Base Camp Life Cycle Management:

Focusing on the Critical Elements

A Monograph

by

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Abstract

Base Camp Life Cycle Management: Focusing on the Critical Elements by Major Sarah Marsh Read, U.S. Army

Increased expeditionary military operations tempo over the past sixty years highlighted the increasing need for base camps to enable force projection for the U.S. as well as allied partners in a variety of locations in the world. Base camps evolved based on mission and the environment, while the ever-changing needs of the force inadvertently established (and often cemented) cost prohibitive practices, inconsistencies in decision making, management and quality, and resulted in ad hoc solutions. Projections for future engagements make it very likely that the need for base camps will be an increasing focal point for the U.S. and allied partners. As a business or logistics model, “life cycle management” is not currently a well defined or typical conceptual development process applied to military base camps. Methodically applying a life cycle management framework, with stakeholders as the focus, to a military base camp’s situation can significantly improve both long and short- term operational capabilities, resourcing concerns, and even national strategic relationships

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Welcome to the Circus

Military base camps are like circuses. Both users and stewards maintain particular perceptions and expectations based on their personal experiences. Multiple semi-autonomous sub-systems compose the overall whole and enable it to function as intended; most of these sub-systems require special skills or management not inherent in the overall management organization, but every performer also can be or is a user of the organization. Be they circuses or military base camps, the organization of the system is usually highly mobile and only temporarily established; the nature of the basic organization changes if made permanent in one physical location. The organization is a fluid system, constantly adapting to and learning from inputs from the users, managers, environment, and resources available. Within both circuses and military base camps, users, managers, environments, and resources are typically an amalgamation of national origins, cultures, training and or expertise backgrounds, political agendas, and intended outcomes. These stakeholders are critical main-stays and or drivers of the organization. There does not seem to be a consistent rhyme or reason to how adjacent or like-organizations operate, and there is very little synchronization between sister organizations. But there is a distinct difference between circuses and military base camps: there is no obvious “ringleader” orchestrating the organization’s operations within a master plan, and there seems to be a lack of structured, yet flexible and adaptable, resource management. Bottom line: there seems to be a distinct lack of a cohesive, multi-functional, multi-stakeholder structured process to manage these organizations at an operational or strategic level for the establishment of base camps within the U.S. military.

As a business or logistics model, “life cycle management” is not currently a well defined or typical conceptual development process applied to military base camps. Methodically applying a life cycle management framework, with stakeholders as the focus, to a military base camp’s situation can significantly improve both long and short- term operational capabilities, resourcing

concerns, and even national strategic relationships. This is the main assertion that is explored in this research endeavor.

Grounding the Problem

At first glance, military base camps often first appear to be "just" a complicated military problem; a "system [that] assumes expert and rational leaders, top-down planning, smooth implementation of policies, and a clock-like organization that runs smoothly" or effectively.[1] By peeling back the layers of military base camps in practice at the operational and tactical levels however, the situation looks suspiciously more like a complex problem. That is a problem "filled with hundreds of moving parts, scores of players of varied expertise and independence [stakeholders], yet missing a 'mission control' that runs all these different parts within an ever-changing political, economic, and societal environment."[2] The bottom line for military leadership now and throughout history is: base camps of some kind, shape, number, duration, size, location, and or purpose are an absolute necessity to make missions happen and to achieve the strategic objectives. But how does one grasp this complexity and make it understandable or manageable, much less translate it into execution, yet still keep it synchronized with the operational campaign?

> Any organization that has a purpose or mission, along with some resources to expend, must plan how it will use its resources to achieve that purpose or mission. The opposite of planning is aimless drift, and few individuals or organizations would want to entrust their futures to such a process when other options are available.[3]

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[1] Larry Cuban, "The Difference Between "Complicated" and "Complex" Matters," Larry Cuban on School Reform and Classroom Practice, http://larrycuban.wordpress.com/2010/06/08/the-difference-between-complicated-and-complex-matters/ (accessed September 17, 2011).

[2] Ibid.

[3] Michael P. Brooks, *Planning Theory For Practitioners* (Chicago, Ill.: American Planning Association (Planners Press), 2002), 9.

A review of some of the cognitive tools available helps provide structure and direction in bridging the gap between conceptual base camps and actual operational execution. Using a systematic process overlay for managing military base camps requires an initial look at the various theory and literature on systems and organizations, and how these impact military organizations. Life cycle management is an emerging business concept reflecting both organization and systems theory; the U.S. Army began adopting this management process for acquisition and sustainment management over the past ten years, to varying degrees of success. Historical record and study of base camps at the operational and strategic levels seems limited and often incomplete, especially in regards to stakeholder contributions, but U.S. Army base camp analysis and development for the future force is gaining momentum and attention.

Organizations and Systems

A number of authors on systems and organizations theory contribute intelligent perspectives useful to directing the study of military base camps. According to Jamshid Gharajedaghi, systems thinking is a method of bringing more order to the complexity, and bringing enough order to provide focus on the relevant issues and the pertinent details, without being drowned by overwhelming quantities of irrelevant information.[4] Organizations are too big, too complex, and too fluid to be summarized into a single theory; there are numerous organizational theories and not all of them fit together. Mary Jo Hatch, among other authors, explains that no concept or theory is a complete or stand-alone entity, but rather a part of dynamic elements, interdependent and interrelated to the other concepts.[5] Understanding the different

[4] Jamshid Gharajedaghi, *Systems Thinking: Managing Chaos and Complexity: a Platform For Designing Business Architecture*, 2nd ed. (Boston, MA.: Butterworth-Heinemann, 2006), xvii.

[5] Mary Jo Hatch with Ann L. Cunliffe, *Organization Theory: Modern, Symbolic, and Postmodern Perspectives*, 2nd ed. (New York: Oxford University Press, USA, 2006), 19. Figure 1.2 on page 19 is an

relationships and interplay between the perspectives and the theories, and how this interplay produces continuous understanding, creativity, innovation, change, and effectiveness, means additional doors open to new designs and organizations.[6] Military base camps (writ large) are an amalgamation of theory and concepts usually drawn from a large number of perspectives and institutionalized theories, put into practice only when needed, often maintaining stove-piped responsibilities and functionalities. To date, however, there is little or no study on the interplay of those relationships or the actors (stakeholders). "Learning to appreciate and rely upon multiple perspectives increases tolerance for the views of others and the capacity to make positive uses of the diversity multiple perspectives bring to organization and to life in general."[7] The organization or system may need understanding as a whole, not just an analysis of the sub-systems or parts. By understanding the whole, and understanding the nature of the interrelations, makes the possibility of a practical assembly or analysis of a whole more realistic. Understanding the whole, the parts, and the relations (or feedback loops) gives better clarity to potential improvements, changes, and performance, and gives insight into how the organization interacts with its environment. [8][9] Peter Senge, a systems thinker, encourages organizations to be more like the living patterns in nature: to be less rigid, sensing and acting locally while building both intellectual understanding as well as building capacity for action. Essentially, the use of centralized control over complex networks of localized control continues to build adaptive organizations, and more particularly,

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appropriate graphic depiction of the internal, interrelated dynamic elements of an organization within an environment.

[6] Ibid, 5-7.

[7] Ibid, xii.

[8] Ibid, 38-39.

[9] Peter M. Senge, *The Fifth Discipline: the Art and Practice of the Learning Organization*, Rev. and updated. ed. (New York: Currency Doubleday, 2006), 6.

organizations that can survive and overcome obstacles (including key leadership changes).[10] Within organizations, military organizations, and more specifically military base camp organizations, there is no escaping the relations between power, conflict, and control, and how each impact the overall system or organization. In concert with a number of authors, Hatch, Ronald Heifetz, and John Kotter detail theories on the core concept of power, as well as the difference sources of power within an organization. This is key to this study: power and authority being two critical elements of managing an organization, especially an organization with multiple stakeholders not normally affiliated with each other, reporting to different higher headquarters and directives, and resourced from different funding sources as they are in military base camps. Power takes the form of either formal authority, or the more social and or informal forms. Formal authority or power generally works from the top of an organizational hierarchy downwards, whereas informal authority is more network-centric. Informal authority presents itself as authority in expertise, through coercion, exerting control of critical resources or materials, and seizing opportunity. Military organizations, and specifically operational base camps, use both types in practical application; studying military organizations is yet another stepping stone to analyzing life cycle management in operational base camps.

