

# **Best Practices For Army Management of Lower-priority Capabilities**

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## **Abstract**

Despite having the largest military budget in the world, the financial resources of the United States (US) military are not unlimited. Despite these fiscal constraints, requirements the Army possesses seem to have no bounds. This imbalance of requirements and resources presents the Army with difficult decisions on how to prioritize resources against the most critical requirements, often leaving lower-priority capabilities without sufficient resources. The effects of this are evidenced by the Army's decreased ability to execute conventional warfare against current near-peer threats. By researching best practices, a design, process, or framework may emerge that Army Senior Leaders can use to improve management of lower-priority systems and the overall capability of the Army.

## Chapter 1 – Introduction

Despite having the largest military budget in the world (Bandyopadhyay, 2023), the financial resources of the United States (US) military are not unlimited and the Army must prioritize capabilities (McCormick, 2017). Despite these fiscal constraints, requirements the Army possesses seem to have no bounds: “The Army of 2028 will be ready to deploy, fight and win decisively against any adversary, anytime and anywhere” (Esper, 2018). This imbalance of requirements and resources presents the Army with difficult decisions on how to prioritize resources against the most critical requirements, often leaving lower-priority capabilities without sufficient resources.

### Background

The last half of the 20<sup>th</sup> century saw several changes in military strategy as the Army transformed its priorities from conventional warfare of the World War II era to the nuclear arms race (Burr, 2020) to power projection after the fall of the Soviet Union and the conclusion of the Cold War (Campbell, 2019). The beginning of the 21<sup>st</sup> century was no different with the beginning of the Global War on Terror (GWOT) and the shift in focus to Counter Insurgency (COIN) Operations following September 11<sup>th</sup>, 2001. The significance of this shift in priorities was best stated in A Strategy of Tactics: Population-centric COIN and the Army where the author states: “Population-centric counterinsurgency (COIN) has become the American Army’s new way of war” (Gentile, 2009, p. 2).

Almost synonymous with COIN was Improvised Explosive Device (IED) defeat. This was in response to the more than 3,100 fatalities and 33,000 casualties (Zoroya, 2013) due to the insurgencies’ abundant use of tactics utilizing IEDs. Appropriately, the Army, and ultimately the

Department of Defense (DoD), invested considerable resources to address this issue. Through 2013 \$75 billion was spent on armored vehicles and tools, \$2 billion to train Soldiers to combat the IEDs and another \$7 billion to address intelligence networks that were associated with insurgents (Zoroya, 2013). In contrast, the total budget for aircraft procurement for the Army was only \$6.3 billion in 2013 (DEFENSE, 2012).

During the GWOT, priorities shifted to COIN and more traditional capabilities within the Army dropped in priority. As a result, the lower-priority capabilities fell behind in effectiveness against their respective threat. “The contention is that the Army’s effectiveness at adapting to the threat of insurgency has dulled the skills required to face down a peer or near-peer competitor, like a rising China or Russia” (Campbell, 2019, p. 2). Therefore, by lowering the priority of capabilities to combat near-peer threats the Army diminished its ability to fight any enemy, anywhere, anytime (Esper, 2018).

This result is somewhat surprising given the DoD’s transition to a capabilities-based planning (CBP) model in 2001. This CBP model was intended to assess the required capabilities the U.S. more broadly would need to defend against a non-specific adversary who may possess certain capabilities. This was a strategic shift away from the previously used threat-based model that focused on specific adversaries and systems (Rumsfeld, 2001).

## **Problem Statement**

The problem is that the Army has vast requirements for capabilities (Esper, 2018) with limited resources and therefore can only focus resources on the priorities of the day (McCormick, 2017). Given the focus on current priorities, the Army may not be able to appropriately modernize and maintain lower-priority capabilities and systems. This is evidenced

by the Army's decreased ability to execute conventional warfare against current near-peer threats (Campbell, 2019).

### **Purpose of This Study**

The purpose of this research is to explore what capabilities the Army prioritized during the period when the focus was on the GWOT and identifying opportunities to improve Army management of lower-priority capabilities. Illustrating the Army priorities will indirectly highlight the plethora of capabilities that are not at the forefront and will indicate the relatively limited resources those areas are provided. By researching best practices, a design, process, or framework may emerge that Army Senior Leaders can use to improve management of lower-priority systems and the overall capability of the Army to meet the intent of the Army Strategy.

### **Significance of This Research**

The Army's role in the defense of the United States is a massive undertaking highlighted in the 2018 Army strategy: "*The Army of 2028 will be ready to deploy, fight and win decisively against any adversary, anytime and anywhere*" (Esper, 2018, p. 1). Maintaining the capability to defend against all current enemies while forecasting and modernizing to defend against all future threats requires savvy management. With a requested Army budget in 2023 of \$177.5 billion (Affairs, 2022), identifying efficiencies of even a small percentage can lead to considerable savings. Therefore, if opportunities exist to optimize the management of Army resources, so does the opportunity to maintain and modernize lower-priority capabilities which facilitates a more versatile and capable force to defend our nation.

This study will explore the theory and/or implementation of alternative ways to manage lower-priority capabilities within an organization and a unique corollary for the Army to improve management of the same. This identification of best practices should influence Army policy and result in modified governance for the execution of the full complement of Army capabilities to best address US threats of today and tomorrow.

### **Overview of the Research Methodology**

Research conducted intends to locate published sources identifying data that addresses the problem statement and research questions. This research will demonstrate whether there is a disparity in resources and management between Army priority capabilities and the remaining Army capabilities. Subsequently, the research intends to identify if best practices exist to improve the management of lower-priority capabilities.

Four search engines will be employed to conduct the research for this paper: EBSCO, ProQuest, Google Scholar, and Google. There is debate over exactly when the GWOT ended. For the purposes of this study, it is considered ended when President Obama declared it was over in May of 2013 (Shinkman, 2013). The GWOT covered more than a decade, hence data points during that period are demonstrative of the concepts presented and are used rather than a more comprehensive look at each individual year.

