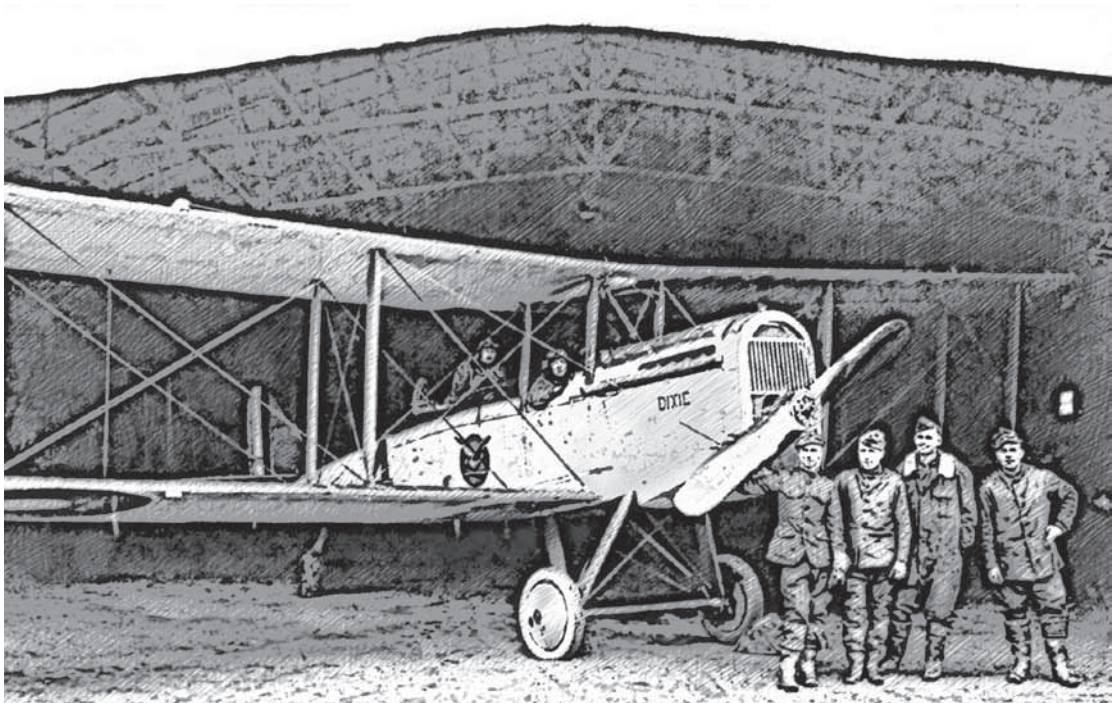


The United States Air Force Expeditionary Center

Airpower from the Ground Up

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The American Expeditionary Force was created in 1917 as the first unit capable of significant over-the-horizon global power projection of US forces. Ninety years later, the US Air Force Expeditionary Center (USAF EC) received its commission as a training center of excellence for expeditionary operations. Between 1917 and today, everything—yet nothing—has changed in the world of expeditionary operations. That is, although the time



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USAF photo

Expeditionary Airmen of the 96th Aero Squadron, American Expeditionary Force, 1918

required to project global power over the horizon has shrunk from months to hours, the enabling engine of that force projection remains the same: military and civilian professionals suitably trained and equipped to support the endeavor. The Air Force's ability

to project power in air, space, and cyberspace has advanced significantly, but at the core remains the requirement to build the foundation of that airpower projection from the ground up. On the bookshelf of the Air Force's advanced training capabilities, the

USAF EC serves as the bookend complement to the US Air Force Warfare Center (USAF WC), the former focusing on airpower from the ground and the latter emphasizing airpower from above. Key to both bookends of this bookshelf is the ability to evolve with the speed of change and thus remain relevant to Airmen charged with over-the-horizon global power projection. The USAF EC's relevance lies in providing advanced training for expeditionary Airmen to support the joint fight and to develop the tactics, techniques, and procedures (TTP) that today's expeditionary combat support (ECS) mission needs to project airpower from the flight line to the front line, from the ground up.

