DETERMINING MOBILITY SUPPORT ADVISORY SQUADRON EFFECTIVENESS IN SUPPORT OF BUILDING PARTNER CAPACITY

GRADUATE RESEARCH PAPER

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AFIT/IMO/ENS/12-14

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GRADUATE RESEARCH PAPER

Presented to the Faculty

Graduate School of Engineering and Management

Air Force Institute of Technology

Air University

Air Education and Training Command

In Partial Fulfillment of the Requirements for the

Degree of Master of Science in Logistics

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June 2012

AFIT/IMO/ENS/12-14

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Abstract

National strategic-level guidance has outlined how the U.S. will continue in "The Long War." From the President downward, emphasis has been placed on bolstering U.S. national security interests by working with and through foreign counterparts. The U.S. Air Force has assumed the leadership role to develop the aviation capacity and capability of key partner nations (PN). The key asset to accomplishing this objective is to use Air Advisors (AA). These AAs are trained to assess, advise, train, assist, and equip selected PNs. As the worldwide leader in air mobility capability, Air Mobility Command has activated two Mobility Support Advisory Squadrons (MSAS) to manage the AAs and their taskings.

While initial, broad-based guidance was provided, no direction was given on how the MSAS are to measure and report their effectiveness at conducting the Building Partner Capacity (BPC) mission. Since the MSAS seek to establish, build, and foster relationships, this process is time-consuming and lengthy in nature. Furthermore, it is difficult to quantify expected outcomes such as trust, good-will, and positive feelings towards the U.S.—thus making measurement of outcome almost entirely subjective.

This qualitative research effort utilized a Delphi study to assemble 20 expert panelists to determine the key criteria the MSAS could use to measure, track, and report unit effectiveness toward accomplishing their BPC mission. The data obtained through this study helped to formulate recommendations that could be utilized by Air Force decision makers at the tactical, operational, and strategic levels on how to shape the future of PN engagements made through the BPC initiative.

Acknowledgments

Col Christopher Pike, former Vice-Commander, 21st Expeditionary Mobility Task Force, was the study sponsor. I greatly appreciate Col Pike's enthusiastic support and assistance with keeping the research properly focused and desire to make this effort count.

Dr. Alan Heminger, AFIT/ENV, was the study advisor. After hearing my research topic proposal, it was Dr. Heminger that recommended using the Delphi method to answer my research questions. Throughout the research effort, he provided me timely and value-added guidance which ensured I was able to get the most out of the Delphi. I'm truly grateful for his passion for teaching and student learning.

Thanks to Pamela Bennet Bardot, USAF Expeditionary Center Librarian-Extraordinaire for graciously entertaining my numerous requests for information and helping me get smarter on the Delphi method.

Thanks to Lt Col Thomas Adkins, Commander, 818 MSAS and Lt Col Joseph "Nacho" Sanchez, Commander, 571 MSAS, for openly sharing their perspective, insight, and personal experiences as they make history serving as the first two MSAS commanders.

Thanks to Maj Phil Smith, 818 MSAS/DO, for providing the idea that ultimately became the topic of this research paper.

Thanks to Hale Laughlin, AFSOC/A8, for taking his time to share his wealth of knowledge and experience on the Building Partnerships/Building Partner Capacity (BP/BPC) issue as well as point me to other valuable sources of information.

Thanks to Col J. Olaf Holm, Commandant, Air Advisor Academy (AAA) and the AAA cadre for allowing me to sit in their classes and share their outlook.

Thanks to Col Eric Watkins, HAF/A3; Ken Arteaga, AETC/A3; and Deo Lachman and Paul Judge, AMC/A3; for keeping me informed as developments occurred within the BP/BPC program.

Thanks to the Delphi panel for your patience, time, and effort spent sharing your personal, honest perspective on the BP/BPC mission. This made the research study an overwhelming success. Without a doubt, you all are champions for the cause. The members are as follows:

Lt Gen Robert Allardice	AMC/CV	Lt Col Ernest Teichert	NDU Student
Col John Cairney	621 CRW/CV	Maj Wes Eagle	87 LRS/CC
Col Javier Delucca	571 CRG/CD	MSgt Sameul Nowman	439 AEAS
Col Valentine Dugie	SAF/IA	MSgt Robert Weatherly	439 AEAS
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Col Scott Graham	HAF/A3	Mr. Kenneth Arteaga	AETC/A3
Col Eric Watkins	HAF/A3	Mr. Paul Judge	AMC/A3
Lt Col Thomas Adkins, II	818 MSAS/CC	Mr. Deo Lachman	AMC/A3
Lt Col Michael Grub	1 SOG/CD	Mr. G. Hale Laughlin	AFSOC/A8
Lt Col Joseph Sanchez	571 MSAS/CC	Mr. Pasquale (Pat) Capriglione	Department of State (ret)

Finally, my immeasurable gratitude and love go to my wife, children, and parents. Thank you for your steadfast encouragement throughout this study and academic year. Your support made all of this possible. Thank you.

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DETERMINING MOBILITY SUPPORT ADVISORY SQUADRON EFFECTIVENESS IN SUPPORT OF BUILDING PARTNER CAPACITY

I. Introduction

National strategic-level guidance has outlined how the U.S. will continue to endeavor in "The Long War." From the President downward, emphasis has been placed on bolstering U.S. national security interests by working with and through foreign counterparts. The U.S. Air Force has assumed the leadership role to develop the aviation capacity and capability of selected partner nations (PN). The key assets to accomplishing this objective are Air Advisors (AA). The Air Force defines an AA as "an Airman specially trained and educated to apply aviation support and operational expertise to assess, train, advise, assist, and equip PNs in the development and application of their aviation enterprise to meet their national needs, in support of U.S. interests" (Air Mobility Command, 2010a:58).

As the worldwide leader in air mobility capability, Air Mobility Command (AMC) answered this charge in December 2010 via the *AMC Programming Plan 10-01, AMC Building Partner Capacity Unit Activations for Contingency Response Wings at Travis AFB and Joint Base McGuire-Dix-Lakehurst* (Air Mobility Command, 2010b). This document directed the rapid creation of two Mobility Support Advisory Squadrons (MSAS) and aligned one under each of two U.S.-based Contingency Response Wings (CRW). The MSAS were assigned commanders in April 2011, which marked their official activation. As designed, each of these squadrons is assigned specific geographic areas in which to operate. The squadrons will supply AAs in order to further the aviation enterprise development of specified PNs. The 818th MSAS is aligned to work with U.S.

Africa Command (USAFRICOM) and its air component, 3rd Air Force (AFAFRICOM). The 571st MSAS is aligned with U.S. Southern Command (USSOUTHCOM) and its air component 12th Air Force (AFSOUTH).

While initial, broad-based guidance was drafted and published in order to assist timely unit stand-up actions, in-depth guidance necessary for success is still being developed. One key element that has not been addressed pertains to assessment. Specifically, no direction was given on how the MSAS are to measure their effectiveness at conducting the Building Partner Capacity (BPC) mission. What makes this requirement even more difficult is that establishing, building, and fostering relationships with PNs is time-consuming. Furthermore, it is difficult to quantify expected outcomes such as trust, good-will, and positive feelings towards the U.S. This makes measuring outcome, at present, almost entirely subjective in nature.

Therefore, this qualitative research effort used a Delphi study to determine what appropriate measurement criteria and reporting mechanism the MSAS could use to track and report unit effectiveness toward BPC. From the data collected, analyzed, and reported, this study proposes that leadership can then make the necessary decisions, at the tactical, operational, and strategic levels, on how to continue with PN engagements via the MSAS. Furthermore, a standardized, realistic set of performance criteria can ensure standardization between the MSAS and give AMC a baseline from which to inspect compliance and mission readiness.

Achieving this goal will be difficult due to the subjectivity and challenge of quantifying desired effects. Furthermore, the tactical-level actions each MSAS takes with their assigned PNs must be able to be conveyed in some manner that demonstrates

the effectiveness and progress of the overall engagement. This is important since these outcomes are tied to operational and strategic-level end states as determined by AMC, the geographic combatant commander (GCC), and up to the President. If done correctly, outcomes may garner tangible results such as country access, overfly rights, and coalition support during humanitarian assistance/disaster response activities. The data obtained through this study will form recommendations that will be offered to Air Force decision makers at the Headquarters, Major Command (e.g. Air Mobility Command), and wing levels in order to shape the future of this mission.

II. Literature Review

The documents reviewed for this study can be broken into the following categories:

National Guidance

National-level references such as the 2010 *National Security Strategy*, 2008 *National Defense Strategy*, 2011 *National Military Strategy*, and 2006 and 2010 *Quadrennial Defense Review Reports* were referenced to provide the background and overall purpose of the BP/ BPC initiative. Additionally, Joint Service Doctrine was also studied in order to gain further understanding on how Security Cooperation programs and initiatives have been designed and implemented.

Air Force Guidance

In order to get senior Air Force leader interpretation and subsequent direction on how to support BP, the following service-level documents were examined: Air Force Doctrine Document (AFDD) 3-22, *Foreign Internal Defense*, AFDD 2-3, *Irregular Warfare, Air Force Global Partnership Strategy, The 21st Century Air Force Irregular Warfare Strategy, AMC Air Mobility System Building Partnerships Concept of Employment, and Building Partnership Capacity Trifold Pamphlet*.

Analysis Reports, Research Papers, Journal and Media Articles

To gain further understanding of the topic and to see what areas of BP have previously received interest and study, the author reviewed several RAND analysis reports, various Intermediate and Senior Developmental Education graduate research

papers, as well as various public news and journal articles. Additionally, non-military based articles were referenced to gain related insight from the Health Care community, religious community, and other governmental agencies such as the Peace Corps.

National Guidance

> *Whenever advisable, the United States will work with or through others: enabling allied and partner capabilities, building their capacity and developing collaborative mechanisms to share the decisions, risks and responsibilities of today's complex challenges. The United States must work with new international partners in less familiar areas of the world to reduce the drivers of instability, prevent terrorist attacks or disrupt their networks, to deny sanctuary to terrorists anywhere in the world, to separate terrorists from host populations and ultimately to defeat them.*
> *- Building Partnership Capacity: QDR Execution Roadmap, 2006:5-6.*

From the strategic-level down to the tactical-level of our government, direction has been given on how the U.S., through its various governmental departments, must act to bolster national security. This direction is abundantly clear within the Department of Defense as evidenced by the multiple documents published. President Obama, through the *2010 National Security Strategy*, declared, "Our military will continue strengthening its capacity to partner with foreign counterparts, train and assist security forces, and pursue military-to-military ties with a broad range of governments" (Obama, 2010:11). The *2008 National Defense Strategy* (NDS) states:

> …arguably, the most important military component of the struggle against violent extremists is not the fighting we do ourselves, but how well we help prepare our partners to defend and govern themselves…We will support, train, advise, and equip partner security forces to counter insurgences, terrorism, proliferation, and other threats. We will assist other countries in improving their capabilities through security cooperation, just as we will learn valuable skills and information from others better situated to understand some of the complex challenges we face together (Department of Defense, 2008:8, 15-16).

Furthermore, *Department of Defense Directive 5100.1, Functions of the Department of Defense (DOD) and Its Major Components,* states that shaping activities and improving relationships with Partner Nations (PNs) are significant to the DOD (Department of Defense, 2010a). In January 2012, in support of the President's new strategic direction for the Department, Secretary of Defense Panetta published new strategic guidance via the *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense.* The guidance states that "…strengthening alliances and partnerships across all regions" is a requirement for sustaining U.S. global leadership (Department of Defense, 2012). Finally, the *2011 National Military Strategy* conveys, "We will strengthen and expand our network of partnerships to enable partner capacity to enhance security. This will help reduce potential safe-havens before violent extremism can take root" (Department of Defense, 2011:6).

Air Force Guidance

In support of this national focus area of building partnerships (BP) with PNs, the Secretary of the Air Force (SECAF) and Chief of Staff (CSAF) initially published the *Air Force Global Partnership Strategy: Building Partnerships for the 21st Century* in 2008 as a means to outline the service's approach. In the Foreword section of the document, the Air Force leadership highlights that "the USAF must build…relationships with partner air forces of all economic means and available resources…[as well as consider] collaborating with advanced nations to assist less capable nations…when mutually beneficial" (Donley and Schwartz, 2008:i). To further solidify the importance of this initiative, the SECAF and CSAF via the *2009 U.S. Air Force Posture Statement* added

BP as one of the 12 Air Force Core Functions (Donley and Schwartz, 2009). Most recently, in recognition of the need to adapt to a rapidly changing strategic environment, AF leadership published the *2011 U.S. Air Force Global Partnership Strategy* (AFGPS) to supersede the 2008 document. This latest document outlines the service's new strategy to apply ends, ways, and means towards AF security cooperation and combatant commander support efforts. It emphasizes, "We can't have Global Vigilance, Reach, and Power for America without Global Partnerships" (Donley and Schwartz, 2011). To that end, the U.S. Air Force has assumed "the leadership role in developing PN aviation capacity worldwide in support of U.S. security interests" (Air Mobility Command, 2010a:11).

Development of Building Partnership/Building Partner Capacity Mission

> *BP affords the Air Force low cost options that can significantly enhance the security of the U.S. By appropriately utilizing its capabilities and/or changing existing processes/procedures the USAF can optimize its ability to train and educate partners. Air mobility goes beyond the sum of its parts – it often acts as the catalyst in political, economic, and military arenas. Beginning with a thorough initial assessment of capabilities and needs for PNs, AMC selects the appropriate ways and means for building, sustaining, expanding, and guiding partnerships. Concepts of operations, interoperability, required training, security, logistics, and maintenance and communication infrastructure are necessary to support AMS development for PNs.*
> *- Air Mobility Systems Building Partnerships Concept of Employment, 2010a:15.*

As a subset of Irregular Warfare (IW), Building Partnership (BP) is the ability to set the conditions for interaction with partner, competitor, or adversary leaders, military forces, or relevant populations by developing and presenting information and conducting activities to affect their perceptions, will, behavior, and capabilities (Department of the Air Force, 2010). The *U.S. Air Force's Concept of Employment (CONEMP) for Institutionalizing Building Partnerships Into Contingency Response Forces* further

defines Building Partnership Capacity (BPC), a subset of BP, as "the ability to assist domestic and foreign partners and institutions with the development of their capabilities and capacities—for mutual benefit—to address U.S., national or shared global security interests" (Department of the Air Force, 2010:3).

Therefore, the AF goal is to assist PNs to create an aviation enterprise—the total of a nation's aviation capability and capacity—that contributes to its security, its government's legitimacy and stability, and its ability to combat terrorist networks, drug cartel, and criminal organizations in order to prevent lethal threats from originating within weak or struggling states (Livingston, 2011). To accomplish this, the *USAF Global Partnership Strategy* (Donley and Schwartz, 2008) directed the AF BP program to target four strategic end states:

- Establish, sustain, and expand global partnerships that are mutually beneficial.
- Provide global partners the capability and capacity necessary to provide for their own national security.
- Establish the capacity to train, advise, and assist foreign air forces, while conducting partnership activities using USAF Airmen with the appropriate language and cultural skills.
- Develop and enhance partnership capabilities to ensure interoperability, integration, and interdependence, as appropriate.

These key end states, as highlighted in this document, emphasize the fact that "…aviation is a strategic asset to all sovereign nations" (Donley and Schwartz, 2008:2). This versatile capability provides benefits to both military and civilian uses. Furthermore, aviation resources can accomplish critical roles for political administration, security, and social needs during humanitarian or natural disasters as well as contribute to the economic growth and development of a nation (Donley and Schwartz, 2008). To

further this proposition, the CSAF assembled the Irregular Warfare Tiger Team (IWTT) in 2009 to "determine the U.S. Air Force's irregular warfare (IW), building partnerships (BP), and air advisor (AA) requirements, gaps, and shortfalls" (Department of the Air Force, 2009:1). During April 2009, two teams traveled to all the air components and conducted interviews with the people responsible for satisfying U.S. Air Force component requirements for IW and BP. The Tiger Team's tasks were to provide doctrine, organization, training, materiel, leadership, personnel, and facilities (DOTMLPF) solutions within the USAF to meet combatant commander (CCDR) demands and to make recommendations for incorporating IW, BP, and AA requirements into the component's designed operational capability (DOC) statements (Department of the Air Force, 2009). The underlying premise that guided the team was the ardent belief that, "the security, stability, and economic development of a nation in the early 21st century are inextricably linked to its aviation resource capacity and capability" (Department of the Air Force, 2009:ii).

