

**Effects of Budget Reductions on Army Acquisition Support
of Equipping and Modernization Goals**

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Abstract

During a decade of war, the Army purchased vast amounts of equipment. As the conflicts end and the overall Army budgets are significantly reduced (34% since 2008), maintaining the entire equipment portfolio reduces the funding available to meet Army equipping and modernization goals. The Army will need to make decisions about the best way to invest the available funding in the next couple of years and across the current Program Objective Memorandum (POM) years, fiscal year (FY) 2017–2021, to meet the goals.

The objectives of this study are to provide information on the extent to which legacy systems and non–programs of record (non-POR, including non-standard equipment) exist within the Mission Command portfolio, examine their impact on equipping and modernization, and make recommendations on how to divest the equipment no longer needed.

The survey results and the insights from the literature review show that the Army needs to take a comprehensive look at the current portfolio of equipment being managed and the link to the new Defense guidance and Army equipping guidance and modernization plans. Any systems or programs that are not linked to the new guidance and plans should be divested.

Chapter 1 – Introduction

Background

During a decade of war and increasing defense budgets, the Army saw substantial changes to their acquisition activities. Army budgets tripled from fiscal year (FY) 2002 to FY 2008 (including supplemental funding). During this time, new programs of record (PORs) were initiated, some existing PORs were expanded, and non-PORs (including non-standard equipment) were purchased to fill quick-reaction capability gaps. As the conflicts end and the overall Army budgets are significantly reduced (34% since 2008), maintaining the entire equipment portfolio reduces the funding available to meet Army equipping and modernization goals. The Army's equipping guidance and modernization strategy provide the strategic guidance and framework on how the Army will equip and modernize the force over time. The Army's equipping guidance extends over multiple years to provide "direction for Army Components, Major Commands, and units to allocate and distribute equipment" (Department of the Army, 2013b, p. 7).

Problem Statement

In order to meet the goals of the Army's Equipping Guidance and Modernization Strategy, the Department of the Army (DA) will need to make decisions about the best way to invest the available funding in the next couple of years and across the Program Objective Memorandum (POM) years, FY 2017–2021. Since the FY 2012 planning cycle, the Army's research, development and acquisition (RDA) funding has seen a 39% decline when compared to FY 2015, and with sequestration looming for FY 2016, another 25% reduction could be a reality (Barclay, 2014). With such reductions, disposition of the vast array of non-standard equipment purchased to fill urgent quick-reaction needs over 12 years of war, coupled with the current

PORs and non-PORs in the portfolio, will affect the ability to invest sufficient funding across all of the programs within the Army Equipping Program Evaluation Group (EE PEG). The EE PEG plans and programs for the development, purchase, and fielding of capabilities and equipment to the Army. Inefficient use of available funds may add schedule risk to Army modernization plans, as every dollar spent on obsolete equipment and on equipment not aligned with the current Defense and Army priorities may affect the pace at which the Army can modernize its equipment and units. For this research I selected the Mission Command portfolio as a representative subset of the Army acquisition portfolio.

Purpose of This Study

The research assessed the challenges that the Army faces in executing its equipping and modernization plans with the current budget reductions and budget uncertainty and sought to identify areas of efficiency within the Mission Command portfolio to reduce program risks. The areas of efficiencies that this study examined involved the amount of legacy equipment, non-POR, and non-standard equipment that exist that can be candidates for divestment.

Significance of This Research

This study helps identify the number of systems that are legacy or non-POR (including non-standard equipment) within the Mission Command portfolio and the funding challenges they create in the current financial environment that the Army faces. The results may inform and influence the funding decisions that are made within the Mission Command portfolio in support of the current Army equipping and modernization guidance. The results also show that guidance and criteria need to be developed by the Army to guide the strategic choices concerning disposition of equipment within the portfolio as the Army equips and modernizes the force.

Overview of the Research Methodology

The research method is based on a literature review and a survey. The literature search was conducted to research emerging Army equipping and modernization priorities across the current POM years. The focus was on the funding profile within the DA G8 Mission Command portfolio and assessment of the impact of reduced funding (including supplemental funds) as a result of the end of Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF), sequestration, and the Budget Control Act of 2011. The survey provides insight into the number of programs managed by program/project/product managers (PMs) and product directors (PDs), whether or not the programs have traceability back to requirements documents, and their source of funding.

Research Question

What are the opportunities for divestiture within the DA G8 Mission Command portfolio that would provide efficiencies and allow for greater investment in modernization efforts in support of the Army's equipping and modernization guidance as budgets are reduced (including supplemental funding)?

Research Hypothesis

The Army G8 Mission Command portfolio has systems (legacy systems, non-PORs, and non-standard systems procured during wartime) that are candidates for divestment in order to reduce the threat to the Army equipping and modernization plans created by reduced budgets and sequestration effects.

Objectives and Outcomes

The objectives of the study are to provide information on the extent to which legacy systems, and non-PORs (including non-standard equipment) exist within the Mission Command

portfolio, to assess their impact on equipping and modernization, and to make recommendations on how to divest the equipment no longer needed.

The outcome provides information that can be used to inform funding decisions across the POM years and identifies systems/programs within the Mission Command portfolio that are candidates for divestment in order to meet Army equipping and modernization goals.

Limitations of the Study

A potential weakness of this study is that it focuses on systems and equipment and does not take into account the effect of budget reductions on PM staffing (both potential staffing reductions and the impact of furloughs), which also affect the mission. In order to narrow the scope of the research, the questionnaire concentrates on the Mission Command portfolio within the DA G8. While the Army plans for equipping and modernization, and the budgetary issues discussed in this research apply to the entire Army acquisition community, the emphasis of this paper is on the Mission Command portfolio within the DA G8.

Validity of the Research

An indirect variable that would affect validity of the research would be any future congressional financial plus-ups or resource management decisions that would change programs' funding postures. These resource decisions were not available during the time of this study. Another variable was the amount of participation by the survey respondents, which could be a limiting factor due to potential bias toward their programs. Some survey questions were either skipped or incompletely answered. PMs and those in a PM office often become "wedded" to their programs and feel a sense of ownership that may lead them to protect their systems to assist the survival and viability of their PM office.

Reliability of the Responses

With respect to the review of reports, Army documents, and literature on this topic, this research can be replicated and produce similar results. The results of the survey questions may not produce the same results because acquisition policy, budgets, and equipping and modernization guidance could change over time. In addition, the results could be different if a different demographic were chosen within the EE PEG.

Chapter 2 – Literature Review

This literature review is intended to provide an understanding of the effects of the Department of Defense (DoD) and DA strategic guidance and of budget reductions on the Army equipping and modernization goals. Specific emphasis is placed on the risks and challenges inherent to the Army's Mission Command portfolio. The review is presented in four sections: DoD Strategic Guidance, DA Guidance and Plans, Army Budget Posture, and Budget Reduction Effects on Readiness and Modernization. The review will study the challenges the Army faces as it "transitions from Afghanistan through sequestration towards regionally Aligned and Mission Tailored Forces" (DA, 2013b, p. 7).

DoD Strategic Guidance

The driving force for Army strategic planning comes from various strategic documents that guide defense programming, operational planning, and budgets. At the forefront of the Army's plans to realign, equip, and modernize the force is the Defense Planning Guidance (DPG). After a decade of war, and with the drawdown of operations in Afghanistan, the President and Secretary of Defense released their strategic planning guidance in January 2012. The guidance emphasized a shift in DoD focus to the Asia-Pacific region and laid the foundation for reshaping the U.S. military into a Joint Force that will be smaller and leaner, but more agile, flexible, ready, and technologically advanced (DoD, 2012).

