



Sustaining Service Members and Their Families

Exploring Opportunities for Efficiency
and Joint Provision of Services Using
Nonappropriated Funds

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Preface

The Department of Defense (DoD) routinely seeks ways to become more efficient and reduce costs. Each military service provides its members and their families with a wide range of services supported by resources that are paid for using nonappropriated funding (NAF), congressionally appropriated funding, or a combination thereof. DoD was interested in determining whether any administrative NAF activities on the employee side could be consolidated—and, if so, whether consolidation would save costs. DoD created a task force to explore these issues and identified 15 areas for improvement, ranging from contracting to information technology. DoD Military Community and Family Policy asked the RAND National Defense Research Institute to review the work of the task force and provide an independent assessment of specific recommendations. In collaboration with the sponsor, RAND provided intensive analysis of recommendations in two areas for improvement that the task force identified. This report contains the results of that analysis, looking at the areas of NAF accounting and NAF employee benefits in terms of best practices in organizational change management, financial costs, and the savings that might be realized from proposed changes.

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Summary

Service member and family support organizations provide a wide range of programs designed to ease the stresses of military life and promote service member and family member well-being. Each military branch offers these programs at installations across the world, with a total annual cost of billions of dollars. The financial support of these programs may come from congressionally appropriated funding (APF), nonappropriated funding (NAF),¹ or some combination of the two. Supporting service members and their families is an ongoing priority, but current defense planning calls for reducing both the size of the nation's defense force and its budget. As the goals of many of the programs are similar across the military services, DoD has become increasingly interested in the possible synergy of service member and family programs.

In 2012, the Office of the Deputy Assistant Secretary of Defense for Military and Community and Family Policy (DASD [MC&FP]) appointed a task force of military personnel and management and financial experts to explore the feasibility of program cooperation and of improving efficiency through organizational change. Rather than changing service member-facing offerings, the target was back-office efficiency. Five-day Rapid Improvement Events (RIEs), or workshops, were held in which members explored how areas supported by NAF might improve efficiencies by sharing common processes and leveraging lessons learned. Each RIE elicited a series of recommendations for DASD (MC&FP) to consider in moving forward.

DASD (MC&FP) requested that RAND National Defense Research Institute conduct a deeper assessment of the RIEs' recommended areas for consolidation. Specifically, RAND was asked to review and assess RIE efficiency recommendations and to identify methods for improving their approach to change management. In addition, we were asked to provide insight into any potential challenges that consolidation might bring about, and to suggest ways to improve efficiency while maintaining or improving program quality.

The team developed three research questions to serve as an analytical foundation for its analysis:

- **What is a broad framework for effective change management?** The consolidation of services across DoD's military and family support spectrum is a sizable organizational

¹ *Nonappropriated funding* (NAF) refers to monies derived from sources other than congressional appropriations and commissary surcharge funds—primarily from the sale of goods and services to Department of Defense (DoD) military and civilian personnel and their family members—that are used to support or provide morale, welfare, and recreation programs (DoD, 2014a). According to the Army's NAF employee handbook, "NAF employees are not deemed to be Federal employees for purposes of most Office Personnel Management-administered laws and regulations. Thus, the policies, procedures, and entitlements relating to NAF employees are different than those for Appropriated Fund (Civil Service) employees" (U.S. Army, undated, p. 3).

change, and will affect not only those served by such programs but also personnel who work in them. RAND drew from a framework consisting of eight guidelines from contemporary change-management literature that would offer MC&FP guidance toward desired goals.

- **What does the framework look like when applied to government efficiency efforts?** RAND used the framework of eight guidelines to assess previous instances of DoD-related organizational change. We then applied this approach to specific examples important to MC&FP. We used data collected from the program areas in question to ensure the appropriateness of our recommendations.
- **Under what circumstances do the recommendations produce cost savings and therefore create a business case for change?** Finally, RAND conducted a cost analysis to further assist MC&FP in understanding the feasibility of the plans developed by the task force and during subsequent interactions.

After reviewing the RIE documentation for all of the selected areas, the team recognized that the recommendations revolved around changing business processes to leverage lessons learned among the military services and, in some cases, consolidating overhead functions across the military services. Because these recommendations required significant business process changes and investment, we examined the task force recommendations through two lenses: cost analysis and effective government change management. In collaboration with the sponsor, the team chose to focus on two program areas—*NAF accounting* and *NAF employee benefits programs*—both to support more-detailed analysis and to illustrate applications of the framework for change management that could be applied more broadly to other areas that the task force considered.

The team used both qualitative and quantitative methods, including a review of change-management literature, discussions about business processes, assessments of similar organizational consolidation cases, and cost-benefit analysis. Overall, the mixed-method approach enabled the team to identify best practices pertaining to efficiency initiatives, analyze change and the way forward, and assess the cost implications of such actions with business cases.

Change-Management Best Practices and the Eight-Point Framework

Sharing resources and pooling capabilities has the potential to increase efficiency and efficacy. Practitioner experience and literature by experts both suggest, however, that deep organizational changes such as program consolidation must be managed carefully. Changes such as those recommended by the RIEs can be difficult to achieve. Guidance from the literature and a framework through which to consider change management may prove helpful. Best practices from change-management literature, considered throughout the study, include the following eight guidelines (Fernandez and Rainey, 2006): Best practices from change-management literature, considered throughout the study, include:

1. Ensure the need: Managerial leaders must verify and persuasively communicate the need for change.
2. Provide a plan: Managerial leaders must develop a course of action or strategy for implementing change.

3. Build internal support and overcome resistance: Managerial leaders must build internal support and reduce resistance to change through widespread participation in the change process and other means.
4. Ensure top managerial support and commitment: An individual or group within the organization should champion the cause for change.
5. Build external support: Managerial leaders must develop and ensure support from political overseers and key external stakeholders.
6. Provide resources: Successful change usually requires adequate resources to support the change process.
7. Institutionalize change: Managers and employees must effectively institutionalize change.
8. Pursue comprehensive change: Managerial leaders must develop an integrative, comprehensive approach to change that achieves subsystem congruence.

Note that while the eight guidelines are listed sequentially, it is quite likely that efforts aligned with multiple factors will occur simultaneously, while at other times the change initiatives aligned to differing guidelines will occur at different points in the process.

NAF Accounting

Options for Consolidation

The Office of the Secretary of Defense (OSD) issues overarching policy guidance and regulations on accounting for the DoD components, including the military services. However, each of the military services independently conducts NAF accounting functions; these include payroll; accounts payable and receivable; financial management; and recordkeeping on sales (including point of sale [POS]), inventory, and more. Each function is accomplished using a variety of accounting and software systems.

The task force group working on NAF accounting recommended that DASD (MC&FP) choose one from among three courses of action (COAs):

COA 1. Structure Update: The military services would retain independent accounting and systems that feed departmental and POS transactions to the general ledger; however, all would adopt the same standard general ledger (SGL) and migrate to uniform singular-accounting and cost-center structures to improve consistency of reporting.² The RIE estimated the cost for this COA is \$45–\$63 million; estimated savings are approximately \$97 million.³

COA 2. Common Systems: In this COA, the military services would select not only an SGL and uniform accounting and cost-center structures but also standard core feeder and financial systems—though they would maintain separate databases. This COA would improve reporting, shorten staff training time, and include the use of web-based systems to reduce

² *Standard general ledger* is a term in government accounting for what generally accepted accounting principles used in the private sector refer to as a *chart of accounts*: an organizational method for financials that lists every account (a record for each type of asset, liability, equity, revenue, and expense) in an accounting database.

³ This estimate is from the RIE outbrief and reflects a quick estimate made by the members of that effort. RAND analysis looked at the potential cost of this COA and two others.

hardware requirements and allow for real-time data access. The RIE estimated the cost for this COA is \$67–90 million; estimated savings are, again, approximately \$97 million.

COA 3. Consolidated Service Center: This COA would build on COA 2, standardizing all accounting, singular accounting, and cost-center structures, as well as the core feeder and financial systems. All services except the U.S. Marine Corps would select one core financial service provider, although there would be no change to field personnel or ownership of financials/programs. The initial investment would be shared among the military services. The RIE estimated the cost for this COA at \$53–78 million; estimated savings are approximately \$134–\$145 million.

The RIE members developed the aforementioned costs and savings based on back-of-the-envelope calculations by the subject matter experts in the meeting and did not rely on formal cost analysis. The RAND team worked to develop a more formal model of potential costs associated with proposed changes.

Analysis of Change and Ways Forward

A review of the current NAF accounting environment, change-management literature, and case studies of organizational change highlight the challenges and opportunities that the different NAF accounting organizations could face in consolidation efforts.

Currently, NAF accounting functions are conducted independently across the military services. These independent bodies use a variety of systems that are not compatible across—or even within—services. The NAF accounting functions also lack standardized processes, such as an SGL. Resolution of the SGL challenge is in progress: Although the SGL has been agreed to, it has not yet been implemented (Office of the Assistant Secretary of Defense, Manpower and Reserve Affairs, 2015).⁴ Yet discussions with NAF accounting personnel suggest a disconnect between how OSD and the military services see the need for changes to the system: Personnel are not vested in the change; rather, they are invested in the status quo and thus may perceive movement to a more unified system as a reduction in autonomy. We were able to provide feedback to OSD and personnel during the change process itself (which was ongoing throughout our project span) regarding the application of the eight-point framework. We provide highlights here.

Because of the aforementioned disconnect, OSD has the opportunity to *ensure the need* for change, citing all relevant reasons, including both current budgetary constraints and the long-term opportunity to take efficient action. A well-designed communication campaign could inform the military services and action officers about the need for change while giving all personnel an opportunity to become more engaged and raise immediate concerns that should be included in the detailed long-term plan. This is especially important because the military services are currently updating some of their existing systems.

Some forward movement in NAF accounting consolidation already has been made. Leaders should consider *providing a plan* that clearly articulates the operational specifics required for consolidation according to the chosen COA, its goals, and desired end state. This plan should include specifics about how the planned system upgrades would be used to facilitate that end state, because military departments will have made substantial financial investment in technology that cannot readily be recouped if another accounting system is proposed as a final aligned solution to COA 3. Furthermore, significant *internal support* will need to be built to *overcome*

⁴ This document includes a revised SGL, common accounting code framework, chart of accounts, installation list, NAF instrumentality fund list, activity, and cost center codes.

resistance; the selection of standardized feeder systems and a core financial system are difficult tasks and military services are heavily invested in the systems they already have.

Because the changes wrought through consolidation will be deep and will take many steps by many organizations, an OSD-level leader, in addition to the already instated NAF Accounting Working Group (AWG), should *ensure top managerial support and commitment*. Outreach events by senior leaders in MC&FP and other OSD-level organizations also could help champion the change.

COA 2 and COA 3 suggest deep changes. As change leaders, OSD should be ready to *provide resources*, both technical and monetary, to move forward. As many of the military services do not see the need for enacting either of those COAs, OSD should avoid overtaxing the military services. Instead, they should continue to fund mechanisms that are actively working toward consolidation.

Once a COA is chosen and change is under way, changed processes must become the way of doing business, and efforts must be undertaken to *institutionalize change* through policy updates. To date, several revisions are already under consideration within OSD.

Finally, OSD must *pursue comprehensive change*, making sure there are no loose ends by monitoring and evaluating change as it occurs, particularly in the IT sector. One of the largest challenges will be to select and incorporate the feeder systems into the accounting infrastructure. The complexity of the subsystems and manner in which the data are incorporated into the accounting systems must be fully mapped out to ensure functionality of the entire system. The AWG, or a working group devoted to this particular issue, should analyze and understand the interconnections between feeder systems and the main systems of record to ensure the systems and POS interfaces are integrated.⁵

Business Case

The cost analysis for implementing any of the three COAs for the Army, Air Force, and Navy suggest that potential savings from investment are significant. The Marine Corps was excluded from this part of the analysis because of its existing integration within a larger accounting system (i.e., the Marine Corps Exchange). The analysis considered the cost of developing and implementing a new system, the costs of maintaining it, the estimated annual personnel savings, and the net savings for the ten years following implementation. Table S.1 summarizes the findings.

Table S.1
Integrated Cost and Saving Summary

Program	Total Cost Summary (fiscal year [FY] 2015\$, in millions)		
	COA 1	COA 2	COA 3
Development and deployment	8.9	51.5	54.1
Postdeployment maintenance (annual)	2.8	4.0	3.6
Personnel and reporting (annual)	-1.2	-18.8	-31.8
Total projected net cost savings at ten years after implementation	-5.4	-146.6	-276.7

NOTE: The negative numbers reflect the amount of cost reduction that is estimated to occur, i.e., the change from the estimated baseline costs.

⁵ These interfaces are retail sales information systems, including computers and registers that need to share sales information with accounting systems.

The analysis assumes each COA is implemented independently. That is, COA 2 does not assume the full prior implementation of COA 1, nor does COA 3 assume prior implementation of COA 1, COA 2, or both. If the COAs were implemented sequentially, savings per COA would be significantly less because the Army's personnel savings, which account for about \$100 million, would all be attributed to the purchase of a replacement for its accounting system, which is in an outdated programming language that limits updates to the latest accounting standards.

The projected net costs and savings in constant FY 2015 dollars look at the total discounted cost of implementing each COA independently through ten years of implementation. This total takes the total new costs of development, deployment, maintenance, future personnel, and reporting and compares them with the baseline costs for maintaining the current system, paying current personnel, and reporting to DASD (MC&FP). All of the alternatives show some level of potential savings. COA 3 provides the largest potential savings if the military services are able to agree on a single set of requirements.

NAF Employee Benefits

Options for Efficiency

Currently, OSD issues overarching policy guidance and regulations for military service member and family benefits. NAF employees are not eligible for employee benefits offered to service members or APF civilians, but do have access to benefits as determined by each military service's NAF employee benefits program. The only NAF employee benefit that is identical for the Air Force, Army, Navy, and Marine Corps is medical/dental insurance, which Aetna provides. The change to shared insurance was mandated by Congress as part of the FY 1995 National Defense Authorization Act and not voluntarily undertaken (U.S. Congress, 1994). All other NAF employee benefits are managed independently by the military services, although most contracts are currently written to allow the other military services to add on their employees. Most services use the same company for at least some benefits (albeit with somewhat different packages), including the following:

- *defined contribution retirement plans*: Eligibility requirements are similar across military services; vesting and employer matching schedules vary.
- *defined benefit retirement plans*: Eligibility is similar; employee contributions and enrollment practices vary.
- *life insurance*: Costs and coverage vary.
- *short- and long-term disability*: Short-term disability is not offered by any of the services; only the Navy offers long-term disability.
- *flexible spending accounts*: The Army, Navy, and Marine Corps offer this benefit and the Air Force is in the process of adding it.
- *long-term care*: Costs vary based on amount of coverage and age at enrollment.
- *employee assistance program*: The Navy, Air Force, and the Marine Corps have programs; the Army does not offer this benefit.

The task force generated a number of recommendations to reduce inaccurate benefits determinations, maximize purchasing power, and reduce variability of NAF employee benefits across military services. At this time, there are not any identified immediate cost-avoidance or

Table S.2
Recommendations to Improve NAF Employee Benefits

Area	Recommendation
Performance metrics	Identify performance metrics, by benefit and by NAF employer, and assess best practices
NAF processing/form summary	Create a NAF summary of benefit forms/outprocessing checklist
Process/procedure education	Educate APF human resource (HR) officers about processes and procedures to ensure portability legislation compliance
Portability	Create a DoD portability (NAF and APF) working group to create processes and procedures and to address errors/issues with portability
Training development/implementation	Create/provide training on portability of benefits
Cross-service standardization	Standardize forms, codes, and definitions for use across all services
System integration	Integrate NAF HR and payroll systems
Collaborative website	Create a NAF benefit website for information-sharing and posting of training info, forms, etc.
Policy standardization	Review and standardize NAF eligibility requirements and policies to standardize across services
Joint collaboration	Collaborate with NAF contracting policies and process to create joint statement of work, source selection, piggybacking "all NAF service clauses," etc., where not already exercised
Collaboration mechanism	Establish/create mechanism to access and share NAF benefit contracts and related info
Documentation	Document current benefits provided by each service, including contracts and summary plans
Integration and collaboration	Review the potential for integration and/or collaboration of operations, functions, and systems where it can improve effectiveness, efficiency, and economy of benefit programs
Benefit standards	Establish NAF benefit standards for more consistent cost-effectiveness and serviceability across all NAF
Formalize committee	Formalize the NAF Joint Service Committee for Benefits/HR to review and evaluate comparable offerings

cost-savings opportunities presented by these recommendations, but they provide additional commonality across the military services that may make such savings possible in the future. As Table S.2 demonstrates, recommendations ranged widely, encompassing both the creation of a summary of benefit forms and the integration of payroll systems.

Note that several recommendations suggest more consolidation and standardization of employee benefits offerings across military services. However, this was not stated as an explicit goal in any documentation.

Analysis of Change and Ways Forward

Currently, the military services provide most NAF employee benefits independently through various providers under different contracts. Using different providers with different contract terms creates variability in program offerings, enrollment and eligibility practices, and benefits received by NAF employees. The eight change-management best practices framework suggests where challenges may arise as well as ways forward. Here, we present an overview of the application of that change-management framework.

Ensuring need for change will be important to garner support and facilitate plan-building across the NAF employee benefits community. Multiple military services would benefit from analyzing the systems in place to illuminate shared concerns and possible benefits of consolidation.

There is a deep need to *provide a plan* if consolidation is to occur across the NAF employee benefits environment. Currently, no such plan or milestones have been established. A possible solution would be to use industry standards to benchmark and create milestones for the different services within NAF employee benefits. Another option would be to have MC&FP provide a template for each military service to list the NAF employee benefits it offers as a starting point for documentation, collaboration, and standardization. An example template is provided in Appendix B of the full report.

Building internal support may be somewhat difficult across NAF employee benefits organizations. This challenge may stem simply from a lack of action officer–level working groups and systemic opportunities for collaboration among relevant action officers. Along with developing leadership and a working group, the NAF employee benefits community should consider a communications campaign that engages stakeholders in the change process and engages the relevant action officers as change champions. This would *build external support* with the multiple stakeholders involved. The working group also may provide an opportunity to determine ideal designated leads for changes across the NAF employee benefits environment. There has not been any impetus from the military services to collaborate, and it has been challenging to ensure *top managerial support*.

In order to *provide resources* needed for consolidation in an efficient manner, NAF employee benefits should have an adequately funded working group to ensure military service participation, and the location of the meeting could rotate quarterly so that each military service has an opportunity to feel it has ownership of the process. Technical expertise is another area in which additional support would be helpful to enable the members to develop a workable implementation plan.

Bringing together multiple NAF employee benefits organizations to act as one system will undoubtedly present a number of challenges. Thus, the need to *institutionalize change* is great. The establishment of a long-term forum to share ideas and discuss consolidation procedures could help mitigate a generally “stove-piped” system. Topics for discussion at the forum should include a mandate for sharing military service-level contract information; standardization of forms, codes, and definitions across military services and OSD; and creating a NAF summary of benefit forms and processing checklist. A number of current policies will also need to be updated to institutionalize consolidation.

Business Case

Most of the task force recommendations given to the research team focus on improving communication and collaboration among the services, within NAF personnel, and between NAF and APF personnel. The research team broke these into three categories—cost for collaboration and standardization, implementation and coordination, and information technology and systems collaboration—in accordance with actions necessary for implementing the recommendations. Efforts to achieve the goals in each category were measured by personnel and contractor costs. Employee and contractor personnel time was estimated according to the fully burdened salary levels of NAF employee benefits staff, cost of contractors, and the time investment associated with each recommendation. Although some hardware and software will be required eventually, it is too early to identify what will be needed. These do not figure into the estimates.

Costs for collaboration and standardization proved to be most expensive of the three categories assessed. Personnel in this category include those working with joint collaboration, documentation, NAF processing and form summarization, performance metrics, policy stan-

Table S.3
Estimated NAF and Contractor Personnel Costs for Three Areas

Area	NAF Benefits Staff	Contractors	Total
Collaboration and standardization	\$511,000	\$1,906,000	\$2,418,000
Implementation and coordination	\$208,000	\$1,330,000	\$1,538,000
Information and technology systems	\$39,000	\$175,000+	Undefined

standardization, and cross-service standardization. These tasks require significant NAF employee benefits staff to coordinate and communicate across military services. *Implementation and coordination* included personnel time for achieving portability and for process and procedure education and training development and implementation. *Information technology and systems collaboration* included creation of a collaborative mechanism and website as well as system integration, but not specific hardware and software requirements. Once full requirements are defined, then additional detail can be incorporated on hardware and software costs. The estimated personnel costs are outlined in Table S.3.

The recommendations presented to the research team were designed to improve efficiency of the NAF employee benefits enterprise. Discussions with NAF employee benefits experts, however, suggest that few of the recommendations would result in large budgetary savings.

Conclusion

Support for service members and their families remains an important goal for DoD and each of the military services. However, balancing financial obligations between these programs and prominent warfighting priorities is a matter of concern. Defense planning and missions can limit the improvement of support functions, particularly those that require substantial upfront investment. This does not mean that military support services should not seek strategic opportunities to bring about greater efficiency and offer better support. Rather, it means that a compelling argument must be made—one that ensures all stakeholders *recognize the need* for change and articulates an end state to which more-specific goals and milestones can be directed. In essence, a *plan must be provided*. Part of enacting such a plan incorporates efforts to constructively *overcome internal resistance*, as well as *ensuring top management support and commitment*. And of course, *resources must be provided*. Overall, change-management literature stresses the need for change leadership, and careful attention to the process itself. The application of the guidelines may seem self-evident, but there are many examples of change efforts that did not consider one or more aspects. Hence, working that change-management framework through particularly relevant examples, as done in this report, can be helpful. Application of change-management principles, along with cost analyses, suggest that consolidation could achieve improvement and savings in NAF accounting. Findings suggest considerably less potential in the case of NAF employee benefits. This study recommends that this perspective be brought to bear on other back-office support functions. Leaders who have the breadth of view that encompasses the benefits of centralization should be appointed to bring all relevant parties together, provide a comprehensive approach to change, and of course, guide supporting analyses of potential gains to efficiency and cost savings, along with accompanying policy changes.

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Abbreviations

AAFES	Army and Air Force Exchange Service
AIMS	Accounting Information Management System
APF	appropriated funding
ASD/HA	Assistant Secretary of Defense, Health Affairs
AWG	Accounting Working Group
BCA	business case analysis
CFO	chief financial officer
CM	contract management
CNIC	Commander, Naval Installation Command
COA	course of action
COTS	commercial off the shelf
CSRS	Civil Service Retirement System
DASD (MC&FP)	Office of the Deputy Assistant Secretary of Defense for Military Community and Family Policy
DCPAS	Defense Civilian Personnel Advisory Service
DFAS	Defense Finance and Accounting Services
DHA	Defense Health Agency
DIMHRS	Defense Integrated Military Human Resources System
DMOC	Defense Medical Oversight Committee
DoD	Department of Defense
DoDI	Department of Defense Instruction
DWCF	Defense Working Capital Fund
ERP	Enterprise Resource Planning
EWRAS	Enterprise Wide Referral and Authorization System
FERS	Federal Employees Retirement System
FIAR	Financial Improvement and Audit Readiness
FIP	Financial Improvement Plan
FMR	Financial Management Regulation
FTE	full-time equivalent

FY	fiscal year
GAO	U.S. Governmental Accountability Office
HQDA	Headquarters, Department of the Army
HR	human resources
IG	Inspector General
IMCOM	Army Installation Management Command
MC&FP	Military Community and Family Policy
MCSC	managed care support contractor
MTF	military treatment facilities
MWR	morale, welfare, and recreation
NAF	nonappropriated funding
NAFI	nonappropriated fund instrumentality
NDAA	National Defense Authorization Act
NEXCOM	Navy Exchange Service Command
OSD	Office of the Secretary of Defense
PM	program manager
POS	point of sale
RFP	request for proposal
RIE	Rapid Improvement Event
SAP	Systems Applications And Products
SBR	Statement of Budgetary Resources
SE	systems engineering
SecDef	Secretary of Defense
SES	Senior Executive Service
SGL	standard general ledger
SHRM	Society for Human Resource Management
SME	subject matter expert
SOFA	Status of Forces Agreement
SSC	Shared Service Center
TIN	Tax Identification Number
TMA	TRICARE Management Activity
TRO	TRICARE Regional Office

Introduction

Service member and family support organizations provide a wide range of programs designed to ease the stresses of military life and promote service member and family member well-being. Each military branch offers these programs at installations across the world at a total annual cost of billions of dollars. The financial support of these programs may be congressionally appropriated funding (APF), nonappropriated funding (NAF), or some combination. While supporting service members and their families is an ongoing priority, current defense planning calls for reducing both the size of the force and its budget (Jansen, Burrelli, Kapp, and Theohary, 2014). As the force size decreases, this reduces the number of user fees available to support these organizations. In addition, there is pressure to reduce the burden NAF activities place on APF resources.¹ As a result, the total amount of funding used to support these programs is expected to decline. Given that the goals of programs geared toward service members and their families are often similar across military services, the Department of Defense (DoD) has become increasingly interested in the possible consolidation of such efforts. Because there *is* continuing concern for supporting service members and families, the efforts described here targeted back-office efficiency, rather than changing service member-facing offerings.

In 2012, the Office of the Deputy Assistant Secretary of Defense for Military and Community And Family Policy (DASD [MC&FP]) responded to financial and manpower forecasts and interest in program consolidation by asking then-Acting Principal Deputy Under Secretary of Defense for Personnel and Readiness Jessica Wright to establish a Task Force on Common Services for Service Member and Family Support Programs (Wright, 2012). General and flag officers and Senior Executive Service members were appointed to serve by their Military Departments, along with representatives of DoD staff functions that included the Comptroller, Cost Assessment and Program Evaluation, Administration and Management, and MC&FP. The task force had the following four goals:

- maintain or increase the current level of commitment to programs for the well-being of military families

¹ NAF refers to monies derived from sources other than congressional appropriations and commissary surcharge funds—primarily from the sale of goods and services to Department of Defense (DoD) military and civilian personnel and their family members—that are used to support or provide morale, welfare, and recreation (MWR) programs (DoD, 2014a). According the Army’s NAF employee handbook, “NAF employees are not deemed to be Federal employees for purposes of most Office Personnel Management-administered laws and regulations. Thus, the policies, procedures, and entitlements relating to NAF employees are different than those for Appropriated Fund (Civil Service) employees” (U.S. Army, undated, p. 3).

