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Joint Special Operations University
7701 Tampa Point Boulevard
MacDill AFB, FL 33621

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ISBN 978-1-941715-17-8

JSOU Report 17-5

Special Operations Contracting

Tkach



JOINT SPECIAL OPERATIONS UNIVERSITY



Special Operations Contracting: 21st Century Approaches for Service and Technology Acquisition

Benjamin Tkach, Ph.D.

JSOU Report 17-5



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*Special Operations Contracting:
21st Century Approaches
for Service and Technology
Acquisition*

Benjamin Tkach, Ph.D.

JSOU Report 17-5
The JSOU Press
MacDill Air Force Base, Florida
2017



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This work was cleared for public release; distribution is unlimited.

Printed in July 2017.

ISBN 978-1-941715-17-8

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On the cover. A U.S. Army Ranger from B Company, 2nd Battalion, 75th Ranger Regiment, fires a Special Operations Forces Combat Assault Rifle (SCAR) at a close quarter marksmanship range in Fort Hunter Liggett, California, in January 2014. Developed by USSOCOM, the self-loading rifle boasts a rotating bolt and a firing rate of 625 rounds/minute. U.S. ARMY PHOTO BY PFC. RASHENE MINCY.

Back cover. U.S. Army Rangers, assigned to 2nd Battalion, 75th Ranger Regiment, prepare for extraction from their objective during Task Force Training in Fort Hunter Liggett, California in January 2014. Rangers constantly train to maintain their tactical proficiency. U.S. ARMY PHOTO BY SPC. STEVEN HITCHCOCK.

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Foreword

“Amateurs talk about tactics, but professionals study logistics.” This quote is attributed to the Commandant of the Marine Corps, General Robert H. Barrow in 1980. The observation is especially relevant to the USSOCOM enterprise due to the command’s dual role as a combatant command and an organization with legislated military department-like authorities. One of the chief tasks under those military department-like authorities is the procurement and fielding of SOF-peculiar equipment. Certainly within the past 15 years, many in the special operations community will argue that technology that is acquired and fast-fielded can save lives. Therefore, Dr. Tkach’s monograph is an important read for Special Operations Forces (SOF) professionals.

In the pages that follow, Dr. Tkach examines USSOCOM’s acquisition and procurement processes, policies, and challenges. He analyzes processes for SOF-peculiar acquisition, the impact of organizational capital, and market competition. Through interviews with Special Operations Forces Acquisition, Technology, and Logistics (SOF AT&L) and industry surveys, he identifies four specific areas for improvement: SOF procedures for identifying needs, SOF procedures for writing requirements, interoperability, and procedures for protests. He acknowledges USSOCOM’s unique advantages and benefits from being an adaptive, joint organization that enables flexible acquisition and procurement. He recognizes leadership and a dedicated workforce that aggressively seeks revolutionary capabilities. He is also clear-eyed about challenges noting that USSOCOM is less able to benefit from market competition than the Services. The economic reality is that low-volume purchases of SOF-peculiar equipment combined with high technology readiness level requirements make USSOCOM less competitive in the marketplace. Still, his overall assessment is positive.

As you read this monograph, recall that USSOCOM celebrated its 30th anniversary in April 2017. USSOCOM comprises a tiny fraction of the overall acquisition workforce—about 0.4 percent. Nevertheless, at the 2016 Defense Acquisition Workforce Awards, 5 of 17 DOD Acquisition Individual Award winners were affiliated with the SOF community. SOF AT&L was

also recognized as one of DOD's top Acquisition Workforce Development Programs—an honor SOF AT&L has held for the past 6 years.

Dr. Tkach wrote this monograph for all professionals who study logistics and enable SOF. As you review the work, consider how you can ensure SOF continues to receive the effective support it needs to carry out its mission.

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Interim Director, Center for Special Operations Studies and Research

About the Author

Benjamin Tkach is an assistant professor of security and intelligence at King University. His research agenda focuses on the causes and consequences of security privatization and non-state actors' involvement in conflict. His work has appeared in *Peace Economics, Peace Science and Public Policy*, and *Conflict Management and Peace Science*. Prior to his current position, he was a post-doctoral fellow at the Center on Conflict & Development at Texas A&M University. He led a research team examining the consequences of digital technology on conflict perceptions and participated in institutional assessments in Kinshasa, Democratic Republic of Congo. He has lectured at American University Beirut (Lebanon), American University Sharjah (United Arab Emirates), University of Exeter (United Kingdom), University of Groningen (Netherlands), and Texas A&M University Qatar. He has been a research fellow with the U.S. National Defense University and collaborated on projects with the Department of Energy and the Pacific Northwest National Laboratory. He holds a Ph.D. in political science from Texas A&M University. Prior to graduate school, Dr. Tkach worked in defense consulting for Jane's Information Group.



Acknowledgements

I would like to thank the numerous individuals that made this monograph possible. I am indebted to Dr. Edwin Price, director of the Center on Conflict and Development at Texas A&M University, for supporting my research endeavors. Dr. Shahriar Kibriya provided valued insight and assistance throughout the project. The monograph would not have been possible without the assistance of Christopher Harrington and Wyman W. Irwin. Christopher arranged and managed the schedule with SOF AT&L personnel. Will provided direction, encouragement, and research assistance. Two anonymous reviewers provided feedback that strengthened the monograph. Industry representatives candidly discussed their businesses and federal contracting practices. Several students provided critical research support. I want to thank Chris Janes, Ryan O’Neal, and Max Shanstrom for their assistance.

Introduction

The objectives of this monograph are: (a) to assess the processes and policies of the U.S. Special Operations Command (USSOCOM) for purchasing technology and services from the private sector, and (b) to evaluate possible enhancements and alternative processes and policies. Primary responsibility for purchasing technology and related services currently lies with Special Operations Forces Acquisition, Technology, and Logistics (SOF AT&L), whose mission is to provide Special Operations Forces (SOF) with equipment and services that satisfy validated requirements in a timely, cost-effective manner. In this role, SOF AT&L is responsible not only for the acquisition of advanced SOF-peculiar technologies for use in operational environments, but also for contracting the entire range of support services required for USSOCOM to operate effectively. Policymakers and strategists recognize that staffing and funding of SOF have not kept pace in recent years with the increased demand for their services.¹ In a fiscally tight environment, USSOCOM thus faces heightened challenges in ensuring that the acquisition and procurement process is maximized to ensure SOF continues to receive the effective support it needs to carry out its mission, focus on hybrid threats, and win in complex environments.²

SOF AT&L's acquisition processes pursue revolutionary SOF-peculiar capabilities using an evolutionary acquisition system. Revolutionary capabilities are disruptive technologies that change tactical (and potentially strategic) capabilities; evolutionary capabilities are incremental improvements on existing capabilities.³ Despite constraints imposed by federal acquisition regulations, improvements in SOF AT&L's acquisition processes are possible.

Editor's note: The research for this monograph was completed in mid-2015. At the end of 2015, USSOCOM opened the doors of their two SOFWERX facilities in Tampa, Florida. According to the SOFWERX website FAQ section, "SOFWERX performs collaboration, ideation and facilitation with the best minds of Industry, Academia and Government. SOFWERX can also conduct rapid prototyping and rapid proof of concepts from ideation discovery." For more information on SOFWERX, refer to their web site, <http://www.sofwerx.org>.

The current approach of adopting and then adapting already existing, mature technologies and equipment has the benefit of shortening time-to-delivery. At the same time, it can limit the disruptive potential of new technologies. To achieve revolutionary capabilities, SOF AT&L may need to better mobilize its resources to develop capabilities in particular areas. Development of existing technology, as opposed to aftermarket modification, will better fulfill some SOF-peculiar requirements. That said, acquisition of revolutionary SOF-peculiar capabilities will require improvement in the processes through which SOF needs are translated into written requirements and in SOF AT&L implementation of acquisition and procurement programs. SOF AT&L needs to better mobilize private investment earlier in the acquisition process to successfully capitalize on rapid deployment of untested disruptive technologies.⁴ Prioritization of non-traditional defense companies has yet to have a discernible impact on the acquisition process.

The SOF AT&L acquisition and procurement process engages the private sector primarily with regard to two types of services: 1) military-specific services that include operational support and military-specific technology acquisition, and 2) general support services that include administration, research and development, and management services. Both types of services impact SOF operational capabilities. Commercial industry supplies equipment and technological development, and private military and security companies (PMSCs) offer military- and security-specific services.⁵ PMSCs are publicly traded and individually owned firms that supply materials, support, and expertise to the military including logistical, technological, management, and linguistic services.⁶ Non-military specific private sector support encompasses a range of SOF requirements including management, research and development (R&D), and operational support.

In this context, acquisition and procurement involves a range of private sector actors in service, logistics, and technology areas. Recent U.S. operations in Iraq and Afghanistan expanded public awareness of private sector involvement in military operations, but private sector involvement and engagement in military operations dates back decades.⁷ The evolution of private sector involvement from service contracts in World War II, to maintenance specialists in Vietnam, to base security personnel in Afghanistan accelerated following the 9/11 terrorist attacks in 2001. USSOCOM's continued adaptation to 21st century acquisition challenges ensures SOF

will procure the technology and capabilities required to win today's and tomorrow's fight.

USSOCOM's contemporary priorities and acquisition processes have been shaped by its history. Special operations predate the 1987 formation of USSOCOM, as SOF played significant roles in U.S. operations since World War II. USSOCOM was created in 1987 in response to growing recognition that limited coordination between the various special operation commands decreased performance and effectiveness. The reorganized structure enables unified command and control of operations and, consequently, of acquisition processes as well. The force consists of approximately 66,000 active duty troops and civilians, and is headquartered at MacDill Air Force Base, Florida.⁸ Demand for SOF continues to expand⁹, even while other military branches experience drawdowns and budgetary cuts.¹⁰ SOF operates in dozens of countries and the demand for private sector support follows a similar pattern. Private sector partners, specifically Boeing and Textron, are supporting less publicized operations such as those in the Philippines,¹¹ where USSOCOM is conducting extended training exercises to bolster the government's counterinsurgency capacity.¹² Expanded public awareness of special operations, attributed to successful high-profile operations (e.g., the Osama bin Laden raid) and depictions of SOF activities on multiple media platforms (movies and video games), however, does not necessarily translate into accurate understanding of the actual activities of SOF.¹³

USSOCOM has several organizational characteristics that separate it from the rest of the U.S. military. First, the command consists of the special operations service component commands from the four military branches.¹⁴ The combination of commands maximizes organizational capital through centralized decision-making, preserves branch associations, and utilizes small-unit acquisition processes. Second, USSOCOM has implemented Federal Acquisition Regulations (FAR) more expediently than other Department of Defense (DOD) services through numerous funding mechanisms. For example, SOF AT&L utilization of acquisition category II and III programs increases budget flexibility through smaller financial commitments and limited purchase volumes.¹⁵ Additionally, USSOCOM also directly controls Major Force Program 11 (MFP 11) dollars, which enables rapid funding of SOF-peculiar requirements. MFP 11 purchases "reflect [a] macro-level force mission or a support mission [that] contains the resources necessary to achieve a broad objective or plan ... [in] a fiscal year time-phasing of mission

objectives.”¹⁶ MFP 11 enables rapid procurement capabilities of unfunded requirements that are not covered by alternative funding sources.¹⁷ Third, the USSOCOM commander has a comparatively flexible acquisition authority.¹⁸ Further, the commander has conferred procurement authority to the acquisition executive, who in turn delegates authority to lower administrative levels. The delegation of procurement authority affords SOF AT&L flexibility and the ability to respond rapidly to emerging SOF needs and pursue flexible acquisition and procurement strategies. The emergence of new and shifting operational requirements continues to shape acquisition programs.

Utilization of the private sector generates several acquisition challenges. First, private sector involvement generates tension between buyers and sellers. Sellers of goods and services in general seek to maximize profits, while traditional buyers seek to minimize expenses and maximize services. For USSOCOM, however, the importance of price is diminished (but not eliminated) compared to the primary objective of meeting operational requirements. In this context, USSOCOM’s specific mission requirements differentiate its contracting practices from broader DOD acquisition policies and operations. Rapid deployments, harsh and isolated operating environments, specialized skill requirements, and high reliability requirements characterize SOF operations. Additionally, unlike the Services, USSOCOM often modifies existing equipment and technologies, which alters the acquisition process. Thus, adopting broad general lessons from DOD-wide experiences may not suit USSOCOM requirements. The challenge for USSOCOM, in the words of Gary Smith, the first acquisition executive for USSOCOM, is to focus on the imperative of timely and effective service delivery to such a degree that, “if [USSOCOM is] going to manage a program on the same schedule as one of the Services, we’re not doing our job.”¹⁹

Second, firms that provide goods and services may face barrier-to-entry challenges, which occur when either the market keeps firms out through high costs or technological requirements, or when the bureaucratic hurdles of federal contracting limit company engagement. Barriers to entry in defense markets have previously been examined in environments distinct from special operations.²⁰ Four USSOCOM barriers cited by firms include specialized contract requirements, less-than-easy access to decision makers, the challenge of navigating FAR, and low-volume orders.²¹ Continued improvement in engagement with the private sector may mitigate these barriers and increase the presence of non-traditional defense companies.

Third, USSOCOM purchases are generally much smaller than those made by the main military branches. USSOCOM's relatively small budget, despite rapid increases in its total size since 2001,²² reduces the potential benefits of economies of scale and bulk purchases compared to branch service purchases.²³ Further, because SOF AT&L's priority is to meet operational requirements, which often require rapid deployment of technologies and services, budgetary and time pressures elevate the utility of modifying branch equipment or commercial off-the-shelf (COTS) items to fulfill requirements. However, this equipment-modification approach requires purchased items to have high technology readiness levels (TRL). The purchase of higher-TRL equipment improves delivery times because technologies, equipment, and procedures have typically already been tested outside a laboratory environment. However, smaller budgets and higher TRLs limit the acquisition of revolutionary technologies—disruptive technologies that could fundamentally alter the nature of combat and give SOF a significant operational advantage.

Monograph Outline

The following monograph examines USSOCOM's acquisition and procurement processes, policies, and challenges. The monograph's first section outlines private sector support of military- and non-military-specific equipment and services. Next, the acquisition and procurement processes are examined through analysis of SOF-peculiar acquisition practices, market competition, and organizational capital. Market competition remains a fundamental assumption of government acquisition procedures—with competition being understood as a force that in general decreases prices, spurs innovation, and improves quality.²⁴ Organizational capital is the capacity of an organization to adopt alternative modes, mechanisms, and structures to adjust to new requirements. Additional extensions from these three main concepts examine technology development, bureaucratic management, contractor dynamics, and small-business engagement.

To draw attention to key features of the USSOCOM's SOF-peculiar acquisition process, the author has compared this process to a stylized acquisition model. USSOCOM has outpaced the rest of the DOD in utilizing innovative and efficient methods and authorities to quickly acquire and deploy new technologies and services.²⁵ SOF AT&L's procurement authority is unique within DOD because it is vested in the commander, who delegates the authority to

the acquisition executive. This organizational improvement increases SOF AT&L's capability to rapidly and effectively support the force. The existing streamlined acquisition process limits the usefulness of looking to other commands to identify potential areas for improvement. For this reason, the following monograph instead compares SOF AT&L practices with idealized acquisition procedures and processes. Interviews with SOF AT&L personnel and industry surveys identified four specific areas where improvements are needed. These four areas were SOF procedures for identifying needs, SOF procedures for writing requirements, interoperability, and procedures for protests. Two of these areas, the writing of requirements and interoperability, are not necessarily SOF AT&L responsibilities. The USSOCOM Directorate of Force Structure, Requirements, Resources and Strategic Assessments (J-8) establishes written requirements and conducts the validation process.²⁶ Interoperability requires multidimensional coordination with the branches, international SOF, and international partners, and interoperability may or may not be an explicit component of a validated requirement. Examination of the four aforementioned areas for improvement indicates that delivery of SOF capabilities can be improved through specific adjustments in each area.

Market competition remains one of the most touted mechanisms to save money when purchasing services from the private sector—indeed, DOD Better Buying Power (BBP) terms it “the single most powerful tool available” to improve productivity.²⁷ National governments identify competition as an important mechanism for removing waste and increasing efficiency. Initial research examining private sector involvement in SOF operations indicates that market competition between firms may improve performance.²⁸ The Pentagon's direct BBP specifically identifies strategies to improve market competition between PMSCs. Extending theoretical competition models, the analysis presented in this monograph identifies patterns in procurement and the significant influence of competition on acquisition procedures. For example, the analysis indicates that USSOCOM's comparatively small budget may reduce the role of competition in certain service sectors; at the same time, the analysis indicates that USSOCOM generally promotes effective competition across service sectors among both large and small businesses.

Research Methods

The following monograph adopts a multi-method approach to examine USSOCOM's acquisition and procurement processes. Both quantitative and qualitative methods are employed. Quantitative analysis enables big-picture examination of procurement patterns and trends. Qualitative methods supplement the quantitative analysis by illuminating key features of the acquisition process identified by stakeholders. Quantitative and qualitative methods are commonly combined when examining SOF topics because of the classified environment and unique SOF culture.²⁹

Quantitative assessments examine the role of organizational capital and market competition. The Federal Procurement Data System (FPDS) provides data for over 88,000 USSOCOM transactions between 2004 and 2014—a detailed and publicly available record of the command's procurement history. Trend analysis examines business practice changes during the current period of USSOCOM expansion. Content analysis of individual requests for proposals and information accessed through the Federal Business Opportunities website deepens our understanding of the role of interoperability in written requirements.

Qualitative analysis highlights specific areas for improvement identified by SOF AT&L personnel and industry representatives. Face-to-face interviews with USSOCOM personnel and contractors were conducted at MacDill Air Force Base, providing perspectives on all aspects of the acquisitions process. These interviews combined standard structured social science and ethnographic techniques. Structured interview methods minimize interviewer effects and enable systematic comparisons across interviews.³⁰ Ethnographic methods allow for directed but informal conversations to discover how individuals conceptualize their organization and identify meaningful concepts.³¹ The combination of these techniques enables comparisons between interviewees in the standardized sections and flexibility to focus on an individual's specific role and his or her suggestions for improvements in the acquisition process. The majority of questions posed in these interviews focused on participants' experience, opinions, and values. In some cases, individuals with many years of experience were asked follow-up questions comparing the current acquisition process and SOF AT&L culture to previous periods. Individual names and positions are not identified in the monograph to protect the anonymity of respondents.³²

Concept exploration is emphasized in the qualitative research.³³ Concepts are the unit of analysis, not individual interviews. Thus, quotations and insights from each interview are applied where appropriate based on the subject matter. Each interview involved an initial explanation of the nature and purpose of the research, an informed consent process, standardized questions, and open-ended responses. Specific quotes were written verbatim during each interview because security requirements prohibited the use of any recording device (or any other electronic device). Quote accuracy was confirmed during the interview by reading back the exact quote to the individual participant and acquiring verbal confirmation of accuracy. Consistent with standard ethnographic practice, each interview concluded with discussion of the most important element of the interview as identified by participants.

An online survey of Special Operations Forces Industry Conference (SOFIC) 2015 participants provides insight into the views of industry representatives.³⁴ Participants from SOFIC 2015 were contacted and nearly 50 company representatives provided feedback on a range of issues. The survey contained quantitative and qualitative components. Participants rated SOF AT&L personnel on a range of professional characteristics as well as SOF AT&L practices and procedures. Participants were also asked open-ended questions about the acquisition process to identify areas for improvement. Analysis of the open-ended questions utilizes the same ethnographic techniques previously discussed. Similar to the individual interviews, this industry survey is not assumed to be representative of industry perspectives. Moreover, because of limitations in sampling procedures,³⁵ conclusions are not drawn solely from the survey analysis. Instead, the survey provides an indication of key issues facing SOF AT&L from the private sector's perspective.

Conclusions

The research presented in the following pages provides an analysis of USSOCOM acquisition policies and practices, and trends in these policies and practices. The analysis examines a wide range of topics, driven partly by questions and inquiries provided by SOF AT&L personnel. Key points are summarized below:

- SOF AT&L's pursuit of revolutionary capabilities may depend on adoption of a model of acquisition in which the government plays the role of lead integrator, coordinating the activities of multiple parties over extended periods of time. The Tactical Assault Light Operator Suit (TALOS) program illustrates how this model could work. The program requires unprecedented forms and levels of collaboration among multiple private sector actors, universities, and the government to overcome daunting technical challenges. Success will be measured by the delivery of a working suit prototype by 2018, the stated official objective.³⁶ Program success is not limited to on-time delivery, however, spin-off technologies are a potential benefit for USSOCOM and other entities (e.g., military services, fire departments, etc.) The acquisition model for the TALOS program requires that companies cooperate with one another and with USSOCOM to higher degrees than in previous collaborative contracts, including potentially sharing proprietary technology and contributing resources without receiving intellectual property rights. Organizational innovations, such as rapid prototyping environments, should be evaluated to identify how each change contributes to the program. A detailed program history that documents business participation, decision-making processes, and mistakes should be implemented. If the TALOS program is successful, extensive (declassified) documentation will aid in replication and extension of the TALOS approach to other programs.
- Contract requirements describe the proposed good, service, equipment, or technology to be procured from the private sector. The clarity with which these requirements are articulated remains an issue for the acquisition process. USSOCOM personnel and private industry described the need to improve how requirements are generated, written, and communicated. The responsibility for articulating and communicating requirements effectively extends beyond the contract officers and legal teams. Steps to improve understanding of requirement language for additional personnel may enhance the acquisition process.
- Market competition is a bedrock principle of acquisition and procurement. Competition typically lowers prices and improves innovation. USSOCOM, however, is less able to benefit from competition than the services because SOF-peculiar technology and equipment are not

mass-produced. Competition levels are not consistent across industries. Low-volume purchases and high TRLs further reduce competition in some sectors.

- USSOCOM benefits from extensive organizational capital that enables flexible acquisition and procurement. Branch-level purchases of major platforms reduce oversight and management burdens for the relatively small staff. Division between branches of the command provide for improved SOF-peculiar procurement. Finally, centralization of decision-making significantly reduces decision timelines.
- Understanding SOF culture is important for success. Businesses recognize the importance of the SOF culture, often employing individuals with SOF experience. Yet, the importance of employees with SOF experience varies between companies and within company positions. Employment of personnel with SOF experience is not—and should not be—a requirement for the private sector to successfully engage USSOCOM.
- The leadership qualities of individual USSOCOM officers establish expectations and create a unique business environment. USSOCOM's overarching emphasis on SOF-informed acquisition and reduction of bureaucracy is actively supported by the command. Turnover of personnel is inevitable, yet institutionalization of standards and procedures may reduce the negative effects of such turnover.

1. Acquisition and Procurement: Overview of Private Sector Engagement

USSOCOM acquisition and procurement processes involve a diverse array of firms that support command activities. Some of these firms furnish non-military-specific equipment and services, while others provide only specialized military-specific equipment and services, and still others provide a mix of both types. As is the case with other federal agencies, the private sector provides general and specific services that support the operational capacity of SOF. SOF AT&L is one player in a dynamic international marketplace where DOD, as a whole, is the single largest and most influential party. The federal government and DOD set sector-wide acquisition policies that influence USSOCOM's policies and procedures. In this section, we first explore key features of DOD private sector involvement before delving into USSOCOM-specific practices.

Private sector engagement is often synonymous with contracting services. The transition from government-provided services to contracted services was one of the most important federal management trends initiated in the 1990s. Nor has the trend been limited to services alone; a similar transition has been underway for decades with regard to the production of advanced weapons systems, too, with multinational corporations taking over the production of most big-ticket items, from

fighter aircraft to intercontinental ballistic missiles.³⁷ In general, privatization trends in DOD activities have mirrored privatization across the

The transition from government-provided services to contracted services was one of the most important federal management trends initiated in the 1990s.

federal government.³⁸ The Army Corps of Engineers initiated a formal study of contracting and its benefits in 1992, and follow-up research by private firms amplified key findings.³⁹ Additional federal investigations in the 1990s gave the impression of a consensus about the benefits of contracting, particularly regarding potential monetary savings.⁴⁰ During the 1990s, the use of private companies also shaped U.S. Army doctrine, including composing field manuals and assisting in training operations.⁴¹ The privatization trend has had critics, too, notably units within the U.S. Government Accountability

Office (GAO) that explicitly argued the projected savings from privatization were overstated.⁴² Yet these critical voices have not slowed the overall trend. Further, the trend of private sector engagement shows no signs of slowing—despite opposition from proponents of government contracting, and the mixed results of private sector contracting.⁴³ Today privatization constitutes a significant factor in determining the success and failure of U.S. military operations.