Well-documented studies have correlated training with organizational performance. Commercial industry considers training a key part of "employee engagement," and studies show that highly engaged firms with robust employee training programs increase their operating income by upwards of 20 percent over less engaged firms with poor emphasis on employee training.¹ The impact of training on operating income obviously has a direct correlation to earnings per share and, ultimately, shareholder satisfaction. It comes as no surprise to military professionals that training is a valuable tool for improving performance and building equity in an organization and its mission. For most of us, this point is not so much an epiphany as it is a blinding flash of the obvious. However, in the face of cost cutting and reduced operating budgets, it is worth reemphasizing that training (or employee engagement) is a front-end load that we must support in order to generate desired operational outcomes and effects. Just as we update computer hardware and software to improve performance, so must we continually update the "grayware" of our Airmen, keeping them trained, current, and engaged.

Commercial cargo carriers such as FedEx fully understand the importance of keeping their grayware up to date, investing more than \$2,500 annually per employee to ensure that maintainers, cargo specialists, and

couriers remain on the cutting edge of industry innovation.² This significant investment leverages a relatively stable workforce that operates within a rather well-defined delivery grid. Obviously more dynamic, the military workforce moves through the force structure with greater velocity than personnel in commercial industry. For example, FedEx operates from 375 airports worldwide, whereas Air Mobility Command (AMC) operates from 1,162.³ Notably, over 90 percent of the airports utilized by AMC lie outside the structured en route system. The ability to operate off the established en route grid and cover the last tactical mile of the supply chain in uncertain environments distinguishes AMC from FedEx or other commercial carriers. The combined effect of operating in austere and uncertain environments with a more transient work force is the imperative that motivates relevant and timely training. In a commercial enterprise, failing this imperative results in diminished income. For the military, failure means reduced over-the-horizon maneuver speed, a lack of in-transit visibility, and insufficient combat-support logistics. Success, on the other hand, comes with the capability to provide timely global-reach laydown, which ultimately creates the foundation we need to win battles and save lives. The USAF EC enables success through timely and relevant training. This article offers insight into the design of the USAF EC, discusses how this design contributes to enabling the effects of its two schools, and shows how those effects are integrated across the spectrum of the ECS mission in building airpower from the ground up.

The Design of the US Air Force Expeditionary Center: From the Flight Line to the Front Line

Located at Joint Base McGuire-Dix-Lakehurst, New Jersey, the USAF EC partners with the Air Staff, Air Education and

Training Command (AETC), and the USAF WC to provide a disciplined training process that teaches the right skills at the right time across the expeditionary enterprise. The center offers 82 in-residence courses and 16 Web-based training courses, graduating more than 17,000 students annually.

Two Schools from the Ground Up

The USAF EC brings together a wealth of expertise from dozens of specialties to provide accountable, up-to-date instruction across the spectrum of mobility and expeditionary skills. Because of the wide variety of demands on ECS training and the huge swath of responsibility for which AMC and the Air Force are tasked, instruction runs the gamut from mission qualification to graduate-level academic programs. Composed of a mobility operations school (MOS) and an expeditionary operations school (EOS), the USAF EC meets both the steady-state training requirements for advanced mobility training and the need for rapidly emerging, war-fighter-centric, just-in-time (JIT) expeditionary skills training (fig. 1).

Mobile and Expeditionary

Neither equipped nor organized to provide foundation training (which remains within the scope of AETC), the USAF EC offers ad-

vanced training only, largely conducted at one of two Air Force centers of excellence—the USAF WC at Nellis AFB, Nevada, or the USAF EC at Fort Dix. These centers report directly to their operational major command headquarters—Air Combat Command and AMC, respectively—for resourcing of their advanced training, an arrangement that reflects the core competencies of each command.

