Evaluating the Train-Advise-Assist Mission Impact on Engineering and Facilities Management in the Afghan Air Force

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Problem Statement

The Afghan Air Force (AAF) continues to make significant strides toward becoming a professional, sustainable, and capable air force. In the spring of 2017, the coalition began planning efforts (known as AAF modernization) to increase the AAF's capacity. This increase led to the AAF doubling its current aircraft inventory and increasing its personnel from 8,000–12,000 people by 2023.[1] While much attention has been directed toward AAF flying and maintenance activities and their associated effects on the battlefield, many other AAF support functions receive similar attention from the US-led coalition in contract support and/or train, advise, and assist (TAA) activities.

The purpose of this article is to discuss the current state of engineering and facilities management within the AAF and the extent that TAA activities influence its development. We accomplish this in six parts. First, we provide a background and overview of the AAF and associated air advisor predeployment training. Next, we present a brief overview of the challenges affecting the Afghans' ability to manage, operate, and maintain their built infrastructure (buildings, roads, and utilities) as reported by the Special Inspector General for Afghan Reconstruction. This overview adds to the reader's context and serves as the basis for subsequent portions of this article. We then describe the Afghan and coalition's current execution methods for managing infrastructure at AAF installations coupled with the assessment methods used when evaluating the AAF engineers' progress. The fourth portion contains a brief overview of the engineering-specific TAA activities performed by air advisors to further develop AAF engineer capabilities. We then analyze the effect of current TAA activities via case study analysis of a recent engineering TAA efforts at Kabul Air Wing. Finally, we conclude with offering recommendations based on one year of field work in Afghanistan and working with the AAF civil engineers from March 2017–March 2018.

AAF Background

The AAF's history, tracing back to the 1920s, can be characterized as an air force dependent on other nations for support and currently transitioning from a heavy Soviet influence to a US and coalition-based air force.[2] The AAF's creation began during King Amanullah Khan's reign when he began accepting aircraft from the British, Italians, and Soviets and sent pilots to Italy and the Soviet Union for training. Aircraft purchases increased in the 1930s as the AAF also began developing its maintenance capability on a limited number of aircraft. The AAF's capabilities dropped substantially after World War II due to challenging logistics issues and weakening support from partner nations that became more preoccupied with their survival. The AAF began rebuilding through the 1940s, largely through a revitalized relationship with the Soviet Union that resulted in additional Soviet aircraft such as MiG-17 and MiG-21 fighters, Mi-8 helicopters, Il-28 bombers, and other transport aircraft. The buildup continued in the 1970s with additional aircraft, including the Su-7 fighter, bringing the AAF's aircraft total to more than 500 aircraft by some estimates during the beginning of the Soviet-Afghan war. During the latter half of the 1980s when the Soviet withdrawal from Afghanistan became inevitable, the Soviets built up the AAF in hopes of it helping to stabilize the communist regime led by Dr. Mohammad Najibullah. However, the 1990s brought greater instability within Afghanistan as

well as the rise of the Taliban, resulting in a greatly reduced AAF in terms of aircraft and capabilities.

It wasn't until 2005 and after the establishment of a US-friendly government in Kabul in 2002 that the AAF began to re-experience significant foreign investment.[3] At that time, US Secretary of Defense Donald Rumsfeld directed the creation of a presidential air wing. In 2007, the Combined Air Power Transition Force–Afghanistan (CAPTF-A) was formed to begin to "set the conditions for a fully independent and operationally capable" air corps.[4] At this point, the Afghan Air Corps consisted of only a couple dozen aircraft, but over time, additional countries like the United Arab Emirates, the Czech Republic, and Ukraine began donating An-32 aircraft and Mi-17 helicopters. In 2008, the Afghan Air Corps experienced further momentum by way of the US Air Force, institutionalizing the CAPTF-A mission via activating the 438th Air Expeditionary Wing (438th AEW). The Afghan Air Corps later moved to its new home in early 2009, a constructed cantonment area in the North Kabul International Airport area that was previously demined of thousands of unexploded ordnance devices, primarily from the 1980s. That same year, Afghan pilot candidates began English classes and follow-on undergraduate pilot training in the US. In 2010, the CAPTF-A mission was replaced with the North Atlantic Treaty Organization (NATO) Air Training Command–Afghanistan (NATC-A), and by 2011, almost 30 countries had contributed to rebuilding the Afghan air corps in this "train and advise" mission in Afghanistan.

