour as operators. We must fight this myth in order to continuously attract and grow experienced munitions and missile maintainers who will solve the sustainment and life cycle concerns of our ICBM community.

PRESENT: Expeditionary Mindset Creates Expansion of Skills

I could easily argue that we are maintainers first and foremost, and it is this knowledge set and experience that makes maintenance necessary at senior levels within the Air Force and Department of Defense. As munitions and

missile maintainers, we garner the additional responsibility of being the only logistics officer career field dedicated to the nuclear mission, a key expertise much needed and identified in the numerous studies looking into how to improve

So our current officer development construct relies on establishing core maintenance competencies, layering experience in our munitions-unique business processes and continued development through increased leadership opportunities.

our nuclear enterprise. So our current officer development construct relies on establishing core maintenance competencies, layering experience in our munitions-unique business processes and continued development through increased leadership opportunities.

All maintainers share core maintenance competencies that must be honed.

Understanding our workforce of maintainers; ensuring their training needs are met; and that they are properly resourced, have proper direction, have the equipment and vehicles necessary to get maintenance done, ensuring plans and policies are in place to direct daily activities and ultimately support mission accomplishment. Understanding the mission and translating it into activities within Air Force guidelines for safety, as well as ensuring that the mission can be done with the most efficiency and effectiveness possible, also consumes the activities of most maintenance officers. Understanding supply chain support, plus acquisition and life cycle management of the weapons systems supported is instrumental for any maintainer. Maintenance officers must also become experts at packaging all of these concerns and deploying to potentially remote locations and continuing to get the mission done. Now the ability to weave this

complexity of
maintenance skills
within the unique
environment of the

Where in most areas of maintenance, risk is managed; the 21Ms must carry the message that within the nuclear enterprise, it is not about managing risk but about eliminating it.

munitions world is the forte of the 21M. Where in most areas of maintenance, risk is managed; the 21Ms must carry the message that within the nuclear enterprise, it is not about managing risk but about eliminating it.

Two incidents led to tremendous change for the munitions maintenance career field: the unauthorized movement of nuclear weapons from Minot AFB to Barksdale AFB in 2007 and subsequently the discovery of the inadvertent shipment of nuclear-related material to Taiwan in 2006. The Air Force Blue Ribbon Review of Nuclear Weapons Policies and Procedures (2008) and the Report of the Secretary of Defense Task Force on DoD Nuclear Weapons Management (Schlesinger Report) should be mandatory reading for 21Ms (and senior leaders) and emphasizes



the Air Force's reliance on its nuclear experts. The 2014 Malmstrom AFB cheating scandal and numerous Force Improvement Programs (FIPs) reinforce the need for a nuclear cultural change, one in which 21Ms must play a leading role.

FUTURE: Uncharted Territory- 21Ms Must Persevere

21Ms have three current shreds: A- conventional, I- ICBM, and N- nuclear. Through the concept of “functional pairing,” a conscious effort is made to have officers either in their second or third assignment, experience an assignment in a shred different from their original shred. Because As and Ns are paired, and Is and Ns are paired, almost all munitions officers will garner nuclear experience within their career. Functional pairing re-infuses and refocuses 21Ms as the Air Force’s nuclear experts and the DoD demand for nuclear expertise will only continue to rise in the future. 21Ms, have become the newfound commodity on headquarters’ staff in the form of key nuclear billets necessary to ensure the right emphasis and support continues to be placed on the Air Force’s highest priority. We continue to garner more than our share of maintenance command selection, filling many aircraft maintenance command positions. Who’d have thought we’d have munitions officers filling AMC Squadron Command positions? Uncharted territory,

21Ms, have become the newfound commodity on headquarters’ staff in the form of key nuclear billets necessary to ensure the right emphasis and support continues to be placed on the Air Force’s highest priority.

but it’s happening, today. We are Squadron Commanders of some of the toughest units known to the Air Force...try running a mini-base in the middle of a foreign country. This is what we ask of our MUNSS Commanders. We’re Deputy Group and Maintenance Group

Commanders. We lead in organizations like the Defense Threat Reduction Agency and the Defense Logistics Agency. We’re in Safety and the IG. There are 21Ms required on Joint Staffs, where nuclear and munitions expertise remains an AF competency to provide in the joint war fight. We have senior leaders, such as Lieutenant General John B. Cooper, Director of

Logistics, Headquarters Air Combat Command; Lieutenant General Lee K. Levy II the Vice Director for Logistics (J-4), Joint Staff; and Brigadier General Carl A. Buhler, Commander, Ogden Air Logistics Complex, who share munitions maintenance backgrounds with 21Ms.

Our 21st Century form of deterrence must change from that of the 20th Century that produced our Air Force and our future 21Ms must lead in this change. The deactivation of Strategic Air Command, a loss of focus on the nuclear mission, the push to become more expeditionary-like, and a future now bounded by the unpredictable influences of forces like cyber on our ability to do our mission continues to keep munitions and missile maintenance officers in new and uncharted territory. Munitions and missile maintainers are critical to our future Air Force and must be prepared to take on new challenges. 21Ms must hold on tight to core maintenance disciplines, continue to foster nuclear expertise, while being willing to chart a new course into future. We can't stay behind the fence...

ABOUT THE AUTHOR:

Col Kim R. Brooks is Chief, Nuclear Weapons, Missiles and Munitions Division and 21M Career Field Manager, Headquarters Air Force Pentagon, Washington D.C

JOINT MATTERS



With Maj. Gen. Aundre F. Piggee, USA, director, J-4, U.S. Central Command, MacDill Air Force Base, Florida.



MG Aundre F. Piggee, USA

Strategic Thinking for the Logistician

Presently, conditions in the CENTCOM Area of Responsibility (AOR) remain in a dynamic state of change. Nonetheless, at the Combatant Command (CCMD) level, we must balance tactical needs with the need to focus on long term requirements, by strategically posturing logistics capabilities to ensure the right material is in the right place at the right time. This is not a cliché, but art and science driven by experience and education. However, how do logisticians obtain that experience or education to successfully operate at the strategic level of war?

Joint Publication-1 (JP-1) states, “Strategy is a prudent idea or set of ideas for employing the instruments of national power in a synchronized and integrated fashion to achieve theater and

multinational objectives.”

As logisticians, we must be able to translate strategy developed by the J3 or J5 into sustainable logistics capabilities that are flexible and responsive to all phases of war.

As logisticians, we must be

able to translate strategy developed by the J3 or J5 into sustainable logistics capabilities that are flexible and responsive to all phases of war. This is easier said than done because there is no magic panacea that turns an individual into a strategic thinker capable of translating requirements and implementing a sustainment strategy to support theoretical plans. Logisticians, regardless of Service, lack a deliberate assignment path, professional military education program, or training approach needed to prepare personnel to operate at the strategic level of war. Often, logisticians learn “on the job,” ad-hoc, or are lucky to have the right assignments to prepare them to operate at the strategic level of war. Be it resource constraints, operational requirements, or manning, we may never be able to create a deliberate approach for developing our officers and senior enlisted personnel. However, all is not lost. A logistician operating at the strategic level of war can improve their capabilities immensely by following some basic tenants.

You must first ask the question; have I read the key operational or contingency plans that support my AOR? These plans serve as your “educational foundation” for how to direct your efforts while you serve at the strategic level of war. This can be tedious and seem

These plans serve as your “educational foundation” for how to direct your efforts while you serve at the strategic level of war.

downright boring, but it is necessary if you want to understand the operational focus and end state of the combatant commander. Understanding the operational concepts laid out in operational plans will ensure logistics success. There will still be tactical details to work through on a daily basis, but knowing the plans will put these tactical details into perspective. Tactical level details or working “pop-up” contingency requirements may consume logisticians at times but they must never lose site of the larger AOR picture. Approach the review with a critical eye. Thinking critically is the hallmark of a good officer or senior non-commissioned officer.

Secondly, once you have immersed yourself in the AOR's operational plans, ask yourself; what is the requirement and how do I set or posture the theater to provide operational success? Regardless of your leadership level on the staff, commodity managed, or skill set you bring to the fight; everyone can help better posture the AOR for success. For example, if you are managing distribution capability for the AOR, your duty is to conduct a rigorous analysis of transportation modes and nodes to identify and prevent movement chokepoints, while balancing costs with the need to have expandable, responsive, and redundant transportation pipelines. Once inefficiencies are identified, coordination with your J5 counterparts and partner nations is the next step. For example, during the drawdown in Afghanistan, CENTCOM reduced its presence at Mihail Kogalniceanu Air Base and redirected all Coalition passengers redeploying from Afghanistan to other nations in the CENTCOM AOR. While conducting the negotiations with the partner countries, and in coordination with EUCOM and TRANSCOM, the enterprise structured the air base support contracts so that the base could rapidly expand or collapse its capabilities should operational requirements change. This was a complicated process involving multiple combatant commands, but it all started with a logistician reviewing the requirement and determining the best way to support the Commander's intent.

Third, inclusion and coordination with the CCMD components is critical.

...inclusion and coordination with the CCMD components is critical.

Regardless of the concept of logistics support envisioned by the CCMD, the service component will carry out the task. Including them early and often will ensure success. Additionally, the service components are a great source to leverage information to refine concepts or initiate new requirements. The component "4s" are seeking to improve logistics effectiveness and efficiency,

but may lack the support or capability to get the idea across the goal line. Establishing a close, collegial relationship with your service components will generate teamwork and success for the entire Joint force. Information will flow across the spectrum, typically being “pushed” instead of being “pulled.” This may sound like common sense, and it is, but you would be surprised how often this concept is not followed. Continuing with the Mihail Kogalniceanu Air Base example, as we discussed redirecting the passenger Unit Line Numbers to Arabian Gulf countries, we discovered that our Theater Gateway would need to restructure its capabilities to account for the influx of additional personnel. From a CCMD perspective, the number of passengers being redirected was considered relatively small and we were surprised at their concern. If we had not established close coordination, we ran the risk of pushing the extra personnel to the Theater Gateway too soon, which ultimately, would have caused personnel dwell time to increase from our standard of 72 hours to in excess of 120 hours.