Private sector involvement has also been internationalized. The majority of USSOCOM transactions involve firms located in the United States: firms from each of the 50 states and three of the five territories are represented in the data.⁴⁴ As shown in figure 1, however, USSOCOM also works with at least one firm in 47 different countries around the globe. International private sector transactions totaled about \$916 million during the 10-year period studied.⁴⁵ The geographic diversity of firms in the U.S. and foreign countries reflects USSOCOM’s global footprint.

The following sections describe non-military and military-specific private sector support. The first section discusses non-military-specific support by describing its importance for USSOCOM, as well as the economic challenges associated with employing firms providing non-military services. The second section examines USSOCOM engagement with firms providing military-specific services.



Figure 1: Country of primary service performance of firms contracted with USSOCOM (2004-2014). Source: The Federal Procurement Database System

Non-Military-Specific Private Sector Support

Special operations usually require non-SOF support. Private sector support involves numerous non-military-specific services and products. Support occurs throughout the entire range of SOF activities from R&D, to training, to actual operations. Commercial items and services may or may not be ready to use off-the-shelf and may require modification to meet USSOCOM specifications.⁴⁶ Non-military-specific private sector support involves acquisition and modification of items ranging from lightweight boats to unmanned aerial systems. Other support includes manufacturing, public administration, logistics, and professional/scientific services.⁴⁷ Non-SOF-peculiar support is provided on U.S. and international bases, as well as in operational environments.

Non-military-specific contracts cover equipment and services; many include applications outside of a direct military and security context. For example, a recent solicitation for a password-recognition software program that identifies complexity in passwords and ensures compliance is not unique to a military context.⁴⁸ Non-military-specific services are also sometimes included in larger contracts. The Special Operations Forces Support Activity Contractor Logistics Support contract is one such example. Lockheed Martin's 2010 contract includes non-military specific services such as business process transformations and information technology in addition to military specific services such as vehicles, weaponry, and electronics equipment maintenance.

Modification of commercial items is the alteration of equipment or technology to ensure compliance with military-quality standards and requirements. Modification of commercial items reflects a general shift in federal acquisition patterns. Since passage of the Federal Acquisition Streamlining Act of 1994, federal procurement has shifted from products developed exclusively for the government to an environment that focuses on modifying and optimizing commercial items to meet government requirements. The initial iteration of the law is premised on three concepts: maximizing use of commercial products, using contractors who have previously demonstrated superior performance, and promoting competition. Commercial item acquisition accounted for approximately 43,069 of the 88,407 USSOCOM transactions totaling over \$6.4 billion from 2004 through 2014.⁴⁹ The initial provider or an alternative firm can do SOF-peculiar modifications. Modification of

commercial items to fulfill requirements is a priority for private sector partners and USSOCOM.⁵⁰

Purchase and modification of commercial equipment, however, is often problematic. Commercial equipment, services, and software typically meet an immediate need but do not necessarily address USSOCOM's long-term requirements. COTS may become obsolete before the end of a typical military life cycle.⁵¹ Obsolescence is especially problematic in sectors such as software, telecommunications, and information technologies where the military generally requires longer service life cycles than is the case in private industry.⁵² Finally, when a military requirement exists that no commercially available item can fulfill, limited funding usually restricts the option of developing the needed equipment in-house, within the military.

In sum, non-military-specific private sector support is pivotal to operational success.⁵³ Proximity to combat does not determine the impact of the private sector's contribution. Commercially available equipment and technology play an essential role in helping USSOCOM meet time-delivery pressures.⁵⁴ Contracted commercial support for routine services, as well as highly-sensitive services, is likely to continue in the current era of privatization.⁵⁵

Military-Specific Services: Private Military and Security Companies

PMSCs are rational, profit-motivated companies that supply a full range of services to USSOCOM and other employers.⁵⁶ In this analysis, PMSCs are defined as firms that are contracted to provide security- and military-related services, equipment, and material to USSOCOM. This broad conceptualization of PMSCs enables a holistic evaluation of the acquisition and procurement process.

Security and military related services are equipment and services that are exclusive to military and security environments. Examples of military-specific equipment and services include weaponry, military vehicles, and surveillance capabilities. Operational conditions—operating in isolation or in advance of forces—often require intelligence, surveillance, and reconnaissance (ISR) support from the private sector. A case in point is operations in Iraq, the Philippines, and Afghanistan that utilized unmanned aircraft systems (UAS) to provide real-time updates. Operation of Boeing's Scan Eagle

required private sector representatives to support operations. Boeing and its subsidiaries (Insitu) and Textron subsidiary AAI Test & Training have won several contracts worth upwards of \$300 million for surveillance services.⁵⁷ These ISR contracts use an innovative “rent-a-pixel” structure.⁵⁸ Firms are paid hourly rates for services that encompass the equipment, operation, and maintenance personnel in the new contractor-owned and contractor-operated approach.

PMSCs provide critical services to the military and affect operational capabilities.⁵⁹ PMSCs provide a range of services to the military. Peter Singer conceptualizes the service continuum as a spear, with non-kinetic support including logistics and training as the shaft and kinetic services as the tip of the spear. Public records indicate that USSOCOM does not hire firms to conduct kinetic services—distinct from other U.S. federal government agencies and units, particularly the Department of State.⁶⁰ Non-kinetic services such as surveillance and linguistic support are critical for operational success. For example, in 2006, Shee Atika was contracted to provide linguistic and interrogation support in various locations across the globe.⁶¹ PMSCs play a crucial role in addressing operational gaps and technology deficiencies in both equipment and services for standard military operations.⁶² PMSCs impact on SOF operations is unknown.⁶³

Conclusions

Acquisition and procurement processes involve military and non-military equipment, services, and technology from a geographically dispersed network of companies. Support from the private sector, particularly in non-military services, will continue to follow general DOD trends. The implications of increased privatization in SOF’s global support network, however, are less clear. Key questions for the force include whether failures to provide support services due to unforeseen problems (e.g. company failures, contract award protests, geographic limitations, etc.) affect SOF operations and whether the global support network will be able to adapt to the changing nature of SOF operational environments. Failure to adequately ensure the global network’s flexibility will reduce the effectiveness of acquisition and procurement processes.

Recent allegations by Congressman Duncan Hunter, R-California, that SOF personnel have used personal funds to equip themselves with basic

combat gear, including ballistic helmets and tactical gear, suggest there may be significant problems with the procurement process.⁶⁴ Representative Hunter’s inquiry raises concerns about several aspects of the procure-

Failure to adequately ensure the global network’s flexibility will reduce the effectiveness of acquisition and procurement processes.

ment process—indicating that, on at least a handful of occasions, SOF personnel have not been provided with key pieces of necessary equipment in a timely manner. However, instances of SOF personnel purchasing their own equipment to overcome limitations in

issued equipment remains extremely rare. (A much more common and widely accepted scenario involves SOF personnel spending their personal funds to customize their gear in idiosyncratic ways.) In general, it appears that the existing global procurement network has effectively adapted to the current environment.

Modification of commercial and branch equipment remains a primary function of industry. Off-the-shelf equipment is frequently not adequate for USSOCOM purposes, and procurement of SOF-peculiar equipment therefore often requires additional research and development that may or may not receive funding. Yet it appears certain that fulfillment of SOF-peculiar requirements will continue to utilize modified commercial items because of the imperative for on-time delivery, a USSOCOM procurement priority. Evolution of off-the-shelf procedures now extends to renting services and equipment, particularly in technology-intensive areas (e.g., ISR), is a major advancement. As USSOCOM and DOD continue to develop rental services, additional analysis of the cost-effectiveness and operational impact of such services will be possible. Additional data and analyses will also allow us to ask and answer new questions such as whether, over time, SOF’s reliance on private sector companies for military-specific services expands the international SOF network by steadily adding new partners.

2. SOF-Peculiar Equipment and Technology Acquisition

SOF AT&L's main objective is to supply SOF-peculiar capabilities that fulfill validated requirements to their personnel. Two SOF-specific lessons from the existing linear acquisition process are examined: advanced equipment is not a guarantee of tactical supremacy and advanced technology rarely develops in a single geographic location. Delivery of SOF-peculiar capabilities takes two general acquisition approaches: evolutionary approaches emphasizing incremental improvements or revolutionary approaches emphasizing disruptive technology. Specific acquisition strategies are adopted depending on which general approach is required to fulfill the specific requirement. These two approaches influence how firms meet required TRLs. SOF-peculiar equipment has high TRL thresholds, which some companies are not able to meet.⁶⁵ USSOCOM's limited financial flexibility in the current austere fiscal environment reduces R&D funding to assist firms with TRL requirements. The austere environment has spurred an innovative approach to acquisition with the launch of the TALOS program, which represents a potential alternative approach to acquisition. The program uses the government as lead technology integrator, the body that coordinates the sub-systems supplied by multiple providers. Integrators are typically large defense companies.

Lessons from the Existing Linear Model

Operators are USSOCOM's acquisition and procurement priority. Operators are directly brought into the initial identification of requirements by J-8. Yet, individuals in SOF AT&L acknowledge the acquisition and procurement process results in alterations from the original requests.⁶⁶ Consequently, despite SOF AT&L innovations and acquisition flexibility, the acquisition process still largely follows the standard linear military model. These strategies are a byproduct of the federal contracting system and, when required, dependent on branch purchases. The linear, top-down model may or may not produce disruptive technologies.

Disruptive technologies are able to change the strategic or tactical operation of military forces. The introduction of advanced technologies, in and of themselves, does not constitute a disruptive technology.⁶⁷ Disruption requires technology to alter tactical environments. The introduction of night vision goggles is an example of disruptive technology.⁶⁸ Image intensifying technology quickly altered tactics once the technology was reliable and portable. However, image intensifying technology and other disruptive technologies demonstrate two limitations of technology acquisition.

First, technology alone is not a guarantee of tactical supremacy. Creativity is one of the distinguishing characteristics of SOF personnel and organization. Robert Spulak argues that rapid operational innovation may or may not involve technology, but that technology has often been a key advantage.⁶⁹ Tactical advantages provided by rapid technology acquisition in areas such as night vision, live-feed surveillance, and telecommunications

Creativity is one of the distinguishing characteristics of SOF personnel and organization.

provide evolutionary changes to capabilities, but have not fundamentally changed the mission or operation of SOF. SOF gain tactical supremacy through elite warriorship, flexibility, and creativity.⁷⁰ Technology is not necessarily a defining requirement of

each of these characteristics. That said, adoption and integration of new technologies has been a feature of elite fighting forces throughout history.

Second, advanced technology rarely develops in only one location. Increased dependence on COTS technologies and mature components, by definition, means that advanced weapons and other equipment are now generally more readily available to adversaries than was the case in the past, when products were developed in classified programs in industry, national laboratories, and academia. The sophistication of commercial UAS and the development of armed variants by foreign states are such examples. The U.S. currently maintains a substantial lead over other countries with regard to both the sophistication of its technology and also the size of its arsenal, causing some policy analysts to call for limitations on exports of commercial technologies.⁷¹ However, the development and spread of UAS technology is not limited to the United States. The extensive export controls and personnel training required by recipients of drones makes strategic sharing of technology with allies one approach to decreasing demand on U.S. resources. Advanced technologies like these are developed in multiple

locations simultaneously, which requires continued tactical innovation by SOF to maintain supremacy.⁷²

Revolutionary versus Evolutionary Technology Changes

Development of SOF-peculiar equipment must balance technological innovation and risk. Technology development can be categorized as revolutionary or evolutionary. Revolutionary technologies are disruptive technologies that alter the nature of combat and war. Evolutionary technologies are those that make incremental improvements over previous models.⁷³ Each approach has different levels of risk, defined in this context as the negative externalities of failing to deliver effective equipment. The two approaches are not mutually exclusive, but do require a different approach to acquisition.

The acceptance of risk demarcates the two approaches to technology development. Risk in this military context is defined as ensuring that the military force has the technology required to readily deploy and remain effective. Understandably, risk is a strong consideration when pursuing technology purchases.⁷⁴ In the words of one SOF AT&L employee, “military commanders are geared toward risk reduction, which means eliminating risk.”⁷⁵ Risk is generally reduced through pursuit of evolutionary changes. Evolutionary changes enable rapid deployment of technology advances and more predictable delivery timelines. Risk is further mitigated in evolutionary contexts because new equipment is more likely to be interoperable with legacy and SOF allied equipment. Contract requirements are often tailored to ensure continuity of capabilities.

Revolutionary technologies are inherently higher risk. First, revolutionary capabilities may fail to provide the expected disruption in tactics and strategy. Second, revolutionary technologies must be articulated clearly in the requirements section of requests for information and proposals. Clear description and specification of hypothetical technologies is a difficult task. Finally, revolutionary technologies, once adopted, typically require organizational changes to fully maximize the new capability.⁷⁶

The pursuit of revolutionary technologies using a system designed to produce evolutionary changes invariably creates friction. The FAR are, to a large degree, a system of checks and balances designed to produce incremental improvements. The existing system is thus biased in favor of evolutionary change and against revolutionary change. The standardization

of the acquisition process, while critical from the perspective of efficiency and risk management, reduces opportunities for the development of SOF-peculiar products that provide revolutionary capabilities. Finally, limited financial capacity to assist companies in the development and testing of new equipment reduces the availability of technologies that reach the high TRL threshold required by SOF AT&L.

Technology Readiness Levels

TRLs provide a metric with which to evaluate technology (and products) during the acquisition process. TRLs are at the center of the tension that exists between revolutionary and evolutionary technology change. USSOCOM predominantly purchases technologies that have higher levels of readiness, unlike the military branches that provide R&D funding to develop new concepts. Time-sensitivity and rapidly changing field requirements often dictate pursuit of evolutionary, not revolutionary, technology innovation. Acquiring and altering existing technology to SOF-peculiar requirements is consistent with a focus on producing 80 percent solutions today.⁷⁷ The following section outlines how TRLs shape the acquisition process. TRLs determine the availability of technology and establish private sector goals. However, USSOCOM's high TRLs are a barrier to market entry, which leaves some promising technologies undeveloped or not fielded.

DOD TRLs are divided into 9 levels with each involving a different level of proof of concept requirements. Typically, only technologies that have reached at least level 5—demonstration of system or subsystem effectiveness in a laboratory environment—are taken to the next stage of development. This is a demanding threshold that typically results in modifications of existing equipment and technologies.

USSOCOM TRLs indirectly establish private sector goals. Companies that primarily work with USSOCOM and other federal agencies benefit

Companies that primarily work with USSOCOM and other federal agencies benefit from products they develop because they often gain access to additional markets.

from products they develop because they often gain access to additional markets. SOF-peculiar technology has a very limited market, despite the command's goal of sharing technology with the branches. Developing a technology or product to TRL 5 is costly, particularly when small

economies of scale exist. One company executive articulated this point as follows: “the more demand by the military insofar as volume, the more the specific requirements will get sent up the chain of importance in product development.”⁷⁸ The current austere financial environment requires companies to self-fund technology development, an acquisition strategy that shifts more risk from USSOCOM to private industry.

The private sector faces higher financial risks when pursuing contracts with high TRLs. High TRLs require costly extensive testing and fielding to ensure interoperability and compliance with military specifications. USSOCOM does not typically prioritize development of nascent technologies, which is consistent with their priority of providing rapid and responsive support to SOF. But the lack of funding increases the risk to firms that seek to develop revolutionary technologies.⁷⁹ The development cycle often leaves technologies in the “valley of death”—the zone that lies between isolated demonstration of capabilities and thorough testing in a particular environment. The existing acquisition model shifts the financial burdens and development risk to industry, but if industry is unwilling or unable to establish a profitable business model, investment in the development process may weaken and useful technologies will not be fielded.⁸⁰

TALOS Case Study

The development of the TALOS may foreshadow the future of specialized military acquisition processes. TALOS was launched at the behest of Admiral William McRaven, former USSOCOM commander, following the loss of SOF personnel, particularly in instances where warriors breach doorways.⁸¹ TALOS is a mechanized exoskeleton suit designed to augment the strength and endurance of the operator. The current acquisition program is designed to deliver a prototype of the suit by 2018, which will require integration of revolutionary technology leaps using existing evolutionary acquisition procedures. TALOS is a unique program in which USSOCOM is the lead integrator.⁸² The program also uses lump-sum competition awards, integration of other DOD resources, and development of long-term technologies with lower TRLs. If the program is successful, it has the potential to revolutionize the military acquisition and procurement process.

The technology requirements for the suit are daunting. The ambitious program seeks to integrate the following characteristics: advanced armor,

mobility/ability, situational awareness, light and noise discipline, C4, medical, thermal management, power generation, and power management. The technologies for each of these capabilities, in many cases, are still under development. For example, clothes that staunch blood loss and treat medical wounds are still under development. The most demanding challenge is the generation, storage, and distribution of energy.⁸³ The suit's advanced technological requirements and the lack of existing capabilities catalyzed USSOCOM to develop new approaches to acquisition.

Prime contractors typically integrate system and subsystems of technologies on major defense systems. Prime contractors are typically large, multinational defense companies that are the lead company and carry primary responsibility for completing a contract.

The existing model that uses private sector firms as lead integrators has elicited criticism. First, prime contractors are not necessarily open and transparent about the nature of their competitions for sub-awards. Thus, the government often does not benefit from the competitive bidding process embedded within the contracting model.⁸⁴ Second, detractors argue it is too expensive because primes are able to push costs to subcontractors while taking a percentage of the profits. The combination of defense consolidation and decreasing defense budgets increases prime contractors' leverage over subcontracted firms.⁸⁵ Third, when a firm is the lead integrator it typically retains intellectual property (IP) rights to the system and its subcomponents. Control of these IP rights is highly contentious between firms and the military. IP rights often influence firm profitability, system costs, recompute advantages, and market scalability.⁸⁶ Former USSOCOM Command Sergeant Major Chris Faris, speaking at SOFIC 2013, indicated the importance of IP when he stated that participation in TALOS "might mean that you [private companies] have to lay out intellectual property on the table next to a competitor."⁸⁷ The context of the statement is clear: revolutionary change may require industry to overcome their reluctance to share IP. Whether industry will overcome this reluctance remains an open question.

The government, as lead integrator, has spurred direct collaboration with a wide range of actors. The Joint Acquisition Task Force—Tactical Assault Light Operator Suit, directs the TALOS program, and locations across the country are developing pieces of the program. Multi-location development is not unique to TALOS, but the high level of direct interaction and cooperation—made possible by the removal of bureaucratic layers—is unique.

In addition to private sector firms, the TALOS program has involved universities, national laboratories (e.g., Sandia and Los Alamos), and multiple government agencies, including the Defense Advanced Research Projects Agency (DARPA). This high level of collaboration has increased the logistical burden on program personnel,⁸⁸ but it has also increased organizational flexibility.⁸⁹ Unlike prior defense acquisition models, both successes and failures are directly reported to the program executive office (PEO) SOF Warrior. The increased efficiency greatly reduces the time between decisions. Integration of SOF is a foundational component of TALOS and creates conditions for accelerated development of technologies as well as for identification of potential spin-off technologies. The government stepping into the role of lead integrator has also provided more opportunities for direct warrior feedback during the development phase. SOF personnel are embedded in the TALOS team, which enables direct identification of technology and capabilities that can be used today. Once these are identified, collaboration between combat developers and POE can initiate acquisition of materials through USSOCOM's acquisition process.

The TALOS program also utilizes competitive awards and low-level TRL technology development. Competitive awards are procedures used to reward delivery of requirements. Other federal agencies, particularly DARPA, use competitive awards to spur innovation. The TALOS program's use of competitive awards is the continuation of shifts in procurement policies. The TALOS program also issued requirements for information far lower than for normal TRL technologies.⁹⁰ The request for lower-than-normal TRLs in the TALOS program is an effort to ensure that developed technology aligns with future requirements and that it accelerates delivery of program subsystems.⁹¹ USSOCOM's adoption of these two approaches seeks to create revolutionary leaps in technology and acquisition policies required to field TALOS.

The government-as-lead-integrator model poses risks and challenges as compared to the traditional linear, top-down acquisition model. Under the new model there is no outside firm (or other actor) that can be held responsible for failing to deliver the capability; the government will have no one to blame or sue if delivery of equipment is delayed or if equipment is unsuccessful. A significant risk involved in the pursuit of revolutionary technologies is conditions where SOF are not adequately supplied. TALOS is insulated from these concerns because the program is fulfilling a requirement that currently has no known solution.

An additional problem arises when the government acts as lead integrator: Who will manufacture the final product? To achieve the rates of production anticipated by the program and expectations of wider audience adoption (e.g., fire, police), a manufacturer or a group of manufacturers may have to be engaged. The process to move multiple components, each of which may have proprietary elements, to private industry is a daunting task. Little to no discussion or research has been conducted on production of products with the government as lead integrator.

3. USSOCOM's Acquisition Process: Current Systems and Possible Improvements

Acquisition of SOF-peculiar services and equipment is the responsibility of the SOF AT&L Center. The center was established in 1991 and is responsible for research, development and acquisition, procurement, and logistics support for the Command. SOF AT&L's centralized acquisition authority has improved many aspects of the acquisition process, yet the full process—from identification of SOF needs to final delivery of products and services—remains convoluted. Furthermore, SOF AT&L must conform to a variety of federally required steps and administrative management layers that reduce acquisition efficiency. Areas for improvement are identified based on interviews with SOF AT&L personnel and industry participants at SOFIC 2015. Multiple study participants identified four specific aspects of the acquisition process that deserve attention: identification of needs, written requirements, interoperability, and protests. Each area is examined in the context of the existing acquisition process.

An ideal acquisition process would minimize bureaucratic layers between SOF operators and industry partners. The ideal acquisition model would expand this team to encompass expertise for the entire spectrum of acquisition steps—in particular the identification of needs and the validation of requirements. In this ideal process, SOF operators would identify a need (requirement) that would then undergo an internal validation process. Once approved, SOF AT&L would efficiently utilize industry to furnish the service or equipment. Non-SOF-peculiar acquisitions (e.g., public administration) would also be taken into account when conceiving of this ideal model, given that generic support services are also essential to optimal functioning of the Command. Further, the ideal acquisition model—from the standpoint of innovation, efficiency, and rapid delivery—would incorporate the wisdom of Integrated Product Teams (IPTs), which would further reduce bureaucratic layers. IPTs reduce these layers by combining key members of the acquisition process (PEO, legal, and contracting officers) into a single cohesive team. This would remove layers between J-8 and SOF AT&L to create a single,

flat bureaucratic layer with expertise to handle each step in the acquisition process.⁹² A change along these lines would reduce to the absolute minimum (i.e., a single layer) the number of bureaucratic layers between SOF and capabilities delivery. This new structure would optimize SOF's ability to experiment with rapidly delivered novel capabilities. Federal regulations, however, limit the implementation of the ideal acquisition model, as numerous bureaucratic layers are required to write requirements, manage acquisition and maintain oversight.⁹³

Where and how exactly does the existing acquisition process diverge from the ideal model sketched in the preceding paragraph? First, steps from identification of initial requirements by J-8 to delivery are extraordinarily complex, involving numerous actors, decision makers, and bureaucratic levels. Identification of requirements begins with SOF operators and is formalized at J-8 (Force Structure, Requirements, Resources, and Strategic Assessments). Once requirements are identified, the Requirement Analysis Division of J-8 shepherds the documents through the validation and approval process. PEO identify acquisition and technical requirements necessary to meet the validated requirements. Additional SOF AT&L bureaucratic layers include legal, management, and contract offices. Other elements of the existing acquisition model that generate inefficiencies fall into the four aforementioned areas identified by SOF AT&L personnel and industry partners as problem areas: the identification of SOF needs, written requirements, interoperability, and protests. These areas merit further investigation not only because they were mentioned by a significant percentage of SOF AT&L personnel and industry participants interviewed at SOFIC 2015, but also because they comprise elements that can, in fact, be addressed and improved within the existing federal acquisition system that dictates SOF AT&L acquisition and procurement strategies.