The shift in strategy articulated in the guidance will cause a change in the way the Army equips, modernizes, and trains the force. For the past 10 years, the Army has focused on the wars in Afghanistan and Iraq with a large force, but now it will shift focus to a different region with a smaller, more agile force. The shift will drive changes in the Army's strategy for equipping and modernizing the force and could leave the capabilities and equipment within the Army out of

sync with the new strategy, as the previous investment strategy was focused on the current conflicts in the Middle East. The full impact of the guidance on the Army acquisition community will not be realized until the Army revises its strategic guidance as a result of this new DoD policy. The Army acquisition community will have to consider whether the capabilities and equipment that we have in the portfolio today meet the needs of the new strategies.

Building on the DPG, the Quadrennial Defense Review (QDR) articulates the DoD plan for adapting the force to the new strategy. The 2014 QDR builds upon the priorities and missions articulated in the 2012 DPG and emphasizes three pillars: protect the homeland, build security globally, and project power and win decisively (DoD, 2014). The review stresses the *rebalancing* of the Joint force. While the review states the DoD will be able to meet the missions and fulfill the intent of the defense strategy, it is with risks to Army end strength and modernization. The review also warns that if sequestration-level cuts come to fruition beginning in FY 2016, overall readiness will be affected and critical modernization programs will be broken (DoD, 2014).

Army Guidance and Plans

Following the release of the DPG and simultaneous with the development of the 2014 QDR, the chief of staff of the Army (CSA) articulated the Army's overall vision for its part in the DoD strategies in the Army Strategic Planning Guidance (ASPG). The ASPG provides the framework for implementing and integrating the CSA's vision of "a regionally aligned, mission tailored force that can Prevent, Shape, and Win now and in the future" (DA, 2013c). Four imperatives are identified to meet this vision:

- "Provide modernized and ready, tailored land force capabilities to meet the combatant commanders' requirements across the range of military operations;
- Develop leaders to meet the challenges of the 21st century;

- Adapt the Army to more effectively provide land power; and
- Enhance the all-volunteer Army” (DA, 2013c, p. 8).

With these imperatives in mind, the strategy describes the near- and mid-term actions that include modernizing the network and equipment. The strategy acknowledges that equipment was developed with Overseas Contingency Operations (OCO)/supplemental funding and that there are some difficult decisions needed to either retain or divest these systems as OCO funding is transitioned to base funding. This is particularly important to modernization because the transition of equipment from OCO funding to base funding spreads the available base funding within the portfolio even thinner.

Building on the ASPG, the 2013 Army Modernization Strategy provides further guidance and establishes the framework for the synchronization of requirements, resourcing (funding), and acquisition processes to modernize the Army’s equipment (DA, 2013a). The strategy focuses on the following guiding priorities: enhance soldiers for broad Joint mission sets, enable the network for Mission Command, and remain prepared for decisive action. For the Mission Command portfolio, the objective is to deliver an “integrated and interoperable network that connects all echelons from the soldier to the Joint Task Force along with interagency and coalition partners” (p.13).

In providing the near-, mid-, and far-term objectives for each portfolio, the strategy sets the priorities for the Army’s modernization effort and will guide the investment decisions made in each portfolio. The strategy addresses only overall capabilities over time and does not address what program/systems will deliver the capabilities.

Further defining the way the Army will adapt to the new policies and guidance, the Army Equipping Guidance (2013) provides “multi-year guidance for Army Components, Major

Commands, and units to allocate and distribute equipment” (DA, 2013b, p. 7). The purpose of the guidance is to reduce risks and cost during the transition to the new strategies. The guidance outlines three lines of effort: equipping units for their missions, increasing readiness by redistributing equipment, and saving money.

Together, the equipping guidance and the modernization strategy provide the context for how the Army will distribute equipment to units and what capabilities the equipment will provide in support of the overall Army strategy. These will drive the decisions on what capabilities and equipment to invest in and which ones can be divested. While it is pointed out that the Army is willing to divest equipment to decrease operating costs, operations tempo, and sustainment costs, there is no guidance or criteria presented on how to make those decisions. If left up to the individual portfolio managers to decide how to invest their funds in light of the strategy, there could be inconsistencies in how the efforts are implemented across the entire Army equipment portfolio. This could add more risk in meeting the goals of the Army Strategic Planning Guidance.

Following the guidance in the modernization strategy and informed by budget limitations, the Army Equipment Plan (formerly Army Modernization Plan) details the Army’s RDA investments in support of the President’s budget for a particular fiscal year. The plan details how the Army’s RDA request for the year is linked to the Army Modernization Strategy and shows where the investments have been applied. According to the plan, the FY 2015 RDA investments for the Army “have declined 39 percent since the FY 2012 budget planning cycle” (DA, 2014, p. 8). As a result, the Army will not “be able to fully recover to a modernized Total Force until FY 2023” (p.10).

According to the FY 2015 plan, the FY 2015 Mission Command investments total \$2.7 billion and include communications transport, applications, and network service capabilities (DA, 2014a). This represents a 29% reduction in funds when compared to the FY 2013 and FY 2014 equipment plans. The impact of such a reduction limits the extent to which the portfolio can modernize its capabilities and also affects the amount of equipment that can be procured and fielded. The plan also details the key Mission Command investments for the year in accordance with Army guidance.

While the plan does point out that there are risks being accepted within the portfolio, it does not provide any detail of the operational impact of the risks. Putting the risks in operational terms would add better granularity of the impact in meeting the DoD and Army strategies and guidance. Further, the priorities in the plan only include PORs and contain no guidance about the rest of the equipment in portfolio. This creates a dilemma for PMs on how to balance their allocated funds across the Army priorities and the rest of the equipment they manage. While the plan also looks at divesting equipment as a way to gain efficiencies to reduce equipping and modernization risks, there is no guidance to PMs on where to divest.

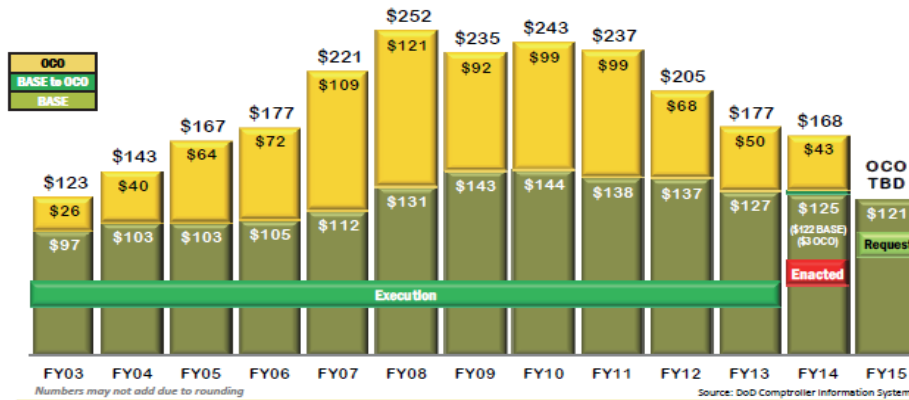
Army Budget Posture

The Army budget is a critical component that will drive the accomplishment of equipping and modernization goals. As mentioned earlier, the Army's budget increased substantially over a number of years, but it is now being reduced dramatically as we come out of more than 10 years of war. The supporting documentation for the Army's 2015 budget request (Dyson & Welch, 2014) depicts the changes in the Army funding profile since 2003 (Figure 1).