Lastly, the military is a profession of arms and as such, requires individuals to devote themselves to learning about their military occupation, more than what the Department of Defense offers. Similar to doctors, lawyers and other professionals, continuous study is required to improve our functional skills as well as our leadership skill sets. You don’t want to pick a lawyer who stops

...the military is a profession of arms and as such, requires the individual to devote themselves to learning about their military occupation, more than what the Department of Defense offers.

studying the law after they pass the bar. Just the opposite, continuous study leads to critical thinking. As Fred Krawchuk states in *Collaborative Strategic Planning and Action: A New Approach*, “With the proper kind of creative thinkers and pragmatic project managers, COCOMs can forge helpful bonds with willing partners, while leveraging the knowledge and experience of

the private and public sectors.” One of the worst things a military member can do is to stop learning. I challenge you to improve yourself through self-education and learning to think critically. Thinking critically is sometimes considered a lofty goal; almost as if an individual has reached self-enlightenment, but in reality, “critical thinking” teaches us to approach problems from different angles. How can it be achieved? An approach is to choose reading topics that cause you to debate thoughts or processes in your mind and with your contemporaries. It does not have to be academia work, but something that makes you think, makes you ask questions, or fosters a new approach.

The future is difficult to predict. JP-1 states, “The strategic security environment is characterized by uncertainty, complexity, rapid change, and persistent conflict. This environment is fluid, with continually changing alliances, partnerships, and new national and transnational threats constantly appearing and disappearing.” Because of this uncertainty, it is difficult for logisticians to look past the tactical aspects of current operations and maintain a strategic focus across the AOR. After all, we spend most of our careers at the unit level, garrison or deployed, conducting tactical actions and we gain instant gratification as we see those tasks completed. But in reality, a Joint Task Force, Service component, or Theater Sustainment Command, is responsible for handling most of these day-to-day needs. I believe the approach previously discussed provides additional tools for success, but it is up to us as officers to apply these techniques. Our logistics systems and processes are envied by the countries in our AOR. To maintain that success, we must prepare ourselves to think at the strategic level of war.

ABOUT THE AUTHOR:

Maj. Gen. Aundre F. Piggee, USA, is the director, J-4, U.S. Central Command, MacDill Air Force Base, Florida.



SES SPEAKS

With Lawrence S. Kingsley, a member of the Senior Executive Service, and the Director of Logistics, Installations and Mission Support, Headquarters Air Force Global Strike Command, Barksdale Air Force Base, LA



Lawrence S. Kingsley

Standardization...Key to Sustaining the ICBM

How many of you experienced logisticians can name a C-5 sustainment issue? How about a challenge for the F-16? Now can you name a single maintenance issue for the ICBM? Take your time—they've been around for about 50 years. The reason they have been left out of our conversation is because they were left out of our standard logistics team. The Minuteman III Intercontinental Ballistic Missile (ICBM) was logistically left behind 50 years ago as the Air Force marched ahead with an increasing emphasis on an integrated enterprise approach to sustaining our platforms. And in that isolated situation, professional logisticians charged with sustaining the ICBM used dedication and innovative local processes to maintain readiness.

To better understand the situation, you need to know how we got where we are. In 1950, wing commanders were given the funds required to sustain and operate their wings. Fuel, parts and facility maintenance all came from the wing budget. Last year, ICBM wing commanders had to decide whether to fund critical missile cables in an ICBM launch facility or grass cutting

services for the base—
all out of the same
wing O&M budget.

Last year, ICBM wing commanders had to decide whether to fund critical missile cables in an ICBM launch facility or grass cutting services for the base—all out of the same wing O&M budget.

This is because unlike

other flying systems, ICBM wing-level parts are not currently funded out of the Consolidated Asset Management (CAM) fund. That is not the kind of challenge we serve up to any of our other wing commanders.

The first Minuteman was deployed in 1962 and in all these years there has never been a Programmed Depot Maintenance (PDM) program similar to that performed for our aircraft. And most foundationally of all, the weapon system is defined as only the payload. The ICBM MDS consists of only the missile itself, not the Launch Control Center (cockpit), not even the Launch Facility (bomb bay) that launches the weapon is considered part of the weapon system. All this is about to change.

The reasons for this situation are varied and understandable. Charged with finding

Charged with finding solutions, it didn't take long for the AFMC and AFGSC teams to realize that standardizing the weapon system would be tough.

solutions, it
didn't take
long for the
AFMC and

AFGSC teams to realize that standardizing the weapon system would be tough. For example, we fund our other weapon systems primarily on flying training hours. While ICBMs are obviously a flying system; they don't generate any training sorties. Instead of aluminum, most of the ICBM infrastructure is concrete and steel—the purview of civil engineers, not aeronautical engineers. In addition, the maintenance process is fundamentally different. You can really appreciate

having a flightline with an expediter truck when you look at the challenge of getting to actually work on an ICBM. When an ICBM maintenance team is dispatched from Malmstrom AFB to troubleshoot a fault, the longest drive is 153 miles one way. Winter driving on rural roads in the northern tier of the United States is infamous. Then it might take another two hours to process through security to get access to the launch facility. In addition, technicians will need the right tech orders, test equipment, and team composition before they even begin their troubleshooting to find out what parts may be required. Even with standardization, the fact that this process is hard is not going to change.

If this is how it has been for so long, why does this need to change? While no individual could bring the ICBM weapon system into the AF mainstream, in 2013 AFMC and AFGSC

teams began to wrestle the problem toward manageable outcomes. The problem was highlighted when one of

The problem was highlighted when one of those wing funding burdens became too big for the wing to handle.

those wing funding burdens became too big for the wing to handle. There are over 2,400 Launch Facility batteries for a single ICBM wing. Each battery weighs over 1,500 lbs and costs about \$13,000. In 2013, when multiple wing batteries required simultaneous replacement, a portion of the bill had to be taken as an unfunded to the corporate Air Force. This is not how we sustain any other weapon system. It became clear the root cause was in multiple non-standard ICBM sustainment paradigms. The team coalesced to solve this problem through adopting standard time changes, scheduled inspections, and centralized funding.

Today, we are on track to bring the ICBM into the standard Air Force logistics process.

There are three major efforts underway. First, with a few exceptions, the MDS will be redefined to include weapon system components below ground.

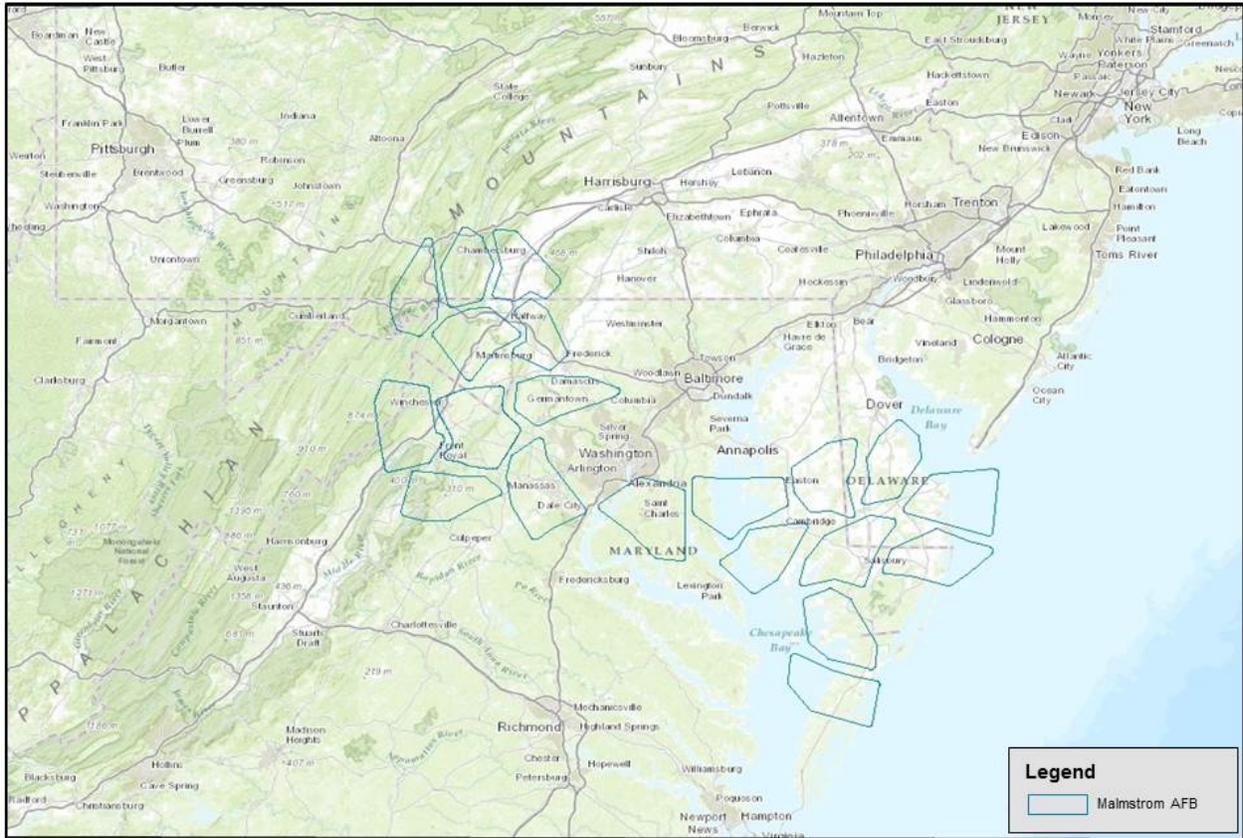
Today, we are on track to bring the ICBM into the standard Air Force logistics process. There are three major efforts underway.

Next, funding for parts will be

centralized and brought into CAM. Finally, an actual PDM will be established for the weapon system for the first time ever—after 53 years in the field. Since 2013, the cultural shift in thinking has been enormous. An increasing number of non-standard processes and accommodations have been uncovered. These initiatives originated at the most fundamental level in AETC training, metrics, supply and maintenance practices.