From 2013–18, the AAF began the transition to multiple US-made aircraft; namely, the C-208, C-130, A-29 fixed-wing aircraft, and the MD-530 helicopter. The Mi-17 and Mi-35 have continued as reliable workhorses for the AAF but will eventually be phased out over time with the fielding of the UH-60 Black Hawk. The AAF operates from four primary locations: Kabul, Kandahar, Mazar-e-Sharif, and Shindand. With these aircraft, the AAF conducts light tactical airlift, troop transport and medium-lift, aerial assault, and close air attack in support of the Afghan National Army's (ANA) combat forces. The AAF has continued to develop its air capabilities further, adding airdrop to its mission portfolio in 2017 and of mission capabilities by successfully conducting its first successful aerial resupply mission.[5] The AAF's numerous accomplishments are due in part to the train, advise, and assist efforts of the 438th AEW, or Train, Advise, Assist–Command (TAAC)-Air, the name given the unit under its NATO mission for Operation Resolute Support. The unit's mission is to train, advise, and assist the AAF into a professional, sustainable, and capable air force.

In the summer of 2017, the 9th Air and Space Expeditionary Task Force (AETF)-Afghanistan, along with TAAC-Air, began the initial planning efforts

to further modernize the AAF. The almost $7 billion, six-year program represents a significant investment by the US and its coalition partners that includes aircraft procurement, maintenance, training, and sustainment activities determined to further transition the AAF into a more professional, sustainable, and capable air force.[6] To facilitate this growth in aircraft capability, the 438th AEW work *Shona ba Shona* (Dari for "shoulder-to-shoulder") with the AAF to further build on its current capabilities, experience, and expertise.

Air Advisor Predeployment Training

Airmen slated for air advisory duty at a deployed location like Afghanistan undergo approximately six weeks of predeployment training. The training consists of one week of evasion and conduct after capture at JB San Antonio–Lackland, Texas; three weeks of field training, designated "Field Craft Hostile" and "Field Craft CENTCOM" at JB McGuire-Dix-Lakehurst (JBMDL), New Jersey; and two weeks of academics at the Air Advisor Academy, also at JBMDL.

The 438th AEW's TAA mission is not new to our Air Force as history contains multiple examples of air advising from Vietnam, Korea, Iraq, and more recently, Costa Rica.[7] Substantial demand in 2007 for a permanent predeployment training curriculum that focused on preparing deployers for the air advisor mission paved the way for today's Air Advisor Academy. The Air Advisor Course reached full operating capability in January 2013 and later realigned under the Air Force Expeditionary Center in 2015 and represents a key component of the air advisors' predeployment training regimen.[8]

The Air Advisor Academy provides the most tailored predeployment training and instruction for future air advisors. The two-week course leads students through lecture and guided discussions to better understand the five core functions of air advisors (train, advise, assist, equip, and assess) and other areas such as culture and organizational awareness, religious familiarization, cross-cultural negotiation strategies, conducting capabilities-based assessments, working with interpreters, conducting key leader engagements, and 30 hours of region-specific language training. Embedded within the language training portion, students interact with native-speaking instructors to not only learn basic language speaking and writing skills but also to engage in relevant cultural discussions. The course concludes with multiple role-playing scenarios of advisors interacting with fictional AAF counterparts, conversing through an interpreter, to begin applying learned skills from the course in scenarios quite similar to what they will encounter while deployed. With the numerous career fields that comprise the air advisor mission, the course focuses on developing the skill sets all advisors need and leaves tactical familiar-

ization within specific mission sets to the deploying member to accomplish separately from the course.

AAF Engineering Challenges

Many of the challenges facing the AAF engineers can be linked to the extremely difficult living and working conditions within Afghanistan. According to the *CIA World Fact Book*, Afghanistan ranks 193rd in unemployment (23.9 percent), 101st in total gross domestic product (approximately $69B), and 181st in industrial growth (-1.9 percent).[9] The World Bank ranks Afghanistan 183rd of 190 economies using the distance-to-frontier metric, which quantifies the ease of doing business in a particular country.[10] It is landlocked and remains highly dependent on foreign aid. Using these economic indicators for context, we now explore the AAF engineers' primary challenges. The challenges discussed in the preceding paragraphs are a lack of budgetary resources for discretionary spending, a cumbersome and difficult supply system, and further growing the project execution capacity within the Afghan Ministry of Defense's (MoD) Construction and Property Management Department (CPMD) for small and medium-sized infrastructure projects.