Today, the *2011 AFGPS* highlights that the "USAF must actively partner with the global community of airmen to further U.S. and partner nation mutual interests in air, space, and cyberspace… the USAF acknowledges that it must not limit itself to the relationships of the past and must broaden its scope to include partnerships for new situations and circumstances" (Donley and Schwartz, 2011:6). In order to accomplish this task, Donley and Schwartz (2011) have tasked the AF to focus security cooperation efforts to build the capabilities of at-risk and underdeveloped PNs so that they are able to defend themselves against the threats of today and tomorrow. Furthermore, "…all military and defense related activities with a foreign partner can range from efforts

generating goodwill and access to assisting partner nations in building their capabilities to defend themselves" (Donley and Schwartz, 2011:6). Specifically, in accordance with the *2011 AFGSP* (2011), the USAF seeks to:

- Employ USAF security cooperation activities in support of coalition efforts to counter violent extremism.
- Collaborate with partner nation Air Forces to deter and defeat aggression.
- Strengthen international and regional security.
- Shape the future coalition Air Force.

While these outcomes are the desired end-states for AF security cooperation efforts, the ways or methods to achieve them are through a variety of military capabilities. Air Advisors embody a versatile option that can be utilized to deliver key AF core functions.

Development of 21st Century Air Advising

> *[T]he Department must be prepared to grow a new team of leaders and operators, who are comfortable working in remote regions of the world, dealing with local and tribal communities, adapting to foreign languages and cultures, working with local networks, operating alongside or within United Nations organizations, and working alongside non-governmental organizations to further U.S. and partner interests through personal engagement, persuasion and quiet influence – rather than through military force alone.*
> *- Building Partnership Capacity: QDR Execution Roadmap, 2006:6.*

Air Advisors (AA) are the key asset to accomplishing the aforementioned objective. The *USAF Air Advising Operating Concept* defines an AA as "An Airman specially trained and educated to apply aviation expertise to assess, train/educate, advise, and assist foreign personnel in the development and application of their aviation resources to meet their national needs, in support of

U.S. interests" (Department of the Air Force, 2012b:10). While advising is not a new activity to Airmen, it has historically been employed during conflicts by combat aviation advisors from within the Special Operations community, particularly in IW and in counter insurgency (COIN) operations. However, the knowledge and experience gained was often lost after "draw downs or conversions after each conflict" (Read, 2007:42). To prevent having to relearn the essential requirements of effectively working with PNs, the AF sought to widen its pool of AAs by using its general purpose force (GPF).

As stated by the SECAF and CSAF in 2009 *The 21st Century Air Force Irregular Warfare Strategy,* "The Air Force will establish a permanent GPF advisory capability for steady-state, protracted IW requirements to complement existing SOF advisory capabilities" (Department of the Air Force, 2009:10). In order to develop a trained corps of AAs, the CSAF in 2007 directed the Air Education and Training Command (AETC) to formally establish a training venue for AAs in order for them to acquire the necessary individual, team, and cultural and language skills prior to deployment. As a result, the Air Advisor Academy was founded at Joint Base McGuire-Dix-Lakehurst, New Jersey. Furthermore, in 2009, AETC was appointed as the Core Function Lead Integrator responsible for developing current, relevant instruction for those Airmen selected to fulfill AA roles.

As highlighted in the *AFGPS* (Figure 1):

> The USAF continues to develop a GPF Air Advisor program to help build global air, space, and cyberspace partnerships in support of combatant commanders' SC and irregular warfare activities. GPF Air Advisors will be prepared both to operate independently and in concert with other Services (in permissive

environments) and to augment AFSOF CAA and other SOF forces (in uncertain and hostile environments) (Department of the Air Force, 2011:38).

Figure 1. Partner Nation Air Mobility System Development

Source: *Air Mobility System Building Partnerships Concept of Employment*, 2010a

Importance of Mobility Airmen to BP/BPC

> *"The BP mission of AMC is to conduct operations that will train, advise, and assist PNs in the development of an Air Mobility System (AMS)."*
> *- Air Mobility Systems Building Partnerships Concept of Employment, 2010a:15.*

As the worldwide leader in air mobility capability, Air Mobility Command (AMC) answered this charge in December 2010 via the *AMC Programming Plan 10-01, AMC Building Partner Capacity Unit Activations for Contingency Response Wings at*

Travis AFB and Joint Base McGuire-Dix-Lakehurst (JB MDL) (Air Mobility Command, 2010b). This document directed the rapid creation of two Mobility Support Advisory Squadrons (MSAS) and aligned one under each of two U.S. based Contingency Response Wings (CRW)—615 CRW at Travis AFB, CA and 621 CRW at JB MDL. The MSAS were assigned commanders in April 2011 which marked their official implementation. As designed, each of these squadrons were assigned over 70 personnel from nearly 25 Air Force specialties to provide the requisite functions to establish, sustain, or expand a PN's aviation enterprise and infrastructure (Air Mobility Command, 2011c). Core functions, under the umbrella of Agile Combat Support, include mobility operations, air field operations, logistics, fuels, vehicle maintenance, air transportation, supply, civil engineering, electrical power production, communication, and security forces. These selected skill sets were placed into two teams (unit type codes) to support a capabilities-based approach which allows paring and tailoring of team size in order to employ the right-sized capability required to accomplish the BPC mission.

Concept of MSAS Employment

The MSAS is assigned specific areas in which to operate. Each squadron serves as AAs in order to further the aviation enterprise development efforts of PN's. The 818th MSAS, based at JB MDL, NJ, is aligned to work with U.S. Africa Command (USAFRICOM) and its air component, 3rd Air Force (AFAFRICOM), and the 571st MSAS, based at Travis AFB, CA, is aligned with U.S. Southern Command (USSOUTHCOM) and its air component 12th Air Force (AFSOUTH). The MSAS AAs are charged with preparing for and conducting five basic activities as required:

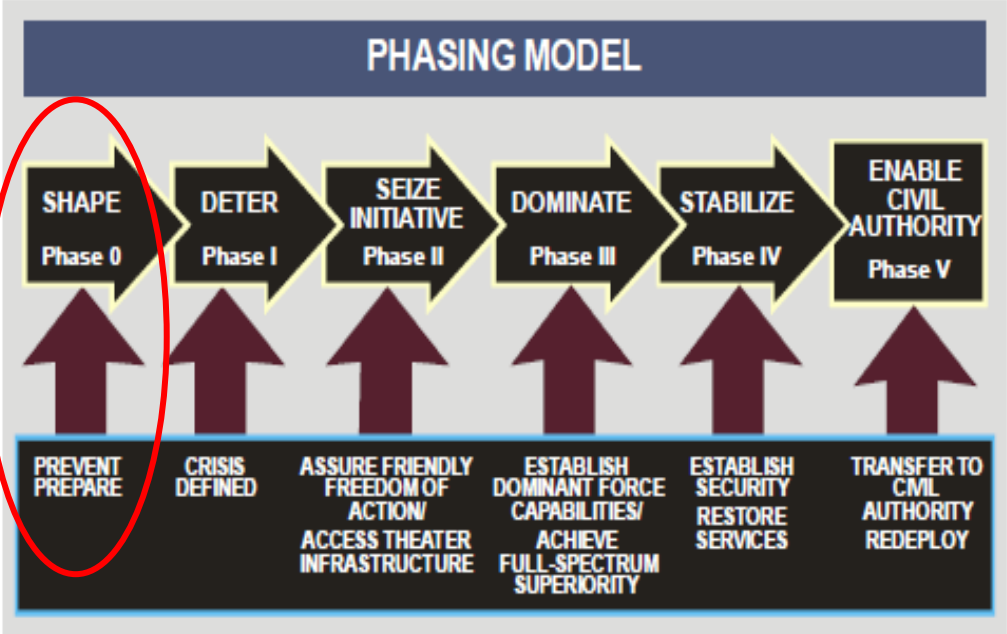
- Assess
- Train
- Advise
- Assist
- Equip

Counter to direct military action that occurs in response to a conflict or crisis, the approach used by the MSAS AAs consists of indirect action and international relationship building that is focused on preventing the likelihood of military conflict (Figure 2). Particularly, the AAs target their PN engagements to take place during *Phase 0 – Shape* operations (Figure 3). This particular phase seeks to prevent a crisis by dissuading potential adversaries and to assure or solidify relationships with friends or allies, thereby preempting military intervention (Joint Publication 5-0, 2011b).

Figure 2. Irregular Warfare Approaches

Source: Livingston, 2011

Figure 3. Phasing Model



Source: Air Force Doctrine Document 2-3, *Irregular Warfare*, 2007

Joint Publication 3-0, *Joint Operations*, further explains that *Shape* activities:

> …are executed continuously with the intent to enhance international legitimacy and gain multinational cooperation by shaping perceptions and influencing adversaries' and allies' behavior; developing allied and friendly military capabilities for self-defense and multinational operations; improving information exchange and intelligence sharing; providing U.S. forces with peacetime and contingency access; and mitigating conditions that could lead to a crisis (Joint Publication 3-0, 2011a:V-8).

Tasking Process

The essential link to realizing the potential gains AAs can produce is the tasking process. As outlined by AMC in the 2010, *Air Mobility Systems Building Partnerships Concept of Employment (AMS CONEMP)*, requests for BP activities can be initiated in several ways. Whether from a PN through their associated U.S. Embassy or from

Headquarters (HQ), U.S. Air Force, the Geographic Combatant Commander (GCC) must formally validate and request an AA tasking.

Prior to the request, the GCC must coordinate with a variety of agencies such as the Department of State, U.S. Embassy in the PN, other GCCs, Secretary of the Air Force/International Affairs office, and Service Components to verify if the request is in line with the over-arching U.S. strategy, theater, and regional objectives (AMS CONEMP, 2010). If it is, it is validated and sent to the Service Component to fill via its assigned CRW or Contingency Response Group (CRG).

However, if the Service Component is unable to fulfill the request, the GCC will route its request, via a request for forces (RFF), to U.S. Transportation Command (USTRANSCOM). TRANSCOM will review and validate the request and forward to AMC for coordinating. AMC in turn will task the appropriate CRW, either 615 CRW or 621 CRW, to accomplish the tasking via their MSAS. (Note: AMC will have only one CRW, the 621 CRW, as of 29 May 2012.) Should the selected CRW be unable to fulfill the tasking, AMC can task another BP-capable force from outside the CRW or seek assistance from the Air National Guard or Air Force Reserve (AMS CONEMP, 2010).

Once tasked, the MSAS will work with their Service Component and the GCC to determine the type of support and timeline required. Through continuous communication and coordination, the MSAS will assemble the appropriate sized team to deploy forward and initially assess the PN's capability and capacity. Based off their findings, the MSAS will further develop an engagement plan to achieve the GCC's desired outcome and coordinate further access to the PN through the GCC and appropriate Embassy in order to put the plan to work.

Through each visit, the MSAS seeks to establish and cultivate a mutually beneficial, lasting relationship with each of their PN military counterparts while simultaneously seeking to contribute to the accomplishment of the GCC's Theater Security Cooperation Plans.

Anticipated Benefits of BP/BPC

By seeking to positively influence activities in this phase, preventative programs are more efficient and effective than reactive efforts because they achieve the same goals with fewer assets and less commitment (Teichert, 2009). Additionally, by creating programs to train PNs to establish and maintain their own security, it reduces U.S. commitment of time, effort, money, and resources. Supporting security cooperation and foreign internal defense programs by assisting, advising, training, and equipping can provide capabilities early in a conflict when the threat is smaller, which can serve to strengthen legitimate governments and spread democratic ideals (Teichert, 2009).

Furthermore, a RAND Corporation study highlighted that "many precautionary interventions can be carried out for the price of a single remedial one" (Vick et al., 2006:72). According to Teichert (2009), the RAND study further claimed that the cost savings derived from preventing problems instead of intervening after problems have expanded is so substantial that these programs are worth pursuing even if they prevent an American intervention in one single major conflict. If preventative efforts fail, and U.S. military action is required, benefits from PN relationships like country access and overfly rights may provide necessary capability to intervene and limit overall time, effort, and resources expended.

Challenges

While the potential benefits and capabilities AAs can bring to bear are numerous, there are inherent challenges the MSAS face as they continue to mature. They include:

- Lacking a universally recognized and utilized lexicon. In reference to working with PNs, common, interchangeably used terms include: Security Cooperation, Foreign Internal Defense, Security Assistance, Security Force Assistance, Building Partnership, Building Partnership Capacity, etc.
- Making Department of State, Embassy Country Teams, and Geographic Combatant Commanders and their component staffs aware of the MSAS mission.
- Managing expectations; relationship building with PNs takes time.
- Developing a "whole of government" approach--coordinating between U.S. government entities to ensure organized, deliberate efforts are made.
- Pending budget cuts.
- Lacking an AF doctrine document for BP/BPC; an initial document was scheduled and initially drafted but was abandoned.
- Developing processes as they go since there is not a GPF equivalent to the MSAS.
- Neither measuring criteria nor a reporting mechanism has been developed for MSAS to convey their capabilities and progress with PNs.

While current guidance, as highlighted above, has stressed the urgency and long-term benefits for undertaking BP/BPC, an ongoing challenge inherent with building relationships is measurement. Establishing, building, and fostering relationships with PNs are time-consuming endeavors and lengthy in nature. Furthermore, quantifying and conveying desired outcomes of qualitative elements like trust, good-will, and positive feelings towards the U.S. is challenging, which makes measurement of outcome very subjective. The next chapter will outline the methodology this study used to help bridge the existing gap between measuring and reporting BPC activities.

III. Methodology

In addition to literature reviews, this study employed other research tools such as interviews and personal communication via voice and computer medium. The information obtained from these methods was used to develop the foundation of the study. Additionally, to get to the crux of the issue, a Delphi study was conducted utilizing a pool of military and non-military subject matter experts to serve as the study panel. The method used a series of e-mailed questionnaires as the tool for the panel to exchange ideas and identify an initial set of performance objective criteria the MSAS could use to measure their efforts and report their performance towards meeting BPC goals. Because there is no higher headquarters sanctioned method and mechanism yet, and the delivery date is unknown, measurement criteria are vital to ensure data and feedback obtained during mission preparation and execution are not lost.

The Delphi Method

The Delphi method originated from research conducted by the RAND Corporation in the 1950s. While it was initially developed as a decision making tool for scientific and technological forecasting (Sackman, 1974), the method is used in many different environments to obtain the opinions of experts. It is a "widely used and accepted method for achieving convergence of opinion concerning real-world knowledge solicited from experts within certain topic areas (Hsu and Sandford, 2007:1). It is a flexible and iterative group communication process which is used to collect and distill the anonymous judgments of experts using a series of questionnaires interspersed with feedback (Skulmoski et al., 2007). The questionnaires are designed to clarify problems,

identify opportunities and solutions, or develop forecasts (Skulmoski et al., 2007). The process continues until consensus of opinion is developed concerning a specific topic (Hsu and Sandford, 2007).

According to Linstone and Turnoff (2002:3), the Delphi Study is "a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem." Stated differently by one of the originators of this method, Delphi is based on the adage that "'two heads are better than one,' or more generally, 'n- heads are better than one'" (Dalkey, 1972:6).

Based on the literature reviewed, the Delphi process can be continuously iterated until consensus is reached. While there is no standard indicator for consensus among panelists, Schiebe et al. (2002:271) identify that in most Delphi studies "consensus is assumed to have been achieved when a certain percentage of the votes fall within a prescribed range—for example, when the interquartile range is no larger than 2-units on a 10-unit scale." Furthermore, consensus is oftentimes reached after three iterations (Hsu and Sandford, 2007).

As summarized by Nic Underhill (2004), the basic way of conducting a Delphi study is:

> **Step 1**: The facilitator develops an initial questionnaire and distributes it to the panel.

This step initiates the first round and usually begins with an open-ended questionnaire that seeks to solicit specific information about a content area from the Delphi subjects (Hsu and Sandford, 2007).

> **Step 2**: Panelists independently generate answers for the questionnaire and return it to the facilitator.

The answers the panel provides are reviewed and categorized and serve as the basis for the second questionnaire.

Step 3: The facilitator summarizes the responses to the first questionnaire and develops a feedback report along with the second set of questionnaires for the panelists.

This step initiates the second round. Based on the inputs received, the facilitator categorizes the inputs and requests that the panel rank or rate the importance of the categories formed based off of their initial answers. Furthermore, the facilitator asks the panel members to review their round one responses to ensure their opinions were properly captured, to adjust their answers as required, and to provide additional feedback.

Step 4: Referencing the feedback report, panelists independently evaluate earlier responses and independently vote on the second questionnaire.

Panelists are given initial insight into answers provided by the entire panel and given the opportunity to refine, retract, or expand their previous answers. Additionally, they may be asked to "rate or rank-order items based off the responses to the first questionnaire in order to establish preliminary priorities among items" (Hsu and Sandford, 2007:2-3).

Step 5: The facilitator summarizes the responses to the second questionnaire and develops feedback report along with the third set of questionnaires for the panelists.