In the following pages, SOF-specific characteristics of the acquisition process are discussed with a view to suggesting possible changes that would streamline the acquisition process and address a variety of inefficiencies. Each of the subsequent subsections identifies specific strengths and limitations in the existing acquisition model. Overall, SOF AT&L has a strong record of streamlining acquisition policies and practices when compared to the services. But comparisons between the services, and across the federal government in general, risk misconstruing SOF AT&L capabilities. SOF AT&L benefits from unique acquisition authority, organizational capital,

acquisition categories (ACAT) level, and lower budget amounts that increase acquisition strategy flexibility and make possible tailored oversight and management. These unique characteristics limit the utility of direct comparisons with other organizations. Instead, SOF AT&L is contrasted here with a stylized acquisition model to identify areas for potential improvement.

Overall, SOF AT&L has a strong record of streamlining acquisition policies and practices when compared to the services.

Identification of SOF Needs

Identification of SOF needs begins with SOF operators. Both J-8 and SOF AT&L work to ensure that validated requirements and the acquisition and procurement program fulfill operator needs. Multiple individuals interviewed for this report identified that difficulties in this initial process cascade through the acquisition process and create inefficiencies.⁹⁴ When SOF needs are not effectively identified, translation of requirements into a legal framework that enables construction of objective evaluation metrics generates further difficulties and system inefficiencies. A crucial step then, comprises the initial identification of needs and the timely and accurate translation of these needs into written requirements.

SOF AT&L currently utilizes multiple mechanisms to ensure operators are involved in the acquisition process. First, SOF directly engages SOF AT&L personnel, particularly through placement of personnel in the PEO. Second, SOF personnel attend industry shows and conferences, including SOFIC, which affords the private sector with opportunities to demonstrate capabilities and discuss requirements. Despite these efforts, there are limitations in SOF involvement. Individual billets and involvement with PEOs are not permanent. Budget cuts have limited attendance at industry days and conferences.⁹⁵ Finally, SOF and partners will still need to overcome limitations associated with the vagaries of interpersonal communication within an anonymous system.⁹⁶

Identification of needs and delivery of SOF-peculiar capabilities involving revolutionary advances may require a new non-classified engagement forum. Two current mechanisms, the Technology & Industry Liaison Office (TILO) and the Small Business Innovation Research (SBIR) program, developed out

of the existing acquisition cycle and, consequently, have limitations. SBIR funds small business research opportunities on a competitive basis, but the National Research Council found that total federal SBIR funds, not necessarily USSOCOM's initiatives, are associated with higher levels of overhead and higher levels of uncertainty about contract completion because of the lack of reliability of unknown suppliers.⁹⁷ TILO operates a digital proposal receptacle in which companies detail their capabilities in USSOCOM areas of interest and the TILO platform connects the company with the appropriate PEO or other personnel. Congress established SBIR to support small business research and development. Both mechanisms are external to the acquisition process. TILO, in particular, has a strong track record for timeliness, with reviews of applications usually occurring within 30 days. However, administrative hurdles, particularly TILO format requirements for proposals, have reduced initial company participation. Additionally, submissions are limited to preexisting identified SOF needs, which inhibits creative, novel solutions to issues USSOCOM has yet to formally identify and describe through its bureaucratic channels. Consequently, TILO is designed to address yesterday's problems with today's technology.

An additional burden is answering who owns the IP rights. Firms funded by the Central Intelligence Agency's (CIA) In-Q-Tel (IQT) retain their IP, which enhances their potential profits. SOF AT&L has adopted a different approach in the TALOS program, where firms are encouraged to share IP. It is unclear if TALOS will be successful, and even if successful, which of the two models is best suited to deliver SOF-peculiar equipment and technology. To achieve revolutionary advances in SOF-peculiar equipment and technology, SOF AT&L should be open to alternative acquisitions models.

USSOCOM should simultaneously pursue a non-classified portal modeled on the CIA IQT. IQT is a non-profit organization that connects industry with the intelligence community, identifies limitations in capabilities, and specifically invests in start-ups that can deliver product in less than 36 months. There are numerous bureaucratic hurdles to establishing such a system, yet IQT boasts a very attractive \$9 to \$1 return on investment and nearly two thirds of companies using IQT are non-traditional defense companies.⁹⁸

Written Requirements

Contract requirements are of the utmost importance for an effective acquisition process that delivers the capabilities needed to succeed in hybrid warfare. Contract requirements describe in detail the product or service requirements to be fulfilled by the private sector. In the ideal acquisition model, SOF personnel directly inform the requirements. As described above, SOF AT&L utilizes experienced operators in the acquisition process more than is the case in other DOD units. Nonetheless, the current process of identifying and writing requirements remains problematic. Individuals from each phase of the acquisition process independently identified the absence of well-written and specific requirements as a significant impediment standing in the way of successful acquisition.⁹⁹ Three specific issues with written requirements were identified as reducing the efficiency of the existing acquisition process: the challenge of translating SOF-operator-identified needs into requirements, the bureaucratic approval process, and the reality that clearly specified requirements are still no guarantee of on-time delivery. These issues are not unique to SOF compared to other DOD acquisition and procurement programs; however, SOF AT&L is more affected by on-time delivery than the branches because of the nature of the service.¹⁰⁰ As well, SOF AT&L are in principle better able to address these limitations through leadership initiatives, and acquisition and program procurement flexibility.

The difficulty of translating SOF needs into written requirements is primarily a communication problem. SOF identifies their needs and often, understandably, requests operational capabilities that may exceed existing technologies and equipment. Once a desired capability is identified, written, and approved by J-8 personnel, SOF AT&L personnel must translate the requirements into a form that can be used to write legal contracts. Once requirements are approved, SOF AT&L identifies the most appropriate acquisition strategy.

Generating written requirements involves multiple layers of bureaucracy in J-8 before SOF AT&L is tasked with implementing an acquisition strategy. USSOCOM ensures that SOF input is provided from the beginning and has streamlined the bureaucratic process in several key ways. Nonetheless, red tape can still hinder the acquisition process. SOF AT&L often form IPTs to reduce these layers and promote cooperation between PEOs, legal review, contracting officers, and additional acquisition personnel. SOF

AT&L integrated product teams have also reduced acquisition barriers by limiting individual team representatives from independently slowing (and stopping) the acquisition process. On rare occasions when SOF AT&L uses a service to manage a program, additional DOD layers of bureaucracy must usually be dealt with. As a consequence of these bureaucratic layers, written requirements often end up being controlled and shaped from the top, so to speak, to the point that they no longer resemble the original user requests.¹⁰¹ One scholar articulates this point as follows:

In general, requirements as user needs do not represent bottom-up innovation because the requirements validation process results in top-down requirements that may have little resemblance to the original user requests or current needs by the time the technology is fielded. This point is illustrated by the formal USSOCOM process—that is, the long-range planning process at SOCOM headquarters provides the input to the requirements validation process, and no operator input is explicitly shown. As a result, development projects (e.g., the Mk 23 offensive handgun) can show delivery of a capability that met the requirements but did not meet user needs.¹⁰²

Consequently, the existence of multiple bureaucratic layers often leads to a second issue with written requirements—final products that do not ultimately fulfill end users' needs.

The recent case of the all environment capable variant small unmanned aircraft (AECV) demonstrates how failure to properly validate requirements cascades through the acquisition process, potentially resulting in fielding deficient equipment. In 2015, the DOD inspector general (IG) conducted an audit that concluded USSOCOM effectively validated requirements for 6 programs, but the AECV did not meet primary performance attributes during operational testing.¹⁰³ The IG stated USSOCOM fielded 41 AECVs with no assurance that it is capable of fulfilling its mission because of under-performance in the launch and recovery categories as well as weight/size. The director of J-8 maintained that the proper test methodology was followed, however, J-8 will field test a different variant of the AECV in the future to demonstrate compliance with the primary performance attribute, an acceptable solution to the IG. SOF AT&L does not have control over the validation process and is not responsible for the audit's findings. Yet, failure to follow

policy resulted in acquisition of equipment that may not adequately support the operator.

SOF AT&L acquisition programs that prioritize customization of equipment may still not match up with the ideal acquisition model previously sketched. SOF AT&L has experimented with intensive SOF involvement in the development process of SOF-peculiar equipment. One example is the Special Operations Combat Assault Rifle (SCAR) family of weapons. The SCAR program was launched to find a replacement for the M4 carbine and other small arms rifles.¹⁰⁴ The program enabled extensive testing and interaction with SOF personnel to identify key features of the rifle. The Belgium company FN Herstal utilized 3D printing to fabricate different model variants that received immediate feedback from SOF personnel. Design improvements included lappable bolts and the ability to accommodate different-size magazines (e.g., both M-16- and AK-47-style) in addition to an extended life of the barrel, improved stock technology, and advanced sights. The program more closely followed the ideal acquisition process. Yet, while the procurement process approached a hypothetical ideal process, SCAR demonstrates two limitations of acquisition processes focused on customization. First, extensive customization reduces the ability of other firms to compete. One company representative identified this problem, stating, “[requirements] help us to understand the targets but sometimes they are written so narrowly that it is clear that they only want a specific product [from a particular manufacturer].”¹⁰⁵ Second, extreme customization may sacrifice affordability. If FN Herstal’s collaboration with SOF members influenced the written requirements, then market dynamics and potential competition benefits were impaired or eliminated. The announcement that the program passed milestone C, enabling full-rate production, confounded the procurement of 5.56 mm Mk 16 variants, with USSOCOM announcing that it would not be proceeding with those orders. In the end, SOF received a rifle that fulfilled its requirements, but ultimately cancelled the Mk 16 because the increased costs were not associated with meaningful improvement over the M4.

Written requirements drive affordability. Affordability is typically defined in terms of per unit and life cycle costs. SOF AT&L’s low volume purchases pose challenges for many private sector partners because profitability typically depends on the ability to sell to a larger customer base, but meeting specialized SOF-specific requirements may reduce marketability.¹⁰⁶ The criterion of affordability is therefore often problematic. It entails addressing

how requirements are written and developed to balance SOF needs while still engaging the private sector.¹⁰⁷ Affordability, it must be noted, is a subjective assessment for many SOF acquisition programs. The unique demands placed on SOF may justify increased costs to ensure operational continuity.

In sum, effective translation of SOF needs into written requirements remains a challenge for J-8 and SOF AT&L. Communication problems, bureaucracy, and the costs of customization move the acquisition process away from the ideal acquisition model. Tracking the evolution of requirement language from initial requests made by SOF to request for proposal (RFP), section M (evaluation factors for award) & L (instructions, conditions, and notices to offerors or respondents) formalization, to source-selection debriefs (winners and losers) could yield useful insights into the process but is unfortunately beyond the scope of the current research. No publicly available database currently exists to allow this type of analysis of the evolution of requirements. Industry, for its part, is generally capable of supplying equipment and technology that fulfills requirements, but the requirements must be written in a manner that ensures market engagement and satisfaction of SOF needs. SOF AT&L can improve performance through increased training for SOF operators and support staff and by conducting evaluations of how requirements change during the contracting process.

Interoperability

Interoperability is most broadly defined as the ability of systems, procedures, individuals, and military forces to collaborate effectively and achieve a common goal.¹⁰⁸ Consistent with SOF Truths that humans are more important than hardware, SOF interoperability emphasizes individual and leadership collaboration over compatibility of equipment and technology. However,

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equipment and service interoperability is growing in importance as USSOCOM adopts a global posture to strengthen and support strategic partners.¹⁰⁹ SOF's explicit need to work globally with allies, partners, and even resistance groups places an emphasis on the acquisition process delivering interoperable equipment that goes beyond typical military

specification standards. Interviewed SOF AT&L personnel emphasized interoperability of equipment and technology as increasingly important in the globalized SOF network. Specifically, representatives reported that equipment and technology challenges arise, particularly when operations involve collaboration between SOF forces and international partners. This section examines interoperability in a SOF context focused on international partners, before concluding with a discussion of SOF AT&L's options to support interoperability with non-U.S. partners.

Interoperability between United States Special Operations Forces (USSOF) personnel and international SOF occurs at two operational levels. First, interoperability at the strategic level requires coordination of national policies and use of SOF. Second, tactical unit-level interoperability allows for coordinated actions and activities in operations. Interoperability with international SOF is primarily achieved through training, education, and equipment. USSOF acquisition decisions establish benchmarks for international SOF, despite some equipment not being available for export because of restrictions imposed by the International Traffic in Arms Regulations. As is the case for other branches and units of the DOD, provision of equipment and services for SOF can occur through international agreements, direct commercial sales, and foreign military sales. These mechanisms take on distinct characteristics in the SOF environment that distinguish USSOCOM's efforts to support international partners. SOF AT&L is not solely responsible for provision of equipment to partners. Direct commercial sales of SOF-peculiar equipment, such as Italy's purchase of the Ground Mobility Vehicle 1.0,¹¹⁰ enhance interoperability between allies. SOF-peculiar direct commercial sales are limited by international traffic in arms regulations restrictions because the modifications to platforms and SOF-peculiar technologies and equipment are typically classified. Pursuit of interoperability during the acquisition process enhances the influence and global leadership of USSOCOM.

Interoperability between USSOF and international partners face distinct challenges in the provision of equipment and training. DOD and USSOCOM provide equipment, training, weapons, and services to international partners, though the quality of equipment provided and its compatibility with U.S. equipment varies from one partnership to the next. For example, USSOF has recently deployed to countries as varied as the Democratic Republic of Congo and the Philippines to provide training and technical assistance. Each

country has a different level of military capability and a unique relationship with the U.S. that together constrain and shape the provision of training and equipment. The U.S. Africa Command, via its theater special operations command, provides basic military training in the Congo.¹¹¹ Meanwhile, in the Philippines, USSOF members carry out a wide range of activities that place forces near or on the battlefield.¹¹² In the latter case, the provision of military equipment and services is designed to improve operational results, whereas in the former case, training operations are designed to build the relationship. The presence of SOF does not mean, however, that provided equipment and services are SOF-peculiar. Sale and transfers of military equipment are predominately managed by DOD and typically provide non-SOF-peculiar capabilities. For example, in the Philippines case, sale of non-specialized equipment from the military branches is the standard practice. International competitors also equip the Filipino military. Thus, improvements in the counterterrorism capabilities of the armed forces are a combination of USSOF involvement and traditional military sales. Public records do not provide information on whether SOF-peculiar equipment and services have been included in transfers.

Currently, acquisition and procurement programs do not explicitly emphasize interoperability outside of the U.S. military. Text analysis of USSOCOM requests for proposal (RFP) requirements,¹¹³ when available in the Federal Business Opportunities records from the last year, reveals no instances in which interoperability was explicitly connected to the involvement international partners. RFPs included a diverse range of products and services including modification of commercial items (e.g., commercial vehicles) and SOF-peculiar equipment development programs (e.g., dry combat submersible). Interoperability with international partners and international SOF appears to be addressed mostly after the acquisition stage, primarily through training and through ad hoc testing of compatibility in equipment and technology for particular applications.

There are opportunities for SOF AT&L to promote international interoperability. USSOF acquisition and procurement practices set global trends: USSOF is the world's largest such force, giving it considerable market leverage and influence over the direction of technology development. As we have noted, SOF-peculiar equipment may require aftermarket modifications, and export of these modifications is both important for establishing interoperability, and potentially difficult because of export restrictions. Direct

commercial sales and foreign military sales of SOF-compatible equipment are also options. USSOCOM and other DOD entities are involved with sales to foreign entities. Finally, USSOCOM has pursued the option to manufacture weapons used by partners. Recent solicitations for information have sought to identify possible manufacturers of non-standard (non-U.S. and NATO) firearms and equipment. For example, a recent solicitation calls for the U.S. industrial base to manufacture variants of the AK-47 and Dragunov sniper rifles.¹¹⁴ The solicitation is explicitly designed to produce weapons used by foreign partners.¹¹⁵ The policy justification for the production of foreign-designed weapons by U.S. firms includes ease of field maintenance (versus current U.S. supplied weapons) and removal of foreign producers from the supply chain, which may increase oversight and quality control. However, supply of foreign-designed weapons will also reduce identification of U.S. support, which may indirectly decrease public accountability of supplied weapons because a given weapon's country of origin may now include the U.S.

In many instances, it is the aftermarket modifications that transform a platform into SOF-peculiar equipment. Modifications are difficult. For example, the Defense Security Cooperation Agency received approval for sales of Blackhawk UH-60M helicopters to numerous countries including Austria, United Arab Emirates, Qatar, Thailand, Jordan, Saudi Arabia, Mexico, Brazil, Tunisia, and Egypt. U.S. Army SOF fly MH-60M variants of the helicopter, but the Defense Security Cooperation Agency and the individual countries do not identify if the purchases will be modified for special operations. Additionally, this example illustrates the difficulty of identifying SOF-peculiar equipment and technology transfers. Both the U.S. government and international actors document arms transfers, but not always with sufficient detail to allow identification of SOF-peculiar equipment. Finally, this example also illustrates the divisions that exist between advanced militaries with whom operational collaboration is more likely, and other international partners. Current commercial sales and other existing avenues enable short-term interoperability solutions tailored to specific international partners.

Establishing interoperability through the provision of equipment and weapons, however, may not provide the intended results. Recent research indicates that countries that receive U.S. military assistance have incentives to support U.S. counterterrorism policies. However, the provision of military assistance also generates a moral hazard whereby a recipient government

deliberately refrains from definitively eliminating a terrorist threat because of fear of losing desired military assistance.¹¹⁶

In sum, the pursuit of international interoperability is not the responsibility of SOF AT&L, unless this criterion is explicitly stated in a requirement. Compared to larger DOD programs such as Joint Strike Fighter, radar systems, and aerial refueling, where there are financial and military advantages to cooperation, USSOCOM is less likely to benefit from co-production of SOF-peculiar equipment. Limited SOF-peculiar equipment markets and the complexity of export regulations reduce the benefits of cross-national industry collaboration because of heavy reliance on modification to satisfy SOF specifications.

Protests

Protests are a final potential cause of delay in the acquisition process. The protest system enables companies to challenge the award of a source selection if they believe the process was not conducted fairly or legally. Protests

Limited SOF-peculiar equipment markets and the complexity of export regulations reduce the benefits of cross-national industry collaboration because of heavy reliance on modification to satisfy SOF specifications.

delay the source selection award until they are reviewed and resolved by the GAO, and in some cases adjudicated in federal courts. Protests occur at all federal agencies; they are a natural part of the contracting system. However, protests generate delays in service delivery and efforts are therefore made to avoid them.¹¹⁷ Delays affecting USSOCOM source selections are typically shorter than those for large weapon programs. Still, these shorter delays may have a significant negative impact on SOF operations because of the generally high level of urgency of SOF AT&L contracts.¹¹⁸ This subsection identifies different

types of protests and emphasizes the importance of written requirements as a mechanism to reduce the likelihood of protests.

Protests are typically based on either procedural complaints—certain policies were not followed—or disagreement about the evaluation of a proposal with regard to a particular requirement. Each type of protest presents SOF AT&L with opportunities to improve the acquisition process to minimize protest volume and speed resolution.

Procedural protests occur when a company identifies what they perceive to be a violation of protocol. Procedural violations are typically addressed through administrative records at Federal Business Opportunities, firm records, and SOF AT&L. The GAO typically determines procedural protests quickly because violations are based on established policies and are specified in the RFPs. However, procedural protests still arise, as illustrated by the SOCOM Wide Mission Support (SWMS) contract. SWMS is an indefinite delivery, indefinite quantity contract that includes a range of knowledge management, administrative, and professional assistance to SOCOM HQ, components, and other USSOCOM entities.¹¹⁹ SWMS provides an example of the protesting procedure. Federal Acquisition Services Team, LLC (FAST) protested the award on the basis that USSOCOM did not consider their application.¹²⁰ FAST's protest centered on the claim that their proposal was not properly processed through the federal email system. The GAO ruled that USSOCOM had followed established procedures and denied the protest.¹²¹ GAO rulings are final unless plaintiffs move to federal court, which FAST did in January 2015.¹²² The initial four-month delay was further extended by the federal court case. SWMS is a broad-based support contract, and delays are therefore costly and affect USSOCOM capabilities.

Protests relating to evaluation criteria are often more complex and time intensive. One example is the protest of translation and interpretation service contracts by Mission Essential Personnel, LLC (MEP). The 2013 protest was based on a disagreement with USSOCOM's evaluation of the qualifications of MEP's linguists and alleged failure to engage MEP following identification of deficiencies in the proposal. Each of the five companies competing for the contract received multiple evaluation notices and initial evaluations of their proposals. MEP was found to have included qualifications information for only 163 of the 330 required linguists; 382 candidate linguists failed to provide required certifications. The GAO denied the protest.¹²³ WorldWide Language Resources, Inc. was ultimately awarded the \$245 million contract; approximately six months later than would have been the case without the protest. This example demonstrates an important lesson for SOF AT&L. Written requirements that appear clear from the perspective of USSOCOM personnel may not be clear to industry: MEP argued vehemently that they had appropriately completed documentation as directed in the request for proposal.

In sum, protests are a natural part of the federal contracting system and cannot be completely avoided. Written requirements and their evaluations are often at the center of the protests. For its part, SOF AT&L has a strong record of winning protest cases. Yet, in the SOF context, delays are particularly costly because of the time-sensitivity of SOF AT&L orders for products and services. Improvements in the quality and transparency of written requirements may reduce protests.

Ideal vs. Actual Acquisition Process: Conclusions

Arguably, SOF AT&L's approach to acquisitions is better than any other organization within the DOD.¹²⁴ And yet, even the SOF AT&L approach falls short of what might be characterized as the ideal model. In the ideal model, the acquisition process would always begin with SOF identification of needs, and it would minimize bureaucratic layers between contract officers and delivery of equipment and services. SOF AT&L has an excellent track record of prioritizing SOF needs and involving SOF personnel throughout the acquisition process. This prioritization is evident in the degree of interoperability achieved and the limited number of sustained protests. SOF AT&L's successful streamlining of the acquisition process must also be seen in the context of the unique pressures of obtaining specialized services and equipment on very tight timelines for SOF operating in diverse and evolving environments. Continued improvement of the acquisition model requires addressing written contract requirements.

Evaluation of the existing TILO database to track industry submissions through the entire acquisition and procurement process can shed light on USSOCOM's ability to rapidly adopt market innovations. TILO contains non-classified but potentially proprietary industry innovations that stretch

Continued improvement of the acquisition model requires addressing written contract requirements.

back 5 years in the inactive database. The existing system accepts submissions only for currently identified issues—an inherent limitation because of rapidly changing technology. Empirical evaluation of TILO submissions will identify if an alternative private sector engagement mechanism is

required. Furthermore, analysis of the submissions will provide insight into market competition, small business participation, and SOF AT&L's ability

to bring innovations from the marketplace to the operator. Process tracing of specific TILO filings through the acquisition and procurement process will identify how the bureaucratic process influences equipment and procurement.

Written requirements can be improved to better streamline the acquisition process. Requirements are one area outside of procedural limitations imposed by FAR that can realistically be addressed. Some amount of friction between the different steps in the formalization process is natural and to be expected. However, improvement of written requirements through training, education, and research will improve delivery of SOF-peculiar capabilities and decrease the likelihood of protests. Additional collaboration between J-8 and SOF AT&L personnel and industry is required to reduce inefficiencies. Specifically, further research is needed to shed light on the evolution of requirements, and in particular to ascertain how exactly requirement language impacts SOF AT&L acquisition programs.

4. USSOCOM and Private Sector Competition

The expectation that private sector competition will reduce costs and accelerate innovation is a fundamental assumption of government contracting. For contracting to live up to this expectation, incentive differences between buyers and sellers in the market must be reconciled. Buyers seek to maximize services while sellers seek to maximize profits. In the classic theoretical contracting model, effective contracting procedures—procedures that overcome incentive differences—abide by four principles: contracts are complete, contracts receive sufficient bid solicitations, objective evaluation metrics are applied, and objective monitoring is enforced.¹²⁵ These principles do not have to be fully satisfied for effective acquisition and procurement. Instead, the principles represent what is desirable under ideal conditions; in reality, they are unlikely to be fully realized. That said, the classic contracting model generates a rubric with which to evaluate the effectiveness of USSOCOM contracting and the likelihood of achieving BBP objectives.