Military Organizations

Military organizations take on a different dimension of organization and systems theory, and, for a time in history, often set the example for organizational management in the business world. But with one key difference: military organizations belong to the realm of politics, rarely ever profit. Osinga and Lindley-French put into perspective the complexity facing military

[10] Ibid, 364-365.

organizations: the global attitudes, types of wars and missions, resourcing capabilities/constraints, risks, threats (real and perceived) in which Western military organizations survived. This puts military organizations into a more practical context; this context gives some insight into how the military, more specifically the U.S. and allied nations' military organizations, arrived at the state in which they live and operate today.[11] Soeters and fellow editors created a multi-disciplined approach to analyzing military organizations, putting the useful general organizational and systems theories described by Hatch and Senge into military practical application. Military organizations are characterized by three inherently ingrained common characteristics: communal life, hierarchical organizations, and stress on discipline. Communal life includes the 24-hour a day lifestyle military service entails, as well as general segregation from "normal" civilian society through provided housing (for individuals and families, deployed and at home), communities of commonality, and general work atmosphere. By its very nature, military organizations are hierarchical, and consequently imbued with fairly clear and well accepted formal power (evidenced by rank worn on uniforms) to ensure unity of thought and action. And as an effect of this hierarchy and formal power, militaries stress discipline to maintain compliance with rules, acceptance of the authority and orders, and punishment in cases of disobedience to that power.[12] For better or for worse, these characteristics speak directly to the purpose and execution of military base camp organizational management. As an action-oriented organization, the aspect of politics is never far from mind.

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[11] Franz Osinga, Julian Lindley-French, "Leading Military Organizations in the Risk Society: Mapping the New Strategic Complexity." *Managing Military Organisations: Theory and Practice* (Milton Park, Abingdon, Oxon.: Routledge, 2010), 17-28.

[12] Joseph Soeters, Paul C.van Fenema and Robert Beeres, eds., *Managing Military Organisations: Theory and Practice* (Milton Park, Abingdon, Oxon.: Routledge, 2010), 1.

> [Militaries are] the executive power of politicians in the field of national and international security, safety, and public order: they are the agents…working for political principals….[T]his revolves around the missions and operations the politicians set them to do, including the mandates and resources with which the military will have to do the job. After all, these are all operations and facilities of political choice….managing military and peace operations is also about dealing with political complexities.[13]

This is an important item of note when viewing military organizations in relation to operational base camp management. This means military action, something as simple as building a small building to shelter soldiers, can have political constraints, implications, and/or ramifications. Military organizations differ from civilian ones: military supply and demand systems focus on operations rather than profits. Political taskings, constraints and restraints, and political clarity and obscurity end up forcing military organizations to be multi-taskers, multi-service oriented, multi-national, and highly interested in partnering in order to accomplish the mission. This adds a different dynamic spin to the power, conflict, and control concept outlined by Hatch, and leads Soeters to stress the idea that manag*ing* and organiz*ing* military organizations is much more important than management and organizations. Soeters and his fellow editors create a collection of multi-discipline dialogues, organized into four parts, intended to be a cyclic concept: context, strategy, and external coordination which leads to internal coordination and preparation of operations, which leads to military organizations in action, leading to monitoring operational effectiveness and (secondary) outcomes, leading back to context, strategy and external coordination. [14] This cyclic collection of theories and concepts (dialogues) can be directly correlated to the basic concepts of life cycle management.

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[13] Ibid, 3.

[14] Ibid, 7.

Life Cycle Management

Life cycle management is an emerging developmental process that began largely in the business or logistics domains, but has expanded as a thinking and planning process to promote sustainable consumption and production patterns. The United Nations Environment Programme (UNEP) and the Society for Environmental Toxicology and Chemistry (SETAC) launched an International Life Cycle Partnership (the Life Cycle Initiative) to enable users around the world to put life cycle thinking into effective practice. In 2003, UNEP/SETAC Life Cycle Initiative published a draft final report on a Life Cycle Management (LCM) Definition Study. This study defines the LCM framework concept, and focuses on the total life cycle performance of goods and services with the goal of promoting sustainable production and consumption using system-oriented platforms. While this particular LCM study focuses on materiel or product production under life cycle management, the concepts and descriptions strive to change stakeholder perspectives, and encourage users to "develop/refine a definition of Life Cycle Management that meets user needs."[15] The concepts are applicable to other areas of interest facing similar complex and or complicated problems, such as military forward area base camps. The study report and the Life Cycle Initiative program stress the need to incorporate this kind of process strategy into decision making, policy development, and practical action/production.

I. M. Jawahar and Gary L McLaughlin bring the LCM concept into conjunction with organizational theory, developing a more descriptive stakeholder theory central to both the life cycle management concept, and how it can apply to military base camps. This approach establishes a means of viewing a multi-faceted, multi-branch or discipline, time-unconstrained,

[15] Saur, Konrad, Gianluca Donato, Elisa Cobas Flores, Paolo Frankl, Allan Astrup Jensen, Evans Kituyi, Kun Mo Lee, Mohammed Tawfic, and Arnold Tucker. "Draft Final Report of the Lcm Definition Study, Version 3.6." *UNEP/SETAC Life Cycle Initiative* (November 17, 2003): 3.

resource intensive problems, and the organizational issues entailed; organizations wrestle with the power, conflict, and control relations generated by these kinds of problems. Unlike other LCM authors, Jawahar focuses on the inception of a project, with multiple agents participating or needing use of the project, much like a military operational base camp in a newly established theater of operations. In contrast, any number of other "life cycle" studies focus on synchronizing or coordinating already-mature projects or sub-systems almost exclusively.[16] Jawahar brings attention to how the stakeholders within the organization are managed in getting the project off the ground and into operation – this is a very real problem facing base camp project personnel, especially in a joint or multinational environment, as most of the disparity is over some disagreement between base camp stakeholders and the authorities they do or do not hold over one another, rather than physical constraints or limitations. There are particular benefits in making life cycle management part of strategic (and for military purposes, operational) thinking and planning. Henrik Ny and co-authors focus primarily on the life cycle management and sustainability of specific materiel, but the discussion on materiel management moves into larger and longer strategic planning is extremely useful when overlaid with the military operational base camp management problem.

Planners Are the Users

Military base camps in one form or another existed as operational tools as long as militaries have been organized, if the brief and quickly passing references of military theorists and historians are taken into account. Historical military base camps (i.e. pre-9/11) at the operational and strategic levels are not well documented, other than one-sided views, or detailed accounts of

[16] I.M. Jawahar and Gary L. McLaughlin, "Toward a Descriptive Stakeholder Theory: An Organizational Life Cycle Approach," *Academy of Management Review* 26, no. 3 (2001): 397.

the tactical level efforts of the engineers building specific base camps in specific locations without links to the historical context. There is little to no mention of the stakeholder involvement, and ties to the operational campaign plan are thin and often not explained.