The point of this discussion is about teams. Every operation and location is different in many respects. Standard Air Force processes will benefit ICBMs, as they do all our efforts. But we as an Air Force team have done a good job of learning together. That learning is ignored if we inappropriately justify a non-standard process or structure. We need to understand that activities operating outside the standard boundaries often operate without our institution's full support.

Because few of you will ever get to visit an ICBM base, I can give you an idea of what ICBM missile maintenance looks like. At Malmstrom AFB, MT (about two hours south of the Canadian border), a Minuteman III missile combat crew in the field received missile fault indications.



341st Missile Wing, Malmstrom AFB, Great Falls, MT
Size of Malmstrom AFB Missile Field—Approximately 14,500 sq miles

If the 341st Missile Wing was in Washington DC, its missile field would cover the area shown above.

Troubleshooting the probable cause at the main base, it is determined the Missile Guidance Set (MGS) would have to be changed. This entails removing the warhead Re-entry Vehicle (RV), removing and replacing the MGS, then replacing the RV.

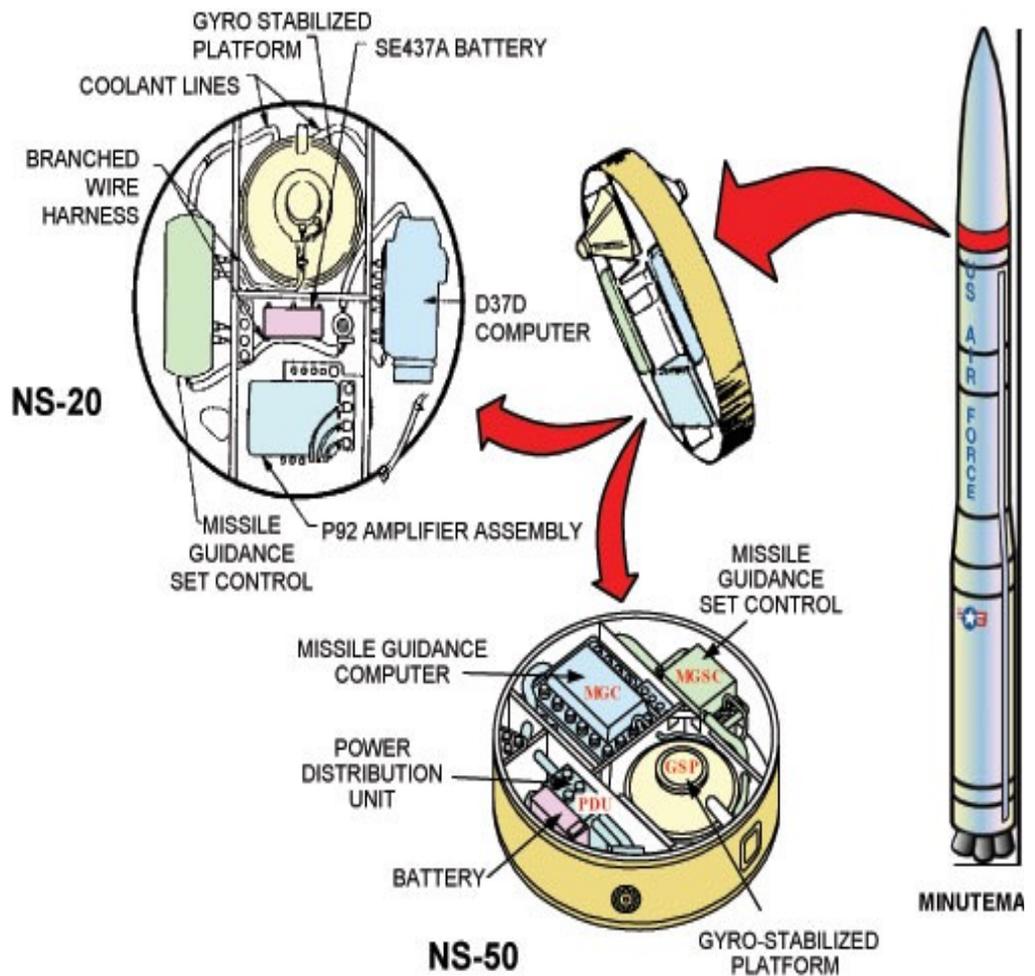


Starting at 0500 hrs the next day, the maintenance crew verifies the site and road status, and then checks out tools and equipment. The topside team receives their briefings and head-out after 0600 hrs to begin the penetration of the site.

Security forces deploy to provide security. The maintenance team needs to open the launcher closure door to expose the missile while the downstairs team configures the payload transporter that would be required to remove the nuclear warhead.

Maintenance technicians drive an hour and a half, the last portion on dirt roads, arriving at the launch facility at 1030 hrs.

In coordination with the missile combat crew, the topside team begins the security process for opening the site an hour earlier. It would take two hours to fully penetrate the site and begin to open the launcher closure door at 1145 hrs. Now the team



has access to the top of the missile and the payload transporter is stabilized directly over the

open launcher. The team enters the launch tube in a work cage to overwrite the installed MGS and decouple the warhead.

The new MGS is electrically and mechanically mated to the missile. The topside team begins lowering the re-entry system at 1430 hrs.





By 1530 hrs, the work cage and safing pins are removed from the missile and the site is closed.



By 1630 hrs, the conference calls with security, maintenance control and the combat crew are completed. The Electro Mechanical Team (EMT) arrives to program the new MGS, which would

require another two and a half hours of loading tapes and backing-out of the site following a thorough and comprehensive site inspection.



Leaving the EMT on site, the first teams

receive permission to depart the site. They arrive back at Malmstrom AFB around 1930 hrs and spend an hour and a half cleaning and servicing equipment and vehicles. At 2100 hrs, 16 hours from when they first arrived at the shop, the maintenance team finally heads home.



For years, many argued this mission set was so unlike any other in the Air Force that non-standard practices had to be accommodated. Our challenge in all of our respective logistics missions is to reject that notion. We have proven time and again that we, as an Air Force logistics team, are profoundly successful. To accept non-standard practices is to reject membership in the team and deny the benefits derived from our collective attention. Despite our unique challenges in our particular area of logistics expertise, we can't afford to go it alone.

ABOUT THE AUTHOR:

Lawrence S. Kingsley, a member of the Senior Executive Service, is the Director of Logistics, Installations and Mission Support, Headquarters Air Force Global Strike Command, Barksdale Air Force Base, LA. This command has control of our nation's Minuteman III intercontinental ballistic missiles, B-2 and B-52 bombers while also performing lead command functions for the Air Force's UH-1N helicopter fleet. Mr. Kingsley is responsible for organizing, training and equipping the command's civil engineering, contracting, logistics, maintenance, munitions and security forces totaling 13,000 personnel. Air Force Global Strike Command provides combatant commanders with combat ready forces to conduct the strategic nuclear deterrence and global strike operations.

Flightline Test in Your Hand

NEXT-GENERATION ARMAMENT TEST IS HERE

The state-of-the-art MTS-3060 SmartCan™ is an advanced flightline armament test set that enables preload and weapons system testing of aircraft armament systems.

- Supports legacy and “smart” weapons systems
- Pre-load test modes for stray voltage and basic signals (such as SERD 75060)
- Enhanced weapons system test using weapon emulation
- Audio, video, and MIL-STD-1760 test capabilities for advanced troubleshooting



Learn more about the MTS-3060 at
marvintest.com/smartcan.



The
Marvin Group

MARVINTEST.COM



FOCUS ON A CHAPTER LEADER

Capt Kelly Womble

Vital Statistics

Name: Capt Kelly Womble

LOA Chapter: Kanaloa Chapter, JBPHH, HI

Position: Vice President

Hometown: Cookeville, TN

College(s): University of Tennessee / Central Michigan University

Degrees: BA in Communication / Masters in Administration

Family: Husband (Aaron). Border Collie & Cat.

Technical Training: Aircraft Maintenance Officer Course (2013), Jet Engine Mishap Investigation Course (2014), ACQ 101 (2014), LOG 101 (2015), LOG 399 (2015)

Past Duty Titles (list most current first): Maintenance Flight Commander, 15 MXS
OIC, KC-135 AMU, 15 AMXS
ICBM Combat Crew
Commander/Instructor, 742 MS

ER: What do you like most about being a loggie? The people and experiences are, by far, the best thing about the Loggie/Maintainer life. The Airmen are always excited to tell you, and show you, what they do – and it’s great to be able to see that enthusiasm. I love learning from my Airmen, NCOs & SNCOs and I love that they share their experiences and knowledge with me. There is no other job in the world where you can go to work and have the honor of re-enlisting one of your Airmen while flying on a C-17 10,000 feet over the island of Oahu when the aircraft ramp is down.

ER: What was your biggest learning moment? As a cross-flow CGO coming from the world of Intercontinental Ballistic Missiles (ICBMs) (AFSC 13N) to Aircraft Maintenance (21A), every day is big learning moment. What’s best is that I have enjoyed every moment of it. The challenge of changing career fields almost five years in is certainly tough at times, but my

Airmen have really stepped-up to show me what they do in person – so whether it’s launching jets, building up tires or understanding workflow and beyond, it’s been a season full of learning moments. What’s helped me adapt is discovering that diving into my local LOA chapter also helps build relationships within the career field. This opportunity to network can help with the more challenging days. My biggest lesson learned by far though, has been to always remember that even when you have a step back in progress, you can still pick back up with your best foot forward and keep going.

ER: What are you most proud of in your short time on active duty?

I’m most proud of my ability to adapt and make the best of any situation while maintaining balance in other aspects of life. After changing career fields, I was able to finish



my Master’s degree, complete my maintenance core tasks for my Career Field Education and Training Plan and complete Squadron Officer School, in residence, all before hitting my one-year mark in Maintenance. It was a whirlwind, and there were a few times when I had a general disregard for my own sleep schedule, but my leadership really guided me in the right direction through positive opportunities and my husband was also very supportive of me diving in headfirst. To culminate that effort, I had the honor being selected as CGO of the Year (2014) for 15 MXG.