## **Research Questions**

- 1) What capabilities were the Army's priority during GWOT?
- 2) What are best practices for the comprehensive management of lower-priority capabilities?
- 3) How can the Army benefit from best practices to improve management of lower-priority capabilities?

## **Objectives and Outcomes**

The objective of this research is to identify Army priority capabilities and confirm or refute whether a significant percentage of available resources go to a relatively small number of priority programs. Subsequently, best practices for the comprehensive management of lower-priority systems in the defense or perhaps commercial sector shall be identified. This data can be used for an ongoing discussion on how to modify the management of lower-priority systems within the Army. The desired outcome is a modification to Army policy ultimately resulting in a greater complement of properly maintained systems within the existing fleet and a more broadly applied modernization approach to meet the intent of the Army Strategy.

## **Limitations**

The Senior Service College Fellowship program brings with it several limitations related to this paper and associated research. Two primary limitations are the lack of funding available to support research assistance and the limit of approximately five months to complete the research in order to produce the final paper. This limits the amount of research that can be executed to address the problem statement and study. As a result, data will not be completely comprehensive throughout the subject period. In addition, information referenced must be

publicly releasable. Due to these limitations, available data demonstrative of the critical information are used as a case in point. With more time and funding, additional research could be conducted to explore the effects of transitions and adaptations to priorities throughout the history of the US. This more closely examines the exact dollar amounts of funding provided to each individual capability and system, where the rationale for decisions were codified, and how identified best practices may have improved the policy in those respective time periods.

## Chapter 2 – Literature Review

### Introduction

With the need to fight any adversary throughout the world (Esper, 2018) the Army must maintain a wide range of capabilities to support that endeavor. Despite having the largest military budget in the world (Bandyopadhyay, 2023) resources are not infinite, forcing a prioritization of resources determining which capabilities shall be modernized, procured, and sustained. Logically, lower-priority capabilities are provided resources dependent upon availability after higher-priority needs are sufficiently satisfied. The Army therefore may not be able to appropriately modernize, procure, and sustain lower-priority capabilities.

Identification of dissertations, scholarly articles, and formal studies relevant to the problem set is the goal. Achievement of this goal was possible by conducting various searches relating to management of lower-priority Army systems. Search terms such as: US Army, priority, Counterinsurgency, COIN, War on Terror, Global War on Terror, Dynamic Army Resources Priority List (DARPL), systems, capabilities, modernize, maintain, non-priority, lower-priority, lack of priority, Army Strategy, divestiture, mothball, in various combinations were entered in the ProQuest and EBSCO search engines of the Defense Acquisition Virtual Research Library as well as Google Scholar and Google. Unsuccessful while using this methodology, the search was expanded to include US military, Navy, and Air Force, which also did not generate results distinct to the problem. Four DAU research librarians were contacted for assistance and suggested additional searches using variations of the term(s) Capability Based Planning. Additionally, reference lists of works with marginal utility were also reviewed for relevant sources. Ultimately, the collective search effort did not yield any results specific to the management of lower-priority military capabilities, confirming the knowledge gap in this area.

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Due to the identified void in published literature relating to the specific problem, the review contains works that have some tangential relevance to the topic to demonstrate the type of data that is currently available. The data lends credence to the problem statement and while the individual literature does not address the issue, there is some relevance to components of the problem that are worthy of consideration.

## **Literature Review**

### **Alternative Look at Requirements**

US military doctrine is largely based on the assumption predictions can be made from the intelligence process. This may be more relevant for established conventional or near-peer adversaries or even asymmetric warfare elements that fall in cyclic patterns. This predictive analysis limits its utility to those scenarios with the inherent predictability of adversaries and is unable to capture the benefit of surprise with basic battle planning. Accordingly, commanders must give appropriate consideration to lower-priority capabilities of an adversary that could have potential for adverse impacts on the missions. Traditional predictive analysis can be complemented to minimize risk by using an alternative method which focuses on uncertainty and explores the range of the possible, providing greater utility (Lewis, 2004).

### **Disconnect Between Requirements and Resources**

The issue between resources and execution of lower-priorities was identified by Rand during a resource management study for the Air Force. They assessed the lifecycle of software, resources committed to it in various phases, and the comparisons between development and support. As part of the software prioritization process, decisions are often made to delete lower-priority requirements from systems improvements. Once lower-priority capabilities are removed

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and further constraints are identified, an evaluation on removing additional capability or incurring significant increases to cost are made. Recommendations for including additional flexibility for future modifications should be included in future development to allow for a more adaptable capability (Malcolm R. Davis, 1981).

Highlighting an even more significant disconnect with requirements and resources is when the DoD made the decision to terminate the Medium Extended Air Defense System and the Surface-Launched Advanced Medium Range Air-to-Air Missile programs. This was done despite then Secretary of Defense Robert Gates specifically stating that defending against near-term regional threats was a priority of missile defense. The elimination of these programs left a void in that capability. The termination of these programs was part of a rebalancing effort to move resources away from lower-priority programs. To remedy this situation, the Army must articulate a strategy that synchronizes defense policy, requirements, fiscal priorities, and resource implementation. This study is limited to a missile defense capability and associated actions necessary to sufficiently support it (Williams, 2012).

The current CBP portends a myth that it can comprehensively address military strategic development. Ways (requirements) and means (available budget allocations) are not sufficiently aligned to address the military need. There are far too many unprioritized missions to be accomplished within the confines of limited resources. Further examination of force size and shaping needs to be conducted to embrace fiscal realities. Strategic vulnerabilities such as interoperability and operations with coalition partners, as well as an overarching operational risk assessment, require more focus (Kendall, 2002).

The intent of the current CBP model is to broaden the requirements view in acknowledgement that the future is uncertain and the US cannot always predict who our next

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adversary will be. This broader perspective intends to maintain responsiveness to a wide range of threats from conventional to asymmetric and to assess capability goals against existing capabilities. This assessment can identify capability gaps as well as excess capability where divestiture options are identified. Activities to address capability gaps and actions required for divestiture are prioritized and assessed against resource constraints. A challenge exists in the lack of one common and cohesive planning framework for both CBP and resource execution (Walker, 2005).