In the following pages, after a more detailed discussion of the theoretical contracting model, USSOCOM engagement with small and large businesses is examined using empirical data from FPDS. This section concludes with a brief discussion of the influence of private sector competition on USSOCOM contracting.

The Theoretical Contracting Model and USSOCOM

The first principle of the contracting model is that contracts should be complete. Complete contracts are those that include all possible specifications detailing the dynamics between the private sector and USSOCOM. Contracting theory provides the foundation for this principle. Incomplete contracts occur when information about the seller, buyer, or the environment—a critical complicating element for USSOCOM operations—are not known. Contracts are typically incomplete because it is too costly to research and draft a contract that includes all possible contingencies.¹²⁶ In the DOD context, complete contracts are those that control initial price and total life cycle costs. In BBP parlance, complete contracts “[mandate] affordability as

a requirement.¹²⁷ Despite improvements in DOD-wide acquisition, many programs continue to exceed cost estimates.¹²⁸

USSOCOM acquisition programs typically focus on modification of existing high-TRL equipment. Contracts involving existing equipment tend to be more complete than those involving platform development or R&D work because there is less uncertainty regarding the capabilities of existing equipment.¹²⁹ On the other hand, contracts for services in operational environments are regularly shaped by incomplete information between contract participants because of the general uncertainty of the environment and unknown costs of service delivery. Haphazard contracting procedures, particularly in the administration of service contracts in the field, plagued U.S. military operations in Iraq, reducing military effectiveness.¹³⁰ In general, SOF AT&L is better positioned to issue complete contracts than other areas of DOD.

The second principle of the contracting model is that sufficient bid solicitation should occur to generate market competition. BBP provides guidance on the entire acquisition and procurement process and emphasizes the use of bid solicitation and competitive pressures to align buyers' and sellers' disparate incentives. Assessing the sufficiency of bid solicitation involves measuring competition in terms of the number of firms able and willing to compete for a specific contract. Bids capture the total number of competing businesses willing to endure the costs of competition. The number of bids also details information on both the observable and unobservable business calculus of firms. Observable factors are composed of publicly available information about firms (e.g. existing contracts, number of employees, revenue, taxes, etc.) and characteristics of the solicitation (e.g. contract amount, contract structure, geographic location, etc.). Unobservable factors include firms' possibly diverse business models, risk acceptance, and similar proprietary information. One critical unobserved factor is that firms constantly seek to balance their profit margin portfolios. In a period when profit margins are fixed or squeezed through intense competition, firms may choose not to pursue particular opportunities based on the expectation that, even if they emerge victorious, the resulting contract will not be lucrative enough to raise their overall profit margin. There is thus a definite risk that particular services, equipment items, and technologies will not be developed or provided in the future if enough firms are not able to achieve the profit margins they need or wish to attain across all their contracts. Because firms are profit

maximizing, competition only occurs when multiple firms pursue a contract. And for now, competition exists in nearly all security and military service sectors because few, if any, services are provided by a single firm.

The principle that contracts should undergo competitive bidding, while often realized, fails to capture the complexity of DOD and USSOCOM contracting. Various government restrictions alter the competitive landscape. DOD and USSOCOM utilize sole-source contracting mechanisms as necessary to support operational and classified requirements. Moreover, federal procurement policies establish protections for small businesses (e.g., veteran-, women-, or minority-owned businesses) that enable firms to be competitive. These necessary protections ensure the long-term health of the industry and promote innovation.¹³¹

Because firms are profit maximizing, competition only occurs when multiple firms pursue a contract.

The third principle of the contracting model requires objective evaluation metrics. Objective evaluation metrics are typically associated with performance indicators, including on-time delivery and price. However, even delivery and price are often difficult to quantify.¹³² One mechanism designed to eliminate the ambiguity in pricing are “lowest-price technically acceptable” (LPTA) numbers. A LPTA number is determined based on the lowest-price submitted by industry that satisfies the minimum technical requirement. However, even this mechanism can be problematic for DOD and USSOCOM.¹³³ For example, Frank Kendall made the case that LPTA should be selectively utilized and should generally be reserved for situations with “well-defined requirements [in which] the risk of unsuccessful contract performance is minimal, price is a significant factor in the source selection, and there is neither value, need, nor willingness to pay for higher performance.”¹³⁴ SOF AT&L evaluation metrics are dependent on specific, well-defined requirements, arguably the antithesis of the LPTA approach.¹³⁵

USSOCOM’s mission requirements and truncated timetables often limit the utility of traditional evaluation metrics. Price is not necessarily USSOCOM’s most important metric, which is consistent with evaluation metrics in contingency operations.¹³⁶ Instead, evaluation metrics focus on required capabilities, on-time delivery, and affordability.

The final principle of the contracting model is objective monitoring in USSOCOM’s two primary environments. The first environment is when contracts are fully executed in the U.S. which is the case for the vast majority

of USSOCOM contracts. In this environment, consistent and robust monitoring of private sector partners is possible. The second environment occurs when contracts occur outside the U.S., particularly in operational environments. Ensuring objective monitoring in both environments through effective monitoring systems remains a key objective for the U.S. military.¹³⁷ To ensure objective monitoring, USSOCOM is developing the Special Operations Resource Business Information System (SORBIS) for use in both contracting environments. SORBIS combines three existing systems that detail each of the three business cycle phases: financial execution; planning, programming, and budgeting; and acquisition management/program information reporting. Combining the different systems into a unified portal is expected to increase the frequency and accuracy of real-time updates during the acquisition process. The GAO found that the program was not well maintained or updated, and it lacked an enforcement mechanism. Consequently, the program was terminated in 2011.¹³⁸ The failure of the SORBIS system demonstrates the difficulty of management in operational environments.

Each of the four principles described in the preceding paragraphs highlights different aspects of the acquisition process. Effective engagement need not strictly abide by all four principles; instead SOF AT&L's fulfillment of SOF needs remains the benchmark for acquisition directives. Market competition is not the panacea proponents argue it is, but competition does exert downward pressure on prices while also promoting technological innovation. In the next section, market competition—arguably the most lauded feature of the contracting model—is examined within the larger context of procurement trends.

Empirical Evaluations of USSOCOM Transactions

This section empirically evaluates USSOCOM procurement practices. The analysis is based on transactions data from the Federal Procurement Data System-Next Generation. All USSOCOM activities from 2004 through 2014 that are publicly available and recorded are used. The Federal Procurement Data System-Next Generation is the U.S. federal government's central source for contract data that contains detailed information on all contract actions greater than \$3,000. FPDS systematic reporting of transactions is a more complete picture of procurement practices than any other publicly available source.¹³⁹

A second key source of information is Defense.gov, which announces contracts more than \$6.5 million on a daily basis. Defense.gov is an excellent resource for tracking contracts that execute services on behalf of USSOCOM. For example, the 10 June 2015, extension of DynCorp International LLC's Navy contract directly supports the Joint Special Operations Task Force-Philippines. This \$18.5 million extension, and the cumulative \$154 million total contract award, will not be captured in the FPDS dataset criteria used in this analysis because it is overseen by the Navy. This is an example of SOF AT&L's organizational capital that will be discussed in the next section. FPDS data is not complete. Aside from the fact that some portions of USSOCOM's budget are classified and not reported at all, FDPS is only as accurate and reliable as the individuals who input the data.¹⁴⁰ Despite these limitations, FPDS remains the best publicly available source on federal contracting.¹⁴¹

The dataset for this monograph is compiled from all USSOCOM transactions from 2004 through 2014.¹⁴² The data was compiled using USSOCOM as the highest administrative unit in the FDPS database. This criterion ensures inclusion of other contracting offices and units within USSOCOM's umbrella, regardless of their geographic location. Each of the 88,382 recorded transactions details information about what was purchased, whether or not the contract was competitive, the name(s) of the firm(s) involved, the firm's structure (small business or not), the location of services, the name of the administrating unit, the number of competing bids, and the contract structure. Each transaction further identifies firms by their North American Industry Classification System (NAICS) code. The data contains 24 major categories and 675 specific acquisition categories. The net total transactions are worth over \$23 billion during the specified period.¹⁴³ It is important to keep in mind that the data pertains to transactions, not source selections or individual contracts. A single contract award can contain hundreds of transactions. Evaluations of transactions are thus the primary unit of analysis for the following empirical sections.¹⁴⁴ Figure 2 depicts annual financial acquisition outlays from 2004 through 2014. The values represent only those funds used for acquisition and do not include personnel and operational costs.¹⁴⁵

Total spending levels are indicative of increased demand for SOF. For the 2004 to 2014 period, SOF AT&L's budget increased an average of 4.8 percent every year. The average annual increase includes periods of sequestration and year-to-year periods of decreased funding. The major spike in spending in

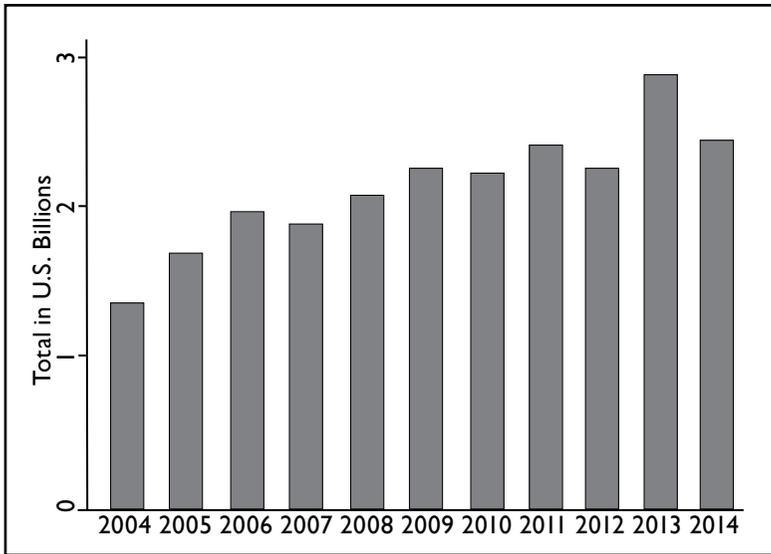


Figure 2: Annual SOCOM Financial Acquisition Totals: 2004-2014.
Source: The Federal Procurement Data System

2013 includes contracts for task orders based on existing contracts for CV-22 Osprey and MH-60 aircraft.¹⁴⁶

Marketplace Competition and Business Size

DOD acquisition leadership emphasizes market competition typically in one of two ways: 1) in terms of holding a fair and open competition in which firms compete against each other or, 2) in terms of receiving more than one bid for each task order. SOF AT&L typically outpaces DOD guidelines for the percentage of contracts put out for competitive bidding. However, the second definition of competition is the one utilized in this analysis. The reason is that fair and open competitions do not necessarily lead to actual market competition. When market competition, as conceptualized in the contracting model, requires multiple firms to compete for a contract, the particular mechanisms used to arrange competition are less important than the end result of having more than one firm submit a bid.¹⁴⁷ The following section examines market competition based on business size and service sector.

Market competition is measured using the number of bids received for each transaction. Consistent with the BBP language, bids are the number of firms that formally submit proposals in response to RFPs.¹⁴⁸ Submitted bids

capture multiple dynamics of the private security market. Each business sector is subject to different competitive forces. SOF AT&L's acquisition focus is different than that of the four services. The effects of sector competition are thus distinct from those experienced by the services. SOF-peculiar equipment and services benefit from service-level competitions. SOF AT&L is also able to identify and implement incremental contract awards, recompetes, and other mechanisms to maximize competition.

First, bids capture the number of firms that are capable of providing the required services and that possess a viable business case to compete. Bidding on contracts requires a financial commitment with no guarantee for return on investment. Costs associated with pursuing RFPs vary based on the services, contract complexity, and firm size.

Second, across the defense industry, increased competition and barriers to entry have increased consolidation, thereby reducing the ability of small businesses to compete for certain types of contracts (e.g., contracts for airlift services).¹⁴⁹ U.S. federal contracting requirements establish parameters that set benchmarks for small-business participation levels. Federal regulations also set benchmarks for participation of businesses with particular ownership characteristics (i.e., minority, veteran, etc.), which creates a market environment that is not strictly free and open.

BBP establishes the importance of small-business participation by identifying two objectives: promoting real competition and improving tradecraft in service acquisition.¹⁵⁰ Small-business involvement in DOD acquisition is predicated on operational factors including innovative technology, rapid fielding, and patent holdings as well as business-environment factors including low overhead, job creation, and sustainable economic growth. USSO-COM's approach to engaging small businesses involves the entire acquisition life cycle.

Figure 3 shows the average level of competition faced by small businesses and large businesses when vying for contracts in the top 10 NAICS categories. Competition is measured as the average number of bids for all transactions in each category.¹⁵¹ The average level of competition across all business is indicated for each category with a circle. Figure 4 demonstrates that, for most services, small businesses face more competition than large businesses.

SOF AT&L has effectively generated competition in most service areas. Small firms, however, face a more competitive marketplace. On average, they face two additional competitors in task orders they win beyond the number

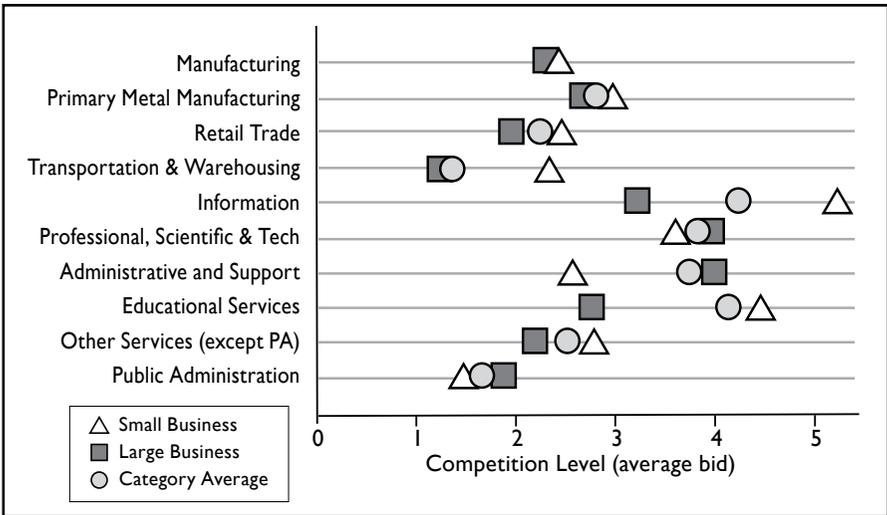


Figure 3: USSOCOM Competition Level: Top 10 Services/Products.
 Source: The Federal Procurement Data System

faced by large firms. Public administration and professional, scientific, and technical are the only two categories where large businesses face higher competition levels than small businesses. These categories are two of the highest value service areas in USSOCOM, DOD, and the federal government. While all firms benefit from economies of scale, higher competition levels between large businesses in these categories are likely due to the increased profitability of providing generic government support services. Two service categories—manufacturing and public administration—experienced essentially the same level of competition between different-sized firms. This consistency suggests that the market for these services is not conditional on economies of scale.¹⁵² Economies of scale is one of the few limitations USSOCOM faces. USSOCOM’s low acquisition rate increases costs for private industry unless the product or service is marketable outside special operations.

The continued consolidation of the U.S. defense industry is evident in several service categories. Large businesses faced less than three competitors in six service categories. These six categories also account for the majority of spending. Two categories (public administration, and transportation and warehousing) averaged less than two competitors—the minimum required for competition to actually occur. Defense consolidation may pose a danger to SOF AT&L’s ability to generate competition in the marketplace of the future.¹⁵³

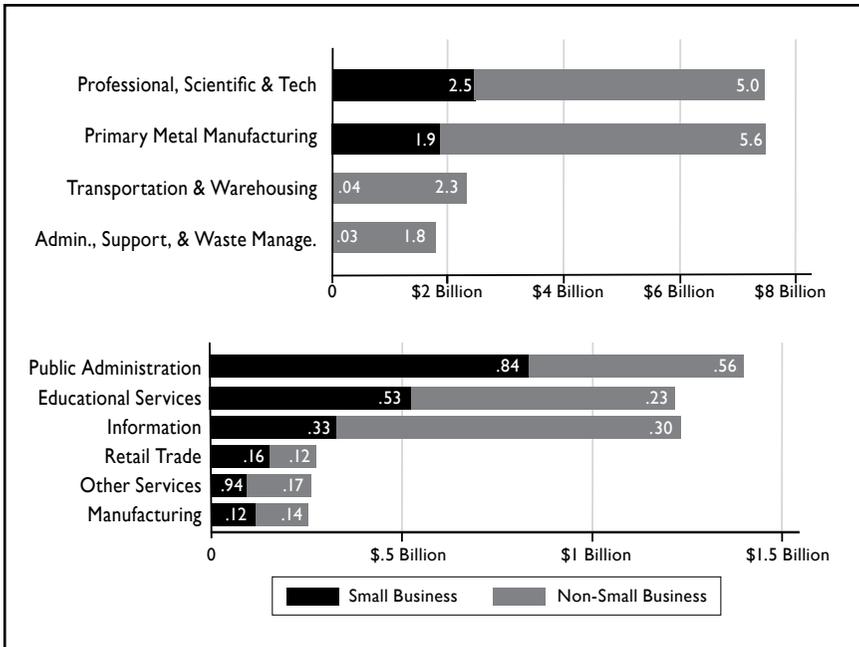


Figure 4: USSOCOM Transaction Totals by Business Size: Top 10 Services/Products. Source: The Federal Procurement Data System

USSOCOM effectively balances business size and total contract value in most acquisition categories. Figure 4 depicts the top 10 NAICS categories based on total transaction value, with a breakdown for each category by business size. During the specified period, only four service categories saw large business outpacing small businesses by more than a billion dollars. This represents a considerable achievement for SOF AT&L, given the size of its budget and DOD-wide performance.¹⁵⁴ The top four spending categories were metal manufacturing; transportation and warehousing; professional, scientific, and technology; and administrative support. These results indicate that, overall, SOF AT&L has effectively engaged small businesses. The Office of Small Business Programs (OSBP) is designed to advocate for small businesses. OSBP achieved goals of 33 percent of prime dollars to small business, or approximately \$906 million in FY 2015.¹⁵⁵ OSBP also achieved protected category specific goals in woman-owned, service-disabled veteran-owned, and small disadvantaged business goals. OSBP is an effective advocate for small business compared to DOD services and the larger federal government. The Office of Federal Procurement Policy awarded OSBP the

Chief Acquisition Officers Council award in 2015 in recognition as a top performer.¹⁵⁶ Small business engagement is expected to remain high as long as it remains a leadership priority.

Parity in contract value between small and large businesses is not a reasonable or, in most cases, desirable goal. Firms that are able to overcome inefficiencies in the market survive and are profitable. SOF AT&L acquisition is better able to approach parity in value than the services because of its unique acquisition focus. Low-volume production requirements may limit profitability for many firms that require economies of scale in production in order to achieve profitability. The reality is that many large firms depend on high rates of production to generate profitability because of their higher levels of overhead. Small firms, on the other hand, are less able to contribute R&D funding and platform development. In this context, the fact that SOF AT&L has achieved something close to transaction value parity—across small and large businesses—in multiple categories including education, information, retail trade, and manufacturing, demonstrates SOF AT&L’s strong commitment to small-business collaboration and investment.

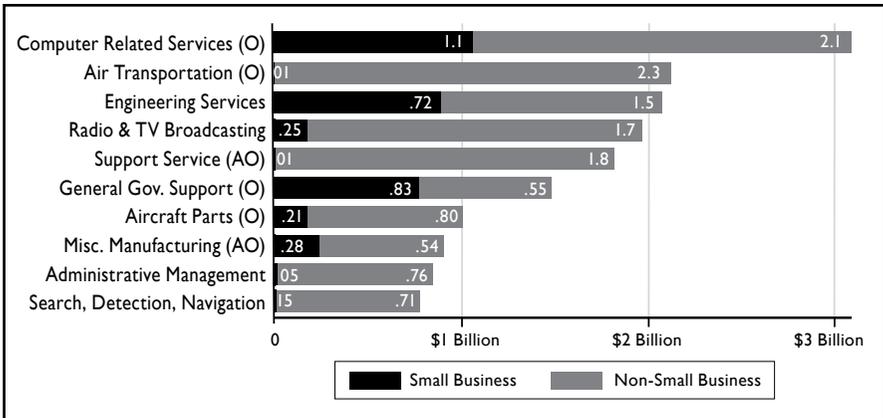


Figure 5: USSOCOM Total Financial Outlay: Top NAICS Services/Products. Classification: (O) Other, (AO) All Other. Source: The Federal Procurement Data System

Figure 5 shows outlays on the top 10 NAICS categories based on transaction value from the FDPS data, with each category further broken down by spending on small and large businesses.¹⁵⁷ As was the case for spending on the general service and product categories, spending in these categories flows predominantly to large businesses, especially in air transportation, aircraft

parts, support services, and search, detection, and navigation. However, small businesses are better able to compete and win contracts related to engineering, general computer technology, and general government support. These are also categories in which businesses can compete outside of SOF AT&L, DOD, and the federal government while remaining profitable. This trend suggests that, while many small businesses provide military- and security-specific services, continued intentional efforts by SOF AT&L to award contracts to small businesses are required for the health of the industry.

Competition Conclusion

BBP establishes competition as the bedrock principle of effective acquisition and procurement programs. Two conclusions emerge from the preceding analysis. First, the competitive landscape remains robust. Market specialization has enabled USSOCOM to effectively generate competition in most service areas. SOF AT&L generates competition across most categories of private sector support. Two high-technology sectors—information services and professional, scientific, and technological services—exemplified robust competition during the period reviewed, namely, 2004 to 2014. Both service sectors averaged approximately four competitors for each task order. These industries are high-value sectors: the category of professional, scientific, and technological support alone accounted for over \$5 billion during the period studied—the single largest acquisition category. Consistent with SOF AT&L's acquisition priorities of equipment modification and rapid development, competition in these technical services strongly suggests that defense industries are healthy and that USSOCOM's acquisition approach is effective.

Two service sectors—transportation and warehousing and public administration—lagged behind the others in SOF AT&L's portfolio. Transportation and warehousing is a category in which defense consolidation has reduced competition, with some firms dropping out of the market. Rotor and fix-wing airlift capacity and their support services (e.g., spare parts, maintenance) have undergone industry-wide consolidation. A reduction in the number of firms providing transportation support is a general defense industry trend. Future challenges posed by consolidation will be faced by the services, which have improved leverage over platform-level acquisition. The lack of competition in public administration services is inconsistent with evidence from other federal agencies.¹⁵⁸ Future analysis specifically focusing

on public administration is warranted to identify if there are particular idiosyncratic features of SOF AT&L requirements that diminish competition. If competition remains limited in this area, SOF AT&L may overpay or receive lower-quality services from their contracted support partners.

Second, small businesses face more competitive pressures than large businesses. There are two explanations for this result. Small businesses are more plentiful than large prime contractors following years of defense industry consolidation. Additionally, small businesses are often in a better position to compete for low-volume, SOF-peculiar items and modifications. Overall, USSOCOM has adopted BBP models and practices that produce what is arguably the best record of small-business engagement in the DOD.

5. Organizational Innovation

Organizational capital is the capacity of an organization to adopt new modes and mechanisms to adjust to new challenges and changing environmental conditions. Organizational capital is an intrinsic characteristic of organizations that impacts their ability to achieve their objectives. Large bureaucracies typically have limited organizational capital because size and age decrease incentives to overcome collective action problems.¹⁵⁹ The U.S. military is arguably the world's largest bureaucracy. It should therefore come as no surprise that, overall, its acquisition and procurement policies and practices struggle to adapt to changes in the environment (e.g. rapid changes in networked technologies). And yet, within the U.S. military there are exceptions to this general trend, most notably USSOCOM. USSOCOM's high level of organizational capital, particularly compared to that of the five services has enabled adoption of innovative acquisition policies to support SOF's unique mission.

USSOCOM's organizational capital is comprised of three elements: 1) a commander with head-of-agency power that enables centralization and delegation, 2) service purchases and modifications, and 3) establishment of SOF culture and individual leadership quality.¹⁶⁰ Yet, organizational capital is dynamic and organizational capital fluctuates. Moreover, even optimized agency powers do not magically overcome the distance and division between contractors and government employees, guarantee control over personnel, or resolve the challenges of working on classified systems. Constant personnel turnover, including leadership positions, reduces organizational continuity and efficiencies. The following section describes in detail the three major components of USSOCOM's organizational capital and concludes with a brief discussion.