Army Budget Trends FY 2003 - FY 2015 (\$B)

FY 15 continues declining budget levels, necessitating end strength reductions and deferred modernization programs



Given realities of constrained budgets, the Army must adapt, innovate, and make difficult decisions impacting the Total Force

Figure 1 – Army Budget Trends

Source: Adapted from Dyson & Welch, 2014, p. 4

Figure 1 represents the total Army budget. From 2010 to 2014 the Army budget was reduced by 31%. To determine the effects of these reductions on Army modernization, the focus needs to be on RDA accounts. Specifically, within the RDA accounts, the Army G8 Mission Command portfolio is responsible for Mission Command equipping and modernization. This portfolio is integral to two of the three main focuses of the Army Modernization Strategy: the soldier for the Joint mission, and enabling the network. In contrast to the budget reductions stated in the 2015 Army Equipment Plan, the actual reductions were 35% versus 29% over the time period. The difference was due to the use of planning numbers to support the President’s budget as investment figures in the equipment plan rather than the actual appropriations for those years. The total funding in the Mission Command portfolio across the 5-year Future Years Defense Program (FYDP) from POM 13 to POM 16 dropped from a total of \$22.8 billion to

\$15.04 billion (DA, 2014b). This also represents a 35% reduction across the POM years. If sequestration is not avoided in 2016, there may be another 25% reduction of RDA funding, further affecting modernization efforts. This was echoed by Army Vice Chief of Staff, GEN John Campbell (2014), who said, in his testimony to the subcommittee on readiness and management support, that if the above sequestration cuts are allowed to go into effect in 2016, there would be a significant reduction to Army modernization accounts, which would affect the majority of programs in the Army.

According to the Mission Command Equipment Plan for POM FY 2017–2021 (Carter, 2014), the current budget constraints will remain in effect for this 5-year FYDP. The plan provides guidance to PMs for preparing budget requests for the POM years. The plan also restates the need for delivering capabilities in an affordable manner while divesting obsolete equipment and reducing sustainment costs. An interesting note in this planning guidance is that capabilities must be tracked to a requirements document before funding in the FY 2017 POM will be considered (Carter, 2014).

With the 35% reduction in funding in the portfolio since FY 2012, coupled with the budget constraints remaining in effect through FY 2020, the challenges the Army faces today should be expected to continue. The budget documents also reference PORs as the priorities for equipping and modernization investments and make no mention of non-PORs and non-standard equipment. With the severity of the reductions since 2012 and the focus of modernization on PORs, it is surprising that there is no mention of the disposition of the rest of the equipment in the portfolio. To this end, there is no evidence in any of the documents of divestitures that were made in programs or equipment as the budgets have been declining since FY 2012, nor guidance on future divestment opportunities to reduce modernization risk. Is the Army leaving it up to

PMs to decide how to distribute their allocated funding across the programs they manage? This could lead to inconsistencies in how the modernization effort is implemented across the portfolio.

Budget Reduction Effects on Readiness and Modernization

Barclay (2014) asserted that the Army's goal during this period of budget uncertainty is to "maintain a proper balance between end strength, readiness, and modernization across the Total Army" (p.166). He stressed the need to concentrate funds on rebuilding readiness, and to do this we must accept greater risk in our modernization programs in the near-term while maintaining investments in science and technology to meet future needs. Barclay further argues that "when Sequestration-level budget caps return in fiscal year 2016, the Research, Development, and Acquisition accounts will bear the burden of these unrelenting reductions. Accordingly, this will directly impact every modernization priority and every equipping program the Army has on the books" (p. 170). This fact further reinforces the need to look for areas of efficiencies to preserve available funding, and it is consistent with the concept of this research in that divestiture is one area to consider and necessary to reduce these effects.

Dunn (2013) makes the argument that maintaining combat readiness in these times of declining budgets is increasingly difficult. He describes readiness as a three-legged stool where personnel, equipment, and training represent the legs and need to be balanced to be effective. Acknowledging that readiness is a very complicated subject to understand, Dunn asserts that Congress needs to have full awareness of the three dimensions of readiness in order to avoid an unbalanced force. In addition, Dunn points out that in times of budget decline, procurement accounts have been hit hard, which leads to delays in modernization and forces the Army to rely on older, less reliable equipment that can become less effective over time. Many senior Army

leaders have reiterated this point and posit that the RDA accounts have been taking the brunt of the budget cuts and will be hit even harder if sequestration is allowed to come into effect in FY 2016. Dunn (2013), however, does point out that Congress should learn from our past challenges during times of declining budgets (post-Vietnam, post-Cold War [1990s]) and not repeat mistakes of the past.

Campbell (2014) emphasizes the challenges of keeping the force in balance due to the combination of the severity of current budget cuts, unpredictable budget climate, and the Army's worldwide commitments. This balance is necessary "to avoid becoming a hollow Army. A hollow Army is a large force that lacks adequate training and modernized equipment" (Campbell, p. 3). He warns that there will be a period of hollowness and decreased readiness during the downsizing.

This is not the first time the military has seen large budget cuts following years of war and conflict. In their research, Feickert and Daggett (2012) provide an understanding of how the force became "hollow" in the past, thereby adding some context as the military goes through another period of declining budgets. In their report, the authors provide detail on the factors that led to the references of hollow forces following Vietnam and the Cold War. While the socioeconomic conditions during these two time periods were different, in both cases decisions made on how to allocate the budget were factors leading to the hollow force (Feickert & Daggett, 2012). In the first case, following a period of rapid budget decline, coupled with the rising personnel costs brought on as a result of the elimination of the draft (transition to an all-volunteer force), modernization was put on hold. As budgets began to rise a few years later, the DoD decided to focus on the replacement of the 1950s-era technology from the Vietnam War and develop new weapon systems. The authors provide an assessment by the Congressional Budget

Office that suggested, "...aside from the aforementioned social conditions, that leadership decisions on procurement of new weapons versus readiness also played a role in the creation of the hollow force" (p. 8).

In the 1990s, as budgets were continuing to decline, the concerns of a hollow force were again voiced. However, in this case the authors (Feickert & Daggett, 2012) point out that the DoD decision to add plus-ups in operations-and-maintenance accounts with each annual budget to aid readiness came at the expense of the procurement accounts (weapons modernization). As this trend continued, it became characterized as a "procurement holiday" from year to year. This again led to a force that was out of balance.

As noted above, common to both of the examples was the DoD's struggle to balance force structure changes, readiness, and modernization. The challenges of today are no different than they were in the past two eras of declining budgets. As has been discussed in this chapter, the Army is trying strike a balance between force structure reductions, readiness, and modernization during the current rounds of budget declines. However, it appears that this time the Army has learned something from the past struggles and has put the *rebalancing* of the force as it's priority as highlighted in the 2012 DPG and the 2014 QDR.

While the Army's plans and strategies for modernization point out that there are risks being taken due to the budget situation, there are some competing perspectives on the amount of risk that is being assumed. Feickert and Daggett (2012) point to a 2011 report from the Stimson Center that suggests that "over the past decade, the military services took advantage of increased procurement funding to modernize their forces more substantially than DoD officials have sometimes implied" (Feickert & Daggett, 2012, p. 17). They further state that the Congressional Research Service calculated when recent amounts of weapon modernization (equipment

purchased over the past 10 years) are compared to the amounts invested in the mid-1980s, the dollar value of the relatively modern equipment available today appears to be robust (Feickert & Daggett, 2012).

Conclusion

The majority of documentation reviewed in the research was published either by or for the DoD, which is the primary author of documentation regarding defense planning. A possible weakness is that there is a potential for proscribed thinking. These references provide key insight into the challenges the Army faces in its efforts in equipping and modernization in the reduced funding environment.