### **Capabilities-Based Planning**

To improve CBP, appropriate consideration of political, military, economic, social, infrastructure, information, and diplomatic aspects is presented for analysis of a portfolio structure. This methodology provides a broader range of options to consider both within a portfolio as well as across portfolios. The study on this approach is limited to the Global Strike and Ballistic Missile Defense Capability areas (Paul K. Davis, 2008).

In a global setting with an ever-increasing tempo of technology advancements, varying economic scenarios, and uncertain agendas of countries throughout the world, the US finds itself in a complex and uncertain military landscape. The US Federal Government needs to increase the flexibility and quality of investment management, which is comprised of capital planning and CBP. Managing programs collectively as a portfolio vice individual systems provides an improved method to link available resources to strategic objectives. Effective investment management is essential to optimize the defined portfolio. The comprehensive framework that includes performance monitoring management controls and independent assessment and oversight to evaluate portfolio management in the government is further detailed in the table below:

**Table 1 Building an Effective Portfolio**

Optimize	Evaluate, visualize and refine project selection for portfolio balance, conduct external review to validate portfolio
Project Selection	Defined value model, structured decision methodology, clear evaluation criteria, independent review, clear decision authorities
Establishing & analyzing alternatives	Analysis includes broad set of alternatives and factors to include; market, technical, cost, benefit, risk
Laying the groundwork for effective project portfolio selection and management	Linking strategy to investment priorities, establishing portfolio structure, preliminary studies, external partnerships, cross portfolio planning, integrated business processes

(Carter, 2009, p. 99)

The study is limited to six government research and development organizations (Carter, 2009).

When properly executed, CBP considers a wide-range of generic possibilities the military may need to address as well as discrete threats. This assessment then analyzed these potential scenarios with unknown adversaries against existing capabilities and provides priorities to be pursued in an environment of constrained resources. Davis suggests that an additional analysis that he has coined as FARness is necessary to determine if suggested capabilities are most appropriate: “Flexibility to take on new or changed missions, objectives,....adaptiveness to new or changed circumstances, robustness to adverse shocks (or even highly positive shocks)” (Davis, 2014, p. XV). This FARness analysis is essential to overcome the “Tyranny of Priority Lists” (Davis, 2014, p. 9) which Davis describes as the failure of a rank ordered priority list in an austere budget environment. In this scenario, the programs are funded from the top down until there are no remaining funds. A preferable approach is a balancing of portfolios which works to

adequately, rather than optimally, enhance capability while optimizing cost effectiveness (Davis, 2014).

Acknowledging the transition from an asymmetric/counterinsurgency focus to large scale combat operations (LSCO) currently underway within the Army, Wright develops a monograph to explore the similarities and differences with the transition back to LSCO that occurred after the Vietnam war. Highlighted within the study is the assessment that the Army balances fiscal constraints with requirements by establishing priorities against a limited, albeit more likely, set of combat scenarios. An acknowledgement on the necessity for coordination with allied partners to fill areas where US capability proved insufficient historically highlights the limitations of the US desire to fight “against any adversary, anytime and anywhere” (Esper, 2018, p. 1). Due to the uncertainty of forecasted adversaries and the questionable utility of associated modernization, it is essential the US remain flexible to lower-priority threats. Following the Vietnam war, the Army used the “big Five” modernization efforts, focusing on specific systems. The Army Futures Command (AFC) leveraged this concept and identified Cross Functional Teams (CFT)s which “represent interconnected umbrella project areas instead of singular systems” to address the shift of priorities from asymmetric warfare back to LSCO (Wright B. T., 2022, p. 40). This portfolio of priorities should streamline the acquisition process to increase the likelihood of acquisition success (Wright B. T., 2022).

## **Quantitative Analysis for Resourcing Decisions**

Program Executive Office Ground Combat Systems (PEO GCS) and Program Executive Office Combat Support and Combat Service Support (PEO CS&CSS) realized resourcing decisions needed to be evaluated further so they directed the creation of a portfolio planning optimization tool. The Capability Portfolio Analysis Tool (CPAT) is a software platform that uses a mathematical formulation to prioritize the modernization of existing or replacement of vehicles within its portfolio. The intent of the model is to provide data supporting the creation of a strategy optimizing fleet modernization and mitigating system obsolescence within resource constraints. The model is limited to PEO GS and CS&CSS vehicles and only focuses on modernization and procurement of existing platforms (Wadell & et al, 2017).

Further exploration of a mechanism to make difficult decisions on lower priorities was presented by Bozkurt (Bozkurt, n.d.) where he conducted a quantitative analysis to explore the use of real option modeling as a determinant factor for Turkish tanks considered for divestiture, mothballing, or reactivation from a mothball status. The subject tanks are not required for routine military options but are necessary for full scale war, suggesting a determinant mathematical calculation to divest or maintain lower-priority capabilities. The model analogizes military equipment to a commercial business and where to best use funds. This study is limited to cost elements for maintenance, operation, reactivation, and procurement of systems. While not specific to the broader management of lower-priority systems the decision to either divest or mothball (preserving systems for and placing in long term storage) are essential options for considerations within the problem (Bozkurt, n.d.).

## Conclusion

The Army's requirements are vast and resources have limitations requiring priority lists to determine what programs get funding. Davis appropriately describes the failure of a rank ordered priority list in an austere budget environment by coining the phrase "Tyranny of Priority Lists" (Davis, 2014, p. 9) where lower priorities are left insufficiently resourced. Lower-priorities are still indeed priorities necessary for an effective military strategy (Lewis, 2004) which presents a critical gap. Yet, despite the reality of this challenge, the research did not come upon any studies on the comprehensive management of lower-priority systems or capabilities. Various studies did address specific aspects of the problem, however.

Perhaps the most poignant consideration revealed through the research was the perspective that fiscal realities are not embraced, and appropriate planning is not conducted to appreciate these limitations throughout the military. Kendall suggests this reality needs to be embraced with far reaching reevaluations across the military spectrum (Kendall, 2002). Also relating to resource planning deficiencies is the asynchronous association of requirements and resources, perhaps exacerbated by the lack of acceptance on the limitations of resourcing.