Head of Agency Powers

The commander of USSOCOM, unique among combatant commanders, has the authority to directly procure equipment, technology, and weapon systems. The USSOCOM commander has the authority of a head of agency and authority over USSOCOM's own budget. This budgetary authority enables SOF AT&L to innovatively pursue SOF-peculiar equipment and

services, while fully complying with all federal and DOD rules and regulations involving acquisition. The commander delegates authority to the acquisition executive who, in turn, delegates procurement authority down through the organization to individual contract officers.

SOF AT&L consists of the support staff for the acquisition executive, eight PEOs, and four directorates.¹⁶¹ The division of labor within the command and the command's high level of independent purchasing authority affords PEOs increased organizational flexibility. The organizational arrangements that have emerged mirror the major acquisition requirements for the force (e.g., fixed wing, services, etc.). The division improves connections with industry on specific equipment and technology.¹⁶²

USSOCOM is comprised of various units that enable the acquisition process to be tailored to the specific needs of the SOF. Figure 6 depicts the top twelve funding agencies by total transaction values during the period studied for this report (2004-2014). USSOCOM's Regional Contracting Office (represented by the second bar in the second panel) oversaw \$16 billion in acquisitions during the studied period, accounting for nearly 70 percent of all USSOCOM financial transactions. The top three funding agencies—USSOCOM's Regional Contracting Office, the Technology Application Contracting Office, and SOF special activity agencies—account for nearly 90 percent of all acquisitions. This degree of centralization reduces transaction costs for both the buyer and the seller and represents a significant advantage USSOCOM has over other military services and DOD-wide initiatives. The centralization of authority is a form of organizational capital asset: establishing centralized decision making, financial authority, and review processes create a single user-interface scenario.

Figure 6 demonstrates how organizational capital enables flexibility in the acquisition process. USSOCOM has the flexibility to utilize numerous funding agencies—more than 235 are included in the data—to ensure timely delivery of services and materials. The utilization of additional funding agencies does not translate into huge financial outlays, however. Indeed, the average financial obligation from the bottom 10 percent of funding agencies is just over \$1 million—less than a rounding error in most budget environments. Yet, this organizational flexibility is pivotal to USSOCOM's contracting success because firms and the command have multiple avenues through which to partner without needing to incorporate other military services into the acquisition process.¹⁶³

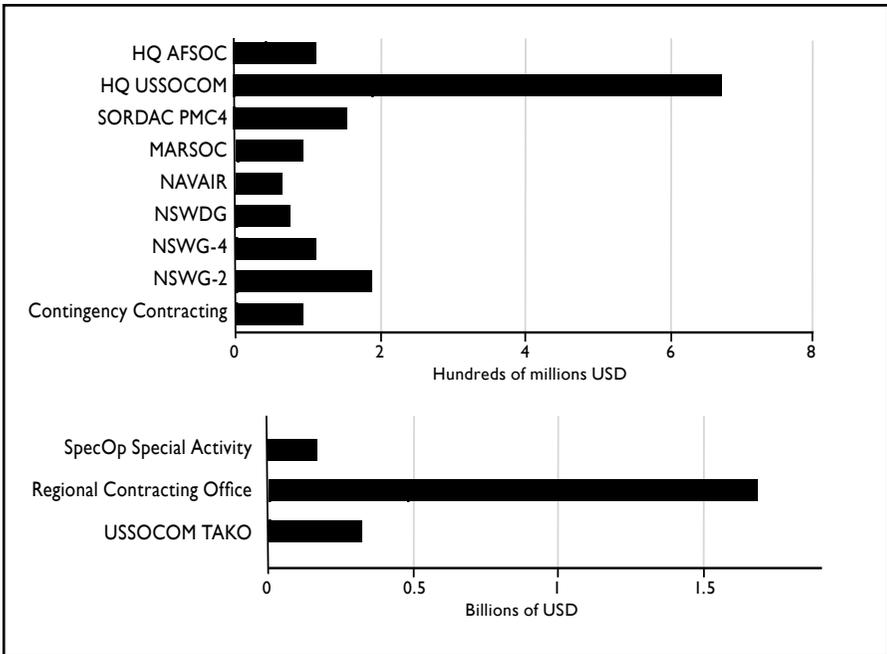


Figure 6: USSOCOM Total Financial Value: Top 12 Units.
 Source: The Federal Procurement Data System

Control over budgets does not guarantee control over personnel. SOF AT&L personnel policies remain entrenched in federal requirements and DOD practices. Personnel stability, the degree to which individuals maintain positions, is an important determinant of organizational success.¹⁶⁴ SOF AT&L's personnel instability is impacted by the elimination of positions and the assignment of specific positions by the services, rather than total work force turnover.¹⁶⁵ Elimination of positions is often determined outside of the command. Typically the services influence billet assignments because they fund the personnel positions. Additionally, specific billets, particularly in the legal department, may not align with the current needs of the force.¹⁶⁶

SOF AT&L relies on contractors to support acquisition policies and their implementation. Contractors have supported internal acquisition policies up to the permitted "inherently governmental function" boundary established by federal regulations. Contractors do not provide one-to-one ratio capabilities as government employees but are often treated as facsimiles by decision makers in higher positions of authority.¹⁶⁷ Contracting personnel are often credited with increasing organization flexibility and helping to manage

service-demand fluctuations. However, contracting overall is negatively associated with organizational performance.¹⁶⁸ Contracted SOF AT&L personnel identified differences in workplace treatment, job security, and general trust as negatively affecting to their job performance. These perceptions are consistent with the findings of federal surveys of contracted personnel working in government environments.¹⁶⁹ Continued substitution of contract personnel for government positions may over time erode organizational capital.

Benefits and Problems of Service Collaboration

USSOCOM has the capacity to collaborate with military services to secure and modify platforms tailored to SOF. For example, USSOCOM operates SOF-variants of the ‘Chinook’ (MH-47) helicopter that have improved its range, defensive capabilities, and overall operational capacity. The Army purchased the helicopters and provided numerous upgrades, and USSOCOM supplied the final upgrades to ensure delivery of operational requirements. The dual acquisition approach enables SOF AT&L to add task orders to existing purchase orders. The ability to shift major acquisition and management responsibilities to a different military service largely insulates SOF AT&L management from the burdens of program management.

Dependence on service modifications, however, generates bureaucratic and strategic limitations. First, bureaucratic impediments arise because of incompatibility between operational procedures, different accounts, computer software, and similar functional processes. For example, transferring money between USSOCOM and the services used to be a laborious process that could take a month or longer. SOF AT&L personnel have since decreased the transfer time to about three weeks.¹⁷⁰ The compatibility—and lack thereof—of computer software also frequently generates bureaucratic impediments. The contracting software currently in use is a case in point. DOD-wide software, while attempting to unify the system, has generated one-size-fits-all procedures that may not fully support SOF-peculiar contracts. Thus, compatibility is limited not only because software is sometimes incompatible, but because unified software is incompatible with SOF-peculiar contracts.

Second, dependence on the services for major acquisitions poses a potential long-term limitation for procurement of SOF-peculiar equipment. Currently, the services purchase equipment that can be modified, sometimes

at a very high cost to meet SOF-peculiar requirements. Modification, however, is an effective policy only if the services continue to purchase equipment that can realistically be modified, similar to what they have purchased in the past.¹⁷¹ Emphasis on conventional capabilities will likely continue to occupy a prominent role in service

DOD-wide software, while attempting to unify the system, has generated one-size-fits-all procedures that may not fully support SOF-peculiar contracts.

acquisition;¹⁷² however, service acquisitions are increasingly focusing on technology-intensive platforms that reduce the role of the individual soldier. For the services, technology-intensive equipment offers opportunities to remove individuals from harm's way and improve operational alternatives. This approach may not always be compatible with SOF tactics, which often require that SOF personnel operate in close proximity to enemy targets and therefore seek to augment and enhance, not reduce, the individual soldier's capabilities. Currently, there are no alternative plans for major platform-level acquisition, which may leave USSOCOM vulnerable to changes in service acquisition behavior.¹⁷³

SOF Culture and Individual Leadership

Individual leadership and the understanding of SOF culture influence SOF AT&L acquisition effectiveness. The available research indicates that, in some contexts, bureaucratic processes can be strongly influenced by difficult-to-quantify leadership qualities (e.g., decision-making, leadership style, and innovation). USSOCOM is an example of such a context. SOF-peculiar cultural elements (e.g., acute time-sensitivity, SOF Truths, a very strong mission focus and shared sense of operational importance) differentiate the environment from the rest of DOD. Specifically, leadership and SOF culture influence SOF AT&L personnel with regard to direction, personnel turnover, and emphasis on retaining personnel with DOD experience instead of hiring new employees.

Leadership from the top of SOF AT&L establishes expectations and performance incentives. Leadership's influence on organizational culture is exemplified by the ability of personnel to readily identify their organization's priorities and performance measures. Interviewed SOF AT&L personnel often cited providing "guys down-range" with needed equipment as their

top professional performance measure, regardless of previous conceptualizations of professional accomplishment. Subtle shifts in organizational culture resulting from leadership are reflected in the acquisition executive office's push for face-to-face interactions with industry. Both the private sector and SOF AT&L sources referenced this new emphasis on face-to-face interactions as a significant factor moving forward.

Successful interactions between the private sector and SOF AT&L are seen by many SOF personnel as requiring a shared understanding of SOF culture.¹⁷⁴ SOF culture is certainly unique. One potential downside is that private sector employees and SOF AT&L personnel may sometimes talk past each other.¹⁷⁵ Despite efforts of SOF AT&L leadership to facilitate successful partnerships, the perception persists in the private sector that in-house SOF experience (e.g., hiring retired SOF personnel) is required to win contracts. Continued emphasis on FARs and clarifying contract requirements may help to counter this industry misperception.

SOF AT&L operations place a heavy emphasis on the expertise of experienced personnel. The complexity of many SOF AT&L tasks (e.g., articulating requirements for contracts to modify existing military equipment or develop highly specialized new equipment) means that familiarity with SOF AT&L procedures and culture is especially valuable. Yet, few individuals start their careers at USSOCOM. Instead, it is typical for individuals to transfer into SOF AT&L.¹⁷⁶ Consequently, personnel who have accumulated a number of years of SOF AT&L experience and expertise are seen as the backbone of SOF AT&L and leadership tries to retain them. As is the case in other federal agencies, however, a generational workforce gap is developing that may negatively impact future efficiency.

SOF AT&L is taking steps to mitigate potential generational gaps. First, USSOCOM utilizes Expedited Hiring Authorities which allow individuals to be hired "off the street" that would not otherwise be available. The expedited process is a DOD-wide initiative to appoint highly qualified individuals in specific shortage acquisition categories.¹⁷⁷ Second, SOF AT&L developed an intern program to assuage generational gaps in the workforce. These initiatives bridge generational gaps, yet it is unclear if these steps are sufficient to avoid staffing issues in the future. Moreover, SOF AT&L will likely eschew staffing issues facing DOD as a whole because of the existing practice to recruit from within the DOD.

6. The Private Sector, Better Buying Power, and SOF AT&L Personnel

In the context of increasing private sector integration, and to better engage the private sector, DOD instituted the BBP program. BBP 1.0 was issued in 2010 by Ashton Carter, then Under Secretary of Defense for Acquisition, Technology, Logistics (USD (AT&L)), as part of DOD's Efficiency Initiative.¹⁷⁸ Input from industry, the military, and Congress generated two additional versions of the document. The primary objective of the BBP 3.0 program is to “deliver warfighting capabilities needed within the constraints of a declining defense budget by achieving better buying power for the warfighters and taxpayer.”¹⁷⁹ A brief review of the program identifies key aspects of the contracting model and how it relates to USSOCOM's acquisition programs. BBP initiatives are examined within the context of SOF AT&L personnel and a preliminary empirical analysis of USSOCOM transactions.

BBP and USSOCOM

The BBP program identified initiatives to improve Pentagon acquisition processes. The review produced 36 different initiatives, which are condensed here into seven primary focus areas.¹⁸⁰ Two of the initiatives, improving tradecraft in the acquisition of services and improving the professional quality of the total acquisition workforce, are examined in relation to USSOCOM in the following sections.¹⁸¹

USSOCOM acquisition programs are atypical compared to the rest of DOD. ACAT is the DOD's taxonomy of acquisition program categories. The categories are divided by financial size (cost) and level of decision authority.¹⁸² Each acquisition program—though not necessarily all the transactions and contracts it generates—contains milestone decision authority that determines if and how the program moves forward. SOF AT&L typically manages ACAT III programs and milestone decision authority resides with the commander, who delegates acquisition authority to the acquisition executive. The commander, in turn, may designate the acquisition executive.¹⁸³ Rapid modification and fielding of equipment is different from the development of weapons platforms or similar projects. USSOCOM experienced problems

with both ACAT I acquisition programs (common aviation package and Advanced SEAL Delivery System) and ACAT II programs (CV-22 Advanced Vertical Lift Aircraft).¹⁸⁴

BBP's cost targets and goals are applicable to SOF-peculiar programs.¹⁸⁵ Acquisitions cost limitations are predicated on the will-cost and should-cost managerial approach. "Should-cost" is a concept introduced by then USD (AT&L) Carter to emphasize the life-cycle costs of acquisition and underscore the importance of cost estimates as a ceiling, not a cost floor.¹⁸⁶ Conceptually, "should-cost" costs are those incurred once all inefficiencies and bureaucratic costs that can be removed are calculated.¹⁸⁷ Kendall identified the importance of "should-cost" for all programs:

Managers at all levels should be taking and requiring that these steps be taken and rewarding successful realization of cost savings. I am seeing more and more of the desired behavior as time passes, but I am also still seeing cases where implementation seems to be more token than real. We also have work to do in understanding and teaching our managers the craft of doing "should cost" for our smaller programs (e.g., Acquisition Category IIIs, Services, etc.)—this remains a work in progress. Overall, "should cost," as a single measure alone, if fully implemented, will cause fundamental change in how we manage our funds.¹⁸⁸

SOF-peculiar modifications and lower ACAT levels present challenges in establishing "should cost" prices.

Organizations are typically slow to adapt to new policies and programs—a problem for many large bureaucracies. Top-down initiatives, such as BBP, required management personnel to support and implement policy changes and alterations. Management is a key characteristic in implementation of BBP because DOD's acquisition budget is so large.¹⁸⁹ Many SOF AT&L staff downplayed the practical application of BBP.¹⁹⁰

SOF AT&L has largely been able to overcome organizational hurdles and achieve BBP objectives through effective management decision-making and leadership. SOF AT&L's record of small business engagement is one example of implementation of BBP policies to improve tradecraft in the acquisition process. Promotion of small business permeates SOF AT&L acquisition culture because it is a leadership priority.¹⁹¹ USSOCOM's OSBP routinely outpaces the rest of DOD and the federal government in small business

engagement. SOF AT&L figures from fiscal year 2013 demonstrate their success. In 2013, the small-business goal was 23 percent of all contracts, but SOF AT&L achieved a 25.56 level of engagement. During the same period, DOD-wide small-business engagement achieved 20.94 percent, falling short of the goal of 22.28 percent. Similar outpacing of DOD targets in other categories of protected small-business contracts were also achieved by SOF AT&L.

Private Sector Views of SOF AT&L Personnel

SOF truths that humans are more important than hardware applies to the individuals that purchase the hardware. BBP 3.0 identifies improvement in the professional quality of the total acquisition workforce as a major objective. SOF AT&L personnel, who number approximately 600, are essential to the development and implementation of innovative acquisition policies and procurement strategies. SOF AT&L employs civilian and active military personnel. Retired military personnel are also an important source of new employees. This section briefly discusses SOFIC 2015 participants' views of SOF AT&L personnel. The survey provides a general overview of private sector actors' views of SOF AT&L engagement, not a critique of existing personnel nor a comprehensive survey of industry attitudes regarding SOF AT&L.

SOF AT&L personnel, who number approximately 600, are essential to the development and implementation of innovative acquisition policies and procurement strategies.

Figure 7 contains survey results from SOFIC 2015 participants. Respondents were asked to rate SOF AT&L personnel on a scale of 1 to 5, with 5 representing "very high" and 3 representing "average."¹⁹² The results suggest that SOF AT&L personnel are perceived as generally capable and well-versed in the acquisition process. Each category averaged about 4, a rating of "high." However, SOF AT&L personnel rated lower with regard to responsiveness and understanding of specific businesses and business sectors.

The survey captures differences in perspectives across traditional and non-traditional partner firms. Firms are considered non-traditional partners if they reported less than 25 percent of their revenue coming from DOD-related contracts.¹⁹³ For example, no non-traditional partner rated SOF AT&L personnel as above average with regard to knowledge of their

firm and responsiveness. By contrast, traditional partners were rated highly for responsiveness and firm-specific knowledge. One potential explanation for this inverse relationship is that non-traditional partners are more accustomed to rapid interactions in the private sector and are not yet familiar with DOD acquisition environments. Interestingly, non-traditional partners consistently gave SOF AT&L personnel higher ratings for their understanding of acquisition policies than did traditional partners. This result can partly be attributed to non-traditional partners' lack of familiarity with the acquisition process. Conversely, traditional partners are better versed in the acquisition process and may therefore be better able to identify limitations and shortcomings in SOF AT&L-provided support. Because engagement with non-traditional partners is a priority for SOF AT&L, improved understanding of their individual businesses may be required to increase engagement. SOF AT&L's 'radical transparency' practice, while an improvement over DOD-wide practices, may still lag behind private sector expectations.

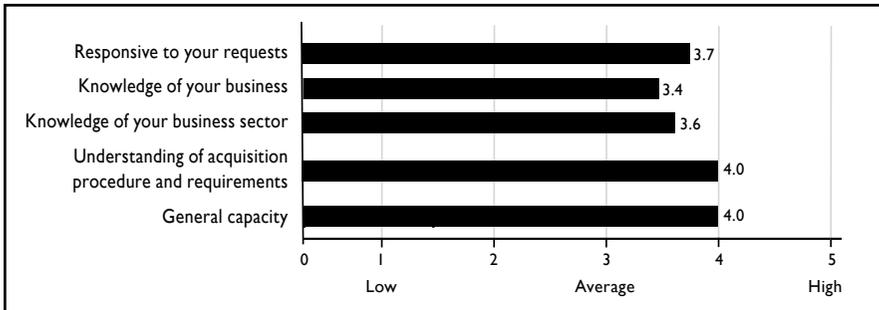


Figure 7: SOFIC 2015 Respondents to “How would you Rate SOF AT&L Personnel?” Source: author, data collected from online survey of 2015 SOFIC company participants

Conclusion

The 21st century presents many challenges in the acquisition and procurement of services and technologies for the SOF community. Challenges arise from the internal constraints of decreased federal defense spending and complex federal contract requirements. Yet, despite fiscal limitations, the demand for special operations is on the rise. Emerging threats from state and non-state actors increase operational demands, straining both equipment and personnel. SOF AT&L provides arguably the best and most responsive acquisition process in the military; however, SOF-equipment cannot be mass produced. The fiscal, technological, and operational environment requires SOF AT&L to modify the acquisition model to successfully overcome the challenges of the contemporary environment.

The existing acquisition model ensures continuity of services but often fails to provide revolutionary technology and equipment improvements. Revolutionary technologies disrupt the existing military paradigm. The pursuit of revolutionary technology requires adaptation of the existing acquisition model. SOF AT&L's TALOS initiative is the most prominent example of attempts to acquire revolutionary capabilities. The collaborative effort involves USSOCOM, universities, national laboratories, and private firms. The collaborative environment, particularly the potential for firms to share proprietary information, may offer new solutions to the most daunting technology integration challenges. Potential improvements in the acquisition and procurement process ensure that TALOS' impact is not limited to equipment and spin-off technologies.

The fiscal, technological, and operational environment requires SOF AT&L to modify the acquisition model to successfully overcome the challenges of the contemporary environment.

Public administration is one area of service acquisition that requires additional research. Public administration includes a wide variety of activities ranging from day-to-day business operations, time-sensitive planning, interagency support, to intelligence operations and program analysis.¹⁹⁴ Public administration services accounted for over \$1 billion from 2004-2014. Because reliance on private firms for public administration services may

influence USSOCOM operations, it is imperative to identify how and under what conditions private firms best support the command. Furthermore, in some areas of government, private firms are so entangled with operations, reversibility in privatization trends are not an option. Future research must explore the consequences of procuring private sector public administration support.

The continued importance of collaboration with international SOF and international partners offers opportunities for acquisition and procurement programs to advance operational goals. Because requirements are written to support USSOF, international interoperability is often not a consideration. Yet, USSOCOM often establishes market trends and standards because it is the world's best-funded force.

Identification and evaluation of whether and how acquisition and procurement programs can be designed to improve international interoperability without losing sight of the primary goal of supporting USSOF may have lasting consequences for allies, partners, and operational success.

Finally, AT&L personnel immortalize the SOF truth that personnel are more important than hardware. The existing acquisition system can be improved and the personnel are the individuals with the expertise, capacity, and motivation to revolutionize the acquisition and procurement process. Dedication to overhead minimization, improved organizational capacity, and revolutionary technology development are only a few of the areas of excellence. Development and implementation of new acquisition tools and procedures to improve delivery of SOF-peculiar services and technology are required if SOF are to continue to be the best equipped force on the planet.↑

Appendix A: SOFIC Survey

The SOFIC is held annually in Tampa, Florida. It brings together U.S. and international industry partners, internationally-based SOF members, and government personnel. The conference provides a forum for industry to directly interact with SOF personnel and decision makers, to view demo products, and receive updates. For this monograph, a survey was provided to each company that participated in SOFIC 2015. The 2015 conference attracted approximately 9,000 attendees and 340 companies.

The purpose of the survey was to identify methods and mechanisms to improve interactions between USSOCOM and the private sector. The need for the survey was identified during conversations with SOF AT&L personnel. Several individuals recommended direct contact with private sector actors to ensure accurate and up-to-date description of their views.

Each company was asked to provide a representative from the company to complete the survey. Individual respondent names and information were not collected.¹⁹⁵ Individuals from 47 companies completed the survey, representing a response rate of roughly 13 percent. Companies were contacted through email or contact links on their websites.¹⁹⁶ Some companies provided their name on the survey, but that was removed from the record. The survey was not designed to obtain definitive answers on the topics addressed, rather, it supplements the existing research. In this monograph, individual narrative responses are quoted (without named attribution) and descriptive statistics are utilized when appropriate. Descriptive statistics and graphics for each question are provided in this appendix.

Survey respondents were representative of the industry. Companies identified their employee total, small business status, defense-specific revenue, and SOF experience. Representatives from manufacturing, retail trade, transportation, information, professional and scientific, educational services, and other branches of the industry all provided responses.¹⁹⁷ Firms varied in size from 2 to over 10,000 employees. Protected small businesses were included in the sample. Individual representatives included owners, presidents, contract managers, and market managers. About 30 percent of the companies have SOF-experienced personnel in their leadership. One quarter of companies responded that SOFIC 2015 was their first conference

attendance. Finally, companies surveyed derive between 1 percent and 65 percent of their revenue directly from USSOCOM-related contracts.

The survey examines SOFIC, SOF experience, technology integration, military requirements, and engagement impediments. Questions were developed during the research, and in many cases are based on feedback from USSOCOM personnel. For example, based on this feedback, questions were included to probe possible misconceptions; such as the misconception repeated by multiple private sector respondents that previous SOF experience is a mandatory prerequisite for successfully winning business. Multiple questions were included in the survey to address this issue.

In general, individuals with SOF experience are involved in the business practices of many firms. That said, many respondents stated that SOF experience is not, in fact, required for business success. One of the most insightful comments on the survey addressed the idea that the value of SOF experience for firms seeking USSOCOM contracts may evolve over time. One company representative stated: “At one point they were [SOF personnel] but the economic climate has forced us to be much more diversified; however, we feel our products offer some solutions to existing needs.”¹⁹⁸ There appears to be an inconsistency between the perceptions of SOF AT&L personnel and perceptions in the private sector regarding the importance of SOF experience.