The literature review provided critical background on the policies and strategies driving the changes in Army force structure and missions. These strategies create challenges for the Army in developing equipment and modernization strategies. The Army's dilemma rests with the fact that, after 10 years of war, the capabilities and equipment in the inventory may be out of sync with the new strategy. While the documents reviewed during the research detail the Army's plan to meet the goals of the strategies, the plan only addresses the capabilities through PORs. There is no guidance for the disposition of the vast amount of equipment and capabilities purchased for fighting the wars in Iraq and Afghanistan, including the capabilities and equipment that already existed within the inventory. The review also provided significant information about the challenges of rebalancing the force and the risks in providing a modernized force. There were, however, no details in any of the documentation showing the progress that has been made to date in the Army's modernization efforts as the result of increased budgets during wartime. Without providing the detail on what has been done and what is left to do, it is difficult to assess the severity of the risks the Army is accepting. This particular point was made in the

Congressional Research Service findings that the value of the equipment modernization over the past 10 years, taking into account inflation factors, appears fairly robust when compared to the mid-1980s. This suggests the risks that are mentioned by the Army may not be as bad as stated.

The literature review also provided details of the reduced budget climate since FY 2012. The recurring theme in the literature review is that reduced resources is the most significant challenge the Army faces as it restructures the force, resets equipment coming out of Afghanistan, and equips and modernizes the force to meet new missions. With an RDA budget that has been reduced by 39% since 2012, how does the Army expect to meet the equipping and modernization goals and support the entire inventory of equipment it possesses? The challenges will be magnified if sequestration is not averted in FY 2016, which could bring additional funding reductions of 25%. Even with the severity of the reductions facing the Army, the Mission Command portfolio budget documentation addresses only PORs and makes no mention of the rest of the equipment in the portfolio. The lack of guidance suggests that it will be up to PMs to decide on how they allocate the funds in their budget lines across the programs and equipment that they manage. This could lead to an unbalanced modernization effort within the portfolio based on the diversity and breadth of equipment in their respective program offices.

While the concept of divestiture is mentioned many times in the reference documents as a way to save money and to conserve resources, there was no guidance on how to base decisions on the disposition of equipment that does not align with the strategy. With the focus on PORs to meet the capabilities in the equipping and modernization plans, my assumption is that any legacy equipment, non-PORs, and non-standard equipment that exist within the portfolio should be candidates for divestiture to reduce risk. This assumption provided the context for the development of a survey. The concept of divestiture discussed in the references supports the

basis of this paper in that the Army needs to take a top-to-bottom look at all of the equipment/systems in the portfolio and decide which systems to keep and which to divest. When divesting equipment, it will be important to divest systems from the inventory rather than moving the systems to sustainment. Moving all of the equipment not needed for the new strategy to sustainment will affect readiness, because there will be more systems to sustain with the same funding, thus impairing the balance that the Army wants to maintain between readiness, training, and modernization.

Chapter 3 – Research Methodology

This chapter provides the research methodology, research process, and the data collection used to examine the effects of reduced budgets on Army equipping and modernization plans and serve as the basis for recommendations on criteria for divesting equipment to reduce risk.

Research Hypothesis

The Army G8 Mission Command portfolio has systems (legacy systems, non-PORs, and non-standard systems procured during wartime) that are candidates for divestment in order to reduce the threat to the Army equipping and modernization plans created by reduced budgets and sequestration effects.

Research Process

The research process involved a review of literature and a survey to collect data relevant to the research topic. To determine the factors that influence current equipping and modernization guidance and plans, a review of the DoD and Army Strategic Guidance, Army equipping and modernization guidance and plans, Army budget documentation, and other relevant literature was performed. This provided sufficient detail about the Army plans for equipping and modernization of the force as well as the challenges and risks. This literature review formed the framework of the survey questions, which were distributed to the targeted population.

An online survey tool (SurveyMonkey) was used to develop and collect the required data on programs within the research focus area (G8 Mission Command portfolio). The survey included three sections containing a total of 23 questions (both qualitative and quantitative). The initial section asked questions to determine the demographics of the survey's participants. Following this section, the survey was broken into questions in two areas: (1) program/system

information to document the numbers and types of programs in the managers' portfolio, including the type of requirements documentation; and (2) information describing how the programs/systems were funded (base funding and/or OCO funding) and the effect of funding reduction or elimination. There was one open-ended question that asked how programs that were funded solely with OCO would be funded if that type of funding went away.

Data Collection

The survey targeted only the PMs and PDs within the Mission Command portfolio. These PMs and PDs fall under Program Executive Office Command, Control, Communications-Tactical (PEO C3T); Program Executive Office Soldier (PEO Soldier); Program Executive Office Intelligence Electronic Warfare and Sensors (PEO IEW&S); and Program Executive Office Combat Support and Combat Service Support (PEO CS&CSS). A pilot survey was developed and distributed to solicit feedback and refine the survey questions before sending the survey to the larger audience targeted in the study. The final survey was sent to 44 PMs and PDs within the target area. This number is more than the number of PMs and PDs that manage programs in the portfolio. The number of product managers and product directors within PEO C3T, PEO Soldier, and PEO CS&CSS that manage programs within the Mission Command portfolio was known (25), and the survey was specifically targeted to them. The number of product managers and product directors within PEO IEW&S that manage programs within the mission command portfolio was not specifically known, so the survey was distributed to all 19 of them within the PEO. Due to the distribution it was expected that there would be a number on non-responses to the survey. The amount of participation by the respondents to the survey could be a limiting factor due to potential bias toward their programs. PMs and those in a PM office often become "wedded" to their program and feel a sense of ownership that may lead them to

focus on protection of their systems to assist the survival and viability of their PM office. All respondents read the informed consent agreement at the beginning of the survey and validated that their participation and responses were voluntary and anonymous.

Chapter 4 – Findings

This objective of this research was to identify the number of systems that are managed within the Mission Command portfolio that include PORs, and non-PORs (including non-standard equipment) and their impact on the equipping and modernization strategies. In addition, this research will propose possible criteria to be used in evaluating Mission Command systems for divestiture.

Population & Sample Size

Within the Mission Command portfolio, there are a finite number of PMs and PDs who manage the programs. The survey was sent out to 44 PMs and PDs within the Mission Command portfolio, as discussed in chapter 3. Only 16 respondents answered the survey. All 16 respondents agreed to the informed consent agreement; however, 8 did not complete the survey. Six responses provided only demographic data, while two others only agreed to the consent question and answered no further questions. A possible reason for this is due to the way the survey was distributed. Among the four PEO's within the portfolio, 25 PMs and PDs who manage equipment in the portfolio were known and targeted for the survey. The PMs and PDs in the fourth PEO (PEO IEW&S) who manage equipment in the portfolio were not known, so the survey was distributed to all 19 PMs and PDs within the organization. Many of the programs in this PEO are funded through the intelligence portfolio, and I expected a number of these PMs and PDs would not respond or complete the survey.

Using the overall sample size of 44, the 8 surveys that were completed represent 18% of the sample. While this may provide a low degree of statistical confidence, the questions in the survey have specific answers unique to each PM and PD and are not expected to be the same.

Due to this, the number of respondents that answered the survey may be sufficient for an initial analysis of responses and to draw some initial conclusions.

Collected Data

The following figures and data reflect the results of the survey that was discussed in chapter 3 and earlier in this chapter. I will step through each element of the collected data.

Questions 2 through 6 of the survey collected the respondents' demographic. The data presented for the demographics represents only the 8 respondents that completed the survey.

Question 2 asked for the respondents' position within their organization (Figure 2). Six out of the 8 respondents were PMs or PDs. The balance responded on behalf of the PM or PD they support.