Perhaps contrary to the call to be more fiscally disciplined, several studies acknowledged the need to broaden the considerations to define and manage requirements. Whether it be to identify "portfolios" or simply use the defined capabilities-based approach, there is a consistent call to get away from specific system requirements and management to like groupings in a broader capability set. In parallel, the need to increase the scope of considerations for requirements to appropriately consider the unpredictable nature of what our military may need to address is essential. Within the construct of portfolio management or the established CBP

model, several recommendations were made to create an improved framework to execute the essential objective.

Acknowledging the creation of CFTs by the AFC to manage priorities using a portfolio concept, Wright continues to call out that these CFTs are designed in response to the shift in focus to near-peer threats. Applying lessons learned from previous shifts, Wright calls on the need for continuous reassessment from past conflicts and applying the relevant considerations to the Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities and Policy (DOTMLPF-P) construct. Most critical however is the need for modernization to embrace the need to be able to react and respond to an uncertain future (Wright B. T., 2022).

Finally, two studies focused on mathematical models to inform decisions on the resourcing and management approach. Waddell (2017) details a model used for modernization and procurement decisions for the fleet of vehicles within PEO GCS and PEO CS&CSS while Bozhurt (n.d.) presents a model to make decisions regarding continued maintenance, mothballing or divesting of capability for Turkish tanks.

The lack of literature specific to the problem statement highlights the need for additional scholarly work in this area. The identified knowledge gap will dictate an expanded approach to the research methodology in pursuit of answering the research questions in this study.

## Chapter 3 – Research Methodology

Understanding that the Army has vast requirements for capabilities (Esper, 2018) and limited resources it is required to focus resources on priorities (McCormick, 2017). Therefore, the primary focus of this qualitative research was to identify relevant studies on the comprehensive management of lower-priority systems or capabilities. The purpose of this chapter is to detail the approach to research in sufficient detail for the reader to understand the methodology as well as describe the process for collecting and analyzing data.

### Research Questions

Specific questions were generated to focus the research, determine the available data on the management of lower-priority systems or capabilities and assess if any relevant practices could prove beneficial for the Army. The databases in the methodology section were used to research the below questions:

1) What capabilities were the Army's priority during GWOT?

The intent of this question was to determine what the Army priorities were during a specific period of time in relation to the broader set of capabilities the Army seeks to maintain.

2) What are best practices for the comprehensive management of lower-priority capabilities or systems?

The intent of this questions was to explore if best practices have been identified for the management of lower-priority capabilities or systems.

3) How can the Army benefit from best practices to improve management of lower-priority capabilities?

The intent of this question was to review the potential application of identified best practices to the Army's management of systems or capabilities.

### **Purpose of This Study**

The purpose of this research is to explore what capabilities the Army prioritized during the period when the focus was on the GWOT and identifying opportunities to improve Army management of lower-priority capabilities. Illustrating the Army priorities will indirectly highlight the plethora of capabilities that are not at the forefront and will indicate the relatively limited resources those areas are provided. By researching best practices, a design, process, or framework may emerge that Army Senior Leaders can use to improve management of lower-priority systems and the overall capability of the Army to meet the intent of the Army Strategy.

### **Research Design**

This research paper used a qualitative approach to identify works that were related to the problem statement and research questions. As part of the SSCF program, the required use of internet sources dictated the fundamental approach of the research. A literature review was performed to identify relevant works relating to the problem statement. The discovered knowledge gap was based on research. Once the knowledge gap was identified, works that provided relative applicability to the problem statement and research questions were used. Due to the limited sources identified, specific aspects of the problem statement were identified with the intent to identify data that would provide relevance in the aggregate.

The other limiting factor as part of the SSCF program is the use of information available in the public domain. Data limited to government use could not be used, therefore, information demonstrative of the point that is publicly available was provided.

## **Data Collection**

Four search engines were employed; EBSCO, ProQuest, Google Scholar, and Google using search terms such as US Army, priority, Counterinsurgency, COIN, War on Terror, Global War on Terror, Dynamic Army Resources Priority List (DARPL), systems, capabilities, modernize, maintain, non-priority, lower-priority, lack of priority, Army Strategy, divestiture, mothball, US Military, Navy, and Air Force in various combinations. With desired results unattained, four DAU research librarians were contacted for assistance, and additional searches using variations of the term(s) capability-based planning were conducted which yielded tangible data.

Search result title and abbreviated summary were reviewed for any level of applicability and when any such identification was made, a subsequent review of the abstract was conducted. Depending on the level of detail of the abstract and potential relevance of the work the full source was opened with additional word searches and/or review of the content performed for relevancy. All sources deemed to be relevant are reflected in chapters two and four of this paper.

## **Bias and Error**

As part of the Senior Service College Fellowship program, there are time and resource limitations related to this paper and associated research. The time and funding limitations of this study were mitigated with the assistance of four DAU research librarians who were instrumental

when initial queries provided limited results. Their support enabled the opportunity to obtain additional sources which facilitated the completion of relevant sections of this paper within prescribed timelines.

Active awareness of potential for personal bias (seeing what this researcher wanted or expected to see) and research bias (erroneously only focusing on one aspect of the problem statement) led to consciously working to ensure the work was objective. The ability to leverage the four additional individuals (DAU research librarians) to assist in identifying relevant sources, and an additional review by a research advisor, has reasonably eliminated researcher bias. The potential does exist for bias by an author within the body of references identified but there is no material means to determine the extent of that bias.

### **Validity of the Research**

The methodology used yielded data appropriate and sufficient to answer the research questions while identifying where additional studies are warranted. Data on priority systems were sufficiently available whereas this research found a lack of resources specific to the comprehensive management of Army lower-priority systems/capabilities and definitive best practices for same. This confirms the knowledge gap calling for additional research and analysis. However, research has yielded data relevant to specific aspects of the management of lower-priority systems/capabilities. These specific aspects, decisions to maintain or dispose of systems and requirements, resource management, and the associated issues relating to lower-prioritization, highlights the issue and provides recommendations for their remedy.