- improve the effectiveness, efficiency, and economy in the delivery of programs within the purview of DASD (MC&FP).
- drive down the APF and NAF unit cost
- enable greater economies of scale through shared overhead.

As an initial step toward reaching these goals, the appointed task force members held four- to five-day *rapid improvement events* (RIEs) for selected areas across the NAF community that were considered likely to benefit from shared efficiencies. RIEs are part of a “lean” business approach to improving the cost-effectiveness of organizations by identifying activities that add little or no value; in them, cross-functional teams meet for several days to study a process, identify inefficiencies, and begin designing an implementation plan for future improvement activities. The task force members identified 15 program areas likely to benefit from shared efficiencies:

- child care, youth, and family programs
- NAF procurement and contracting
- management training
- NAF accounting
- NAF banking and investment
- information technology services
- exceptional family member program
- lodging
- NAF employee benefits (insurance, retirement funds, and other benefits provided to employees paid from NAF)
- Yellow Ribbon reintegration program
- information and referral services
- school liaison officers
- fitness, aquatic, and wellness programs
- risk management and NAF insurance programs
- personal financial management.

Study Purpose and Focus

As the list above suggests, group members participating in the task force generated a list that encompassed many diverse areas of support for service members and their families. Analysis was incomplete, given the short span of time in which the groups had to work. Thus, MC&FP requested that RAND conduct a deeper assessment of the RIEs’ recommended areas for consolidation. Specifically, we were asked to review and assess RIE efficiency recommendations and identify methods to improve their approach to change management. We were asked to provide insight into any potential challenges that consolidation might bring about, and suggest ways to move forward to improve efficiency while maintaining or improving program quality.

To focus our analysis, we developed three questions to frame the study:

1. **What is a broad framework for change management?** The consolidation of services across DoD’s military and family support spectrum is a sizable organizational change

and will affect both those who are served by the programs and the personnel who work in them. We drew from a framework consisting of eight guidelines from contemporary change-management literature that would offer MC&FP guidance towards desired goals.

2. **What does the framework look like when applied?** We used the framework of eight guidelines to assess the change of past cases of DoD-related organizational change. We then applied this to specific examples important to MC&FP. We used collected data from the program areas in question to ensure the appropriateness of our recommendations.
3. **What is the business case for change?** Finally, we conducted a cost analysis to further assist MC&FP in understanding the feasibility of their plans.

We used both qualitative and quantitative methods in this study. We describe these methods in in the next section.

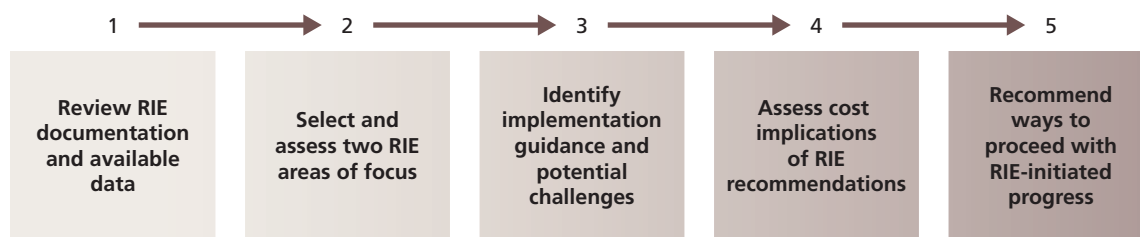
Overview of Study Approach and Methods

The study was conducted in five consecutive steps, as illustrated in Figure 1.1. Each step is also described here.

1. Review RIE documentation and available data. The research team first reviewed RIE documentation for the 15 areas. This material was delivered in two forms: initial “inbrief” and final “outbrief” PowerPoint presentations with discussion transcripts and a final report. Each was created for and delivered to the MC&FP task force. The information provided included the goals of the program area, a broad picture of all programs designed to foster that goal across all military services, a comparison of programs, possible benefits of consolidation, and recommendations on how to move forward. The research team evaluated these materials to understand how much information was immediately available to assess effectiveness, responsiveness, efficiency, ease of recommendation implementation, relevance, and potential costs of implementing the recommendations.

2. Select and assess two RIE areas of focus. The team reviewed the RIE documentation provided to the task force to determine if sufficient data existed for close analysis. The examination focused on cost, scope of organization or programming, external and internal drivers for change, and what effect changes could have on stakeholders and other programs or organizations. These information-evaluation exercises affirmed the need to analyze each of the 15 proposed areas in greater depth. Because these areas were very different, we collaborated with our sponsor in choosing to focus on only two areas: NAF accounting and NAF employee

Figure 1.1
Study Approach Consisted of Five Steps Using Both Qualitative and Quantitative Methods



benefits. This focus enhanced our ability to conduct a detailed analysis of potential costs and implementation issues that could arise in program consolidation.

To supplement RIE documentation, the team collected additional data and discussed the RIE recommendations with stakeholders in both areas. These stakeholders had firsthand knowledge of NAF accounting or NAF employee benefits from the perspectives of the military services, participated in an RIE, and helped to create final RIE presentations. Discussions also included subject matter experts (SMEs) recommended by these individuals, as well as individuals serving on any follow-on working groups. Personnel at MC&FP and other OSD offices were also solicited for their thoughts on the task force, RIEs, and ensuing recommendations. Table 1.1 summarizes organizational identities and position of interviewed personnel; most were involved in day-to-day business operations where they could affect changes in motion. Initial sessions with relevant offices included between one and five participants, were conducted both in person and over the phone, and typically lasted between one and two hours. One session was all that was generally required to obtain the necessary information, but follow-up discussions were sought in some cases with some personnel. Appendix A documents the semistructured discussion protocol for initial discussions. Appendix B documents benefits data collected from participants.

3. Identify implementation guidance and potential challenges. Consolidation and streamlining of overhead for programs supporting military service members and their families can cause changes—in the form of efficiency dividends—not only for the people who benefit from the programs but also for the personnel who execute them. Managing this change can increase success and reduce the stress that can come along with large-scale shifts, as well as increase the probability of staying on schedule and target. Thus, the research team reviewed organizational change-management literature to inform the implementation of the RIE recommendations. To supplement the list of “best practices,” the team also selected case studies of three government programs to highlight the specific successes and challenges associated with similar government overhead reduction and consolidation efforts. Additional background on these case studies is included in Appendix C. Finally, researchers explored some of the regulations that might be required to implement the RIE recommendations.

4. Assess cost implications of RIE recommendations. Researchers developed cost estimates of recommendations associated with the selected areas of review. Areas of risk and uncer-

Table 1.1
Sources for Research Data

OSD	Army	Air Force	Marines	Navy
Comptroller	NAF Employee Benefits—IMCOM	Financial Management Division	Human Resources and Benefits	NAF Employee Benefits—CNIC
NAF Personnel Policy Division—DCPAS	HQDA NAF Accounting—IMCOM	MWR Services Directorate	NAF and APF Accounting Personnel	NAF Accounting—CNIC
MWR Resale Policy—MC&FP	Soldier & Family Readiness Division—IMCOM	NAF Human Resources		IT Section—CNIC

DFAS

NOTE: IMCOM=Army Installation Management Command; CNIC=Commander, Naval Installation Command; DCPAS=Defense Civilian Personnel Advisory Service; HQDA=Headquarters, Department of the Army; DFAS= Defense Finance and Accounting Services.

tainty associated with the RIE recommendations were also explored in this step. Because the RIE NAF employee benefits and NAF accounting teams submitted different kinds of recommendations that needed assessment, the two areas had to be assessed differently. Thus, more-detailed discussion of the specific cost analysis methods as well as analysis results are presented in Chapters Five and Six. Additional cost detail is available in Appendix D.

5. Recommend ways to proceed with RIE-initiated progress. Based on these four considerations, the team developed a path forward in the selected areas.

Organization of the Report

Chapter Two presents a broad overview of the two RIE areas selected for intensive analysis to provide context. The descriptions of NAF accounting and NAF employee benefits are based on information supplied by the RIE groups, as well as additional data and resulting insights from discussions. Chapter Three reviews the change-management literature and offers the eight actionable guidelines that make up a framework to promote change across complex and diverse organizations. This chapter also describes three case studies of managed change in DoD or military service–related programs. Chapter Four then reviews the NAF accounting and NAF employee benefits consolidation plans in light of the eight change-management guidelines. Chapter Five presents the potential efficiencies and cost savings of making accounting programs more similar across NAF, and Chapter Six presents the cost implications for coordinating NAF employee benefits in the military services. Finally, Chapter Seven lays out conclusions and final recommendations.

Four appendices support this report. Appendix A contains the semistructured interview guides. Appendix B describes the benefits data gathering. Appendix C contains background sections from case studies. Appendix D provides additional information on costs described in Chapter Five.

Program Area Descriptions: NAF Accounting and NAF Employee Benefits

This chapter describes the RIE processes and recommendations the research team selected for “deep dives”: NAF accounting and NAF employee benefits. The descriptions are based on multiple sources, including the initial and final presentations delivered to the task force and additional data and information derived from research and discussions.¹

NAF Accounting

The Office of the Secretary of Defense (OSD) issues overarching policy guidance and regulations on accounting for the DoD components, including the military services. However, each of the military services independently conducts NAF accounting functions; these include payroll, accounts payable and receivable, financial management, and recordkeeping on sales (including point of sale [POS]), inventory, and more. Each function is accomplished using a variety of accounting and software systems.

The RIE group working on NAF accounting acknowledged that accounting and financial systems are not compatible across military services—or even within services. The Army uses manpower-intensive legacy accounting and payroll systems and multiple other nonintegrated software systems. Although it is seeking a new accounting system, neither the package nor the time line have been determined as of this writing. The Navy, Marine Corps, and Air Force have invested in enterprise resource planning software for their accounting systems from different vendors. The Navy’s Accounting Information Management System (AIMS) is integrated and includes Systems Applications And Products (SAP) software for financial and HR issues and Kronos for timekeeping. Unique among the services, the Marine Corps’ Computron accounting system is used not only for NAF accounting but also for its Exchanges and Marine and Family Programs;² it is also in the process of replacing its existing system. The Air Force uses an Oracle-based Enterprise Resource Planning (ERP) that features financial management and accounting support. DASD (MC&FP) requests annual financial reports (*data calls*) from the

¹ The presentations for NAF accounting and NAF/MWR employee benefits were given to the task force on March 13, 2013, and April 4, 2013, respectively. The final RIE outbrief for NAF accounting was submitted on April 10, and the outbrief for NAF/MWR employee benefits was submitted on May 1, 2013 (Task Force on Common Services for Service Member and Family Support Programs, 2013a–d).

² The Marine Corps Exchange is a retail operation. MC&FP excluded exchange programs from this effort. In addition, it follows commercial accounting practices and does not use the government fiscal year, so it does not align well with the structure of NAF accounting in other services.

services for MC&FP programs, but creating comparable reports is time-consuming because of the system differences. Further, there are a multitude of legacy systems that in some cases necessitate manual manipulation and workarounds to maintain desired standards of information. In addition, the DoD Inspector General (IG) recommended that services update their policies to ensure a common chart of accounts and that they “uniformly [apply] generally accepted accounting principles” (DoD IG, 2007). The services were originally given a deadline of no later than January 31, 2015, to implement a standard structure. This deadline has since been extended to October 1, 2016, according to a DASD (MC&FP) memo coordinated with the Office of the Under Secretary of Defense, Comptroller (Office of the Assistant Secretary of Defense, Readiness and Force Management, 2013). As of this writing, they are still working on implementation. If the services are unable to agree on a common structure, they may be compelled to comply with a previously proposed structure that is “unlikely to achieve the desired purposes” (Office of the Assistant Secretary of Defense, Readiness and Force Management, 2013). Thus, multiple reasons make compatible software a potentially compelling case.

RIE Recommendations for Efficiency and Consolidation

The Accounting RIE goal was to make key recommendations to reduce costs associated with NAF operational accounting. The task force identified three possible courses of action (COAs):

COA 1—Structure Update: While the military services would retain their independent accounting and systems that feed departmental and POS transactions to the general ledger (hereafter referred to as feeder systems), all would adopt the same standard general ledger (SGL) and migrate to uniform singular-accounting and cost-center structures to improve consistency of reporting to DASD (MC&FP).³ *RIE-estimated cost: \$45–\$63 million; estimated savings: \$97 million.*⁴

COA 2—Common Systems: In addition to the SGL and uniform singular-accounting and cost-center structures in COA 1, the military services would select standard core feeder and financial systems, though they would maintain separate databases. Along with improved reporting consistency, the RIE outbrief suggests additional advantages of change, including standardization of staff training and the use of web-based systems that could reduce hardware requirements and allow for real-time data access. *RIE-estimated cost: \$67–90 million; estimated savings: \$97 million.*

COA 3—Consolidated Service Center: In addition to the SGL and uniform singular-accounting and cost-center structures (COA 1), plus the standard core feeder and financial systems (COA 2), the services (except the Marine Corps⁵) would select one core financial service provider, although there would be no change to field personnel or ownership of financials/programs. Unlike COA 2, the initial investment would be shared among the military services. *RIE-estimated cost: \$53–78 million; estimated savings: \$134–\$145 million.*

³ *Standard general ledger* is a term in government accounting for what generally accepted accounting principles used in the private sector refer to as a *chart of accounts*: an organizational method for financials that lists every *account* (a record for each type of asset, liability, equity, revenue, and expense) in an accounting database.

⁴ This estimate is from the RIE outbrief and reflects a quick estimate made by the members of that effort. RAND analysis provided in Chapter Five looks that the potential cost of this COA and the other two COAs.

⁵ The Marine Corps would not participate because their accounting system also includes their Exchange store system and runs on a different account cycle.

Areas Needing Further Study

The Accounting RIE provided rough order-of-magnitude estimated costs and benefits, as already noted (broken down by military service, in addition to the totals presented here). However, based on the materials included in the initial and final RIE presentations, it was unclear what the precise breakdown of costs and personnel effects might be. Several important caveats were stated, including that the Army and Marine Corps estimates would need to be re-validated, some system costs included in the estimate were systems that were already planned, and costs related to feeder systems that were not considered. COAs 2 and 3 were both estimated to require significantly higher initial investments of both time and money compared with COA 1, while only COA 3 was expected to have a higher return on investment compared with COA 1. Thus, further guidance was desirable both in terms of costs and in terms of an implementation way forward.

NAF Employee Benefits

As with NAF accounting, OSD issues overarching policy guidance and regulations, while the military services provide most employee benefits independently. The only common employee benefit is medical/dental insurance, which Aetna provides. The change to shared insurance was mandated by Congress as part of the fiscal year (FY) 1995 National Defense Authorization Act and not voluntarily undertaken (U.S. Congress, 1994). All other NAF employee benefits are managed independently by the military services, although most contracts are currently written to allow the other military services to piggyback on them.⁶ As a result, many services use the same company for at least some benefits, including the following:

- *defined contribution retirement plans*: Eligibility requirements are similar across military services; vesting and employer matching schedules vary.
- *defined benefit retirement plans*: Eligibility is similar; employee contributions and enrollment practices vary.
- *life insurance*: Costs and coverage vary.
- *short- and long-term disability*: No service offers short-term disability; only the Navy offers long-term disability.
- *flexible spending accounts*: The Army, Navy, and Marine Corps offer this benefit, and the Air Force is in the process of adding it.
- *long-term care*: Costs vary based on amount of coverage and age at enrollment.
- *employee assistance programs*: The Navy, Air Force, and the Marine Corps have programs; the Army does not offer this benefit.

Greater detail on individual NAF employee benefits and coverage is in Appendix B.

RIE Recommendations for Efficiency and Consolidation

The RIE generated a number of recommendations to reduce inaccurate benefits determinations, maximize purchasing power, and reduce variability of NAF employee benefits across

⁶ *Piggybacking* is a term used in government for letting another organization use your existing contract to obtain a good or service. For instance, if the Air Force has a life insurance contract and the Navy would like to have the same terms, it could piggyback on the contract if the original contract has the appropriate clauses.

military services. As Table 2.1 demonstrates, recommendations ranged widely, from creation of a summary of benefit forms to integration of payroll systems. The numbers and letters in parentheses indicate the RIE group's categorization of the benefit, presented by cluster:

- 1=inaccurate benefits determination
- 2=maximizing purchasing power
- 3=comparable benefits value across services.

Note that several recommendations in Table 2.1 suggest more consolidation and standardization of employee benefits offerings across military services. However, those participating in the RIE did not state this as an explicit goal. In fact, our interview participants said that maintaining separate contracts can sometimes provide advantages to the individual military services in some cases, depending on the personnel served and the coverage provided.

Although the RIE final presentation did not include estimates of potential monetary costs or savings, it did include charts plotting each recommendation into quadrants by expected

Table 2.1
Recommendations to Improve NAF Employee Benefits

Area	Recommendation
Performance metrics	Identify performance metrics, both by benefit and by NAF employer, and assess best practices (1A)
NAF processing/form summary	Create a NAF summary of benefit forms/outprocessing checklist (1B)
Process/procedure education	Educate APF human resources (HR) officers about inprocesses and procedures to ensure portability legislation compliance (1C)
Portability	Create a DoD portability (NAF and APF) working group to create processes and procedures and to address errors/issues with portability (1D)
Training development/implementation	Create/provide training on portability of benefits (1E)
Cross-service standardization	Standardize forms, codes, and definitions for use across all services (1F)
System integration	Integrate NAF HR and payroll systems (1G)
Collaborative website	Create a NAF benefit website for information-sharing and posting of training info, forms, etc. (1H)
Policy standardization	Review and standardize NAF eligibility requirements and policies to standardize across services (1I)
Joint collaboration	Collaborate with NAF contracting policy and process to create joint statement of work, source selection, piggybacking "all NAF service clauses," etc. where not already exercised (2A)
Collaboration mechanism	Establish/create mechanism to access and share NAF benefit contracts and related info (2B)
Documentation	Document current benefits provided by each service, including contracts and summary plans (2C)
Integration and collaboration	Review the potential for integration and/or collaboration of operations, functions, and systems where it can improve effectiveness, efficiency, and economy of benefit programs (3A)
Benefit standards	Establish NAF benefit standards for more consistent cost-effectiveness and serviceability across all NAF (3B)
Formalize committee	Formalize the NAF Joint Service Committee for Benefits/HR to review and evaluate comparable offerings (3C)

SOURCE: DASD (MC&FP), unpublished.

NOTE: The parenthetical number letter combinations at the end of each recommendation were used as shorthand in the RIE for large flow charts and in other graphics, such as Figure 2.1.

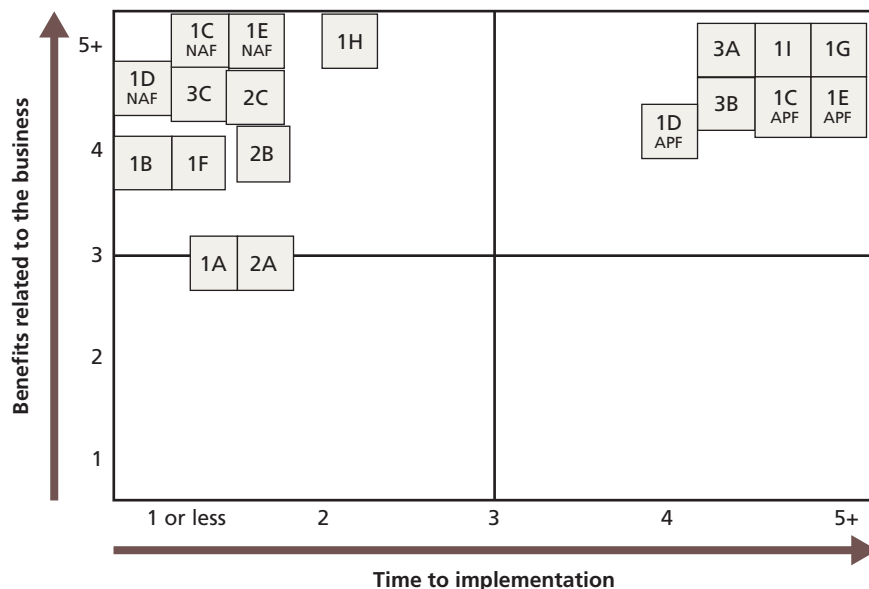
value related to the business and time to implementation. The alphanumeric codes in 2.1 represent the recommendations they are paired with in Table 2.1. The specific letters assigned to recommendations did not seem to have significance in terms of precedence of implementation, etc. The length of time to implementation in the APF environment (denoted by “APF” in the diagram) is higher than in the NAF environment because the RIE participants did not include APF employee benefits stakeholders.

Areas Needing Further Study

Some interviewees said they believed that some of the recommendations were unnecessary, already existed, or had been tried in the past (such as encouraging piggybacking on contracts, maintaining collaborative websites, and documenting current benefits provided). These personnel argued that some participants in the RIE were relatively new on the job and initially unaware of existing or prior collaborative efforts.

Moreover, some of the suggestions offer as-yet unknown dividends, in the sense that the outcomes of collaborative contract competition may vary depending on coverage and population of a given service branch. One such issue, included in the RIE documentation but a comparatively small challenge according to later SME discussions, was that of NAF-APF portability of employee benefits.⁷ Specifically, the task force recommended creating a DoD portability working group including both NAF and APF to address this issue. NAF employees who have

**Figure 2.1
Business Benefits and Implementation Time of NAF Employee Benefits Resulting from RIE Recommendations**



SOURCE: DASD (MC&FP), unpublished.

NOTE: The parenthetical number-letter combinations reflect those stated at the end of each recommendation in Table 2.1.

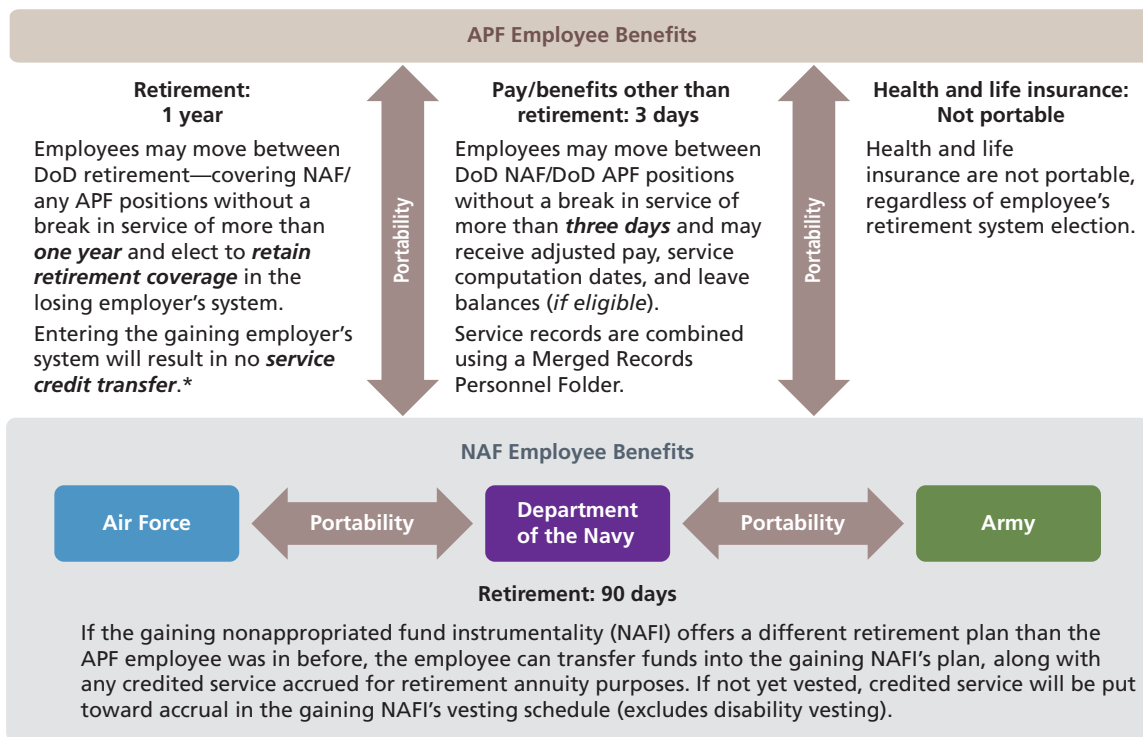
RAND RR1175-2.1

⁷ *Portability* refers to allowing an employee to maintain or transfer retirement benefits among civil service and NAF positions or from one NAF position to a NAF position in a different military service.

shifted to an APF position or vice versa within one year can choose to retain their retirement-related accounts with the employer they have left rather than moving the account to the new employer’s program. Individuals cannot have a break of more than three days of service to retain remaining benefits, such as leave balances. NAF-to-NAF moves allow the employee to retain service credit for vesting and to move retirement funds to the gaining employer’s system. The retirement valuation depends on when the employee entered service, because the legal requirements have changed over time. A simplified version of portability requirements appears in Figure 2.2, which shows portability within and between employee groups.

During the RIE, portability came up as an issue that—while somewhat outside NAF employee benefits staff’s ability to control, given the shared responsibility with APF staff—could be alleviated by standardizing some processes and procedures. After the RIE, however, the service personnel involved in the RIE itself acknowledged that portability affects only a small percentage of the NAF workforce. Thus, further guidance was desirable both in terms of costs, which were not even presented in a rough order of magnitude at the RIE, and in terms of a way forward with implementation.

Figure 2.2
Portability Requirements from Legislation



SOURCES: Civilian Personnel Management Service, Nonappropriated Fund Personnel Policy Division, and Field Advisory Services Division, 2004; DoD, 2009.

* There are several additional caveats listed in Civilian Personnel Management Service, Nonappropriated Fund Personnel Policy Division, and Field Advisory Services Division, 2004, p. 5.

Eight Guidelines for Managing Change: Insight from Expert Literature and Case Studies

Sharing resources and pooling capabilities has the potential to increase efficiency and efficacy. Experience and literature by experts both suggest, however, that deep organizational changes such as program consolidation must be carefully managed. Changes such as those proposed by the RIEs and documented in Chapter Two can be difficult to achieve. Guidance from the literature and a framework through which to consider change management may prove helpful.

This chapter presents change-management best practices from expert literature. After reviewing the literature, we present a framework of eight change-management guidelines. We also examine two case studies of military support organizations that navigated similar consolidations and show how they fared in relation to the guidelines. We then assess possible challenges NAF employee benefits and NAF accounting might face in light of the framework and case studies.

Organizational Change Literature

The organizational change literature offers a number of models, schemas, frameworks, and approaches that are potentially relevant to change management in public governance. Here, we provide a brief overview of some of the more relevant perspectives; a focus on one particular theoretical approach would be unnecessarily limiting, particularly when the literature offers some general principles to apply. However, the theoretical background illustrates some of the possible variables and challenges faced when undertaking an effort that may be considered “organizational change.”