This step initiates the third round. Similar to round two, the facilitator categorizes the inputs and requests the panel to rank or rate the importance of the categories formed based on the round two answers. Furthermore, the facilitator asks the panel members to review the round two responses to ensure their opinions were properly captured, to adjust their answers as required, and to provide additional feedback.

Step 6: Referencing the feedback report, panelists independently evaluate earlier responses and independently vote on the third questionnaire.

Panelists are provided the collective answers from round two and given the opportunity to adjust their previous answers. Also, panel members are asked to comment on the emerging collective perspective. If consensus is reached, and, ultimately, the research question is answered, the process stops.

Step 7: The facilitator develops a final summary report and sends it to the group for a final review.

This step initiates the fourth and final round. The facilitator analyzes and summarizes the third round inputs. Then, the information is returned to the panel for a final review. This allows for thanking the panelists for their participation and allows for closure.

While many purely qualitative studies use one or more of the most common qualitative research methods such as participant observation, in-depth interviews, and focus groups (Mack et al., 2005), the researcher's advisor recommended that the Delphi technique may be better suited for this study. This led to a review of a variety of journals, research papers, and books published on the Delphi method and its use as compared to other traditional survey methods. Due to the flexibility of design and execution, the Delphi technique was deemed the best tool. Since this method doesn't require face-to-face interaction, qualified panel members from a variety of backgrounds and experience from around the globe can participate. This fact, coupled with anonymity and equally weighted responses, enhances the likelihood of honest and open perspectives exchanges, idea generation, and potential solutions to existing or potential questions or issues.

There are, however, some challenges associated with the Delphi technique. It often has poor or declined response rates to each questionnaire and subsequent difficulty obtaining robust feedback (Hsu and Sandford, 2007). The quality of outcome is dependent on the experiential knowledge of the panel (Powell, 2003), and it is time consuming to conduct. Figure 4 shows strengths and limitations of a Delphi.

Figure 4. Delphi Strengths and Limitations

Strengths	Limitations
• Rapid consensus. • Participants can live anywhere in the world. • Avoids group-think • Flexible with no set meeting times, only an agreeable deadline. • Information can be very powerful in predicting future trends and events. • Gain consensus on a large scale (provincial to national to global). • Cost effective. • More detailed than typical survey responses.	• Quality of responses depend on panel. • Researchers must choose participants selectively. • Time consuming. This process is rarely used by researchers/agencies. • Panel may lose interest in topic if consensus is not reached within reasonable time. • Panel may lose cohesiveness overtime. • Interactions between participants and researcher are not face-to-face, depending on subject matter this fact can hinder or assist in information gathering.

Source: Skagfeld and Derbyshire, n.d.

By using the opinions of experts who offer a mixture of relevant perspectives and experiences, the panel's collective voice can help to identify plausible solutions to the research questions: 1) What minimum **criteria** would you recommend the MSAS use to measure their effectiveness at accomplishing their Building Partnership Capacity mission? and 2) What **reporting mechanism** would you recommend the MSAS use to

track and report their unit effectiveness? The next chapter will describe the application of Delphi methodology and highlight the results obtained from the study.

IV. Analysis and Results

Application of Methodology

Prior to accomplishing Step 1, the issue was properly formulated and framed. There were a variety of issues that were being simultaneously worked by each MSAS. These included obtaining facilities, personnel, funding streams, developing an organizational structure, tasking process, and advertising their existence and capabilities. However, the researcher's focus narrowed after receiving the following input from the 818 MSAS director of operations:

> We could use some help on how to measure success in the short and midterm in the BP/BPC mission--a mission that is inherently long-term. That's going to be a big challenge for us as we try to show our capabilities to an Air Force where everything revolves around metrics and impact (P. Smith, personal communication, July 28, 2011).

So, after considering the sum of the issues, a research plan was devised on how to best answer that question. Then, dialogue continued with the MSAS. This led to the exchange of names and offices of other subject matter experts at Headquarters Air Force (HAF), Air Mobility Command (AMC), Air Force Special Operations Command AFSOC), and Air Education and Training Command (AETC) who were in-turn contacted and consulted. In addition to the information garnered from these contacts, the issue was further refined by conducting a more in-depth literature review.

Due to a lack of established standards the MSAS could reference, it was necessary to find appropriate criteria to constitute, measure, and report success. Since the MSAS mission is largely relationship-oriented, a variety of reports and related sources of data from organizations such as USAID, the Peace Corps, and various non-governmental organizations that work to form relationships within communities both within the U.S.

and abroad were referenced. From the data obtained, it was confirmed that observer subjectivity contributes to a long-standing challenge with finding ways to quantify or report the perceived effectiveness in partner engagements. This substantiated the inherent difficulty that extends to the MSAS as well. Furthermore, contact was made with persons from within AFSOC and former members of the 6th Special Operations Squadron, the most experienced unit of aviation advisors within the AF, regarding how the unit tracks, measures, and reports their PN engagements. Their inputs verified that formalized measurement criteria are non-existent. The unit plans and executes its PN engagements with pre-determined outcomes in mind as dictated by their tasking authority. Following the completion of their PN engagement, the primary tool used to report unit actions, efforts, and outcomes are after action reports. As a result of the variety of information obtained, the primary research questions were developed, which served as the basis for the Delphi study. With this foundation in place, the next, perhaps most essential action was to assemble a panel of experts.

Selection of Experts for the Panel

Skulmoski et al., (2007:3) state that "selecting research participants is a critical component of Delphi research since it is their expert opinions upon which the output of the Delphi is based." Hsu and Sandford (2007:3) contend that "choosing the appropriate subjects is the most important step in the entire process because it directly relates to the quality of the results generated." Furthermore, Gordon (1994:6) claims that the "key to a successful Delphi study lies in the selection of participants." While proper panel selection is essential to the Delphi study, literature review has identified that there is no

standard list of criteria to use when selecting Delphi subjects. After reviewing several sources, Skulmoski et al.'s (2007) criteria were used. Their view purports participants should meet the following four requirements to be considered "experts": 1) knowledge and experience with the issues under investigation, 2) capacity and willingness to participate, 3) sufficient time to participate, and 4) effective communication skills (Skulmoski et al., 2007). Additionally, Scheele proposes that there are three types of panelists that help create a successful mix of panelists. These are "stakeholders, those who are or will be directly affected; experts, those who have an applicable specialty or relevant experience; and facilitators, those who have skills in clarifying, organizing, synthesizing, stimulating" (Linstone and Turoff, 2002:65).

Based on the above criteria, the researcher targeted persons in key positions with BPC and/or AA experience from HAF, AMC, AETC, AFSOC, and the CRWs. For a combat support perspective, experts included two currently deployed Air Force AAs working with the Afghan National Air Force and an Airman that served on two 365-day Joint Expeditionary Taskings working with the Afghan National Army and Police. Other panelists included a recently retired State Department diplomat that served a year in Iraq as an advisor on a Provincial Reconstruction Team and a School of Advanced Air and Space Studies graduate who recently published literature on this topic. A total of 20 individuals were selected to participate in the study, and all accepted.

Delphi Study Execution

Step 1

With the Delphi panel in place, the initial questionnaire was drafted. The research questions were developed by the researcher in consultation with BP/BPC subject matter experts and Air Force Institute of Technology (AFIT) faculty research advisor. As recommended by Linstone and Turoff (2002:89), in order to eliminate potential confusion, "each questionnaire should be pretested on coworkers who have not been involved in the design." The final draft of the questionnaire was pretested by the researcher's classmates, AFIT research advisor, and select experts and was deemed clear, concise, and effective towards obtaining valuable panel responses.

The questionnaire (Appendix A) along with an MSAS tri-fold depicting the unit and its mission (Appendix B) was personally sent via e-mail to each of the 20 panel members. While there were other distribution means available, current literature contends that e-mail delivery is highly effective. Per Sheehan and McMillan (1999), e-mail tends to: 1) have higher response rates over post mail, 2) promotes faster response times, and 3) respondents seem more willing to reply to open-ended questions. This initiated Round 1.

Step 2

Ten duty days were allotted for the Round 1 questionnaire to be completed by the panel. Of the questionnaires distributed, 19 of 20 were returned within the timeframe set and resulted in a 95% response rate. The last questionnaire was returned after the cut-off and not included in the first round results.

Step 3

From the responses received, a content analysis was conducted whereby the panel's demographic detail was analyzed (Table 1). Of the 20 panel members, four served as combat aviation advisors with the 6th Special Operations Squadron (6 SOS), three served as AAs in Iraq and Afghanistan, four are currently serving as AAs (two in Afghanistan, one for Africa, and one for South America), two served as advisors to ground forces in Iraq and Afghanistan, one served as an Air Attaché, and one served as a Security Assistance Officer. The remaining five panelists serve as strategic policy developers or are in education and training roles. Of note, one of the educators is a retired political/military affairs strategist who also directs the AF Special Operations School's Building Partner Aviation Capacity Seminar.

Table 1. Panel's Demographic Detail

Position	Number
Combat Aviation Advisor	4
Air Advisor (AFG & IRQ)	7
Ground Advisor (AFG & IRQ)	2
Air Attaché	1
Security Assistance Officer	1
Policy, Education & Training	5
Total	**20**

Collectively, the panelists who have served in an advisory capacity, to include the Air Attaché and Security Assistance Officer, have amassed 400 months, or over 33 years, of advising time to PNs. Due to the varying and valuable perspectives each of the panel

members offers, the content analysis team determined that all respondents' inputs would receive the same weight throughout the study.

From the inputs received, a content analysis was conducted and a master list of 66 criteria was developed. The group's responses were categorized into seven main subject areas containing 44 criteria for the first research question and six main subject areas containing 22 criteria for the second research question.

The results from the first questionnaire were summarized and presented to the panel to provide feedback and set the stage for the next round. The criteria were arranged from highest percentage of mentions to lowest percentage (Table 2). This was the basis for the second Delphi questionnaire.

Table 2. Categorized Responses and Frequency

Original question: What **minimum criteria** (i.e. performance objectives, key indicators, etc.) would you recommend the MSAS use to measure their effectiveness at accomplishing their Building Partnership Capacity mission?

Category		Frequency
Ability to gain/maintain access to Partner Nation (PN)		**14**
Subcategory:	Ability to assess PN capability/capacity (e.g. access to information, facilities, airfields, equipment, etc.)	9
	Ability to establish key contacts	4
	Ability to make repetitive/persistent visits with PN	1
Actions tied to U.S. National/Strategic policy goals		**8**
Subcategory:	MSAS engagements are in support of U.S. National Security policy, Geographic Combatant Commander (GCC) and Component Plans (e.g. Theater Security Cooperation Plans, Campaign Plans, and Air Force Component Campaign Support Plan) and Ambassador Country Plans (e.g. Mission Strategic and Resource Plan)	6
	MSAS actions are integrated with other U.S. Government agency actions	2
Post-engagement outcomes		**6**
Subcategory:	MSAS contributed towards PN's increased capability and capacity (e.g. response during crisis, stable or increasing mission capability rate, sustained personnel training/task proficiency, interoperability with U.S.) as reported by country team, GCC staff	3
	Extent to which MSAS accomplished policy objectives (e.g. GCC end states met)	2
	Notable improvement/development of key relationships with PN (e.g. within government, military)	1
Ability to further develop MSAS capability		**6**
Subcategory:	Ability to identify and recruit personnel for MSAS (e.g. locate, train, develop, track/place) and seek to establish a formal career track and career progression/promotion opportunities	2
	Ability to develop a training plan for MSAS personnel (e.g. language/culture familiarization, general advising skills, etc.)	2
	Ability to develop internal processes that support MSAS mission (e.g. record keeping for information continuity)	1
	Ability to develop key relationships (e.g. other military services, Department of State, interagency organizations, regional centers like the Marshall Center in Europe)	1
Ability to set realistic goals for PN and provide the tools/skills to attain them		**4**
Subcategory:	Ability to develop plans, milestones, projects the PN can accomplish within realistic timeframe	4

Table 2. Categorized Responses and Frequency (cont).

Category		Frequency
Ability to develop standards of performance		**4**
Subcategory:	Ability to develop achievable Mission Essential Task Lists and performance standards for PN	4
Number of taskings received vs. number of taskings completed		**2**
Subcategory:	Requestor and types of requests received (e.g. Assess, Train, Advise, Assist, Equip)	1
	Frequency and duration/longevity interactions with PN	1
Total		**44**

Original question: What **reporting mechanism** would you recommend the MSAS use to track and report their unit effectiveness?

Category		Frequency
After Action Reports		**5**
Centralized data collection and dissemination systems		**5**
Subcategory:	Make entries into GCC/Air Force Theater Security Cooperation Management Information System (TSCMIS)	4
	Make entries into Joint Lessons Learned Information System (JLLIS)	1
Spreadsheets		**5**
Subcategory:	Track PN progress following MSAS engagements using a numeric rating scale (e.g. 1 - 5 scale: (0) - No capability and (5) - Can complete without assistance	5
Feedback from Surveys		**3**
Subcategory:	Survey results from GCC, Component staff, Country team, PN	3
Formal reports		**3**
Subcategory:	Submit annual/semi-annual reports to GCC, Component staff, and Air Mobility Command through MSAS chain of command	3
Unit Readiness reporting		**1**
Subcategory:	Report unit mission readiness monthly through Status of Resources and Training System (SORTS)	1
Total		**22**

In addition, the panel was offered the opportunity to rate each of the criterion from the first questionnaire by level of importance utilizing a five-point Likert scale, where 5=Very Important, 4=Important, 3=Moderately Important, 2=Of Little Importance,

1=Unimportant (Figure 5). This technique was utilized because other researchers found that the rating-scale method is "quick, easy to comprehend, and psychologically comforting" for participants to perform and, therefore, more likely to result in returned questionnaires (Schiebe et al., 2002:267).

Figure 5. Delphi Questionnaire 2

1) Please review each of the following items identified in Questionnaire #1 as **minimum criteria** the MSAS could use to measure their effectiveness at accomplishing their Building Partnership Capacity mission. If you wish to add comments expressing agreement, disagreement, or clarification concerning an item, please do so in the space provided. Brevity and clarity will facilitate analysis.

2) **Please rate the following items** by level of importance as you perceive them at this time.

5 =Very Important, 4=Important, 3=Moderately Important, 2=Of Little Importance, 1=Unimportant

Criteria	Rating	Comments
Ability to assess Partner Nation (PN) capability/capacity (e.g. access to information, facilities, airfields, equipment, etc.)		
Ability to establish key contacts within PN government, military, etc.		
Ability to make repetitive/persistent visits with PN		

After conducting a review and pretest by classmates and AFIT research advisor, the questionnaire was distributed to the entire panel of experts (Appendix C). This initiated Round 2.

Step Four

Ten duty days were allotted for the Round 2 questionnaire to be completed by the panel. Of the questionnaires distributed, 20 of 20 were returned within the timeframe set, resulting in a 100% response rate.

Step Five

According to Hsu and Sandford (2007:4), "the major statistics used in Delphi studies are measures of central tendency (means, median, and mode) and level of dispersion (standard deviation and inter-quartile range) in order to present information concerning the collective judgments of respondents." For studies using Likert-scales, they recommend the use of median score (Hsu and Sandford, 2007). Gordon (n.d.) advises that the group judgment should be based on the median since it is less influenced by extreme answers. He also states that the spread of opinion should be represented by showing the range of responses, often the interquartile range since it is the range that contains the answers of the middle 50% of the respondents (Gordon, n.d.).

Since the Delphi method seeks to gain group consensus, an indicator must be used. As Keeney et al. (2006) noted, the Delphi literature does not provide a standardized way of selecting measures of consensus. However, Plinske and Packard (2010) identified a common guideline that an IQR of 20% of the rating scale is a conservative but acceptable criterion for determining consensus. Furthermore, Plinske and Packard (2010) recommend analyzing responses for stability as well as consensus. They cite Scheibe et al. (1975) who defined stability as a 15% or less change in responses between rounds. For this study, consensus and stability was determined by following these guidelines. Particularly, based on the use of a 5-point Likert scale, an IQR of 1 or less was an indicator of consensus.

Utilizing this information, a content analysis was conducted on the Round 2 questionnaire responses, and a statistical summary to measure central tendency using the median score and level of dispersion via the IQR was calculated via Microsoft Excel for

each criterion. Based on the group's ratings, consensus was reached on nine criteria for the first research question and four criteria for the second research question (Table 3). The criteria were listed in order based on the arithmetic median and IQR (the range that contains the answers of the middle 50% of the respondents) of the group's responses.