The lack of a discretionary budget remains the AAF engineers' most significant challenge. Without resources, engineers cannot purchase parts or materials to affect infrastructure repairs or conduct preventative/responsive maintenance work. The lack of resources greatly reduces, if not altogether nullifies, the ability to respond to emergency repairs that directly contribute to mission accomplishment. This also renders planning and budget forecasting irrelevant since without a discretionary budget, AAF engineering *kandaks* (the Dari term for squadrons) will respond slower (if at all) to infrastructure needs resulting in faster component and system failures that will eventually overwhelm the engineer's capacity to manage the installation's infrastructure without substantial external support. While the AAF engineering kandaks did not have a budget for discretionary spending per se, processes were in place to order parts and materials, which leads to the next significant challenge—operating within the Afghans' supply system.

All AAF kandaks submit supply and material requests using the Afghan MoD's Mod 14 process. The Afghan government has built into the process multiple controls, checks, and limits to ensure unit requests are validated in purpose and quantity to guard against theft and corruption. These extra controls and steps have resulted in greater delivery delays, and when materials do arrive, they can be of insufficient quantities or unacceptable substitutes with little, if any, explanation given for deviations existing between requested and delivered items. As frustrating as the supply process could be, it was an Afghan process and as a key tenant

of advising, working within the Afghans' system and processes was typically viewed as the more sustainable approach.

Lacking a reliable project execution capability within the Afghan MoD via CPMD represents another significant challenge for the AAF engineers. CPMD's role within the Afghan MoD comprises of program management and execution of engineering requirements supporting Afghanistan's military. This challenge includes identifying, developing, prioritizing, and resourcing future engineering requirements that include supporting the engineering kandaks, much like any higher-headquarters organization even though they are beyond the kandaks' capabilities. CPMD has made some noticeable improvements, as demonstrated by their impressive response to affecting repairs to the Kabul National Military Hospital after an insurgent's attack in March 2017.[11] However, the organization still lacks the capacity and technical expertise needed to independently and fully execute engineering projects. This capability gap results in a greater dependence on coalition engineering forces to execute a wide range of engineering projects, discussed in greater detail in the following section.

Installation Management in the AAF

Facilities and associated infrastructure at AAF bases are operated and maintained in one of three methods: coalition contract predominantly managed by Combined Security Transition Command–Afghanistan (CSTC-A), Afghan contract executed by the Afghan's MoD CPMD, and local troop labor within the AAF installation's engineering kandak (squadron). Electrical power is supplied to AAF bases via generators, connecting to the local city's electrical power grid, or a combination of the two. Overall, the primary objective remains guiding the Afghans toward developing a greater capacity within their own organizational structures for executing infrastructure management projects with little to no oversight from coalition forces. This capacity would include activities such as managing daily facility and infrastructure operation and maintenance; procuring repair parts and construction material; managing an engineering craftsman training program; identifying future infrastructure projects (new or repairs to existing) or transitioning their installations to more reliable power systems (e.g., upgrading from generator power to executing electrical grid connection projects).

Before further delving into these methods of execution, it's important to understand the funding of AAF facility maintenance. Facility operation, maintenance, and repair activities are funded via Afghan Security Forces Funds (ASFF) or the NATO Trust Fund Organization (NATFO). Within ASFF, program execution is described as on-budget (Afghan executed) or off-budget (CSTC-A executed). Currently, infrastructure operation and maintenance (O&M) activities

deemed critical to mission success ("too big to fail") are funded as off-budget projects. These project types include: electrical grid connections, medical facilities construction, projects supporting the women participation program (e.g., dormitories), power plant generator repair and overhaul, wastewater treatment plant construction and O&M, and large infrastructure projects associated with the rapid buildup of the AAF and Afghan Special Forces (e.g., pre-engineered buildings, water and wastewater distribution systems, permanent dormitories, etc.). Conversely, on-budget projects are executed by the Afghans, largely through CPMD or the local AAF engineering kandaks. These types of projects include power plant generator O&M and minor facility repair and upkeep.