One of the variables described in the literature is that some theoretical perspectives speculate that managers and other organizational leaders have the opportunity to determine whether and how an organization changes and whether they can proceed with change in a more deliberate or planned way, while other theories suggest that organizational change occurs primarily through organizations’ reactions to constraints in the context in question (e.g., market or budgetary constraints, legal or political context). The abundance of available theories range across a wide spectrum and are backed by varying levels of empirical findings, drawn from studies using varying methods and rigor, to support their claims. Given the variety of approaches, several attempts have been made to impose a taxonomy on the types of theoretical approaches (see, for example, Fernandez and Rainey, 2006; Martins, 2011). We provide short descriptions of the types of theoretical approaches that we found most applicable to framing the discussion

and problem set facing NAF organizations and MC&FP as they move forward with implementation of the recommendations generated by the RIEs. Our discussion draws heavily from Fernandez and Rainey (2006), in particular.

Theoretical Perspectives

We focus on three theoretical perspectives: ecological and evolutionary, institutional, and rational-adaptive. Within the literature on *ecological and evolutionary theories*, discussion notes that, in order for large organizations to function and for management to maintain control, rules and predictability are required. These can lead to a rigid organizational structure that resists change, resulting in what has been described as “structural inertia” (Hannan and Freeman, 1984), which may be particularly pertinent for military-related organizations such as DoD (Soeters, 2000). These types of theories downplay the role of management and other change leaders in the belief that the organization survives and successfully competes for resources via a process of adaptation to or selection by the environment, and they support the premise that external pressures, such as budgetary constraints, can force organizations to adapt or perish.

As summarized by Martins (2011), *institutional theory* suggests organizational change occurs as organizations attempt to increase legitimacy. Although institutional theory posits very little managerial control over the change process, Frumkin and Galaskiewicz (2004) suggested that actors within government bureaucracies might use external pressures to increase the legitimacy of moving organizations in the direction of *less* bureaucracy. That is, there appears to be some managerial choice involved, such that government bureaucracies subject to pressure from external oversight shift toward having less-centralized decisionmaking, less-formalized rules, and fewer departments.

Several theories fall into the categorization of *rational adaptive theories*, according to Fernandez and Rainey (2006). A key point that makes theories in this categorization pertinent is the role played by managers as the agents of change. It is their actions that direct the organization to adapt to the ambiguous environment. In this context, the task force and RIEs could be seen as an attempt by management to initiate an organizational change process and engage relevant organizational stakeholders in that rational planning process.

Summary of Theory and Relevance of Implementation Literature

This brief overview of theoretical perspectives summarizes some of the wealth of thought and empirical work that has been devoted to organizational change, some of the structural challenges that can make change difficult, and the role that managers and change leaders play in that change. Even some of the more deterministic conceptualizations suggest that planned efforts by change agents may reap rewards, although the effects of the environment must always be a consideration.

That said, much of the work is from a general perspective, rather than looking at the actual mechanisms that may be used to implement change. For example, Ostroff, Kinicki, and Muhammad (2012) reviewed the literature on culture change in particular and noted that the actual mechanisms of both culture and climate change (i.e., what exactly must be accomplished) have received more theoretical development than they have empirical support. Martins (2011) looked at organizational change and development more generally (that is, not just in the domain of climate and culture change) and drew the same conclusion. Thus, although they and others discuss change as a necessity, a process, and a possibility for implementation (e.g.,

Burke, 2002; Burke, 2014; Fernandez and Rainey, 2006; Sathe and Davidson, 2000)¹, change efforts should be undertaken with the knowledge that evidence-based practice guidelines for the specific mechanisms and timing of implementation of organizational change are lacking, and that while organizations may change all the time, specific prescriptions for *how* the process occurs are somewhat more art than science.

Eight Guidelines for Organizational Change

After our selective review of the literature, we chose to base our analysis on Fernandez and Rainey's (2006) work on successful change implementation in the public sector, which unites the literature in public administration with the more general literature on organizational change. Their work offers the advantage of specifically focusing on the implications of these literatures for government organizations and for planning large-scale change efforts such as those seen in the public sector and led by public-sector managers and change agents. Their overview highlights the fundamental lesson that the formal adoption of a policy does not guarantee that it will be implemented by either the decisionmakers or the organization writ large, without effort. Meaningful change in public organizations ultimately requires that managers exert a concerted effort to implement change. To that end, Fernandez and Rainey identified eight factors that represent a consensus in the literature and provide specific areas of agreement for future hypothesis testing. These factors as delineated are the change-management ingredients that add to the likelihood of success; we will refer to them in shorthand as the "Eight Guidelines."

While the eight guidelines are listed sequentially, they do not necessarily need to progress in that order. In fact, it is quite likely that efforts aligned with multiple factors will occur simultaneously, while at other times the change initiatives aligned to differing guidelines will occur at different points in the process. Fernandez and Rainey suggest that the interaction of the factors should be seen as additive; that is, the more factors that are present, the greater the likelihood of success; and they also note that it is possible that not all factors are required.

1. Ensure the Need: Managerial Leaders Must Verify and Persuasively Communicate the Need for Change.

Before substantial change can occur in an organization, the organizational leadership must not only confirm the actual need for change but also create a compelling case for—and vision of—that change. This recognition of a gap between the current state and the end state that is required should not be confined to managers or change leaders; rather, recognition of the gap should be shared widely. In part, this determinant of implementation success describes why it is essential to convince those who will ultimately implement the change that the need to do so is, in fact, compelling. The envisioned end state and the confirmed need to reach it become the foundation upon which a strategy may be built. For both NAF accounting and NAF employee benefits, the goal is that of the task force itself: increased efficiency through improvement of automated systems' abilities to integrate, as well as harvesting the benefits of other systemization. The benefits of systemization could include outright money and time savings from the perspective of the organization(s) and operational personnel involved, but also

¹ For a discussion of why implementation efforts may fail, see Kotter (1996).

might include personnel job satisfaction, ease of duty execution, and more seamless performance from the perspective of the customer. At times when cost savings are not immediately evident and must accrue over long periods of time, it is important to consider these other aspects as well.

Compelling an organization to change is seldom easy, and many individuals already vested in the current organization and the status quo are deeply entrenched. To overcome this entrenchment requires compelling and consistent communication: oral, written, and other media. One specific suggestion on the content of the change message consists of five interrelated messages (Armenakis, Harris, and Feild, 2001):

1. Change is necessary.
2. It is possible for the organization to change successfully.
3. Change is in the best interest of personnel.
4. Stakeholders/change agents who would be affected by the change themselves support it.
5. Change is in the best interest of the organization.

Of course, the extent that these communiqués are true rather than merely inspirational will no doubt affect their efficacy. Thus, it is possible to make some of these arguments (e.g., change is necessary, possible, and in the interest of organizational survival or success) and hope that they enable the others (e.g., change is in our best interest, affected stakeholders support the change). As noted by Keyton (2014), communication encompasses both the sender of the message and the receiver, and both must take part for communication to occur. Stakeholders bring their own attitudes and beliefs to the process, which affects how persuasive change agents' messages are. These messages should be communicated throughout the process of change and should engage as many stakeholders as possible. Management must play an active role in both ensuring the need and in notifying the entire organization of the need, to persuade as many as possible. For the overall NAF RIEs and the work of the task force, budgetary constraints were a guiding rationale (Vollrath, 2013). However, budgetary constraints are not sufficient in and of themselves to guide change in a particular direction in the face of complacency, which Kotter (1996) notes is quite common.

2. Provide a Plan: Managerial Leaders Must Develop a Course of Action or Strategy for Implementing Change.

A strategy for implementing change serves as a blueprint for how the organization will reach its end state. It should clearly articulate what that end state looks like, identify obstacles and ways to overcome them, lay out a time line, and identify the optimal personnel needed to carry out the plan. The basic elements of the plan should create a vision that is closely tied to the ultimate goal of changing the organization. Specific goals should be defined throughout the organization to tie the formal policy to the actions of managers. This action will establish a standard to which officials and leadership can be held.

A clear vision should be built into a strategic plan that is understood throughout the organization. This will prevent the ensuing transition from devolving into a set of unrelated and confusing directives and activities rather than a cohesive whole that facilitates the overall goal (Kotter, 1995; Kotter, 1996). Kotter notes that transformation efforts can fail through lack of successful translation of a guiding vision to a sensible plan. The plan must make sense in terms of the means chosen to its ends and include clearly stated policy goals and coherent causal

thinking that links individual actions to that guiding vision or strategy. (For a discussion of how this applies to policy, see May, 2003.)

3. Build Internal Support and Overcome Resistance: Managerial Leaders Must Build Internal Support and Reduce Resistance to Change Through Widespread Participation in the Change Process and Other Means.

There is always internal resistance to change, and organizational managers must put concerted effort into overcoming it. Experience with waves of reform that founder or only partly succeed after a great deal of effort can build cynicism in government and other employees that can transfer to even well-laid-out change efforts. Fernandez and Rainey (2006) cite several examples of this. Thompson and Fulla (2001) describe in depth the dynamics of varying degrees of implementation (and success or lack thereof) across government agencies of one relatively recent federal change effort, the National Performance Review.

As Burke (2002) notes, while resistance to change is problematic, it is at least an emotional reaction and implies some investment in the change, albeit a negative one. Apathy is more problematic. Burke also describes research suggesting that resistance may come in different forms: blind (resistance to all change on principle), political (resistance to change owing to the perception that something of value will be lost), and ideological (resistance because of the belief that the change simply will not work or contravenes important values). Depending on the type of resistance, strategies to overcome it might include negotiation and bargaining to ensure that valued outcomes are not lost or that sacrifices are understood to be short-term, or they might focus on persuasion regarding the alignment of the change with core values and demonstration of a sensible plan to achieve the change. Burke (2011) reviews some of the literature on change resistance in greater detail, and notes that in some cases “resisters” can be engaged as part of a problem-solving discussion, and “resistance” reframed as part of that problem-solving effort. This would suggest that objections brought up by stakeholders provide potentially relevant detail for the change planning process itself. A sensible planning effort can include demonstrating the urgency of the need; as noted by Kotter (1995), failure to establish a sufficiently broad sense of urgency increases the chances of change failure. Fernandez and Rainey quote Judson’s work on that topic that identifies a variety of tactics that managers can employ to reduce resistance to change, including threats and compulsion, criticism, persuasion, inducements and rewards, compromises and bargaining, guarantees for job security, psychological support, efforts to build organizational loyalty, validating and applying best practices, and a gradual implementation of change.

According to Judson, most of these methods can help lower the barriers to change, with the exception of threats, compulsion, and criticism, which tend to have counterproductive effects. Fernandez and Rainey note that one of the most frequently offered prescriptions for overcoming resistance is involvement of the stakeholders in the change process, which offers the opportunity for them to air their concerns as well as the opportunity for communication regarding the change effort and vision more generally and discussion regarding barriers to implementation specifically.

4. Ensure Top Managerial Support and Commitment: An Individual or Group Within the Organization Should Champion the Cause for Change.

Kotter (1996) notes that without a critical mass of influential individuals (a “guiding coalition”), change efforts are likely to go nowhere. Using government examples, Thompson and

Fulla (2001) describe how one individual with sufficient authority and management expertise or familiarity can implement change in even relatively large and bureaucratic organizations.

5. Build External Support: Managerial Leaders Must Develop and Ensure Support from Political Overseers and Key External Stakeholders.

It is not enough just to engage with the military services and OSD personnel to enact true large-scale change across the NAF community. Political appointees within DoD and other external stakeholders, such as Congress, affect decisions and process improvements. These outside actors can influence statutory changes and control the flow of resources.

Obtaining the support from governmental authorities and political actors can involve serious challenges, especially when budgets are tight. Many times, political actors are not working toward the same goals and are, in fact, actively working at cross-purposes. Additionally, political actors rotate into and out of positions frequently, which leads to inherently weak relationships with career government civilians (Golembiewski, 1985). Despite these challenges, it is imperative that managerial leaders work with the political actors and other outside stakeholders to enact change.

6. Provide Resources: Successful Change Usually Requires Adequate Resources to Support the Change Process.

While money is one aspect of this factor, time and stakeholder “bandwidth” to assist in planning are also relevant. That is, one resource is the time and the ability of stakeholders themselves to concentrate on effecting change. Adequately resourcing change is certainly one of the relevant principles of change in the private sector (e.g., Kotter, 1995; 1996). Boyne (2003) notes the evidence that resources are critical in the management literature, and indicates that while the effect seems equivocal in extant literature, there is evidence of the same effect in the public sector that is currently understated. He also notes that what evidence is available regarding the question of whether management practices matter indicates that they do (management, in this case, involves personnel practices and organizational change and leadership). Fernandez and Rainey (2006) also review public-sector examples that show that sufficient resources are key in public-sector change implementations.

Resources are always scarce, but without fully committing to a change and obtaining the resources needed for the change, the chances of successful implementation decline drastically. Funding is necessary to staff implementing agencies, provide technical assistance, and show commitment from leadership. If for nothing else, organizations providing a service must still meet their missions while implementing change and may not be able to achieve both aims successfully if limited to the resources necessary for normal operating costs. A lack of financial and HR services can also constrict the flow of information and prevent the necessary training from occurring.

7. Institutionalize Change: Managers and Employees Must Institutionalize Change.

Change is rarely easy for large bureaucracies, and some groups may feel they have “won” while others will feel they have “lost.” For change to be truly successful, however, it needs to become permanent. This is easier said than done, as noted in a review of literature on sustainment of organizational change by Buchanan and his colleagues (Buchanan, et al., 2005). There are different ways of defining organizational change and what type of change is desired or anticipated should be considered as part of tracking, measuring, and institutionalizing change. As

described by Armenakis, Harris, and Feild (2001)—who in turn drew upon Golembiewski (1986)—change may include incremental changes in feeling and behavior; a recalibration of norms such that prior standards no longer apply; or a “paradigm shift” that goes beyond recalibrating the scale on which performance is rated to changing the scale itself, e.g., changing the strategy of an organization such that a different outcome is the most highly valued. For any of these changes, new behaviors need to be created or promoted in the short term, which will ideally lead to institutionalized norms over the long term (as noted by Burke, 2014, behavior change is much easier to manage than change of paradigms and underlying norms). Unless these new behaviors are securely adopted, they will dissipate with time, and the intended change will not last, as theorized by Lewin in 1947, asserted more recently by Schein (2004), and noted by Buchanan et al. (2005). Kotter (1995) notes that one of the errors that lead to failed change is “declaring victory too soon;” that is, not taking the time to embed the change in the organization.

Multiple strategies exist to reinforce and institutionalize change. Armenakis, Harris, and Feild (2001) describe an array of techniques, including using rites and ceremonies to signal the end of a change period and the importance of the new regime, application of appropriate formalization activities (e.g., carrying through changes to appropriate supportive process and policy), modification of relevant HR activities (e.g., changing selection, appraisal, and training systems to align and providing incentives for the newly desired behavior), and management of communication to persuade the change targets that the change has come and it is good. They also note that monitoring and evaluating the change process is essential to ensure that the change has indeed occurred and to assist in planning efforts throughout implementation. Fernandez and Rainey (2006) suggest that according to their review, assessment should begin during the planning stages and continue until the change is fully adopted and organizational behaviors are fully aligned with the new organization. This will prevent a “relapse” into old organizational behaviors and patterns of processing work.

8. Pursue Comprehensive Change: Managerial Leaders Must Develop an Integrative, Comprehensive Approach to Change that Achieves Subsystem Congruence.

Comprehensive change enables the alignment of relevant subsystems and does not leave subsystems operating at loose ends, contravening a given change effort. Without this aspect, change is not coordinated, and stakeholders and change targets may be confused by conflicting signals. Fernandez and Rainey (2006) cite numerous studies and summaries that suggest that subsystems, including various aspects of HR management such as training, incentives, and work design, as well as information and controlling systems, need to work in tandem to shape and reinforce behavior (see also Becker and Huselid, 2006; Ostroff, Kinicki, and Muhammad, 2013; Robertson, Roberts, and Porras, 1993). Managers must actively consider effects across subsystems to ensure consistency with the desired end-state; changing only one or two of the subsystems will not generate sufficient force to enact change and, as noted, may send conflicting signals if they are not aligned.

Case Studies Demonstrating Eight Change-Management Guidelines

It can be helpful to consider the experiences of like organizations when thinking about potential challenges to and benefits of organizational change efforts. Therefore, we sought some

examples that could provide parallels to the NAF domain efforts. Examples are taken from three U.S. DoD organizations that underwent significant and often complex changes involving multiple stakeholders and integration across military service branches: TRICARE, DFAS, and the Defense Integrated Military Human Resources System (DIMHRS). We reviewed publicly available documentation and discussion of these efforts, and we applied all eight guidelines in our evaluation of each case study effort. Table 3.1 presents a simplified view of the success of the three case studies with respect to our judgments regarding the application of the eight guidelines of change. Green shading means the criteria was fully met; yellow means partially met; and red signifies the criteria are not met.

As previously noted, however, not all eight guidelines need to be present and implemented for successful organizational change. History is rife with examples of federal agencies embarking on a path to change without committing to the complete change process, including proper resourcing and change management. Lessons exist in both failures and successes. For these reasons, each of the more detailed case study discussions below highlights the guideline points that made a clear difference in the success or failure of the three organizational changes. The full background on the case studies is present in Appendix C.

TRICARE Regional Consolidation

TRICARE is the health care program for military personnel and their dependents. As such, it has a direct and significant impact upon thousands of service members and their families that is very visible, unlike the other case studies that we will consider and unlike the areas of NAF highlighted by the RIEs. The Defense Health Agency (DHA) manages the program for DoD.² Since 1994, TRICARE beneficiaries can receive health care either through military treatment facilities (MTF) or civilian providers. MTFs compose DoD’s direct care system for beneficiaries, and networks of civilian providers compose DoD’s purchased care system.

Table 3.1
Application of Eight Guidelines to Case Studies of Organizational Change Efforts

Guideline	DIMHRS	DFAS	Consolidate TRICARE
Ensure need	Yellow	Green	Green
Provide plan	Red	Red	Green
Internal support/overcome resistance	Yellow	Yellow	Green
Top management support	Yellow	Green	Green
External support	Green	Yellow	Green
Provide resources	Green	Red	Green
Comprehensive change	Red	Red	Green
Institutionalize change	Red	Red	Green

LEGEND: FULLY Done PARTLY Done NOT Done

² The DHA was established on October 1, 2013. Prior to that date, TRICARE’s program manager was the TRICARE Management Activity (TMA). The TMA was disestablished on October 1, 2013.

TRICARE: Considering the Eight Change-Management Guidelines

TRICARE consolidation was carefully achieved over the course of a decade, with a detailed planning process, heavy stakeholder integration at multiple levels, and interested oversight and measurement of progress. Change was also pursued in a comprehensive fashion, both in terms of organizational structure and in terms of the processes of the reorganized program manager. Established in 1994, TRICARE was adopted by DoD as its primary health care system. From 1995 to 1997, the TMA (the precursor to DHA) implemented TRICARE through seven health care delivery contracts that covered 11 geographic regions across the United States (U.S. Governmental Accountability Office [GAO], 2005, p. 15). From TRICARE's inception in 1995 until regional consolidation began in 2003, the U.S. General Accounting Office issued more than 18 reports on DoD's evolution in implementing various aspects of TRICARE.³ In 1995, GAO issued its first report on TRICARE contract management, citing health delivery contractor concerns about the significant cost and complexity of the bidding process. (U.S. General Accounting Office, 1995, pp. 2–3). Additional reports critiqued other aspects of TRICARE contract management,⁴ and a 2001 GAO report identified TRICARE contract management as part of an agencywide, high risk–management challenge for DoD (See U.S. General Accounting Office, 2001a; U.S. General Accounting Office, 2001b).

In August 1999, the Deputy Secretary of Defense formed the Defense Medical Oversight Committee (DMOC) to provide oversight of TRICARE, including its contract management. DMOC's membership consisted of the Under Secretary of Defense (Personnel & Readiness), the four service Vice Chiefs, the military department Under Secretaries, the Under Secretary of Defense (Comptroller), the Director of Logistics from the Joint Staff, the Surgeons General, and the Assistant Secretary of Defense (Health Affairs) (ASD/HA). This level of leadership and the parties involved enabled bringing all of the relevant parties together, with a breadth of perspective encompassing potential benefits of centralization beyond the exigencies of service branch prerogatives.

In anticipation of the expiration of the first generation of health care delivery contracts in 2003, DoD considered DMOC's recommendations on how to restructure its TRICARE contract management process, including the reduction of geographic regions from 11 to three (U.S. General Accounting Office, 2005). In 2004, the TMA and the military services established a new regional infrastructure to manage and oversee both the direct and purchased care systems within TRICARE (GAO, 2005, p. 17) and performed the realignment into three large regions. Before the consolidation, the 11 regions had different staffing and organizational structures, and the regional lead agents reported directly to their respective military services. Since the change, each region has a managed care support contractor (MCSC) as well as a TRICARE Regional Office, known as a TRO, which oversee health care delivery within their respective regions. Each TRO contracts with a different health insurance provider but has the same organizational structure and a regional director who reports to DHA to maintain organizational and informational continuity. To remain aware of the different service perspectives,

³ Up to 2004, GAO's name was the General Accounting Office. The name was changed to better reflect the office's mission.

⁴ For example, GAO reports cited concerns with overly prescriptive proposals in lieu of a uniform request for proposal (RFP) process (GAO, 1995). Overly burdensome contractual requirements also led to claims processing inefficiencies (Backhus, 2000).

each TRO is staffed with representatives from the military services so the TROs can identify how to better serve their respective needs.

The consolidation of TRICARE health delivery services is something of a “success story” when reviewed in light of the eight change-management guidelines, as all eight guidelines are present in its change-management story.

Ensure the Need

The office of ASD/HA started considering new efforts to redesign the next generation of TRICARE contracts, and it coordinated with the DMOC on ways to rework the system. Congress also tasked GAO with preparation of reports on the prior TRICARE contracting process, implementation of the TRICARE regional consolidation, and its next generation of contracts. This oversight and attention to reforming the system ensured the need for change within DoD, the federal government, and with such external stakeholders as the contractors. Health care is an issue that stirs the passions of those who are subject to a given system, as may be witnessed by the alignment of health care benefits provided to NAF employees, engendered by concerns about fairness of differing benefits provided. The importance accorded to health care naturally leads to higher visibility. Moreover, health care is a significant expense, and efficiencies can have a large effect on the bottom line of organizations—and TRICARE serves millions of service members and their families. These factors make ensuring the need for change less onerous, although the sheer number of stakeholders and visibility can itself be a challenge.

Provide a Plan

Earlier iterations of TRICARE have a documented history of issues with processes (Backhus, 2001), which likely contributed to a consensus that care needed to be taken with the next generation of changes. Considerable planning underpinned the regional consolidation effort. Stakeholders such as DoD, TMA officials, contractors, and the military services had to identify at least some of the problems they saw with the current approach. They also had to come up with varied ideas for change against which to evaluate both new ideas and the status quo. To move toward implementation, the stakeholders then had to formulate tangible change products, such as the development of a uniform RFP (the method for solicited contract bids), which streamlined the previously cumbersome and region-unique contract bidding process.

Build Internal Support and Overcome Resistance

TMA developed good internal support for the consolidation. It collaborated extensively with each of the military services to develop a better design for the next generation of contracts and the regional consolidation (GAO, 2005, p. 26). Where the previous structure had 11 separate regions with different staffing and organizational structures, and the regional lead agents reported directly to their respective military services, under the new regional governance plan, each TRO had the same organizational structure and a director reporting to TMA (now DHA). Each TRO also had a staff that included representatives from each of the military services as a way to stay connected to varied needs and concerns. The GAO report on the TRICARE consolidation noted the close collaboration of TMA, MCSCs, and the military services (GAO, 2005, p. 6).

Ensure Top Managerial Support and Commitment

TMA and the military services also consistently collaborated to help create the new contract system and governance plan. The ASD/HA reassessed how to structure the TRICARE con-

tracts in conjunction with the DMOC's recommendations. The GAO noted that the ASD/HA also considered other related, important issues including the size of contracts, competition among contractors, and how to increase efficiencies within the organization and in providing customer service (Backhus, 2001, p. 2). TMA and the military services also consistently collaborated to help create the new contract system and governance plan.

Build External Support

Before implementing the current contract structure and governance plan, TMA officials spent three years developing the first iteration of the new contract structure, called TRICARE 3.0 (Backhus, 2001, p. 9). It was created using a partnership approach, which involved input from numerous military and private industry representatives, current TRICARE contractors, and health care consultants (Backhus, 2001, p. 9). Although the initial approach was rescinded, it was done so based upon input from contractors regarding flaws and concerns within the redesigned RFP and contracts. This input then informed what became the final iteration of the next generation of contracts.

Provide Resources

Development of both the rescinded TRICARE 3.0 structure and the final contract structure and governance plan for consolidation required substantial resources, both financial and human capital, and those were provided. For example, GAO noted the development of the Enterprise Wide Referral and Authorization System (EWRAS), a business process designed to provide automated referrals and authorizations, was approximately \$9 million in contract costs alone (GAO, 2005, pp. 4–5). During the EWRAS development phase, initial estimates on labor-intensive, manual beneficiary processes exceeded \$250 million over a five-year contract period, although those estimates did not include the costs of the additional staff workloads (GAO, 2005, p. 4). Moreover, a large amount of time was used, which enabled change efforts to be well thought-out and systemic.

Institutionalize Change

The different stakeholders had continued buy-in throughout the development and reassessment of this process. Creating a single TRO organizational structure with civilian and military staff representation increased uniformity that helped to institutionalize change. When problems arose in implementation, such as conflicts over responsibility sharing, TMA officials acknowledged the need to reassess and clarify the existing governance plan to address these shortcomings (GAO, 2005, p. 9). Thus, the prospects for institutionalization seem good.

Pursue Comprehensive Change

Redesigning the existing contract structure and consolidating the governance structure involved comprehensive change. Moving from separate, unique RFP processes to a single, uniform RFP process simplified the contract proposal process. Consolidating 11 regional centers into three simplified the governance structure. Additionally, creating a single TRO organizational structure with the same chain of command reduced inefficiencies and differences among the regions.