The Multiplying Effect of Advanced Training

By having experts use lessons from today's fight to teach future experts, we produce a multiplying effect on advanced training, bolstering the argument for independent centers of excellence outside the realm of foundational training. The integration of current TTPs, taught by professionals with recent experience, into the training environment results in a timely and highly effective construct for training and education.

In addition to incorporating current and relevant TTPs into JIT training, the USAF EC training model efficiently cross-utilizes core-competency skill sets and common infrastructure. For example, when the center teaches the mission-orientation course for an air base opening, in addition to aerial porters, mobility doctrine specialists, and mobility command and control (C2) professionals, it employs security forces, intelligence analysts, civil engineers, and communications specialists while leveraging access to advanced training ranges. The same Airmen who teach advanced contingency skills also facilitate Eagle Flag, a realistic ECS training event similar in design to the USAF WC's Red Flag exercise.

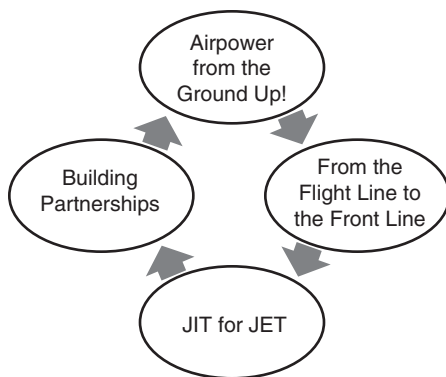


Figure 1. The production circle of expeditionary training: the USAF EC provides JIT for joint expeditionary taskings (JET)

Enabling Effects of the Mobility Operations School: Flight Line to Forward Operating Base

The MOS is the sole source of C2 training for all air mobility operations in both the

intertheater and intratheater missions. Graduates are trained in the full range of operations from deployment planning, through deployment execution and monitoring, to highly effective automated systems and total asset visibility.

Deployment Planning

The MOS meets the need for enduring mobility training with such offerings as the Aerial Port Operations Course, Mobile Command and Control Leadership Course, and Maintenance Supervision and Production Course, as well as upper-level programs such as the Advanced Logistics Readiness Officer Course and Advanced Study of Air Mobility, a one-year Intermediate Developmental Education program granting a master's degree in logistics to future mobility leaders. Through its array of contingency response (CR) training courses, the MOS also serves as the command, control, and communications (C3) schoolhouse for CR forces. The MOS's advanced training enables CR Airmen to effectively deploy and employ the most modern mobile C3 equipment and systems, providing the closing link in the C3 chain at in-theater aerial ports of debarkation. If the MOS did not train this robust set of CR C3 capabilities, both the C3 and in-transit-visibility systems would be blind at the forward-deployed end of the spectrum. With this vital training, however, the link is closed, extending the fidelity of the distribution process far into the theater.

Deployment Execution and Monitoring

Through lecture, demonstration, performance, and exercises, the MOS shapes the logistician, installation deployment officer, and unit deployment manager to assume their roles in the deployment/redeployment process using the latest C2 systems. Courses for the installation deployment officer and unit deployment manager, as well as the Advanced Logistics Readiness Officer Course, provide significant, in-depth train-

ing in deployment planning and execution, preparing these individuals to execute the full spectrum of duties across the deployment-through-redeployment continuum. This training develops critical thinking skills for performing predeployment, execution, reception, and redeployment duties.

Automated Systems and Total Asset Visibility across the Spectrum

The MOS also trains Airmen to master the automated systems that ensure in-transit visibility / total asset visibility (fig. 2). At the tactical level, the USAF EC trains installation deployment officers and unit deployment managers to load and transfer all materiel and personnel data accurately into in-transit-visibility systems. Additionally, the center provides training at the operational level on extracting data from these systems, thus ensuring C2 of logistics over all materiel and the flow of personnel into a theater of operations.