In 2008, leadership in the Army began realizing the overall schema of military base camps in the Iraq and Afghanistan theaters of operation experienced systemic and "wicked" problems, often producing or leading to other systemic and complex problems.[17] A number of U.S. engineering agencies, logistics agencies, Center for Army Lessons Learned, and the Army Auditing Agency within the U.S. Department of Defense conducted site surveys, after action reports, and studies on military base camps in Iraq and Afghanistan; many of these are classified documents, not yet releasable for public use, or focus in on very specific (engineering or tactical) issues. The Director of the Army Capabilities Integration Center (ARCIC), under the Training and Doctrine Command (TRADOC), approved a project led by the Maneuver Support Center (MANSCEN) Engineering Department, to analyze the Army Base Camp problem. The MANSCEN-led Integrated Capabilities Development Team (ICDT) focusing on the project is comprised of stakeholders ranging from the joint services, to sustainment, protection, engineering, special partners (like Defense Logistics Agency and Army Materiel Command), to the garrison-focused Installation Management Command (IMCOM), among others. The project charter bounded the team to Army base camps within a particular time frame: 2015-2024, and directed the team to construct a specifically structured concept capability plan (CCP) drawing a

[17] A "wicked" problem is a problem that is difficult or seemingly impossible to solve due to incomplete, contradictory, and/or changing requirements that may not be clearly defined. Definition is usually attributed to Horst Rittel and C. West Churchman. Sravan Ankaraju, "How Do You Solve a a Wicked Problem?" GET OFF THE DRAWING BOARD: BUSINESS AND HUMAN CHALLENGES – THINK. SOLVE. EXECUTE, entry posted January 21, 2010, http://www.getoffthedrawingboard.com/2010/01/31/how-do-you-solve-a-a-wicked-problem/ (accessed June 19, 2011)

conceptual framework; formal approval of the CCP in 2009 led to a structured capabilities based analysis (CBA). The majority of the ICDT products, while still in draft or developing phases and not technically considered doctrine yet, represent movements in the direction of a cohesive and systematic life cycle management plan. The movements in that direction are constrained by certain limiting factors: the CCP uses the Joint Publication 1-02 definition of life cycle management but does not define it in terms of a systematic process for base camp development, nor does translate this systems process into actionable operational management.[18] Another serious constraint of the MANSCEN-led team: MANSCEN is the current TRADOC "ringleader" for the Army Base Camp circus, but the circus is comprised of many conflicting stakeholders not yet sure of their roles or authorities. If those stakeholders do not buy into the development process, or do not empower the right personnel to represent their organization, the development process becomes skewed.

Scoping the Complexity

In order to study military base camp organization in an operational theater (joint and or multinational base camps), scoping the environment requires some foundation work. Leaders in multiple warfighting functions and at multiple levels of command currently wrestle with the same very basic problems plaguing U.S. and Coalition military leaders for decades. Chief among these are: lack of comprehensive doctrine, lack of common terminology, exclusionary or stove-piped method for dealing with base camp problems within stakeholder purviews, and how to break out of this quagmire into effective action.

[18] Life cycle management is defined by JP 1-02 as: The total phases through which an item passes from the time it is initially developed until the time it is either consumed in use or disposed of as being excess to all known materiel requirements.

There is currently a gap in doctrine covering military base camps: there is no official doctrine written in either the U.S. Army or Joint community, nor is there historical record of operational level doctrine.[19] This causes a wide variety of issues, problems, and confusion, in turn leading to misrepresentation (or no knowledgeable representation at all in planning), unnecessary redundancies, inefficiencies, sometimes deviates from the operational campaign plan, and often places undue constraints on operational leaders. While not doctrine per se, there are similar documentation efforts that can be construed as precedent. Examples of these include home station or garrison-specific policies maintained by the Installation Management Command (IMCOM) that are not appropriate for a hostile combat environment, or the stove-piped functional planning documents like the engineering-oriented "Redbook" or "Sandbook Standards," logistical "Green Book Standards," or the ad hoc engineer-oriented "CENTCOM Sandbook Standards" used in the current theaters of war. Without official Army or Joint doctrine, hodge-podge of planning and or support guides, and a reliance on "making mission happen," there is no common basis for terminology, no common ground agreements on standards of design or living, and no common framework to even begin discussions on improving the process. Yet the U.S. and allied militaries continue to live on and operate ten-or-more-year old base camps in two different theaters of war. This reality begs a number of questions.

How can all the services, as well as all the functional stakeholders within those services, even communicate, much less act in concert? If, within only the U.S. Army, there are different "standards" for planning base camp support to U.S. and Coalition forces, how can those standards come to a common ground to make this process work more effectively? How prescriptive does

[19] U.S. Army, "Army DOTmLPF Integrated Capabilities Recommendation for Base Camp Strategic Integration." **Draft Version 0.5**. (Fort Leonard Wood, MO: U.S. Army TRADOC Maneuver Support Center of Excellence [MSCoE], 2011)..

doctrine (Army or Joint) need to be, or perhaps more importantly not be, to keep base camps cohesive between functional areas, while maintaining operational flexibility? How can the Army and Joint or multinational force change base camp management in stride, in two operational theaters during conflict continuing to rage for over ten years? In a joint, intergovernmental, interagency, multinational environment, how can a base camp life cycle management process improve to truly enable a full spectrum of operations in a variety of environments? How can application of the life cycle management development process to military base camps enable the Department of Defense (DoD) to better execute national strategic directives for budget management, operational flexibility and power, and in building partner capacity, among other things? What projects and development are currently underway in the Army and Joint communities? What projects are in development in the environmental engineering fields? How are these not already solving the life cycle management or conceptual framework problems?

The monograph uses research and evidence from a variety of primary, secondary, and tertiary sources to support the hypothesis: Life cycle management, focusing on stakeholders rather than "standards", is a more efficient and effective conceptual framework in which to develop military base camps within an operational context. The author intends to highlight issues, problems, successes, failures, and or potential future solutions based on examples as depicted from World War II and Baghdad, Iraq. The document develops through four main sections: Requirements of base camps, framework outline of life cycle management, analysis using historic examples overlaid with the framework, and conclusions drawn.

Military Base Camp Requirements and Life Cycle Management Framework

Current events show that the future is likely to more of the same: expeditionary, somewhere on an entire spectrum of operations, with coalition, joint, multi-branch, contractors, and whole-of-

government partnerships. And, as stated before, base camps of some kind of size, shape, type, duration, location, or purpose, etc. must play a role in the operational campaign plan. Identifying key requirements shared by the widest range-types of base camps in the widest variety of environments leads to a common translation of terms, and a common ground for equalizing differences between joint services, intergovernmental and interagency, and multinational partners, and motivates a common purpose. The life span of a base camp, and subsequently common requirements, can be broken down into three phases or categories: design and planning; construction and de-construction (which includes turn over to host nation); and operations and management.[20] An overarching, flexible, adaptable cognitive framework that can be translated to actionable management is highly useful in bridging the gaps and seams in both emerging U.S. Army base camp policy and doctrine, as well as policy within the current theaters.

Stakeholders, and all they bring to bear, are the long pole in the tent in the planning and design, construction and deconstruction, operations and management of these base camps. A base camp management framework must not only orchestrate the efforts of stakeholders, but also provide these partnerships with the most flexible and adaptable response to force projection. All this, while maintaining an effective synchronization with the operational campaign, for both the short and the long term. Life cycle management, as previously noted, is an emerging developmental process that began largely in the business or logistics domains since the 1970s, but recently expanded as a thinking and planning process promoting sustainable consumption and production patterns, as well as enabling adaptive, sustainable growth or development of projects. Common characteristics of LCM stages emerged over time. First, life cycle stages are generally a multi-dimensional phenomenon: vertical as well as horizontal, which relates to the previously

[20] United States Army, TRADOC Pamphlet 525-7-7 "Concept Capability Plan for Army Base Camps in Full Spectrum Operations 2015-2024", November 2010, iv.

discussed formal and informal authorities, hierarchical and network centric operations, as well as the centralized management with decentralized local control.[21] Second, these dimensions, although varied according to focus of the LCM program, relate directly to organization context and structure: common dimensions include size, growth rate, central tasks or missions, structural form, centralization, and multi-levels of organization. In general terms, life cycle stages are "unique configuration[s] of variables related to organisation [sic] context and structure."[22] Some life cycle management scholars debate whether or not these stages are sequential, but there is enough evidence to strictly tie the life cycle program to the context of the project. Life cycle programs can have as many or as few stages (of any duration) as are necessary within the context of the project, but all stages move through an iterative process: inception, growth and development with constant assessment and reassessment, adaptation as necessary, and finally closure. In the context of this paper, life cycle management is viewed as variable, moving non-sequentially between or even skipping some stages as is necessary for military base camps existing within and in conjunction with the operational context. The structure of planning and design, construction and deconstruction, operations and management in relation to time, space, and purpose, provides a new perspective: a base camp life cycle management concept is an extremely flexible tool for the operational campaign.