Defense Finance and Accounting Service (DFAS)

DFAS was established in 1991 to standardize, consolidate, and improve the accounting and financial functions of DoD, including each military service branch, and the intent behind its

creation was to reduce the cost of DoD's finance and accounting operations while strengthening department financial management (DFAS, 2015). DFAS provides finance services (e.g., payroll for DoD military, civilian, and contractor personnel) as well as accounting services (e.g., tabulation and analysis of customer obligations and expenditures) to DoD customers. DFAS is a Defense Working Capital Fund (DWCF) organization, meaning it charges its customers for services to cover its operating costs. It also is a large part of the DoD support infrastructure. From 1991 to 2015, DFAS has consolidated more than 300 installation-level offices into nine DFAS regional sites, and it has reduced the number of individual systems used from 330 to 111 (DFAS, 2015).

Although DFAS is a service provider for DoD customers, the military services also continue to perform certain finance and accounting activities at each military installation (Khan, 2012, p. 6). Each military service differs in what activities it chooses to keep in-house and the activities for which it relies upon DFAS (Khan, 2012, p. 6). Although the military services are customers of DFAS, they are also key stakeholders and information providers for DFAS. For example, the military services authorize most DoD expenditures and have responsibility for most of DoD's assets (Khan, 2012, p. 6). The military services are also the sources of most of the financial information DFAS relies upon both to make payroll and contractor payments and to prepare annual required financial statements mandated by the Chief Financial Officers (CFO) Act of 1990 (Khan, 2012, p. 6).

DFAS: Considering the Change-Management Guidelines

Overall, DFAS has improved DoD payroll and accounting services through consolidation, but the road has not been without challenges. In response to ongoing problems with government financial accountability and accuracy, in 1990 GAO issued its first high-risk list of government agencies vulnerable to waste, fraud, abuse, and mismanagement, and DoD was placed on that list. DFAS was created in 1991 to aid DoD with reining in its financial management. However, despite the creation of DFAS, DoD has remained on GAO's annual high-risk list since 1990 because of long-standing weaknesses in its financial management.

One example of DoD's financial management issues is the agency's widespread inability to achieve audit readiness. As both a DoD agency and a service provider for the military services, DFAS has ongoing issues with auditability. Over the years, auditors have encountered numerous difficulties in conducting thorough and accurate assessments of DFAS financials, in part because DFAS relies upon financial data from the military services to complete its payroll and financial reporting functions. To address congressional concerns over financial management, the National Defense Authorization Acts (NDAA) for fiscal years 1998 and 2000 both required DoD to abide by financial reporting requirements and create an annual strategic plan to improve DoD-wide financial management (U.S. General Accounting Office, 2001c, p. 3). The plan, called DoD's *Financial Management Improvement Plan*, was required to include details on improvements to DFAS internal controls, including a review process to ensure that these controls are implemented and functioning as intended (U.S. General Accounting Office, 2001c, p. 4). Yet in 2011, GAO reported that DFAS personnel continued to use manual processes and different systems to obtain the financial information needed to perform daily tasks (Khan, 2011, p. 19). Moreover (and importantly), because of its reliance upon financial data

from the military services, DFAS has not provided final resolution to the auditability shortcomings in its areas of DoD responsibility.⁵

Provide a Plan

In October 2011, former Secretary of Defense (SecDef) Leon Panetta directed DoD to achieve audit readiness for its Statement of Budgetary Resources (SBR) for General Fund activities by the end of FY 2014 as an interim milestone to meeting the congressionally mandated full audit readiness by the end of FY 2017 (Khan, 2012, p. 1). Congress reinforced Panetta's directive in its NDAA for FY 2012, which required that DoD's next Financial Improvement and Audit Readiness (FIAR) plan include details on how to support Panetta's goal (Kahn, 2014, p. 22). The FIAR also was to be used in preparation of DoD components' Financial Improvement Plans (FIPs). In 2011, GAO found that the FIAR guidance provided a standard, systematic approach for DoD to evaluate and improve its financial processes, and it detailed the roles and responsibilities of the DoD components (Khan, 2012, p. 8). However, GAO found that the military services had not adequately developed and implemented their FIPs in compliance with the FIAR, leading to premature assertions of auditability (Khan, 2012, p. 9). DFAS relies on financial information and documentation from the military services, thus it is unable to bridge the auditability gap because of a lack of effective, repeatable processes for certain activities.

Build Internal Support and Overcome Resistance

GAO reported that in its February 2012 FIAR Plan briefing, DoD "recognized key factors are needed to achieve auditability, such as the consistent involvement of senior leadership as well as the buy-in of field commanders who ultimately must implement many of the changes needed" (Khan, 2012, p. 14). However, the military services' practices pose challenges both to DoD-wide and DFAS-specific audit readiness. Despite using DFAS, the military services continue to perform some finance and accounting activities. They also continue to use disparate systems and processes that make DFAS financial reporting difficult, and they have weak processes to verify and document data reliability. Lastly, they have incomplete and inadequate FIPs to evaluate and fix their financial management issues. Consequently, in a February 2012 briefing on audit readiness, DoD reported that seven of the 24 material general fund defense agencies and other defense organizations had already achieved audit readiness or are ready to have their SBRs audited (Khan, 2012, p. 10). However, because some of DoD's components are audit ready when others are not, DoD as a whole fails at audit readiness.

Ensure Top Managerial Support and Commitment

At top levels, DoD is pushing anew for departmentwide audit readiness. In 2011, former SecDef Panetta provided the DoD audit readiness plan and milestones. Congress has reinforced these goals through financial management reporting mandates and frequent evaluation of progress by GAO. In prior congressional budget hearings, then-SecDef Chuck Hagel also acknowledged the need for DoD to achieve institutional audit readiness. The degree to which this top managerial support and commitment exists at the military service level is unclear, however.

⁵ See, e.g., Khan (2014); GAO (2015); GAO (2014b); GAO (2014c).

Institutionalize Change

Although various stakeholders see the need to improve DFAS's functioning and meet audit readiness, this does not appear to translate to institutionalized change at the DFAS and military service levels. Over the past decade, external organizations repeatedly have noted DFAS and service shortcomings, such as inadequate financial documentation and problems with disparate, duplicative feeder systems. As recently as 2014, these problems continued to exist.

Defense Integrated Military Human Resources System (DIMHRS)

The DIMHRS was an unsuccessful and incomplete program “intended to provide a joint, integrated, standardized personnel and pay system for all military components (including active and reserve components)” (Farrell, 2008, p. 1). It was anticipated to correct high-profile payroll and accounting errors following the 1991 Gulf War, which included reserve soldiers not being paid and others being paid twice for the same period of service. The goal of the program was to “move to a single, all-Service and all-component, fully integrated personnel and pay system, with common core software” (Farrell, 2008, p. 1). DIMHRS was to provide DoD with improved and coordinated processes, including: (1) accurate and timely personnel data; (2) standard data for comparison across the services and other components; (3) tracking information on reservists for both pay and service credits; (4) tracking information on military personnel both in and out of theater; and (5) integrated personnel and pay functions (Farrell, 2008, p. 4). The Army was selected as the first branch to implement the program in FY 2006. After years of effort and at substantial expense, DIMHRS was canceled in February 2010, before the program was completed.

DIMHRS: Considering the Change-Management Guidelines

At the time of its cancellation, the DIMHRS program had involved approximately 12 years of unsuccessful effort at a cost of \$1 billion. An assessment of its case in relation to the eight change-management guidelines shows at what points the program might have succeeded, had different courses of action been taken.

Provide a Plan

Although DoD understood the need for change in initiating the DIMHRS program, it did not provide an adequate plan, build internal support for it, or communicate it to the military services. The original plan called for buying a commercial off the shelf (COTS) personnel system and installing it with minimal modifications. However, as the first branch selected to implement DIMHRS, the Army insisted on changes to the original system to accommodate its unique personnel and payroll needs. This led to efforts to cobble together DIMHRS with existing and sometimes-antiquated systems, leading to delays and increased costs. Efforts to accommodate the Army's requests while achieving DIMHRS' objectives fell victim to disagreements between DoD and the Army on both the need for requested changes and whether they had been incorporated into various iterations of the program.

Build Internal Support and Overcome Resistance

Even though the failings of the disparate, outdated personnel and payroll systems were well noted, key stakeholders did not follow through with building and maintaining both internal and external support for change. DIMHRS change was not a priority among top officials; instead, implementation was left to lower-level managers, and top officials rarely checked in on the progress (Paltrow and Carr, 2013). At the military level, commitment to implementing

DIMHRS varied across the military services; the Army reported commitment to implementation, the Air Force generally supported DIMHRS but was concerned the system would not meet its needs, and the Navy and Marine Corps were not very supportive because they were unconvinced of any improvement over their existing systems (Hite and Wilshusen, 2005, p. 5). Compounding the problem of building support was the fact that DoD program responsibility, accountability, and authority over DIMHRS implementation were diffused. For example, the joint requirements development office carried responsibility for defining the requirements. The program office was responsible for acquisition. But responsibility for transferring to the new system rested with the end users: 11 DoD components reporting through five chains of command (Hite and Wilshusen, 2005, p. 6).

Ensure Top Managerial Support and Commitment

The DIMHRS undertaking required substantial effort with numerous stakeholders and development and implementation of a technically complex computing system. However, once the DIMHRS program moved beyond the “ensuring the need” phase, top managerial support and commitment to change waned. The military services had different perspectives on whether the change was needed or would represent an improvement over the current, service-unique systems. Within DoD, top officials left oversight of the development and implementation process to lower-level managers.

Lessons Learned from Case Studies

As with the RIE recommendations, a common thread throughout the case studies is a desire to streamline or consolidate disparate, complex systems to achieve greater effectiveness and efficiencies. In the next chapter, we discuss the potential problems to be avoided or overcome using the same set of change determinants highlighted above for the case studies.

Many NAF programs work independently of each other with limited formalized best practices and communication systems. Although there may be a broad sense of the inefficiencies or problems associated with current practice, concerns over the time and costs associated with large-scale change, and stakeholder concern that different processes may or may not represent actual improvement, reinforce inertia. The case studies also demonstrate the potential breakdowns from pursuing piecemeal change in lieu of comprehensive change, particularly as it relates to partial integration of systems and practices, as most clearly demonstrated by DFAS. Miscommunication among stakeholders of the need for change and the details of such change, especially in the face of opposition or simple inertia, made failure more likely for some of the case study examples. DIMHRS also demonstrates the challenges of change management when responsibility is diffuse. Of the case studies, the TRICARE regional consolidation was the most successful in meeting the eight guidelines. It also highlights that the first attempt at change may not be successful (i.e., the initiation of the TRICARE system was not without flaws), and that dealing with stakeholder concerns in the process is worthwhile. It also may be said to represent a case that demonstrates the visibility attained by a change implementation that affects many beneficiaries in a very clear manner relative to some of the other issues considered, such as financial auditability.

Managing Change: Analysis and Ways Forward for NAF Accounting and NAF Employee Benefits

In Chapter Three, we introduced eight guidelines for organizational change. These guidelines should be considered “best practices” because they were drawn from expert literature on management. The eight guidelines were then applied to three case studies that, like NAF accounting and NAF employee benefits, support various programs throughout DoD and the military services.

In this chapter, we focus again on the eight guidelines but this time in light of current plans to improve efficiency of NAF accounting and NAF employee benefits. The analysis here presents gaps in current change-management activities and identifies actions based on the guidelines. We presented this analysis to our sponsor as a uniquely relevant illustration of the guidelines. Note that for any one guideline, multiple actions may be undertaken and offer the opportunity to increase chances of success. Moreover, we do not present all possible opportunities here, only possibilities. Some steps have been taken to orchestrate goals, personnel, and systems across NAF accounting and NAF employee benefits. However, efforts to align and improve the organizations are not fully complete at the time of this writing. The plans developed by the RIE teams and subsequent discussions inform much of this analysis, but we also incorporate examples from the three case studies into discussions when appropriate. These example applications of the framework can better enable broad application to other areas considered by the task force.

Applying the Eight Guidelines: NAF Accounting

Currently, the NAF accounting functions are conducted independently across the military services. These independent bodies use a variety of systems that are not mutually compatible across or even within services. The NAF accounting functions also lack standardized processes, such as an SGL. As of the time of this writing, resolution of the SGL challenge is in progress.

We apply the eight change-management guidelines for the lead organizations to consider in consolidating NAF accounting.

Ensure the Need

The first guideline recommends that managerial leaders verify and persuasively communicate the need for change. This instills “buy-in” and highlights some of the challenges that teams may face when working to achieve goals.

NAF accounting may encounter challenges in consolidating various organizations if the first guideline is overlooked. First, effective communication from MC&FP to the military services is critical. MC&FP should communicate the need for change citing all relevant reasons, not least of which are budgetary constraints. Leadership should initiate a communication campaign that addresses the goals and reasons for change. Interviews and discussions with relevant parties suggest a disconnection between how the military services see the need for changes to the system and how OSD sees the need. Despite engagement in the RIE and follow-on activities, military department personnel see less urgency in the need and are less personally vested. Moreover, they are invested in the current status quo and may perceive a reduction in autonomy as movement to a more common system is made. Thus, a communication campaign should focus on the military services as well as the specific action officers who will be implementing the change so that they understand the greater picture and have the opportunity to become more personally engaged. It also provides them with a chance to raise concerns with the process that, while they may be seen as “resisting the change,” may also be used as opportunities to make sure the change actually works for the relevant stakeholders (for example, see Burke, 2014) and, if needed, revisit the goals and plan as was done in the case of TRICARE. An ongoing communication and stakeholder engagement campaign also provides the opportunity to address concerns as they arise, as they are likely to do throughout the process. If the planned change as implemented would not reduce autonomy, for example, this is an opportunity to make that clear. While ad hoc communication techniques can be used and may enable greater breadth of communication to the action officer level, MC&FP should also rely on formal memos and other written communication to inform the military services to ensure that the widest audience is engaged. Communication by other means, such as video teleconference meetings, might also be a viable way to convey the urgency of the need.

Quick action may be necessary. According to the RIE and our discussions, the military services are updating some of their existing systems. If alignment to the objectives of the RIE COAs is not explicitly considered in their purchases, military departments will have made substantial financial investment in technology that cannot readily be recouped if another accounting system is proposed as a final aligned solution to COA 3. This investment, if not shaped, will make arguments in favor of purchasing a new system for final integration less compelling.

There are also many opportunities for efficiency gains within the NAF accounting community and many places where synergy is already occurring. After the RIE recommendations were published, a NAF SGL working group was created. This group, officially known as the NAF Accounting Working Group (NAF AWG) because its portfolio addresses the broad range of policies, reports, and other accounting issues, was facilitated by an external contracting company that worked with the military departments in coordination with OSD to create an SGL that mandated the same inputs across the services to a level of precision that suited both the services and OSD. Given that those action officers affected by the change are helping to design its implementation, this represents an opportunity for them to discuss their concerns and develop solutions, and be persuaded of the need for change. Moreover, many of the members of this working group are well aware of the conclusions drawn at the RIE because they took part in it and developed those recommendations. This working group has already produced results and is a key element to enable communication throughout each military department less formally. Members who attend this group regularly pass communication downward to inform the regional centers and installations as well as upward to the overseeing military

service directorate. Additionally, information is passed along to the MC&FP staff members that fund the accounting contractor that facilitates the AWG meetings.

Passing of information is critical for the military departments because they must be convinced of the need to change; otherwise, it will be difficult to alter well-entrenched bureaucracies and reverse financial outlays. The discussed rationale must show how the changes would reduce expenditures, free up effort for other functions, and improve the process for each individual military service.

Provide a Plan

The second guideline reminds managerial leaders to develop a course of action or strategy for implementing change. Currently, the NAF AWG is moving forward with some of the recommendations of the Accounting RIE. However, the NAF AWG has struggled to implement plans fully. In part, this is merely a function of the time to implement some of the recommendations. However, although the goals and end state of each COA developed in the RIE event were clearly articulated, they lack some of the operational specifics required for implementation. Thus, OSD must continue to lead the effort to develop a strategy that is sufficiently detailed, as well as achievable by the military services. A critical component of this plan is a prioritized list of specific actions to be completed by the services. Additional items include a time line and designation of task leads for each issue to be jointly worked. Finally, consideration of efficiently incorporating the cost of upgrades would be a key part of this process.

The implementation plan outlined in the RIE is one such area to be jointly worked. While COAs 1, 2, and 3 are independent of each other *according to RIE documentation* (Task Force on Common Services for Service Member and Family Support Programs, 2013c), it will be imperative to provide clear and specific guidance from OSD on what COA is to be enacted. This guidance will help the military branches avoid inconsistencies and ambiguity. If, instead of committing to a single COA (which would maximize returns on investment), the services decide to work through the SGL and related issues gradually and then proceed with getting a common type of system and maybe consider full consolidation (COA3) at a later date, it will be possible to benchmark achievable milestones through COA 1 and COA 2—which will, in turn, build momentum—but key decisions need to be made in the near term. Otherwise, as individual services press forward with the procurement of new systems and updates to older ones, their actions will not be synchronized. As with the DFAS case study example, the military services would likely need to customize the common accounting system to enable interfaces with their unique feeder systems and needs. As later shown for the current example, this weakens the business case for implementation by extending development time and cost.

The NAF AWG is a good model because it shows action has already been taken from the task force and RIE recommendations, and its progress is emblematic of planning and momentum. However, the creation of additional working groups or the continuation of the current working group should be considered as the work on the SGL comes to a close. Reasons for this include existing momentum in that group, the military services' routine of sending the same personnel and building on an existing rapport, which leads directly to a good working relationship in NAF accounting across the military services. It would be relatively easy to build on this existing group to act as a forum to discuss additional SGL issues and feeder system integration, because current plans include ongoing contact. This issue lies at the heart of COAs 2 and 3 and needs to be discussed before the major investments associated with the SGL are complete. Moreover, communication between the members of the working group and their respective

military services could be better leveraged as time progresses to enable this channel to be used even more effectively in terms of planning and communication of the detailed plan. It was clear from some of our discussions that relevant stakeholders within the military services were not always aware of pertinent efforts; thus, the working group model must include communication with as many relevant stakeholders as would be involved in implementing a plan.

Another option would be to formalize communication efforts between military services through quarterly meetings. To ensure participation, a GS-15 (as is currently the case) or a member of the Senior Executive Service (SES) should chair the quarterly working group, and military service participants should be of equally high rank. Incorporation of stakeholders at the level of original task force participants may also be advised to ensure that upper-level support and visibility is adequately engaged throughout the process, rather than languishing over time as demonstrated by the DIMHRS case. The group could start with the military services and then be expanded to include the Exchanges as “nonvoting” participants.

Build Internal Support and Overcome Resistance

There is always some internal resistance to change, because some personnel may prefer “the way we’ve always done things” when facing an uncertain future. To enact COAs 2 or 3, significant leadership from OSD will be necessary—and, potentially, additional external pressure, as there was for the NAF AWG. The selection of standardized feeder systems and the selection of a core financial system are both difficult tasks, and the military services are already heavily invested in the systems they have; there is little incentive for the services to change toward a common direction. OSD will have to work to find an acceptable solution for all stakeholders. This will be challenging because some military services have gone through multiple reorganizations, thereby reducing their appetite for change and potentially causing a further retrenchment into current business practices. Moreover, the same budgetary constraints that inspired the work of the task force initially make arguments for initial strategic investment more difficult.

Ensure Top Managerial Support and Commitment

Deep organizational change such as that proposed by the NAF accounting RIE team needs champions to advocate and guide various organizations’ implementation steps through the years ahead. It will be critical that the process champion has the proper skill, acumen, and fortitude to overcome entrenched ideas within the military services. Each service is operating systems independently, there is no common model, and there are no identified action officers to be internal champions. Bringing the military services together and getting them to agree upon core financial and feeder systems will be difficult because there is no perceived internal urgency or impetus. One way to build some momentum would be to have outreach events from senior leaders in MC&FP and other OSD-level organizations and to identify clear change leaders within the military services.

Other considerations that must be accounted for are process times and the associated cost within each military service’s accounting division. Additionally, there is a lack of tracking mechanisms to gauge progress accurately. OSD can help with these challenges and show commitment by providing resources for the procurement of systems or by hiring a contractor to facilitate dialogue on the subject, as it has done. An example of this is the current contract that is facilitating the NAF AWG, as well as the program office, to ensure that progress continues.

The NAF AWG is nearing completion of its work on an SGL, and the official memo was approved June 30, 2015 (Office of the Assistant Secretary of Defense, Manpower and Reserve

Affairs, 2015). A decision also must be made on how best to implement the SGL: whether to only tackle COA 1 or to set sights on a broader change that encompasses the recommendations of COAs 2 or 3. Further analysis about the cost of COAs 2 or 3 will be detailed later in this report. However, it is worth noting in this section that large costs are associated with personnel and with systems procurement that are part of those COAs. Whatever the decision may be, it will be important for senior leadership within OSD, as well as within the military services, to support the decision and chosen COA, which may take the form of communications plans or outreach events.

Build External Support

In addition to internal advocates, external stakeholders also influence the tempo and climate of change. But winning over outside actors is greatly facilitated by the ability to provide a plan, implement it, and show the successes from implementation. With few existing metrics to show efficiency across accounting, this will be a difficult task. Another issue facing accounting is the potential turnover of leadership among the stakeholders. Such turnover could hamper the effort for several reasons. The first is that COAs 2 or 3 must be decided upon by OSD and the military services, and both may involve substantial financial outlays. This is a complicated problem and requires dialogue and negotiation, which may take time in itself. Once a decision is made, the course should not be significantly altered, but with the turnover of high-level personnel, this is always a risk. A second issue identified is the large number of stakeholders affected, including DoD entities such as the exchanges, academies, IT sector, and Comptroller, as well as outside agents such as Oracle, SAP, and the companies that provide the feeder systems.

Overcoming these obstacles will require stakeholder meetings with as many of the relevant players as can be gathered, including the military services, IT, and other interested parties, to build a network of consensus. As mentioned, a strong starting point to build this network may be from the NAF AWG, which already has a solid base of knowledge after having worked together for the last several months.

Support from such external stakeholders as the Comptroller and Congress also may be leveraged in the sense that it is external pressure that is forcing DoD APF accounting toward commonality; a reasonable case can be made that NAF accounting must surely follow. Although progress on this effort in the APF domain is plagued with delays (Khan, 2012; see also the DFAS case study discussion in Chapter Four), the pressure remains. Moreover, at this point there seems little call for Congress to completely roll back sequestration cuts from the Budget Control Act (Lyle, 2015), which means funding will be limited into the future and the pressure to find savings will remain. The extent to which Congress is a source of viable reduction plans is otherwise doubtful, although planned strategy might be expected to help the DoD save money over the long term.

Provide Resources

This guideline reminds us that people and funds enable change to occur. OSD must be able to persuade military service stakeholders that change benefits them, or it will be difficult to convince them to implement COAs 2 or 3. OSD provides leadership, and must also continue to provide funding and technical resources to implement the RIE recommendations. Many of the military services do not see the need for or associated benefits of enacting COAs 2 and 3 in an integrated fashion, as described above. Consequently, OSD should avoid overtaxing the

military services, which are already engaged with the AWG, and continue to fund mechanisms that are actively working toward consolidation. An example of this is the Grant Thornton contract, through which contracting help is engaged to organize the agenda and support planning for the group working through the issues in the accounting domain, as well as providing technical expertise where required. Throughout the discussions, this facilitation and support contract was consistently recognized as the reason the NAF AWG was moving forward.

Institutionalize Change

At some point, changed processes must become the way of doing business, and managers should employ multiple techniques to ensure that the changes within the NAF community are codified. Monitoring and evaluation will be critical to the success of the NAF AWG and should be conducted at the relevant levels to make sure data quality issues are solved as the NAF SGL is rolled out. The change champion should take the lead on evaluating the change process and actively engage issues as they arise. Additionally, the leader should consider a common set of standards for monitoring and evaluation across the military services so that benchmarking or comparisons can be made more easily. Once a common set of standards is in place, progress can be measured across the military services, and incentive programs can be implemented to encourage continued improvement.

Another area to be closely watched is the IT sector. COA 3, if pursued, requires POS alignment; to the extent that this would be achievable, it would be beneficial to monitor the military services' IT systems, acquisitions in the accounting domain, and any tailoring made to COTS packages to minimize the time needed to determine where the military services will have different needs and systems later.

Relevant policy changes and documentation also should be incorporated into DoD Instruction (DoDI) 1015.15 (DoD, 2008) and other agency-level policy documents (see Table 4.1 for a description of the relevant policy documents). OSD is in the process of revising this policy document. Another venue to institutionalize the changes might be to hold celebrations or functions in which the RIE and working group participants are able to gather and confirm the changes and reengage with the process initiated with the task force's work. Some of the other mechanisms of institutionalizing change, such as changes in HR systems, would require military service initiation.

Table 4.1 suggests the policy documentation that might require modifications to enable consolidation to be institutionalized across the NAF accounting domain. For example, Chapter Two of Volume 13 of the Financial Management Regulation (FMR) dictates a four-digit structured accounting system (DoD, 2011). In discussions, the working group was moving out to a seven-digit structured accounting system that would not only facilitate the universality of accounting categories desired by OSD so it could compare "apples to apples" in terms of costs but also enable the military services to pursue tailored applications for issues relevant for their internal organizational structure and reporting requirements (e.g., one service may combine cost reporting for a bowling alley and attached café while another service may report them separately). Given that the FMR is far more detailed on this matter than other policy documentation, it is possible that not all of the documents described below would need to be modified. However, the table provides the relevant documents that detail policy that may be relevant to the changes undertaken and, when described in sufficient detail in current policy, changes implemented in the documentation itself. We have heard that revisions are already under consideration within OSD.