The difference in on- and off-budget program execution can also be used as a metric of performance when assessing the Afghans' ability to execute engineering work independently. Essentially, the greater the percentage of on-budget execution, the greater the Afghans' ability to independently complete engineering projects. Figure 1 illustrates two graphs representing the FY 17 (FY 1396 of the Afghans' fiscal calendar) ASFF Engineering Budget (left) and ANA Off-Budget (right). Note that the total ANA off-budget amount of $99.2M illustrated in the FY 17 ASFF Engineering Budget graph only consists of infrastructure ($79.9M) and sustainment ($19.3M) expenditures. Training ($5.5M) and equipment ($3.4M) funds were derived from different funding sources and are therefore included in the ANA off-budget graph. For discussion purposes, we will only consider ANA on- and off-budget execution since that is how AAF projects are funded.

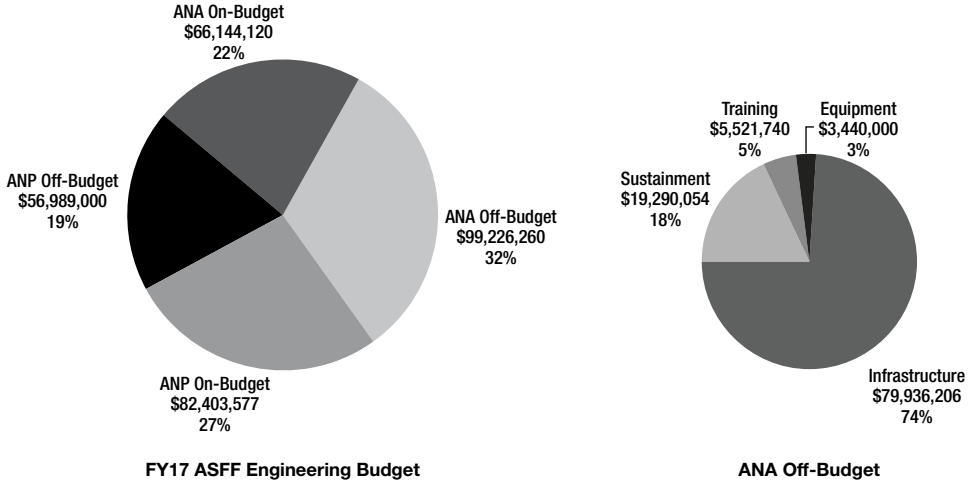

Figure. FY 17 ASFF engineering and ANA off-budgets

In FY 17, the ASFF engineering budget of almost $305M consisted of $165M applied toward ANA projects ($99M—off-budget and $82M on-budget). The

ANA off-budget may be further divided into infrastructure ($80M, 74 percent) and sustainment ($19M, 18 percent), while training ($5.5M, 5 percent) and equipment ($3M, 3 percent) were funded through other resource streams. Within ANA projects, 60 percent were executed via off-budget (i.e., CSTC-A or coalition), while 40 percent were executed via Afghan execution. When compared to the FY 18 budget ($301M), the ratio of on- to off-budget execution remained roughly the same (61 percent off-budget, 39 percent on-budget). The percentage and change over time of on-budget execution can be used as a direct indicator of the Afghan's ability to directly program, plan, and execute the construction of new infrastructure projects. From the coalition's perspective, we want that percentage to increase over time. In addition, tracking the types and amounts of on-budget execution can also be used as a performance metric to gauge the Afghans' progress toward more autonomy. The detailed information for on-budget execution wasn't readily available and therefore, not included in this article.

One approach to increasing the Afghans' capacity to execute engineering projects was by intentionally reducing the amount of coalition support on projects the Afghans deemed high priority yet were still within their capability from a technical and constructability standpoint. The T-wall barrier placement to address force protection concerns was a prime example of this whereby the coalition adopted a much larger advisory role to the Afghans rather than simply performing the task themselves for the sake of expediency—a common pitfall for all air advisors, not just engineer advisors. The Afghan engineering kandaks possess limited engineering capabilities but have been observed to be quite resourceful and capable, as noted earlier in responding to the March 2017 insurgent attack on the Kabul National Military Hospital.[12] Measuring the impact of this policy stance was difficult due to turnover but nonetheless tapped into another essential part of any TAA effort: the circumstances surrounding a TAA effort should lead the Afghans to believe it's in their best short- and long-termed interest to internalize what is being trained or taught to the point of self-sufficiency.

With this background and familiarization in mind, the following sections turn the reader's attention to the engineer advisors' work with their AAF counterparts.

TAA Activities

Engineering TAA activities with the AAF engineers consisted of primarily two areas: facility engineering and fire and crash rescue. How our team accomplished TAA depended on the situation and the resources available. This section explains the methods used, the associated benefits and challenges of each, and the relative effectiveness from the author's perspective.