Data saturation relating to the problem statement was verified based on receipt of similar results with the various research variables. Data saturation was also likely confirmed on the

question of best practices for the comprehensive management or lower-priority systems/capabilities. Due to potential expense of lower-priority capabilities, which has potential for relevance in almost any industry anywhere in the world, the opportunity does exist that additional data may be available when time for research is not as constrained.

Due to the defined limitations, particularly of search engines and publicly releasable data, it is possible that content validity is under question regarding completeness of the research. It is recommended the unconstrained researcher pursues all avenues for data to seek confirmation of that risk.

### **Reliability of the Data**

Management of lower-priority capabilities and the study of the topic are both lower priorities. While there was no shortage of works exploring how to best identify and manage priorities the converse was true for the comprehensive management of lower-priority capabilities. This void in data is unlikely to be determined inaccurate with additional time for research. Based on this, the focal point became more general and largely in relation to the management of extensive requirements within constrained resources and how that impacts lower-priorities. Given that many of the data points were gleaned from the Government Accountability Office (GAO)s extensive studies, this researcher believes the overarching logic is sound. Some points made relative to outside research can be disputed. This researcher does not believe the need for an increase in quantitative data points for decision makers to use can in anyway be dismissed. Therefore, while it is virtually impossible to anticipate the response from every other human that would review this data relevant to the topic, this researcher assesses it is highly unlikely that others would arrive at different conclusions.

## Chapter 4 – Findings

### Introduction

The purpose of this study is to identify best practices for the management of lower-priority capabilities and to assess the benefit of their utilization by the Army. Research shall explore the existence of prioritization by the Army via an examination of the post September 11<sup>th</sup>, GWOT era, identification of any best practices to manage low priority capabilities and determine applicability to the Army.

### Collected Data

The data is based on research relative to the research questions supporting exploration of the problem statement.

1. What capabilities were the Army's priorities during GWOT?

“Almost immediately after the attacks (September 11<sup>th</sup>), President Bush stated that the United States would wage a war against terrorism and make this war the nation's top security priority” (Nardulli, 2003, p. 2). In furtherance of this objective a National Strategy for combatting terrorism was published in 2003 (State, 2023) and in 2004 DoD officials reallocated funding from capabilities to combat conventional near-peer threats to those in support of nation building, guerilla warfare and counterterrorism (Cloud, 2004). Further indication of a significant shift in US strategy during GWOT occurred in 2009 when former Secretary of defense Donald Rumsfeld announced that there would be significant cuts to traditional weapon systems and increases to COIN efforts in the billions (E.B., 2009)

In line with DoD priorities, the Army has placed a priority on supporting the war on terror and capabilities to COIN. In the 2012 Army Strategic Planning Guidance (ASPG), it

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states the intent of the document is to plan for and implement the President and Secretary of Defense's Sustaining US Global Leadership: Priorities for 21<sup>st</sup> century defense over the Future Years Defense Plan (FYDP) where counterterrorism and irregular warfare are listed as the number one mission set (McHugh, 2012).

The Army undertook several activities to modify doctrine, tactics, and training in support of the transition from the conventional warfare approach to COIN. After the push into Iraq in 2003-2004 Army General. George W. Casey Jr. stood up the COIN academy just north of Baghdad to instill a mindset and teach tactics necessary to be successful against the insurgency (Ricks, 2006). In July of 2006 the Army teamed with the Marine Corps to create the Fort Leavenworth-based Counterinsurgency Center to update training and doctrine. The Center's efforts were quite extensive. They conducted research and hosted seminars, conducted engagements with organizations outside of the Army and Marine Corps and engaged with training centers to share the latest information. The center was also integral in the rewrite of the more than 20-year-old Field Manual 3-24; The military guidebook on how to counter insurgencies (Hilburn, 2007).

One core element that was used extensively by the insurgency was the IED (Moulton, 2009). The capability to defeat the IED became a top priority for both the Army and the entire DoD (Spectrum Management, 2014). To address training for explosive hazards (of which IEDs were a significant component) the Army stood up the Countermine/Counter Booby Trap Center in 2002 (which was subsequently renamed the Counter Explosive Hazards Center (CEHC) in 2004). While the Rapid Equipping Force was working to provide materiel solutions to combat insurgency threats the Army also established the Joint Improvised Explosive Device Defeat (JIEDD) Task Force (TF) in 2003 to provide additional focus on combatting IEDs (D'Aria,

2005). In 2006, the JIEDD TF was converted to the Joint IED Defeat Organization (JIEDDO) which reported directly to the Deputy Secretary of Defense and accounted for over \$18 billion spent by the DoD (Sisk, 2015); A large, yet small sum relative to the more than \$40 billion spent on another counter IED platform, the Mine Resistant Ambush-Resistant Protected Vehicles (MRAP) (Sisk, 2015).

The Army transition from conventional to population-centric (the concept where populations are the main objective in COIN) COIN was referred to as “the new way of war” (Gentile, 2009, p. 1) and every American Soldier was now considered a counterinsurgent. (Gentile, 2009). Highlighting the significance of this prioritization above other capabilities, The 2008 Army Modernization Strategy stated the transition to counterinsurgency was: “to the detriment of preparing for full spectrum operations” (Speakes, 2008, p. 7) and “the lack of balance is reducing the Army’s strategic depth and degrading our ability to readily respond to other contingencies” (Speakes, 2008, p. 7). The subsequent desire to rebalance the forces capabilities was referenced in the 2010 Army Modernization Strategy as well as the ASPG in 2011-2013.

2. What are best practices for the comprehensive management of lower-priority capabilities.

The Merriam Webster dictionary defines a best practice as: “a procedure that has been shown by research and experience to produce optimal results and that is established or proposed as a standard suitable for widespread adoption” (Best practices, 2023). Although the research did not yield best practices for the comprehensive management of lower-priority capabilities, it did reveal research, studies, and best practices of aspects and/or areas worthy of consideration for the management of lower-priority capabilities. Interestingly, in most of the identified resources, management of lower-priority capabilities were not the primary topic. However, poignant

considerations relative to the subject were made. When compiled, the resources provide a rather extensive review of recommended practices for the management of lower-priority capabilities.