Time:

In order to effectively integrate a system framework like base camps into an overall operational campaign, there ought to be a time dimension associated with basing operations.

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[21] Peter M. Senge, *The Fifth Discipline: the Art and Practice of the Learning Organization*, Rev. and updated. ed. (New York: Currency Doubleday, 2006), 6.

[22] Zelia Serrasqueiro (Ph.D.) and Joao Ferreira (MSc and Ph.D. student), "A Taxonomic Development of Life-Cycle Stages: An Approach of the Firm Acquisition Capital" (Ph.D. diss., Beira Interior University (UBI), 2003), 5-6.

Time definitions applied to base camps, terms such as “enduring” and “temporary,” are often tied to financial and/or political issues and are often points of contention or even outright strategic constraints. This means there is a requirement to enable flexible time options into base camp planning and design, especially at the beginning of overall campaign planning. Base camp plans/design should be capable of creating camps operating on a temporary basis, but with the capability to evolve into enduring locations if the mission and strategic guidance dictate, all while maintaining a systematically efficient design to flex between short-and long-term missions. Construction also requires a time dimension association to answer critical questions: how quickly is the base required to be built and operational to support the operational mission? What kinds of construction material is most efficient given the factors of elemental environment, the mission, potential threats, potential numbers of turnover tenants, surge and ebb populations capacity, the nature of the time endurance, and given the availability of the material? How much time will be available to deconstruct the base upon departure? What proprietary material (e.g. recoverable classified systems cables) used in construction that now must be removed before departure? Where does the excess/usable construction material go, legally? Is the base to be deconstructed and dismantled, or is it to be turned over to the host nation as an operational camp? Setting conditions for deconstruction is more important at the conclusion of a base camp’s life, and is as bounded by time as construction efforts. Base camp operations and management are fluid and adaptive processes; this phase is likely the most flexible of the three in regards to requiring/adapting to time boundaries. Operations and management require a time dimension in order to structure processes to best complement the operational mission in both the short- and long-terms. This includes budgeting for base maintenance effectively, anticipating unit turn over (quantities, magnitude, and required conditions), surge and ebb populations, and maintaining

flexible capabilities to support a changing user (to include supporting major equipment changes, types, quantities and specialty support) among other aspects.

As stated previously, the flexibility of the life cycle management framework functions within the context of the project, regardless of the scale. Time factors effects some of the sub-organizations or systems within the framework, but overall, the flexibility of a life cycle framework provides operational planners and military base camp leaders opportunities to maintain critical synchronization with the operational campaign plan – the reason d'être for base camps. The overarching life cycle management framework is the foundation structure given to sub-organizations or systems (stakeholders resources) in order to map out appropriate timelines as far in advance (time-wise) as possible, while still within the context of the operational campaign. In the military base camp perspective, the military operational campaign as well as potential resourcing constraints or restraints will drive the timeframe scope or scale. As life cycle management is an iterative process, this also gives planners an opportunity to build the necessary assessment and reassessment cycles into the timelines, especially if the projected operational campaign spans years or decades instead of months. This management process can also scale down timelines, not just project, as long as the overarching framework maintains synchronization (and inherently, responsive communication) with the operational campaign. Scaling up and down timelines (i.e. moving faster or slower) based on operational timelines can provide flexibility for surge capacity within the overall system as well. Time span can also mean leadership changeovers and operational user transitions; an overarching life cycle management framework can provide highly useful master planning continuity for the stakeholders, the military base camp leadership, as well as the operational planers. Time is certainly a factor for life cycle management frameworks – the longer time available, the better the product – but time is not an obstacle, but an opportunity.

Space:

Environmental conditions are a very basic and often unique characteristic of base camps, impacting all three categories in ways difficult to plan for or anticipate. Space requirements place one of the largest operational constraints on base camps: the physical space occupied and location of base camps must synchronize with the overall operational mission. This may mean base camps are established in less than optimal locations to facilitate greater operational opportunities. This also means the space aspect must dictate greater flexibility and adaptability in base camp systems framework. All three phases must be adaptive to anticipated and/or assigned space in regards to such aspects as (but not limited to): environmental considerations/issues/constraints, cultural considerations of the host nation and potential tenant users, availability of construction or maintenance materials, strategic guidance on maximum scope/scale of base camp sizes, traffic ability and access, as well as security concerns/requirements to name just a few. A systems framework with a space perspective can open opportunities to maintain flexibility and adaptability within all three categories.

If managed by the right leadership, life cycle management frameworks are applicable to any geographical location, and can be adapted to fit the required space. This means that the framework enables stakeholders and those stakeholders organizations or systems to not only construct a general plan for a particular space (or spaces, as mission requires), but can be constructed for maximum flexibility: scaling and scoping. This is definitely an opportunity, but hinges upon that critical framework synchronization with the operational campaign. Military base camps, especially those of any duration, are not always needed at the size to which they were originally built; there may be a requirement to either enlarge or downsize the space a camp (or camps) occupy. If a camp organization (or multiples) cannot plan for or manage spatial scale and scope adjustments, they become among other problems drains on critical resources and potential

security issues, thus a risk or even a detriment to the operational campaign. If managed properly, life cycle management frameworks can build that kind of flexibility for spatial scaling and scoping into the framework itself, inherently providing more options to the stakeholders and the operational planners as part of the process.

Purpose:

Base camps are not created without reason or intended effect; the problem is that base camps are not always considered, nor integrated early enough, in the campaign planning process because there is no single entity responsible for representing the development. Often, one of the three categories is skipped or hastily executed in order to meet time, space, or operational mission purposes. Planning and design suffers shortfalls in regards to purpose and integration of multiple or sub-purposes. Short shifting an integrated purpose guiding planning and design causes a ripple effect on construction and deconstruction as well as operations and management, and often constrains adaptability and base camp evolution.

Life cycle management conceptual frameworks are flexible and adaptable enough to move beyond disciplines or functional area-specific expertise at the higher levels of organizations, and can tailor stakeholders and stakeholder participation or contribution to specific purposes. Military base camps in any given theater, in any given geographic location, established for any given duration have different or multiple purposes for being. Not all base camps require the same resources or functions, and or perhaps not to the same degree that others require. In military operations, physical resources and organizations are often constrained by either availability, capacity, or through competing requirements. Not all stakeholders are necessary from beginning to end in the process; some may be more useful at the beginning, others at the end of the cycle. Tailoring the stakeholders involved in the life cycle management, and tailoring their contributions (in either time, space, or purpose) is critical to being responsive to the operational campaign plan,

as well as good stewards of potentially constrained resources. Life cycle management framework is flexible enough to be an adaptive organization or system because of stakeholder tailoring, the iterative nature of the process, and the simple but critical synchronization with the operational campaign. In an operational environment, adaptation and flexibility are paramount to mission success.

These issues highlight gaps and seams that a comprehensive operational framework – such as life cycle management - can bridge, not just for the military base camp campaign, but also synchronized with and supporting the operational campaign.

Analysis

The analysis projects the LCM framework over the historical examples of WWII military base camps in a particular context as well as reviewing modern base camps in Baghdad, Iraq. Some terminology has changed since the 1940s to today, but concepts and meaning remain largely the same; within these case studies, the author attempts to use more current terminology, as long as it does not distort the underlying concept of the pertinent era of the case study. As an item of note: During the 1930s until 1942, logisticians and engineers were grouped together in the G-4 staff element. From 1942 until approximately the 1970s, U.S. engineers were typically part of the "Services of Supply" (SoS) organizations within the Army for each theater, still under the purview of the G-4 element (logisticians and engineers as a combined effort.) The SOS organizations were created as a result of the massive globe-spanning logistics and base camp efforts required in World War II, and began with the Bolero Plan.[23] Army engineers during this

[23] Alfred M. Beck et al., *The Corps of Engineers the War Against Germany: The Technical Services*, United States Army in World War II (Washington, D.C.: Center of Military History, 1985), 35-58.

time were responsible for construction of garrison installations as well as deployed locations.[24] The U.S. Navy has always maintained a distinct department of engineers responsible for construction and management of docks and shipyards, as well as forward port locations in one form or another in order to maintain operational reach. Currently, the Department of the Army staff has a G-4 (logistics) section, an Office of the Corps of Engineers (OCE), as well as an Office of Assistant Chief of Staff of Installation Management Command (OACSIM). At the U.S. Joint Staff currently, the J-4 section is comprised of both logisticians and engineers together.