Train

Fire and crash rescue reflect the best training example within the engineering TAA spectrum. All AAF firemen at Kabul Air Wing (AW) received hands-on training from the TAAC-Air fire trainers and advisors. Due to a lack of resources, the team acquired metal connex storage containers and repurposed them into a live-fire training complex whereby AAF firemen would practice the basics of conducting offensive fire operations, search and rescue, and command and control, all under the close supervision and guidance of the fire trainers. The advantages of the live-fire trainer were many: it provided a realistic training environment at near-zero operation and maintenance costs for Afghan firemen to train and become more familiar with their personal protective equipment and gear. Despite our focus on training, equipment maintenance remained the greatest challenge.

Facility engineering training focused primarily on areas of procurement, work prioritization, and facility manager training. Due to the significant challenges of acquiring engineering parts and materials, the team heavily focused on procurement with limited success. The Afghan procurement process (Mod-14) is quite cumbersome and difficult to navigate within. This problem was partially due to an initial unfamiliarity with the Afghans' process but also to a number of process controls and checks embedded within the system intended to guard against potential corruption. Procurement is a vital element of any support organization, whether it's engineering, aircraft maintenance, supply, or logistics. Without a robust, reliable, and dependable supply and distribution system, the AAF engineers resorted to other means to create their bench stock of parts and materials. Their bench stock consisted of abandoned items from past military unit retrogrades or delayed supply deliveries that either arrived late to need, no longer served its original purpose, or just became a casualty of rotation amnesia. It was a byproduct of an inadequate supply system coupled with the uncertainty of the coalition presence duration and associated support.

Working with the Afghans to make them more proficient in procurement improved their capabilities by going beyond their own accumulated, albeit resourceful, inventory. Leadership buy-in, particularly with the AAF, was essential in making this training line-of-effort successful.

Craftsman training (plumbing, welding, structures, etc.) was accomplished via sending Afghan soldiers and airmen to an engineering school, created and maintained by a coalition contract, located at Camp Sheehan. Our primary goal in this line-of-effort was to work with the Afghans through our advisory role to send soldiers and airmen to this training. The training was necessary, but results were lacking largely due to poor attendance across all Afghan military branches of

service. It was difficult to determine the overall root cause(s) of the observed low attendance, but it was clear that the same drivers and incentives for training that exist in other militaries simply didn't exist in the AAF. Apparently, mobile training teams had been tried in the past but were discontinued in favor of centralizing the training for greater efficiencies and economies of scale. This centralization was a significant challenge that frustrated the headquarters staff and engineer advisors alike. Within our advising sessions regarding this topic, it was not abundantly clear how training documentation occurred to understand better who really needed the training. At one point, the lead engineer for the training contract threatened to discontinue the contract if training quota fill rates did not improve. In turn, we made this a greater priority in our advising sessions and over time, we were able to see improvement in this area. But it was difficult to assess this training gap's impact on the AAF engineers' capabilities mainly due to the larger problem of a lack of funding and overall budget to establish a bench stock of repair parts within a very challenging supply system.

Work order review board training focused on work prioritization by approaching facility repair from an installation perspective, similar to how engineering work orders are accomplished in our own Air Force. This effort was not nearly as successful, as it very quickly highlighted the limitations of the engineering kandak as well as the engineering supply system to the point where meetings yielded little value and were eventually discontinued. On the one hand, the initial meetings were encouraging in that they forced our counterparts to work with other entities within the AAF and to discuss engineering requirements in an open forum that could generate positive results. Conversely, this approach perhaps incorrectly assumed that a western approach would be openly received and adopted. The Headquarters AAF engineer (to whom the author served as advisor) led these work order review boards and increasingly placed blame on the higher echelon CPMD organization for any work request made during the forum. While partially true, it also largely stymied initiative or innovation. The Afghans utilized a simpler model that focused more on informal request and coordination that was largely accomplished outside of the advisors' purview. They had a method for getting work accomplished, and we were just unfamiliar with it. This cultural difference is another common challenge that comes with advising. It's very natural to think western methods can be used as a valid model for our TAA efforts, but advisors must be keen on knowing when an approach isn't working and have the adaptability and agility to restructure training methods that are more likely to be adopted by our counterparts and therefore have potentially longer-lasting impacts.