Table 3. Criteria that Consensus was Reached On in Round 2

What minimum **criteria** would you recommend the MSAS use to measure their effectiveness at accomplishing their Building Partnership Capacity mission?	R2 Median	R2 IQR
MSAS contributed towards Partner Nation's (PN) increased capability and capacity (e.g. response during crisis, stable or increasing mission capability rate, sustained personnel training/task proficiency, interoperability with U.S.) as reported by country team, GCC staff	5	1
Ability to develop a training plan for MSAS personnel (e.g. language/culture familiarization, general advising skills, etc)	5	1
Ability to assess PN capability/capacity (e.g. access to information, facilities, airfields, equipment, etc.)	5	1
MSAS engagements are in support of U.S. National Security policy, Geographic Combatant Commander (GCC) and Component Plans (e.g. Theater Security Cooperation Plans, Campaign Plans, and Air Force Component Campaign Support Plan) and Ambassador Country Plans (e.g. Mission Strategic and Resource Plan)	5	1
Ability to develop internal processes that support MSAS mission (e.g. record keeping for information continuity)	4	0.25
Ability to develop achievable Mission Essential Task Lists and performance standards for PN	4	1
Requestor and types of requests received (e.g. Assess, Train, Advise, Assist, Equip)	4	1
Frequency and duration/longevity of interactions with PN	4	1
Ability to develop key relationships (e.g. other military services, Department of State, interagency organizations, regional centers like the Marshall Center in Europe)	4	1

What **reporting mechanism** would you recommend the MSAS use to track and report their unit effectiveness?	R2 Median	R2 IQR
After Action Reports	5	1
Survey results from GCC, Component staff, Country team, PN	4	1
Report unit mission readiness monthly through Status of Resources and Training System (SORTS)	3	0.5
Make entries into Joint Lessons Learned Information System (JLLIS)	3	1

A third Delphi questionnaire included the results from the second questionnaire, which were summarized and presented to provide feedback and a snap-shot of what the group was thinking. Particularly, it contained individual Round 2 scores in relation to the group median and IQR as well as any pertinent comments submitted by the panel. This questionnaire was designed to ask each participant to review the data, to reconsider individual responses as compared to the group's responses, and to support their respective position as required for each criterion—for both items that reached and did not reach consensus (Figures 6 and 7). After conducting a review and pretest by the researcher's classmates and AFIT research advisor, the third questionnaire was approved and distributed to the panel (Appendix D).

Figure 6. Delphi Questionnaire 3a.

Below are the results from the previous questionnaire. Based on the group's ratings, **consensus was reached on 9 criteria** for the first research question and **4 criteria** for the second research question. The criteria below were listed in order based on the arithmetic median and interquartile range (the range that contains the answers of the middle 50 percent of the respondents) of the group's responses. For this study, an interquartile range (IQR) of 1 or less is an indicator of consensus.

Task: First, **review the ratings in left-hand column for both sections**. Then, **select "Yes" or "No" in the box below.** If you select "Yes," then you are finished with this section. If you select "No," please re-rank and comment as needed. Be sure to use the same 5-point rating scale from the last round. Once completed, **continue on to Part 2 – Questionnaire 3**.

I agree with ratings as determined by the group in Round 2:

Yes (Proceed to part 2)	
No (Re-rank, comment, then proceed to Part 2)	

Section 1: The **minimum criteria** the MSAS could use to measure their effectiveness at accomplishing their Building Partnership Capacity mission.

5 =Very Important, 4=Important, 3=Moderately Important, 2=Of Little Importance, 1=Unimportant

Your Rating	Group's Rating/IQR	Criteria	New Rating/Comment(s)
5	5/1	MSAS contributed towards Partner Nation's (PN) increased capability and capacity (e.g. response during crisis, stable or increasing mission capability rate, sustained personnel training/task proficiency, interoperability with U.S.) as reported by country team, GCC staff	
5	5/1	Ability to develop a training plan for MSAS personnel (e.g. language/culture familiarization, general advising skills, etc)	
5	5/1	Ability to assess PN capability/capacity (e.g. access to information, facilities, airfields, equipment, etc.)	

Figure 7. Delphi Questionnaire 3b.

The items below **did not** reach consensus in the last round. Therefore, items in section 1 and 2 below should be reviewed and re-assessed by the group in an effort to reach consensus. The criteria were analyzed using the arithmetic median of the responses given in Questionnaire #2.

Task: Please **re-rate**, as required, the items in **both sections** by level of importance as you perceive them at this time using the 5-point rating scale below. If you want to keep your original rating, please add "No Change" to the comments section. Add brief, concise comments for clarification.

Section 1: The **minimum criteria** the MSAS could use to measure their effectiveness at accomplishing their Building Partnership Capacity mission. There are **8 items** included.

5 =Very Important, 4=Important, 3=Moderately Important, 2=Of Little Importance, 1=Unimportant

Your Rating	Group's Rating from Round 2	Criteria	Group's Comments	New Rating/Comment(s)
3	5	Ability to establish key contacts within PN government, military, etc.	- Relationships are #1 priority. - This does not tell me how effective I am or am not. It is important but does not speak to the question. - No substantial contacts, no mission. - Dept of State responsibility. - Ways (Ends, Ways, Means).	
3	4	Ability to make repetitive/persistent visits with PN	- Key to MSAS mission. - Means (Ends, Ways, Means). - This does not tell me how effective I am or am not. It is important but does not speak to the question. - Establishes/maintains relationships and results in minimal re-learning of requirements/expectations. - This criterion depends entirely on the nature of why return visit is warranted. - Depends on what you want to do with the country.	

Step Six

Ten duty days were allotted for the Round 3 questionnaire to be completed by the panel. Of the questionnaires distributed, 20 of 20 were returned within the timeframe set, resulting in a 100% response rate.

Step Seven

While the Delphi technique is an iterative process that seeks to develop group consensus, much of the Delphi literature purports that, in most cases, three rounds are often sufficient to collect the needed information and obtain consensus (Hsu and Sandford, 2007). Sumsion (1998) also warns that after two or three rounds, participants may become fatigued, and that, after three rounds, stability and consensus should have been reached. Based on this information, the panel's high participation rate, the stability of responses, and the consensus achievement on the majority of criteria, the Delphi study was concluded. After analyzing the third questionnaire, a final report summarizing Round 3 findings was generated and returned to each panel member as a means of closure and to recognize their collective participation to this study (Appendix E).

As in the previous rounds, data analysis was conducted on the responses the panel provided in questionnaire 3. After reviewing the ratings and comments from round 2, the group reevaluated their ratings and reached consensus on 15 of the 16 criteria for the first research question—an increase from nine items in round 2. Consensus was reached for six of the seven criteria for the second research question—an increase from four items in round 2. A total of 76 rating changes were made for the first research question, and 38 rating changes were made for the second research question. Of the panel members, 11 agreed with the collective group ratings from round 2. Finally, the overall number of panel member comments provided was noticeably higher in round 3 than in round 2. Of the panel, 12 members made comments in questionnaire 2, and 18 made comments in questionnaire 3—a 50% increase. A summary of round 2 and 3 median and IQR scores are provided in Table 4.

Table 4. Summary of Median and IQR Scores

What minimum **criteria** would you recommend the MSAS use to measure their effectiveness at accomplishing their Building Partnership Capacity mission?	Round 2 Median	Round 2 IQR	Round 3 Median	Round 3 IQR
MSAS contributed towards Partner Nation's (PN) increased capability and capacity (e.g. response during crisis, stable or increasing mission capability rate, sustained personnel training/task proficiency, interoperability with U.S.) as reported by country team, GCC staff	5	1	5	0
Ability to develop a training plan for MSAS personnel (e.g. language/culture familiarization, general advising skills, etc)	5	1	5	1
Ability to assess PN capability/capacity (e.g. access to information, facilities, airfields, equipment, etc.)	5	1	5	0
MSAS engagements are in support of U.S. National Security policy, Geographic Combatant Commander (GCC) and Component Plans (e.g. Theater Security Cooperation Plans, Campaign Plans, and Air Force Component Campaign Support Plan) and Ambassador Country Plans (e.g. Mission Strategic and Resource Plan)	5	1	5	0
Ability to develop internal processes that support MSAS mission (e.g. record keeping for information continuity)	4	0.25	4	0
Ability to develop achievable Mission Essential Task Lists and performance standards for PN	4	1	4	0.25
Requestor and types of requests received (e.g. Assess, Train, Advise, Assist, Equip)	4	1	4	0
Frequency and duration/longevity of interactions with PN	4	1	4	0
Ability to develop key relationships (e.g. other military services, Department of State, interagency organizations, regional centers like the Marshall Center in Europe)	4	1	4	0
Ability to establish key contacts within PN government, military, etc.	5	2	5	0.5
Ability to make repetitive/persistent visits with PN	4	2	4	1
MSAS actions are integrated with other U.S. Government agency actions (e.g. State Department, U.S. Agency for International Development, other military units)	4	1.25	4	0
Extent to which MSAS accomplished policy objectives (e.g. GCC end states met)	4	2	4	1
Notable improvement/development of key relationships with PN (e.g. within government, military)	4	2	4	0.25
Ability to identify and recruit personnel for MSAS (e.g. locate, train, develop, track/place) and seek to establish a formal career track and career progression/promotion opportunities	4	2	4	1.25
Ability to develop plans, milestones, projects the PN can accomplish within realistic timeframe	4	1.25	4	0.5

Table 4. Summary of Median and IQR Scores (cont.)

What **reporting mechanism** would you recommend the MSAS use to track and report their unit effectiveness?	Round 2 Median	Round 2 IQR	Round 3 Median	Round 3 IQR
After Action Reports	5	1	5	0
Survey results from GCC, Component staff, Country team, PN	4	1	4	0
Report unit mission readiness monthly through Status of Resources and Training System (SORTS)	3	0.5	3	0
Make entries into Joint Lessons Learned Information System (JLLIS)	3	1	3	0
Submit annual/semi-annual reports to GCC, Component staff, and Air Mobility Command through MSAS chain of command	4	1.25	4	1.25
Track Partner Nation progress following MSAS engagements using a spreadsheet and numeric rating scale (e.g. 1 - 5 scale: (0) - No capability and (5) - Can complete without assistance)	4	2	4	1
Make entries into Geographic Combatant Commander (GCC)/Air Force Theater Security Cooperation Management Information System (TSCMIS)	3	1.5	3	1

Analysis of Results

Summary of Group Participation and Outcome

The group's participation throughout the study was noteworthy. Researchers have reported that participation rates from 40% to 75% can be anticipated with the Delphi study (Gordon, n.d.). After three rounds, this study concluded with an overall 98.3% participation rate (Table 4).

Table 5. Summary of Participation

Round	# Invited to Participate	# Participated	Participation Rate (%)
1	20	19	95
2	20	20	100
3	20	20	100
Overall Participation			98.3

The panel members identified 15 criteria they deemed important for the MSAS to consider using to measure their effectiveness at accomplishing their BPC mission

(research question 1). The criteria are listed in Table 6 in order of importance as rated by the group:

Table 6. Research Question 1 Final Criteria

What minimum **criteria** would you recommend the MSAS use to measure their effectiveness at accomplishing their Building Partnership Capacity mission?

5 =Very Important, 4=Important, 3=Moderately Important, 2=Of Little Importance, 1=Unimportant

Criteria	Group Median	IQR	**Criteria**
1	5	0	MSAS contributed towards Partner Nation's (PN) increased capability and capacity (e.g. response during crisis, stable or increasing mission capability rate, sustained personnel training/task proficiency, interoperability with U.S.) as reported by country team, GCC staff
2	5	0	MSAS engagements are in support of U.S. National Security policy, Geographic Combatant Commander (GCC) and Component Plans (e.g. Theater Security Cooperation Plans, Campaign Plans, and Air Force Component Campaign Support Plan) and Ambassador Country Plans (e.g. Mission Strategic and Resource Plan)
3	5	0	Ability to assess PN capability/capacity (e.g. access to information, facilities, airfields, equipment, etc.)
4	5	0.5	Ability to establish key contacts within PN government, military, etc.
5	5	1	Ability to develop a training plan for MSAS personnel (e.g. language/culture familiarization, general advising skills, etc)
6	4	0	MSAS actions are integrated with other U.S. Government agency actions (e.g. State Department, U.S. Agency for International Development, other military units)
7	4	0	Frequency and duration/longevity of interactions with PN
8	4	0	Requestor and types of requests received (e.g. Assess, Train, Advise, Assist, Equip)
9	4	0	Ability to develop internal processes that support MSAS mission (e.g. record keeping for information continuity)
10	4	0	Ability to develop key relationships (e.g. other military services, Department of State, interagency organizations, regional centers like the Marshall Center in Europe)
11	4	0.25	Notable improvement/development of key relationships with PN (e.g. within government, military)
12	4	0.25	Ability to develop achievable Mission Essential Task Lists and performance standards for PN
13	4	0.5	Ability to develop plans, milestones, projects the PN can accomplish within realistic timeframe
14	4	1	Extent to which MSAS accomplished policy objectives (e.g. GCC end states met)
15	4	1	Ability to make repetitive/persistent visits with PN

The panel members identified six criteria they considered important for the MSAS as they track and report their effectiveness at accomplishing their BPC mission (research question 2). The criteria are listed below in Table 7 in order of importance as rated by the group:

Table 7. Research Question 2 Final Criteria

What **reporting mechanism** would you recommend the MSAS use to track and report their unit effectiveness?

5 =Very Important, 4=Important, 3=Moderately Important, 2=Of Little Importance, 1=Unimportant

Criteria	Group Median	IQR	**Criteria**
1	5	0	After Action Reports
2	4	0	Survey results from GCC, Component staff, Country team, PN
3	4	1	Track Partner Nation progress following MSAS engagements using a spreadsheet and numeric rating scale (e.g. 1 - 5 scale: (0) - No capability and (5) - Can complete without assistance)
4	3	0	Make entries into Joint Lessons Learned Information System (JLLIS)
5	3	0	Report unit mission readiness monthly through Status of Resources and Training System (SORTS)
6	3	1	Report unit mission readiness monthly through Status of Resources and Training System (SORTS)

Items of Importance

Of the 16 total criteria identified as minimum criteria the MSAS could use to measure their effectiveness at accomplishing their BPC mission (research question 1), three emerged as decidedly important in that they attained the highest possible median score of 5.0 (5.0=Very Important) and greatest degree of group consensus with an IQR of 0.0:

1. MSAS contributed towards Partner Nation's (PN) increased capability and capacity (e.g. response during crisis, stable or increasing mission capability rate, sustained personnel training/task proficiency, interoperability with U.S.) as reported by country team, GCC staff;

Ratings of importance for this criterion ranged from 4 to 5, and 19 of 20 panelists (95%) rated this item as a 5. One panelist stated, "This is why advisor units exist…to teach others to fish so they can feed themselves." Another panelist stated:

> … The only measure of effectiveness in BPC is to what extent the capabilities and capacities of the PN have been built. If the GCC has given me a mission of building X's capacity to organize and marshal cargo so that X's can be used to effectively execute this task for the purposes of humanitarian support in the region, but I have been unable to do that, then I have failed. My measure of effectiveness is zero no matter how many key contacts I have made. Only in the initial stages of BPC does establishing key contacts have any relevance. However, [with respect to] building capacity, it means little…

2. MSAS engagements are in support of U.S. National Security policy, Geographic Combatant Commander (GCC) and Component Plans (e.g. Theater Security Cooperation Plans, Campaign Plans, and Air Force Component Campaign Support Plan) and Ambassador Country Plans (e.g. Mission Strategic and Resource Plan);

Ratings of importance for this criterion primarily ranged from 4 to 5, and 18 of 20 panelists (90%) rated this item as a 5. Interestingly, one panelist gave a rating of 1 and stated, "This is a statement. I can't measure it." Another panelist stated, "The one and only reason you advise is to advance [United States Government] national objectives." A final comment from the panel warns that "this issue is likely to be the most convoluted and challenging but linking all this together will yield the highest [return on investment] per BPC mission."

3. Ability to assess PN capability/capacity (e.g. access to information, facilities, airfields, equipment, etc.).

Ratings of importance for this criterion ranged from 3 to 5, and 15 of 20 panelists (75%) rated this item as a 5. One panel member said, "Absolutely [the] critical first step."

Of the seven total criteria identified as the reporting mechanism the MSAS could use to track and report their unit effectiveness (research question 2), one emerged as decidedly important in that it attained the highest possible median score of 5.0 (5.0 = Very Important) and greatest degree of group consensus with an IQR of 0.0:

1. After Action Reports (AAR).

Ratings of importance for this criterion ranged from 4 to 5, and 18 of 20 panelists (90%) rated this item as a 5. Panel members commented, "AARs will be critical in the continued assessment process…appropriately edited reports must be forwarded to [higher headquarters] to ensure support and understanding of MSAS actions, accomplishments and future support requirements;" and "[AARs] are the key document for tracking the training provided to PN and results."