Table 4.1
Policy Updates to Be Considered Across the NAF Accounting Domain

Source	Date Issued/Last Modified	Relevance
DoD 7000.14-R, "Financial Management Regulation" (FMR)	Current Edition (2011)	Financial management policies and information requirements of MWR activities. Vol. 8 addresses civilian pay policy, including benefits, for both APF and NAF employees. Volume 13 addresses NAF accounting policies, standards, and requirements.
DoD 1401.1-M, "Personnel Policy Manual for Nonappropriated Fund Instrumentalities"	December 13, 1988	Sets forth NAFI personnel policies. See also DoDI 1400.25, Vol. 1408, (DoD, 2009).
DoDI 1015.15, "Establishment, Management, and Control of Nonappropriated Fund Instrumentalities and Financial Management of Supporting Resources"	Issued October 31, 2007 Incorporating Administrative Change 1, March 20, 2008	Dictates NAFI financial management and applicable standards for financial and management reporting
DoDI 4105.67, "Nonappropriated Fund (NAF) Procurement Policy and Procedure"	February 26, 2014a	Establishes NAF procurement policy, including provision of items or services inherent to DoD NAFIs' internal operations
DoDI 7600.06, "Audit of Nonappropriated Fund Instrumentalities (NAFI) and Related Activities"	November 5, 2012	Establishes annual audit requirements, including standards for NAF accounting systems

Pursue Comprehensive Change

This guideline reminds advocates of change that there should be no loose ends at the end of implementation. The complexity of the subsystems and manner in which the data are incorporated into the accounting systems must be fully mapped out to ensure functionality of the entire system. The NAF AWG or another working group devoted to this particular issue needs to analyze and understand the interconnections between feeder systems and the main systems of record to ensure the systems and POS interfaces are integrated. Ensuring that these technical subsystems integrate properly is necessary for the completion of any COA besides COA 1, and continuing fragmentation of systems would pose ongoing challenges for achieving the synergistic end goals, as demonstrated by the DFAS case. Ideally, training would also enable personnel across the military services to gain mastery using the new NAF SGL as well as manage any other changes from the various COAs and enable smooth functioning. In terms of performance appraisal, the military services should allow for an appropriate learning period, as well, and not expect perfect performance immediately. Moreover, rewarding participation and cooperation in these vital working groups would aid in signaling the importance of the effort. OSD may have limited capacity to enforce these military service-level changes, so incentivizing participation through the control system of data calls (i.e., ensuring changes result in fewer and less-detailed data calls) as well as making participation less burdensome through the provision of resources, as they are doing now through working group facilitation contracts and providing travel support, is likely to be beneficial. If continued progress is desired, we recommend continuing this and similar initiatives.

The ability to procure a core system and standard subsystems is critical for COAs 2 and 3. A determination must be made regarding what accounting system should be utilized—SAP, Oracle, or some other alternative—and the military services will have to align their current

systems with the new core financial system. The literature also suggests that, to the extent that OSD has the resources to incentivize participation and minimize military service level burden of changes to their specific subsystems, it should provide such resources to enable the military services to pursue the desired IT system change.

Applying the Eight Guidelines: NAF Employee Benefits

Currently, the military services provide most employee benefits independently through various providers under different contracts. Using different providers with different contract terms creates some variability in program offerings, enrollment and eligibility practices, and benefits received by military service members. We apply the eight change-management guidelines for the lead organizations to consider in consolidating NAF employee benefits.

Ensure the Need

Ensuring and communicating the need for change will be important to garner support and facilitate plan-building across the NAF employee benefits community. Multiple military services would benefit from analyzing the systems in place to illuminate areas where common concerns and advantages to greater integration may be found. For example, one military department said that it spent all of its time fixing errors instead of improving the system. Accurately describing the current benefits package and systems that administer those benefits would provide a baseline from which the military services could begin collaboration. The baseline would also help document areas where savings could be found and help provide a sense of the scope of needed change. This would be a vital step in being able to use industry standards as benchmarking and comparison tools, for example, to enable military service personnel to consider courses of action with more-complete information.

Additionally, multiple military services have a board that makes benefits determinations. While these boards meet regularly, the process each military service goes through to make decisions on altering benefits takes time and can slow the flow of information. For example, even simple document changes must receive several levels of approval before being implemented. However, these boards may also be used as a platform for talking with key stakeholders and describing the necessities and advantages to benefits administration.

There are opportunities for synergies that may be leveraged absent a larger integration impetus—the “Do it now!” recommendations and discussions that surfaced at the RIEs. These are relatively easy-to-implement recommendations in the sense that they do not require policy change and can be started with the SMEs in the field. Active engagement in exploring the implementation of these recommendations might even be an opportunity for the military services to surface other, similar types of synergies. For example, one service has a training program in place for the portability of benefits that could be used as a starting point for other services. A group that meets regularly, much like the NAF AWG, could be an effective communication platform for all the military services. Currently, representatives from the military services and OSD meet regarding the health plan aspect of benefits, but this meeting is not regularly used to discuss benefits more generally (and indeed, the representatives who attend may not be SMEs in their services’ other benefits programs). A more general benefits group with OSD attendance could help to ensure that information is not lost (both within and

between military services) and individuals at different levels within the services do not initiate things that contravene the plan.

Provide a Plan

To inspire and bring about organizational change, personnel must have a clear path forward. Unfortunately, to our knowledge, no firm plan or milestones have been established for NAF employee benefits consolidation. A possible solution would be to use industry standards to benchmark and create milestones for the different services within NAF employee benefits. A multitude of industry organization standards and reports could easily be referenced to establish a baseline benefits service standard across the military services and assess status systematically.

Another option would be to have MC&FP provide a template for each military service to list the NAF employee benefits it offers as a starting point for recommendations relating to documentation, collaboration, and standardization. This template could hold detailed information on the costs of the employee benefit as well as information on the contracting vehicle (and would hence be more detailed than extant templates shared with us to date). The template in Appendix B is intended as a starting place for development of annual documentation of the NAF employee benefits offerings. Informed decisions regarding interservice collaborations could then be made looking across the military services and the benefits they offer employees. One body that could lead this task would be the suggested joint service committee for benefits, as described in the RIE group's final recommendations. This body would be comparable to the NAF AWG, would focus on enacting the recommendations that have already been laid out in the RIE, incorporate appropriate stakeholders at the action officer/implementation level, such as those who took part in the RIE itself, and would analyze current military service contracts for a "best value" contract.

Build Internal Support and Overcome Resistance

Internal support, important to facilitating deep organizational changes, may be somewhat difficult to secure across NAF employee benefits organizations. This challenge may stem simply from a lack of action officer-level working groups and systemic opportunities for collaboration among relevant action officers. While the NAF AWG is funded by OSD, there is no similar group within the benefits community. Although the Marine Corps has been known to host networking meetings for benefits personnel across military services and has begun this practice again, Marine Corps members noted they felt it was difficult to be the only service committed to this collaboration. Regardless, the lack of a regular forum hampers the flow of information and hinders the ability of leaders to make informed decisions based on the most up-to-date information from across the military services. Based on our discussions, we note a lack of an open flow of information through the chain of command, between military services, and up to the OSD level. This can lead to misconceptions about progress and the level of work completed, as shown by the fact that there is relatively little evidence of coordinated contract negotiation and varying claims regarding the commonality of coordinating that process. There is even disagreement on whether the goals identified in the RIE represent solutions to real problems (for example, some statements, such as those regarding lack of retirement portability, were considered to be generated by a lack of familiarity with issues rather than genuine challenges faced by military service personnel). As with the TRICARE example, initial planning represented by the RIE may need a revisit.

One way to mitigate the relative lack of interaction would be to have, in effect, a public relations campaign that re-engages stakeholders in the change process, as described earlier, and engages the relevant action officers as change champions. If different goals for change than those determined by the RIE are indeed warranted, they should be identified. Effort at creating a reasonable and specific time line would further enable discussion that would address concerns and barriers perceived by various stakeholders. Resistance might also be lowered if current employees were assured that benefits offerings would not change or would be improved and that only new employees would be affected by new benefits contracts. The working group could have a mandate to review potential contracts systematically for integration, collaborate on operations and best business practices, and coordinate IT systems to improve program efficiency. One way to communicate these recommendations would be through formalized reports to the OSD level and throughout each military service.

Ensure Top Managerial Support and Commitment

Influential personnel are needed to make understood and champion the need for change in any organization. To date, there are no designated leads for changes across the organizations for NAF employee benefits reorganization, and as a result, there has not been any impetus from the military services to collaborate. Moreover, there is currently no OSD-level leadership beyond the health benefits domain. While the RIE did bring together individuals from all of the military services, which in turn facilitated some relationships, the task force as a whole did not include forcing functions in its mandate to ensure that proposed change was pursued. One option would be to engage a designated military service lead agent for each group of recommendations, at least those of the “do it now!” type that do not entail major policy changes. For example, the Army could be designated as the lead for short-term and long-term disability contracts, the Navy could be identified as the lead for 401K and retirement benefits, and the Air Force could be the lead agent for IT solutions across the military services. The U. S. Marine Corps is the contract lead for flexible spending accounts and has already offered additional military service participation, including hosting a meeting for benefits representatives to talk through some of these issues, as noted earlier.

Once some of the issues have been dealt with in these cases, additional areas can have a change lead assigned. Showing some progress in these areas will boost morale and encourage further participation and interaction between the military services. Once the military services are more aligned, it will be possible to invite other agents to participate, such as the Army and Air Force Exchange Service (AAFES) and the Navy Exchange Command Service (NEXCOM). OSD might also consider helping the military services track the cost of working OSD data calls to help demonstrate savings that could be accrued through greater collaboration and standardization.

Build External Support

To build external support for the change, communications must be appropriately targeted, detailed, and timely. To date, communication to stakeholders outside immediate NAF employee benefits organizations have been sporadic at best. Establishing a working group and building internal support that enables more-detailed planning and conceptualization of requirements should first be accomplished, before challenges from outside stakeholders are addressed.

Provide Resources

The NAF AWG oversees the resources needed to support NAF accounting. Currently, NAF employee benefits do not have a similarly focused working group. In spite of this, several interviewees who deal with benefit contract negotiation are engaged in dialogue looking for ways to share benefit provider contracts and reduce costs. However, without additional funding, it will be difficult to implement the RIE recommendations in a systematic and planned manner; one-offs might be achievable where mutual benefit is found but absent an internal interest, stakeholders at the action-officer level will perceive relatively minimal benefit of coordination for coordination's sake, and a cost in terms of time and effort.

The establishment of a working group must be a high priority if action is to be taken on implementing the RIE recommendations. Such a group is described in the final briefing as the joint service committee for benefits. The group should be adequately funded to ensure military service participation, and the location of the meeting could rotate quarterly so that each military service has an opportunity to feel it has ownership of the process. Technical expertise is another area in which additional support would be helpful. Specifically, OSD should provide funding and expertise for the integrated NAF HR and payroll systems and the integrated website for information-sharing. Much like the Military OneSource website that has resources for all service members, an integrated NAF HR and payroll system site could support the greater NAF community and provide substantial long-term savings. The suggestion regarding integrated HR and payroll systems is on par with the larger and more complex IT integration considered in NAF accounting, and would likely require a commensurate level of effort were it to be pursued.

Institutionalize Change

Deep change is rarely easy for organizations, and bringing together multiple NAF employee benefits organizations to act as one system will undoubtedly present a number of challenges, particularly as the lines of authority are more diffuse in benefits than in accounting. Systems that support benefits in the military services are still generally stove-piped; that is, there is no single forum by which to routinely share information. In the past, there were informal regular meetings, and these seem to be in the process of being reestablished. The establishment of a long-term forum to share ideas and discuss consolidation procedures could help mitigate a stove-pipe mentality. This forum also could serve as a platform for program implementation monitoring and could be chaired by OSD (i.e., at the joint benefits meetings as recommended in the RIE).

Topics for discussion at the forum should include a mandate for sharing military service-level contract information, standardization of forms, codes, and definitions across military services and OSD, and creating a NAF summary of benefit forms and outprocessing checklist. Some of the other mechanisms to institutionalize change, such as modifications to relevant agency-level policy documentation, must await the necessary discussion and determination of the best way forward through stakeholder participation. However, determining shorter-term goals and defining what incremental success looks like, and tracking those outcomes, is still relevant, and the forum could be used for troubleshooting some of the longer-term issues as well.

Table 4.2 suggests the policy documentation that might require modifications to enable consolidation to be institutionalized across the NAF employee benefits domain.

Table 4.2
Policy Updates to Be Considered Across the NAF Employee Benefits Domain

Source	Date Issued/Last Modified	Relevance
DoD 7000.14-R, "Financial Management Regulation" (FMR)	Current edition (2011)	Financial management policies and information requirements of MWR activities. Vol. 8 addresses civilian pay policy, including benefits, for both APF and NAF employees. Volume 13 addresses NAF accounting policies, standards, and requirements.
DoD 1401.1-M, "Personnel Policy Manual for Nonappropriated Fund Instrumentalities"	December 13, 1988	Sets forth NAFI personnel policies. See also DoDI 1400.25, Vol. 1408 (2009).
DoDI 1400.25, "DoD Civilian Personnel Management System"	August 22, 2014b	Establishes and implements NAFI personnel policies. Includes several volumes. Each NAF employer administers its own retirement program.
DoDI 1400.25, Vol. 830, "DoD Civilian Personnel Management System: Civil Service Retirement System (CSRS)"	August 22, 2014b	Establishes policy, procedures, and responsibilities for use of CSRS and administration of retirement benefits
DoDI 1400.25, Vol. 840, "DoD Civilian Personnel Management System: Federal Employees Retirement System (FERS)"	August 22, 2014b	Establishes policy, procedures, and responsibilities for use of FERS and administration of retirement benefits
DoDI 1444.02, Vol. 2, "Data Submission Requirements for DoD Civilian Personnel: Nonappropriated Fund (NAF) Civilians"	November 5, 2013	Establishes policy, responsibilities, and procedures for NAF, direct-hire civilians paid partly or wholly from DoD NAFs
DoDI 4105.67, "Nonappropriated Fund (NAF) Procurement Policy and Procedure"	February 26, 2014a	Establishes NAF procurement policy, including provision of items or services inherent to DoD NAFIs' internal operations

Pursue Comprehensive Change

While these programs share many of the same benefits and employee coverage, each system is complicated and unique. At the RIE, benefits representatives from the military services began to analyze and understand the interconnections between their subsystems. Prior to the RIE, a consequence of staff turnover and organizational changes in some of the military services was that, in some cases, functional equivalent staff did not know their counterparts across the services, which limited coordination. While this is no longer an issue, it may have affected the initial recommendations developed, as well as their specificity. These efforts to coordinate are a good starting point, but continued involvement of OSD will be necessary to ensure adoption of consistent NAF benefit standards across military services. With time and support to meet and discuss standardization and the other recommendations from the RIE, other subsystems (including training, which was specifically mentioned) could be brought to bear to ensure that change is comprehensive and supportive mechanisms are in place. Moreover, some integration or updating of the currently varied systems tracking these data would enable additional synergies and minimize time spent fixing system calculation errors rather than providing active customer service, which presumably would yield some dividends in the form of work satisfaction and improved customer service. In the following two chapters we examine the business case for NAF accounting and employee benefits.

NAF Accounting Consolidation: Cost Analysis and Results

Achieving a greater efficiency of scale is frequently the goal behind organizational consolidation efforts. Leaders hope to reduce average costs by increasing an organization's output but not its size. This is an optimistic perspective and certainly drives change, but if there are real costs associated with reorganization, these might not outweigh future savings. Cost analysis is thus essential in any strong organizational consolidation plan; such analysis allows explicit and systematic categorization of the various factors that may influence the price of moving forward and can help organizations avoid inappropriate investments.

This chapter examines the costs of developing, deploying, and maintaining accounting systems from the three COAs put forth by the NAF accounting RIE team. Chapter Six will explore the costs for NAF employee benefits.

The first section reviews the goals of an NAF accounting consolidation and the three COAs. Note that the RIE members did develop initial cost and savings; however, these were based on back-of-the-envelope calculations by the SMEs in the meeting, during which they were unable to conduct a full, formal cost analysis. As part of the RAND analysis, the team worked to develop a formal model of potential costs associated with proposed changes.

The second section reviews the approach, data gathered from literature and during discussions with RIE and task force members and other experts, and the methodology. The third section provides a close look at the analysis used to generate results. Finally, the results of the cost estimates for NAF accounting consolidation are provided in terms of costs and savings associated with implementation. As COAs are likely to be refined in the months and years to come, the estimates here are only of a rough order. Actual costs will depend on detailed requirements negotiated among the military services and OSD.

NAF Accounting: Goals and Courses of Action

One of the outcomes of the RIE was a rough order-of-magnitude cost estimate for the proposed accounting COAs; RAND was tasked with providing an independent cost analysis for implementing these COAs for the Army, Air Force, and Navy.¹

¹ The Marine Corps is excluded from estimates because its NAF Exchange has already been integrated with the Corps' NAF accounting, and NAF Exchanges were excluded from the task force effort. We note, however, that the Marine Corps' example of integration could serve as a useful test case should broader NAF back-end integration be considered. Therefore, all references in NAF accounting to "military services" only include the Army, Air Force, and Navy. The Marine Corps did participate in the RIE and provided some data for this effort. Where we used Marine Corps input specifically, we note its inclusion.

The RIE produced three COAs to provide efficiency and greater effectiveness of back-office functions for the NAF accounting organizations. The descriptions of each COA in the RIE left room for interpretation, requiring us to make several assumptions about the activities included in each COA in order to perform our cost analysis. After our discussions with stakeholders and subject matter experts, our assumptions regarding the scope of each COA are summarized as follows:

- COA 1 Structure Update
 - Migrates the Navy, Air Force, and Army to an SGL that includes:
 - a singular accounting structure
 - a singular cost center structure
 - Military services retain existing feeder systems
 - Navy and Air Force retain and update their current respective systems
 - Army ensures its new system uses the SGL
- COA 2 Common Systems
 - Implements the first three steps above SGL, singular accounting structure and singular cost center structure
 - Move to one core financial system type² for all services, implemented as a separate database for each service³
 - Standard POS/feeder systems selected but implemented separately for each database
 - Not necessarily implemented immediately; standard feeder systems would be implemented by each service when the current feeder systems become obsolete⁴
- COA 3 Consolidated Service Center:
 - Implement first three steps of COA 1
 - Move to one core financial system for all services⁵
 - POS/feeder systems standardized and integrated across military services
 - Not necessarily implemented immediately; standard feeder systems would be implemented by each service when the current feeder systems become obsolete.⁶

Although the final RIE Accounting presentation recommends proceeding directly to COA 3, we were told subsequently that MC&FP treats the RIE's proposed COAs as sequential steps that make it possible to move toward DoD-wide NAF accounting standardization gradually, but the DoD may or may not implement all stages. After discussions with stakeholders and review of enterprise resource planning literature, it was unclear how much effort from earlier COAs actually could be leveraged in later COAs. For instance, if DoD decides to invest in COA 2 and then later to invest in COA 3, the separate military service databases will have become more customized over time, making the integration effort for COA 3 more complex than if it had been selected from the beginning. While it is possible that the COAs will build upon each other, our primary estimates are for each individual COA, independent of the

² The services would select a single COTS software system to allow for improved interoperability.

³ Army no longer invests in a new stand-alone NAF accounting system.

⁴ Feeder systems costs are not included in the estimate (see Appendix B).

⁵ All services cease investing in stand-alone NAF accounting systems.

⁶ Feeder systems costs are not included in the estimate (see Appendix B).

others. For instance, to do COA 3, we do not assume that it is necessary to complete COAs 1 or 2 first. Similarly, savings are independent. This approach recognizes that analysis and coding efforts from prior COAs may not be fully reusable in future efforts and allows DoD to consider the option of skipping one or more COAs entirely. If DoD does invest in all the COAs sequentially, then some costs would be reduced from the results presented in this document. More importantly, if DoD does implement them sequentially, the cost savings associated with COAs 2 and 3 drop dramatically, making the business case for implementation weak. The effect of sequential investment is discussed later in this chapter.

Another important consideration is that the Army's current accounting system is more than 30 years old and does not provide many of the advantages of a modern system. The current system cannot be upgraded to use the NAF SGL proposed in COA 1. As a result, the Army is planning to procure a new system, which would make implementation of the SGL possible. We assume that because the Army already needs to upgrade its current system, the total procurement cost of a new system is marginal and therefore should not be included in COA 1. That said, there will be costs of investment in a new system for the Army, so we have included a cost estimate for a new Army accounting system in Appendix B. In COAs 2 and 3, we make an alternate assumption that the Army can avoid investing in a new system that is solely for its use, and instead invest only in the common system selected by the military services. This is a significant cost avoidance for the Army; if COA 1 is implemented and the Army purchases a new system and then COA 2 is implemented, the Army would need to procure two systems rather than one.

COA 1 is already partly under way with the NAF AWG developing the NAF SGL. Note that a primary benefit of this implementation is that it negates the need for manual reporting to OSD as is currently done. The Navy is undergoing system upgrades, including an updated SGL, and the Army is considering its options for a new financial system. COAs 2 and 3 are more stand-alone because the military services could in theory choose either option without implementing the other, but skipping from COA 1 to COA 3 requires more-rapid change and more joint integration than going from COA 1 to COA 2.

Approach to Cost Estimation

While eventually the military services will want to create a detailed budget estimate that accounts for specific technology investments, this analysis is designed to compare at a rough order of magnitude the costs across the three COAs proposed in the RIE. The military services did not create detailed requirements for each proposal, so we developed a simplified model based on past expenditures by the Navy and Air Force that includes technology, personnel, and maintenance costs.

These estimates do not encompass the whole cost of the NAF accounting function; instead, we focused on marginal savings and costs above the baseline⁷ for the Army, Navy, and Air Force. Cost estimates for COAs 1, 2, and 3 focus specifically on costs and savings of development, deployment, maintenance, and changes in personnel. We do not include costs of all of the staff necessary for NAF accounting, just how the staff would change. We do not consider the cost of facilities, communications, upgrading systems over time, and other costs

⁷ The baseline costs are those overhead costs that the military services are already spending to provide accounting.

that are not expected to change with investment in the COAs. For instance, in COAs 2 and 3, feeder systems would be agreed upon across all military services. Each service would not be required to upgrade to the new, common system until their existing system becomes obsolete. As a result, feeder system costs have been omitted from the estimates as they are assumed to be an eventuality; thus, for the purposes of this estimate, their cost is marginally \$0 (however, note that we include the estimate of those costs in Appendix D).

For each COA, we look at the marginal costs from development through ten years after deployment. This time line is based on previous upgrade cycles experienced by the Air Force, Navy, and Marine Corps. Costs over longer time periods would be subject to more uncertainty as a result of innovation in the technology sector.

For COA 1, we looked at costs associated with prior database upgrades scaled to the size of this effort with input from accounting personnel. We assumed that no single military service could reuse its current accounting system wholesale to meet the goals of COA 2 or 3. While that is possible, it is unlikely that existing business processes and procedures translate well for all services. Therefore, the likely system will be a compromise of the desired capabilities of the three services. For COAs 2 and 3, we estimate the cost of a new accounting system implementation based on the size of the user base. As accounting systems costs are correlated with costs of user licenses, this approach allows us to understand the basic costs of technology without detailed workflows and system integration plans.

The limitation of this approach is that the possible personnel reductions are uncertain until business processes are redesigned. License costs themselves vary based on vendor and current DoD-negotiated rates. In addition, the system integration with existing point of sale, payroll, and other information systems can be a major cost driver, but at this stage there are no system architecture plans to inform an estimate for integration. It is also worth noting that either the Navy or Air Force could experience lower costs in COAs 2 or 3 if either is able to reuse existing database licenses. As the military services have competing licenses, only one service would have the ability to leverage its existing licenses if it pursues a traditional ERP implementation. If either the Navy or Air Force's system is chosen for all services, then the respective service may achieve additional savings, depending on the level of business process reengineering required. Finally, these issues may be moot in the near future: With the advent of cloud licenses and competitors to the existing systems, it is possible that all military services would need new licenses for the new technology.

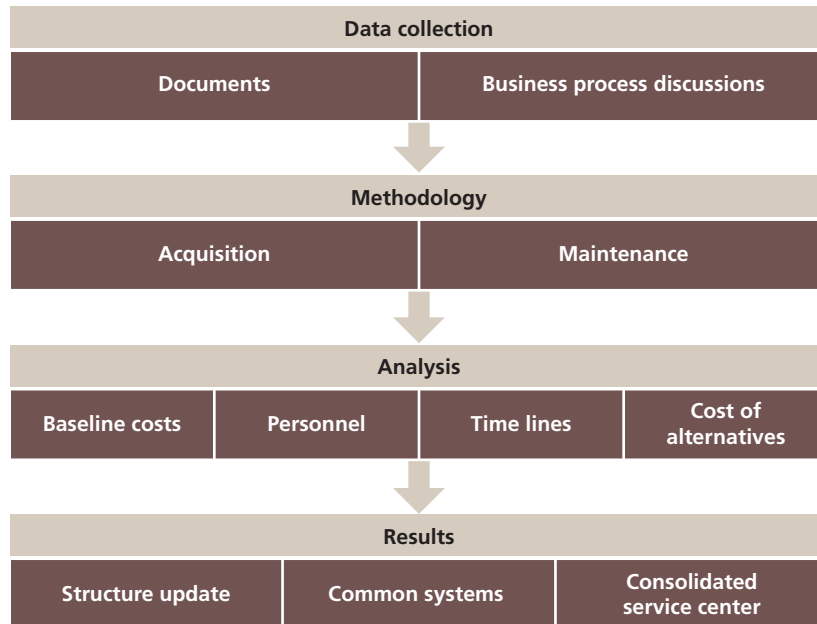
Figure 5.1 provides a road map of the cost analysis for NAF accounting.

Data Collection

We relied on several data sources to inform our estimates. The primary focus of our data collection for cost was official documentation from existing ERP investments. First, the Navy provided several unpublished cost documents, including a 1997 business case analysis (BCA) for the procurement of its current ERP system.⁸ The 1997 BCA estimated the cost of an ERP system to be \$45–63 million in FY 2015 dollars. These data were comprehensive, but potentially dated. In addition, the Navy also provided 2013 BCAs for its current upgrade effort (Commander, Navy Installations Command, 2013a; 2013b). Both of these contain valuable

⁸ A business case analysis looks at the costs and benefits of investing in a new system.

Figure 5.1
Accounting Cost Analysis Roadmap



RAND RR1175-5.1

data on expected costs, full-time equivalent (FTE) levels,⁹ and projected savings. The Navy estimated the costs for its current upgrade effort to be approximately \$20 million. The Navy also provided an Excel file detailing FY 2013 FTE turnover data, which informed personnel savings calculations for all military services in our cost estimates (Davis, 2014). The Air Force provided projected costs and also multiple years' worth of actual ERP-related cost data, including maintenance and software costs. The Air Force's original license purchase for approximately 200 employees at the Shared Service Center (SSC)¹⁰ totaled approximately \$2.2 million in FY 2015 dollars.¹¹ The Air Force's full implementation of new accounting software from 2004–2010 cost about \$45 million in FY 2015 dollars excluding government labor, and about \$78 million with government employees.

The aforementioned documents provided data on costs of system acquisition and maintenance from 1997 through 2014 that were sufficient to inform rough order-of-magnitude estimates of traditional server-based ERP investments, but do not reflect recent shifts in technology, such as software-as-a-service and cloud-based accounting systems. The Army is exploring the cost of a cloud-based architecture, but its estimates were not available in time to inform this study.

We supplemented documentation on ERP systems with data collected through a structured interview process. We clarified data in the documentation with SMEs within the Army, Air Force, and Navy. Where there were insufficient data for the new system, we asked the inter-

⁹ An FTE is the workload of a full-time equivalent person.