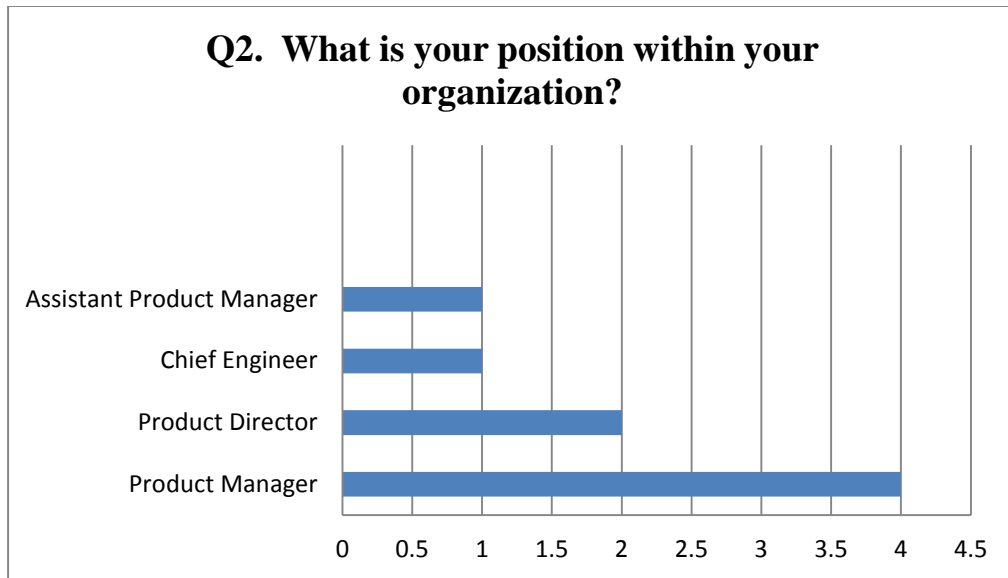


Figure 2 – Response to Question 2

Question 3 asked for years of experience in the military, Federal Government, or as a contractor. Seventy-five percent of the respondents had more than 15 years of experience (Figure 3).

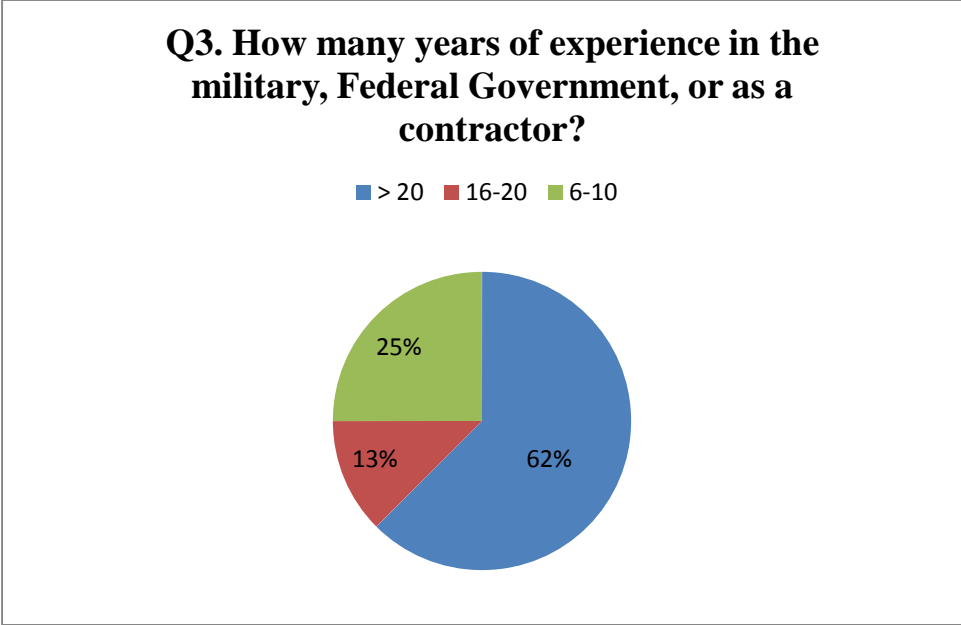


Figure 3 – Response to Question 3

Question 4 asked for the respondents' years in their current position (Figure 4). One hundred percent reported being in their current position for 5 years or less, with 38% in their current position for less than a year. None of the respondents has been in his or her current position for more than five years.

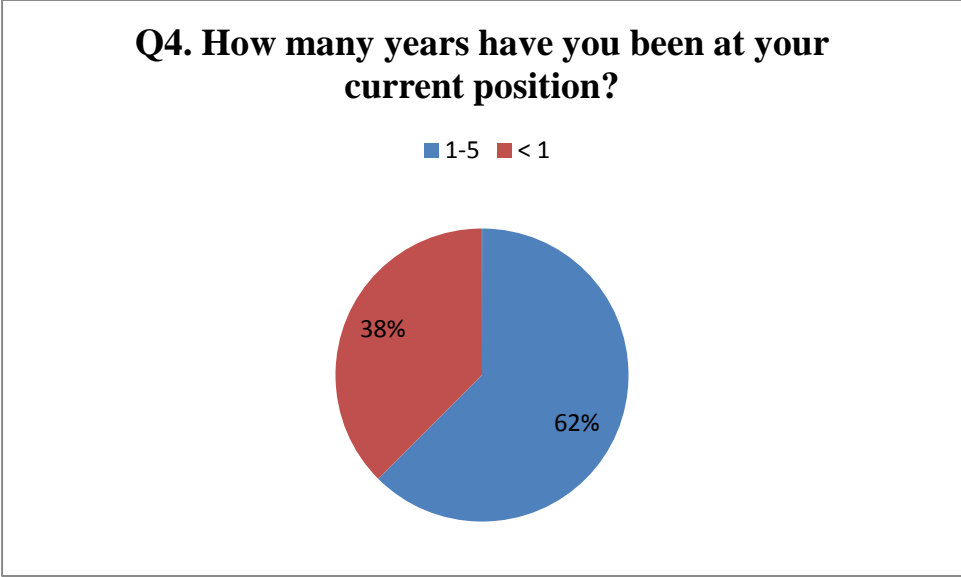


Figure 4 – Response to Question 4

Question 5 asked for the respondents’ rank or civilian grade (Figure 5). Eighty-seven percent of the respondents are either field grade officer or NH-IV, indicating a high percentage of senior level management. Fifty percent of the respondents that completed the survey were Army officers; the other 50% of the respondents were DA civilians. One respondent was an NH-III (GS 12-13 equivalent).

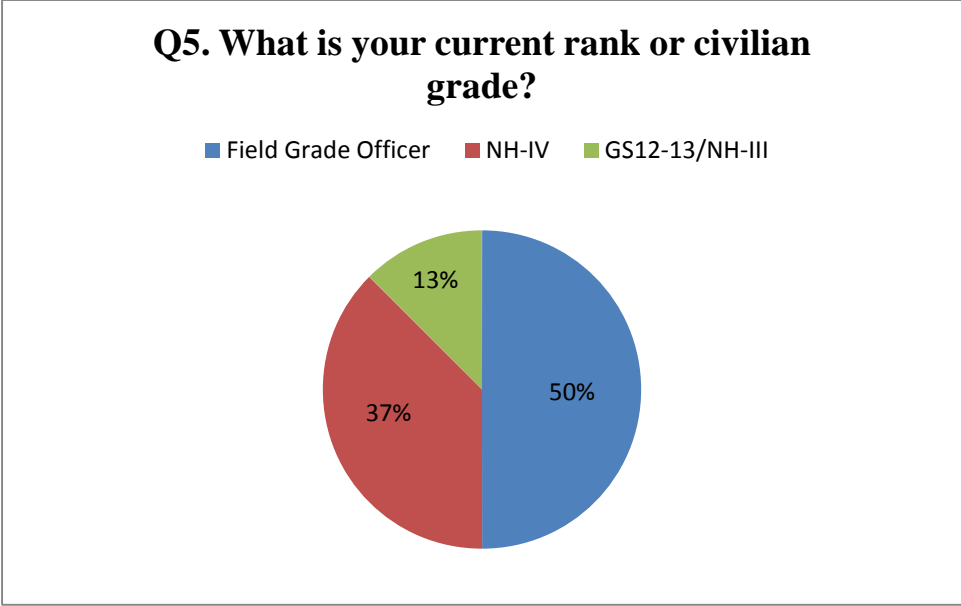


Figure 5 – Response to Question 5

Question 6 asked for the respondents’ Defense Acquisition Workforce Improvement Act primary acquisition field and certification level (Figure 6). Seventy-five percent of the respondents’ primary acquisition field was Program Management, four with level 3 certification and two with level 2 certification. Two respondents had a primary acquisition career field of Systems Engineering; both of these were level 3 certified. In addition, 75% of the respondents are level 3 certified in their career fields.