ER: As a recognized leader in your local LOA Chapter, what activities/events are you most proud of? The Kanaloa Chapter had been quiet for a few years, but we are proud to be coming back to life again. We've not only been out in the community supporting our local Fisher House – but we've hosted a few luncheons with distinguished guests including Brigadier General Allan E. Day, Commander, Defense Logistics Agency Aviation and Brigadier General Kathryn J. Johnson, Director of Logistics, Deputy Chief of Staff for Logistics, Installations and Mission Support, HQ USAF. We've also had the opportunity to participate in various immersion tours with different logistics/maintenance units across the local area in order to help further our CGOs knowledge and professional development. We're also very proud to announce that we're bringing back local scholarships!



Photo 1: Air Force Tech. Sgt. George Welliver, left, 72nd Aerial Port Squadron cargo journeyman, shows Capt. Kelly Womble, 15th Maintenance Squadron Maintenance Flight commander, how to tighten procedures for belly bands during a demonstration of palette buildup at the 735th Air Mobility Squadron aerial port

Photo 2: Known as the 15 MXG resident "Elsa," Capt Womble volunteers by visiting hospitalized children

Photo 3: The 15 MXG hosted a tour with Brigadier General Kathryn J. Johnson, the Director of Logistics, Deputy Chief of Staff for Logistics, Installations and Mission Support, Headquarters U.S. Air Force, Washington, D.C



FOCUS ON A CGO

2LT Kellie
Dowling

IN THEIR OWN WORDS...

There's no doubt about it... logistics is a dynamic profession. If one thing remains constant though, it is the need to be flexible and adaptable. This is true at home and abroad. Leave it to the Company Grade Officer (along with many other valued service members) to face that challenge with gusto and get the job done right the first time. It is not always the loggie with the most years in service that is called to the job either. It is time to throw them a bone by putting them in the spotlight. Take for example...2LT Kellie Dowling.

2LT Dowling, who graduated from James Madison University *Magna Cum Laude* in 2013, began her journey in the Air Force after commissioning through Air Force Reserve Officer Training Corps. Having spent just shy of two years in the Air Force, she has already commanded a Materiel Management Flight at the 67th Logistics Readiness Squadron and is currently serving as the Executive Officer for the 647th Air Base Group at Joint Base Pearl Harbor-Hickam. 2LT Dowling completed the Logistics Readiness Officer Technical Training Course in September of 2013 and was awarded Top Gun Graduate after graduating first in her

class of 30 fellow Logistics Readiness Officers. 2LT Dowling has not deployed as of yet.

The *ER* asked 2LT Dowling to share her thoughts on being a leader...in her own words.

2LT Dowling on her proudest moment(s): I'm most proud of the relationships that I've made with my fellow Airmen and the Civilian employees that I've had the opportunity to work with. I'm also pretty proud of having been selected as the Company Grade Officer of the Year for the 647th Logistics Readiness Squadron.

2LT Dowling on keeping leadership skills honed: In an effort to keep my leadership skills honed, I've taken multiple leadership courses. One of these courses includes STAR 12. STAR 12 is a program made available to the LRS at JBPH-H through Naval Supply Systems Command and it offers both live seminars and on-line webinars. I have also attended the 7 Competencies of a Successful Leader as well as Leadership and Management for Women in the Workforce.

Another way I keep my leadership skills honed is to continuously self-reflect and analyze my actions in order to pick out what improvements I can make with myself.



2LT Dowling on the leadership skills/traits that are most important to logistics officers:

I summarize it in this way:

- Be a voice for the people you are leading
- Learn and care about what's happening in their lives both inside and outside of work
- Understand that your leadership style may need to change depending on the situation
- Know when to be firm and when you need to pull back

2LT Dowling on her aspirations: I have several aspirations. I can never tell what life will hold, so I think it's important to keep my options open. Currently, I'd like to complete my Masters in Business Administration and eventually earn a second Master's degree as well. I'd also love to take advantage of the Air Force Internship Program and spend a year or two working with a major logistics company via the Education with Industry program. Ultimately, teaching ROTC and guiding future Air Force leaders is one of my larger aspirations.

Photo 1: Standing on board the top deck of the US Mercy while in port at JBPH-H for RIMPAC 2014 with her sister, Erin. Pictured left to right, 2LT Kellie Dowling and LTJG Erin Dowling. Photo by MSgt Paul Nelson, July 2014

Photo 2: 2LT Kellie Dowling is pictured with her mom, Patty, and sisters Erin and Tara at Koko Head Crater in March 2014.

The Retrograde of Air Force

WRM from Afghanistan

By: Capt Joshua DeFrank and
Major Paul Cancino



Bagram Air Base, Afghanistan - After more than 13 years of continual combat operations in Afghanistan supporting Operation Enduring Freedom, the United States and members of the International Security Assistance Force (ISAF) transitioned to the Resolute Support (RS) mission. RS is a NATO-led non-combat, training, advisory, and assistance mission that includes approximately 9,800 US military personnel. Unlike the previous decade of operations where ISAF forces controlled hundreds of main, tactical and forward operating bases, the footprint of RS is deliberately sized to a handful of bases at Kandahar, Bagram, Herat, Mazar-i-Sharif and Kabul. As the US presence decreases, CENTCOM has made the tracking, accountability and retrograde of combat support equipment a priority. Based on this directive, AFCENT appointed a cohort of logistics personnel to lead the retrograde charge.

In 2013 the Air Force established a 155 person multidisciplinary team designated the CENTCOM Material Recovery Element (CMRE).

In 2013 the Air Force established a 155 person multidisciplinary team designated the CENTCOM Material Recovery Element (CMRE). Led by Logistics Readiness Officers and comprised of aerial port, supply, traffic management, vehicle operations, vehicle maintenance, and logistics plans skill sets, the team travels throughout Afghanistan with the primary purpose of locating War Reserve Material (WRM), assessing its condition, and preparing it for surface or airlift movement. WRM can include, but is not limited to, power generators, tactical and non-

tactical vehicles, structures, communications and electronic equipment, and aerospace ground equipment. Although in principal the mission sounds simple, it is juxtaposed against a highly contested security environment, diminishing access to reliable transportation, and numerous base transfers and closures. Essentially it is a race against the clock to locate what equates to a mountain of combat equipment spread across a theater roughly the size of Texas and New Mexico combined.

Although the DoD at large has made significant strides over the years to maintain asset visibility through the use of advanced IT systems and instituted new policies and procedures, equipment does still get lost. The rapid speed at which the US entered Afghanistan, the exponential growth of US and coalition bases in theater, and the associated population boom created a dynamic environment where urgent operational needs outpaced the joint logistics community's ability to account for and to track and trace the onward movement of equipment.

In addition to surging kinetic operations, inconsistent property book accounting and the natural seams in turnover of two to

three AEF rotations a year

further complicated the

situation. Although the

CMRE team's primary

Although the CMRE team's primary duties were to prepare and move WRM, they first became masters of navigating a bureaucratic obstacle course, pouring through years of spreadsheets and databases and traveling to austere locations to validate potential leads

duties were to prepare and move WRM, they first became masters of navigating a bureaucratic obstacle course, pouring through years of spreadsheets and databases and traveling to austere locations to validate potential leads.

Throughout 2014, the Air Force CMRE traveled to over 35 bases in search of WRM.

Sometimes the trail would go cold and equipment could not be found. In many instances, a

combination of site visits and piecing together documents led the team to discover the assets were previously disposed of, transferred to the Afghan government, signed over to another service or troop contributing nation, or admittedly lost. Although challenging, the CMRE team's

The FAM then determined the future of the assets by placing them into one of five categories: Retrograde, Redeploy, Reset, Redistribute and Divest (R4D).

detective work ultimately proved successful, as they recovered tremendous

amounts of WRM. Upon finding WRM, the element communicated with the AFCENT WRM Functional Area Manager (FAM) for guidance. The FAM then determined the future of the assets by placing them into one of five categories: Retrograde, Redeploy, Reset, Redistribute and Divest (R4D). Depending on the condition, utility, and value of the asset, final instructions took anywhere from one week to two months while the FAM diligently worked to figure out how best to reconcile the accounts. In addition to AFCENT WRM, the CMRE worked to recover CENTCOM owned equipment, otherwise referred to as Theater Provided Equipment (TPE). TPE are equipment items that other commands "loaned" to AFCENT to support service and joint operations. Examples include MRAPs (Mine-Resistant Ambush Protected vehicles), refrigerators, electronics, communications items, and generators.

This herculean endeavor, spanning three AEF rotations, continues to yield impressive results. To date, The CMRE team retrograded, disposed of, kept in place for

To date, The CMRE team retrograded, disposed of, kept in place for continued use, or redistributed more than 1,185 pieces of combat support equipment valued at over \$17.5M.

continued use, or redistributed more than 1,185 pieces of combat support equipment valued at over \$17.5M.



The importance of reclaiming this equipment is twofold. First, the Air Force and DoD save millions of dollars in recapitalization costs, freeing up funds to put against other competing demands. Second, recovered WRM can immediately redeploy to other locations to support contingencies such as Operation INHERENT RESOLVE in Iraq and Kuwait.

From the field:

Capt Josh DeFrank, the CMRE lead during the second rotation, recalls the difficulty in WRM tracking.

“It was on a trip to Marmal (Mazar-i-Sharif) that I realized how disconnected the Air Force’s tracking system was with the Army’s. At Marmal we recovered 269 assets worth

roughly \$2.3M but all accounted for on the Army accounts. While attempting to reconcile the accounts we learned that the unit using the assets could laterally transfer them to a TPE account the Army had set up for the Air Force, but after that there was no established method to bridge from the TPE account to AFCENT's books. Because we could not find an answer in time, the Army had the authority and made the decision to dispose of assets they did not deem necessary. In the end, because of the programmatic disconnect, all 269 assets were disposed of. Through some trial and error we worked to find creative ways to prevent this from occurring again. It wasn't easy, but part of being a LRO [is] finding pragmatic solutions in the absence of clear guidance.

Capt Adam McClish, the CMRE lead for the third and current rotation, shares a victory.