Case Study: World War II – Operation Bolero

Operation Bolero: The first case study focuses on military base camping in World War II, and more particularly on Operation Bolero. Operation Bolero, or the Bolero Plan, was the strategic buildup of logistics capacity and forces in the United Kingdom in preparation for a cross-Channel attack onto the European continent. Bolero, set against the construct of time, space, and purpose, is an enlightening look at organizations and systems within U.S. joint and multinational stakeholders, functional stakeholders and their behaviors in a specific context, as well as leadership and decisions made at strategic and national level impacting military base camps in a time of global war.

Time:

American Leadership could see it coming. In 1938, the U.S. was still in the early stages of recovery from the Great Depression, not completely finished with the wounds of World War I, and as a nation, much more interested in U.S–internal recovery affairs than international problems. It was a time of careful conservation of all resources, both on a personal level as well

[24] "U.S. Army Engineer School and Regiment," The History of the Corps of Engineers, http://www.wood.army.mil/wood_cms/Corps_History.pdf (accessed June 21, 2011).

as a national level, since relatively few had money to spend on new things. “Reuse” and “recycle” might not have been popular catchphrases or by-words but they were common practice nationwide. Responsible citizenship, community orientation, and good stewardship were basic tenets in the United States with which families were developed. Community cooperation and engagement was normal: people came together to help one another, to find a way to live together agreeably, and to “make things happen.” “Be Prepared” was more than just the Boy Scouts of America motto, it was a national standard of living, especially coming out of hard times. And they could see the next war in Europe coming; they needed to be prepared.

In 1938, when Hitler overran Austria, the U.S. Army and Navy first began authorizing a subtle (and sometimes not so subtle) build-up of military capability and capacity.[25] The U.S. President did not officially declare war at that time, and the American public did not seem to share the alarm of military and political leadership, but the strategic leadership was preparing for war. The Blitz bombing of London, a long time ally, in 1940 and 1941 rocked the U.S. boat of isolationism. This inkling of the future gave military leadership a span of time to look at the current state of affairs: what did the military look like, and what was the capacity to mobilize for war? It was largely a peace-time standing military, moderately modernized since the previous World War, but it was not one yet prepared for another large scale foreign war. Military technology “realm of the possible” for that time had to concentrate on time and distance factors, as well as subsequent mitigation measures to bridge the shortfalls: vehicles (air, ground, and sea going vessels) could travel only so far, so fast. This meant forward base camps in key locations. National mobilization was the only option to build up military capacity, but how quickly the

[25] The Navy Department, Volume 1, vol. 1 of *Building the Navy's Bases in World War II: History of the Bureau of Yards and Docks and the Civil Engineer Corps 1940-1946*, (Washington, D.C.: United States Government Printing Office, 1947), 3-8.

military could mobilize and with what capabilities was based on the national industrial backing. What did the national industrial support base look like, and what was their capacity for mobilization in time and purpose? U.S. national industry was geared for peacetime profit at that time, not war mobilization. No one knew how quickly U.S. industry could be retooled to support a foreign war. But by 1941, as war loomed closer to the United States and it became more of a necessity, strategic, operational, and industrial leadership worked to answer these questions with action.[26] Sudden competition between the U.S. joint services (Army and Navy, with Army Air Corps and Marines, respectively) for funding for this buildup meant trends toward more careful resource stewardship at all levels, and to some degree, ad hoc cooperation for capabilities between the services.

Alliances with the Great Britain and other partners against the Axis powers played a key role and set the strategic context and timing for developing and prosecuting the war; war-oriented political relations between the United States and Great Britain, as well as U.S. concern for France, preceded the U.S. entrance into the war at the end of 1941. At the same time enhancing the Allied war effort, these alliances produced complications within time, space, and purpose for those actually prosecuting the war. Impacts included strategic direction, political agendas, personal egos, capabilities (both military and industrial), technology, and logistics complications to name but a few issues. The Allies agreed there would be a cross-Channel attack at some point in the fight against Germany, but Great Britain's leadership was continually reluctant to pursue this course of action. At the initiation of plans for a cross-Channel attack in April 1942, U.S. and British military planners understood the need for a forward base from which to conduct such an attack, as well as the need for a large-scale logistics buildup at that location based on the

[26] Charles E. Kirkpatrick, *An Unknown Future and a Doubtful Present: Writing the Victory Plan of 1941* (Washington, D.C.: Center of Military History, 1990), 35-63.

operational reach of the military capabilities of both countries. This attack, regardless of when it occurred, was an Allied lodgment on the continent. But would also be the start of further operations into mainland Europe; the scale of the logistics requirements were extraordinary. Almost immediately, the U.S. and Great Britain began the buildup, with the estimated execution date of June, 1942–code named: Operation Bolero. When Great Britain convinced Allied partners to pursue other operations in North Africa and Italy before a cross-Channel attack, it changed the Bolero Plan from summer 1942 to July 1943. Later, it was again postponed, this time until summer, 1944. Delays and changes to the timelines, as well as resource competition for multiple theaters, caused logistics planners to constantly reassess logistics timeliness, asset and stakeholder availability, and continuous branch plans due to threats to the military distribution networks or lines of communication (air, ground or sea.) This context set the stage for continued stakeholder involvement at all levels, in almost all military activities throughout the war, but especially in supporting the strategic and operational planning.

Space:

In the Great Britain of 1942, the strategic alliances between the United States and Great Britain provided military planners a viable option for a forward base from which to conduct a cross-Channel attack onto the German-occupied European continent. England was the Allies' strongest power base within reach of the continent, and the logical choice. Considering the operation was not only a cross-Channel attack, but an expanding lodgment, and point of projection into the rest of Occupied Europe, the scale of logistics required was almost unbelievable. Based upon threats to lines of communication – more specifically the German seagoing "wolf packs" threatening cargo vessels – as well as technological constraints (aircraft had a limited distance of flight before refueling, for instance), availability of resources (industrial capacity, as well as competition from alternate theaters in the war), the requirement for forward

military base camps was a major priority. The Bolero Plan build-up began in 1942, and despite repeated strategic delays, ended up spread out across England and Scotland to approximately 60 separate bases. The original Bolero plan anticipated over 300,000 air, ground, and support forces by 1942. By 1943, that number rose to almost 500,000 air, ground, and support forces.[27] By the actual date of what became Operation Overlord (the ultimate cross-Channel attack, also known as the Invasion of Normandy, or D-Day), over 1.5 million U.S. personnel occupied those bases in Great Britain. [28] The bases were not just U.S. but included Canadian, Belgian, French, and Polish tenants as well. "Bases" ranged from simply occupying and expanding existing infrastructure, to building new infrastructure to fit the needs of the occupants, although "building" this infrastructure often meant cobbling together prefabricated buildings or tents as much as it meant concrete and rebar.

> Just getting the fighting men and materiel to England was a challenge in itself, but feeding, clothing and housing the soldiers once they reached Great Britain was an even bigger challenge. Simply storing the thousands of aircraft and armored vehicles being brought over meant that every vacant field in England was a potential parking lot….Stately English manor houses surrendered their grounds for use as parking sites. Soldiers were often billeted near the local populations…[29]

Aircraft, one of the key innovations extending Allied operational reach, meant specific space and base requirements. Runways, aircraft hangars for protection and maintenance, fuel and ammunition support, control towers: these were among the many requirements pressuring base

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[27] Ray S. Cline, "U.S. Army in World War II, the War Department," Hyperwar: US Army in WWII, http://www.ibiblio.org/hyperwar/USA/USA-WD-Ops/USA-WD-Ops-9.html (accessed June 17, 2011).

[28] Michael E. Haskew, "World War II: July 2000 from the Editor," HistoryNet.Com, http://www.historynet.com/world-war-ii-july-2000-from-the-editor.htm (accessed August 20, 2011); and Alfred M. Beck et al., *The Corps of Engineers the War Against Germany: The Technical Services*, United States Army in World War II (Washington, D.C.: Center of Military History, 1985), 35-58..