Items That Did Not Reach Consensus

There were two items that did not reach consensus (an IQR of 1 or less)—one from each of the criteria the group identified for research questions 1 and 2. However, stability was reached on both items (a median value change of .75 or less between rounds). Both criterions attained a group median score of 4.0 (4.0 = Important) and an IQR of 1.25:

1. Ability to identify and recruit personnel for MSAS (e.g. locate, train, develop, track/place) and seek to establish a formal career track and career progression/promotion opportunities;

Ratings of importance for this criterion ranged from 1 to 5, and 5 of 20 panelists (25%) rated this item as a 5. While consensus was not reached (IQR was 1.25), rating stability of 4 was maintained between rounds 2 and 3, while IQR was reduced from 2 to

1.25. This change serves as an indicator of convergence of opinion as the panel moved closer to consensus on this item.

2. Submit annual/semi-annual reports to GCC, Component staff, and Air Mobility Command through MSAS chain of command.

Ratings of importance for this criterion ranged from 3 to 5, and 5 of 20 panelists (25%) rated this item as a 5. Similarly, while consensus was not reached (IQR was 1.25), rating stability of 4 with an IQR of 1.25 was maintained between rounds 2 and 3.

While the Delphi allowed the panel of experts to use their collective "voice" to come to consensus and determine the final list of criteria, it is important to note that outcome of the Delphi is simply an opinion and "only as valid as the opinions of the experts who made up the panel" (Yousuf, 2007:5). Nonetheless, by using the Delphi method, the expert panelists' inputs were statistically summarized, thereby assigning a quantitative value to their opinions. In addition to quantifying the panel's opinion, this study also was able to gain unanimous consensus on the majority of criteria the panel identified. The next chapter offers a conclusion to this study and provides recommendations for further research.

V. Conclusion and Recommendations

Conclusions of Research

The purpose of this research effort was to develop criteria the MSAS could use to measure, track, and report their effectiveness at accomplishing their BPC mission. Utilizing the Delphi method, a panel of experts was assembled who agreed upon a final list of criteria. From the original 66 items identified in the first round of the study, consensus was reached on 15 criteria for research question 1 (What minimum **criteria** would you recommend the MSAS use to measure their effectiveness at accomplishing their Building Partnership Capacity mission?) and 6 criteria for research question 2 (What **reporting mechanism** would you recommend the MSAS use to track and report their unit effectiveness?). While the panel, through their uniform opinion, identified minimum criteria the MSAS could use to measure their effectiveness, the results from this study only serve as a starting point for the ongoing discussion required for the proper development and tasking of AAs and measuring their impact in support of the BP/BPC mission.

A literature review of non-military organizations that seek to build partner capacity such as the Peace Corps and non-governmental agencies has identified an ongoing effort to determine how best to track, measure, and report the effects of their activities. Teichert (2008) noted that the Peace Corps, 46 years after beginning its mission, did not establish a formal process by which to assess effectiveness until 2007 via the institution of the Office of Strategic Information, Research, and Planning. Prior to

this action, the Peace Corps primarily relied on volunteer exit surveys as a means for indication of their effectiveness and not feedback from those they served.

Gene Ogiogio (2005) of the African Capacity Building Foundation acknowledges that good measures are essential to developing a reliable and adaptable evaluation system for capacity building. The challenge he identifies is that the collective experience for evaluating effectiveness is still growing, and, as a result, viable methodological frameworks and instruments are not readily available. Ogiogio (2005:2) concludes by stating, "The scale and complexity of the capacity building process coupled with the difficulty of impact assessment in the field make the development of performance measures and evaluation systems all the more challenging."

To further support this point, a 2009 RAND study highlighted the lack of a comprehensive assessment methodology for DOD security cooperation efforts. The "dispersed and long-term" nature of conducting security cooperation and the lack of standardization or shared "assessment language" has resulted in the inability to make appropriate resourcing decisions. The study claims that there are efforts underway to remedy this deficiency. However, no date or timeline is given. They conclude by saying that a key goal will ultimately be to infuse more objectivity into the assessment process through the development of a common security cooperation assessment framework (Moroney et al., 2009).

In spite of this shared challenge between the various capacity building-focused organizations, a means of measuring impact, preferably quantitatively, is often required in order for decision makers to justify, plan, obligate, and properly account for resource expenditures. The use of metrics is one tool commonly utilized to convey effectiveness.

This is especially true within AMC where data such as fleet aircraft availability rates and overall fuel consumption are closely tracked. Similarly, the tactical-level actions each MSAS takes with their assigned PNs must be able to be conveyed in some manner that provides awareness at how the overall engagement is going and overall effectiveness of outcomes. This is important because tactical-level outcomes should support the strategic-level end states as determined by AMC, the geographic combatant commander (GCC), the U.S. embassy country teams, and even the President. If done correctly, outcomes may result in country access, overfly rights, and coalition support during humanitarian assistance/disaster response activities. For the time being, until a practical methodology is developed and fielded within the DOD, acceptance of qualitative, intuitive, and subjective feedback may need to continue to be the standard.

Significance of Research

This study assembled a diverse, highly-motivated expert panel of 20 individuals and formally captured group opinion to identify important criteria the MSAS could use in accomplishing its BPC mission. Through the use of the Delphi technique, a 98.3% response rate was achieved across three rounds of questionnaires and feedback. This achievement alone is especially noteworthy since response rates reported in other Delphi studies ranged between 40-75% (Gordon, n.d.). For non-Delphi studies, response rates to an emailed survey can range from 40-60% (40% average, 50% good, 60% very good) (Instructional Assessment Resources, n.d.). Additionally, panel members included a General officer, multiple field-grade officers, senior non-commissioned officers, service civilians, and a retired State department diplomat. They represented HAF, AMC, AETC,

AFSOC, CRW, MSAS, base-level, and deployed AAs from Afghanistan. Collectively, they brought a combined 33 years of PN advisory experience to the study. As a result of their positions and experiences, the panelists brought varying perspectives to each Delphi round. From their inputs, feedback, and ratings, their group's "voice" shaped the final list of criteria. Furthermore, several of the panel members, as key stakeholders, are in positions that can utilize these findings as they develop and mold the future of the AF's BP/BPC mission. In combination, all of these points can be taken as evidence as to the quality and validity of this study and the importance of this topic.

Noteworthy Advancements towards Developing the AF BP/BPC Program

During the course of this study, significant initiatives were undertaken within the AF's BP/BPC realm to address previously identified challenges. These include the following:

HAF

In February 2012, CSAF Schwartz signed and published the initial *USAF Air Advising Operating Concept* which applies to all AF personnel and "establishes a common framework and guidelines for planning and conducting USAF air advising activities in support of geographic commander (GCC) requirements" (Department of the Air Force, 2012:v). This comprehensive document effectively outlines the various facets that comprise air advising and provide key information on how to utilize this function. Additionally, HAF/A9A has been tasked by CSAF via Planning Order for the USAF Campaign Support Plan 0800-12 to develop a security cooperation (SC) framework which will be a "collection of agreed upon definitions, taxonomies, elements, criteria,

standardized data requirements, reporting methods and formats that shape how assessments for SC are accomplished and reported" (Department of the Air Force, 2012a:slide 4).

Major Commands

AMC has formalized and published a design operational capability statement for each MSAS and is currently developing mission essential task lists against which the MSAS will be assessed. AETC, as the service core function lead integrator for BP/BPC, readily supported the maturing MSAS mission by utilizing the Air Advisor Academy to develop and instruct courses specifically tailored for the GPF Airmen tasked and assigned to the MSAS.

MSAS

In an ongoing effort, each MSAS is preparing for potential taskings. Specifically, all of the required, in-garrison organizing, training, and equipping responsibilities along with measuring and reporting unit readiness monthly are accomplished in accordance with established service standards. Each MSAS is ensuring their personnel are receiving appropriate AA training, functional skill training, and career development. They are also working to recruit and source personnel to fill position vacancies. Additionally, both squadrons have had the opportunity to make visits to their areas of responsibility. The 571 MSAS spent a month (January – February 2012) in Honduras. Their AAs conducted training and assisted the Honduran Air Force with installing radar altimeters in some of their helicopters. In March 2012, the 818 MSAS participated in the inaugural African Partnership Flight event in Ghana. This event was a 2-week, military-to-military

familiarization and training opportunity between the Airmen from the U.S., Ghana, Togo, Benin, Nigeria, and Senegal.

Recommendations for Action

With regard to the progress being made and efforts being undertaken at each organizational level, the findings from this study should be taken into consideration to ensure the key criteria, as highlighted by the Delphi subject matter experts, is not overlooked when developing the necessary capabilities required to achieve the desired effects the MSAS is established to generate.

Referencing the *USAF Air Advising Operating Concept* (2012b), the following items should be further addressed jointly by each echelon:

- The ability to develop air advising strategy, policy, and procedures;
- The ability to identify and document air advising requirements that support Guidance for the Employment of the Force end states and GCC Theater Campaign Plans;
- The ability to accomplish comprehensive and deliberate theater-level planning of air advising activities;
- The ability to grasp the intricacies of the authorities and funding available to support air advising activities and to apply proper authorities and funding to specific activities;
- The ability to establish and use measures of effectiveness or measures of performance (MOE/MOP) for partner nation activities;
- The ability to identify the specific resources required for an air advising activity and to determine the most appropriate method of obtaining these resources;
- The ability to develop and execute an effective strategic communications plan;
- The ability to perform an after-action assessment of a partner nation engagement and to provide feedback of lessons learned to involved U.S. and partner nation personnel through the security cooperation organization (SCO).

Based on the Delphi panel's comments and information gained through this study, five recommendations are provided. First, in an ongoing effort to mature its readiness and operational capability, each MSAS could ***continue working with and learning from the 6 SOS combat aviation advisors (CAAs)***. Currently, as the most experienced and developed team of advisors within the AF, the CAAs have been working with selected PNs around the globe since 1994. During this time, they have established repeatable processes and procedures that have been tested and found to deliver results. By referencing and modeling 6 SOS operating instructions, checklists, and after action reports, as appropriate, the MSAS can use the experience and knowledge the 6 SOS has gained to shape their own internal processes and procedures by which to accomplish their BPC mission. In essence, instead of "reinventing the wheel," the MSAS can modify it to fit their needs as required.

Second, ***HAF, SAF/IA, and MAJCOM staffs (e.g. A3, A5, A9, etc.) must be deliberately targeted and better educated on what the MSAS are designed to do and capable of accomplishing.*** These staffs are in the best position to help the MSAS attain access to GCCs, country teams, and, ultimately, to PNs. This is also in alignment with the top three criteria the Delphi panel identified, which were MSAS contribution to PN increased capability; MSAS engagements support national security, GCC and/or Ambassador plans; and MSAS assessment of PN capability and capacity.

Perhaps the linchpin to the MSAS ability to effect positive change or effect towards their BPC mission rests with the NAF. As the service component's interface to the GCC and U.S. embassy country team, the NAF serves as primary integrator for promoting, lobbying, and obligating the MSAS to engage specified PNs in support of

strategic goals. It is essential that the NAF be fully informed on the MSAS so they can properly represent their capabilities during planning conferences or during the initial stages of humanitarian assistance/disaster response missions. Moreover, the NAF can also serve as the feedback conduit for the MSAS regarding the engagements they were tasked to undertake. Nothing can happen without a tasking or support request. The NAF, oftentimes, is in the best position to advise potential MSAS "customers" and help with the tasking generation.

Third, ***AMC and the MSAS could continue to craft and execute a strategic communications plan***. Through deliberate efforts to incorporate base, MAJCOM, HAF, and GCC public affairs offices and related media outlets into their operations, the MSAS can create awareness and interest of their unique mission set and, in turn, generate support requests. Utilizing modern social media like YouTube or Facebook sites is an inexpensive promotional opportunity. Additionally, the MSAS can seek further venues to endorse the BP/BPC mission via professional associational conferences such as the Airlift/Tanker Association, the Logistics Officer Association, the AF Association, etc. Further awareness can be provided through professional military education (Airman Leadership School, Squadron Officer School, NCO Academy, etc.). These settings could generate interest from the field, garner senior leadership support, or target skill sets the squadrons would be looking to recruit.

Fourth, ***AMC and AETC could continue working to bolster and refine the Air Advisor course*** taught at the Air Advisor Academy at Joint Base McGuire-Dix-Lakehurst, NJ. For example, incorporating guest speakers from the MSAS who have recently completed a PN engagement can help to inform and educate the current students

on what to expect during their tenure. It would also keep course instructors and administrators current on the challenges, successes, and areas needing improvement within BP/BPC.

Fifth, ***AAR findings could be entered into AF Theater Security Cooperation Management Information System (AF TSCMIS)*** following a PN engagement. This coincides with the panel's recommendation to use action reports (AARs) as the number 1 mechanism to track and report effectiveness. As directed by SECAF Donley and overseen by Secretary of the Air Force/International Affairs office, AF TSCMIS is the tool for the AF to track and assess security cooperation activities (Department of the Air Force, 2009a). This requirement is critical since the AF TSCMIS data is used to help the GCC track the various security cooperation activities that occur in their area of responsibility as well as to help justify future planning and resourcing decisions. Panel members commented as follows:

- "[TSCMIS] is instrumental to validating and justifying the MSAS."
- "[It] can be used to synergize efforts with other services and agencies as they have visibility into TSCMIS information."
- "This is the way to track the future…and is the best means to build credibility and [money] for a dedicated BP/BPC GPF."

By heeding the Delphi panel's opinion and acting upon these five recommendations, the expected outcomes, when pooled with the results of other security cooperation efforts, may help establish a common assessment framework. This foundation could allow outcomes to be objectively captured and quantitatively reported.

Limitations of the Study

Linstone and Turoff (2002) note that for as many individuals who have had success with conducting a Delphi study, there are as many who have had unfavorable results. They highlight that there are five common reasons for failure (2002:6):

- Imposing monitor views and preconceptions of a problem upon the respondent group by over-specifying the structure of the Delphi and not allowing for contribution of other perspectives related to the problem.
- Assuming that Delphi can be a surrogate for all other human communications in a given situation.
- Poor techniques of summarizing and presenting the group response and ensuring common interpretations of the evaluation scales utilized in the exercise.
- Ignoring and not exploring disagreement so that discouraged dissenters drop out and an artificial consensus is generated.
- Understanding the demanding nature of a Delphi and the fact that the respondents should be recognized as consultants and properly compensated for their time if the Delphi is not an integral part of their job function.

Additionally, there are three common limitations associated with Delphi studies. First, the data produced from a Delphi study is opinion-based and not evidence-based or irrefutable fact. From this point alone, many have dismissed the usefulness of this method. Sackman (1974:11), a noted critic of the method, writes, "If Delphi is to be treated seriously as a professional technique, it must be judged by basic, minimum standards applicable to all empirical social science." He further notes that Delphi lacks reliability measurements and that the findings should be able to be scientifically validated.

Second, there are no universally recognized standards and guidelines for organizing and conducting a Delphi study (Keeney et al., 2006:208). For example, a

literature review reveals that there are a variety of opinions on topics such as how panel members should be identified, how many panelists should be used, how many rounds should be conducted, how consensus should be defined, how data should be analyzed and reported, and when a study should be concluded (Powell, 2003:378-381; Sumsion, 1998:154; Hsu and Sandford, 2007:3-5; Keeney et al., 2006:208-211). Based on this lack of standardization, a considerable amount of time has to be invested up front conducting a literature review in order to identify how best to identify the appropriate thresholds for assembling a study. Ultimately, it's up to the researcher which criterion will be most useful when designing their particular study.

Third, conducting a Delphi study can be time-consuming. To properly prepare, time must be allotted to carryout interviews and design, distribute, collect, analyze, and record initial and subsequent round questionnaires. Delbecq et al. (1975) recommend that 45 days be allotted to conduct a study. They also suggest two weeks be given to panel members to respond during each round. However, Keeney et al. (2006) reviewed multiple studies and found that, while each one was well planned and executed, authors underestimated the amount of time it would take to gain consensus. They reported studies ran from 4-16 months to complete. Lack of panel participation often required follow-up contact by way of reminder e-mails and phone calls, thus adding to the overall time required.

This particular study was also limited by time. Specifically, the researcher worked against a compressed academic calendar and class schedule to design, administer, and conclude the study while leaving enough time to properly draft the research paper. If more time were available, another round could be conducted or interviews carried out to

further refine the expert panel's thoughts regarding the final list of criteria and its potential uses towards BP/BPC. However, in spite of these limitations, Gordon (n.d.:10) claims that "No better way exists to collect and synthesize opinions than Delphi." Skulmoski (2007) further hails that this method is mature and highly adaptable and used by a variety or researchers all over the world.

Recommendations for Future Research

As mentioned earlier, the results from this study only serve as a starting point. Ongoing discussion is required to further the development of an assessment framework for measuring, tracking, and reporting AA effectiveness towards BP/BPC. To this end, there are three recommendations for future research. First, referencing the criteria identified in this study, follow-on interviews could be conducted with a sample of the panel members in order to further explore the top-rated criteria and how to further refine them into more specific tasks and actions.