SOFIC 2015 Survey:

1. Is 2015 your company’s first Special Operations Forces Industry Conference?
2. What are the benefits of SOFIC?
3. How would you rate SOFIC compared to other industry conferences?
4. In what areas can SOFIC be improved?
5. How would you rate SOF AT&L personnel?
 - a. Professionalism
 - b. General capability
 - c. Understanding of acquisition procedures and requirements
 - d. Knowledge of your business sector
 - e. Knowledge of your business

- f. Responsiveness to your requests
- 6. How important are the following issues to your success when working with USSOCOM?
 - a. Individual or business special operations experience
 - b. Understanding special operations culture
 - c. Industry involvement in refining requirements
 - d. Direct access to special operations forces
 - e. Direct access to decision-makers and acquisition personnel
 - f. Special Operations Industry Conference
- 7. How does the level of technology readiness required by USSOCOM influence your business decisions?
- 8. How do military specification requirements influence your company?
- 9. What factors, if any, limit technologies and capabilities that could benefit USSOCOM?
- 10. How do you see the dynamics between commercially funded development and USSOCOM's emphasis on open architecture/fully integrated systems?
- 11. Are there non-traditional contracting mechanisms (e.g. renting equipment, contractor-owned government-operated, government as lead integrator) that would benefit your company?
- 12. What are the primary impediments to engaging USSOCOM (e.g. federal contracting system, limited demand, R&D costs, others)?
- 13. Are individuals with special operations experience critical to your company's success? If yes, at what point in the business process are they most valuable (e.g., identifying requirements for information, connections, presentations, business model, etc)?
- 14. Individual company demographics
 - a. Does your company work with other DOD or federal agencies? If so, please list the agencies.
 - b. How many employees does your company have?

- c. Approximately how long have you done business with USSOCOM?
 - d. Is your company considered a protected small business?
 - e. Are members of your company's leadership special operations veterans?
 - f. What percentage of your company's revenue comes from DOD-related business?
 - g. What percentage of your company's revenue comes from USSOCOM-related business?
15. Please identify the primary category of services your company provides.
16. Please identify the secondary category of services your company provides.

Appendix B: Acronym List

ACAT	acquisition categories
AECV	all environment capable variant (small unmanned aircraft)
BBP	Better Buying Power
CIA	Central Intelligence Agency
COTS	commercial off-the-shelf
DARPA	Defense Advanced Research Projects Agency
DOD	Department of Defense
FAR	Federal Acquisition Regulation
FAST	Federal Acquisition Services Team, LLC
FPDS	Federal Procurement Data System
GAO	Government Accountability Office
IG	inspector general
IP	intellectual property
IQT	In-Q-Tel, a privately-owned non-profit organization
ISR	intelligence, surveillance, and reconnaissance
J-8 (USSOCOM)	Joint Staff Directorate of Force Structure, Requirements, Resources and Strategic Assessments
LPTA	lowest-price technically acceptable
MEP	Mission Essential Personnel, LLC
MFP 11	Major Force Program 11
NAICS	North American Industry Classification System
OSBP	Office of Small Business Programs

PEO	program executive office
PMSCs	private military and security companies
R&D	research and development
RFP	request for proposal
SBIR	Small Business Innovation Research
SCAR	Special Operations Combat Assault Rifle
SOF	Special Operations Forces
SOF AT&L	Special Operations Forces Acquisition, Technology, and Logistics
SOFIC	Special Operations Forces Industry Conference
SORBIS	Special Operations Resource Business Information System
SWMS	SOCOM Wide Mission Support
TALOS	Tactical Assault Light Operator Suit
TILO	Technology & Industry Liaison Office
TRL	technology readiness level
UAS	unmanned aircraft systems
USD (AT&L)	Under Secretary of Defense for Acquisition, Technology, and Logistics
USSOCOM	U.S. Special Operations Command
USSOF	U.S. Special Operations Forces

Endnotes

1. Linda Robinson, *The Future of U.S. Special Operations Forces* (Washington, D.C.: Council on Foreign Relations, 2013), 3.
2. USSOCOM J5, Directorate of Strategy, Plans, and Policy, identified the importance of understanding the acquisition process. J5 identified acquisition as a strategic issue by posing the following question: “Is SOCOM’s acquisition process positioned to capitalize on rapid fielding of untested, potentially disruptive technology?” See: Special Operations Command, “J5 Key Strategic Issues as of 4 September 2014,” accessed 6 February 2015 at: http://www.soc.mil/swcs/SWEG/_pdf/GRAD/USSOCOM%20J5%20Key%20Strategic%20Issues%20List.pdf.
3. Richard L. Kugler and Hans Binnendijk, “Choosing a Strategy,” in *Transforming American’s Military*, ed. Hans Binnendijk (Centre for Technology and National Security Policy, National Defense University, 2002), 57-87. Kugler and Binnendijk discuss the internal DOD debate around competing approaches to transformation. They detail the debate between “evolutionary ‘steady as you go’” strategies and “revolutionary ‘leap ahead’” strategies that aim to move SOF methods ahead in “faster, bolder, and riskier ways.” The authors advocate a blended approach to achieve a “purposeful and measured transformation.” This blended strategy “aspires to keep U.S. forces highly ready and capable in the near term, to enhance their flexibility and adaptability in the mid- term, and to guide their acquisition of new systems prudently in the long term.”
4. USSOCOM J5, “Key Strategic Issues,” 14.
5. For a discussion of the potential benefits and liabilities of PMSC involvement in special operations, see: Christopher Spearin, “Special Operations Forces & Private Security Companies,” *Parameter*, vol. 44, no. 2 (2014), 61-73.
6. There are multiple definitions and acronyms used to describe the private security industry. Peter Singer’s is perhaps the most cited definition and includes all provided services (combat services, consulting, and logistical support). Christopher Kinsey distinguishes between “the object to be secured” and the “means of securing the object” which allows him to differentiate between firms based on whether the client is public (state government) or private (corporations, non-governmental organizations, private firms). Scholars disagree about the proper acronym for the industry: Deborah Avant uses the term “private security companies” (PSC), Seden Akcinaroglu and Elizabeth Radziszewski use “private military companies” (PMCs), Kinsey and Malcolm Hugh Patterson use “private contractors,” and Ulrich Petersohn uses “private military and security companies” (PMSCs). Defining the industry in clear terms remains difficult and the nuances between these terms are conceptually important. PMSCs is the most inclusive and perhaps for that reason increasingly used by scholars. It encapsulates the entire range of services, technologies, and types of support provided by the

- private sector. See: Seden Akcinaroglu and Elizabeth Radziszewski, “Private Military Companies, Opportunities, and Termination of Civil Wars in Africa,” *Journal of Conflict Resolution*, vol. 57, no. 5 (2013), 795–797; Deborah D. Avant, *The Market for Force: The Consequence of Privatizing Security* (New York, NY: Cambridge University Press, 2005), 2-13; Christopher Kinsey, *Corporate Soldiers and International Security: The Rise of Private Military Companies* (New York, NY: Rutledge, 2006), 1-4; Christopher Kinsey and Malcolm Hugh Patterson, *Contractors and Wars: The Transformation of US Expeditionary Operations* (Stanford, CA: Stanford University Press, 2012), 1-3; and Ulrich Petersohn, “The Impact of Mercenaries and Private Military and Security Companies on Civil War Severity between 1946 and 2002,” *International Interactions*, vol. 40, no. 2 (2014), 191–193.
7. Historical identification of PMSCs’ initial contracts with the U.S. military remains contested. Mark Wilson argues that use of private firms by the military—and corruption—dates back at least to the U.S. Civil War, while William Epley details contracting during the Revolutionary War. Some scholars identify Vinnell Corps’ 1975 contract to train the Saudi Arabian National Guard as the unofficial start of U.S. PMSCs because it involved training an outside military force and not just logistical support. The enduring importance of PMSC support is typified by the continuation of the 1951 Contract Field Team (CFT) that provided skilled aircraft technicians to support Air Force locations during the Korean War. DynCorp’s predecessor, Land-Air, Inc, won the initial contract and continues to maintain the contract. Avant traces the historical development of privatization following the demise of mercenary armies during the Napoleonic period. See Deborah D. Avant, “From Mercenary to Citizen Armies: Explaining Change in the Practice of War,” *International Organization*, vol. 54, no. 1 (2000), 51–72; William W Epley, “Civilian Support of Field Armies,” *Army Logistician*, vol. 22 (1990), 30–35; David Isenberg, *Shadow Force: Private Security Contractors in Iraq* (Westport, CT: Praeger Security International, 2009), 3-20; and Mark Wilson, *The Business of the Civil War: Military Mobilization and the State* (Baltimore, MD: John Hopkins University Press, 2006), 107-147.
 8. Andrew Feickert, *U.S. Special Operations Forces (SOF): Background and Issues for Congress*, RS21048 (Washington, D.C.: Congressional Research Service, 2015), 1.
 9. Matthew Johnson, “The Growing Relevance of Special Operations Forces in U.S. Military Strategies,” *Comparative Strategy*, vol. 25, no. 4 (2006), 273-275. See also: Iver Johanse, “Special Operations forces-a weapon of choice for future operations?” in *International Military Operations in the 21st Century: Global Trends and the Future of Intervention*, ed. Per M. Norheim-Martinsen and Tore Nyhamar (New York, NY: Routledge 2015), 97-115.
 10. In February 2015, President Obama sought formal Congressional approval for limited ground forces, specifically special operations, to operate in Iraq to combat the growing threat of the Islamic State of Iraq and the Levant (ISIL). The President sought approval for special operations to conduct humanitarian and military missions, including military strikes against ISIL leadership. See: White

- House, “Joint Resolution,” accessed 15 April 2016 at: http://www.whitehouse.gov/sites/default/files/docs/aumf_02112015.pdf.
11. Richard Comer, “Operation Enduring Freedom–Philippines (OEF-P),” Defense Media Network, 23 August 2012.
 12. Crofton Black outlines that USSOCOM total demarcated spending in the Philippines between 2009 and 2014 was \$29.7 million with approximately \$26.3 million for UAS-ISR services performed by Boeing and Textron. See: Crofton Black, “U.S. Special Operations Command Contracting: Data-Mining the Public Record,” Oxford Research Group: Remote Control, 2014, 35.
 13. See: Ian Graham Ronald Shaw, “Playing War,” *Social & Cultural Geography*, vol. 11, no. 8 (2010), 789–803; Roger Stahl, “Have You Played the War On Terror?” *Critical Studies in Media Communication*, vol. 23, no. 2 (2006), 112–130; and Nick Robinson, “Videogames, Persuasion and the War on Terror: Escaping or Embedding the Military–Entertainment Complex?” *Political Studies*, vol. 60, no. 3 (2012), 504–522.
 14. The five Commands are Army Special Operations Command; Naval Special Warfare Command; Air Force Special Operations Command; Marine Corps Forces, Special Operations Command; and Joint Special Operations Command.
 15. U.S. Government Accountability Office, *Defense Acquisitions: An Analysis of the Special Operations Command’s Management of Weapon System Programs*, GAO-07-620 (Washington, D.C., 2007).
 16. Elvira N. Loreda, John E. Peters, Karlyn D. Stanley, Matthew B. Boyer, William Welser IV, and Thomas S. Szayna, “Authorities and Options for Funding USSOCOM Operations” (Washington, D.C.: Rand Corporation, 2014), 46.
 17. Numerous funding mechanisms are available to USSOCOM. Options include but are not limited to the following: military departments, geographic combatant commands, MFP 2, and MFP 11. For operations, the theater special operations command is responsible for identifying funding. Identification of funding, particularly between MPF 2 (General Purpose Forces) and MFP 11 (Special Operations Forces), remains a challenge. DOD’s report to Congress on SOF only partially addressed MFP 11 funding allocation. DOD concluded that MFP is adequate but did not provide details regarding how the assessment was conducted or how this conclusion was reached. See: U.S. Government Accountability Office, *Assessment of DOD’s Report on Special Operations Forces and U.S. Special Operations Command*, GAO-14-820R (Washington D.C., 2015), 1.
 18. Congress provides USSOCOM with acquisition authority for SOF-peculiar equipment through Title 10, United States Code, Section 167. The combatant command is the only one with branch-level acquisition authority. William Lane argues that retention of this acquisition authority should continue so long as the demand for SOF remains high and the global war on terror (GWOT) is a national priority. Future alterations in the responsibilities of the command may necessitate shifting acquisition authority back to the separate branches. See: William R. Lane, “Resourcing for Special Operations Forces (SOF): Should

- Responsibilities be Passed from USSOCOM Back to the Services?” U.S. Army War College (2006), 3-14.
19. Collie J. Johnson, “Program Manager Interviews Gary Smith, SOCOM Acquisition Executive,” *Program Magazine*, September-October 1997, 2.
 20. Stephen Brooks argues that production of large defense equipment (airplanes, naval vessels, telecommunication equipment) by a single country, including the United States, is not financially feasible. Globalization of production ensures that links of the supply chain occur outside a single country. Keith Hartley examines defense acquisition in alliances and finds that trade between allies is beneficial but collaborative technology development is inefficient. See: Stephen G. Brooks, “The Globalization of Production and the Changing Benefits of Conquest” *Journal of Conflict Resolution*, vol. 43, no. 5 (1999), 646–670; Stephen G. Brooks, *Producing Security: Multinational Corporations, Globalization, and the Changing Calculus of Conflict* (Princeton, NJ: Princeton University Press, 2007), 16-46; and Keith Hartley, “Defense Industrial Policy in a Military Alliance,” *Journal of Peace Research*, vol. 43, no. 4 (2006), 473–489.
 21. These are four common answers from a survey of SOFIC attendees conducted in 2015. The procedure and summary answers are available in Appendix A.
 22. USSOCOM’s annual budget has increased dramatically from 2001 to 2014 from approximately \$3.1 billion to \$9.8 billion in FY 2014 constant dollars. This increase only includes funding for special and contingency operations. These figures do not include service-provided support, which the GAO estimates at approximately \$8 billion per year. See: U.S. Government Accountability Office, *Special Operations Forces: Opportunities Exist to Improve Transparency of Funding and Assess Potential to Lessen Some Deployments*, GAO-15-571 (Washington, D.C., 2015), 1.
 23. Potential risks associated with mass item purchases include outdated capabilities and resource misallocation.
 24. See Kateri Carmola, *Private Security Contractors and New Wars: Risk, Law, and Ethics* (New York, NY: Rutledge, 2010), 64-98; William D. Eggers and John O’Leary, *Revolution at the Roots: Making our Government Smaller, Better, and Closer to Home* (New York, NY: Free Press, 1995), 94-119; Stationary Office, *Private Military Companies: Options for Regulation* (London: The Foreign and Commonwealth Office, 2002), 12; U.S. Department of Defense, *Contractor Support in the Theater of Operations: Deskbook Supplement* (Washington, D.C.: United States Government Printing Office, 2001); and Paul R. Verkuil, *Outsourcing Sovereignty: Why Privatization of Government functions Threatens Democracy and What We Can Do About It* (New York: Cambridge University Press, 2007), 42-56.
 25. For example, the rapid development and fielding of the Casualty Evacuation Kit in a two-year window received the first ever DOD Better Buying Power Efficiency Award. A combined accelerated acquisition process, joint development, and operational testing approach saved considerable time in development and fielding of the kit. Bureaucratic procedures inhibit policy and process innovations because of hierarchical limitations and federal regulations. See: Beth Ritter and

- Mike Bottoms, "USSOCOM Wins First-Ever DOD Better Buying Power Efficiency Award," Legistrom, 7 November 2012, accessed on 20 February 2016 at: http://www.legistorm.com/stormfeed/view_rss/233284/organization/31571.html.
26. The requirements validation process is outlined by USSOCOM Directive 71-4, Special Operations Forces Capabilities Integration and Development System (SOF-CIDS). J-8 establishes Special Operations Command Requirements Evaluation Board (SOCREB) to review potential requirements. Validation authority sits with the USSOCOM Vice Commander who endorses requirements if they have interest from the Joint Requirement Oversight Committee, which identifies SOF-peculiar needs.
 27. Department of Defense, Acquisition, Logistics and Technology, "What is Better Buying Power," accessed 20 February 2016 at: <http://bbp.dau.mil>.
 28. Akcinaroglu and Radziszewski, *Private Military Companies*, 795.
 29. For an example of combined qualitative and quantitative methods, see: Linda Robinson, Patrick B. Johnston, and Gillan S. Oak, *U.S. Special Operations Forces in the Philippines, 2001-2014* (Washington, D.C.: Rand Corporation, 2016).
 30. James H. Frey, "Open-ended Questions," in *The SAGE encyclopedia of qualitative research methods* (vol. 1), ed. L. M. Given (Thousand Oaks, CA: Sage, 2008), 768.
 31. David M. Fetterman, "Ethnography," in *The SAGE encyclopedia of qualitative research methods*, 290-291.
 32. Interviewee identifiers and positions are not included in the manuscript to protect the anonymity of participants. Each participant signed a USSOCOM-reviewed and approved consent waiver prior to beginning each interview. Anonymity is required to ensure individuals speak freely without fear of retribution. Positions and ranks of participants are also not identified because this information, by itself, might in some cases make possible the identification of individual speakers. Consent forms remain on file with the author.
 33. Concept exploration is one component of sensitizing concept illumination techniques. Sensitizing concept illumination is an ethnographic approach that uses exact quotes from different interviews to identify concepts while the interview unfolds. This process emphasizes varying perspectives on and meanings of the key concepts identified by interviewed personnel. Sensitizing concepts are central organizing ideas in a field of research. Clearly, the concepts identified during this research do not fit this definition. First, the field of research on special operations is expanding but has yet to coalesce in acquisition and procurement areas. (The field has identified sensitized concepts related to operations such as flexibility, innovation, and interoperability.) See: Cathy Sheehan, Helen De Cieri, Brian Cooper, and Robert Brooks, "Exploring the Power Dimensions of the Human Resource Function," *Human Resource Management Journal*, vol. 24, no. 2 (2014), 193-200; and Michael Q. Patton, *Qualitative Research and Evaluation Methods*, 4th Edition (Thousand Oaks, CA: Sage, 2015), 443.

34. Texas A&M University Institutional Review Board reviewed and approved the survey instrument. A complete description of the survey can be found in the Appendix A.
35. No sampling strategies could be implemented with industry representatives because there is no mechanism that requires participation. The entire list of publicly available participants at SOFIC 2015 were individually contacted with a request to participate in the survey. Convenience sampling was the only option for data collection from this population. Limitations resulting from convenience sampling include the inability to identify what is unknown. For example, a particular segment of industry employees may have specific suggestions for improvements in the acquisition process, but if no one from this subgroup completes the survey, their comments and suggestions will not be captured.
36. Program outcomes are identified in: Stew Magnusen, "Special Ops' 'Iron Man Suit' on Track for 2018," *National Defense Magazine*, May 2016.
37. Richard A. Bitzinger, "The Globalization of the Arms Industry: The Next Proliferation Challenge," *International Security*, vol. 19, no. 2 (1994), 170–175 and Theodore H. Moran, "The Globalization of America's Defense Industries: Managing the Threat of Foreign Dependence," *International Security*, vol. 15, no. 1 (1990), 57–99.
38. Frank Camm, "How to Decide When a Contractor Source is Better to Use than a Government Source," in *Contractors and Wars: The Transformation of US Expeditionary Operations*, ed. Christopher Kinsey and Malcolm Hugh Patterson (Stanford, CA: Stanford University Press, 2012), 233-255.
39. Jeremy Scahill, "Blackwater Down," *The Nation*, 10 October 2005.
40. See: U.S. Defense Science Board, *Report of the Defense Science Board Task Force on Outsourcing and Privatization* (Washington, D.C., United States Government Printing Office, 1996), 46-96; U.S. Government Accounting Office, *Private and Public Prisons: Studies Comparing Operational Costs and/or Quality of Service*, GAO-GGD-96-158 (Washington, D.C., 1996), 1; and U.S. Government Accounting Office, *Privatization: Questions State and Local Decision-makers Used when Considering Privatization Options*, GAO-GGD-98-87 (Washington, D.C., 1998), 12-15.
41. In 1994 MPRI was contracted by the State Department to provide monitors on the Serbian border and secured a contract to train the Croatian Army. Following the successful seizure of the Krajina region, MPRI secured additional contracts with Croatia and the United States. MPRI's influence grew sufficiently that they assisted the U.S. Army Combined Arms Support Command on multiple programs, including the Battlefield Distribution project, the Theater Force Opening Package, and the CSS Rock Drill. MRPI also contributed to the Theatre Distribution and Theater Support Command Field Manuals. This note is based on: Bernd Horn, "Private Military Corporations as Members of the Global SOF Network: Worth Another Look?," in *The Role of Global SOF Network in a Resource Constrained Environment*, ed. Chuck Ricks (MacDill AFB, FL: JSOU Press, 2013), 45.

42. See: U.S. Government Accountability Office, *Outsourcing DOD Logistics: Savings Achievable by Defense Science Board's Projections Are Overstated* (Washington, D.C., 1997), 4.
43. For a meta-analysis of the public administration literature, see: Trevor L. Brown, Matthew Potoski, and David M. Van Slyke, "Managing Public Service Contracts: Aligning Values, Institutions, and Markets," *Public Administration Review*, vol. 66, no. 3 (2006), 323–331; Graeme A. Hodge, *Privatization: An International Review of Performance* (Boulder, CO: Westview Press, 2000), 13–34; Kenneth J. Meier and Laurence J. O'Toole, "The Proverbs of New Public Management Lessons From an Evidence-Based Research Agenda," *American Review of Public Administration*, vol. 39, no. 1 (2009), 4–22; and Jonas Prager, "Contracting Out Government Services: Lessons from the Private Sector," *Public Administration Review*, vol. 54, no. 2 (1994), 176–184.
44. Data from the FDPS on USSOCOM transactions from 2004–2014 are used for the figures. The U.S. is often listed as "place of performance country" when locations are classified. Companies are identified by the U.S. state and/or the country in which they conducted their principal performance. Firms were also located in the U.S. territories of Guam, Northern Mariana Island, and Puerto Rico. Additional international locations (not listed here) likely also served as locations of performance, but the data provide no further details.
45. The relatively small quantities of international transactions mask the financial implications and importance of international private sector support. Several of the international transactions are in support of major operations such as previous actions in Iraq and Afghanistan as well as ongoing operations in the Philippines and Columbia. For a review of USSOCOM operations in Columbia, see: Mark Moyer, Hector Pagan, and Wil R. Greigo. *Persistent Engagement in Colombia* (MacDill AFB, FL: JSOU Press, 2014), 15–24.
46. COTS items include any item "of a type customarily used by the general public, or by nongovernmental entities" that is acquired, leased, or licensed by the government. See: U.S. Department of Defense, *Commercial Item Handbook*, Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics (Washington D.C.: Department of Defense, 2001), 1.
47. The distinction between military-specific and non-military-specific equipment and service providers is somewhat artificial. However, the distinction is useful. Non-military-specific services are often not studied in conjunction with security firms but are critical to operational success. When speaking to the Operational Contract Support Leader's Conference, General Martin Dempsey stated that "we should acknowledge that [operational contract support] is no longer a niche capability ... contractors are part of our total military force." See: General Martin Dempsey, "Opening Remarks to Operational Contract Support Leader's Conference," 2012, accessed on 20 November 2015 at: http://www.dtic.mil/doctrine/new_pubs/jp4_10.pdf.
48. USSOCOM requires Enterprise Password Policy Enforcement that discriminates between difficult and complex passwords, customizable e-mail reminders, and

password reset integration. (See solicitation F2VUJ01146AC01 for complete details.) This particular solicitation was chosen to demonstrate the seemingly pedestrian nature of private sector support. Password failures may not seem important enough to impact operational success, but inability to access classified information in a timely matter is in fact a critical operational concern.