¹⁰ The Air Force's SSC is an administrative hub, unique to that service, with approximately 200 accounting employees. ERP licenses are required only for these individuals. The remaining population of Air Force accounting professionals numbers 650 and is spread across bases over the world.

¹¹ This investment update was provided by the Air Force Personnel Center, email with authors, 2015.

viewees for their input to the assumptions on areas such as license costs and personnel reductions. Our interview protocol can be found in Appendix A.

Methodology

As mentioned, the goal of this analysis was to provide a rough order-of-magnitude cost analysis for the recommendations presented in the NAF accounting RIE. All costs regardless of source are presented in FY 2015 dollars to allow for comparisons throughout the analysis. Future cost estimates were discounted to FY 2015 dollars using the methods described in the Office of Management and Budget (OMB) Circular A-94 Appendix C for real interest rates (OMB, 2014). We limited both costs and potential savings to the changes associated with the courses of action, and we excluded simultaneous upgrades and modifications from our scope. As each service has a slightly different time line, the years where costs are incurred and savings are realized vary, but to simplify the presentation we provide average annual costs and savings in the tables throughout this chapter. These varying time lines affect the discount rates applied in each COA for each service.

To estimate the costs associated with COA 1, we used the Navy's current upgrade estimate for both the Navy's and Air Force's estimates. As mentioned previously in this chapter, we excluded costs associated with the Army's system for COA 1 because the Army will need to procure a new system irrespective of which COA is implemented. The Navy's upgrade involves a major database update, including (but not limited to) a new general ledger proposed in COA 1. Additional detail is provided in the analysis section of this chapter on COA 1 because it is an upgrade rather than a new accounting system development.

To estimate new accounting system costs for COAs 2 and 3, we primarily focused on estimating costs for ERP systems. The Navy and the Air Force currently use ERP systems for NAF accounting. Large organizations commonly use ERP systems to maintain complex records of transactions and integrate financial, HR, logistics, and other systems. For a detailed engineering estimate, we would need a full design of the proposed accounting system, its features, and how it interacts with other IT systems. We did not find a single methodology that would allow us to develop rough order-of-magnitude estimates with the limited descriptions in the COAs, so we combined methods and data from multiple sources. Table 5.1 provides an overview of the sources of the methodologies applied by section of the estimate.

Given the unavailability of sizing data, such as reports and interfaces from all military services, we opted to use Rosa's cost-estimating relationships for ERP investments based on cost elements (Rosa et al., 2010, Figure 1) as the backbone for our estimate. Cost-estimating relationships allow analysts to scale costs from analogous programs to forecast the cost of a similar new program. To understand the costs of new accounting systems, we scaled costs of prior investments by the Navy and Air Force. Primarily, we used Rosa's methodology for devel-

Table 5.1
Estimate Methodologies

Estimate Section	Methodology
Development	Rosa et al., 2010
Deployment	Rosa et al., 2010
Maintenance	Ng, 2001
Personnel/FTE Calculations (Savings)	RAND

opment and deployment of the software; we independently calculated maintenance costs from Ng (2001). We developed accounting personnel costs and turnover costs using input from the Navy on salaries and staff turnover.

To understand development, we first estimated the costs of new software licenses with information on cost per license and staffing changes associated with the proposed ERP investments in COAs 2 and 3. We calculated the Navy's cost per license for its 1997 buy to be approximately \$1,800 per license, based on the original BCA and the total number of original Navy licenses. However, discussions with the Navy indicated that this cost was significantly reduced because the Navy was an early ERP adopter. These prices might not be achievable today. Additionally, more-recent Air Force license costs were estimated at approximately \$11,000 per license, using original buy data and SSC FTE numbers, significantly higher than the Navy's original buy. Once DoD completes a full requirements process and selects the modules that meet those requirements, it will be possible to better estimate the license cost. For purposes of our estimates, we averaged the license costs for the Navy and Air Force at approximately \$6,500 per license. There are other sources of uncertainty beyond costs for licenses, but this was one area where we wanted to highlight uncertainty because of the different past experiences of the Air Force and the Navy.

Examination of prior DoD investments in ERPs indicated that budgets for ERPs break down differently than traditional software development programs (Rosa et al., 2010). This study found that costs typically are distributed according to the breakdown in Table 5.2.

From our software license procurement cost estimates, we applied the average cost–estimating relationships from Table 5.2 to help us understand the total cost of developing the new ERP. For estimating deployment costs, we started with data on costs of training and site activation and applied the average cost–estimating relationships from Table 5.2 accordingly. Then, we assumed that a bulk-purchase for the military services from the same ERP provider would garner a 15-percent discount on deployment costs for COA 2 (due to economies of scale) but only a 5-percent discount for COA 3 (as new business processes will be required across all services, increasing the magnitude of work required for deployment). We assumed a 10-per-

Table 5.2
Cost-Estimating Relationships for ERP

Cost Element	Percentage of Budget		
	Average	Low	High
Development			
Software license cost	41	25	60
Contractor Program Management (PM)/Systems Engineering (SE)/Contract Management (CM)	26	9	51
Development test and evaluation	26	9	43
Training development	7	3	16
Deployment			
Deployment software and hardware	43	9	64
Site activation	13	9	16
User training	25	15	41
Data migration	13	3	31
Operational test and evaluation	7	3	11

SOURCE: Rosa et al., 2010.

cent reduction in non–software development costs for COA 3 but no reduction for COA 2, as there will be no opportunity to capitalize on economics of scale. Finally, we assumed deployment costs would be similar for each of the military services. These assumptions are outlined in Table 5.3. As captured in Rosa’s study, there is significant variation in expenditure for each cost element, which is unavoidable at this preliminary estimation stage. Budget estimates will need more granular requirements to improve the estimate.

The last category we estimated costs for is ongoing maintenance, which is defined as requests for software enhancement, bug fixes, ongoing system support, helpdesk, and patches. Minor upgrades may be included in that, but typically upgrades are more in depth and have a larger scope (Ng, 2001). According to Ng (2001), annual maintenance costs are approximately 25 percent of the initial ERP investment. We used this approximation to estimate expected annual maintenance costs and compared this to reported maintenance costs by the Air Force (20 percent, from Air Force data) and the Navy (17 percent, estimated by the Navy in discussions). Given the literature and prior experience within NAF, we estimate post-deployment maintenance costs to be 25 percent of development costs for each military service. The military services also do regular upgrades to the systems every five to 10 years.

Analysis

System Maintenance Costs

Annual maintenance costs make up a significant portion of total ERP life cycle costs. Using the aforementioned cost-estimating relationship and the reported actuals from the military services, we developed the current baseline maintenance costs for all services, for a total of \$5.3 million, broken down as follows:

- Air Force: \$1.2 million
- Army: \$2.2 million
- Navy: \$1.8 million.

Table 5.3
Methodology Development and Deployment Structure and Assumptions

	COA 2	COA 3
	Assumptions	Assumptions
Development		
Software license procurement cost		None
Contractor PM/SE/CM	No economies of scale	Assumed a 10% reduction due to economies of scale (one large, integrated implementation)
Development test and evaluation		
Training development		
Deployment		
Deployment software and hardware		
Site activation	Reduced deployment costs by 15% to account for economies of scale in purchase/ deployment	Assumed 5% reduction instead of COA 2’s 15% reduction, as all services need to unify business practices
User training		
Data migration		
Operational test and evaluation		

Current maintenance costs for the Navy were extracted from their existing ERP upgrade BCA. The Air Force's current maintenance was calculated from existing maintenance estimates. We used the Army's reported accounting software maintenance of approximately \$2.2 million. These costs were captured and compared with post-accounting system deployment maintenance costs where applicable. Postdeployment maintenance costs reflect the cost-estimating relationship discussed in the methodology (i.e., 25 percent of acquisition costs). System maintenance costs are important for understanding the total life cycle cost of an accounting system investment and help put the potential advantages and savings associated with the investment in perspective.

Personnel Costs

Our estimates are strongly linked to the number of FTEs using the accounting software. ERP systems are often sold on a cost-per-license basis; thus, our estimates were based on the number of FTEs that need the software licenses. FTE estimates were taken from available data (primarily the RIE briefings), and assumptions were discussed with the military services to confirm reasonableness.

For each COA, we estimated marginal personnel over ten years of use following system deployment. Our personnel estimate is two-pronged. First, we estimated the costs associated with NAF SGL implementation. This cost is primarily based on the *elimination* of personnel required to perform annual data translation to a common format for reporting to OSD, which would now be done automatically by the accounting systems. We assumed the cost for manual reporting was equal to two and a half months of two FTEs per year per military service based on interview data. Second, we calculated the cost over time from the reduction in FTEs with each COA. For this calculation, we estimated that once implementation of any COA was finished, the original FTE levels would be reduced by attrition. FTE levels would continue to decrease until they hit the assumed FTE level for the implemented COA. The fully burdened cost per FTE is assumed to be uniform across the military services because service-specific estimates were unavailable. For our estimate of cost per FTE, we used Navy accounting salary data as a proxy for all NAF accounting employee costs. These personnel-reduction percentages were based on discussions with the military services.

For the Navy, we assume part of the FTE reductions in the current upgrade effort are attributable to COA 1 implementation. For COA 2, we assume an additional 15-percent reduction from the baseline FTE levels, on top of FTE reductions from implementing the NAF SGL, given that some synergies would likely result from a more central and uniform system within the service. We assume an even further reduction from the baseline for the Navy—an additional 35 percent—for COA 3, because of additional centralization and synergies with DoD-wide implementation of uniform software.

The Air Force accounting group has already centralized significantly by creating the SSC. Given this existing centralization, our estimate did not further reduce FTE levels for COAs 1 or 2. For COA 3, we assume the Air Force would reduce FTE levels in the *overall* accounting organization, not just in the SSC, by 25 percent. This reduction in FTEs is driven by the more significant DoD-wide centralization of ERP administration.

Finally, we know the Army has data-entry employees for its legacy IT system (approximately 246 FTEs), and we assume it has 390 additional accounting employees providing analysis (equivalent to the number of Navy accounting employees), for a baseline total of 636

FTEs.¹² The number of data-entry employees can be reduced with investment in a new Army accounting system that automates this function, but not simply by implementing the NAF SGL. Therefore, there are no FTE savings associated with the Army data-entry employees for COA 1. For COA 2, we assumed the Army invests in a new common system (and does not first purchase its own new system) that achieves the data-entry automation discussed above; therefore, our FTE projection assumes the data-entry employees will leave the organization once a core system is developed, and also reduces the other 390 COA 1 employees by 15 percent, consistent with the Navy FTE reduction. The Army's COA 3 FTE projection eliminates data-entry employees associated with the legacy system in addition to reducing non-data-entry employees by 35 percent, consistent with the Navy FTE reduction. Table 5.4 offers an overview of our FTE assumptions for each service, as well as the projected FTE for each COA. FTE reductions shown in the table were translated to personnel costs savings by subtracting the assumed FTE reduction from the baseline for each COA. For example, COA 1 for the Navy is 389 FTE, and subtracting the baseline of 482 yields -93, the personnel savings.

In each scenario, FTEs are not reduced immediately upon implementation of a COA. Instead, FTEs are assumed to fall by 17 percent each year until the target FTEs in Table 5.4 are achieved. The rate of 17 percent was obtained from FY 2013 Navy NAF employee attrition data (Davis, 2014).

We assume that attrition is slow and phased over time for several reasons. First, an immediate reduction in force is difficult for the government to implement and achieve. Second, systems take time to integrate. Reducing workforce immediately upon implementation may be more strenuous for those employees left to work with the new system; a gradual phase-out of employees provides more manpower for the training and early phases of the ERP adop-

Table 5.4
Personnel Assumptions

	Air Force		Army		Navy	
	FTE	Assumptions	FTE	Assumptions	FTE	Assumptions
Baseline	847	Current FTE levels	636	Current FTE levels	482	Current FTE levels
COA 1	847	Field Accounting Officers and SSC	390	Assumed new system required to implement SGL removes requirement for 246 data entry FTEs (total: 636 FTEs) if the existing legacy system is to remain, and assumed 390 non-data-entry employees (equivalent to Navy's regionalized setup number of FTEs)	389	Regionalized levels, personnel reduction only partially attributed to SGL
COA 2	847	Equal to baseline—Field Accounting Officers and SSC	332	Assumed elimination of 246 data-entry employees, plus a further reduction of 15% of staff off of baseline	331	15% reduction
COA 3	635	25% reduction from baseline (as baseline already contained SSC)	254	Assumed elimination of 246 data entry employees, plus a further reduction of 35% of staff off of baseline	253	35% reduction from baseline

SOURCE: RIE briefs and subsequent discussions.

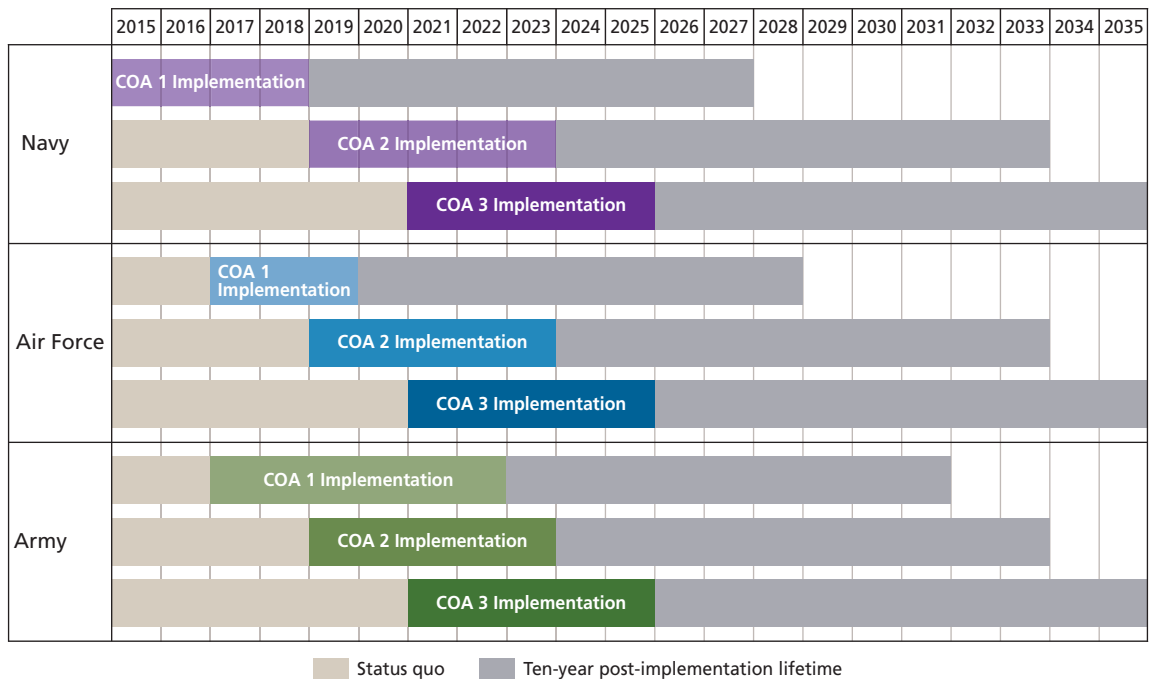
¹² At the time of this writing, the Army was having a BCA approved. Once that BCA is publicly available, it will be possible to update the FTE assumptions laid out above.

tion, enabling new users to learn the system gradually without worrying about maintaining or increasing their workload. Hence, while immediate FTE reduction offers greater perceived cost savings, they may not be realized in practice and would lead to an unrealistic estimate.

Time Line

ERP systems typically have extended development and deployment time frames (Figure 5.2). The time line details separate schedules for the Navy, Air Force, and Army based on discussions with each service about ongoing investments. COA 1 can be implemented on a shorter time frame than the other COAs because it does not require a new system to be implemented; instead, it requires only modifications to existing systems for the Air Force and Navy. The Navy’s COA 1 can start immediately; in fact, it is already in progress. We did delay the Army and Air Force’s COA 1, because they need additional planning and approval for procurement. Also, in the case of the Army, COA 1 requires a whole new system, so it would be subject to a longer time frame. For COAs 2 and 3, we assumed the implementation period of a brand-new ERP system would take approximately six years. We examined savings and maintenance over a ten-year period. Finally, as indicated in Figure 5.2, we staggered implementation initiation. COA 2 requires more time to start than COA 1, because it would require additional approval from all military services. Likewise, COA 3 would require additional planning and coordination across all the services, so it would start later than the other COAs.

Figure 5.2
Implementation Time Lines for COAs 1, 2, and 3



Three Courses of Action, NAF Accounting

COA 1

The total estimated cost of the Navy's current upgrade is approximately \$14 million. However, not all of that cost goes toward the SGL. We assume that costs associated with the SGL are only 25 percent of the non-license upgrade costs, with the remaining 75 percent being attributed to other blueprint and implementation costs. Thus, we estimate the cost of upgrades required to implement the SGL to be approximately \$3.3 million. Similarly, we attributed 25 percent of the aforementioned 93 FTE in personnel savings of the full Navy upgrade to the SGL.

As the Air Force has stated that it would also require upgrades to implement the SGL in its database, we used the Navy Upgrade BCA to estimate costs for the Air Force. We assume that it will not require new Oracle licenses for the SGL. Additionally, as the Air Force already has an SSC, we estimate that the blueprint and implementation costs would be reduced by 50 percent because it will not need to reorganize as many aspects of staffing and business processes, and that buffer costs (to account for delays and other unforeseen challenges) continue to be 20 percent of blueprint and implementation costs. Unlike the Navy, this Air Force estimate is not part of a larger upgrade effort. It is a stand-alone effort to implement the SGL, and therefore will spread program management and contract management costs over a smaller effort. Thus, the Air Force's estimate is 50 percent of the Navy's total upgrade cost as opposed to 25 percent of the Navy's total upgrade we assumed for the Navy's own SGL costs. This leaves the Air Force with a total projected cost for COA 1 of \$5.6 million in Table 5.5.

Table 5.6 summarizes the implementation costs of COA 1 as a whole. The personnel reductions from COA 1 for the Air Force and Navy are minimal: Because the Air Force will not experience any FTE reduction, its savings are less than \$100,000. The Navy experiences some FTE reduction, but most of it can be attributed to system changes other than the SGL. Therefore, we have scaled personnel reductions by 25 percent to account for savings associated with COA 1. The Navy's COA 1-related upgrades would provide -\$1.2 million annually.

As mentioned previously, for the purposes of our estimate, we are assuming the Army has no additional marginal costs for COA 1 because the upgrade to a modern accounting system is already required and in the early planning stages; the RIE COA recommendations are not responsible for these costs, but they are an excellent opportunity to implement new policies and procedures.

In sum, the total cost for COA 1 is \$8.9 million for the Navy and Air Force, and provides \$1.2 million in personnel savings. Maintenance costs would remain the same after COA 1 is implemented, but discounting to 2015 dollars makes them appear somewhat smaller on average.

Table 5.5
Navy, Air Force SGL Investment Costs (FY 2015\$ in millions)

Accounting, Procurement, Inventory Control	Air Force	Navy	
	SGL Upgrades	Regional Single Fund	Costs Associated with SGL
New licenses	—	1.0	—
Blueprint and implement	4.7	9.4	3.3
Buffer	.9	3.7	—
Total non-feeder investment costs	5.6	14.1	3.3

Table 5.6
Total COA 1 Implementation Costs (FY 2015\$ in millions)

Operations	Air Force	Army ^a	Navy	Total
Current maintenance (annual)	1.2	NA	1.8	3.0
Development and deployment	5.6	NA	3.3	8.9
Postdeployment maintenance (annual)	1.1 ^b	NA	1.7 ^b	2.8
Personnel and reporting (average annual)	-0.04	-0.03	-1.2	-1.2 ^c

NOTE: POS costs excluded.

^a See Appendix C.

^b With discounting, the deployment maintenance appears lower than current maintenance, but without discounting, they are equal.

^c Dollar values are rounded for presentation. Rounding results in lower total than if rows and columns are added.

COA 2

The COA 2 estimate shifts from upgrade estimates to full system development and deployment. Table 5.7 lists the estimated costs for COA 2, with POS and feeder system costs excluded. As explained previously, Rosa's breakdown provided the framework for our estimate, which is based on license costs. The costs per license were then multiplied by the FTE estimates for COA 2, and were put into Rosa's framework to achieve a development and deployment cost.

Current maintenance costs are the same as those estimated in COA 1. The Air Force experiences a slight decrease in annual maintenance costs, while the Navy remains at the same level. The Army's estimated maintenance costs are approximately equal to the Navy's, primarily as a result of our assumption that the Army's non-data-entry FTE levels are approximately equal to the Navy's.

The results of this estimate indicate that the total development and deployment costs for COA 2 are \$52 million, as shown in Table 5.7. The annual maintenance costs would decrease to \$4.0 million. In total, the annual projected reductions in personnel costs are estimated to be \$18.8 million per year over ten years.

COA 3

The main goal of COA 3 is to select one core financial system with uniform databases for all services. COA 3 employs the same methodology as COA 2, with some adjustments. We included an additional reduction in development costs, specifically those that were nonsoftware costs (contractors, test and evaluation, training development). Table 5.8 lists the estimated costs for COA 3, with POS costs excluded. As with COA 2, Rosa's breakdown provided the framework for our estimate based on license costs. Development and deployment costs for COA 3 are \$54 million, as shown in Table 5.8.

Table 5.7
COA 2 Implementation Costs (FY 2015\$ in millions)

Operations	Air Force	Army	Navy	Total
Current maintenance (annual)	1.2	2.2	1.8	5.3
Development and deployment	15.9	17.8	17.8	51.5
Postdeployment maintenance (annual)	0.9	1.5	1.5	4.0
Personnel and reporting (average annual)	-0.03	-12.2	-6.5	-18.8

NOTE: POS costs excluded.

Table 5.8
COA 3 Implementation Costs (FY 2015\$ in millions)

Operations	Air Force	Army	Navy	Total
Current maintenance (annual)	1.2	2.2	1.8	5.3
Development and deployment	16.3	18.9	18.9	54.1
Postdeployment maintenance (annual)	0.7	1.5	1.5	3.6
Personnel and reporting (average annual)	-9.0	-13.9	-8.9	-31.8

NOTE: POS costs excluded.

Current maintenance costs are the same as those estimated in COAs 1 and 2. The total annual postdeployment cost of maintenance for all three services is approximately \$3.6 million. These results show a significant reduction in annual maintenance costs with COA 3.

Cost reductions garnered through FTE and reporting requirement reductions are also increased with COA 3. Since the Air Force can realize further FTE reductions due to DoD-wide centralization, it achieves an average of \$9 million annually in savings per year over ten years. The Army saves the most from COA 3, assuming it does not invest in its own system first, as a result of the reduction of data-entry employees for the legacy system plus additional reductions with further centralization. These reductions lead to \$13.9 million average annual savings in FTEs and reporting costs. Combined with the Navy's annual cost reductions, all three services are estimated to save an average of almost \$32 million annually for ten years.

Other Considerations

Cross-Walk

The main goal of COA 1 is to migrate to a uniform accounting structure. However, an SGL may not be necessary to achieve that end. One alternative is to implement a cross-walk. This would translate ledgers between military services, eliminating the need for the services to upgrade their current systems and revise their general ledgers. While this is considered a "Band-Aid" solution, it would make improved reporting possible at a very low cost. The Navy estimated that the cost of creating a cross-walk would be equal to \$100,000 for each service. While not as sophisticated or thorough as implementing a standard general ledger, a cross-walk would provide a similar result without incurring the cost of a system upgrade that subsequently would be replaced by an entirely new system if COAs 2 or 3 were adopted. This low-cost solution allows for OSD reporting, but does not fully address the requirement to have an SGL implemented by 2016.

Results: Costs and Savings for NAF Accounting RIE Courses of Action

A summary of estimated costs and savings for each COA are shown in Table 5.9.

The projected net costs and savings look at the total discounted cost of implementing each COA independently through ten years of implementation. This total takes the total new costs of development, deployment, maintenance, future personnel, and reporting and compares them with the baseline costs for maintaining the current system, paying current personnel, and reporting to DASD (MC&FP). All of the alternatives show some level of potential savings. COA 3 provides the largest potential savings if the military services are able to agree on a single set of requirements.

Table 5.9
Integrated Cost and Saving Summary (FY 2015\$ in millions)

Operations	Total Cost Summary		
	COA 1	COA 2	COA 3
Current maintenance (annual)	3.0	5.3	5.3
Development and deployment	8.9	51.5	54.1
Postdeployment maintenance (annual)	2.8	4.0	3.6
Personnel and reporting (average annual)	-1.2	-18.8	-31.8
Projected net cost total (projected net cost savings at 10 years after implementation)	-5.4	-146.6	-276.7

NAF Employee Benefits Efficiency: Cost Analysis and Results

In the previous chapter, we presented the cost analysis and results for NAF accounting efficiency efforts along three courses of action. This chapter presents a similar analysis and results for the proposed NAF employee benefits efficiency efforts. Unlike NAF accounting programs, NAF employee benefits programs include the Marine Corps.

In the first section of this chapter, we briefly review the goals and recommendations submitted by the NAF employee benefits RIE team. Whereas the NAF accounting RIE team presented three COAs to consider, the NAF employee benefits RIE team submitted goals and recommendations to move forward; thus, the analytic approach is somewhat different. The second section of this chapter describes the approach to the cost analysis. The third section documents the methodology used to generate results, and the fourth explains how each set of costs and savings were generated as well as assumptions that underlie the analysis. Finally, the results of the cost estimates for NAF employee benefits consolidation are provided in terms of costs associated with implementation. Again, task force recommendations are likely to be refined in the near future, and any estimates presented here must be considered rough ones. Actual costs will depend on detailed requirements negotiated among the military services and OSD.

NAF Employee Benefits: Setting Coordination Goals

Rather than COAs, the NAF employee benefits RIE set forth a series of recommendations to streamline, standardize, and coordinate employee benefits across all NAF organizations. These recommendations suggested improvements for employee satisfaction and to take advantage of any possible economies of scale and reduce costs to NAF employee benefits organizations. A discussion of the recommendations can be found in Chapter Two.

To generate categories by which we could perform appropriate cost analysis, we categorized the recommendations according to three categories: (1) collaboration and standardization; (2) implementation and coordination; and (3) information technology and systems. This was done after full review of the RIE recommendations and subsequent discussions with RIE team members and other experts. We excluded the contract clause recommendation from the cost analysis because it was already under way and primarily required resources within the contracting department, which was a separate part of the task force. We also excluded the working group recommendation because those activities are incorporated into the cost analysis through most of the other recommendations. The following list presents the results of the initial categorization exercise:

- Collaboration and Standardization
 - joint collaboration
 - documentation
 - NAF processing/form summary
 - performance metrics
 - policy standardization and benefits standardization¹
 - cross-service standardization
- Implementation and Coordination
 - portability
 - process/procedure education
 - training development/implementation
- Information Technology and Systems
 - collaboration mechanism
 - collaborative website
 - system integration.