Second, in conjunction with HAF/A9 and SAF/IA, a Policy Delphi study could be conducted to assist with the development of an assessment framework for the AF Security Cooperation Campaign Support Plan. A Policy Delphi is an organized method for comparing views and information regarding to a specific policy area and allows panel members with varying opinions to address and assess differing viewpoints (Turoff, 2002). After the study is concluded, policy makers could then use the inputs generated to help form the necessary policy related to Security Cooperation and its assessment framework.

Third, if more timely input is needed to develop the assessment framework, HAF/A9, with support of SAF/IA, could fund and conduct a Nominal Group Technique (NGT) study. The NGT is an effective way to make pooled judgments or decisions in groups which meet face-to-face (Delbecq et al., 1975). Select panel members identified in this study could be assembled. Similar to the goal of the Delphi study, they would work to generate ideas and develop a group opinion through consensus. The primary benefit of NGT is that answers are generated considerably faster since the panel is in the same room.

Summary

In closing, as emphasized in the *USAF Global Partnership Strategy* (2008:3), "Partnerships provide the force multiplier essential to the success of winning today's fight while preparing for tomorrow's challenges." Through MSAS AAs, tactical level actors on the world's stage are able to link tactical actions to strategic requirements in support of global U.S. strategic goals. Furthermore, from their engagements, AAs increase the likelihood of PNs ability to benefit from formalizing and sustaining an aviation enterprise. Results can lead to a PN's ability to better self-govern, protect its borders, provide for its population, expand economic potential, and serve as a regional leader and stabilizer. As Benjamin Franklin's old adage goes, "An ounce of prevention is worth a pound of cure."

However, the imposed requirement of having to quantify or report effectiveness is difficult in regards to relationship-building—especially during a time of fiscal conservativeness. While reporting inputs, outputs, and outcomes through metrics is

common place within the public and private sector as a form of accountability of resources, a universal, one-size-fits-all assessment tool for quantifying qualitative-type of outcomes such as trust and good will has yet to be developed. In regards to the MSAS, since every PN is different, it is possible for a common assessment platform to be developed and adjusted for use as required. As mentioned earlier, there are current efforts working to achieve that goal. Until one is fielded, feedback such as, “Bottomline: if the [GCC] and Ambassadors are happy, we are doing a good job” can serve as a practical indicator of effectiveness (M. Grub, personal communication, April 9, 2012). In the end, when wanting to quantify things, it would be wise to heed Albert Einstein when he wisely stated, "Not everything that counts can be counted, and not everything that can be counted counts." This is not to downplay the importance of quantifying outcomes but to understand that the initial challenge is determining what to count.

The author postulates that as the BP/BPC program matures, as communication and reporting mechanisms improve, as the mission and capability is better defined, and as its purpose is recognized, the program will reach its potential. The ultimate payoff for BP/BPC investment is building mutually beneficial PN relationships. Through partnerships, PNs can be equipped to independently address conflicts using their own organic resources and to manage humanitarian/disaster response with little or no U.S. military intervention. Through purposeful PN taskings aimed to support combatant commander strategic goals, the MSAS, through AA’s as critical enablers, can help ensure U.S. national security is attained and preserved.

Appendix A

Mobility Support Advisory Squadron's BPC Mission Delphi Study Questionnaire #1

Thank you for agreeing to participate in this Delphi Study. The purpose of this research is to determine **what appropriate measurement criteria and reporting mechanism** the Mobility Support Advisory Squadron could use to track and report unit effectiveness toward their Building Partnership Capacity mission. The sponsor for this research is Colonel Christopher A. Pike, Vice Commander, 21st Expeditionary Mobility Task Force, Joint Base McGuire-Dix-Lakehurst, NJ.

Please note the following:
Benefits and risks: There are no personal benefits or risks for participating in this study. Your participation in completing this questionnaire should take less than 15 minutes per round.

Confidentiality: Your responses are completely confidential, and your identity will remain anonymous. No individual data will be reported; only data in aggregate will be made public. Data will be kept in a secure, locked cabinet to which only the researchers will have access. If you have any questions or concerns about your participation in this study, please contact:

JOSEPH E. WHITTINGTON, JR., Major, USAF IDE Student, Advanced Study of Air Mobility USAF Expeditionary Center JB McGuire-Dix-Lakehurst, NJ DSN 312-650-7748 Comm 609-754-7748	ALAN R. HEMINGER, Ph.D. Associate Professor of Management Information Systems Graduate School of Engineering and Management Air Force Institute of Technology Wright-Patterson AFB, OH Voice: 937-255-3636 (785-3636 DSN) ext 7405

Voluntary consent: Your participation is completely voluntary. You have the right to decline to answer any question, to refuse to participate, or to withdraw at any time. Your decision of whether or not to participate will not result in any penalty or loss of benefits to which you are otherwise entitled. Completion of the questionnaire implies your consent to participate.

Background: Because each respondent will have a different perspective, allow me to give a brief overview of the topic of study.

National strategic-level guidance has outlined how the US will continue to endeavor in "The Long War." From the President downward, emphasis has been placed on the importance of the US to work with, by, and through foreign counterparts to ultimately bolster US national security interests. The US Air Force has assumed the leadership role to develop the aviation capacity and capability of selected partner nations (PN). The key assets to accomplishing this objective are Air Advisors (AA). The Air Force defines an AA as, "an Airman specially trained and educated to apply aviation support and operational expertise to assess, train, advise, assist, and equip PNs in the development and application of their aviation enterprise to meet their national needs, in support of US interests." As the worldwide leader in air mobility capability, Air Mobility Command has activated two Mobility Support Advisory Squadrons (MSAS) who are preparing their AAs to assess, advise, train, assist, and equip selected PNs as tasked (please reference attached brochure for more information).

While initial, broad-based guidance was drafted and published in order to assist timely unit stand-up actions, necessary in-depth guidance has yet to be developed and provided. One key element that has not been addressed pertains to assessment. Specifically, no direction was given on how the MSAS are to measure their effectiveness at conducting the Building Partner Capacity (BPC) mission. What makes this requirement even more pressing is that establishing, building, and fostering relationships with PNs are time-consuming and lengthy in nature. Furthermore, it is difficult to quantify expected outcomes such as

trust, good-will, and positive feelings towards the US, making measurement of outcome, at present, almost entirely subjective in nature.

Therefore, *this qualitative research effort seeks to determine what appropriate measurement criteria and reporting mechanism the MSAS could use to track and report unit effectiveness toward BPC.* By responding, **you have the unique opportunity to shape how the MSAS can tie their tactical-level actions to strategic outcomes.** The data obtained through this study will form recommendations that will be offered to Air Force decision makers at the Headquarters, Major Command (Air Mobility Command), and wing levels in order to shape the future of this mission. Thank you for participating in this study. I appreciate your time and candid responses.

Process:
1. Please complete this questionnaire **electronically** and return it to: **joseph.whittington@us.af.mil** no later than **7 February 2012.** If you have questions, I can be reached at 609-754-7748 or via DSN 650-7748.

2. This questionnaire is an instrument of a Delphi Study. The Delphi method is an iterative, group communication process which is used to collect and distill the judgments of experts using a series of questionnaires interspersed with feedback. The questionnaires are designed to focus on problems, opportunities, solutions, or forecasts. Each questionnaire is developed based on the results of the previous questionnaire. The process continues until the research question is answered. For example, when consensus is reached, sufficient information has been exchanged. This usually takes, on average, 3-4 rounds.

3. There are three background questions and two primary questions for this round. The background questions are requested to establish your particular expertise for the study and will not be shared specifically in the report. Again, the survey is non-attribution, so **please elaborate fully on your answers**. Once all survey responses are received and analyzed, you will be asked to review and revise your initial responses to questions 4 and 5 based on responses provided by the entire group. Subsequent rounds will be announced as needed and all research will conclude by 6 April 2012.

Background questions:

1. Personal Information:
    a. Rank/Grade:
    b. Current Duty Title:
    c. Time in Current Position:
    d. (If military) Core AFSC:

2. How long have you been involved with building partnerships among foreign partner nations?

3. In what capacity have you dealt with foreign nation partnership issues?

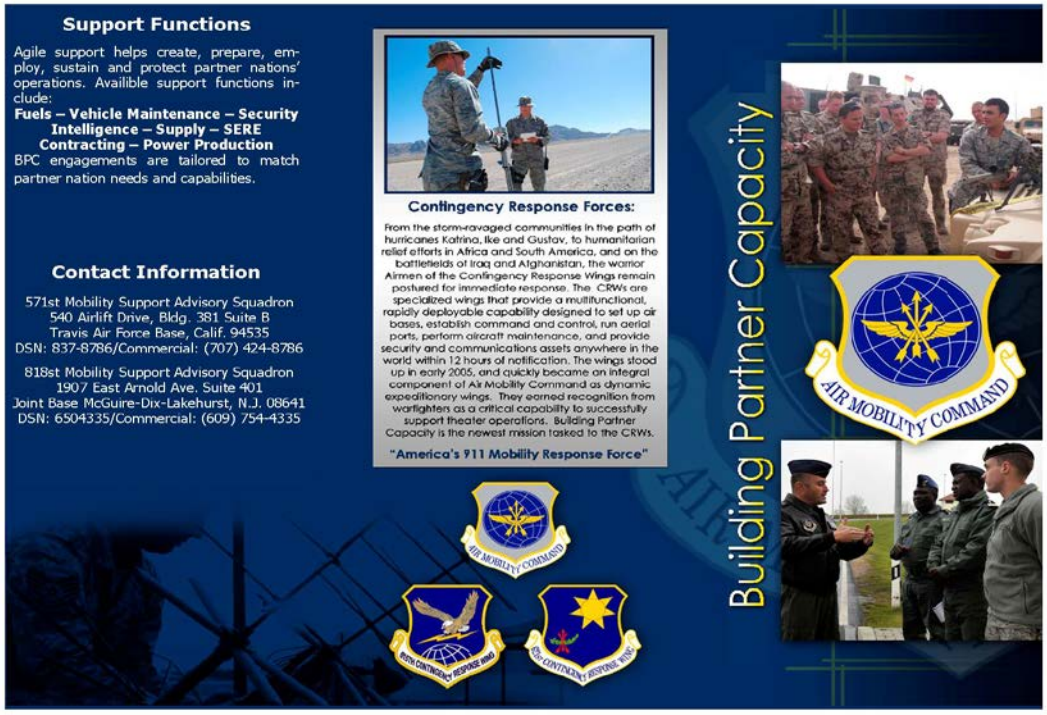
Research questions:

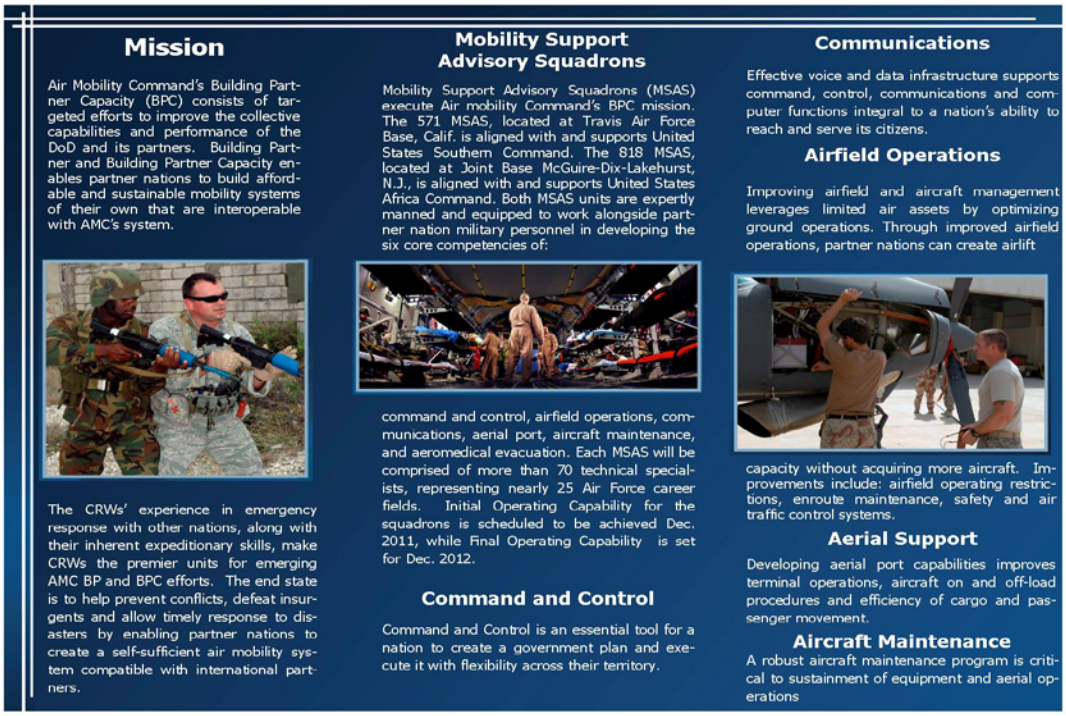
Please answer the following questions as clearly and concisely as possible without omitting critical information required for the group to consider your opinions. Provide any appropriate rationale for your responses.

4. What **minimum criteria** (i.e. performance objectives, key indicators, etc) would you recommend the MSAS use to measure their effectiveness at accomplishing their Building Partnership Capacity mission?

5. What **reporting mechanism** would you recommend the MSAS use to track and report their unit effectiveness?

Appendix B


Support Functions
Agile support helps create, prepare, employ, sustain and protect partner nations' operations. Availible support functions include:
Fuels – Vehicle Maintenance – Security
Intelligence – Supply – SERE
Contracting – Power Production
BPC engagements are tailored to match partner nation needs and capabilities.
Contact Information
571st Mobility Support Advisory Squadron
540 Airlift Drive, Bldg. 381 Suite B
Travis Air Force Base, Calif. 94535
DSN: 837-8786/Commercial: (707) 424-8786
818st Mobility Support Advisory Squadron
1907 East Arnold Ave. Suite 401
Joint Base McGuire-Dix-Lakehurst, N.J. 08641
DSN: 6504335/Commercial: (609) 754-4335
Contingency Response Forces:
From the storm-ravaged communities in the path of hurricanes Katrina, Ike and Gustav, to humanitarian relief efforts in Africa and South America, and on the battlefields of Iraq and Afghanistan, the warrior Airmen of the Contingency Response Wings remain postured for immediate response. The CRWs are specialized wings that provide a multifunctional, rapidly deployable capability designed to set up air bases, establish command and control, run aerial ports, perform aircraft maintenance, and provide security and communications assets anywhere in the world within 12 hours of notification. The wings stood up in early 2005, and quickly became an integral component of Air Mobility Command as dynamic expeditionary wings. They earned recognition from warfighters as a critical capability to successfully support theater operations. Building Partner Capacity is the newest mission tasked to the CRWs.
"America's 911 Mobility Response Force"
Building Partner Capacity
AIR MOBILITY COMMAND


Mission
Air Mobility Command's Building Partner Capacity (BPC) consists of targeted efforts to improve the collective capabilities and performance of the DoD and its partners. Building Partner and Building Partner Capacity enables partner nations to build affordable and sustainable mobility systems of their own that are interoperable with AMC's system.
The CRWs' experience in emergency response with other nations, along with their inherent expeditionary skills, make CRWs the premier units for emerging AMC BP and BPC efforts. The end state is to help prevent conflicts, defeat insurgents and allow timely response to disasters by enabling partner nations to create a self-sufficient air mobility system compatible with international partners.
Mobility Support Advisory Squadrons
Mobility Support Advisory Squadrons (MSAS) execute Air mobility Command's BPC mission. The 571 MSAS, located at Travis Air Force Base, Calif. is aligned with and supports United States Southern Command. The 818 MSAS, located at Joint Base McGuire-Dix-Lakehurst, N.J., is aligned with and supports United States Africa Command. Both MSAS units are expertly manned and equipped to work alongside partner nation military personnel in developing the six core competencies of:
command and control, airfield operations, communications, aerial port, aircraft maintenance, and aeromedical evacuation. Each MSAS will be comprised of more than 70 technical specialists, representing nearly 25 Air Force career fields. Initial Operating Capability for the squadrons is scheduled to be achieved Dec. 2011, while Final Operating Capability is set for Dec. 2012.
Command and Control
Command and Control is an essential tool for a nation to create a government plan and execute it with flexibility across their territory.
Communications
Effective voice and data infrastructure supports command, control, communications and computer functions integral to a nation's ability to reach and serve its citizens.
Airfield Operations
Improving airfield and aircraft management leverages limited air assets by optimizing ground operations. Through improved airfield operations, partner nations can create airlift
capacity without acquiring more aircraft. Improvements include: airfield operating restrictions, enroute maintenance, safety and air traffic control systems.
Aerial Support
Developing aerial port capabilities improves terminal operations, aircraft on and off-load procedures and efficiency of cargo and passenger movement.
Aircraft Maintenance
A robust aircraft maintenance program is critical to sustainment of equipment and aerial operations

Appendix C

Mobility Support Advisory Squadron's BPC Mission Delphi Study Questionnaire #2

Thank you for agreeing to participate in this Delphi Study. The purpose of this research is to determine **what appropriate measurement criteria and reporting mechanism** the Mobility Support Advisory Squadron (MSAS) could use to track and report unit effectiveness toward their Building Partnership Capacity mission. The sponsor for this research is Colonel Christopher A. Pike, Vice Commander, 21st Expeditionary Mobility Task Force, Joint Base McGuire-Dix-Lakehurst, NJ.