Enabling Effects of the Expeditionary Operations School: The Last Tactical Mile from the Forward Operating Base to the Front Line

The EOS concentrates on field craft and the practical application of ECS, which allows our Airmen to survive and operate in diverse, uncertain environments. Many EOS field courses focus on military operations in urban terrain, convoy operations, and training in countering improvised explosive devices, utilizing fully instrumented ranges. Additionally, several EOS courses prepare Airmen in our security forces to meet the rapidly growing demands for their capabilities. These include such courses as Tactical Security Element, Phoenix Warrior, Military Working Dog, and Phoenix Raven (a highly specialized course for small security forces teams that protect aircraft and aircrews at remote, poorly protected air-

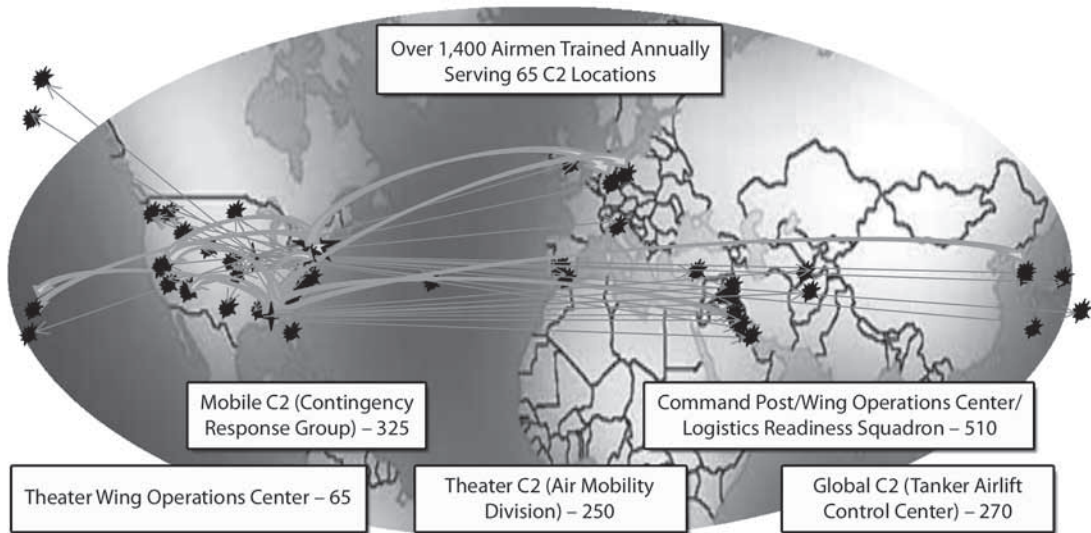


Figure 2. Over 1,400 Mobility Airmen are trained annually at the USAF EC to provide worldwide logistics C2 and total asset visibility for AMC.

fields around the world). The EOS also acts as the exercise-control function for Eagle Flag, an Air Force chief of staff exercise that allows the CR community to practice its base-opening capabilities in a real-time, hands-on scenario. The school supplies not only observer-controllers to monitor and direct the exercise, but also the opposing forces and actors who pose as local nationals. The end effect is a realistic and relevant training environment that replicates the conditions of today's fight.

The Joint Fight and the Joint Enabler

The expeditionary enterprise begins at accession for every Airman. The expansion of basic military training and advanced training in JIT contingency skills ensures that we reach every Airman with the appropriate level of education, creating personnel who are expeditionary in nature and effective by design. JIT predeployment training must be relevant to the contingency and build upon basic skills learned by all Airmen. This advanced training provides the greatest payoff

in mission success and individual survivability. The continuum of training guarantees that the expeditionary enterprise has the appropriate level of expertise yet conserves resources to assure maximum effectiveness.

As part of the Air Force's capability in agile combat support, ECS has developed rapidly in the past 15 years. Both the CR and en route communities have evolved with supporting wing-organization constructs (CR wings and air mobility operations wings) that enhance the mobile and fixed en route system, which in turn supports the war fighter's logistics reachback.