“My experience with CMRE was very rewarding. I loved being able to get out and do some direct hands-on logistics work. My team and I travelled all over Afghanistan and handled every aspect of the retrograde from initial recovery, building movement orders, aircraft mission and load planning, identifying locations or personnel that could utilize the assets we found, preparing equipment for shipment, and aircraft upload and download. It's the only job in the Air Force that combines all aspects of the LRS into one team in a truly joint atmosphere. It is complex and sometimes trying, but when we figure out how to circumvent impediments it's personally rewarding, because I know we saved the service money and helped to employ this gear somewhere else in the theater for use.

There are a lot of ways the Air Force could learn from this and improve the retrograde process. Retrograde will become increasingly relevant as the DoD realigns forces in the Middle East and

potentially pivots towards Asia. I believe we, as a service, do an outstanding job of getting WRM into theater, but now we must focus on accountability. This can be improved through the continued use and refinement of logistics IT systems, updating strategic guidance and regulations, and clearing up lines of authority. The capstone for enterprises like this would be tying into how the Army executes accountability because of their preponderance of forces. The better we are at R4D operations, the leaner and more synergized we can be.

As stewards of taxpayer money it is important to understand the CMRE's importance as we drawdown forces in Afghanistan. By building upon lessons learned from this joint operating area, we as a logistics

community can continue

refining accountability

best practices for

By building upon lessons learned from this joint operating area, we as a logistics community can continue refining accountability best practices for maintaining asset visibility.

maintaining asset visibility. Ultimately, this equates to a significant cost savings for the Air

Force in terms of money, manpower, and resources—essential requirements for upcoming fiscal

challenges.

ABOUT THE AUTHORS:

Capt Joshua D. DeFrank is the Director of Operations for the 439th Supply Chain Operations Squadron (SCOS), Joint Base Langley-Eustis, under the 735th Supply Chain Operations Group, 635th Supply Chain Operations Wing (SCOW), Scott AFB. The SCOS is the sustainment enterprise's customer interface for wholesale and retail supply. The SCOS's portfolio provides parts for the B-1, B-2, B-52, ICBM, MRAP, A-10, T-38, U-2 and all UAV weapon platforms. Previously, Captain DeFrank was forward deployed as the CENTCOM Material Recovery Element (CMRE) Team Lead, 455th Expeditionary Logistics Readiness Squadron, Bagram Air Base, Afghanistan.

Maj Paul A. Cancino is the Commander of the 439th Supply Chain Operations Squadron (SCOS), Joint Base Langley-Eustis, under the 735th Supply Chain Operations Group, 635th Supply Chain Operations Wing (SCOW), Scott AFB. The SCOS is the sustainment enterprise's customer interface for wholesale and retail supply. The SCOS's portfolio provides parts for the B-1, B-2, B-52, ICBM, MRAP, A-10, T-38, U-2 and all UAV weapon platforms. Currently, Major Cancino is forward deployed as the Chief of Logistics (A4) for the 9th Air and Space Expeditionary Task Force-Afghanistan, ISAF Headquarters, Kabul, Afghanistan.

Toxic Followership:

Who & What is it?

By: Major Michael Boswell



While leadership is crucial to the USAF's present and future successes, I also believe effective followership is equally important. In recent years, the theory of toxic leadership has permeated academia as well as the military establishment. So much so that leaders are now being relieved of command based on this emerging concept. I would argue that an equally problematic issue comes in the form of toxic followership. In this article, I will define the notion of toxic followership based on my experiences. Additionally, I developed an inventory to help you assess whether you are a toxic follower, as well as give tips to help change your perspective on how better to support your leadership.

Though not unique to the business world, the notion of toxic leadership is one that is gaining momentum in the military. Renowned author and analyst Gillian Flynn notes a toxic manager is one "who bullies, threatens, and yells. The manager whose mood swings determine the climate of the office on any given workday". She further suggests these leaders possess, "poor interpersonal skills and unfortunate office practices".

In many instances, manager and leaders are interchangeable in any organization. As such the definition, as mentioned above, is pertinent to this discussion. While this article is not designed to focus on toxic leaders, I would argue that a toxic leader can also be a toxic follower. The common strand that exists is the establishment of a poisonous climate. A toxic leader

impacts morale and works laterally as well as downward.

While this article is not designed to focus on toxic leaders, I would argue that a toxic leader can also be a toxic follower.

Toxic followers can be more dangerous because they affect lateral as well as the vertical spectrum of the rank structure. Not only do they spout venom amongst followers and peers, but they also adversely impact the leader they have sworn to follow through the enlistment oath or oath of office.

So, what is a toxic follower? Dr. Robert Kelley's Diagram of Followership identifies five typologies that exist regarding followership. They are Alienated, Passive, Exemplary, Conformist and Pragmatist Follower.

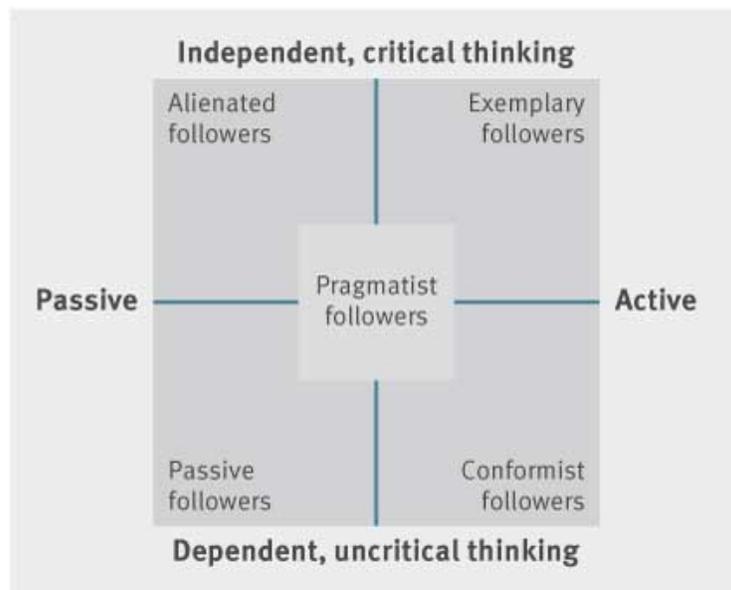


Figure 1: Dr. Robert Kelley's Diagram of Followership

Alienated follower is the closest specific typology to a toxic follower. This type of

Alienated follower is the closest specific typology to a toxic follower.

subordinate are “critical and independent in their thinking, but fulfill their roles passively.”

Furthermore, these individuals “distance themselves from the organization and ownership of its mission. Often cynical, they tend to sink gradually into disgruntled acquiescence.”

To-date there is little to no empirical data on toxic followership, I will seek to clarify its definition in more detail. Merriam-Webster describes the idea of toxic as, “extremely harsh, malicious, or harmful.” Webster further defines follower as, “someone who supports and is guided by another person or a group.” The superficial combination of these two concepts is a definition of a toxic follower. In my personal experience, I would propose a toxic follower is highly functioning, a critical thinker, self-absorbed, manipulative and disruptive to the organizational greater goals. Their agenda is to push, what they deem to be, in the best interest of the organization at the cost of good order discipline. These individuals seek an audience and use others to undermine leadership as well as validate their toxic views. The greatest tool at their disposal is group-think and band-wagon discussions.

It is important to note that healthy dissent or closed door disagreement is not tantamount to toxic followership. Effective followers can disagree with their leadership and still be positive contributors to the organization and its mission. Our goal today must be to fulfill our role as effective followers. Dr. Kelly defines an exemplary or effective followership as, “proactive, independent and able to think critically; effective followers are also respectful of the leader’s

In my personal experience, I would propose a toxic follower is highly functioning, a critical thinker, self-absorbed, manipulative and disruptive to the organizational greater goals.

authority. They practice self-leadership, take responsibility, are committed and seek

feedback to continuously improve their performance.” It must be understood that a toxic leader is not an excuse for toxic followership.

While a toxic leader can create an environment ripe for toxic followership, it is still one’s individual responsibility to be the most effective follower possible. It is the intent of the follower that truly makes them toxic. So, are you a toxic follower? I’ve included a brief inventory of followership (titled “Toxic Followership Inventory”) based on my experiences as a leader and academic: Frame these questions on how you have viewed your supervision and decisions he or she has made recently. Be honest with your assessment.

Toxic Follower Inventory:

1. Do you withhold information from your leadership for your interest or to make him/her look incompetent?
2. Do you contradict (verbally or silently) most decisions your leader makes regardless of the benefits to the greater organization?
3. If asked, can you do a better job than those appointed over you, would you answer yes? Do you believe you are fundamentally a better leader than the individuals appointed over you?
4. Do you often discuss dissatisfaction with your leader’s decisions with your peers and subordinates?
5. Is it easier for you to identify negative traits in your leader than positive ones?
6. Do you present negative decisions or orders, from your leaders, as your direction? Example, The commander wants us to go on 12-hours shift, **vice** it is important that we work on 12-hour shifts to accomplish the mission.
7. Do you find yourself often in disagreement or have discourse with your leadership regardless of the location (deployed, home station or through several assignments)?
8. Do you actively seek opportunities to highlight, what you consider to be, incompetence or poor performance of your supervisor, without placing decisions into context?

9. Do you obtain personal enjoyment from the perceived failures of your leadership and the organization?

If you answer, “yes” to three or more of these questions, then you may need to reevaluate how you follow those appointed over you. While this list is not all-inclusive, it is a starting point. Many military members will traverse the spectrum of being effective to potentially toxic. The overall goal is to self-actualize and rebound to traits of an effective follower. Now let’s transition to how to personally combat toxic followership. If you display the attributes of a toxic follower or are by nature a toxic follower, how can you reverse the tendency? There are three fundamental characteristics I believe are synonymous with effective followers. They are loyalty, humility, and drive.

As military leaders, we are taught loyalty to our subordinates, but there is little focus on loyalty to your boss and the greater organization.