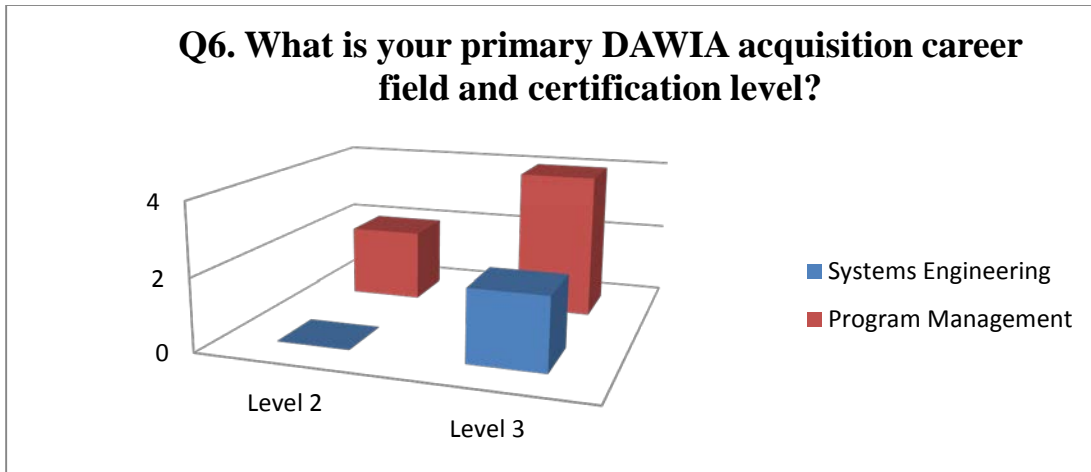


Figure 6 – Response to Question 6

Questions 7 through 23 asked respondents to identify how many programs they managed, program type, requirements traceability, and type of funding (base, OCO).

Question 7 asked respondents how many programs/systems under their management are resourced through the G8 Mission Command portfolio. The aggregate total of systems from the respondents' answers to the survey totaled 45. The distributions across the 8 respondents can be seen in Figure 7.

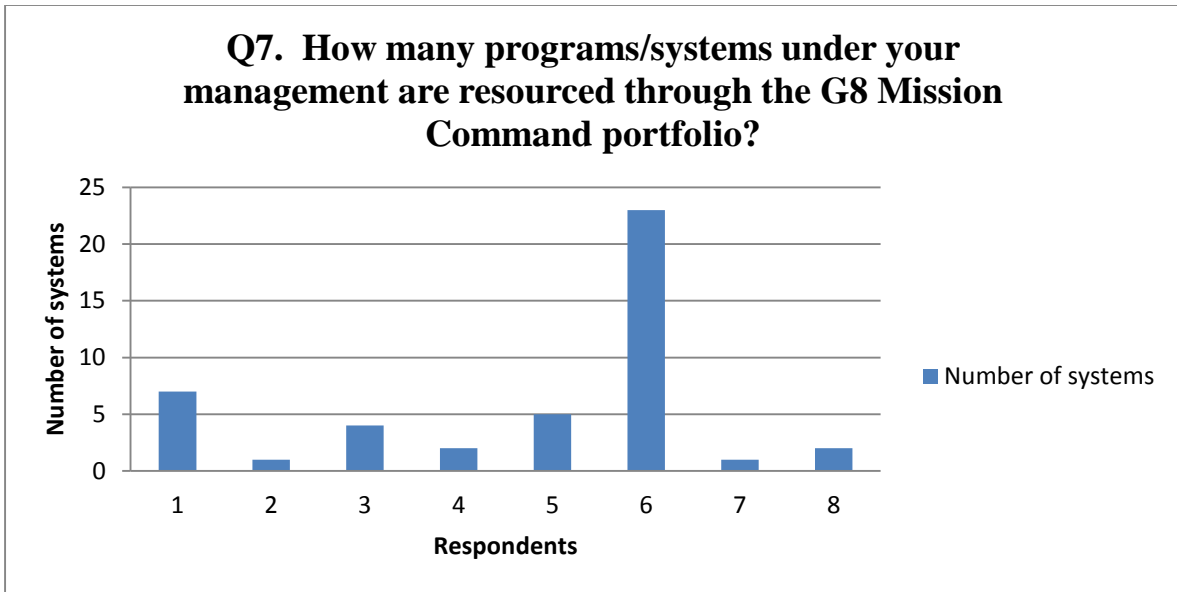


Figure 7 – Response to Question 7

Question 8 asked respondents how many of these programs/systems are either PORs, non-PORs, or non-standard equipment (quick reaction capabilities from OEF/OIF)? The data show that of the 45 programs/systems that are managed by the respondents, 25 are non-PORs or non-standard equipment (56%; Figure 8).

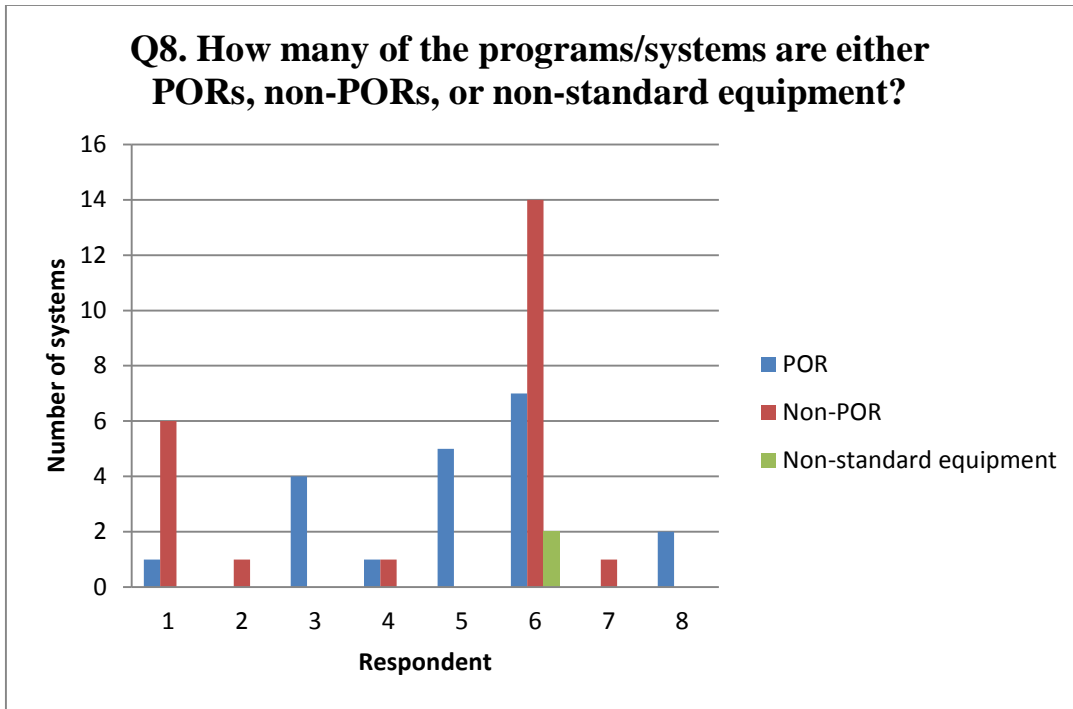


Figure 8 – Response to Question 8

Question 9 asked the respondent whether any of the PORs they identified were considered legacy systems. This was a yes-or-no question, and four of the eight respondents selected yes and the other half selected no.