Every Airman a Joint Enabler

As the Air Force continues to respond to emerging missions in the combat support arena, it is imperative that Airmen acquire and maintain skills necessary to survive and operate in uncertain and rapidly changing environments. A small, agile center of excellence that teaches the most up-to-date TTPs and adapts quickly to maximize the readiness of our ECS forces is crucial to at-

taining success in today's fight and meeting tomorrow's challenges. Graduates of EOS field courses, such as Combat Airman Skills Training, are trained at a level that allows them to operate in sync with US Army and US Marine Corps units. The skills imparted by the USAF EC's cadre of instructors prepare Airmen to become value-added joint enablers.

The effect produced from establishing an Air Force center of excellence for expeditionary training is nothing less than Airmen standing shoulder to shoulder with joint partners on the front line. Whether deployed to fulfill joint expeditionary taskings, such as advising or building the capacity of partner nations, or to provide combat support to traditional Air Force missions at bases around the world, Airmen deserve the best training and preparation available. Without the USAF EC and its advocacy for the expeditionary Airman, we risk sending personnel forward without the proper training to survive and operate—and we ultimately lose the legitimacy of a true joint partner.

Beyond the Wire

The Air Force already possesses unique expertise in many expeditionary skills that will prove critical to growing US military missions such as irregular warfare (IW) and building partnerships (BP). Planned modifications to CR groups that call for adding a BP mission send a strong signal that the Air Force is ready to leverage a valuable mobility capability to meet current and future missions. The USAF EC's EOS has the capability to integrate IW/BP scenarios into training and exercises—including Eagle Flag, which has traditionally served as a training ground for CR groups to practice their base-opening mission. The Air Force's IW tiger team has already acknowledged that IW and BP missions frequently require types of agile combat support capabilities resident in the CR groups. That same team wants to develop processes for tracking and managing Airmen with IW- and BP-related skills.⁴ Many of these Airmen will have received their training at the USAF EC.

Effects of the Joint Tactics Squadron: The Integrator

The Air Force's role in the joint fight has evolved considerably in recent years, and, as a service, we continue to develop new competencies in the ground-combat-support arena, joint expeditionary taskings, and IW/BP. Airmen continue to advocate and maximize the advantages of airpower inherent in these capabilities, as long as those Airmen are the product of a disciplined, accountable training process in a curriculum that continually adjusts its TTPs to remain relevant to today's and tomorrow's fight. As we continue to build airpower from the ground up, we must remain aware of emerging threats, catalog our capabilities, and improve our training in real time.

As part of the journey to build a better expeditionary Airman, the USAF EC is moving toward a disciplined and comprehensive TTP capability for ECS Airmen. With the establishment of a joint tactics squadron (JTS) within the USAF EC's EOS (expected in early 2010), we will have moved the Air Force significantly closer to closing the gap between our highly trained aircrews and our ECS Airmen.

Tactics, Techniques, and Procedures and Lessons Learned: Avoiding Lessons Observed

The 561 JTS at the USAF WC has enjoyed much success in validating tactical lessons learned in the flying community and turning them into codified TTPs. Leveraging the Air Force's weapons officer establishment to provide subject-matter expertise, the 561st has cemented its place as the premier tactics squadron in the service and the single focal point for capturing tactical-air lessons learned. Unlike the highly evolved air tactics practiced by the USAF WC, many ECS training-improvement processes were simply a two-way exchange between quality assurance and training.⁵



Under its charter, the USAF EC is tasked to gather, refine, disseminate, and serve as the repository for expeditionary-skills lessons learned and TTP development.⁶ A new USAF EC squadron will fulfill this task for the Air Force's ECS forces. Although the USAF WC has a robust TTP process for aviators, our ECS forces currently do not have a single, central point for capturing tactical lessons learned.