[29] Michael E. Haskew, "World War II: July 2000 from the Editor," HistoryNet.Com, http://www.historynet.com/world-war-ii-july-2000-from-the-editor.htm (accessed August 20, 2011).

camp leadership. “When Operation Overlord was set in motion, the shipment of men and materiel to Britain had consumed more than 400 million hours of labor and nearly $650 million [1940s currency rates] in construction costs.” [30]

Purpose:

As mentioned before, Operation Bolero was a critical aspect of Allied defeat of Germany and the Axis powers. It was the strategic aggressive initial action against Germany at a key location, from which the Allies could gain a new position of advantage. In order to meet strategic goals, the conditions had to be set as soon as possible, and as quickly as possible. The Bolero Plan initially focused heavily on the strategic air power capability the Allies (or just before they were Allies, rather) determined were key to an attack on the European continent. In the spring of 1941, a small and inconspicuous team, organized as a military staff complete with G-1 (personnel), G-2 (intelligence), G-3 (plans and operations), and G-4 (logistics and supply) took up residence in London as the advanced party of the U.S. military, should America finally declare itself “in the war.” Construction planning and initial troop billeting fell heavily on the engineers in the G4 section as the Bolero Plan took shape and as the strategic context continued to advance towards another world war. Much of the base site selection in Iceland, England, Ireland, and Scotland for Bolero stemmed from the basic American war plan RAINBOW 5 among other discussions, plans, and agreements between the U.S. and Great Britain.[31] By December 7, 1941 and the shock of Pearl Harbor was taking effect, U.S. Army representatives in Great Britain already experienced shortfalls in British resources required to establish new base camps, or modify and maintain existing sites. As the strategic context changed the priority or importance of

[30] Ibid.

[31] Alfred M. Beck et al., *The Corps of Engineers the War Against Germany: The Technical Services,* United States Army in World War II (Washington, D.C.: Center of Military History, 1985), 8.

one base camp location above another changed often. Base camp construction supplies coming from other-than-England, and more specifically those coming from the U.S. by cargo sea vessels, were endangered by the increasing threat of German U-boats or wolf packs. Forbidding terrain in Iceland caused problems with distribution of supplies as well as basic construction, weather effects changed the nature of base camp and building designs as well as the types of material appropriate for that climate; these were direct challenges to very critical base camp and operational timelines. Army Aviation Engineers, Navy Seabees, and hordes of contractors worked continuously to have the sites ready to receive U.S. and Allied forces on the designated timeline, but were constantly met with new challenges. Based on the strategic context – American declaration of war, Allied war plan changes and subsequent unit movements or shifts, Axis movements and operations – estimated troop and equipment levels constantly fluctuated. Numbers fluctuations alone are simple issues, but the second and third orders of effect of these troop and equipment flux caused changes in underlying (often invisible to users) dependencies that had larger impacts. For instance: if the operational plan called for three times the amount of aircraft stationed at a location, there must be enough appropriate run way, hangar, ammunition, refueling, safety, and parking for them; the dependencies alone could take more than a year to complete! If a site previously designated for 100,000 stationary troops (i.e. not transient) changed to only 100, the food preparation and storage area requirements changed drastically – the equipment needed to feed 100,000 must now be moved to a new location to feed that number, along with the other competing demands for transportation or distribution in the area. Despite the U.S. War Department authorizing the Supply of Services organizations, responsible for the massive buildup in Great Britain under the Bolero Plan, critical personnel to fill positions within this organization went unfilled. As the war developed, and additional SOS elements added to the overall strategic plan, differences between roles and relationships, authorities and personalities

surfaced. Tensions grew between the SOS directors, who were a mix of logisticians and engineers, over competing priorities in both the supply and base camp arenas. As the Bolero Plan changed (to include it's name) as the strategic context changed; when the Allies changed direction and pursued Operation Torch in North Africa, and then the Italy campaign, to include supply bases, naval ports, and strategically placed airfields, demands on base camp resources increased on a global scale.[32] The Bolero Plan was technically the buildup of Allied forces in the United Kingdom. By the time Operation Overlord was executed on June 6, 1944, the "Bolero Plan" no longer existed on paper, but historians from a variety of backgrounds and perspectives all agree that Operation Overlord could not and would not have been possible without Bolero.[33]

How did the story end? The Allies won. Operation Overlord, although incurring high casualties in personnel and equipment from all Allied stakeholders, was a success; the Allies were able to project into the European continent and Overlord is often credited with tipping the balance of the war in Allied favor. Bolero set the stage for it, and put Operation Overlord within the realm of the possible for the Allies. Bolero thus, was also a success at the strategic and operational levels. But what could have made Bolero less painful during the operation? The leadership shaping, managing, and executing Operation Bolero, whether they realized it or not, used elements of the life cycle management process, to high degrees of overall success. The base camp managing leadership engaged in synchronizing the base camp process with the operational plan very early, even before the U.S. declared war. The engineers (regardless of national origin or branch of service) and the logisticians, as well as the tenants, the British local populations, the

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[32] Ibid, 7-287.

[33] Ibid, 1-566.; and Michael E. Haskew, "World War II: July 2000 from the Editor," HistoryNet.Com, http://www.historynet.com/world-war-ii-july-2000-from-the-editor.htm (accessed August 20, 2011).

suppliers (from all contributing countries), and even the operational planners were communicating and collaborating towards a common goal, along a common timeline. Stakeholders and their resources were managed (and protected) by a "ringleader": the SOS director for that theater. The base camp process managers synchronized their operations to a very high degree with the overall operational plan; subsequently, base camp process managers enabled their stakeholders the most amount of flexibility and adaptability as possible through multiple means of supply, multiple and sometimes redundant design planning, and flexible execution a through centralized management, but empowerment at the lower levels.

Without reaching high into the strategic context literature, or diving into the lowest levels of tactical engineering operations literature, the difficulty in this case study is focusing on how these two translated to the operational level of Operation Bolero. While Bolero was an overall success, deviation from life cycle management process properties seem to center on personal or professional viewpoint tensions surrounding roles and responsibilities (between engineers and logisticians), or "ringleader" responsibilities and control. As a successful example, this by no means implies that future "ringleaders" of base camp management should be one (logisticians) or the other (engineers.) But there must be a balance of professional knowledge, management, judgment, and experience within that leadership or leadership organization in managing multi-functional stakeholders. And as a last note: where did this process get institutionalized in the U.S. Army? Answer: as a comprehensive whole, it did not get institutionalized or inculcated into military best practices.

Case Study: Global War on Terrorism - Baghdad

This case study focuses on military base camp formation during the Global War on Terrorism in Iraq, and centers on base camps developed in Baghdad, Iraq. Unlike the myriad of

smaller operations creating the whole strategic campaign in World War II, operations in Baghdad grouped under the single operational title Operation Iraqi Freedom. This included the base camps; but just like Operation Bolero, these base camps created a specific operational, and sometimes strategic, effect for units and agencies conducting operations in the capital of Iraq. The setting for this case study is still open-ended: Operation Iraqi Freedom was renamed Operation New Dawn, but it is not yet a finished operation, and thus this case study asks almost as many questions as it tries to answer. Baghdad, during Operation Iraqi Freedom, set against the construct of time, space, and purpose, provides a more contemporary review of the same kinds of organizations and systems as Operation Bolero. It focuses on the changes in U.S. joint and multinational stakeholders, functional stakeholders and their behaviors, national and strategic leadership and their decisions, and how all of these factors impact military base camps in yet another time of global war.

Time:

The global experiences of more than sixty years changed many aspects of military base camp stakeholders since Operation Bolero. In that time, three generations of Post World War II children moved away from the post-Great Depression era of careful resource conservation, community cooperation, and good stewardship. The prevailing trends were now: privileges were now rights, the priority importance of individuals, plentiful money, and the idea that almost everything was “expendable” or “disposable.” Regardless of national origin, technology was in boom.