49. Data collected from the Federal Procurement Database System. Data was retrieved 20 April 2016 at: <https://www.fpds.gov/fpdsng/cms/index.php/en/>.
50. One company representative stated that, “military specs heavily influence our company as we often work with USSOCOM to find COTS solutions that address MILSPEC [military specifications].” Additional company representatives stated similar priorities. Quote taken from the survey of SOFIC 2015 participants.
51. Cees Bil and John Mo, “Obsolescence Management of Commercial-off-the-Shelf (COTS) in Defense Systems,” in *Concurrent Engineering Approaches for Sustainable Product Development in a Multi-Disciplinary Environment*, ed. Josip Stjepandic, Georg Rock, and Cees Bil (New York, NY: Springer, 2013), 621-632.
52. One example of software compatibility and support is Microsoft SharePoint. One USSOCOM employee identified how different offices have different versions of the software and that private actors also have different versions. Some offices use versions that are no longer supported, so updates and licenses are out of date. The lack of compatibility decreases functionality. Another example is the Navy’s continued use of Windows XP, a program that is no longer supported by the company. See Robert Hackett, “Why the Navy Still Pays Millions for Microsoft’s Windows XP,” *Time*, 25 June 2015.
53. Operations in Iraq exemplified the importance of non-military-specific support for operational success. For example, difficulty in fuel delivery spurred DOD to initiate programs to move away from fossil fuels. Deputy Secretary of Defense William Lynn specifically identified targeting of ‘soft-target’ fuel trucks as a threat to operational success. See: Steven M. Anderson, “Save Energy, Save Our Troops,” *New York Times*, 12 January 2011; and Christopher Helman, “For U.S. Military, More Oil Means More Deaths,” *Forbes*, 12 November 2009. Soldiers’ daily provisions are increasingly provided by the private sector, though SOF forces are unlikely to fall into this category of support.
54. Donna Miles, “SOCOM Strives to Meet Current, Future Operator Requirements,” *American Forces Press Service*, 29 May 2013.
55. Carlos Ortiz, “The New Public Management of Security: The Contracting and Managerial State and the Private Military Industry,” *Public Money & Management*, vol. 30, no. 1 (2010), 35-41.
56. The U.S., U.K., and other democratic states employ the majority of PMSCs globally. Clive Walker and Dave Whyte, “Contracting Out War?: Private Military Companies, Law and Regulation in the United Kingdom,” *International & Comparative Legal Quarterly*, vol. 54, no. 3 (2005), 651–690. The increased acceptance of PMSCs is reflected by the decisions of multinational companies, humanitarian organizations, and the United Nations to employ PMSCs, too, for

- both armed and unarmed services. See: Ase Gilje Ostensen, *UN Uses of Private Military and Security Companies: Practices and Policies*, Technical report Geneva Centre for the Democratic Control of Armed Forces (2011); and Abby Stoddard, Adele Harmer, and Victoria DiDomenico, "Providing aid in insecure environments: 2009 update," *HPG Policy Brief*, 34 (2009).
57. See Michael Peck, "Insitu to Support SOCOM ScanEagle in \$300M Deal," *Defense News*, 17 September 2013. USSOCOM has announced an additional competition to be awarded in 2015 for an additional indefinite-quantity, indefinite-delivery (IDIQ) contract (solicitation number H92222-15-R-0001). These contracts are all part of the Mid-Endurance Unmanned Aircraft Systems II contract.
 58. Richard Whittle, "DOD Tries Buying Pixels, Not Planes, For Flexible ISR: It Ain't Renting," *Defense News*, 7 May 2012.
 59. Peter W. Singer, *Corporate Warriors: The Rise of the Privatized Military Industry* (Ithaca, New York: Cornell University Press, 2002), 16.
 60. U.S. Commission on Wartime Contracting, *Transforming Wartime Contracting: Controlling Costs, Reducing Risks* (Washington, D.C.: United States Government Printing Office, 2011), 102-105.
 61. Shee Atika received approximately \$153 million for dozens of transactions related to linguistics and translation services starting in 2006, see: Black, "Data-mining," 1-13. The contract stems from a larger DOD Directive 3115.09, which specifically outlines interrogation support including those performed by USSOCOM. The contracts and directives have been made publicly available through Freedom of Information Act filings, accessed on 15 November 2015 at: <http://www.dtic.mil/whs/directives/corres/pdf/311509p.pdf>.
 62. One motivation for additional ISR contracts for UAS was the surge in capacity that was required following cancellation of AAI's contract in December 2014. See Paul J. McLeary, "SOCOM Seeks New Contractor for UAV Program," *CAISR and Networks*, 30 December 2014. Details for the cancellation are classified. USSOCOM was able to cite national security concerns, stated as unusual and compelling urgency, to quickly reissue the contract to Boeing and ensure continued operational capacity.
 63. Service and equipment procurement from the private sector may pose problems for SOF. In standard military operations, private sector firms' impact on operations is dependent on management effectiveness and the operational environment. See: Jacques S. Gansler and William Lucyshyn, "Contractors Supporting Military Operations: Many Challenges Remain," in *Contractors and Wars: The Transformation of US Expeditionary Operations*, ed. Christopher Kinsey and Malcolm Hugh Patterson (Stanford, CA: Stanford University Press, 2012), 278-296. Employment of PMSCs may decrease military effectiveness, potentially reducing the advantages of democratic militaries. See: Molly Dunigan, *Victory for Hire: Private Security Companies' Impact on Military Effectiveness* (Stanford, CA: Stanford University Press, 2011), 4-5. For a review of democratic advantage, see: Dan Reiter and Allan C. Stam, "Democracy and Battlefield Military

Effectiveness,” *Journal of Conflict Resolution*, vol. 42, no. 3 (1998), 259; and Dan Reiter and Allan C. Stam, “Democracy, War Initiation, and Victory,” *American Political Science Review*, vol. 92, no. 2 (1998), 377–389. Reiter and Stam argue that democratic military forces benefit with regard to innovation, logistics, and leadership when compared to non-democratic militaries. Because PMSCs are increasingly viewed as extensions of the agencies they support, including SOF, see: Ryan Kelty and Darcy Schnack, “Attitudes on the Ground: What Soldiers Think about Civilian Contractors,” in *Contractors and Wars: The Transformation of US Expeditionary Operations*, ed. Christopher Kinsey and Malcolm Hugh Patterson (Stanford, CA: Stanford University Press, 2012), 36–59.

64. Meaghann Myers, “Lawmaker Questions Why Some Navy SEALs Buy Their Own Gear,” *Navy Times*, 7 March 2016. Rep. Duncan Hunter also alleges SEALs have not received sufficient combat rifles and critical gear. See: Richard Lardner, “Navy SEALs tell Congressman there is a Combat Rifle Shortage,” *CNSNEWS.com*, 7 March 2016.
65. One industry representative stated that the expectation of high TRLs “puts an onus on us to develop product on our own, makes predicting the need difficult and makes the military world a less desirable and more competitive market.” The uncertainty of future requirements is a financial cost that shifts from USSOCOM to private industry. High-TRL equipment will continue to be provided so long as companies are willing to fund investment. As echoed by the company representative, there is a profit margin threshold that is required to do business with the military.
66. Three separate interviewees and one manuscript reviewer identified the difference between initial SOF requests and final requirements. Interview with SOF AT&L personnel, MacDill AFB, Florida.
67. Air power, specifically the suite of stealth aircraft technologies and precision munitions, has been one key area of disruptive technology advances. Stealth aircraft were first deployed in the Gulf War in 1991, and their radar-evading capacity, first strike capability, and precision munitions had a significant impact on the war’s outcome. In the wake of the Gulf War, air power was extolled by many advocates as the tool-of-choice for future conflicts. See: Daniel Byman, John G McGinn, Keith Crane, Seth G Jones, Rollie Lal, and Ian O Lesser, *Air Power as a Coercive Instrument* (Santa Monica, CA: Rand Corporation, 1999); and Robert A. Pape, *Bombing to Win: Air Power and Coercion in War* (Ithaca, NY: Cornell University Press, 2014). However, the usefulness of stealth air power in counterinsurgency contexts is limited because complete air superiority does not necessarily advance the achievement of mission objectives. In counterinsurgency combat, evasion of enemy anti-aircraft capabilities is less important than avoiding civilian collateral damage. See: Daniel R. Lake, “The Limits of Coercive Airpower: NATO’s ‘victory’ in Kosovo Revisited,” *International Security*, vol. 34 (2009), 83–112. Benjamin Lambeth concludes that infusion of information over multiple platforms and munitions, not stealth technology, accounts for much of the success of Operation Enduring Freedom. See: Benjamin S. Lambeth, *Air*

Power Against Terror: America's Conduct of Operation Enduring Freedom (Santa Monica, CA: Rand Corporation, 2005), xxix.

68. Night vision goggles refers to the suite of technologies that enable improved vision in low-intensity light situations.
69. Robert G. Spulak, Jr., *A Theory of Special Operations* (MacDill AFB, FL: JSOU Press, 2007), 1.
70. Ibid.
71. Sarah Kreps and Micah Zenko, "The Next Drone Wars," *Foreign Affairs*, vol. 93 (2014), 15–16.
72. Advanced technology development also includes how technology is utilized. For example, the development of advanced Internet propaganda requires multi-location development. A website is not necessarily an innovative technology, but groups such as al-Shabaab and ISIL have demonstrated the importance of propaganda for recruiting personnel and for dissemination of information. To counter these media efforts, USSOCOM initiated a \$19 million contract with General Dynamics to support the Magherbia website to promote news in English, Arabic, and local dialects. The site was eventually funded and operated by Africa Command before lack of funding ended the program in February 2015. See: Tom Vanden Brook, "Special Operations Command Leads Propaganda Fight," *USA Today*, 6 December 2012.
73. Richard L. Kugler and Hans Binnendijk, "Choosing a Strategy," in *Transforming America's Military*, ed. Hans Binnendijk (Washington, D.C.: National Defense University Press, 2002), 57-100.
74. DOD conceptualization of risk broadly applies to the entire supply chain within acquisition. The literature on minimizing risk in acquisition is extensive. For a review of DOD policies see: U.S. Department of Defense, *Performance of the Defense Acquisition System: 2014 Annual Report* (Washington, D.C.: U.S. Government Printing Office, 2014), 5-6; and U.S. Government Accountability Office, *Additional Guidance Needed to Improve Visibility into the Structure and Management of Major Weapon System Subcontracts*, GAO-11-61R (Washington, D.C.: 2010), 4-19.
75. Quote from interview with SOF AT&L personnel, MacDill AFB, Florida.
76. Revolutionary technologies have been discovered during the process of evolutionary change in military technology. See: Andrew F. Krepinevich, "The Military-Technical Revolution: A Preliminary Assessment" (Washington, D.C.: Center for Strategic and Budgetary Assessments, 1992) and Rolf Hobson, "Blitzkrieg, the Revolution in Military Affairs and Defense Intellectuals," *The Journal of Strategic Studies*, vol. 33, 2010, 625–643. The development of German blitzkrieg tactics is a specific example. The revolutionary change was not the tank (or the mechanical superiority of German tanks), but development and employment of combined arms doctrines. Technology that enabled improved command and control was also critical in developing the new, effective battlefield tactics. Krepinevich describes revolutionary changes occurring when the "application of new technologies into

a significant number of military systems combines with innovative operational concepts and organizational adoption in a way that fundamentally alters the character and conduct of conflict.” See: Andrew F. Krepinevich, “Cavalry to Computer: The Pattern of Military Revolutions,” *National Interest*, fall 1994, 30–42. Revolutionary technologies produce a dramatic increase—often an order of magnitude or greater—in the combat potential and military effectiveness of armed forces. Cyril Falls states that, “It is fallacy, due to ignorance of technical and tactical military history, to suppose that methods of warfare have not made continuous and, on the whole, fairly even progress.” Quoted in Eliot A. Cohen, “A Revolution in Warfare,” *International Security*, vol. 75, 1996, 35-54. Original quotation is from Cyril Falls, *A Hundred Years of War* (New York: Collier Books, 1953).

77. Secretary Gates initiated the discussion of rapid fielding equipment by focusing on problems with platform acquisition. He argued for a transition from 99 percent exquisite service based platforms to the 80 percent multi-service solution. See: Robert Gates, “Remarks by Secretary of Defense Robert Gates at the Army War College,” 16 April 2009, accessed on 14 December 2015 at: <http://archive.defense.gov/transcripts/transcript.aspx?transcriptid=4404>. While Gates’ reforms primarily focused on platforms, the 80 percent solution today has become common acquisition parlance.
78. Quote from a survey of company representatives that attended SOFIC 2015.
79. One company representative stated; “technology gaps may feed directly into research and development, but in the absence of clear requirements, even existing technologies may not be evaluated.” Quote from survey of 2015 SOFIC attendees. The lack of technology evaluation reduces the likelihood of discovering revolutionary technology changes.
80. USSOCOM does have a limited development support budget and ability to provide in-kind support (e.g. training environments for operational testing).
81. Miles, “SOCOM Strives to Meet Current, Future Operator Requirements.”
82. Michel Fieldson, TALOS lead for USSOCOM, identified the difference between traditional government procurement that utilizes a prime contractor and government as a lead. Fieldson stated; “in this case, the government will be the lead integrator, and we’ll look to work with traditional or nontraditional partners in industry and academia who are innovative.” Quotation is taken from Ellen V. Rubin, “Special Ops Command Seeks Prototypes for ‘Iron Man Suit,’” *Army News Service*, 18 October 2013.
83. Stew Magnuson, “Power Remains Key Challenge for Building SOCOM’s Iron Man Suit,” *National Defense Magazine*, May 2015.
84. Prime contractors are increasingly outsourcing elements of contracts with estimates ranging from 60 to 80 percent of the value of the main contract. See: U.S. Government Accountability Office, *Additional Guidance Needed to Improve Visibility into the Structure and Management of Major Weapon System Subcontracts*, GAO-11-61R (Washington, D.C.: 2010), 1. Prime contractors are also increasingly

managing the risk associated with outsourcing by using firm fixed-price (FFP) contracts. This trend in fact mirrors existing trends in federal government contracting. Yong Woon Kim and Trevor Brown found that the DOD uses FFP for most short-term purchases but modifies longer-term contracts, which reduces the benefits associated with market competition. See: Yong Woon Kim and Trevor L Brown, “The Importance of Contract Design,” *Public Administration Review*, vol. 72, 2012, 687–696.

85. There is disagreement about whether military spending has declined because of consolidation (William Kovacic and Dennis Smallwood) or whether (as Nayantara Hensel argues) competitive markets account for post-Cold War defense industry consolidation. See William E. Kovacic and Dennis E Smallwood, “Competition Policy, Rivalries, and Defense Industry Consolidation,” *Journal of Economic Perspectives*, 1994, 91–110 and Nayantara Hensel, “Can Industry Consolidation Lead to Greater Efficiencies? Evidence from the U.S. Defense Industry,” *Business Economics*, vol. 45, 2008, 187–203.
86. Ownership of the integrated system is a priority for firm profitability because of the life-cycle advantages. System costs are the entire range of costs associated with a product including research and development, prototyping, testing, manufacturing, and distribution. When firms act as lead integrators, financial benefits can accumulate throughout the business cycle, instead of deriving from just one piece of the process. As a result, firms are more flexible during the development phase—and willing to take risks and bear costs—if they can count on making a profit at another phase of the cycle. Recompete advantages occur when firms bid on contracts for existing systems—contracts involving maintenance and/or new purchases. Recompete advantages most often occur with complete weapon systems, such as aircraft. TALOS will be a particularly lucrative program if firms are able to scale it to the entire military force. Non-military applications of the suit further extend potential scalability.
87. Quoted in Steven Hoarn, “SOCOM Seeks TALOS (Tactical Assault Light Operator Suit),” *Defense Media Network*, 18 May 2013.
88. Interview with USSOCOM staff at MacDill AFB, Florida.
89. One step to remove bureaucracy is the Cooperative Research and Development Agreement (CRADA) signed by Acquisition Executive James Geurts, which institutes a government-industry agreement that promotes sharing of resources and technical expertise. CRADA is part of the federal contracting system, but Geurts took the step of issuing an industry-wide agreement and allowed POE to sign their own CRADA. See: George Jagels, “SOCOM’s TALOS: Build it Fast, Build it Right,” *Armor & Mobility*, 22 May 2014.
90. For complete details see: solicitation USSOCOM-TALOS-RFI-Nov, Federal Business Opportunities, accessed on 15 March 2016 at: https://www.fbo.gov/index?s=opportunity&mode=form&id=7688dd7f440ee5edb97e5dbb533f874b&tab=core&_cview=1.

91. Scott R. Gourley, "SOCOM Extends TALOS Technology Timeline Vision," Defense Media Network, 23 September 2013.
92. Individual small acquisitions initiated using commander funds typify the ideal acquisition model. However, the relatively small size of commander funds limits their utility for SOF-wide acquisitions. Purchases beyond commander funding require additional oversight and management.
93. This is a stylized description of the translation process that highlights SOF-specific elements of the federal contracting system. The FAR was codified in 1974 and updated with the Federal Acquisition Streamlining Act of 1994. FAR is designed to "deliver on a timely basis the best value product or service to the customer, while maintaining the public's trust and fulfilling public policy objectives (FAR1.102)." Available at: http://159.142.160.6/comp/seven_steps/library/FAR1-102.pdf. Because SOF AT&L must adhere to the FAR, as do other federal agencies, acquisition problems and issues that arise because of the FAR are not examined.
94. Interviews with individuals at MacDill AFB, Florida, were conducted in February of 2015. In some instances, interviewees reported that operators have difficulty even articulating a specific capability gap. One example identified by interviewed SOF AT&L personnel involved the ability to see through walls, an evolutionary extension of existing technology that is difficult to conceptualize.
95. Industry representatives rated SOFIC as an above-average defense conference. When compared to other defense conferences, a majority of respondents (63%) selected the response "better than most" or "much better than most." Approximately 25% of participants rated SOFIC as average. A common complaint was the lack of SOF personnel and limited time for interaction. However, a common endorsement was access to SOF personnel and decision makers. Multiple other respondents focused complaints on alterations to the reservation system, the requirement to purchase advertising space, and limited conference amenities (limited coffee, venue duration too long, floor space insufficient, dislike TIER system, etc.) Many small-business owners self-identified themselves to specifically voice concern over the costs of attendance. One final suggestion offered was to follow a model used at other defense conferences (e.g., AFCEA) that enables companies to exhibit based on previous performance.
96. Spulak argued that the lack of personal connection might inhibit exchange of ideas and solutions. In the future, the classified Hardedge Web system will provide a platform that connects MTRCs, USSOCOM, government, industry, and academia in one integrated system. The system is designed to provide evolutionary solutions to contemporary issues faced by deployed SOF. The system is not designed to deliver revolutionary capability changes, despite the environment for extensive experimentation and testing. See: Robert G. Spulak, Jr., *Innovate or Die: Innovation and Technology for Special Operations* (MacDill AFB, FL: JSOU Press, 2010), 45.
97. Charles W. Wessner (ed.), *An Assessment of the Small Business Innovation Research Program* (Washington D.C.: National Academies Press, 2008). Analysis of SOF

AT&L and other USSOCOM entities' use of SBIR funding are not included in this analysis.

98. See the CIA's In-Q-Tel website, available at: <https://www.iqt.org>.
99. Interviews with individuals at MacDill AFB, Florida, were conducted in February 2015.
100. The GAO's annual review of DOD's major weapons acquisition programs identified several problems: failure to implement knowledge-based practices, decreased use of competition in bidding, and inconsistent application of 'should-cost' principles. These problems significantly increase risk and expose programs to undue costs and schedule delays. See: U.S. Government Accountability Office, *Defense Acquisitions: Assessment of Selected Weapon Programs*, GAO-16-329SP (Washington, D.C.: 2016), 6-28, at: <http://www.gao.gov/assets/680/676281.pdf>.
101. Spulak, *Innovate or Die*, 22. Spulak describes the process, stating, "In general, requirements as user needs do not represent bottom-up innovation because the requirements validation process results in top-down requirements that may have little resemblance to the original user requests or current needs by the time the technology is fielded. This point is illustrated by the formal USSOCOM process—that is, the long-range planning process at SOCOM headquarters provides the input to the requirements validation process, and no operator input is explicitly shown. As a result, development projects (e.g., the Mk 23 offensive handgun) can show delivery of a capability that met the requirements but did not meet user needs."
102. Ibid.
103. Inspector General, U.S. Department of Defense, "USSOCOM Needs to Consistently Follow Guidance to Revalidate Capability Requirements," Report No. DoDIG-2015-077, 15 February 2015.
104. The development contract for SCAR was issued in November 2004 following drafting of the Joint Operational Requirements Document (JORD). FN Herstal passed Milestone C in 2010, which allowed for full-rate production of the different variants.
105. Survey respondent from the 2015 SOFIC conference survey.
106. One industry representative, when asked about the importance of requirements, stated that, "The more demand by the military insofar as volume, the more the specific requirements will get sent up the chain of importance in product development" (response provided by 2015 SOFIC participant). Low-rates of production will remain an enduring challenge for SOF AT&L. USSOCOM's cancellation of FNH USA SCAR-L orders in 2010 is one specific example of how specific requirements may decrease marketability. FNH USA marketed the SCAR Mk 16 variant as the rifle of the elite warrior, but faced problems with marketing following cancellation. See: David Crane, "SOCOM Cancels FN Mk-16 SCAR-L," *Defense Review*, 28 June 2010.
107. The Chairman of the Strategic Direction of the Joint Force argues that acquisition "must be affordable in every way possible." See: William H. McRaven, "United

- States Special Operations Command: Forging the Tip of the Spear,” U.S. Special Operations Command, 2013, 8. Affordability, however, typically generates two divergent economic principles: affordability usually requires either near-term savings (e.g., rapid acquisition of COTS) and increased life cycle costs, or increased near-term costs but savings over time.
108. Interoperability’s two pertinent dimensions for this analysis include coordination and cooperation with U.S. armed forces, including the SOF component and international partners. The definition of interoperability is paraphrased from Myron Hura et al., *Interoperability: A Continuing Challenge in Coalition Air Operations* (Santa Monica, CA: Rand Corporation, 2000), 7.
 109. McRaven articulates a vision for a “globally networked force of Special Operations Forces, Interagency, Allies, and Partnerships able to rapidly and persistently address regional contingencies and threats to stability.” See: McRaven, *United States Special Operations Command*, 4. For a discussion of the importance of interoperability with international partners see: Richard Rubright, Kevin Morton, Emily Spencer, Bill Knarr, Bernd Horn, Alan Bell and Chuck Ricks, *The Role of Global SOF Network in a Resource Constrained Environment* (MacDill AFB, FL: JSOU Press, 2013), 19-22. For a review of the development of the global SOF Network see: Thomas S. Szayna and William Welser IV, *Developing and Assessing Options for Global SOF Network*, Research Report RR300 (Santa Monica, CA: Rand Corporation, 2013).
 110. Andrew White, “Latest Tactical Vehicles Capture Attention at SOFIC,” *HIS Jane’s*, accessed on 30 May 2016 at: <http://www.janes.com/article/60811/latest-tactical-vehicles-capture-attention-at-sofic>.
 111. Nicole Dalrymple, “U.S. and DRC in Partnership to Train Model Congolese Battalion,” United States Africa Command Public Affairs, accessed on 20 March 2016 at: <http://www.africom.mil/NewsByCategory/article/7196/us-and-drc-in-partnership-to-train-model-congolese>.
 112. See Robinson, Johnson, and Oak, *Philippines*, iii.
 113. Practical extraction and report language (PERL) was used to extract statements from files associated with each FedBizOpps solicitation entry. PERL enables text manipulation and organization, in this case, identification of key words in the text. Key words were identified for the word searches. Because of the paucity of entries that emphasized ‘international,’ all phrases, regardless of text length, were individually examined.
 114. Howard Altman, “Iconic Russian AK-47 Might Some Day be ‘Made in the U.S.A.’ for Military,” *Tampa Bay Times*, 9 June 2016.
 115. Thomas Gibbons-Neff, “Special Operations Command looks to U.S. Companies for Homemade AK-47s,” *Washington Post*, 10 June 2016.
 116. See: Navin A Bapat, “Transnational Terrorism, US Military Aid, and the Incentive to Misrepresent,” *Journal of Peace Research*, vol. 48, no. 3 (2011), 303–318. One additional difficulty when supplying interoperable weapons pertains to ensuring that international partners use the equipment responsibly. Weapons may be

used irresponsibly, or they may fall into the wrong hands. For example, there are claims that advanced weapon systems from the Free Syrian Army have been utilized by ISIS members following defeat of the Harakat Hazm group. See: Liz Sly, “Syrian Rebel Group that got U.S. Aid Dissolves,” *Washington Post*, 1 March 2015.