Loyalty to your leadership is not groveling, but to the

Loyalty to your leadership is not groveling, but to the contrary, a deep understanding of one’s specific role and responsibility of supporting the mission.

contrary, a deep understanding of one’s specific role and responsibility of supporting the mission. An example is how you speak about your leadership to others. Be positive when talking about your leadership. If you disagree with a decision, it is still your responsibility to motivate subordinates to meet the leader’s objective. If those objectives are illegal, immoral or unethical, then one does not have to follow. If a leader’s decision falls within any of the areas mentioned above, there are methods of addressing that maintain good order and discipline.

The next attribute is humility. Commander, United State Air Forces in Europe, General Frank Gorenc once said, “Everyone will have an opinion of how to lead better than you. When it’s their opportunity, they can lead how they would like.” My interpretation of this point is that

followers will fundamentally have opinions of what is best for the organization whether it is in the group's best interest or not. I would further assert that a lack of humility is at the heart of toxic followership. Merriam-Webster notes that humility is the "quality or state of not thinking you are better than other people." A person who believes they are more capable of leading compared to their leadership is not humble. It is important to understand that leadership at any level is challenging. Arguably, the higher the position, the more demanding and challenging it becomes. As such, there are times when a leader may have access to information that is privileged communication. They may not be able to discuss the proverbial "why" associated with a decision. A follower must trust their leader and accomplish the objective. That certainly does not abdicate the leader from their responsibility to receive counsel or discuss with experts. Once they have received sage advice, a subordinate must accept that it is that leader's decision and not theirs. This acceptance and the execution of those orders is what make a follower truly effective.

My final quality of an effective followership is drive. These are individuals that are self-motivated and have a robust desire to help the mission succeed. A driven subordinate will look for opportunities to

make their
organization better
and is proactive in

In closing, effective leadership, as well as followership, is arguably the cornerstone for the USAF's successes over the past several decades.

nature. Their attitude is one that is "can-do" **vice** we can't accomplish this task. These subordinates have mastered the art of leading their boss in a positive way. They execute the leaders' vision as their own regardless of how they feel about a decision.

In closing, effective leadership, as well as followership, is arguably the cornerstone for the USAF's successes over the past several decades. If we are to continue to be the most effective and efficient fighting force the world has ever seen, we must each take an inventory of how we follow those appointed above us. Toxic followers are beginning to surface in every organization, and we must address their effects as is being done with toxic leaders. In short, toxic followership can be narrowed down to one immutable characteristic, a lack of professional humility towards one leader or the establishment. So the question remains, what type of follower are you?

Special thanks to Mr. Christopher Shades and CMSgt Martin Lara for assisting with the development of this new concept.

ABOUT THE AUTHOR:

Major Michael L. Boswell is the Commander of the 100th Logistics Readiness Squadron, RAF Mildenhall, England. He is responsible for 460 United States Air Force, United States civilian and British Ministry of Defense members, providing logistical support for the 100th Air Refueling Wing and five partner units. Prior to arriving at RAF Mildenhall, he was a student at the Naval War College in Newport, Rhode Island.

KC-46 Pegasus: A New Paradigm for Sustainment

By: Col Shawn D. Harrison

Contributing Authors: Mr. Francis P. Crowley

Dr. Robert I. Marx



If flexibility is the key to airpower, then innovation is its close cousin! And where better to apply innovation than in the development and sustainment of a new weapon system? The KC-46, the Air Force's next generation aerial refueling tanker, brings numerous design innovations and advanced capabilities to the Warfighter. Could there be innovation in its sustainment approach as well? This article examines an inventive approach to commercial derivative aircraft sustainment—one which preserves Federal Aviation Administration (FAA) certification while affording all the benefits of organic depot maintenance—a clear departure from the current practice of Contractor Logistics Support (CLS) above the organizational level.



As our “sixth generation” fixed-wing tanker, the KC-46 Pegasus is the Air Force’s newest aerial refueling aircraft, with initial deliveries projected in 2016. It will be equipped with significant technological improvements designed to enhance operations and increase mission effectiveness. Its improved capabilities include boom and drogue refueling on the same sortie as well as multi-point drogue refueling. In addition, the aircraft will have a 212,000-pound fuel capacity, cargo capacity up to 18 pallet positions, and be able to carry passengers and aeromedical evacuation patients. It will also have defensive capabilities (including a Tactical Situational Awareness System, Large Aircraft Infra-Red Countermeasures, and Radar Warning Receiver); Chemical, Biological, Radiological, and Nuclear survivability; night vision compatible/covert lighting; and the ability to host communications gateway payloads. The aircraft is powered by two PW4062 (F139) engines generating 62,000 pounds of thrust each. It features a modernized fly-by-wire boom with 1,200-gallon per minute (gpm) offload and drogue systems, including Wing Aerial Refueling Pods (WARPs) and Centerline Drogue System (CDS) with 400-gpm offload. Three aircrew members (Aircraft Commander, Pilot and Aerial Refueling Operator) will operate the aircraft, and it will be maintained using existing Air Force maintenance specialties. The KC-46 will be capable of accomplishing Air Force refueling missions and is the first of three phases of tanker recapitalization.

The KC-46 is derived from a commercial Boeing 767-200ER series aircraft. Boeing is developing the 767-2C Provisioned Freighter as a baseline non-military aircraft with an enhanced flight deck, freighter cargo door and floors, body fuel tanks, and tanker provision systems. This

The KC-46 will be Federal Aviation Administration (FAA)-certified for worldwide operations to include Extended Operations (ETOPS)

baseline non-military aircraft, which flew for the first time on 28 December 2014, will become a KC-46 when the refueling systems and military avionics are added to the aircraft at the “Finishing Center” (FC). Both the production line and FC are located at Everett, WA (Paine Field). The KC-46 will be Federal Aviation Administration (FAA)-certified for worldwide operations to include Extended Operations (ETOPS) exceeding 180 minutes, including polar routes. All but a handful of military components and capabilities of the aircraft will be FAA-certified.



Certification Influences Sustainment Concept

Air Force aircraft are certified by an independent airworthiness authority either to a Military Type Certificate (MTC), FAA type certificate [Type Certificate (TC), Amended Type Certificate (ATC), or Supplemental Type Certificate (STC)], or a blend of both. Traditionally, military aircraft (fighters, bombers, etc.) carry only a MTC. On the other hand, Commercial Derivative Aircraft (CDA) typically carry an ATC/STC for life, with a limited number of military-unique equipment under a MTC. For equipment certified under MTC, the Air Force establishes the design and airworthiness criteria and can sustain those systems however it chooses—organic, contractor, or blended solution. For all current CDAs under an ATC/STC however, the Air Force has decided on sustainment via contract maintenance above the organizational level (O-level). FAA-licensed mechanics and repairmen working at certificated repair stations perform inspections [called C-checks, developed through a Maintenance Steering Group-3 (MSG-3) process], heavy maintenance, and component repairs to maintain FAA certification.

One alternative previously available to the Air Force, to avoid being tied to a contractor for component or repair processes above O-level, was to request FAA certification of an organic depot. This was successfully obtained for the KC-10 paint operation at Tinker AFB. Soon after, however, the FAA ruled it would no longer certify repair stations primarily performing maintenance of “public” (e.g., government-operated) aircraft due to lack of statutory jurisdiction. While this ruling meant FAA certification of any other Air Force repair stations [i.e., Air Logistics Complexes (ALCs)] was no longer an option, this action did generate an important question: could the Air Force achieve “equivalency” with FAA regulatory guidance and use such a determination as the basis to maintain FAA certification organically?

This line of inquiry clearly influenced the KC-46’s acquisition strategy, which directed the program to conduct a cost-benefit analysis to determine if the system should be maintained with FAA certification beyond its interim contractor support period. This analytical effort was conducted via a Sustainment Feasibility Demonstration (SFD) under contract to Morgan Borszcz Consulting (MBC) during 2013-2014. Through various quantitative and qualitative analyses, including modeling and simulation, the SFD determined it would be more cost-effective and beneficial for the KC-46 to be maintained with FAA certification for its 40-year life cycle. The study determined there

was no inflection point in program total ownership cost that would make it

...it would be more cost-effective and beneficial for the KC-46 to be maintained with FAA certification for its 40-year life cycle.

worthwhile to abandon its FAA certification in favor of an all-MTC approach. This finding was accepted by the Executive Steering Committee comprised of General Officer and Senior Executive Service representatives from stakeholder organizations. The SFD stated the overall value (in terms of cost avoidance) of the FAA-certified approach could be up to \$420M over the aircraft’s life cycle. The finding, however, hinges upon the Air Force securing “Meet the Intent” (MTI) approval from the FAA; that is, the Air Force must demonstrate its processes and procedures meet the intent of FAA regulations, primarily Part 121 (supplemental air carriers) and Part 145 (repair stations). These Title 14 Code of Federal Regulations (14 CFR) requirements apply to wing-level operations and maintenance and to depots, respectively. Without MTI, the Air Force cannot organically maintain the KC-46 (at the depot-level) and still retain FAA certification. With MTI, the KC-46 will be the first platform to do so. AMC and the other operating commands will maintain the airworthiness of each aircraft by complying with FAA-

and USAF-approved continued airworthiness requirements for the KC-46, to include incorporation of applicable FAA airworthiness directives and Government-approved service bulletins.

What are the Benefits of FAA Certification?

The Air Force’s *Enterprise Logistics Strategy* (ELS) strategic priority #3—“Deliver cost effective readiness for product support and operational logistics”—makes a compelling case for sustainment concepts that are budget-savvy. The ELS calls for solutions providing: (a) a systematic approach; (b) end-to-end coverage; and (c) the tools necessary for stakeholders to succeed. Clearly, MTI must embody these requirements and bring substantial financial benefit to the KC-46 over its planned 40-year life cycle. Ostensibly, MTI meets all three ELS prerequisites. First, MTI is a systematic endeavor that will reach all corners of the KC-46 enterprise with a single, standardized solution to ensure safety and airworthiness. Second, it will cover end-to-end: from the repair network at the depot and O-level backshop to “wheels in the wheel well” for mission generation. Third, it will provide tools for maintainers, supply chain managers, engineers and program managers embodying a common operating picture. And, in terms of financial savings, MTI brings several benefits, as outlined below.