Question 10 is a follow-on question to any respondents who answered yes to question 9. The respondents were asked whether any of the legacy systems were candidates for sustainment, and if so, how many, and were there plans for transferring them? All four respondents that answered yes to the previous question provided answers to this question. Of the four respondents, two provided complete data while the other two had incomplete data. One of the respondents stated that some of the PORs will be candidates for transition over the next 3 years without any specifics. Another stated that two PORs are candidates, but provided no additional data. All total, three systems were candidates for sustainment; one respondent stated that two

systems were candidates but provided no other detail, while the other respondent plans to transition one of the PORs to sustainment in 2017.

Question 11 asked the respondents whether any of the non-PORs or non-standard equipment listed in question 8 have approved requirements documents? Five of the respondents selected yes to the question and three either selected no or n/a.

Question 12 is follow-on to question 11. It asks the respondent, for those that have approved requirements documents, to list the document type and approval date and to include an entry for each program/system. The data collected show that 20 of the 25 non-PORs and non-standard equipment have requirements documents (Figure 9). For 12 of the 20 systems, it is unclear what type of requirements document exists and whether they are approved. The respondent stated that all had requirements documents and most had a Capabilities Production Document (CPD) but failed to provide any detail. The requirements documents that were cited in the survey were the Operational Needs Statement (ONS), Initial Capabilities Document (ICD), Capabilities Description Document (CDD), and CPD. Only one respondent provided the approval date for their requirement document.

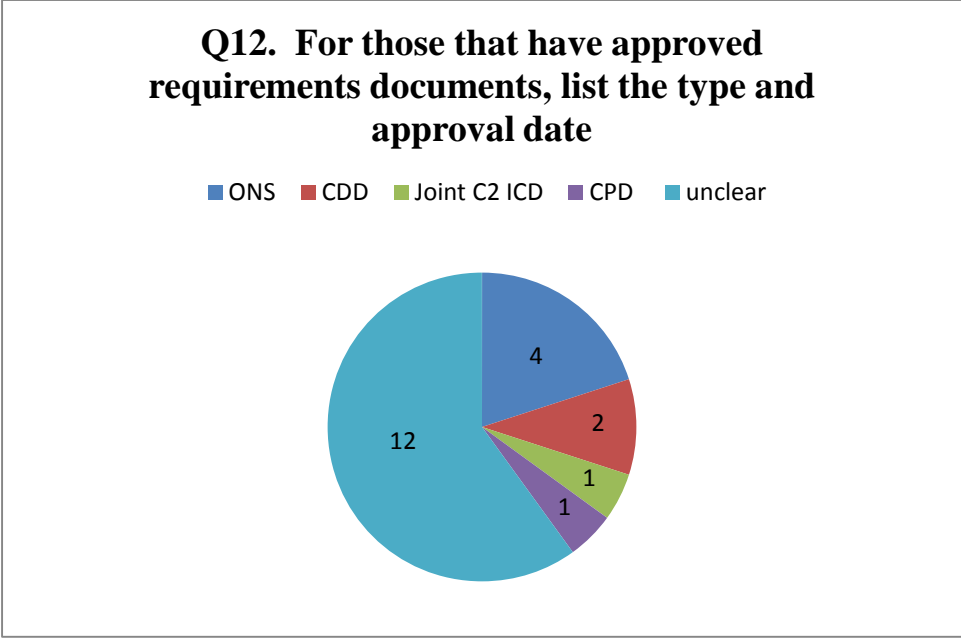


Figure 1 – Response to Question 12

Question 13 and 14 are also follow-ons to question 11. They asked respondents whether the systems without requirements documents are in the process of being documented and if so, how many. The data showed that five non-PORs lack approved requirements documents and also lack plans for documenting the requirements.

Questions 15 and 16 asked respondents whether any of the PORs under their management received supplemental/OCO funding over the past 10 years and if so, are they still receiving supplemental/OCO funds. Two of the six respondents answered yes to question 15 and both answered no to question 16.

Question 17 and 18 were skipped by the respondents. Question 17 was a follow-on to question 16 and asked whether there was an impact to PORs that were still receiving supplemental funding if that source of funding went away. Question 18 was a follow-on for those respondents who answered yes to question 17. It asked what areas of the program would be impacted. This was expected due to the answers to question 16.

Question 19 asked whether any of the non-PORs or non-standard equipment identified in question 8 was funded with base funding. All five respondents with equipment in this category answered the question. Three respondents answered yes while the other two either answered no or n/a. The n/a answer was unexpected. The respondent who answered n/a does manage one non-POR and skipped the rest of the questions.

Question 20 was for those respondents who answered yes to question 19. It asked the respondents to list how many systems, by type (non-POR or non-standard equipment), were funded with base funding. According to the respondents, 16 of 25 of the non-PORs and non-standard equipment use base funding. All 16 were non-PORs. The balance of the respondents skipped this question.

Question 21 asked whether any of those systems identified in question 20 were captured in budget justification documents (P and R forms). Four of the five respondents that manage non-PORs or non-standard equipment answered yes to the question. While the question identifies that some of the non-PORs and non-standard equipment are part of budget justification documents, it does not provide any detail concerning how many systems are included in the forms.

Question 22 asked how many of the non-PORs and non-standard equipment in question 20 received supplemental/OCO funding in addition to base funding. All three respondents who answered question 20 provided answers to this question. All stated that none of the non-PORs received supplemental funding in addition to base funding. The respondent who also manages the two pieces of non-standard equipment stated that the equipment was funded in previous years with OCO.

As a result of the responses to question 22, questions 23 and 24 were either skipped or answered with n/a. Question 23 asked the respondent how many non-PORs or non-standard

equipment under their management are funded solely with supplemental funding. Question 24 was an open-ended question asking how any of the systems listed in question 23 will be funded if supplemental funding goes away. Based on the responses to question 22, it was expected that these two questions would either be skipped or answered as n/a.

The survey findings indicate that PMs have a strong affinity with their programs, even those programs that do not have proper documentation. Three of the eight respondents who completed the survey did not answer the funding questions, and a fourth was contradictory in the answers to the same questions. The survey revealed that 56% of the systems managed by the respondents are non-PORs and non-standard equipment; however, it was inconclusive at identifying the types of requirements documents for each system. Only one respondent provided an approval date for the requirements documents. The data show that there are opportunities for investigation into divestment of equipment in order to gain efficiencies. Based on the survey results, my recommendations in chapter 5 are limited to the need for guidance on disposition of non-PORs and non-standard equipment and possible criteria for identifying programs/systems for divestiture to gain efficiencies in the Mission Command portfolio.

Chapter 5 – Conclusions and Recommendations

The purpose of this chapter is to summarize the results of the study that was conducted on the effects of reduced budgets on Army equipping and modernization. The research assessed the challenges that the Army faces in executing its equipping and modernization plans with the current budget reductions and budget uncertainty, as well as identified areas of efficiency within the Mission Command portfolio to reduce program risks. The areas of efficiencies that this study examined involved the number of legacy equipment, non-POR, and non-standard equipment that exist that can be candidates for divestment. This chapter includes a summary of results as well as an evaluation of how the findings in chapter 4 support the purpose of the study, research question, research hypothesis, and recommendations.