Note that these categories frame the activities described by the recommendation in terms of common activities. Collaboration and Standardization focused inward, on the NAF community, while Implementation and Coordination required engaging the APF community. Information Technology and Systems were recommendations that would likely require software development. We review the approach to estimating costs associated with these categories in the next section. At this time, there are not any identified immediate cost avoidance or cost savings opportunities presented by these recommendations, but they provide additional commonality across the military services that may make such savings possible in the future.

Approach to Cost Estimation

For the NAF accounting COAs, we were able to use literature on ERP estimates to craft a cost-estimating approach. For NAF employee benefits, the recommendations focus on improving communication and collaboration among the military services within NAF and between NAF and APF personnel. The cost literature does not provide much insight into costs of collaboration, so we revert to basic cost-estimating principles. Instead of using an analogy to a similar investment, we build up the costs based on inputs from the military services. Overall, the costs focus largely on fully burdened personnel costs. The reasons for this are twofold: First, the recommendations do not specify many system or hardware requirements; and second, the recommendations focus heavily on collaboration. Thus, the primary cost to the military services will be personnel time, and where necessary, contractor time. Contractors serve as a neutral party that can develop a single framework that does not provide preferential treatment to a single military service. Thus, contractor time was added throughout the estimate where service-neutral expertise is required to execute the deliverable.

At this time, we exclude costs of travel, system maintenance, facilities, and indirect costs because none of these are expected to change, given the focus on communication. We excluded

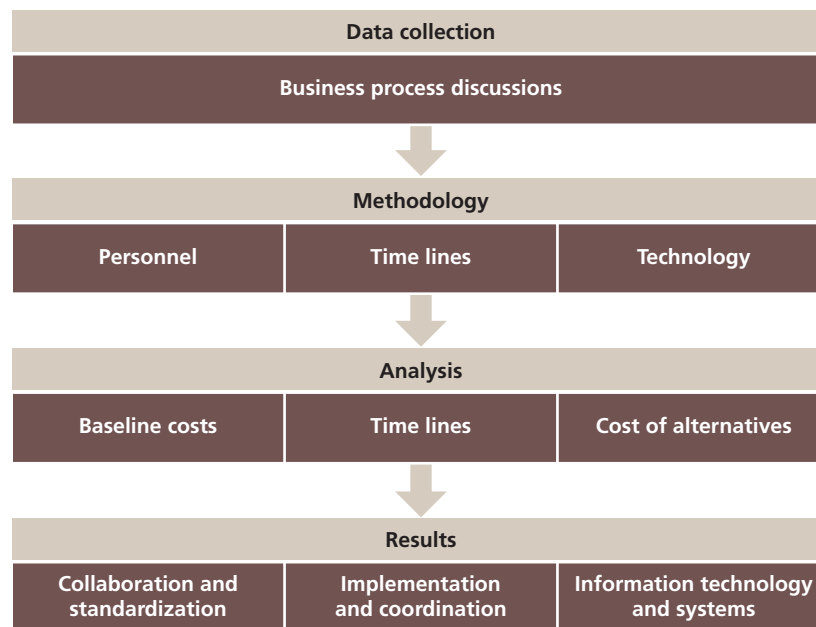
¹ We combined these standardization efforts because they required collaboration by the same experts on eligibility and level of benefit provided.

the cost of administering training programs directly to APF that are developed as part of the recommendations, as few of the affected appropriated fund employees have been identified and the frequency of the training is undefined. We also exclude large software development and integration efforts, as the services need to determine how standardized they can become before integration can be estimated. These recommendations are still in nascent stages of consideration. As these aspects would no doubt exert strong influence on the potential costs, we are unable to determine costs accurately for more comprehensive employee benefits system upgrades given their current ambiguity for this analysis. We have, however, estimated some possible near-term solutions where applicable. Figure 6.1 provides a roadmap of the cost analysis for NAF employee benefits.

Data Sources

Our primary sources of data were the in-person business process discussions with NAF employee benefits personnel. For the initial discussions, we used a protocol that is included in Appendix A. Our protocol included questions pertaining to current employee benefits, differences in employee benefits across military services, priorities, eligibility, collective negotiation, and recruiting, among other issue areas. The RIE Recommendation Presentation also provided useful background for the status quo of current NAF employee benefits. However, sufficient data were not available after the initial process discussions to provide a full, detailed cost analysis.²

Figure 6.1
Roadmap for NAF Employee Benefits



RAND RR1175-6.1

² For example, to ascertain true savings, a greater use of metrics to track expenditures ideally would be available, but use of such metrics did not seem widespread. We received a pilot monthly dashboard from the Air Force including employee benefit premiums, expenses, and claims to understand what metrics are under consideration for being tracked by their staff. The Air Force metrics were still in development at the time of this study.

Thus, additional data were gathered from NAF employee benefits personnel after these discussions by providing a briefing on our “skeleton” cost analysis of the recommendations with basic data collected and assumptions for the military services. These additional data include retirement plan funding, employee benefits–related audits (Towers Watson, 2014a–e), and valuation reports for each military service. We discussed the analysis in detail with each service and incorporated their feedback on our assumptions for benefits offered, terms of benefit plans, benefit plan costs, benefit plan participants, NAF employees, portability procedures, effort required to complete RIE recommendations, information systems, tracking and metrics, and other related topics. Finally, we worked with SharePoint and IT SMEs to gather analogous costs for those technologies.

Methodology

All costs regardless of source are presented in FY 2015 dollars to allow for comparisons throughout the analysis. Future cost estimates were discounted to FY 2015 dollars using the methods described in the OMB Circular A-94 Appendix C (OMB, 2014) for real interest rates. In addition, it is worth noting that the discount rate depends on how far into the future each recommendation reaches.

Personnel and Contractors

A complicating factor for estimating personnel costs for NAF employee benefits employees is that for some military services, some of the staff are paid with appropriated funds, while for other military services, all staff NAF employees. For the purposes of this analysis, we made a simplifying assumption to use APF personnel wage information because NAF personnel wage information was not readily available. We assumed NAF employee salaries to be equal to the average of a Step 5 GS-12 and Step 5 GS-14 employee for each respective location’s locality pay, with an additional fringe benefit burden of 40 percent (Roth, 2014), an assumption presented to and approved by the military services. Fringe benefits include such costs to the government as retirement, health care, and life insurance. NAF employee benefits staff time is calculated in the estimate because it is an opportunity cost to the military, but it is unlikely that additional personnel would be hired to implement these recommendations.

For contractors, we selected three different contractor types for the recommendations and used Bureau of Labor Statistics data on salaries to inform contractor costs (Bureau of Labor Statistics, 2014) with an additional overhead burden of 200 percent.³ We compared Bureau of Labor statistics base wages for consultant skill sets to the fully burdened rates available on the General Service Administration’s Alliant contract vehicle as a proxy for what MC&FP may pay for contractors. From this comparison, we developed the 200-percent wrap rate to account for the fringe benefits, overhead, general and administrative, and profit.⁴ MC&FP has recent experience contracting for similar activities and therefore may want to update the estimates based on their latest cost-per-contractor experiences.

³ Salaries were burdened at 200 percent. The resulting median salaries were (1) software developer: \$135/hour (burdened); (2) training and development managers: \$138/hour (burdened); and (3) management analysts: \$113/hour (burdened).

⁴ The multiplier of the salary rate an organization must bill out its labor in order to recoup such direct costs as employee benefits and indirect administrative expenses.

To calculate personnel and contractor time invested for each recommendation, we requested that each service's NAF employee benefits office provide their estimates for required hours involved. After speaking with all military services, we averaged their individual responses to estimate a realistic time investment. To calculate the cost of personnel and contractor time, we multiplied the fully burdened salaries and the time investment associated with each recommendation. Table 6.1 delineates the contractor types and staff burdens assigned to each recommendation.

It is worth noting that both the collaborative website and system integration lack sufficient requirements and definition to estimate the personnel and consultant time investment. Thus, we noted these as "undefined."

Time Line

In addition to time investment, we explored the calendar time line required to implement each recommendation. To develop the time line, we requested each service's NAF employee benefits office estimate calendar time involved. In addition, as many of these recommendations cannot be performed simultaneously, we solicited feedback on the likely order of performance of each recommendation. We plotted the total RIE implementation time line to better assess the effect of discounting in personnel costs over time (see Figure 6.2). In an effort to keep the level of

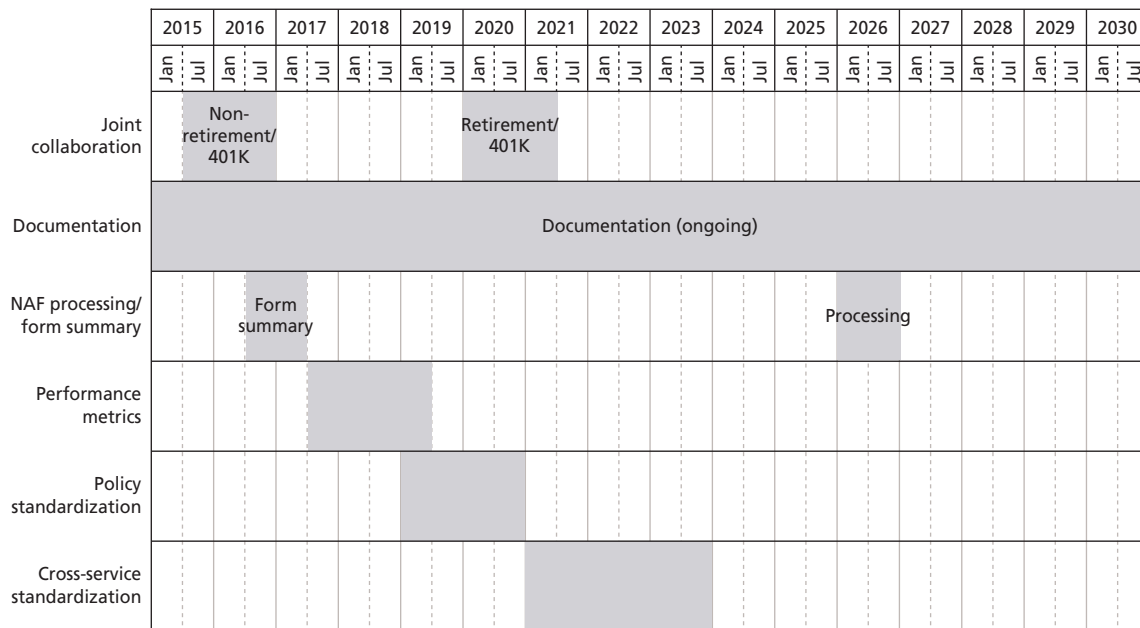
Table 6.1
Staffing and Contracting Personnel Types and Time Investments

	NAF Staff Requirements	Consultant Requirements (Duration of Implementation)	Consultant Type
Collaboration and Standardization			
Joint collaboration	1.5 staff per service, 1 day per month	1/4 time, 2.5 consultants	Management analyst
Documentation	2 staff per service, 1 day per year	N/A	N/A
NAF processing/form summary	1.5 staff per service, 1 day per month	1/4 time, 2.5 consultants	Management analyst
Performance metrics	1.5 staff per service, 1 day per month	1/4 time, 2.5 consultants	Management analyst
Policy standardization	1.5 staff per service, 1 day per month	1/2 time, 2.5 consultants	Management analyst
Cross-service standardization	1.5 staff per service, 1 day per month	1/4 time, 2.5 consultants	Management analyst
Implementation and Coordination			
Portability	1.5 staff per service, 1 day per month	1/4 time, 2.5 consultants	Management analyst
Process/procedure education	1.5 staff per service, 1 day per month	1/2 time, 2.5 consultants	Training and development manager
Training development/ implementation	1.5 staff per service, 1 day per month	1/2 time, 2.5 consultants	Training and development manager
Information Technology and Systems			
Collaboration mechanism	1.5 staff per service, 1 day per month	1/4 time, 2.5 consultants	Software developer
Collaborative website	Undefined	Undefined	Software developer
System integration	Undefined	Undefined	Software developer

effort of NAF personnel consistent over time, we attempted to cap personnel effort in any given year at 40 days per year. The 40 days for key NAF staff would support a multiservice working group to negotiate priorities and make investment decisions. This limitation is necessary because many of the recommendations are interconnected and require the same limited NAF personnel resources and it would overload the future working group.

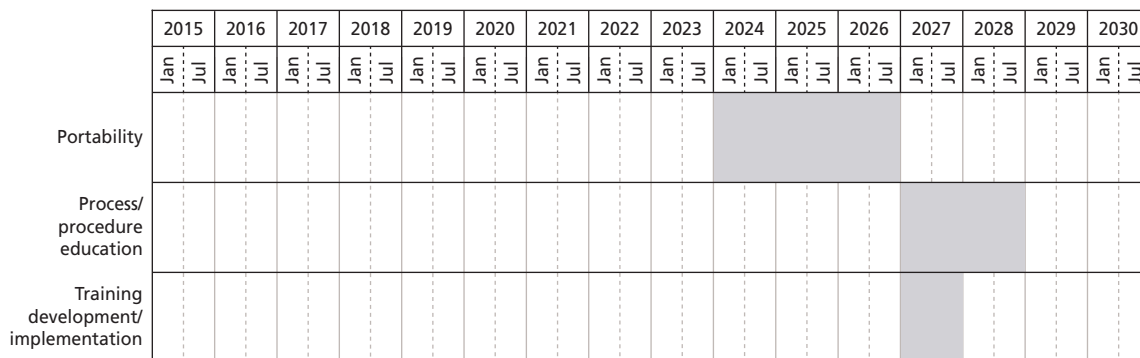
We developed notional time lines (Figures 6.2–6.4) for implementing the recommendations. The military services provided feedback on our initial time-line proposals; the figures incorporate their input. As the collaborative website and system integration depend on the decisions made in the collaboration and standardization recommendations, the implementation of these recommendations is many years in the future.

Figure 6.2
Collaboration and Standardization Recommendation Time Line



RAND RR1175-6.2

Figure 6.3
Implementation and Coordination Recommendation Time Line



RAND RR1175-6.3

Figure 6.4
Information Technology and Systems Recommendation Time Line

	2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030	
	Jan	Jul	Jan	Jul	Jan	Jul	Jan	Jul	Jan	Jul	Jan	Jul	Jan	Jul	Jan	Jul	Jan	Jul	Jan	Jul	Jan	Jul	Jan	Jul	Jan	Jul	Jan	Jul	Jan	Jul		
Collaboration mechanism	█																															
Collaborative website																																
System integration																																

RAND RR1175-6.4

Results of Cost Estimation for NAF Employee Benefits RIE Recommendations

As described previously, to estimate personnel and contractor costs, we focused on quantifying the time required to implement each recommendation, as well as the order of implementation to discount the salaries across the appropriate time frame. We separated the personnel costs into two categories: NAF employee benefits employees and contractors.

Collaboration and Standardization Costs

Collaboration and Standardization costs proved to be most expensive of the three recommendation subgroups in terms of total cost, but the effort requires fewer contractors per recommendation than the other subgroups. These recommendations require significant NAF employee benefits staff time to coordinate and communicate across military services. The estimated personnel costs are outlined in Table 6.2.

Implementation and Coordination Costs

Implementation and Coordination requires greater contractor costs per recommendation than do Collaboration and Standardization efforts. Table 6.3 reflects the costs for this category.

Information Technology and Systems Costs

Like Implementation and Coordination, the recommendations that fall in the Information Technology and Systems grouping will likely rely more heavily on contractor costs once the military services identify the requirements. The consultants involved in these efforts are primarily software developers. It is likely that some NAF employee benefits staff time would be required to keep the recommended collaboration mechanism up to date as changes and updates occur. However, we considered that this would be relatively minimal if the prior recommendation of standardization was implemented. Table 6.4 shows the costs associated with the Information Technology and Systems subgroup of recommendations.

While these recommendations will require technology to complete, these systems do not have defined requirements. Without those, it is difficult to estimate system costs. For example, the system integration recommendation rests on complex integration of several IT systems currently in use by the various services for payroll and personnel applications, which include in-house databases, as well as IT applications such as Benefits Workstation 5, ADP interfaces,

Table 6.2
NAF and Contractor Personnel Costs

Task	NAF Employee Benefits Employee	Contractors	Total
Joint collaboration	\$115,000	\$432,000	\$547,000
Documentation	\$59,000	\$0	\$59,000
NAF processing/form summary	\$74,000	\$205,000	\$279,000
Performance metrics	\$77,000	\$289,000	\$366,000
Policy standardization	\$76,000	\$570,000	\$647,000
Cross-service standardization	\$110,000	\$410,000	\$520,000
Total	\$511,000	\$1,906,000	\$2,418,000

Table 6.3
Estimated Implementation and Coordination Recommendation Costs

Task	NAF Employee Benefits Employee	Contractors	Total
Portability	\$105,000	\$394,000	\$499,000
Process/procedure education	\$68,000	\$621,000	\$688,000
Training development	\$35,000	\$315,000	\$350,000
Total	\$208,000	\$1,330,000	\$1,538,000

NOTE: Rounding affects addition of current totals

Table 6.4
Estimated Information and Technology Systems Recommendation Costs

Task	NAF Employee Benefits Employee	Contractors	Total
Collaboration mechanism	\$39,000	\$175,000	\$214,000
Collaborative website	Undefined	Undefined	Undefined
System integration	Undefined	Undefined	Undefined
Total	Undefined	Undefined	Undefined

Kronos, Peoplesoft, and Oracle. Given prior time lines for IT system requirements development and implementation in NAF program administration, these recommendations will take several years to implement.

One possible near-term solution for a collaboration mechanism would be to use a Microsoft Sharepoint platform or similar collaboration tool across employee benefits offices to communicate information. For 40 users, we have estimated the cost of a system like this to be approximately \$16,000 total, with an additional \$2,000 for hardware based on discussions with Sharepoint subject matter experts. This system could be administered by NAF employee benefits employees, and would be a simple, COTS solution.

Another possible near-term solution for a collaborative website would be to create and maintain a single website for all four services. Given discussions with benefits professionals about their current website and IT budgets, we would estimate the cost of a website alone to be approximately \$20,000–40,000 per year. The NAF staff were unsure how much of their time would be needed to design and provide content for the website. Consolidating the requirements for four websites to a single website would save money on existing websites if they could be retired, but would require leadership and continued staff engagement for the data to be maintained and up to date.

Benefits Cost Savings and Avoidance

In our discussions, we looked at the potential cost savings associated with the full range of employee benefits recommendations. One potential benefit to be gained from implementing better information technology and systems is that of reduced costs of exceptions. Exceptions are payroll and retirement calculation inaccuracies that are largely attributed to the information system. The Air Force estimates that it has approximately 1,700 total exceptions that currently need to be corrected. Each exception costs the Air Force between \$10,000 and \$20,000. At this time, it is unclear how long the exceptions have been present and how far into the future they could continue to create inaccuracies. The other military services did not provide estimates of the exceptions in their employee benefits IT systems, so there is uncertainty about the scope of the problem. Assuming each service has similar numbers of exceptions to the Air Force, NAF employee benefits could avoid between \$68 million and \$136 million from exceptions alone. If these system problems are widespread, this cost savings could provide the incentive to invest in new technology, but will require further analysis.

Total Costs for NAF Employee Benefits RIE Recommendations

A summary of estimated costs for each NAF employee benefits recommendations is presented in Table 6.5.

Many RIE recommendations are to be fulfilled by communication and coordination, which is primarily a personnel cost. Consultants are of particular concern, because they incur additional costs to the NAF employee benefits offices. However, total personnel costs to implement all 12 recommendations are relatively low, even inclusive of contractors, as shown in Table 6.5.

The majority of the recommendations are designed to improve efficiency of the NAF employee benefits enterprise. This will result in qualitative benefits for NAF employees, but discussions suggest that few of the recommendations would result in large budgetary savings.

Table 6.5
Benefit RIE Cost Summary

Costs	Costs (in \$)
Total Personnel	
NAF staff costs	758,000
Contractors costs	3,411,000
Total	4,169,000
Total Nonpersonnel	
Collaboration mechanism (SharePoint)	18,000
Collaborative website (annual)	20,000–40,000

Conclusions and Recommendations

Support for service members and their families is an important goal for the DoD as a whole and for each individual service. How best to balance competing financial obligations for these and more-prominent warfighting priorities is a matter of ongoing concern. The overall warfighting mission of the military can limit the improvement of support functions, particularly those that require substantial upfront investment. This does *not* mean, however, that arguments should not be made to harvest strategic opportunities and offer better support in the future. In this effort, we developed and applied a framework for change management and assessed the business case for change in two areas. Our conclusions and recommendations are derived from the areas of NAF accounting and NAF employee benefits, but they also provide insight into the challenges facing MC&FP as it considers implementation in the other 13 areas studied by the task force. Thus, although we do note some specific suggestions for those areas, our ultimate recommendations step back from the tactical level and are more strategic in nature.

The context of perceived lower imperatives for deploying resources to improve support functions, rather than warfighting ones, can make the acts of crafting a compelling argument and “ensuring need” even more vital to managing change. The literature strongly supports creating a compelling vision for change that can inspire stakeholders at all levels and that articulates an end state to which more-specific goals and milestones can be directed. The stakeholders involved in the RIEs are managing multiple tactical issues—and in some cases, involved in cross-service collaborations. We also found that, while able to make some accommodations to integrate, these stakeholders and their leadership do not find the vision of cross-service overhead efficiencies to be such a pressing need and compelling vision that it encourages actively stepping outside of their day-to-day roles and arguing for the up-front investment in time and planning required. The exceptions to this are situations where the RIE process and findings can be used as a corollary to an argument that stakeholders and their leadership are already motivated to make *within their service* to achieve existing internal goals. Unfortunately, these situations are not widespread enough to claim there is an underlying groundswell of support or that a compelling argument for change has indeed been made. Given the domain chosen for this search for synergy, it is also unlikely that external beneficiaries will be moved to advocate change on their own behalf. Hence, the major motivating factor must by definition be internal.

Another factor that can improve change outcomes is having a change agent who is committed to marshaling these arguments, winning over stakeholders, and developing the plan in conjunction with relevant stakeholders. As explained in previous chapters, while stakeholder

diversity can make such a process challenging, it is nonetheless helpful to have change leadership that can achieve the following:

- bring the relevant parties together
- provide a breadth of view that encompasses the benefits of centralization
- see past service branch prerogatives
- provide a comprehensive approach to change
- guide supporting policy changes.

In the case of moving forward with the RIE domains of NAF accounting and NAF employee benefits, all of these elements are clearly necessary. Certainly, the task force provided the initial leadership and drive for enacting change across the NAF community, but to continue progressing, another individual or collaborative group needs to champion the cause or the actors in the original task force should be reengaged.

Central leadership and funding are necessary to enable the military services to reach a compromise on requirements. As noted earlier when discussing the application of the guidelines to NAF accounting, despite engagement in the RIE and follow-on activities, military department personnel see less urgency in the need and are less personally vested. Moreover, in the case of NAF accounting, providing a plan must be jointly worked—in a situation where individual departments are not themselves vested, this imperative is clearest at OSD. On the NAF employee benefits side, efforts are hampered by lack of a clear baseline or concrete plans, despite the RIE, increasing the importance of motivated leadership that can see past service branch prerogatives. It is impractical to expect individual department personnel to be able to resolve potentially thorny interdepartmental issues without providing resources to facilitate this—per the guidelines, adequate resourcing is key. One such resource is, frankly, leadership. That said, the incorporation of relevant stakeholders in the RIE process and change processes that are continuing is critical in ensuring the success of any change effort. Ultimately, these stakeholders can supply the needed level of detail to craft a plan that will enable constructive confrontation of challenges and an accurate perception of costs and benefits of proceeding with change. As an example of where this is working, OSD has provided leadership and funding for starting the accounting recommendations by negotiating the SGL. This leadership has paid off with progress on many of the goals associated with the SGL, while the employee benefits recommendations have gained less traction.

Given the high-level plans generated at the RIE events for both benefits and accounting, we are able to provide a rough order-of-magnitude cost estimate that suggests there is a business case for change. It is suggestive and specific enough to guide decisionmaking, but the requirements needed to undertake certain ends will affect the final achievable costs and benefits. Tracking the requirements, goals, cost, and benefits is useful for the purposes of decisionmaking, tracking the actual change process itself, and being able to recognize and celebrate goals achieved along the envisioned path.

Even with a detailed and specific plan upon which stakeholders unanimously agree, change is time-consuming and challenging because it involves leaving comfort zones and venturing into shared control. It is impossible to foresee every challenge; it is vital to maintain open communication throughout the process to track progress and to successfully tackle challenges and concerns as they arise. However, such a plan would facilitate an even more credible cost estimate with fewer limitations incorporated into the assumptions. Regardless of whether

a revised cost analysis is requested as detailed plans are developed, the process of planning itself is key to successful change implementation and taking the time to do it well is not wasted, as demonstrated by our case studies.

Accounting

Accounting has made progress on the recommendations from the RIE. With the leadership of OSD and assistance from accounting specialists, the military services are each pursuing COA 1. The SGL from COA 1 will allow for greater comparability of reporting to OSD, but on its own does not drive large cost savings. Actual implementation of the SGL in their respective accounting systems will differ for each service. OSD-level leadership is helpful given the breadth of perspective, and they should continue to take the lead on evaluating the change process and actively engage issues as they arise. Additionally, the leader should consider a common set of standards for monitoring and evaluation across the military services so that benchmarking or comparisons can be made more easily. Thus, **we recommend that an OSD-level leader serve as the primary supporter of change beyond the AWG's work on the SGL from within MC&FP.**

Given that NAF accounting groups intend to upgrade their systems, **we agree with the recommendation in the RIE outbrief that they skip COA 2 and simply pursue COA 3.** The benefit to COA 2 is that it provides an intermediate stepping-stone between COAs 1 and 3 if desired; it provides a less drastic change on the road to a DoD-wide system. Assuming that no military service could reuse its current system, implementing COA 2 would require the military services to acquire a new, uniform system. However, given that each service would still use its own database, the systems would diverge over time as they were updated to suit each military service's specific needs. Over time, the three "uniform" systems would become very different, defeating the purpose of the initial investment in a uniform system shared across the military services. Thus, if COA 3 were ultimately the preferred course of action, it would likely require another full-system purchase because of the likely individualization among services for COA 2.