First, MTI enables the Air Force to avoid the high cost of being tied to an Original Equipment Manufacturer (OEM) or 3rd

Increasing contract costs, lost opportunities to influence the government side of “50/50,” and the desire for greater control drove the Air Force to announce the KC-46’s long-term strategy to be “100 percent organically managed.”

Party Logistics (3PL) provider for platform-level CLS for life. Several Air Force weapon

systems were fielded in the 1990s with a “CLS for life” sustainment strategy, largely driven by OSD’s emphasis on outsourcing tasks that were not inherently governmental. Now, several decades later, OSD and the Air Force have begun to re-examine that business model. Increasing contract costs, lost opportunities to influence the government side of “50/50,” and the desire for greater control drove the Air Force to announce the KC-46’s long-term strategy to be “100 percent organically managed.” As such, the Air Force will not establish a platform-level CLS contract; and it will establish an organic Product Support Integrator (PSI). The PSI will determine the most cost-effective arrangement of product support providers. For the aircraft depot, this has been determined to be the Oklahoma City Air Logistics Complex (OC-ALC). OC-ALC technicians, under MTI, will not need to be Airframe & Powerplant (A&P) licensed repairmen, nor will the complex need to apply for Title 14 CFR, Part 145 certification. OC-ALC repaired parts will be able to be installed on KC-46 aircraft and preserve FAA certification. However, OC-ALC repaired parts will not be able to be installed on commercial aircraft—only a certificated Part 145 repair station with authority to affix an FAA Airworthiness Approval Tag, can furnish these services. MTI only applies to KC-46, not its commercial cousins operated by the airlines and express carriers.

Second, MTI leverages the intellectual and analytical power of the baseline commercial aircraft type certification [in this case the Boeing 767 (B767) family]. As stated previously, this approach requires only minimal Government cost and effort to certify the MTC covered items. The KC-46 SFD estimated the value of leveraging the ATC/STC to be a cost avoidance of \$150M.

Third, maintaining the FAA certification enables the program to leverage commercial industry product improvement. This includes both the aircraft and its components. Boeing, as the type design approval holder for the 767-2C provisioned freighter will continue to provide service actions as long as there are aircraft on the FAA ATC registry. This gives the Air Force a direct link to Airworthiness Directives, Service Bulletins, and engineering support. In addition, many B767 commercial common parts vendors will perform obsolescence mitigation [e.g., resolution of Diminishing Manufacturing Sources and Materiel Shortages (DMSMS)] and make reliability

FAA certification provides opportunities for synergy with other commercial operators (passenger and freighter) as well as Maintenance Repair, and Overhaul (MRO) organizations.

improvements as long as there is a business base for their parts. For example, the KC-46 commercial color weather radar and PW4062 engine have amassed millions of flight hours and been modified and updated numerous times since initial fielding. As a B767 user, the KC-46 program will be able to take advantage of these solutions.

Finally, maintaining FAA certification provides opportunities for synergy with other commercial operators (passenger and freighter) as well as Maintenance Repair, and Overhaul (MRO) organizations. For example, there are many benefits to participating in B767 fleet team meetings, including lessons learned and best practices. This final benefit is likely short-lived, however. Although domestic B767 operations peaked in overall fleet size in the 2004 timeframe with close to 325 aircraft, the majority of B767 users in the US will be in steep decline from about 2020-2028, just when KC-46 is ramping up. However, new orders from United Parcel Service and Federal Express will arrest and stabilize this decline about the same time the KC-46

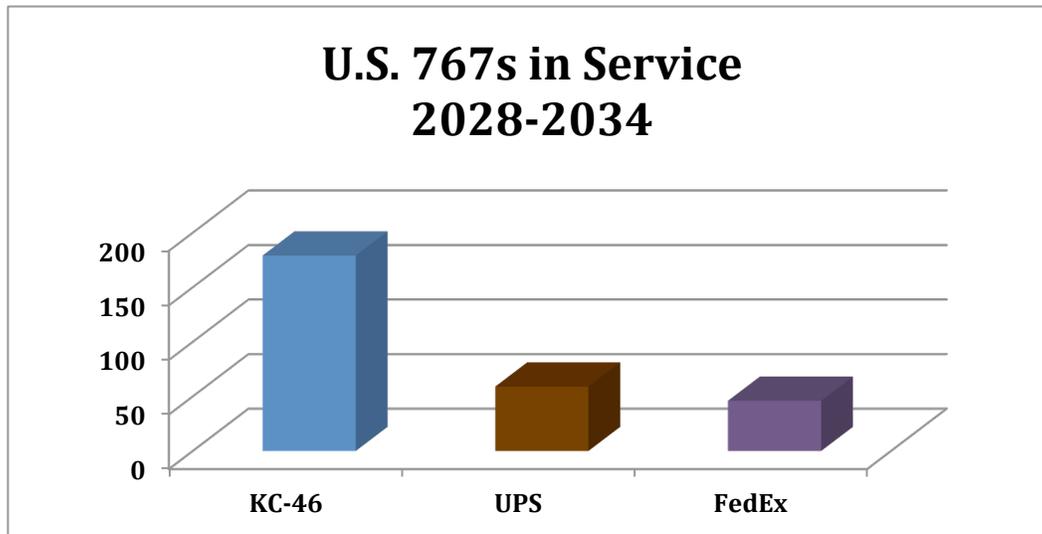


Figure 1. Projected Fleet Size of Major 767 Operators (US Only)

reaches its full inventory of 179 aircraft. Figure 1 shows the majority domestic B767 operators during the B767’s “second peak.” This time frame presents a unique opportunity for collaboration with industry B767 operators due to the volume of maintenance and reliability data that will be available for analysis. Following this phase, the KC-46 rapidly achieves a position of overwhelming prominence among US operators. To “jump start” collaboration now, the KC-46 Program Office has reached out to one of the major US freight operators to share insights on technical data and Continuing Analysis and Surveillance System (CASS) procedures. This partnership, which could easily be expanded to include other operators, has been made possible because the Air Force is a future FAA-certified B767 derivative operator.

What changes does the AF need to make to support MTI?

In short, not as many as you might think. While there are procedures that will need to be enhanced to support MTI, the Air Force is already estimated to be 90-95% compliant or equivalent to FAA Parts 121 and 145. For example, maintenance records, training programs,

tool control, and other Air Force processes embody the same principles for safety and continued airworthiness the FAA

While there are procedures that will need to be enhanced to support MTI, the Air Force is already estimated to be 90-95% compliant or equivalent to FAA Parts 121 and 145.

requires of its commercial carriers, line maintenance activities, and repair stations. Much of this is facilitated by the substantial Operations, Maintenance, Installation, and Training (OMIT) data rights procured on the contract. Some new Air Force procedures, however, will need to be developed, and they are being identified through a line-by-line review of applicable FAA guidance.

Wing-level procedures are most closely related to FAA Part 121 (supplemental carrier) requirements. The KC-46 program office is working with HQ AMC to develop a single set of processes for the enterprise that covers active duty and reserve components (ANG/AFRC). This guidance will be contained in AF-level publications (e.g., AFI 21-101/lead command supplement) to ensure a single, standardized approach as required by the FAA. Early indications are the CASS program and ETOPS procedures are the major elements requiring expanded processes. Another major concern of Air Force stakeholders was the issue of A&P licensing. Under MTI, Air Force technicians (military and civilian) will not need to be licensed, since they will not be repairing components for use by commercial aircraft. As stated earlier, organically repaired parts will only be placed back on KC-46 aircraft.

Although A&P licenses are not required, some enhancements will be necessary for O-level maintenance. For example additional content may be necessary for pipeline or Field Training Detachment training.

One example of this is ETOPS procedures. Under ETOPS,

There are no unique IT systems associated with the aircraft.

there are additional requirements for record keeping and parts tracking; there may also be additional measures needed for engine oil consumption monitoring. For the most part, flightline maintenance (mission generation) will be business as usual; tasks to inspect, service, launch, recover, and repair look the same under MTI. The KC-46 will also use existing logistics Information Technology (IT) systems, such as the Core Automated Maintenance System for Mobility (G081), the Standard Base Supply System (SBSS), and the Comprehensive Engine Management System (CEMS). There are no unique IT systems associated with the aircraft.



Technical Orders, with the exception of being procured in the S1000D Interactive Electronic Technical Manual (IETM) format, will be familiar to legacy tanker maintainers.

MISCONCEPTION	GROUND TRUTH
<ul style="list-style-type: none"> A&P licensed mechanics required 	<ul style="list-style-type: none"> A&P licenses helpful, but not required; AF “meets the intent”
<ul style="list-style-type: none"> Vast AF policy changes needed 	<ul style="list-style-type: none"> Minor adjustments needed
<ul style="list-style-type: none"> Sweeping training impacts 	<ul style="list-style-type: none"> Minor curriculum updates
<ul style="list-style-type: none"> FAA will inspect AF facilities and programs 	<ul style="list-style-type: none"> FAA will not inspect AF; AF will “police” itself
<ul style="list-style-type: none"> AF can’t organically repair/overhaul parts 	<ul style="list-style-type: none"> AF can organically repair/overhaul parts for use on KC-46
<ul style="list-style-type: none"> AF repairs jeopardize FAA certification 	<ul style="list-style-type: none"> Certification remains intact by following T.O.s

Table 1. KC-46 “Meet the Intent” Myths

O-level backshops (repair network) will be authorized to repair KC-46 components. However, they will **NOT** affix 8130-3 tags (see Fig. 2), even though the original parts may have come with these tags from the manufacturer or FAA certificated Part 145 repair station. Instead, Air Force mechanics will repair and affix the standard DD Form 1574 (materiel condition tag, aka “yellow tag”) on parts they repair.

In addition to maintenance, there will be MTI implications for retail (wing-level) supply. Procedures will be developed to ensure proper tracking of 8130-3 tags (serviceable parts) and other documentation received from FAA-approved suppliers to preserve the “pedigree” required

ETOPS parts will likely require a more stringent level of management than we currently execute

by FAA regulations.