Working within a resource constrained environment the DoD needs to be more realistic about the capabilities it can develop and sustain in order to avoid what it has done historically, namely: “started more programs than its resources can support” (Sullivan, 2008, p. 25). Sullivan (2008, p. Intro) stated “this involves making tough decisions as to which programs should be pursued, and more importantly, not pursued.” This results in lower-priority capabilities being cut from a priority designation at all and not funded. The GAO recommendation is to set these capabilities aside and to indeed, not fund them unless resources become, “both available and sustainable. This means that decision makers responsible for weapon system requirements, funding, and acquisition execution must establish an investment strategy in concert” (Sullivan, 2008, p. 13). This acknowledgement of limited resources, priority designation, and ultimately the development of an investment strategy concept provides more of an all or nothing approach. If precious dollars are in fact going to be spent, there is a far greater likelihood of lower-priority capability program success with a dedicated strategy to provide resources.

“Every dollar spent inefficiently in acquiring weapon systems is less money available for other budget priorities” (Sullivan, 2008, p. 1). A practice identified to improve the management of lower-priority capabilities is non-specific to the level of priority and actually insinuates a more direct relation to higher-priority programs. The proper management of higher-priority programs alleviates the often-negative consequence of the converse, which is an “attempt to fix troubled programs by taking funds from others” (GAO-07-388, 2007, p. 18). Naturally, lower-priority programs are commonly used as sources of funding to “fix” higher-priority program problems.

Therefore, an inherent risk to the proper planning and effective execution of lower-priority programs is the possibility of flaws with those programs prioritized above them.

The GAO details several best practices that are necessary to increase the probability of successful development programs based on their analysis, with the objectives of these practices to ensure that programs are executable. Some of the key practices include solidifying requirements prior to the programs commencing, holding individuals and organizations accountable for performance, and ensuring estimates of expected capability and costs are accurate (Sullivan, 2008). Expanding on adequate estimates GAO-08-674T recommends a change to: “ the environment and incentives that lead DOD and the military services to overpromise on capability and underestimate costs in order to sell new programs and capture funding” (Sullivan, 2008, p. Intro). Establishing accurate and credible cost and schedule baselines are fundamental aspects of successful program management and are essential to ensure programs are executed efficiently and effectively while increasing the probability that lower-priority development programs remain unscathed due to the performance of other programs.

Another area that has an indirect benefit to lower-priority capabilities is modifying the management approach for development investments to one of an integrated portfolio approach. In an effort to improve the DoD’s ability to complete projects on time, on budget, and with the desired capabilities the GAO reviewed the best practices of Caterpillar, Eli Lilly, IBM, Motorola, and Proctor and Gamble. Focusing on some of the earliest steps in the acquisition process the GAO looked at the identification of gaps in capability through the phase where solutions are analyzed.

Table 2 lists the identified and recommended best practices.

**Table 2 Best Practices for an Enterprise-Wide Portfolio Management Approach**

<b>Best Practices for an enterprise-wide portfolio management approach</b>
Integrates the assessment and determination of warfighting needs with available resources and cuts across the services by functional or capability area.
Establish a single point of accountability at the department level with the authority, responsibility, and tools to ensure that portfolio management for weapon system investments is effectively implemented across the department.
Implement a review process in which needs and resources are integrated early and in which resources are committed incrementally based on the achievement of specific levels of knowledge at established decision points;
Prioritize programs based on the relative costs, benefits, and risks of each investment to ensure a balanced portfolio;
Require increasingly precise cost, schedule, and performance information for each alternative that meets specified levels of confidence and allowable deviations at each decision point leading up to the start of product development;
Establish portfolio managers who are empowered to prioritize needs, make early go/no-go decisions about alternative solutions, and allocate resources within fiscal constraints
Hold officials at all levels accountable for achieving and maintaining a balanced, joint portfolio of weapon system investments that meet the needs of the warfighter within resource constraints.

(GAO, 2007)

Rather than look at individual products, this integrated portfolio-based approach used by the commercial sector has proven to properly balance product lines to requirements, potentially highlighting the need for a lower-priority capability which may not have been brought to light in another construct. It also aligns prioritized needs with available resources to ensure priorities identified have a strong likelihood of success – a critical consideration for lower-priority capabilities.

Many of the highest priority items are also the most expensive which leads to the reduction or elimination of lower-priority capabilities Davis (2014) asserts that “balancing” a portfolio of capabilities where “multiple criteria are adequately” (Davis, 2014, p. 90) addressed vice optimally addressed is essential. This increases the breadth of capabilities or priorities that

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can be resourced. This precept of requirements management in a fiscally constrained environment is further expounded upon in the Australian Army journal: “Accept ‘Fit-For-Purpose’ In Lieu of ‘Best of Class’” (Wright K. , 2019, p. 61). Meeting base level requirements rather than the preferred, most technologically advanced systems, is recommended. In addition, constraining capability rather than eliminating it can be achieved by only equipping units with the highest probability of engagement (Wright K. , 2019).

In order to effectively make decisions relating to modernization and management of the large and diverse portfolio of vehicles PEO GCS and PEO CS&CSS developed a software based mixed integer linear programming formulation (CPAT) to be used as a planning tool that factors capability, various costs (procurement, recapitalization, operations & support, and research development testing & evaluation), storage, lead times, and a number of other business rules. It is used in tandem with secondary effect considerations such as impacts to the industrial base. The data generated ensures unbiased information is available for leaders to make informed decisions on how and when to resource various aspects within the portfolio to maximize overall fleet performance (Waddell, 2017). This approach removes subjectivity and relies on the numbers to provide a fleet-wide (inclusive of lower-priority capabilities) recommendation to determine resource allocation.