Please note the following:
Benefits and risks: There are no personal benefits or risks for participating in this study. Your participation in completing this questionnaire should take less than 15 minutes per round.

Confidentiality: Your responses are completely confidential, and your identity will remain anonymous. No individual data will be reported; only data in aggregate will be made public. Data will be kept in a secure, locked cabinet to which only the researchers will have access. If you have any questions or concerns about your participation in this study, please contact:

JOSEPH E. WHITTINGTON, JR., Major, USAF
IDE Student, Advanced Study of Air Mobility
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JB McGuire-Dix-Lakehurst, NJ
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Voluntary consent: Your participation is completely voluntary. You have the right to decline to answer any question, to refuse to participate, or to withdraw at any time. Your decision of whether or not to participate will not result in any penalty or loss of benefits to which you are otherwise entitled. Completion of the questionnaire implies your consent to participate.

Purpose:
This qualitative research effort seeks to determine what appropriate measurement criteria and reporting mechanism the MSAS could use to track and report unit effectiveness toward BPC. By responding, **you have the unique opportunity to shape how the MSAS can tie their tactical-level actions to strategic outcomes.** The data obtained through this study will form recommendations that will be offered to Air Force decision makers at the Headquarters, Major Command (Air Mobility Command), and wing levels in order to shape the future of this mission. Thank you for participating in this study. I appreciate your time and candid responses.

Process:
1. Please complete this questionnaire **electronically** and return it to: **joseph.whittington@us.af.mil** no later than **2 March 2012.** If you have questions, I can be reached at 609-754-7748 or via DSN 650-7748.

2. This questionnaire is an instrument of a Delphi Study. The Delphi method is an iterative, group communication process which is used to collect and distill the judgments of experts using a series of questionnaires interspersed with feedback. The questionnaires are designed to focus on problems, opportunities, solutions, or forecasts. Each questionnaire is developed based on the results of the previous questionnaire. The process continues until the research question is answered. For example, when consensus is reached or sufficient information has been exchanged. This usually takes, on average, 3-4 rounds.

3. This is **Round #2** of the study. Once all questionnaire responses are received and analyzed, you will be asked to review and revise your initial responses based on collective responses provided by the entire group. Subsequent rounds will be announced as needed and all research will conclude by 6 April 2012.

Results from Questionnaire #1

Below are the responses from Questionnaire #1. Please review the responses and then continue to Questionnaire #2. The group's responses were categorized into 7 main subject areas for the first research question and 6 main subject areas for the second research question. The responses are listed by the frequency the criteria was mentioned.

Original question: What **minimum criteria** (i.e. performance objectives, key indicators, etc.) would you recommend the MSAS use to measure their effectiveness at accomplishing their Building Partnership Capacity mission?

Category		Frequency
Ability to gain/maintain access to Partner Nation (PN)		**14**
Subcategory:	Ability to assess PN capability/capacity (e.g. access to information, facilities, airfields, equipment, etc.)	9
	Ability to establish key contacts	4
	Ability to make repetitive/persistent visits with PN	1
Actions tied to U.S. National/Strategic policy goals		**8**
Subcategory:	MSAS engagements are in support of U.S. National Security policy, Geographic Combatant Commander (GCC) and Component Plans (e.g. Theater Security Cooperation Plans, Campaign Plans, and Air Force Component Campaign Support Plan) and Ambassador Country Plans (e.g. Mission Strategic and Resource Plan)	6
	MSAS actions are integrated with other U.S. Government agency actions	2
Post-engagement outcomes		**6**
Subcategory:	MSAS contributed towards PN's increased capability and capacity (e.g. response during crisis, stable or increasing mission capability rate, sustained personnel training/task proficiency, interoperability with U.S.) as reported by country team, GCC staff	3
	Extent to which MSAS accomplished policy objectives (e.g. GCC end states met)	2
	Notable improvement/development of key relationships with PN (e.g. within government, military)	1
Ability to further develop MSAS capability		**6**
Subcategory:	Ability to identify and recruit personnel for MSAS (e.g. locate, train, develop, track/place) and seek to establish a formal career track and career progression/promotion opportunities	2
	Ability to develop a training plan for MSAS personnel (e.g. language/culture familiarization, general advising skills, etc.)	2
	Ability to develop internal processes that support MSAS mission (e.g. record keeping for information continuity)	1
	Ability to develop key relationships (e.g. other military services, Department of State, interagency organizations, regional centers like the Marshall Center in Europe)	1

Ability to set realistic goals for PN and provide the tools/skills to attain them		**4**
Subcategory:	Ability to develop plans, milestones, projects the PN can accomplish within realistic timeframe	4
Ability to develop standards of performance		**4**
Subcategory:	Ability to develop achievable Mission Essential Task Lists and performance standards for PN	4
Number of taskings received vs. number of taskings completed		**2**
Subcategory:	Requestor and types of requests received (e.g. Assess, Train, Advise, Assist, Equip)	1
	Frequency and duration/longevity interactions with PN	1
Total		**44**

Original question: What **reporting mechanism** would you recommend the MSAS use to track and report their unit effectiveness?

Category		**Frequency**
After Action Reports		**5**
Centralized data collection and dissemination systems		**5**
Subcategory:	Make entries into GCC/Air Force Theater Security Cooperation Management Information System (TSCMIS)	4
	Make entries into Joint Lessons Learned Information System (JLLIS)	1
Spreadsheets		**5**
Subcategory:	Track PN progress following MSAS engagements using a numeric rating scale (e.g. 1 - 5 scale: (0) - No capability and (5) - Can complete without assistance	5
Feedback from Surveys		**3**
Subcategory:	Survey results from GCC, Component staff, Country team, PN	3
Formal reports		**3**
Subcategory:	Submit annual/semi-annual reports to GCC, Component staff, and Air Mobility Command through MSAS chain of command	3
Unit Readiness reporting		**1**
Subcategory:	Report unit mission readiness monthly through Status of Resources and Training System (SORTS)	1
Total		**22**

Questionnaire #2: Rating of Criteria

1) Please review each of the following items identified in Questionnaire #1 as **minimum criteria** the MSAS could use to measure their effectiveness at accomplishing their Building Partnership Capacity mission. If you wish to add comments expressing agreement, disagreement, or clarification concerning an item, please do so in the space provided. Brevity and clarity will facilitate analysis.

2) **Please rate the following items** by level of importance as you perceive them at this time.

5 =Very Important, 4=Important, 3=Moderately Important, 2=Of Little Importance, 1=Unimportant

Criteria	Rating	Comments
Ability to assess Partner Nation (PN) capability/capacity (e.g. access to information, facilities, airfields, equipment, etc.)		
Ability to establish key contacts within PN government, military, etc.		
Ability to make repetitive/persistent visits with PN		
MSAS engagements are in support of U.S. National Security policy, Geographic Combatant Commander (GCC) and Component Plans (e.g. Theater Security Cooperation Plans, Campaign Plans, and Air Force Component Campaign Support Plan) and Ambassador Country Plans (e.g. Mission Strategic and Resource Plan)		
MSAS actions are integrated with other U.S. Government agency actions (e.g. State Department, U.S. Agency for International Development, other military units)		
MSAS contributed towards PN's increased capability and capacity (e.g. response during crisis, stable or increasing mission capability rate, sustained personnel training/task proficiency, interoperability with U.S.) as reported by country team, GCC staff		
Extent to which MSAS accomplished policy objectives (e.g. GCC end states met)		
Notable improvement/development of key relationships with PN (e.g. within government, military)		
Ability to identify and recruit personnel for MSAS (e.g. locate, train, develop, track/place) and seek to establish a formal career track and career progression/promotion opportunities		
Ability to develop a training plan for MSAS personnel (e.g. language/culture familiarization, general advising skills, etc)		
Ability to develop internal processes that support MSAS mission (e.g. record keeping for information continuity)		
Ability to develop key relationships (e.g. other military services, Department of State, interagency organizations, regional centers like the Marshall Center in Europe)		
Ability to develop plans, milestones, projects the PN can accomplish within realistic timeframe		
Ability to develop achievable Mission Essential Task Lists and performance standards for PN		
Requestor and types of requests received (e.g. Assess, Train, Advise, Assist, Equip)		
Frequency and duration/longevity of interactions with PN		

Questionnaire #2: Rank Order Criteria (continued)

1) Please review each of the following items identified in Questionnaire #1 as the **reporting mechanism** the MSAS could use to track and report their unit effectiveness. If you wish to add comments expressing agreement, disagreement, or clarification concerning an item, please do so in the space provided. Brevity and clarity will facilitate analysis.

2) **Please rate the following items** by level of importance as you perceive them at this time.

5 =Very Important, 4=Important, 3=Moderately Important, 2=Of Little Importance, 1=Unimportant

Criteria	Rating	Comments
After Action Reports		
Make entries into Geographic Combatant Commander (GCC)/Air Force Theater Security Cooperation Management Information System (TSCMIS)		
Make entries into Joint Lessons Learned Information System (JLLIS)		
Track Partner Nation (PN) progress following MSAS engagements using a spreadsheet and numeric rating scale (e.g. 1 - 5 scale: (0) - No capability and (5) - Can complete without assistance)		
Survey results from GCC, Component staff, Country team, PN		
Submit annual/semi-annual reports to GCC, Component staff, and Air Mobility Command through MSAS chain of command		
Report unit mission readiness monthly through Status of Resources and Training System (SORTS)		

Appendix D

Mobility Support Advisory Squadron's BPC Mission Delphi Study Questionnaire #3

Thank you for agreeing to participate in this Delphi Study. The purpose of this research is to determine **what appropriate measurement criteria and reporting mechanism** the Mobility Support Advisory Squadron (MSAS) could use to track and report unit effectiveness toward their Building Partnership Capacity mission. The sponsor for this research is Colonel Christopher A. Pike, Vice Commander, 21st Expeditionary Mobility Task Force, Joint Base McGuire-Dix-Lakehurst, NJ.

Please note the following:
Benefits and risks: There are no personal benefits or risks for participating in this study. Your participation in completing this questionnaire should take less than 15 minutes per round.

Confidentiality: Your responses are completely confidential, and your identity will remain anonymous. No individual data will be reported; only data in aggregate will be made public. Data will be kept in a secure, locked cabinet to which only the researchers will have access. If you have any questions or concerns about your participation in this study, please contact:

JOSEPH E. WHITTINGTON, JR., Major, USAF
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Wright-Patterson AFB, OH
Voice: 937-255-3636 (785-3636 DSN) ext 7405

Voluntary consent: Your participation is completely voluntary. You have the right to decline to answer any question, to refuse to participate, or to withdraw at any time. Your decision of whether or not to participate will not result in any penalty or loss of benefits to which you are otherwise entitled. Completion of the questionnaire implies your consent to participate.

Purpose:

This qualitative research effort seeks to determine what appropriate measurement criteria and reporting mechanism the MSAS could use to track and report unit effectiveness toward BPC. By responding, **you have the unique opportunity to shape how the MSAS can tie their tactical-level actions to strategic outcomes.** The data obtained through this study will form recommendations that will be offered to Air Force decision makers at the Headquarters, Major Command (Air Mobility Command), and wing levels in order to shape the future of this mission. Thank you for participating in this study. I appreciate your time and candid responses.

Process:
1. Please complete this questionnaire **electronically** and return it to: **joseph.whittington@us.af.mil** no later than **23 March 2012.** If you have questions, I can be reached at 609-754-7748 or via DSN 650-7748.

2. This questionnaire is an instrument of a Delphi Study. The Delphi method is an iterative, group communication process which is used to collect and distill the judgments of experts using a series of questionnaires interspersed with feedback. The questionnaires are designed to focus on problems,

opportunities, solutions, or forecasts. Each questionnaire is developed based on the results of the previous questionnaire. The process continues until the research question is answered. For example, when consensus is reached or sufficient information has been exchanged. This usually takes, on average, 3-4 rounds.

3. This is the **3rd and Final Round** of the study. Once all questionnaire responses are received, an analysis of the Round 3 will be conducted and the results will be summarized and sent to you in a final report.

Part 1 - Results from Questionnaire #2

Below are the results from the previous questionnaire. Based on the group's ratings, **consensus was reached on 9 criteria** for the first research question and **4 criteria** for the second research question. The criteria below were listed in order based on the arithmetic median and interquartile range (the range that contains the answers of the middle 50 percent of the respondents) of the group's responses. For this study, an interquartile range (IQR) of 1 or less is an indicator of consensus.

Task: First, **review the ratings in left-hand column for both sections**. Then, **select "Yes" or "No" in the box below.** If you select "Yes," then you are finished with this section. If you select "No," please re-rank and comment as needed. Be sure to use the same 5-point rating scale from the last round. Once completed, **continue on to Part 2 – Questionnaire 3**.

I agree with ratings as determined by the group in Round 2:

Yes (Proceed to part 2)	
No (Re-rank, comment, then proceed to Part 2)	

Section 1: The **minimum criteria** the MSAS could use to measure their effectiveness at accomplishing their Building Partnership Capacity mission.

5 =Very Important, 4=Important, 3=Moderately Important, 2=Of Little Importance, 1=Unimportant

Your Rating	Group's Rating/IQR	Criteria	New Rating/Comment(s)
5	5/1	MSAS contributed towards Partner Nation's (PN) increased capability and capacity (e.g. response during crisis, stable or increasing mission capability rate, sustained personnel training/task proficiency, interoperability with U.S.) as reported by country team, GCC staff	
5	5/1	Ability to develop a training plan for MSAS personnel (e.g. language/culture familiarization, general advising skills, etc)	
5	5/1	Ability to assess PN capability/capacity (e.g. access to information, facilities, airfields, equipment, etc.)	

4	5/1	MSAS engagements are in support of U.S. National Security policy, Geographic Combatant Commander (GCC) and Component Plans (e.g. Theater Security Cooperation Plans, Campaign Plans, and Air Force Component Campaign Support Plan) and Ambassador Country Plans (e.g. Mission Strategic and Resource Plan)	
4	4/0.25	Ability to develop internal processes that support MSAS mission (e.g. record keeping for information continuity)	
4	4/1	Ability to develop achievable Mission Essential Task Lists and performance standards for PN	
4	4/1	Requestor and types of requests received (e.g. Assess, Train, Advise, Assist, Equip)	
4	4/1	Frequency and duration/longevity of interactions with PN	
4	4/1	Ability to develop key relationships (e.g. other military services, Department of State, interagency organizations, regional centers like the Marshall Center in Europe)	

Section 2: Reporting mechanism the MSAS could use to track and report their unit effectiveness:

5 =Very Important, 4=Important, 3=Moderately Important, 2=Of Little Importance, 1=Unimportant

Your Rating	Group's Rating/IQR	Criteria	New Rating/Comment(s)
5	5/1	After Action Reports	
4	4/1	Survey results from GCC, Component staff, Country team, PN	
5	3/0.5	Report unit mission readiness monthly through Status of Resources and Training System (SORTS)	
4	3/1	Make entries into Joint Lessons Learned Information System (JLLIS)	

Part 2 – Questionnaire #3: Reviewing and Re-rating the Remaining Criteria

The items below **did not** reach consensus in the last round. Therefore, items in section 1 and 2 below should be reviewed and re-assessed to see if the lack of consensus still holds. If you do not find yourself agreeing with the majority opinion, please explain your reasoning to help us better understand the divergence of opinion. The criteria were analyzed using the arithmetic median of the responses given in Questionnaire #2.

Task: Please **re-rate**, as required, the items in **both sections** by level of importance as you perceive them at this time using the 5-point rating scale below. Add brief, concise comments for clarification. If you want to keep your original rating, please add "No Change" to the comments section.

Section 1: The **minimum criteria** the MSAS could use to measure their effectiveness at accomplishing their Building Partnership Capacity mission. There are **7 items** included.