Summary of Results

The review and analysis of Army strategies and plans for equipping and modernization along with the results of the survey appear to support the research question and hypothesis. The question the research was seeking to answer concerned the opportunities for divestiture within the DA G8 Mission Command portfolio to achieve efficiencies and allow for greater investment in equipping and modernization efforts during this time of reduced Army budgets. The literature review revealed that the DoD and Army plans and guidance for equipping and modernization only address capabilities through PORs. Even though these plans are updated on an annual basis, there was never any mention of non-PORs or non-standard equipment in the priorities for equipping units and modernization. The literature review also showed that the Army's RDA budget has declined by 35% since FY 2012, adding further risk to modernization efforts. The decline in funding substantiates the need for efficiencies in the portfolio. The lack of guidance on non-PORs and non-standard equipment, coupled with the need for efficiencies and declining

Army budgets, leaves those systems as the logical candidates for divestiture. However, without Army guidance on the disposition of the equipment, PMs will continue to spread their appropriated funding across all programs/systems within their portfolio, reducing the funding that can be allocated to modernization. The findings from the survey showed that there are at least 25 non-PORs and non-standard equipment that exist within the portfolio, supporting the research question for the opportunities for divestiture to gain efficiencies. The details of the findings are expanded below.

The survey was useful in providing information with regard to the number and types of systems managed by the respondents. Overall, the survey revealed that of the 45 systems managed by the respondents, 25 were non-PORs or non-standard equipment. The data show that 56% of the systems managed by the respondents are not PORs. The survey also revealed that legacy systems exist in the portfolio as well. Four were specifically identified, while another response stated that several systems will be candidates over the next 3 years. The amount of non-PORs and non-standard equipment identified in the survey along with legacy systems supports the research hypothesis that the Army G8 Mission Command portfolio has systems that are candidates for divestment in order to reduce the risks inherent to the Army equipping and modernization plans. The eight respondents represent 18% of the targeted survey recipients, therefore a greater amount of non-PORs and non-standard equipment across the portfolio can be expected when considering all systems managed by the PMs and PDs in the portfolio. An important part of the survey was to collect data on the traceability of the systems to valid requirements documents. The data from the survey showed that five of the non-PORs have no requirements documents or any plans on documenting and validating a requirement. The balance of the non-PORs and non-standard equipment were reported to have requirements documents,

but the data were inconclusive for 12 of the remaining non-PORs. Traceability to requirements is important, as DoD 5000.02 states that a requirements document is required as part of the acquisition process (DoD, 2015). Therefore, without a requirements document the Army should not spend scarce funding on systems that are not in line with acquisition policy. Further research is required in this area to determine the source of the requirements for all of the equipment in the portfolio as well as the date the requirements were validated. Capabilities documented in older requirements documents may not be applicable to the current shift in strategy and force structure.

Another area of the survey that was inconclusive concerned how programs are funded. The survey was developed to identify the type of funding that is utilized for each program (base vs. OCO). Three of the eight respondents skipped all of the funding questions, while a fourth had contradictory answers to the questions. Of the four respondents who completed the funding questions, the data show all non-PORs are currently funded with base funding. If it is assumed that all of the equipment in the portfolio has transitioned from OCO funding during the war to base funding today, then not all of the funding outlined in the Army Equipment Plan will be spent on the PORs identified as the priorities. This is one of the challenges that the Army faces in executing the equipping and modernization strategies; the appropriated funds are supporting the entire portfolio of equipment that may not be aligned with the new defense strategies and Army plans.

The purpose of this study was to assess the challenges the Army faces in this environment of reduced budgets in executing the equipping and modernization strategies as well as identifying areas of efficiencies that can be realized to reduce risk. The lack of Army guidance on the disposition of non-PORs and non-standard equipment; the steep decline in Army funding and challenges that were identified in the literature review; the number of legacy systems, non-

PORs, and non-standard equipment coupled with the uncertainty of requirements documentation and funding sources identified in the survey support the purpose of this study. The survey results along with the insights from the literature review show the Army needs to take a comprehensive look at the current portfolio of equipment being managed within Mission Command and the link to the new Defense guidance, Army equipping guidance, and Army modernization plans. Any systems or programs not aligned to the new guidance and plans should be candidates for divestiture.

Recommendations

With the accumulation of equipment in support of a decade of war in one theater, combined with the shift in defense strategy to a different theater and the realignment of units to support new missions, the Army needs to develop guidance and criteria for the divesting of equipment that is no longer needed. In the absence of guidance and a process for the divestiture of unneeded equipment, PMs will continue to spend their limited program funding to support all of the equipment that they manage, adding risk to Army equipping and modernization efforts. Possible criteria for the prioritization of the funding of equipment should include valid requirements documentation, alignment of requirements documents to new guidance, and affordability (cost-benefit analysis should be completed for all programs). Any programs that do not meet the criteria should be divested from the inventory. When looking at valid requirements documents, special attention should be paid to the date of the approval. Older, validated requirements may not align with the new Defense guidance and Army strategies and plans, therefore all requirements documents should be reviewed. Decisions on the divesting of equipment need to be made at the Army level and not be left up to PMs to decide the best way to distribute their allocated funding across the entire portfolio that they manage. In the current fiscal

environment of declining budgets, every dollar needs to be spent for priorities, not on programs that do not align with the new strategies and missions articulated in the 2012 Defense Planning Guidance.

In addition, when purchasing capabilities for prolonged conflicts, the Army should have a plan for the disposition of the equipment once the conflict has ended. Currently, everything purchased during the past decade of war is still being supported.

Limitations

Among the limitations of the research is the lack of granularity on type and age of requirements documents for the systems in the portfolio. Another limitation concerns the amount of funding that is spent on the non-PORs and non-standard equipment in the portfolio.

Understanding the percentage of appropriated funds that are spent on non-PORs would be beneficial in assessing the risks to modernization of maintaining everything in the portfolio. The type of data described above would be better gathered from the portfolio managers rather than the product managers and product directors, as the latter are protective of the systems they manage and are focused on the survival of product office and programs.

Areas for Further Research

In addition to addressing the limitations of this study, a comprehensive look across all of the equipment portfolios in the Army should be conducted to provide details on how the funding appropriated to the Army for equipping and modernization is being spent. Further research should be conducted in the number of systems that are transitioned from the EE PEG to the sustainment PEG rather than removed from the inventory. While the risk to modernization efforts is reduced when the systems are transitioned to sustainment, there is a direct impact to readiness accounts. Simply moving systems from the EE PEG to sustainment only increases the

burden on the operations-and-maintenance accounts and will affect readiness, as now there will be more systems to support with the limited funding in those accounts. As stated before, simply moving to sustainment all systems that do not align with the new strategies will put the Army out of balance with respect to readiness, training, and modernization. The Army should look to divest equipment from the inventory in order to gain the efficiencies needed across the portfolios.

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Glossary of Acronyms and Terms

ASPG	Army Strategic Planning Guidance
CDD	Capabilities Description Document
CPD.....	Capabilities Production Document
CSA.....	Chief of Staff of the Army
DA.....	Department of the Army
DoD.....	Department of Defense
DPG.....	Defense Planning Guidance
EE PEG	Equipping Program Evaluation Group
FY	fiscal year
FYDP	Future Years Defense Program
ICD.....	Initial Capabilities Document
OCO	Overseas Contingency Operation
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
ONS.....	Operational Needs Statement
PD	product director
PEO C3T.....	Program Executive Office Command, Control, Communications-Tactical
PEO CS&CSS..	Program Executive Office Combat Support and Combat Service Support
PEO IEW&S ..	Program Executive Office Intelligence Electronic Warfare and Sensors
PEO Soldier ...	Program Executive Office Soldier
PM.....	program/project/product manager
POM.....	Program Objective Memorandum

POR.....program of record

QDRQuadrennial Defense Review

RDAresearch, development, and acquisition