Facility manager training began as the result of our team recognizing the need for more emphasis in basic facility maintenance. Seeing this need, one of our

contractor trainers developed and implemented a facility manager course. The course consisted of weekly classroom lessons, whereby the basic concepts of facility manager responsibilities were taught. The AAF engineering operations chief was a tremendous benefit to the course as not only a show of presence to validate the effort, but also the chief was visibly proactive in conversing with newly appointed facility managers in training them how to report and affect building repairs—a key component to any facility manager program. As with other TAA efforts, obtaining early leadership buy-in, particularly in this case, to obtain AAF volunteers to serve as facility managers, was a key step in making this a successful training endeavor.

Advise

Frequent meetings with our counterparts, often served with chai, was the prevalent method for advising. Our meetings contained multiple recurring topics: dealing with base electrical power shortages, restructuring the Tashkill (manning and equipment) document, or other general leadership issues. But the advising sessions were also the greatest contributors toward relationship building. Over time, the team would gather a feel for the extent to which our advising sessions could contribute to relationship building as opposed to discussing mission-related issues. The portion of our advising sessions spent on relationship building varied, but the greatest contributor to relationship building was a frequency in visits. For our team, the main challenges associated with the advising sessions were understanding how to structure our overall advising approach to achieve our set objectives. Ultimately, with everything we did, our advising sessions would focus on bringing the conversation back to the central premise of how *they* would solve the task at hand. It was not uncommon, especially early in the advisor's tenure, to be "tested" by our respective counterparts, usually consisting of being presented with a list of needs that (supposedly) exceeded our respective counterpart's ability to affect and therefore needed the advisor's assistance. A compelling strategy, for who wants to contribute to a rocky start with their counterpart when predeployment training places such emphasis on the importance of relationship building?

Assist

Similar to the train and advise components of the TAA mission, assisting also took on different forms. It could be as simple as showing presence with our counterpart during a high-level meeting as a visible sign of support and solidarity, always mindful to ensure our counterpart was the primary focal point of addressing and solving an issue. Addressing issues in parallel through our respective chains-

of-command and advisor network was another common assist approach that yielded favorable results. But this method also posed the risk of crossing the boundary into essentially doing a task or solving a particular problem for our counterparts. As a guiding principle to our advising efforts, the onus of responsibility had to be with our AAF counterparts. To do otherwise could encourage behaviors not conducive with establishing a professional and sustainable air force, capable of meeting its needs and addressing its own challenges. But exceptions did occur, usually resulting from a mission-based risk analysis that determined whether the cost of learning through failure was too great on mission achievement. The risk analyses were more art than science, generally relying on leadership's view of overall mission impact as a result of keeping problem resolution with the AAF. Assisting could also take the form of conducting engineer assessments in tandem and proved useful in time-sensitive situations as will be discussed in the next section regarding the restoration of the AAF dormitory buildings.

This next section examines one of the engineer advisors' primary efforts of advising the AAF: affecting winterization repairs to the Afghans' dormitories at Kabul AW. We use this effort as a case study to further examine the advise-and-assist elements of our TAA mission. This case study analyzes a dorm winterization project at Kabul AW located adjacent to Hamid Karzai International Airport in Kabul, Afghanistan. The project activities included restoring heat and hot water to the AAF dormitory facilities that had reportedly been without these amenities for the last three years.

Dormitory Repairs

Kabul AW contains 10 two-story dormitory buildings. The dormitories were constructed in approximately 2008 and consist of open-bay layouts for lower-ranking members (soldiers) and separate room configurations for noncommissioned officers (NCO) and officers. In March 2017, the coalition began directing more attention toward the deteriorating condition of the AAF dormitory buildings largely due to maintenance neglect and a lack of leadership emphasis. Problems included a lack of hot water and heating, leaking water pipes, cracked or broken windows, and general cleanliness in the facilities' latrines. While Kabul AW enjoys a mild climate during most of the year, below-freezing temperatures in the winter exacerbate occupants' lack of heat and hot water. According to the Afghan airmen and soldiers living in these dormitories, the facilities had been without heat and hot water for the past three years. This problem resulted in occupants having to rely on their means for providing heat during the winter months. For example, some soldiers and NCOs would combine their earned wages to rent

off-base housing with heating amenities. Others would bring burning embers from the nearby AAF fire training area to their dorm room/bay.