5 =Very Important, 4=Important, 3=Moderately Important, 2=Of Little Importance, 1=Unimportant

Your Rating	Group's Rating from Round 2	Criteria	Group's Comments	New Rating/Comment(s)
5	5	Ability to establish key contacts within PN government, military, etc.	- Relationships are #1 priority. - This does not tell me how effective I am or am not. It is important but does not speak to the question. - No substantial contacts, no mission. - Dept of State responsibility. - Ways (Ends, Ways, Means).	
4	4	Ability to make repetitive/persistent visits with PN	- Key to MSAS mission. - Means (Ends, Ways, Means). - This does not tell me how effective I am or am not. It is important but does not speak to the question. - Establishes/maintains relationships and results in minimal re-learning of requirements/expectations. - This criterion depends entirely on the nature of why return visit is warranted. - Depends on what you want to do with the country. - To build a lasting capability, regular engagement a must.	
4	4	MSAS actions are integrated with other U.S. Government agency actions (e.g. State Department, U.S. Agency for International Development, other military units)	- If you aren't Interagency and Joint, you won't be successful. - Very important if there are other engagements in progress but not required to move forward. - Ends (Ends, Ways, Means). - Important to long-term development. - This does not tell me how effective I am or am not. It is important but does not speak to the question.	
4	4	Extent to which MSAS accomplished policy objectives (e.g. GCC end states met)	- This is the one criterion that all others fall under. - Difficult to measure since capacity increases will probably take extended periods of time that go beyond one group of MSAS advisor's involvement. - Policies can conflict and be interpreted differently. - Ends (Ends, Ways, Means). - Very important if policy objectives are realistic; focus	

5	4	Notable improvement/development of key relationships with PN (e.g. within government, military)	- How do you know when you've attained it…does it mean you can stop? - This would be a specific policy or military objective the MSAS to accomplish; one could succeed at everything else and still fail at this objective. - Ways (Ends, Ways, Means). - Along with actual capability increases, the relationships are right there with importance. - If you don't have relationships, you have nothing. - Very hard to measure, but may be only thing to measure early on.	
4	4	Ability to identify and recruit personnel for MSAS (e.g. locate, train, develop, track/place) and seek to establish a formal career track and career progression/promotion opportunities	- This can't be understated; need to build a professional, appealing, and career enhancing career field; if not we won't succeed. - Ability to identify and recruit is a 5 but career track is a 1. - This does not tell me how effective I am or am not. It is important but does not speak to the question. - Means (Ends, Ways, Means). - Important to get the right people in the unit and get the right jobs after the assignment.	
5	4	Ability to develop plans, milestones, projects the PN can accomplish within realistic timeframe	- A critical step. - Need to build milestones based on PN capabilities not USAF standards. - This one is a minefield since dependent on factors outside DoD control; advisors should be assessed on ability to develop relationships. - Means (Ends, Ways, Means). - This does not tell me how effective I am or am not. It is important but does not speak to the question. - Timelines are secondary. - Initial milestones may be faulty…but as they're made and adjusted they provide objectives to be made/reported.	

Section 2: Reporting mechanism the MSAS could use to track and report their unit effectiveness**.** There are **3 items** included.

5 =Very Important, 4=Important, 3=Moderately Important, 2=Of Little Importance, 1=Unimportant

Your Rating	Group's Rating from Round 2	Criteria	Group's Comments	New Rating/Comment(s)
5	4	Submit annual/semi-annual reports to GCC, Component staff, and Air Mobility Command through MSAS chain of command	- Excellent idea and critical that non-advisors understand what you are accomplishing and dollar cost benefit. - Linked to measures of effect identified in specific Theater Campaign plans down to country level. - If MSAS is going to stay in business, they are going to have to communicate effectively with their customers and bosses.	
3	4	Track Partner Nation progress following MSAS engagements using a spreadsheet and numeric rating scale (e.g. 1 - 5 scale: (0) - No capability and (5) - Can complete without assistance)	- Very Important. - Looks good on PowerPoint and metrics are good, but reality is more detailed than this. - Not sure this is the best evaluation suggestion. - Very important but should be close hold due to possible PN embarrassment; critical to the constant assessment process. - Very hard to measure, but may be only thing to measure early on.	
5	3	Make entries into Geographic Combatant Commander (GCC)/Air Force Theater Security Cooperation Management Information System (TSCMIS)	- Instrumental to validating and justifying MSAS.	

Appendix E

Mobility Support Advisory Squadron's BPC Mission Delphi Study Final Report

Thank you for participating in this Delphi study. The purpose of this research is to determine **what appropriate measurement criteria and reporting mechanism** the Mobility Support Advisory Squadron (MSAS) could use to track and report unit effectiveness toward their Building Partnership Capacity mission. The sponsor for this research is Colonel Christopher A. Pike, former Vice Commander, 21st Expeditionary Mobility Task Force, Joint Base McGuire-Dix-Lakehurst, NJ.

Please note the following:
Benefits and risks: There are no personal benefits or risks for participating in this study.

Confidentiality: Your responses are completely confidential, and your identity will remain anonymous. No individual data will be reported; only data in aggregate will be made public. Data will be kept in a secure, locked cabinet to which only the researchers will have access. If you have any questions or concerns about your participation in this study, please contact:

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Process:
The questionnaires you completed were instruments of a Delphi study. The Delphi method is an iterative, group communication process used to collect and distill the judgments of experts using a series of questionnaires interspersed with feedback. Each questionnaire was developed based on the results of the previous questionnaire. The process continued until the research questions were answered. Three rounds were conducted, and a total of 3 questionnaires were used for this study.

Part 1 - Results from Questionnaire #3

Below are the results from the final questionnaire. After reviewing the ratings and comments from round 2, the group re-evaluated their ratings and reached **consensus on 15 out of the 16 criteria** for the first research question—*an increase from 9 items* in round 2. **Consensus was reached for 6 out of the 7 criteria** for the second research question—*an increase from 4 items* in round 2. A total of 76 rating changes were made for the first research question, and 38 rating changes were made for the second research question. 11 panel members agreed with the collective group ratings from round 2. Finally, the overall number of panel member comments provided was noticeably higher in round 3 than in round 2. 12 panel members made comments in questionnaire 2, and 18 made comments in questionnaire 3—*a 50% increase.*

The criteria below are listed in order based on the arithmetic median and interquartile range. This range contains the answers from the middle 50 percent of the respondents. For this study, an interquartile range (IQR) of 1 or less is an indicator of consensus.

Section 1: The **minimum criteria** the MSAS could use to measure their effectiveness at accomplishing their Building Partnership Capacity mission.

5 =Very Important, 4=Important, 3=Moderately Important, 2=Of Little Importance, 1=Unimportant

Criteria	Group's Rating/IQR	Criteria
1	5/0	MSAS contributed towards Partner Nation's (PN) increased capability and capacity (e.g. response during crisis, stable or increasing mission capability rate, sustained personnel training/task proficiency, interoperability with U.S.) as reported by country team, GCC staff
2	5/0	MSAS engagements are in support of U.S. National Security policy, Geographic Combatant Commander (GCC) and Component Plans (e.g. Theater Security Cooperation Plans, Campaign Plans, and Air Force Component Campaign Support Plan) and Ambassador Country Plans (e.g. Mission Strategic and Resource Plan)
3	5/0	Ability to assess PN capability/capacity (e.g. access to information, facilities, airfields, equipment, etc.)
4	5/0.5	Ability to establish key contacts within PN government, military, etc.
5	5/1	Ability to develop a training plan for MSAS personnel (e.g. language/culture familiarization, general advising skills, etc)
6	4/0	MSAS actions are integrated with other U.S. Government agency actions (e.g. State Department, U.S. Agency for International Development, other military units)
7	4/0	Frequency and duration/longevity of interactions with PN
8	4/0	Requestor and types of requests received (e.g. Assess, Train, Advise, Assist, Equip)
9	4/0	Ability to develop internal processes that support MSAS mission (e.g. record keeping for information continuity)
10	4/0	Ability to develop key relationships (e.g. other military services, Department of State, interagency organizations, regional centers like the Marshall Center in Europe)
11	4/0.25	Notable improvement/development of key relationships with PN (e.g. within government, military)
12	4/0.25	Ability to develop achievable Mission Essential Task Lists and performance standards for PN
13	4/0.5	Ability to develop plans, milestones, projects the PN can accomplish within realistic timeframe
14	4/1	Extent to which MSAS accomplished policy objectives (e.g. GCC end states met)
15	4/1	Ability to make repetitive/persistent visits with PN

Section 2: Reporting mechanism the MSAS could use to track and report their unit effectiveness:

5 =Very Important, 4=Important, 3=Moderately Important, 2=Of Little Importance, 1=Unimportant

Criteria	Group's Rating/IQR	Criteria
1	5/0	After Action Reports
2	4/0	Survey results from GCC, Component staff, Country team, PN
3	4/1	Track Partner Nation progress following MSAS engagements using a spreadsheet and numeric rating scale (e.g. 1 – 5 scale: (0) – No capability and (5) – Can complete without

3	4/1	Track Partner Nation progress following MSAS engagements using a spreadsheet and numeric rating scale (e.g. 1 – 5 scale: (0) – No capability and (5) – Can complete without assistance)
4	3/0	Make entries into Joint Lessons Learned Information System (JLLIS)
5	3/0	Report unit mission readiness monthly through Status of Resources and Training System (SORTS)
6	3/1	Make entries into Geographic Combatant Commander (GCC)/Air Force Theater Security Cooperation Management Information System (TSCMIS)

Section 3: Items that group **consensus was not reached** on:

5 =Very Important, 4=Important, 3=Moderately Important, 2=Of Little Importance, 1=Unimportant

Criteria	Group's Rating/IQR	Criteria
Research Question 1	4/1.25	Ability to identify and recruit personnel for MSAS (e.g. locate, train, develop, track/place) and seek to establish a formal career track and career progression/promotion opportunities
Research Question 2	4/1.25	Submit annual/semi-annual reports to GCC, Component staff, and Air Mobility Command through MSAS chain of command

Part 2 - Items of Importance

Of the 16 total criteria identified as minimum criteria the MSAS could use to measure their effectiveness at accomplishing their BPC mission, three emerged as decidedly important in that they attained the **highest possible median score of 5.0 and greatest degree of group consensus with an IQR of 0.0**:

1. MSAS contributed towards Partner Nation's (PN) increased capability and capacity (e.g. response during crisis, stable or increasing mission capability rate, sustained personnel training/task proficiency, interoperability with U.S.) as reported by country team, GCC staff;

2. MSAS engagements are in support of U.S. National Security policy, Geographic Combatant Commander (GCC) and Component Plans (e.g. Theater Security Cooperation Plans, Campaign Plans, and Air Force Component Campaign Support Plan) and Ambassador Country Plans (e.g. Mission Strategic and Resource Plan);

3. Ability to assess PN capability/capacity (e.g. access to information, facilities, airfields, equipment, etc.).

Of the 7 total criteria identified as the reporting mechanism the MSAS could use to track and report their unit effectiveness, one emerged as decidedly important in that it attained the **highest possible median score of 5.0 and greatest degree of group consensus with an IQR of 0.0**:

1. After Action Reports.

Part 3 - Summary of Participation

The group's participation throughout the study was phenomenal. Researchers have reported that participation rates from 40 to 75% can be anticipated with the Delphi study. This study concluded with an overall **98.3% participation rate**. Below is a summary:

Round	# Invited to Participate	# Participated	Participation Rate (%)
1	20	19	95
2	20	20	100
3	20	20	100
Overall Participation			98.3

By participating in this study, **you sought the unique opportunity to shape how the MSAS can tie their tactical-level actions to strategic outcomes.** The data the group provided through this study will form recommendations that will be offered to Air Force decision makers at the Headquarters, Major Command (Air Mobility Command), and wing levels in order to shape the future of this mission.

Thank you again for participating in this study. I greatly appreciate your time and candid responses.

Very Respectfully,

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Determining Mobility Support Advisory Squadron Effectiveness In Support of Building Partner Capacity

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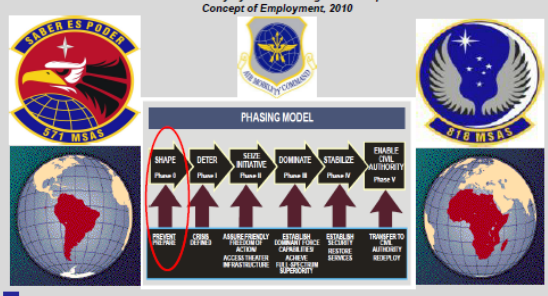
Introduction

The USAF has taken the leadership role to develop the aviation capacity and capability of partner nations (PN). The key to accomplishing this objective are Air Advisors (AA). AAs are trained and educated to assess, advise, train, assist, and equip selected PNs. Air Mobility Command has activated two Mobility Support Advisory Squadrons (MSAS) to manage the AAs and their taskings. Initial, broad-based guidance was provided but no direction was given on how to measure and report MSAS effectiveness at conducting their Building Partner Capacity (BPC) mission. This research utilized a Delphi study to determine criteria the MSAS could use to measure, track and report unit effectiveness toward accomplishing their mission.

Research Goal

- Determine appropriate measurement criteria the MSAS could use to report unit effectiveness toward BPC (Research Question (RQ) 1)
- Determine appropriate reporting mechanism the MSAS could use to report unit effectiveness toward BPC (Research Question (RQ) 2)

"The BP mission of AMC is to conduct operations that will train, advise, and assist PNs in the development of an Air Mobility System."
- Air Mobility Systems Building Partnerships Concept of Employment, 2010



* 5 =Very Important, 4=Important, 3=Moderately Important, 2=Of Little Importance, 1=Unimportant

What minimum **criteria** would you recommend the MSAS use to measure their effectiveness at accomplishing their Building Partnership Capacity mission?	Final Median	Final IQR
MSAS contributed towards Partner Nation's (PN) increased capability and capacity (e.g. response during crisis, stable or increasing mission capability rate, sustained personnel training/task proficiency, interoperability with U.S.) as reported by country team, GCC staff	5	0
MSAS engagements are in support of U.S. National Security policy, Geographic Combatant Commander (GCC) and Component Plans (e.g. Theater Security Cooperation Plans, Campaign Plans, and Air Force Component Campaign Support Plan) and Ambassador Country Plans (e.g. Mission Strategic and Resource Plan)	5	0
Ability to assess PN capability/capacity (e.g. access to information, facilities, airfields, equipment, etc.)	5	0

What **reporting mechanism** would you recommend the MSAS use to track and report their unit effectiveness?	Final Median	Final IQR
After Action Reports	5	0

Motivation

The tactical-level actions each MSAS takes with their assigned PNs must be conveyed in some manner that demonstrates effectiveness and progress of the overall engagement.

Application – Decision Points

- 20 experts formed the Delphi panel
- 3 rounds w/questionnaires
  - 66 initial criteria narrowed to 23
- Consensus reached on 21 criteria
  - 15/16 for RQ1 & 6/7 for RQ2
  - * 4 w/best scores (5-Median/0-IQR)
- Overall 98% panel response rate

Impacts/Contributions

- Delphi panel determined initial criteria the MSAS could use to measure/track/report effectiveness
- AF decision makers at tactical, operational, and strategic levels could use this data to shape the future of the MSAS & BPC efforts
- Data from this study can help the development of a formal AF assessment framework

Collaboration

SAF/IA, HAF A3, AMC A3, AETC A3 & AAA, AFSOC A8 & AFSOS, CRWs

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 074-0188

PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.

1. REPORT DATE *(DD-MM-YYYY)*	2. REPORT TYPE	3. DATES COVERED *(From – To)*
15-06-2012	Graduate Research Paper	Jul 2011 – May 2012

4. TITLE AND SUBTITLE
Determining Mobility Support Advisory Squadron Effectiveness in Support of Building Partner Capacity

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)
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5d. PROJECT NUMBER
N/A

5e. TASK NUMBER

5f. WORK UNIT NUMBER

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10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
DISTRIBUTION STATEMENT A. APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.

13. SUPPLEMENTARY NOTES

14. ABSTRACT

National strategic-level guidance has emphasized the importance of the U.S. to work with, by, and through foreign counterparts to bolster national security. The USAF has assumed the leadership role to develop the aviation capacity and capability of partner nations (PN). The key to accomplishing this objective are Air Advisors (AA). AAs are trained and educated to assess, advise, train, assist, and equip selected PNs. Air Mobility Command activated two Mobility Support Advisory Squadrons (MSAS) to manage the AAs and their taskings. Initial, broad-based guidance was provided but no direction was given on how to measure and report MSAS effectiveness at conducting their Building Partner Capacity (BPC) mission. Since the MSAS seeks to establish and build relationships, this process is time-consuming and lengthy. Furthermore, it is difficult to quantify expected outcomes such as trust, good-will, and positive feelings—thus making measurement of outcome almost entirely subjective. This research utilized a Delphi study and panel of experts to determine criteria the MSAS could use to measure, track and report unit effectiveness toward accomplishing their BPC mission. The data obtained through this research formulated recommendations AF decision makers could use to shape the future of the MSAS and development of the BPC initiative.

15. SUBJECT TERMS
Mobility Support Advisory Squadron, MSAS, Building Partnership/Building Partner Capacity, BP/BPC, Air Advisor, AA

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
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