Other, “alternate methods of compliance” are being considered as well, such as

annual auditing, screening, and other checks and balances, to ensure only FAA-approved sources are used. In addition, ETOPS parts will likely require a more stringent level of management than we currently execute. It may be necessary to segregate ETOPS parts from other parts in the warehouse and/or bench stock to ensure parts traceability in the event of a mishap or incident. Current stock control processes are being evaluated to make this determination. The Program Office is also working closely with Air Staff, the lead command, and the SBSS office to make sure we’ve captured

all new requirements for retail supply systems. Similarly, some adjustments may be required for wholesale supply systems such as D043.



1. Approving Civil Aviation Authority/Country: FAA/United States		2. AUTHORIZED RELEASE CERTIFICATE FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG			3. Form Tracking Number:	
4. Organization Name and Address:				5. Work Order/Contract/Invoice Number:		
6. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:	
12. Remarks:						
13a. Certifies the items identified above were manufactured in conformity to: <input type="checkbox"/> Approved design data and are in a condition for safe operation. <input type="checkbox"/> Non-approved design data specified in Block 12.			14a. <input type="checkbox"/> 14 CFR 43.9 Return to Service <input type="checkbox"/> Other regulation specified in Block 12 Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.			
13b. Authorized Signature:		13c. Approval/Authorization No.:	14b. Authorized Signature:		14c. Approval/Certificate No.:	
13d. Name (Typed or Printed):		13e. Date (dd/mm/yyyy):	14d. Name (Typed or Printed):		14e. Date (dd/mm/yyyy):	
User/Installer Responsibilities						
<p>It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article.</p> <p>Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country specified in Block 1.</p> <p>Statements in Blocks 13a and 14a do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.</p>						

FAA Form 8130-3 (02-14)

NSS: 0052-00-012-9005

Figure 2. FAA Airworthiness Approval Tag

Since the decision was made at program inception to conduct depot maintenance organically, there are also several MTI implications for the ALCs. As a major step towards this end, OC-ALC has authored a Military Repair Station (MRS) Plan intended to satisfy the requirements of Part 145 and of Part 43, Preventive Maintenance, Rebuild and Alteration. The MRS Plan builds upon the existing KC-10 paint repair station concept (a certificated station) and has been updated to include FAA requirements and coverage for KC-46 aircraft and related systems. It was submitted to the FAA for review in October 2014.

In addition to the MRS Plan, the Air Force Sustainment Center (AFSC) intends to establish a Flight Standards Management Office (FSMO) to provide oversight of maintenance. This FSMO will mirror many elements of the FAA Flight Standards District Office, which has broad oversight over commercial aviation repair stations. The FSMO will be manned with certified Air Force

Aviation Safety inspectors (civilian job series) and have centralized

This FSMO will mirror many elements of the FAA Flight Standards District Office, which has broad oversight over commercial aviation repair stations.

responsibility to conduct periodic audits and surveillance enforcing the standardization, accountability, and traceability of AFSC repair station processes within all of the ALCs and identified repair sources.

Updates to other Air Force policy documents will also be required as the enterprise adapts, to include KC-46 MTI. These may include airworthiness guidance such as AFRD 62-6 and MIL-HDBK-516, and several 00-series methods and procedures Technical Orders. The KC-46 Program Office and other stakeholders will work with the OPRs for these documents to determine the extent of revisions required.

The KC-46 Program Office must also establish the procedures and infrastructure to implement MTI. First, the Program Office needs to establish a CASS that meets the intent of 14 CFR 121.373 and FAA Advisory Circular 120-79A. The CASS program is one of ten elements of an air carrier's maintenance program, and will be used to monitor, analyze and optimize the

The KC-46 Product Support Manager envisions establishing a CASS office comprised of logisticians, engineers, cost estimators, and operations analysts.

performance and effectiveness of

maintenance programs. The KC-46 Product Support Manager envisions establishing a CASS office comprised of logisticians, engineers, cost estimators, and operations analysts. KC-46 CASS will utilize and build upon existing wing-level and MAJCOM analysis shops as well as authoritative logistics and engineering data systems. It will be underpinned by a Fleet Management Tool (FMT). This FMT will be used to collect and analyze “big data” from multiple sources, facilitating trend analysis, data visualization, self-alerting, predictive health, scheduling, configuration, and sustaining engineering. A monthly meeting in the form of a CASS Board will be held with the CASS office, customers, and product support providers to identify and resolve issues. Figure 3 identifies the high-level concepts of the CASS program.

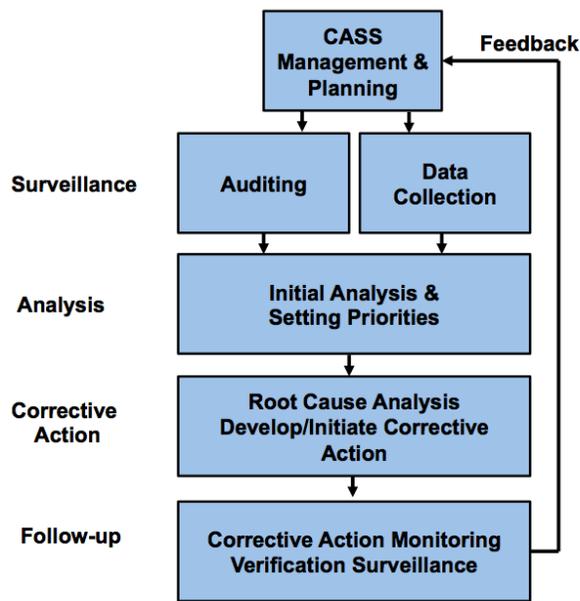


Figure 3. Continuing Analysis and Surveillance System (CASS) Concepts

Major Commands (MAJCOMs) operating the KC-46 will also have a role in MTI. AMC, as the lead command, has a significant role in establishing policy and procedures to support and demonstrate MTI. They are a key partner to the Program Office and AFSC in establishing the

cross-walk of Air Force procedures to FAA regulations, particularly for Part 121. In addition, AMC, AETC, AFRC, and NGB will also participate in the CASS program. The headquarters' analysis functions and policy shops will be greatly involved in ensuring the operating units support CASS and will facilitate implementation of corrective actions developed based on the CASS program. Any interfaces with the FAA will be the responsibility of the Product Support Manager (PSM) in concert with the FAA Military Certification Office (MCO) in Wichita, KS.

Challenges

Demonstrating compliance is a huge undertaking requiring the investment of intellectual capital across all stakeholder organizations. The Program Office estimates several thousand man-hours to be required for this effort—no easy task. The FAA has stated they will not be satisfied with evaluating mere statements of policy (the “what”); they want to see procedural information (the “how.”)

This will require a detailed cross-walk of AF Instructions and

In addition, making MTI a reality requires the development of some new and modified policies and procedures.

operating procedures to the hundreds of requirements in FAA Regulation language. In addition, making MTI a reality requires the development of some new and modified policies and procedures, including the AFI 21-101/AMC lead command supplement identified earlier. To facilitate the FAA's review and approval, the Program Office is submitting documents to them incrementally with the goal of official MTI-approval letters in the December 2015 timeframe, well in advance of KC-46 Initial Operational Test and Evaluation (IOT&E) and initial fielding.

Way Ahead

The Program Office, AMC, and AFSC are on track to complete and submit MTI documents to the FAA in time to meet the KC-46 program schedule. Along the way, there may be “findings” of additional procedural gaps that need AF policy coverage. Towards this end, the Program Office conducted a series of “Commercial Capabilities” training sessions in the summer of 2014 to help key stakeholders begin thinking critically about such issues as ETOPS flight-following and Category III landing currencies.

Once the MTI letters are in-hand, the



program will be prepared to share lessons learned with other CDA development programs.

Among those that may benefit from this foundational work are the Presidential Aircraft Recapitalization (PAR), T-38 Replacement (T-X), Airborne Warning and Control System (AWACS), National Airborne Operations Center (NAOC), and JSTARS replacements—and perhaps even some current CLS-supported CDA programs.

ABOUT THE AUTHORS:

Colonel Harrison is the KC-46 Director of Logistics, Wright-Patterson AFB. He received his commission in 1989 after graduating from Worcester Polytechnic Institute. His previous duties have included assignments in aircraft maintenance, acquisition, and headquarters staffs. Col Harrison has commanded an aircraft maintenance squadron and training group. He is a joint qualified officer and certified life cycle logistician and program manager.

Mr. Crowley is the KC-46 Product Support Manager (PSM), Wright-Patterson AFB. As PSM, he is responsible for cradle to grave affordable and effective life cycle sustainment of the KC-46A Pegasus--our nation's newest airborne Tanker. He oversees planning and delivery of all 12 integrated product support elements to support a planned fleet of 179 aircraft at 11 operating bases. He is a retired aircraft maintenance officer and former director of the Air Force Fleet Viability Board.

Dr. Marx is the Air Force Life Cycle Management Center FAA Military Certification Office Liaison. He is currently assigned to the Tanker Directorate, where he serves as both FAA Liaison and Test & Evaluation advisor to the Program Executive Officer. He is responsible for ensuring support required for FAA KC-46 design approval and that both organizational and depot-level organic maintenance "meet the intent" of FAA Part 121 and 145 requirements. This allows, for the first time ever, a two level blue suit maintenance program that maintains the FAA type design of a commercial derivative aircraft with the USAF as the airworthiness authority.

UNMANNED SYSTEMS •

CYBER •

C4ISR •

LOGISTICS •



***THE VALUE OF
ENSURING THAT OUR
WARFIGHTERS ARE
NEVER ON THEIR OWN.***

When mission success is the only option, Northrop Grumman delivers. For over 80 years, we've proudly stood shoulder to shoulder with our customers wherever leading-edge thinking was needed. Every day, we're developing new ways to advance global logistics affordably and effectively. *That's why we're a leader in innovative logistics solutions.*

THE VALUE OF PERFORMANCE.

NORTHROP GRUMMAN

www.northropgrumman.com/logistics