The coalition viewed the dorms' neglected condition as a lack of Afghan leadership and proper care for their younger troops and thus made it a high priority to address. Beyond the common leadership principle of providing for the troops' well-being, addressing the condition of the dorms became a significant line-of-effort with strategic implications for three additional reasons. First, improving the dorms' condition would provide soldiers with a higher quality of life that could subsequently help with not only retention but also future AAF recruitment as well. Second, we didn't want the degraded dorms' condition to be a situation for the Taliban or other hostile group to the Afghan government to exploit for propaganda purposes. Third, improving the dorms' condition hinged on providing reliable power and thus brought welcomed attention to Kabul AW's degrading electrical power situation.

The dormitory repairs quickly became a TAA activity with our Afghan engineer counterparts. Much like the capstone project of an engineering class, this TAA activity encompassed many of the desired skills we had been working toward with our AAF engineer counterparts. The project consisted of planning; building a schedule containing the necessary steps to identify, procure, and install parts to complete repairs to the damaged dormitories; the execution of repairs using the Afghan engineers as the sole labor force; and collaboration with other Afghan organizations such as logistics, finance, and CPMD to ensure a unity-of-effort to successfully complete this planned effort.

From start to finish, the project's schedule developed by the advisors and AAF engineers contained 11 steps. Within the "tasks" rows, each activity is named along with the organization responsible for completing the activity in parentheses. Each activity contains two subrows. The first row depicts the planned activity duration, while the second row indicates the actual duration for comparison.

The schedule was developed utilizing the Afghan's Mod-14 procurement process. Keeping this project within the domain of the Afghans' processes and capabilities was important from the outset. The coalition could have easily switched the project to coalition-executed and likely would have completed the work in less time and with a greater overall quality. But both leadership elements within TAAC-Air and its parent organization, the 9th AETF, recognized the importance of keeping the burden and responsibility of project ownership with the Afghans. To have done otherwise would have squandered an opportunity for the Afghans to demonstrate basic leadership and proficiency in caring for their troops. It also assumed the risk of adding to the Afghans' dependence on the coalition for solutions and implementing the means to achieve those solutions.

The schedule also proved to be a useful communication tool with leadership as well as maintaining a unity-of-effort among the advisors in advising our counterparts. Identifying areas for needed support and engagement from higher-headquarters advisors to facilitate subsequent, critical-path activities were critical to keeping the project on schedule. The schedule also helped manage expectations. Working within the Afghan supply chain was very challenging. As winter drew closer, we received more questions from all levels concerning the status of the dorm repairs. Taking the time to better understand the Afghans' procurement process not only allowed us to build a more realistic and reliable schedule, but it also enabled us to better advise and work with our Afghan counterparts. As the schedule illustrates, the repair parts and materials were eventually identified, procured, delivered, and installed by the Afghan engineers. The dormitory occupants were grateful and overall, we viewed this as a significant accomplishment for our engineer counterparts and the AAF.

But the large degree of oversight and necessary engagement conducted by both the advisors and higher levels of coalition leadership reflect a less positive assessment from a different perspective. This assessment was most evident on two different occasions. In the first instance, CPMD's action to "verify parts and create Mod 14s" only took one week as opposed to the estimated four weeks. We based this activity duration estimate from the previous summer's attempt to acquire the same materials in lesser quantities that CPMD later approved only one-fourth of the request. But it only took one week during this scenario, and 100 percent of the request was approved. What was the difference? Significant leadership engagement from both the coalition and the AAF convinced CPMD to bypass the usual verification step and approve the AAF's parts and material request in total. From the project's standpoint, it was an effective move that accelerated the overall schedule to meet the intended outcomes. However, from the larger perspective of working toward a sustainable AAF that could independently achieve facility repairs within its supply distribution system within a specific timeline, areas of improvement still exist.

The second instance occurred when the initial supply request exceeded the inventory amount contained within the Central Supply Depot and a purchase from a local vendor to procure the remaining items was planned. During this time, the AAF commander was to have at his disposal the resources necessary to procure the dormitory repair parts and materials as part of a larger initiative to supply the Afghan military corps with discretionary funding on a monthly basis. The AAF's continued work toward becoming a secondary budget unit appeared to make them eligible for this new monetary policy. However, when it came time to actually procure the parts and materials, the overall funding apparatus wasn't complete and

caused the coalition deciding to intercede. Item procurement continued without immediate payment to expedite the delivery of parts and materials to the supply kandak. Again, this move was helpful toward the AAF engineers meeting their schedule milestones but was still largely enabled by coalition intervention. In essence, Activity 9 was only completed to the extent that enabled the AAF engineers to complete the dormitory repairs. Our TAAC-Air/CJ-8 advisors were left with the task of slogging through the nonpayment issues that took months to resolve.