The Blood of Those before Us

Establishing a JTS will link ECS training and standardization as well as provide valid current tactics to our trainers, allowing them to deliver timely, up-to-date instruction and resulting in better, more prepared Airmen for the combatant command. As a focal point for entry of lessons learned into the TTP development process, that squadron will prove crucial to the successful implementation of those lessons. Our goal is documenting enduring TTPs for future warriors and, ultimately, saving lives by never making a deadly mistake twice—literally, we learn from the blood of those who served before us. Knowing the validated and effective Air Force TTPs, as well as those of our enemies, is essential for surviving and operating in the combat environment. This process enables our forces to plan for and against a rapidly evolving threat, adapting current tactics to a changing environment. At the USAF EC, training venues use enemy TTPs to test and prepare counter-TTPs for the crucible of combat. Tactics evolve and mission requirements change rapidly, so training must also evolve to ensure that our Airmen truly “train like they fight,” excelling on today's battlefield and in tomorrow's challenging scenarios of hard and soft power.

The Glue That Binds

Until now, the various agile-combat-support functional communities had stovepiped their respective efforts in standardization; furthermore, the integration of new proce-

dures has often been self-contained, lacking cross talk among specialties. Without the single-gatekeeper function that the new JTS will provide, many agile-combat-support communities have experienced limited success in validating their own TTPs and have had virtually no perception of new enemy TTPs observed by friendly forces in the area of responsibility. The ECS JTS will collaborate with the entire training community to ensure the integration of tactical lessons into predeployment training for ECS forces and the use of those lessons during Air Force exercises to further validate their effectiveness in a combat environment. Through benchmarking processes currently employed at the USAF WC, the USAF EC's new JTS will create a circular exchange of information among trainers, validators, and practitioners.

Conclusion

The design of the USAF EC concentrates on building airpower from the ground up by providing agile-combat-support Airmen with the necessary advanced training to enable global power projection and success in the joint fight. Agile mobility is a unique core competency of all Airmen, who are steeped in the knowledge of operating in the third dimension of air and space. The MOS emphasizes mastering the spectrum of global reach from the flight line to the forward operating base, whereas the EOS concerns itself with refining and developing the field craft (TTPs) to take us the last tactical mile to the front line in the mobility continuum. The JTS will synchronize and update the combined effects of the two schools, with a unique and focused objective of melting the titanium cylinders of functional excellence and creating a community of practice that facilitates the exchange of TTPs across the skill sets of agile-combat-support Airmen.

The USAF EC has the ultimate effect of presenting Airmen fully prepared to enable the joint mission at the right time

with the right training. This was the charge from Gen John J. Pershing to Col Billy Mitchell over 90 years ago, when the American Expeditionary Force was created, and it is the charge of the chief of staff of the Air Force to the USAF EC today. Although everything has changed and nothing has changed, the requirement to build airpower from the ground up remains the thread that ties it all together from the flight line to the front line. ✪

Notes

1. Ramesh Kumar Singam, "Training at the Frontline, Success at the Bottom Line," *Today's Manager*, August–September 2007, <http://www.entrepreneur.com/tradejournals/article/167431703.html> (accessed 22 August 2009).

2. Ibid.

3. "FedEx Express Facts," FedEx, http://about.fedex.designcdt.com/our_company/company_information/fedex_express?referer=www.clickfind.com.au (accessed 22 August 2009); and Col Keith Moncrief, USAF, chief, Air Transportation, AMC, interview by Col Murrell Stinnette, 1 September 2009.

4. Lt Col Thomas Livingston, AF/A5R-Q, Minutes of the Irregular Warfare Task Force Virtual Teleconference, Headquarters US Air Force, Washington, DC, 20 May 2009.

5. Maj William Rondeau, "Black Knights Resurrected: 561st Joint Tactics Squadron Prepares Force, Captures Today's Tactical Issues," Nellis AFB, NV, 8 June 2007, <http://www.nellis.af.mil/news/story.asp?id=123056044> (accessed 22 August 2009).

6. Gen Norton A. Schwartz, chief of staff, US Air Force, to commanders of all major commands and commander of USAF Expeditionary Center, memorandum, subject: United States Air Force Expeditionary Center Charter, n.d., <http://www.expeditionarycenter.af.mil/shared/media/document/AFD-090306-128.pdf> (accessed 22 August 2009).



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Gen John Pershing, General Headquarters, Chaumont, France, 1918

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