117. Interview with SOF AT&L personnel on 15 February 2015 at MacDill AFB, Florida.
118. For example, the Air Force’s acquisition of KX-TANKER was delayed by nearly four years because of protests. Both Boeing and EADS/Airbus and Northrop Grumman consortium protested the contract award. Because the time horizon for acquisition is 2020 to 2035, there are few, if any, immediate negative consequences for the Air Force and its operations. However, most SOF-peculiar acquisitions are somewhat or extremely time-sensitive, which means that a delay as short as four months may negatively impact operational capacity.
119. SWMS is a general-support contract that requires firms to provide cost-effective services that fulfill all requirements in the task order. There are five major categories of support services, which include program management, management services, administrative and other services, professional services, and education and training.
120. See U.S. Government Accountability Office, *Federal Acquisition Services Team LLC*, B-410466 (Washington, D.C.: 2014).
121. In the ruling, the GAO determined that FAST had sent files that were too large to enter into the Defense Information Systems Agency (DISA) server and improperly used contract officer email addresses instead of the designated USSOCOM service. See: U.S. Government Accountability Office, *Federal Acquisition Services Team LLC*. Another example of procedural protests is the 2004 USIA Underwater Equipment Sales Corporation case. USIA alleged USSOCOM illegally failed their product during the pass/fail testing phase of proposal evaluations. USIA’s fabric failed to pass an abrasion test, resulting in the protest. USSOCOM relied upon the services of an International Organization for Standardization (IOS)-certified laboratory to conduct the materials test. USIA argued that the materials tests were improperly used as a reason to exclude their entry from further consideration. They supported their position by pointing to the permissive words “may” and “should” used in the contract solicitation (in connection with the materials tests) as opposed to “must” and “shall.” The protest was denied. See: U.S. Government Accountability Office, *USIA Underwater Equipment Sales Corporation*, B-292827.2 (Washington, D.C.: 2004).
122. Judge Victor J. Wolski’s order in the U.S. Court of Federal Claims disclosed several interesting aspects of this procedural protest and at the same time indicated general principles underlying how protests are handled at this level. First, FAST again raised claims that FedBizOpps’s web portal failed to work correctly and improperly denied their application. Second, Wolski’s order highlighted the importance of individual contract officers. FAST alleged that a specific contract officer (Ms. Stevens) provided statements of “bad-faith” during the GAO hearing.

The Judge ruled the protest was unique and required evidence outside the ordinary administrative record. A limited written deposition from Ms. Stevens was ordered. Yet, the Judge formally recognized the time-consuming nature of this protest, stating, “And while the deposition of a contracting officer by oral examination ‘is not lightly to be ordered’ because it can be time-consuming and disruptive of other duties, the Court finds a limited deposition of Ms. Stevens by written questions to be an appropriate means to fill gaps in the record and thereby enable effective judicial review.” Quote taken from Judge Victor J. Wolski ruling: “In the United States Court of Federal Claims: Federal Acquisition Services Team, LLC v. The United States”, No. 15-78C, 3-4. Order retrieved on 3 October 2016 at: https://ecf.cofc.uscourts.gov/cgi-bin/show_public_doc?2015cv0078-26-0.

123. See: U.S. Government Accountability Office, *Mission Essential Personnel*, LLC, B-408788 (Washington, D.C.: 2013).
124. DARPA is also often lauded for innovations in acquisition models. However, DARPA suffers from several limitations that currently do not affect SOF AT&L. As organizations age, their bureaucratic processes tend to ossify, slowing adoption of innovations. See: John Paul Parker, “At the Age of 50, It’s Time for DARPA to Rethink its Future,” *National Defense*, September 2009. Older organizations also have difficulty keeping pace with external developments and demands, though older organizations may provide incremental innovations compared to younger organizations that provide more impactful innovations. See: Jesper Sorenson and Toby E. Stuart, “Aging, Obsolescence, and Organizational Innovation,” *Administrative Science Quarterly*, vol. 45, no. 1 (2000), 81–112.
125. Ruth H. DeHoog, “Competition, Negotiation, or Cooperation Three Models for Service Contracting,” *Administration & Society*, vol. 22 (1990), 317–340.
126. Fredland argues that transaction costs for firms in the defense sector prohibit firms from providing effective combat services. Davids specifically examines transaction costs in conflict environments. Both find that the military logistical operations are similar to e-commerce approaches to acquisition. E-commerce approaches rely heavily on outsourcing and local contracting. See Eric J. Fredland, “Outsourcing Military Force: A Transactions Cost Perspective on the Role of Military Companies.” *Defence and Peace Economics*, vol. 15, no. 3 (2004), 205–219, Christiaan Davids, Robert Beeres, and Paul C. van Fenema, “Operational Defense Sourcing: Organizing Military Logistics in Afghanistan.” *International Journal of Physical Distribution & Logistics Management*, vol. 43 (2013), 116–133.
127. Ashton Carter, “Memorandum for Acquisition Professionals,” Office of the Under Secretary of Defense, 2010, 2.
128. The GAO provides extensive reviews of defense acquisition performance, see: U.S. Government Accountability Office, *Defense Acquisitions: Where Should Reform Aim Next?*, GAO-14-145T (Washington, D.C.: 2014), 2.
129. The KC-X Tanker competition typifies incomplete contracting in defense industries. See: John Birkler et al., *Competition and Innovation in the US Fixed-Wing Military Aircraft Industry* (Santa Monica, CA: Rand Corporation, 2003). KC-X

experienced numerous award problems that generated multiple objections from both Boeing and the EADS/Airbus and Northrop Grumman consortium. The lack of clarity regarding requirements eventually resulted in a simplistic evaluation metric where each feature (e.g., working toilets, effective fuel delivery booms) was given equal weight in performance evaluations. Failure to effectively quantify the evaluation criteria prior to competition extended the competition, costs, and delivery. See: Nayantara Hensel, “Can Industry Consolidation Lead to Greater Efficiencies? Evidence from the U.S. Defense Industry” *Business Economics*, vol. 45 (2008), 187–203. ACAT I systems are more prone to these types of complications, but all USSOCOM SOF AT&L contracts can be considered incomplete—to a lesser or greater extent—with regard to the general principle of contracts needing to be complete.

130. John Hutton and William Solis, “Defense Acquisition: Actions Needed to Ensure Value for Service Contract,” GAO-09-643T, Testimony Before the Defense Acquisition Reform Panel, Committee on Armed Services, U.S. House of Representatives, Washington, D.C., 2009.
131. SOF AT&L emphasis on small business was identified during numerous interviews. The consistent refrain from personnel is that small business engagement is a leadership priority. This commitment is reflected in the FY 2015 budget, where 33.1 percent of all contracts were awarded to small businesses. See: Courtney Hacker, “We Wanted to Know SOCOM’s top priorities, so we asked the guys in charge,” *Bloomberg Government*, 2 March 2016.
132. Renee de Nevers, “Looking Beyond Iraq: Contractors in US Global Activities” in *Contractors and Wars: The Transformation of US Expeditionary Operations*, ed. Christopher Kinsey and Malcolm Hugh Patterson (Stanford, CA: Stanford University Press, 2012), 60-84.
133. Anuj Vohra and Alan Pemberton, “Under Secretary Kendall Proposes ‘Limited’ Use of Lowest-Price, Technically Acceptable Procurements in Department of Defense,” *Inside Government Contracting*, 22 March 2015.
134. Frank Kendall, “Memo: Appropriate Use of Lowest Price Technically Acceptable Source Selection Process and Associated Contract Type,” U.S. Department of Defense, 4 March 2015.
135. One SOF AT&L contracting officer stated that the lack of system-wide, standardized tools for automated evaluation is one limitation that slows the existing acquisition process. Different PEOs have different processes for evaluation of requirements that use different metrics (Author’s interview with SOF AT&L personnel, February 2015).
136. James W. Vizzard and Timothy A. Capron, “Exporting General Petraeus’s [sic] Counterinsurgency Doctrine: An Assessment of the Adequacy of Field Manual 3-24 and the U.S. Government’s Implementation,” *Public Administration Review*, vol. 70 (2010), 485–493.
137. See: U.S. Commission on Wartime Contracting, *Transforming*, 9-12.

138. SORBIS combines the following three systems: financial information system (FIS), the planning, programming and budgeting, and execution system management information system (PPBES MIS), and the special operations acquisition and logistics (SOAL) information system (SOALIS)/integrated financial tool for SOAL (IFTS). The GAO identified serious limitations regarding SOALIS's capacity to perform the required reporting. See: U.S. Government Accounting Office, *Defense Acquisition*, 23.
139. The FPDS only includes information about firms that win awards; no data on competitors is provided. FPDS does not include subcontractor related information, nor is data on subcontractors typically available in DOD-reported contract activity.
140. FPDS collects information provided by each federal agency. SOCOM's head-of-agency authority ensures data availability. Periodic updates and corrections are submitted. DOD has implemented the small business maximum practicable (MaxPrac) opportunity analysis model that utilizes the FDPS to identify opportunities to identify small businesses to participate in unclassified contract competitions.
141. FPDS has been used to compare adoption of acquisition programs, defense spending trends, and review of overseas contracting. See: Dylan D. Pope, "Performance Based Service Acquisition: A Quantitative Evaluation of Implementation Goals and Performance in the United States Air Force" (Master's thesis, Wright Patterson Air Force Base, 2005), David Berteau et al., *Defense Contract Trends: U.S. Department of Defense Contract Spending and the Supporting Industrial Base* (Washington, D.C.: 2011), and Moshe Schwartz and Wendy Ginsberg, *Department of Defense Trends in Overseas Contracting*, R41820 (Washington, D.C.: Congressional Research Service, 2013). DOD also uses the database for the annual performance review of the defense acquisition system, see: Department of Defense, *2014 Annual Report*, 4.
142. There are three types of transactions in the data: purchase orders, definitive contracts, and delivery orders. The total transactions number provides a holistic view of USSOCOM procurement activities.
143. Positive and negative values associated with adjustments to contracts, delivery orders, and purchase orders are included in the analysis. The values do not include all personnel, equipment, and operational costs that are born by the services or the contingency operations budget. See: Marcus Weisgerber, "Peeling the Onion Back on the Pentagon's Special Operations Budget," *Defense One*, 27 January 2015.
144. Source selections are an alternative unit of analysis. Source selections are the "process of evaluating competitive bids or proposals to enter into a Government procurement contract" (Defense Procurement and Acquisition Policy).
145. Estimates of USSOCOM's total budget range from one to three percent of the DOD's total budget, depending on how personnel, major platforms, and additional "enabler costs" are tabulated. See: Weisgerber, "Peeling the Onion Back."

146. Miles, "SOCOM Strives to Meet Current, Future Operator Requirements."
147. Under the strict definition used here, only two firms are required to generate competition. One SOF AT&L officer stated that at least three firms are required for USSOCOM to benefit from competition.
148. New competitions do not occur for each transaction. Competition between firms occurs during source selections, contract awards, and non-FAR contracting models. Transactions are used to quantify the competition landscape throughout the procurement process.
149. See: Anna Leander, "The Power to Construct International Security: On the Significance of Private Military Companies," *Millennium-Journal of International Studies*, vol. 33 (2005), 803-825; and Greg Schneider, "Lockheed Spins off 10 High-Tech Companies: Defense Contractor to Keep 35 Percent Share of Newly Formed Firm," *Baltimore Sun*, 4 February 1997.
150. Richard Ginman, "Memorandum for Commander: Use of Government-wide Acquisition Contracts Set Aside Exclusively for Small Business," Office of the Under Secretary of Defense, 2011; and Andre J. Gudger and Richard Ginman, "Memorandum for Commander: Subject Increase Dynamic Small Business Role in the Defense," Office of the Under Secretary of Defense, 2011.
151. NAICS codes are missing in some instances and if 'missing' is treated as a single category it would be the 7th largest by value. It is not possible to determine if the missing information is systematic and characteristic of classified activity or if the data was not correctly entered into FDPS.
152. These service categories are more competitive than others because the services are often generic and opportunities abound in the commercial market. Low competition levels in public administration are an odd result. It is possible that characteristics of SOF AT&L requirements for public administration are incongruent with the larger market, thus reducing the number of firms able and willing to compete.
153. Officials interviewed at SOF AT&L expressed concern that defense industry consolidation, increased demand for intellectual property rights, and capability sharing may threaten the long-term health of the industry. Their concern stemmed from the observation that profits for contractors continue to shrink while regulation has increased. In combination, these factors may reduce the ability of firms to deliver services. Consolidation in aerospace, weapon systems, and missiles may pose challenges for the services to generate competition, which will indirectly impact SOF AT&L. (Author interviews with SOF AT&L personnel, February 2015). See: Major Judy Davis, *The Impact of the Defense Industry Consolidation on the Aerospace Industry* (Wright Patterson Air Force Base, OH: Department of the Air Force Air University, 2006); and U.S. Government Accounting Office, *Privatization: Questions State and Local Decision-makers Used when Considering Privatization Options*, GAO-GGD-98-87 (Washington, D.C.: 1998), available at: <http://www.gao.gov/special.pubs/gg98087.pdf>.

154. The Pentagon exceeded its small-business targets for the first time in 2014. In that year, small-businesses won nearly 23 percent of prime contracts. See: Claudette Roulo, "Small-business Contracting on the Rise, Officials Says," DOD News, 14 October 2014.
155. See Hacker, "We Wanted to Know SOCOM's Top Priorities."
156. USSOCOM, "2015 Program Updates," accessed on 20 March 2016 at: <http://www.specops-dhp.com/interesting-post/2015-socom-program-management-updates/>.
157. Five of the 10 categories are 'catch-all' categories. These are denoted with O (other) and AO (all other). The difference between these categories is the degree to which a particular sub-category is divided. 'Other' is a larger category than 'All Other.'
158. See: George A. Boyne, "Sources of Public Service Improvement: A Critical Review and Research Agenda," *Journal of Public Administration Research and Theory*, vol.13 (2003), 367-394.
159. Mancur Olson, *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities* (New Haven, CT: Yale University Press, 1982), 76-77.
160. Michael Horowitz provides the definition of organizational capital used in this analysis. Horowitz analyzes the concept into three dimensions: the critical focus of the organization, resources for experimentation, and organizational age. The critical focus of the organization is the guiding principle of the organization—the more strictly an organization defines its goal the more difficult adoption of innovation becomes because interests become entrenched in achieving only the stated goal. SOF AT&L's strengths align well with this conceptualization of organizational capital: 1) SOF AT&L's mission remains broad—to be responsive to the time-sensitive needs of SOF missions; 2) SOF AT&L's has been given latitude to experiment with different acquisition policies, particularly TALOS; and 3) SOCOM's organizational structure was created in 1987, which makes SOCOM a relatively youthful organization. See Michael Horowitz, *The Diffusion of Military Power: Causes and Consequences for International Politics* (Princeton, NY: Princeton University Press), 18-64.
161. See SOF AT&L website, <http://www.socom.mil/our-organization>, for complete organizational description.
162. SOFIC 2015 Survey respondents consistently ranked access to PEOs as a top conference feature.
163. Between 2001 and 2007 only two major programs suffered from delays between USSOCOM and another military service. See: Government Accountability Office, *Special Operations Command's Management*, 19-22.
164. See: Laurence O'Toole and Kenneth J. Meier, "Plus ça change: Public Management, Personnel Stability, and Organizational Performance," *Journal of Public Administration Research and Theory*, vol. 13 (2003), 43-64. The authors identify five types of stability including structural stability, mission stability, production/technology stability, procedural stability, and personnel stability. Institutional constraints, such as the FAR, and mission dedication ensure stability across four of the five stability types.

165. Interviews with SOF AT&L personnel in February 2015, MacDill AFB.
166. Ibid. Each individual interviewed was asked to identify a limitation in the existing workforce. Approximately half stated that the heavy workload of the legal team generated backlogs and delays.
167. Ibid.
168. Kaifend Yang and Anthony Kassekert, "Linking Management Reform with Employee Job Satisfaction: Evidence from Federal Agencies," *International Journal of Public Opinion Research*, vol. 20 (2010), 413-436.
169. To examine federal employee views on contractor views, see: Ellen V. Rubin, "The Role of Procedural Justice in Public Personnel Management: Empirical Results from the Department of Defense," *Journal of Public Administration Research and Theory*, vol. 19 (2009), 125-143. One oft-cited benefit of contracted personnel is the ability to easily move them to a different unit or location. Several individuals cited this area of flexibility as a key benefit of using contractors during interviews with SOF AT&L personnel in February 2015, MacDill AFB.
170. Difficulties in the transfer of funds are also tied to legal requirements of the FAR, legal departments, and the existing process (interview with SOF AT&L personnel in February 2015, MacDill AFB).
171. Duncan provides an excellent review of the difficulties experienced by SOF AT&L when transitions occurred from SOF-peculiar equipment to service-common equipment. A collective-action problem arises between SOF AT&L and the services when transitions of equipment do need to occur. SOF AT&L seeks to not purchase service-common equipment, because it is the responsibility of the services to provide this equipment. However, the services have no codified incentive to alter current processes and procedures to accommodate SOF needs. SOF AT&L internal audits reveal that service-common equipment continues to be purchased and that no solution to the issue is readily available. See: Jonathan M. Duncan, "The Dilemma for USSOCOM: Transitioning SOF-Peculiar to Service-Common," Air War College, 15 February 2012, 2-7.
172. For discussion on conventional weapon procurement and U.S. counterinsurgency strategy, see: Frank G. Hoffman, "Neo-Classical Counterinsurgency?" *Parameters* 37 (2007), 71-89; and GlobalSecurity.org, "US Military Power 2012," accessed 15 April 2016 at: http://www.globalsecurity.org/military/library/report/2013/us-military-power2012_cscpa03.htm.
173. Interview with SOF AT&L personnel in February 2015, MacDill AFB.
174. Ibid.
175. SOFIC Survey 2015 respondents articulated the importance of employing SOF personnel. In many responses, company representatives identified specific business functions (i.e., understanding RFPs) where SOF experience is beneficial. However, the most common answer was that SOF experience was beneficial to the business process, but not mandatory for winning SOF AT&L business.

176. SOF AT&L civilians and contractors interviewed for this piece largely conform to this transfer process. Only one participant's career started at SOF AT&L. As previously discussed, limitations in total interview numbers prevents trend analysis of SOF AT&L personnel. The anecdotal evidence only provides tentative support of generational gap challenges.
177. DOD-wide expedited hiring authority (EHA) for acquisition personnel was again extended in 2015. Examples of the 13 career fields that qualify for EHA include auditing, contracting, and small business, among others. This list of career fields is drawn from Frank Kendall, "Memorandum for the Secretaries of the Military Department: Extension of Expedited Hiring Authority for Select Defense Acquisition Workforce Positions," Office of the Undersecretary of Defense (Acquisition, Technology, and Logistics), 2015.
178. Ashton B. Carter, "Better Buying Power: Guidance for Obtaining Greater Efficiency and Productivity in Defense Spending," Under Secretary of Defense (Acquisition, Technology, and Logistics) 14 September 2010.
179. Department of Defense, "BBP Background," accessed 15 March 2016 at: <http://bbp.dau.mil/background.html>.
180. The seven primary focus areas comprise achieving affordable programs, controlling costs throughout product life-cycles, incentivizing productivity and innovation in industry and government, eliminating unproductive processes and bureaucracy, promoting effective competition, improving tradecraft in the acquisition of services, and improving the professionalism of the total acquisition workforce.
181. The emphasis on professionalism, according to BBP 3.0, prioritizes the need to continue improving skills and professionalism, and underscores the need for personnel to maintain a critical perspective regarding the complex decisions involved in acquisition work. This inclusion of this category does not imply that the DOD or SOF AT&L workforce previously lacked professionalism in any capacity. Nor does the category imply that PMSCs employed by SOF AT&L have previously engaged in unprofessional acts, such as those unprofessional and illegal acts alleged to have been committed by Titan employees at Abu Graib. See: Joel Brinkley, "Private contractor use violated Army's policy," *New York Times*, 12 June 2004; and John H. Cushman, "Contractor Settle Case in Iraq Prison Abuse." *New York Times*, 8 January 2013.
182. ACAT I involves procurement with eventual total expenditures of \$2.19 billion or more and the decision authority rests with the USD (AT&L). Expenditures for research, development, technology, and evaluation totaling more than \$365 million are classified as ACAT I. The benchmarks for ACAT II are \$660 million and \$140 million for research with the MDA residing with the DOD component acquisition executive or designee. ACAT III comprises those programs that do not qualify for ACAT I or II.
183. SOF AT&L manages approximately 138 programs, but only four are identified as ACAT II. Between 2001 and 2006, 76 of 86 acquisition programs were ACAT

- III. ACAT III programs account for approximately 80 percent of USSOCOM weapon system acquisition programs for the same period. See: U.S. Government Accountability Office, *Special Operations Command's Management*.
184. See: U.S. Government Accounting Office, *Defense Acquisitions: Advanced SEAL Delivery System Program Needs Increased Oversight*, GAO-03-442 (Washington, D.C.: 2003); and U.S. Government Accounting Office, *Defense Acquisitions: Readiness of the Marine Corps' V-22 Aircraft for Full-Rate Production*, GAO-01-368R, (Washington, D.C.: 2001).
 185. Kendall argued that, "for smaller programs that are a fraction of the considered capability portfolio, assigning a [cost] cap can be problematic, but it still needs to be done to instill discipline in the requirements process." See: Frank Kendall, "Better Buying Power A Progress Assessment From the Defense Acquisition Executive," *Defense AT&L*, July-August 2014, 1.
 186. Amber Corrin, "DOD Issues 'should cost' Guidance for Achieving Acquisition Savings," *Defense Systems*, 29 April 2011.
 187. The concept of 'should cost' is similar to concepts introduced by Arthur Fitzgerald. See: Arthur Ernest Fitzgerald, *The Pentagonists: An Insider's View of Waste, Mismanagement, and Fraud in Defense Spending* (Boston, MA: Houghton Mifflin Harcourt (HMH), 1989). Similarly, Fitzgerald advocated removal of bureaucratic layers and inclusion of life-cycle costs in all estimates.
 188. Kendall, "Progress Assessment," 3.
 189. Matthew Leatherman, a fellow at the Stimson Center, quoted in Mehta (2015), emphasized management, stating, "One of the things that strikes me about the BBP sequence is, it looks like it is focused on managing the acquisition challenge, not on fixing it or resolving it."
 190. One SOF AT&L official described the initiatives as "common sense" approaches to contracting. Another stated, "BBP documents what good contract officers already do." Interview with SOF AT&L personnel, MacDill AFB.
 191. Small businesses do pose problems for USSOCOM, however. Small businesses typically have less experience with FAR than large businesses. The lack of expertise in the contracting process is emphasized by comments by Acquisition Executive James Geurts in 2014, wgi stated, "You guys make my life miserable ... I can't think of a small business award I have done that hasn't got at least one or two protests." Quoted in Stew Magnuson, "Small Business Causes Big Headaches for SOCOM Acquisition", *National Defense Magazine*, 1 April 2014.
 192. Additional discussion of the survey is available in the appendix.
 193. The technical definition of non-traditional partners would include firms that are not currently under contract and have not performed contracted services within the last year. For a complete definition see: <https://www.dodrif.com/home/faqs?AspxAutoDetectCookieSupport=1>. It is outside the scope of this manuscript to examine each firm's financial transactions.

194. The list of administrative support categories is from the ALMBOS contract with Jacobs Technology, Inc. See: Staff, "US SOCOM Raises Ceiling on ALMBOS Contract As Follow-on Contract Awaits GAO Protest Review," *Defense Industry Daily*, 19 April 2010.
195. The survey was reviewed and approved by the Texas A&M University Institutional Review Board. The IRB approval letter and original data remain in the possession of the author.
196. The response rate for companies directly contacted via email is about twice that of companies contacted using their web-based contact form.
197. The industry categories are taken from the FPDS. Administrative support and public administration (PA) are two categories that received no response. The lack of response from companies describing themselves as public administration companies is odd because PA is one of the largest monetary service categories for USSOCOM. It is unclear whether or not the lack of PA companies distorts the responses or whether companies classify their services in a different way than according to the official FPDS categories.
198. Quote taken from the survey of SOFIC 2015 survey participant.