In the final assessment of this effort, the Afghan engineers demonstrated an ability to successfully execute the repairs to provide a greater quality of life for its dorm occupants. But it was also clear that significant coalition intervention was needed particularly during the procurement phase. Building a reliable and robust supply chain was and continues to be one of the most significant challenges facing the Afghans. Its challenges impact not only the AAF but also all Afghan ministries and organizations.

It should be noted, however, that during the following rotation, the coalition accomplished an off-budget (coalition managed and executed) dorm repair project resulting in more robust repairs to the Afghan dorms. It's quite possible the repairs made during our rotation were short-lived. Rather than forcing a potentially compounding issue with the Afghans during the next winter season, the completed off-budget project would free the coalition to focus on issues that were deemed a higher priority.

Conclusion

In conclusion and based on our advisor team's experiences, we offer the following recommendations. While they are developed from our engineer-centric experiences, they are written to help any mission support-related advisor mission.

Work to establish a strategic unity-of-effort along organizational and functional lines-of-effort. The unity-of-effort principle applies to all military endeavors, and the air advisor mission is no exception. The principle was evident during the dormitory repair project that required constant coordination between advisors of various Afghan organizations and within TAAC-Air.

Pursue TAA activities that involve and overlap with other functions. This will drive a greater collaboration among your counterparts and can yield synergistic effects. It will also broaden your knowledge base as an advisor and improve your perspective of how your advising contributes to the larger campaign.

Understand your counterpart's organizational structure, processes, and culture (for instance, less desire for open-forum discussions). Knowing the structure can better inform you on how to best advise your counterpart. Document that knowl-

edge, and make sure it survives deployment turnover with your successor to limit unnecessary "rediscoveries."

Be flexible in your TAA approach and willing to adopt a different approach or method that better suits the situation and personalities of those you advise. The Air Advisor Course provides deploying advisors with multiple techniques and strategies that can be used as situation-dependent. An advisor must constantly assess not only the progress of the individual or organization he/she advises but also the techniques and strategies used while advising. This assessment requires a better understanding of the individuals being advised: (1) What are their drivers and motivations? (2) What are their strengths and weaknesses? (3) How do you evaluate their potential for continued service?

Be mindful of keeping the burden of task completion with your counterpart. A time-tested principle to always be mindful of when advising is T. E. Lawrence's Principle Number 15: "Do not try to do too much with your own hands. Better the Arabs do it tolerably than you do it perfectly. . ."[13]

This next recommendation is specific to engineers. Standard-building designs that minimize future repairs and the skill level required to complete those repairs should be adopted. Subsequent maintenance problems experienced from those constructed facilities using standard designs should inform future design enhancements for future projects. The US Army Corps of Engineers has developed a significant portfolio of standard-building designs that were useful during our rotation and will likely continue to improve with time.

When possible, consider enduring quantitative assessment methods or metrics that can be used to measure the progress that span multiple advisor rotations. In this article, we examined the percentage of on-budget execution (Afghan-led) as one progress indicator. Another example, not mentioned in this article but observed during our rotation, included not only monitoring the number of engineering projects successfully awarded and executed but also the completion of the milestones leading to an award and the completion of projects. Because of the challenging nature of advising, it is important to select the metrics and measures of success that can transcend and survive the challenges associated with multiple deployment rotations and changes in leadership.

The Air Advisor Course plays a large role in preparing deploying airmen for advisor duty. The course, like all professional military education, must continue to play an active role in maintaining a positive feedback loop that seeks feedback from air advisors and uses that feedback in subsequent iterations of content refinement. During our rotation, Air Advisor Academy faculty visited us in Kabul to interview advisors and collect detailed information regarding our responsibilities and skill sets needed to achieve our mission. The course's role-playing activi-

ties were exceptional portions of the course and on reflection, played the most significant role in preparing as an advisor.

Developing and strengthening the AAF remains a critical part of the overall Afghanistan strategy. The air advisor mission serves as a critical component of achieving that mission. To achieve that mission, advisors must immerse themselves into their mission, develop strong relationships with their counterparts, and have the nimbleness to adjust advising strategies and techniques that are better suited to the culture, counterpart, and situation. ✪

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