Priorities change over time, necessitating decisions need to be made relevant to former top priorities that have been developed and are in inventory. Providing a parallel to commercial businesses, Bozurt (n.d.) has proposed the use of real option modeling to make decisions relating to military hardware that is not immediately needed. Using Turkish tanks as the subject, this mathematical model is used to provide information relevant to decisions for systems to remain idle, for them to be abandoned, mothballed (preserved to minimize degradation and reduce

maintenance costs), and whether or not to reactivate them from a mothball status or to dispose after mothballing. Whether laying idle or mothballed the asset is depreciated and that depreciated value is used within the model. This model also suggests comparing these costs to forecasted expenses to modernize existing equipment and/or incurring the investment cost all over again. (Bozkurt, n.d.).

3. How can the Army benefit from best practices to improve management of lower-priority capabilities?

Several of the recommendations made have benefits to the Army that are virtually self-evident, particularly considering the source (GAO) and the entity to which the recommendations were made (DoD). Executing acquisition best practices to facilitate more efficient and effective development programs will obviously yield savings and produce more capability. Being realistic about a constrained resource environment and only providing a priority to capabilities that can be resourced reduces the total number of priorities. Reduction of the number of lower-capability priorities reduces competition for the same limited resources and therefore increases the probability that remaining capabilities receive sufficient funding. In addition, the creation of a comprehensive investment strategy that includes all key stakeholders and budgets the program from program inception to end of life furthers the opportunity for program success.

The portfolio management approach also presents indirect benefits to the management of lower-priority capabilities. By seeking a balanced approach across the Services redundancies can be identified, increasing funding for other needs. Additionally, having a portfolio manager that is singularly responsible for the performance of the respective capability set allows for

accountability of performance of the overarching portfolio that meets Warfighter requirements within resource constraints.

Taking a balanced portfolio approach where capabilities are adequately addressed allows the Army to pursue a “fit for purpose” vice “best in class” approach. This perspective is another reality check for an Army with a desire for limitless capabilities in a resource constrained environment and allows for a far broader application of available resources, one that is well suited for management of lower-priority capabilities. It is important to note that in September of 2023 the DoD put out a directive rescinding the previous Department of Defense Directive (DoDD) for capability portfolio management (CPM) and to establish updated guidance for the use of CPM. There is a clear change in purpose and scope of the document. DoDD 7045.20 from 2008 stated its purpose: “for the use of capability portfolio management to advise senior leadership on capability investment (Defense, 2008). The updated directive however is far more comprehensive in scope:

“Establishes policy for using CPM across the DoD to advise senior leadership on capability investment, divestment, and management. Assigns responsibilities regarding CPM to support the DoD senior governance framework structure in DoD Directive (DoDD) 5105.79 to synchronize decision support across the planning, programming, budgeting, execution, requirements, and acquisition processes. Provides procedures for managing portfolios.” (Sustainment, 2023, p. Intro)

The revised DoDD 7045.20 provides a much broader approach to portfolio management and refers to the need for analytic products to be “robust, transparent, and well-designed” (Sustainment, 2023, p. 3). This is a profound step in a successful portfolio management approach.

Finally, Bozkurt’s model for Turkish tanks that are not currently required is directly translatable to some of the key considerations of the management of lower-priority capabilities

for the Army. Research, nor contact with the relevant offices of the Army Materiel Command and Assistant Secretary of the Army for Acquisition Logistics and Technology, did not yield a documented policy for mothballing or a codified decision logic for decisions relating to disposal of Army equipment. Therefore, at a minimum, Bozkurt's thesis on the use of real option modeling for decisions to have lower-priority capabilities, lay idle, disposed, mothballed, and later reactivated from mothball or disposed after mothball warrants serious consideration (Bozkurt, n.d.).

## **Analysis**

This section serves to evaluate and synthesize data collected to identify themes or conflicts of information.

### **1. What capabilities were the Army's priorities during GWOT.**

Just a few short years after the September 11<sup>th</sup> attacks occurred and the GWOT was underway a dramatic shift in the Army's approach to warfare occurred. With a new guerrilla style threat to US forces the Army prioritized a counterinsurgency capability that largely dictated a counter IED capability. So significant was the prioritization of these capabilities the Army assessed itself as degraded to respond to near-peer threats. This factor is fundamental to the problem statement and the risk that poor management of lower-priority capabilities imposes – risk of defeat by an adversary.

There was an unequivocal trend with the data in relation to the pivot from LSCO to COIN, and back to LSCO at the conclusion of GWOT. The Army, and DoD as a whole, were consumed with COIN operations and development of equipment to that end. Concerns of the effect of that prioritization became clear in the 2008 modernization strategy where the inability to respond to the “full spectrum of operations” (Speakes, 2008) was a major concern.

2. What are best practices for the comprehensive management of lower-priority capabilities?

Absent best practices for the comprehensive management of lower-priority systems the focus of this research transitioned to indirect impacts to lower-priority capabilities and specific aspects of the management thereof. Not surprising, with the desire to maintain an incredibly broad capability set, much of the research dealt with operating in a resource constrained environment. Improving planning via budgeting and development estimating, program execution via utilization of capability development best practices (Sullivan, 2008), accepting adequate capability across a portfolio (Davis, 2014), and that all requirements cannot be addressed (Sullivan, 2008) highlighted that theme.

The other key recommendation is to codify a decision logic and develop mathematical models to assist leadership in deciding where to place limited resources (Wadell & et al, 2017) and whether to dispose of items in the inventory that are not currently used. This decision logic/model can assist in providing a quantitative evaluation on what needs to be done (Bozkurt, n.d.). The relevance of these models also ties back to the reality of fiscal limitations.

What appears to be missing from this research and the relevance for the Army however are due considerations for the element of time (how long it will take to reconstitute the capability) and some of the essential variables that would need to be considered to calculate that interval. Training, industrial base considerations for production, development, and implementation of an effective sustainment strategy, and of course, a detailed analysis on the risk of defeat by an adversary.

## Chapter 5 – Interpretation

### Introduction

The purpose of this study was to confirm the existence and impacts of prioritization in the Army, and to identify best practices to improve the comprehensive management of lower-priority capabilities. Although this research did not yield best practices specific to the topic, relevant data points provide worthy considerations related to the subject in the aggregate. While the focus of this research was specific to the Army, the broader issue of balancing an almost unlimited number of requirements with finite resources cuts across services. In fact, many of the pertinent resources related to the broader DoD, suggest universal changes to the military.