The United States military experienced change in the 1970s with mass restructuring of organizations, efforts in modernizing doctrine, and the systematic inclusion of minorities and women in the ranks. The military also continued the World War II inter-service rivalry and friction in times of conflict and the times in between conflicts; in an effort to clarify and

streamline command chains and authority, Congress passed the 1986 Goldwater-Nichols Act.[34] In 1990, Desert Shield and Desert Storm proved to the American public (as well as current and future Soldiers, Sailors, Airmen and Marines) that war was relatively cheap, fast, and easy: all it takes to win a war is technology, and lots of it.[35] This lead to a military surge in "modularity" with new organization shuffles, doctrine changes, and new and improved (not to mention expensive and high-maintenance) high speed technology equipment, as well as the baggage that it brings with it. When the U.S. President declared war on Global Terrorism after the events of September 11, 2001, he created a realm of uncertainty: how long would this conflict last? Where would it take place? Whom would it involve, and how much does that cost?

This uncertainty caused a number of issues for base camp managers and stakeholders in the two most prominent theaters of war: Afghanistan and Iraq. Early base camp managers tried to plan for a time duration, but almost immediately discovered obstacles of extreme political and fiscal tension over basic terminology; this is a struggle that continues each year. To an engineer and a logistician, it is useful to use the terms, "enduring" or "temporary" in planning, design, construction, and especially resourcing, although the definitions differ between engineers and logisticians. But used in the context of war, strategic leaders (especially those making or influencing budget decisions) struggled with and studiously avoided letting the military, the physical face of the United States at that time of high tension, use those terms. Those terms connoted "avoiding long term partnership" with countries in need, or worse yet "long term

[34] James R. Locher III, "The Goldwater-Nichols Act Ten Years Later: Taking Stock of Goldwater-Nichols," *Joint Forces Quarterly* (Autumn 1996): 10-17.

[35] Cheryl Rofer, "Comments On: How Perpetual War Became Us Ideology (by J. Joyner)," Phronesisaical: Politics, Philosophy, Fruit, entry posted May 11, 2011, http://phronesisaical.blogspot.com/2011/05/how-perpetual-war-became-us-ideology.html (accessed September 30, 2011); and James Joyner, "Desert Storm Syndrome." *Outside the Beltway*, May 12, 2011. http://www.outsidethebeltway.com/desert-storm-syndrome/ (accessed September 30, 2011).

occupation" and "nation building." This is nothing new. The terminology used for U.S. "base camps" in Korea is still in contention, even after 50 years.

Typically, based on service-oriented force rotation plans for Afghanistan and Iraq, the U.S. Army forces deploy to a theater for approximately 12-15 months; Air Force personnel and Marines deploy for approximately six to nine months. In 2001-2003, these joint service units arrived in country and occupied, built, and at the end of their tour, transitioned their base camps to another unit – but not necessarily a unit within the same service working on and living in that camp within the same timeline duration. Touchy terminology tied to funding and joint services disparate deployment and employment timelines caused ripple effects in how base camps were designed, resourced, and used. These factors also had impacts on how base camps tied into the operational campaign plans; after all, how do you conduct operations, and build, manage, and maintain force protection in uncertainty? As a result of the continuously shuffling units and tenuous "time" definitions tied to funding at each national level, among other problems, it seems as though the Coalition is fighting ten one-year wars instead of one ten-year war. After almost ten years, operations in Afghanistan and Iraq are definitely not cheap, not exactly fast, and certainly not easy.

Space:

Base camps throughout history provided operational commanders a physical capability to project power and extend operational reach. In Baghdad, the operational environment was at first highly mobile, and then suddenly static. As the operational approach changed from high intensity conflict to counterinsurgency operations, the purpose of military base camps changed, and is still changing. Although not using the term "occupying," base camps began as static force projection platforms, and as time and counterinsurgency operations continued, base camps grew or withered to fit the current occupants (at any given time). Often, base camp tenants utilized existing

infrastructure (roads, buildings, bridges, sewer systems, electrical grids) located on a newly-secured base camp. This cut some costs and gave operational commanders a place to house, feed, or administer to troops immediately upon arrival, but it incurred different kinds of requirements. Requirements like: reconstruction of damaged infrastructure, completion of construction in some cases, and most importantly, the technical expertise to evaluate and advise on matters of infrastructure integrity, force protection, and safety. This meant new stakeholders. Stakeholders not necessarily organic to the units, and often trained to only one national standard: site and building inspectors, vector control, safety inspectors, and professional fire marshals, among others. Just within the U.S. forces, these skills are few and far between. The U.S. Army does not have these technical experts within its ranks (or they are in very finite numbers), and the trained personnel in the Air Force (REDHORSE teams) or Navy (SEABEES) were too few to cover all the requirements in Baghdad alone. Logistics Civil Augmentation contractors were available and ready for work, and to some degree, filled the critical safety shortages until other solutions could be found. There is movement within the Pentagon toward deployable Department of the Army civilians serving with the Army Installation Management Command to fill these critical technical skill holes, among other gaps.

Occupants ranged from joint service members (active duty, national guard, or reservists), to multinational partners, other government agencies, non-governmental agencies, contractors, strategic partners (like Defense Logistics Agency), and even host nation partners (like Iraqi Security Forces). Somewhere between time and space, base camps began collecting the residue of a "disposable society:" trash and waste threatened to encroach on critical living space, so forces

created trash dumps "outside the wire" in neighborhoods of the local population.[36] Force protection was critical, which meant expanded areas with enough standoff distance and protection for base camp tenants to survive rockets, mortars, snipers, or bombs.

With all types of military units shuffling into and out of theater over time, base camps required some kind of surge and ebb capacity to house, feed, and provide basic needs for U.S. joint services as well as Coalition partners. Occupants of base camps are as much stakeholders as the builders and those providing resources; with each new flavor, size, and duration of forces, the demands for individuals on the camp changed drastically in many cases. This directly led to disparities in living standards and continuous re-definition of "quality of life." Within the joint services, "living standards" are so different even in garrison (at home station), the Army, Air Force, Navy and Marines pay their personnel disparate compensation if the quality provided does not meet that service's standards. Quality of life standards are similar problems: what is a privilege and what is a right? How many electrical outlets does one Soldier, Sailor, Marine, Airman, Coalition service member, or contractor need? How much do they deserve? What should these troops be able to purchase while in a deployed environment, in the name of "morale" and how much is too much?[37] Answers to these questions change with each new iteration of occupants, and the standards continue to constantly change; this in turn causes resourcing issues, spatial requirements, and at the end of a base camp's life, disposal problems. How then, do base

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[36] Mohamed Fawzi and Izzat Abdul Razaq, "U.s. Dump in Baghdad: Some See Treasure, Others See Trash," *Environment News Service*, January 20, 2004. http://www.ens-newswire.com/ens/jan2004/2004-01-20-05.html (accessed June 30, 2011).

[37] This references the increasing problem of big-screen TVs up to 42" as well as all manner of electronic games and accoutrement, for sale in the Camp Liberty, Baghdad Army Air Force Exchange (AAFES) site. Not only was this a problematic draw on the immature power grid in the early-to-mid stages of base camp development, but created a myriad of problems: space beyond "living" space, heat from electronics, potential for fires, theft, and finally a redeployment baggage requirement problem among others.

camp life cycle managers deal with this constant flux in terms of planning and design, construction (and eventual closure or deconstruction), operations and management to include resourcing, and yet still maintain synchronization with the operational plan?[38]

In 2003-2004, Baghdad base camps came under weekly review by the Coalition Joint Task Force (CJTF) headquarters CJTF-7 Base Camp Acquisition Review Board (BCARB). This board was conducted by the Assistant Chief of Staff C4 (sustainment) staff section, but demanded active participation by base camp managers at the Division level (logistics and engineer planners), resource managers in the C8, operational campaign managers from the C3, as well as contractor and occupant participation. These weekly boards provided a much needed service: critical synchronization with the operational picture, multi-stakeholder buy-in and opportunity for voice, connection of stakeholders to resourcing over a structured timeline, prioritization of efforts in synch with operations, and an objective referee for disputes. These boards determined sizes of camps within Baghdad, how much Logistics Civil Augmentation Program (LOGCAP) support (logistical or engineering support) would be allocated, how many dining facilities per capita was needed, base camp closure if the operational plan did not support large numbers of small camps, and the list continues. There is little or no unclassified documentation for these board meetings, and these boards do not seem exist in any recognizable streamlined form today.

Purpose:

Base camps in Baghdad changed purpose almost as often as the units rotating into and out of the camps over time. The term "base camps" describe a variety of nouns: forward operating

[38] MAJ Brian Lesiak, "Transitioning a Base from Coalition to Us Control," Army Sustainment - Formerly Army Logistician, http://www.almc.army.mil/alog/issues/MarApr10/coalition_2us.html (accessed September 29, 2011).

bases (FOBs), combat outposts (COPs), bases, ports (to include docks and yards for a variety of water craft), life support areas (LSAs), convoy support centers (CSC), medical facilities, detention facilities, supply and distribution hubs, ammunition hubs, among other monikers.[39] Each new tenant required different stakeholder contributions: changes in the physical security requirements (detention facilities or ammunition holding areas); changes in billeting space (influx or exodus numbers); changes in traffic patterns into, out of, or within the camp (especially with new sustainment distribution patterns); changes to the motor pool areas for vehicle storage; specialized consultation work for base camp closure or turnover; and the list continues. With each new and improved "modularized" unit that cycles into and occupies a base camp (of any size, flavor, or duration), the unit brings new equipment, often with new and improved technology. But this also means more dependency on power consumption, unique maintenance demands (and maintenance residue), as well as potential specialized proprietary materiel.[40]

Since this story hasn't ended yet, where does it go from here? The base camp experience in Baghdad, Iraq has been deeply educational. Despite relearning forgotten lessons on base camps in an operational environment from previous conflicts, the U.S. military and allied partners learned quickly and adapted as needed. Life cycle management as a framework was glimpsed early in the theater's development, but disappeared as time and the conflict dragged on, units rotated in and out of country, and lessons were lost all over again. Efficiencies among engineering and logistics,

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[39]Center Army Lessons Learned (CALL), "Initial Impressions Report (IIR) Engineer Operations: Operation Iraqi Freedom, August-September 2008," (November 17, 2008): 46. https://call2.army.mil/CALL2-Search/isysquery/90032ad6-4762-4e97-8ac3-e3e0f9c4279f/6/doc/ (accessed September 29, 2011).

[40] In this instance, an example of proprietary materiel can include specialty high-speed cable to provide secure connectivity for special computer or electronic systems; this materiel cannot be turned over to Coalition or host nation partners in many instances and must be removed or destroyed upon redeployment. This can cause significant structural problems, as well as perceived mistrust of partner nations.

joint services, and Coalition partners became fewer and farther between; stove-piping and "comfort zones" were established, often in concrete. Stakeholder management was ad hoc at best, and was best cooperative at the lowest tactical levels of campaign management. There was no single "ringleader" for the base camp circus, giving synchronization, structure, guidance, and direction to the many stakeholders over the time, space and purpose of the Baghdad base camps. On an important high note: with the length of time required to operate and manage these base camps came the increased need for resource conservation as well as the need for constant adaptive learning. This created an important and potentially enduring culture of reflection and study within base camp stakeholders, integrated with testing new technologies. This is critical as the U.S. military begins to "cut the fat" and relearn how to operate on a tightly constricted budget. Seven-year-old base camps provide case study within case study for a wide range of interested parties; as a result, the U.S. and allied partners are making concerted efforts to change bad habits mid-stride in Iraq, and are making concerted efforts to institutionalize the knowledge. What does the future of Baghdad base camps look like? Continued joint, interagency, intergovernmental, and multinational stakeholders stressing the importance of "sustainability in full spectrum operations as a force multiplier through increased operational efficiencies, reduced logistical burdens, reduced costs, and employing science and technology initiatives as needed."[41]

Conclusions

A base camp management framework must not only allow identification of the right (or nearly right) stakeholders, but it must orchestrate the efforts and resources of these stakeholders, providing these partnerships with the most flexible and adaptable response to force projection. All

[41] Deborah Curtin et al., "Sustainable, Full Spectrum Contingency Operations Gap Assessment: Scalable Microgrid Vision," *USACE: ERDC Construction Engineering Research Laboratory* (August 2008): ii.

this, while maintaining an effective synchronization with the operational campaign, for both the short and the long term. Case studies from World War II and from a current operational environment highlight gaps and seams that a comprehensive operational framework, with a clear focus on the stakeholders at all stages and levels, can bridge. This framework adds reinforcing support, not just for the military base camp campaign to better focus on stakeholders and stakeholder management, but also for that key synchronization and support to the operational campaign. Stakeholders and their respective resources, as well as continuous close ties to the operational campaign, are the critical elements of base camp life cycle management.

As an offshoot of the 2008 Army Base Camp (for the years 2015-2024) analysis project, the MANSCEN-led ICDT lobbied for a Department of the Army (DA) level "ringleader" for the Base Camp circus: an executive agent that had the power and authority to manage stakeholders at the DA level, orchestrate and direct policy for subordinate levels, and with enough power to weigh in to joint service base camp development efforts. As a result in mid-2010, the Army Deputy Chief of Staff, G4 assumed that role in conjunction with US Army Corps of Engineers (USACE) and IMCOM leadership as key advisors. The MANSCEN-led team is currently staffing recommending documented policy changes within the TRADOC organizational hierarchy affecting current operational base camps as well as setting conditions for implementing the recommended capability changes in the future (specifically the years 2015-2024).[42] The plan speaks to operating in a joint, intergovernmental, interagency, multi-national (JIIM) environment, but does not yet bring the Army-internal conflicts into concert first, much less finding common ground between JIIM environment partners – common ground such as common terminology,

[42] U.S. Army, "Army DOTmLPF Integrated Capabilities Recommendation for Base Camp Strategic Integration." Draft Version 0.5. (Fort Leonard Wood, MO: U.S. Army TRADOC Maneuver Support Center of Excellence [MSCoE], 2011).

planning and construction standards, quality of life standards, command and control, and management discipline, among other aspects. Differences in construction standards and even basic measurements (metric versus English for instance) cause materiel and construction issues. These and other similar elements can create obstacles to solving base camp life cycle management issues. Acknowledging these problems and making the effort to start a joint and coalition dialogue on these topics will provide a path toward resolving them. An allied or coalition dialogue on a topic as basic to each nation as base camps can open the door for improved partnering, learning, and cooperation. Potential elements for further change include: national and or service acquisition methods (improving or aligning), elements and methods of contracting, funding, environmental awareness and management, energy conservation and renewal, as well as national and or service policies and doctrine. [43]

A conceptual operational framework is still conceptual. A conceptual framework like life cycle management can create a more cooperative environment, veering away from the traditional stove-piped methods for resourcing, especially important in an increasingly budget-constrained, but high in conflict, joint operating environment. A true base camp life cycle management framework can naturally integrate joint, intergovernmental, interagency, and multinational partners, as well as their resources and contributions, as part of the stakeholder focus. The integrated partnership of stakeholder management has potential to balance and improve national

[43] An historic example of discrepancy in contracting and funding: during OIF 1 through to today, LOGCAP has numerous sub-contracts for each Coalition or U.S. Joint service based on their location. These sub-contracts differed greatly in some locations: the Spanish sector in the south chose not to use LOGCAP to its fullest extent, but accepted Coalition contracting funds. The U.S. Marine Corps in the north west Baghdad accepted LOGCAP for the six to nine months they were in country, but never used the LOGCAP or any contracting to set conditions for follow on units. When the Spanish left country and the U.S. Marines rotated out in 2004, U.S. Army forces were reassigned to those sectors. The basic standard of living (not the same as quality of life) at those locations was so low and unhygienic, the operational timeline had to be adjusted to as much extent as possible to allow time for LOGCAP improvements to very basic base camp functions.

partnerships, not only at the base camp level, but up through national strategic channels as well. The details of the environment still constrain the concept, unless those details are managed as part of a larger whole in concert with the operational plan; then those details become opportunities.

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