This chapter will summarize the findings in chapter four. It will illustrate the tie between the findings and the problem statement and detail recommendations for future research and analysis. Finally, this researcher will detail the limitations impacting this study for clarity on potential weaknesses and opportunities for additional information.

### Summary

Based on the research performed, the Army prioritized the COIN capability during the GWOT. An effect of this prioritization was that the Army lowered the priority of the LSCO capability which ultimately led to significant degradation of its ability to combat a near-peer adversary. Ultimately the dichotomy between vast requirements and finite resources and lack of a comprehensive management plan of lower-priority capabilities served as the root cause of this weakness.

Research identified a knowledge gap in specific studies and/or identified best practices for the comprehensive management of lower-priority capabilities. Therefore, several areas

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somewhat tangential to the primary subject of this paper were used. While tangential, they certainly have significant impacts on lower-priority capabilities.

Many of the tangential topics related to the fiscal realities and the unfavorable truth that the US Army cannot develop and maintain an unlimited number of capabilities. Therefore, in acceptance of this fact, the Army needs to manage requirements accordingly and make difficult decisions on what not to identify as a requirement. Increased emphasis on a portfolio management approach as opposed to singular systems assists with the assessment requirements as well as reducing redundancies and minimizes a small subset of high priority systems consuming most of the resources.

Management of resources is also essential. Full commitment to funding programs that are validated as requirements reduces limited incremental funding that does not meet full requirements, ultimately leads to waste. In addition, the environment where programs underestimate cost, schedule, and performance to have programs initiated needs to change. Underestimating programs adversely impacts lower-priority programs as resources are subsequently pulled to support higher priorities that have not been properly estimated.

Finally, mathematical models can provide quantitative data elements for leaders to make difficult decisions on where to allocate precious resources. These models can enhance best value decisions for RDT&E, procurement, recapitalization, operations and support, mothballing, divesting, and reactivating post mothballing.

## Recommendations for Future Studies and Analysis

Considering the absence of a management plan or best practices specific to the management of lower-priority capabilities, it is recommended this study serve as a foundational exploration of the topic. This study highlights the void in research and analysis regarding lower-priority capabilities, priorities still necessary to ensure that the Army can maximize its ability to: “be ready to deploy, fight and win decisively against any adversary, anytime and anywhere” (Esper, 2018, p. 1). Based on the research in chapter four, the researcher recommends the following:

1. Do not start more programs than resources can support.
2. Develop investment strategies that incorporate requirements, funding, and acquisition execution elements that adequately resource capabilities.
3. Follow established best practices for the development of all programs to increase efficiency and effectiveness while minimizing lower-priority programs as funding sources for higher-priority program problems.
4. Change the environment and incentives that encourage underestimation of costs and overestimation on capability and hold leaders accountable.
5. Effectively manage a DoD-wide enterprise portfolio based on capability sets.
6. Balance portfolios by reaching an “adequate” capability vs. best in class.
7. Develop mathematical models to provide quantitative data relating to best value decisions for RDT&E, procurement, recapitalization, operations and support, mothballing, divesting, and reactivating post mothballing.
8. Develop an Army policy for mothballing capability and document detailed logic/considerations for retain/mothball/dispose decisions.

In addition to these practices identified in chapter four, the researcher recommends the following for additional research and/or analysis:

1. If capabilities are considered for mothballing or disposal, assess the following:
  - a. Assess impacts to the industrial base – risks and estimates (schedule and cost) to restore capability.
  - b. Assess impacts to organic capability – risks and estimates (schedule and cost) to restore capability in the following areas: manpower, personnel, maintenance planning and management, training and training support, supply support, support equipment, tech data, packaging, handling, storage, transportation, facilities and infrastructure, and computer resources.
2. Minimize redundancy of existing and future capabilities with allies.
3. Assess feasibility of increasing multi-purpose platforms, robotics, and artificial intelligence agile enough to support changing priorities.
4. Assess the effectiveness of DoDD 7045.20 CPM 25 Sep 2023

The broader issue of balancing an almost unlimited number of requirements with finite resources cuts across services and therefore has a joint application for the US. The conclusions from chapter four summarized above and the recommendations for future research can and should be heeded across the DoD.

### **Limitations of this Study**

As part of the Senior Service College Fellowship there are several limitations related to this paper and associated research. There is a limit of approximately 5 months to complete the research and produce the final paper. Most specifically, this limits the amount of research that

can be executed to address the problem statement and study. Accordingly, data may not be completely comprehensive throughout the subject period. In addition, information that is referenced must be publicly releasable. Due to these limitations, available data that is demonstrative of the critical information are used as a case in point. If more time and funding was afforded, then additional research could be conducted to explore the effects of transitions and adaptations to priorities throughout the history of the US, more closely examine the exact dollar amounts of funding provided to each individual capability and system, where the rationale for decisions were codified and how identified best practices may have improved the policy in those respective time periods.

In addition, approximately two months after commencing this study and three months prior to completing it, the DoD rescinded the previous and implemented a new Capability Management Directive, 7045.20 on 25 Sep. 2023. Due to the period since the release of this new directive it is impossible to determine the effect that it has on capability management, let alone lower-priority capability management.

## **Conclusion**

Despite having the largest military budget in the world (Bandyopadhyay, 2023), the financial resources of the United States (US) military are not unlimited and the Army must prioritize (McCormick, 2017). The natural result of this process is that higher-priority capabilities are the focus and receive a majority of the resources until their needs are fully met, often leaving lower-priorities without sufficient resources, or worse, neglected. The Army needs to do a better job of accepting this fiscal reality and devise a detailed plan to comprehensively manage lower-priority capabilities. To appropriately weigh decision appreciating these realities,

leaders require quantitative data to understand the impact of their decisions of today on tomorrow and what a transition from a low to high priority entails.

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### **Author Note**

To the center of my world - my wonderful daughters: May we always be proud of each other in all we do.

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