While COA 2 is less costly and would require less stakeholder buy-in, it does not provide the same degree of cost reduction through personnel savings and is unlikely to make the military services' accounting systems easy to combine in the future. Instead, the difficult negotiations and compromises are merely delayed, and more investment is put into systems with planned obsolescence. In addition, COA 2's staggered implementation plan would negate the benefits associated with uniform systems across all military services. Finally, COA 2 does not provide as significant a reduction in maintenance costs as COA 3. In contrast, COA 3 would provide consistency across accounting and POS/feeder systems, reduce personnel requirements, cut maintenance costs, and optimize data transfer and communication across military services. Even beyond the first ten years of operation, combined operations under COA 3 could continue to save NAF accounting by reducing duplicative accounting system upgrades.

Unfortunately, the greatest savings in COAs 2 and 3 are associated with the Army dramatically reducing its accounting employees with the purchase of a new system. The Army alone accounts for \$100 million in savings for COAs 2 and 3 independently. If NAF accounting takes an incremental approach and implements COA 1, then 2, and finally 3, the ten-year savings picture is not as favorable because the Army's personnel savings would be attributed to purchasing its own new accounting system and not to the SGL. With that shift, COA 2 would

not produce large cost reductions for the individual services within ten years of implementation. This makes it more difficult for the military services to invest in development and deployment of a new accounting system. Even with the prospect of \$100 million in savings, the Army has spent years on new accounting system proposals that have little momentum.

The recommendations generated in the RIE are fairly general. Based on those and our work, we have generated an initial rough order-of-magnitude cost estimate. Ongoing work on COA 1 and the SGL gives stakeholders a well-established history of working together, a venue for communication, and a chance for open discussion of the challenges the military services confront as greater integration is pursued. It is also an important forum where OSD can engage directly with stakeholders to ensure that the need is perceived by all, and it can be used as a sounding board for a coherent communication plan. **Stakeholder integration is essential to generate a sufficiently detailed implementation plan** for later COAs, as well as the requirements that would drive a finer-grained cost estimate.

There are several ways OSD could foster the necessary stakeholder support and integration, and OSD may wish to consider enacting multiple possibilities to better its chances of affecting this essential task. One way that OSD could help build support would be to encourage stakeholder participation and open discussions with the military services at the regional and installation levels, broadening the level of participation from that in the RIE and AWG. This approach could solicit feedback from accountants and facility managers on the currently used systems and enable a discussion of relative satisfaction with various systems and their ease of use, as well as their various costs and benefits. A method to collect these data could be survey groups or an online survey. These efforts also could inform personnel at lower levels that change may be imminent. Another possibility would be to have the AWG meet after their initial work is complete to continue the higher-level efforts of the task force. This forum could be used to discuss progress and raise issues to the appropriate level so that a decision can be made for COA 2 or COA 3.

Within accounting, the investment timing is crucial and affects the magnitude of the savings that accrue to a given course of action. Finally, time is also a consideration more generally, in that even if the choice is made to go straight to COA 3, it is likely that a long-term effort would be required. Planning should take that into account.

Benefits

The benefits RIE produced a wide range of recommendations that could improve the efficiency of operations. Because of the sheer number of recommendations, the stakeholder team had limited ability to provide detailed descriptions of the requirements associated with these actions. The majority of the recommendations require the military services to spend considerable time communicating and negotiating shared strategies, which will pose an opportunity cost for the services. In some cases, outside expertise will be necessary to guide the discussion, incurring additional budget requirements for NAF employee benefits. Our rough order-of-magnitude estimates suggest that total personnel costs to implement all recommendations without updating information systems are relatively low, even inclusive of contractors. The larger barrier to progress is that each military service has different priorities when it comes to the recommendations, which may limit momentum without centralized funding and leadership. In some cases, recommendations may need to be tabled when the opportunity cost is too high. Few of the

recommendations directly reduce the cost of providing employee benefits, but many will result in improved experience or benefits for NAF employees. The RIE recommendations could provide additional value beyond cost avoidance. First, **improved communication between the military services can improve the portability of employee benefits.** This communication prevents additional payment transactions for employees who have to pay back incorrect payments. It also prevents employees from the necessity of making catch-up contributions, which in some cases are not feasible from the employee perspective (and which may have long-term effect on retirement income if not made). The RIE recommendations also save time in the portability process; both employees and benefit administrators would save time when employees switch jobs, because they would already have portability guidelines established. Although portability was among the NAF employee benefits recommendations, SMEs estimated these errors really occur for only a few employees each year. In addition, portability issues depend on the timing of the employee's initial hire and other factors that make each case unique. Thus, while it seems likely that inputting information into a single system would be more efficient both for transitioning NAF employees and for their NAF employee benefits administrators, we did not estimate these savings directly because of the ambiguity and scarcity of information.

Additional savings would also be realized as each service continued to streamline benefit administration and achieve additional synergies by benefit piggybacking (also known as using another services' contract). That is, if the services were able to operate collaboratively when contracting out NAF employee benefits provisions, they might be able to negotiate better deals than when contracting out as individual services. One challenge is that each service already has a large pool of NAF employees. While this should allow for economies of scale in existing contracts, combined contracts may not always result in universally lower costs because of the inherent differences in ages and location. After discussion with each employee benefits office, we recognized that we did not have sufficient demographic and actuarial data to estimate the potential savings for the NAF employee population in each contract—but, **with collaboration, the services can better determine how and when to combine contracts to create future savings.** Finally, by improving communication and collaboration, NAF entities avoid possible liability associated with incorrect benefits determination.

Several recommendations will require additional software or hardware to complete. However, NAF employee benefits staff are several years out from the purchase of new systems. The long time frame and lack of joint requirements do not allow accurate assessment of what technologies would make up the new system. As a result, we are unable to estimate accurately the full cost of the Information Technology and Systems recommendations. Initial data from a single service suggests that the problems with existing systems create financial incentive to update and improve the systems, but additional analysis will be necessary to understand fully the costs and savings potential. As a first step, **we recommend the services begin with the documentation of the details of the employee benefits currently provided to NAF employees, using the table we have compiled in Appendix B as a starting point.** This table will enable comparison and standardization efforts to proceed, providing a baseline understanding of the current benefits landscape with sufficient detail to make cost comparisons. This documentation could be hosted in a common location to enable sharing, using a relatively low-cost tool such as Sharepoint until stakeholders identify full information system requirements. Once a common understanding of the current possibilities is developed, the services can coordinate on metrics to benchmark their efficiency and even work to standardize their offerings as desired.

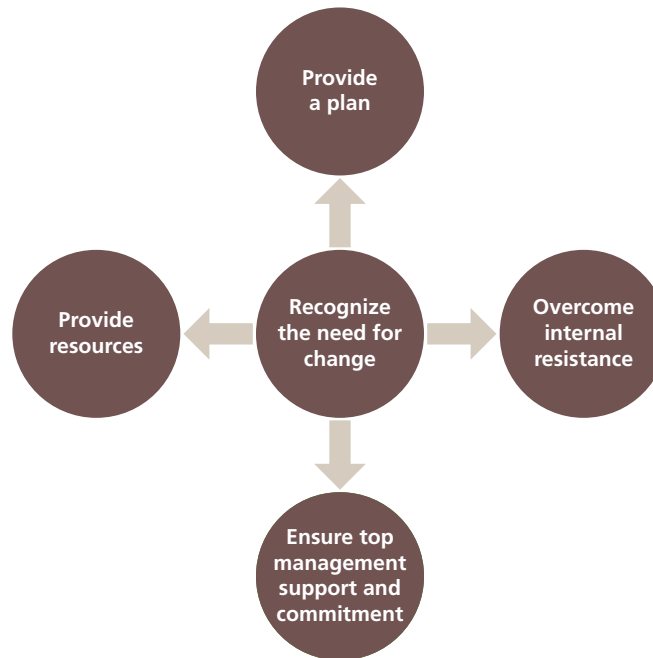
Recommendations

Here, we identify some guidelines for more specific application drawn from our analysis. While several of the recommendations may appear to be plain common sense, change can be difficult to bring about as personnel attitudes, relationships, and ways of going about business are deeply ingrained in organizational fabric. While the literature identifies eight areas, our analysis finds that DoD will benefit most from investing more resources in the five best practices in Figure 7.1. This investment will improve outcomes as DoD pursues the recommendations of the task force.

Recognize the need for change. DoD leaders should make a concerted effort to convince service decisionmakers of the need for change, and/or collect data to determine whether change is needed. MC&FP could take the lead in communicating the need for change, citing all relevant reasons, but strong support from the highest DoD levels will be necessary. This effort can take the form of targeted briefings, white papers, and one-on-one meetings with leadership where MC&FP can explain why investment in change is worthwhile. Stakeholders at all levels must be integrated into this discussion. Our cost analysis suggests that for NAF accounting, the case for proceeding directly to COA 3 may be the most compelling. Our cost analysis for NAF employee benefits suggests that while savings may or may not be harvested, an improvement in employee quality of life may be within reasonable reach.

Provide a plan. OSD leadership will be instrumental in working with the military services to create a plan that is both actionable and realistic in its desired end state and that appropriately builds on the end states envisioned at the RIEs. It will be imperative to provide clear and specific guidance from OSD on which COA is to be enacted and how to avoid inconsistencies and ambiguity, and to ensure a path forward is described. The NAF AWG is a good

Figure 7.1
DoD Will Benefit from Investment in These Five Best Practices



model for going forward, as it allows all of the military services to provide input to the plan and keeps momentum. On the RIE benefits side, progress needs to be made in development of an implementable plan, as current recommendations are still too general.

Overcome internal resistance. Without a widespread recognition of the need for change, simple bureaucratic inertia will slow—if not stop—any movement to change. To enact COA 2 or COA 3 in NAF accounting, OSD will need to exert significant leadership and potentially additional external pressure as there was for the SGL. Selection of new systems is difficult, and the services have already invested both human and financial capital in the systems they have. Thus, they have little incentive to change toward a common direction. OSD could help build support by encouraging stakeholder participation and open discussions with the military services at the regional and installation levels, broadening the level of participation beyond that in the RIE and AWG. For instance, the Marine Corps was resistant to the NAF SGL because it had already made its own system investments, but through the NAF AWG process, the Marine Corps was able to see the value of the single structure, and it has made plans to cross-walk its current accounting structure to the proposed NAF SGL to promote data-sharing. On the RIE benefits side, there is less opportunity for stakeholder groups to discuss the issues and determine if the recommendations should be implemented or if perhaps new ones would be more appropriate. Moreover, because there has not been a regular stakeholder group, there are fewer opportunities to develop the specifics that would be required for recommendations with enough specificity for an accurate cost analysis to enable more-convincing communication of the need for change. Convening such opportunities for stakeholder engagement are key to airing and overcoming internal resistance to change, and integration of stakeholders into the planning process.

Ensure top management support and commitment. An individual at OSD must become the leader who will champion the cause for change from within MC&FP, particularly to facilitate for the NAF employee benefits domain, but also to continue to facilitate for the NAF accounting domain beyond the SGL. To date, there are no designated leads for any of the RIE recommendations in the benefits domain; as a result, there has been no impetus from the services to collaborate. Moreover, there is currently no OSD-level leadership beyond the health benefits domain.

Provide resources. Resources are always important in effecting change, but they are particularly so when there is no strong sense of a need for change. Centralized funding and facilitation will improve momentum and allow individual military services to consider options that may cost more in the short term but provide long-term savings across the military services. OSD should continue to provide funding and technical resources to implement the RIE recommendations.

Semistructured Discussion Guide

Accounting Questions

Background

1. [If not already known] What was your role in the recent RIE? What is your role in your organization?
2. What is most important to your organization right now?
3. We heard that the services are working together on a common-structure line of accounting. Can you define what this will mean to the organization? What is the time line for the discussion/implementation? What roadblocks do you anticipate? When the discussion is complete, what would be required for full implementation? What kind of staff commitment is this effort taking? What other costs would result from standardization? What savings? Who is leading this effort? Have you been consulted?
4. How would you describe what is going on to improve NAF accounting now? What has changed since the RIE? What do you think should happen next?
5. What course of action has the most traction in your organization or with your leadership?
6. Now that it has been a few months since the task force, has timing or prioritization of activities changed? What actions can be taken by the services in the near term (next year)? In the far term?
7. Are there major activities conducted by NAF accounting that are out of scope for this effort other than the exchanges? If so, why? How does excluding the exchanges change implementation?
8. What are the primary programs and activities that your organization supports?
9. What are the primary functions that your organization performs? Are there any that are unique to your service that the other services don't include? Do you have any unique processes or caveats to the way things are done? Are there any functions that are decreasing in importance?
10. How do you track your volume or amount of work? What metrics do you track, and how are they calculated?

Funding

1. What is the operating budget of the current program? Can we get a breakdown of the budget? How much of the budget is NAF vs APF?

2. How much interface with APF systems is required? Per the Navy presentation and the Marine Corps response to our earlier questions, it looks like most of the activities listed had both NAF and APF. Is this the case for all of the services? How is this dealt with in the accounting processes? Is it the same across services, or different?

Interface with Other Organizations

1. Do you communicate with your colleagues in the sister service branches? Has this changed since the RIE?
2. Do decisions made about the domain of NAF procurement and contracting affect your program's operating procedures? NAF IT? Conversely, how does your organization affect them?
3. Is there external pressure legislation or other sources to find efficiencies, beyond the recent Rapid Improvement Events?
4. Who all should we talk to as we move forward on the implementation plan?
5. Do you interface at all with NAF employee benefits? As a consumer of that program, do you have any concerns as a result of the task force findings?
6. For COA 3, one of the issues mentioned is difficulties with culture change. What is meant by that, more specifically? Are there examples of things that might be difficult to manage or need to be addressed?

ERP (Army [A]/Air Force [AF])

1. (A/AF) What discussions are occurring between the Army and the Air Force regarding software?

Existing ERP (Navy [N]/Air Force)

1. (N/AF) What data is available on the Navy/Air Force ERP other than the AIMS ROI document?
2. (N/AF) What were the major cost drivers for the new ERP? Modules? Integration?
3. (N/AF) How much did processing time change with the implementation of the ERP?
4. (N/AF) How would adding transactions to one of the existing systems affect your costs? How much capacity does the system have?
5. (N/AF) How are the ERP licenses structured/sized (users/transactions/locations/other)? What is the capacity of the current system? What is the cost of the current license? How much would it increase if you had to support another service on the same license?
6. (N/AF) What capabilities did the ERP provide that were not possible before? Were any capabilities lost?
7. (N/AF) Were there unexpected challenges during implementation? Lessons learned?
8. (N/AF) Can we talk about the upkeep of the system?
9. (N) For the Navy, the IT budget is about \$9 million. What are the major components of that budget? What would vary if another service wanted to use your system?
10. (AF) For the Air Force, the system cost is quoted as \$1.2 million per year. What does this include? What does it exclude? Can you provide more detail on the NAF tail for salaries?
11. (N/AF) How did staffing change after the new ERP was implemented? How quickly did this occur? Was it by attrition? How many full-time personnel staff in the NAF accounting program? Part-time? Are their salaries covered by NAF or APF funds?

New ERP Implementation (Army)

1. (A) What are the main requirements for a new ERP system? Have any assumptions been revised or updated recently that we should understand?
2. (A) What capabilities will the ERP provide that are not possible today? Will any capabilities be lost? If so what?
3. (A) What sources of cost data are available?
4. (A) Has the BCA from 2010 been updated for the Army?
5. (A) Have you or anyone else you know done a business case analysis on any of the recommendations?
6. (A) What documents, laws, rules might help us understand the impacts of implementing change in your organization?
7. (A) What is the current schedule for implementing a new ERP?
8. (A) What is the worst thing that will happen if you cannot collaborate on an ERP with another service?
9. (A) Are there any specific challenges that are involved with the Army adopting a Navy or Air Force system (partial implementation of COA 2)?
10. (A) How would staffing change after a new ERP is implemented? How quickly do you anticipate this change happening? Would this be managed by attrition? Would there be new lines of communication or authority? What about training requirements?
11. (A) How have new software system roll-outs worked before?

Organizational Structure

1. How do the organizational structures support functions and activities? Are they organized by function, activity, or some combination? How much cross-training goes on, and/or how much is even tenable? Can you provide examples?
2. When was your last organizational structure change? What was the driving factor to the change—sequestration, new leadership, etc.? How did that go? What kinds of difficulties did you encounter, and what kinds of things worked well?
3. Are there aspects of your work culture here that you really value and think most employees would want to maintain? What aspects of the environment do you think are ready for change?
4. What is the level of turnover of staff, and from where do you recruit? Is there a clear reporting chain? Do you have one manager or many?
5. What actions would be best led by OSD or other policy levels?
6. (A) What is the nature of your relationship to DFAS? (contractual, etc.?)

Conclusions

1. Would staffing or other resources need to change to support planning for or implementing any of the recommendations?
2. We have heard the following themes from this discussion _____, _____, _____: Have we missed any important considerations?

NAF Employee Benefits Discussion Questions

General

1. [If not already known] What was your role in the recent RIE? What is your role in your organization?
2. What is most important to your organization right now?
3. In the months since the task force, what areas of employee benefits are collaborating across the services? [implementation of one of the recommended steps—first one is having a collaboration group “Benefits Joint Services Committee”] What things have gotten in the way or facilitated collaboration? Is there a need for APF personnel collaboration in the process?
4. Can you explain the color coding on the recommendations slide?
5. We have noted the differences in benefits provided across the services. Is the chart still accurate? Are there any important factors we should understand? When the provider of a particular benefit is the same across services, do you know if there are different terms of service?
6. What employee benefits currently offered provide you with a strategic advantage for recruiting? What are the key elements that you want to maintain, and why?
7. What would enable the services to negotiate collectively?
8. We understand from the task force that there are some challenges associated with the Official Personnel Folder. Can you share what those are? What can be done to address these issues?
9. For the different employee benefit plans offered by the services, are eligibility requirements the same?
10. How do you communicate with your colleagues in the sister service branches? How long have you been working with the other services? What areas do you focus on for collaboration? What works well in strengthening collaboration?
11. How would you describe the population that you serve? How big is it?

Organizational Structure

1. What are the primary functions your organization performs?
2. (MC) Are there any that are unique to your service that we should understand better?
3. How many FTE personnel staff the NAF employee benefits program? Are their salaries covered by NAF or APF?
4. How do the organizational structures support functions and activities? Are they organized by function, activity, some combination? How much cross-training goes on, and/or how much is even tenable?
5. How long has it been since you tried a different organizational structure, or had to do so due to sequestration, etc.? How did that go? What kinds of difficulties did you encounter, and what kinds of things worked well?
6. Can you walk us through how the recommendations affect staff size and background?
7. What is the level of turnover of staff, and from where do you recruit?
8. Are there aspects of your work culture here that you really value and think most employees would want to maintain? What could improve?

Labor Unions

1. One of Navy priorities (per minutes) is: ‘Managing conversion of APF Labor Relations Services to NAF.’ What does that mean? Does it apply only to the Navy, or all of the services?
2. What labor union issues should be considered? “Most benefits are subject to collective bargaining” – define “most” and what unions need to be negotiated with. Are these all NAF employees, or is part of their funding APF?

Financial

1. Have you or anyone else you know of done a business case analysis on any of the recommendations? If so, how would we obtain your findings?
2. Who are the best contacts to help us understand costs and budgets for your organization?
3. Are any APF funds used to support your operations, or only NAF?
4. What is the operating budget of the current program? Can we get a breakdown of the budget?
5. Will major infrastructure investments be necessary in the near future for NAF employee benefits?

Conclusion

1. What does your organization want to do next?
2. How does the exclusion of exchange employees affect implementation?
3. What does partial implementation of any of the RIE event recommendations look like?
4. Do you interface at all with NAF Accounting? As a consumer of that program, do you have any concerns as a result of the task force findings?
5. Who should we talk to as we move forward on the implementation plan?
6. We have heard the following themes from this discussion _____, _____, _____: Have we missed any important considerations?

NAF Employee Benefits Data Gathering

Benefits Comparison and Standardization

Historically, the military services have not had formal metrics for benchmarking their NAF benefit offerings internally or across the services. However, one service has built a prototype that, with extensions, is suitable to use for monthly internal benchmarks. To better achieve standardization for NAF employee benefits across all services and to improve quality of life for NAF employees, we recommend that the services establish a shared baseline set of metrics and information. This baseline will provide several benefits. First, it will show the current employee benefits landscape, and areas for possible contract synergies. Second, it will show areas of missing information across the services, and thus give insight into how each service tracks and measures existing employee benefits. This exercise will be useful in several of the RIE recommendations, including Documentation, Performance Metrics, Cross-Service Standardization, and Joint Collaboration.

Through our discussions, review of NAF employee benefits websites, and requests for data from the services, we created a table of employee benefits parameters and the service-specific information we were able to collect for each parameter (Table B.1). This table may serve as a starting point for future discussions of parameters, metrics, documentation, and standardization across the services.

Regular data sharing will assist in the larger goal of more-efficient contracting for employee benefits. In some cases, there are data fields included that would help inform efficiency efforts, but data was not available during our study. For clarity, we have labeled data-less fields with unknown and not applicable.

Table B.1
NAF Employee Benefits by Service

Benefits	Measure	Air Force	Army	CNIC	Marine Corps
401K ^a	Provider	Wells Fargo	Fidelity	Wells Fargo	Fidelity
	Dates	1/1/2008–12/31/2014	Unknown	Unknown	Unknown
	Assets	\$192 million	\$565 million	\$157 million	Unknown
	Average fee	Unknown	Unknown	Unknown	Unknown
	Eligibility	Regular NAF civilian employee, U.S. citizen/national/ permanent resident alien, after 30 days of service. No hours per week requirement listed.	Regular NAF civilian employees working 20+ hours/week in United States, District of Columbia, or Puerto Rico; in foreign areas if U.S. citizen or spouse or child thereof, subject to Status of Forces Agreement (SOFA); Army and Air Force Exchange Service (AAFES) employees ineligible	Regular NAF civilian employees age 18+ working 20+ hours/week in United States, District of Columbia, or Puerto Rico; non-resident aliens and residents of Puerto Rico ineligible	Eligible civilian employees who work 20+ hours/week; can enroll on date of hire
	Vesting	3 years as a regular NAF employee, regardless of participation in plan, or upon death, disability, or attaining age 65	After 3 years of employment, regardless of participation in plan, or upon death, disability, or reaching age 62	1 year	1 year
Match	1% at 1%, 2% at 2%, 3% at 2.5%, 4+% at 3%	1% at 1%, 2% at 2%, 3% at 2.5%, 4+% at 3%	1% at 1%, 2% at 2%, 3+% at 3%	1% at 1%, 2% at 2%, 3% at 3%, 4% at 3.5%, 5+% at 4%. If also in DB 1% matched 2%, 2% matched 3%, 3% matched 4%, 4% matched 3.5%, 5+% matched 5%	
Retirement—defined benefit ^b	Provider	State Street	John Hancock	John Hancock	SEI Trust
	Dates	9/1/2010–8/31/2014	Since 1980	Unknown	Unknown
	Assets	\$340 million (\$317.7 million as of audit)	\$1197.7 million	\$312 million	\$370.3 million
	Accrued liability	\$297.0 million	\$1287.1 million	\$351.4 million	\$383.3 million
	Unfunded liability (surplus)	\$20.7 million surplus	\$89.4 million	\$39.4 million	\$13 million
	Funded ratio	107%	93%	89%	97%

Table B.1—Continued

Benefits	Measure	Air Force	Army	CNIC	Marine Corps
Retirement—defined benefit ^b	Eligibility	Regular NAF civilian employee in the United States; in foreign areas, be a U.S. dollar-paid citizen, permanent resident, or noncitizen national of the United States.	Regular NAF civilian employees working 20+ hours per week in United States, Washington, D.C., or Puerto Rico; in foreign areas if U.S. citizen or spouse or child thereof, subject to SOFA; AAFES employees and military personnel ineligible	Unknown (all details behind firewall)	Regular civilian employee; 18 or older; outside United States only if on U.S. payroll, has Social Security Number or Tax Identification Number (TIN), and subject to U.S. tax, subject to SOFA
	Employer contribution	6.50%	7.60%	9.40%	3.51%
	Employee contribution	1.00%	2.00%	1.00%	1.00%
	Interest assumed on employee contributions	Unknown	Unknown	3.00%	Unknown
	Investment returns/ discount rate, valuation interest rate	7.50%	8.00%	7.50%	Unknown
	Annual average wage increase	3.75%	4.00%	4.00%	Unknown
	Social Security wage base increase	3.75%	4.00%	3.50%	
	Payroll growth (overall population)	3.50%	unknown	Unknown	Unknown
	Max benefit	Unknown	\$205,000	No benefit is payable larger than 80% of high three	Unknown
	Participation	Eligible after one year	Mandatory for 1st 6 months, may discontinue at any time	Unknown	Automatically enrolled once eligible
	Ratio of salary at retirement to new entrant	Unknown	Age 25: 7.9; age 40: 4.37; age 55: 2.0	Unknown	Unknown
	Mortality assumptions	RP-2000 Sex-Distinct Scale AA to 2027 for active and 2019 for retirees	RP-2000 combined mortality and disabled mortality Scale AA to 2010	RP-2000 Scale AA to 2020	Unknown
	Retirement age	Normal: 65; Lowest: Age 52 with five years	Normal: 62 with five years, Lowest: 55 with 30 years	Normal: 62 with five years; 55 with 30 years; 60 with 20 years Early: 52 with five years, 50 with 20 or 25 years of total service	Unknown
	Cost Of Living Adjustment/ Consumer Price Index	3.50%	3.50%	3.00%	Unknown

Table B.1—Continued

Benefits	Measure	Air Force	Army	CNIC	Marine Corps
DoD medical and dental ^c	Provider	Aetna	Aetna	Aetna	Aetna
	Premiums	Unknown	\$84 million—premiums	Unknown	Unknown
	Claims	\$47.7 million	\$92–93 million after true-up, \$73 million in Army claims	\$40 million claims	\$33.8 million medical \$2.2 million dental
	Employee premiums	2015 single with dental \$75.22; family with dental \$185.33	2015 single with dental \$75.22; family with dental \$185.33	2015 single with dental \$75.22; family with dental \$185.33	2015 single with dental \$75.22; family with dental \$185.33
	Non-Aetna health care			\$19 million projected HMOs	
Life	Provider	Minn. Life	Unicare	MetLife	Unicare
	Contract dates	10/12/2005–12/31/2014	Unknown	Unknown	Unknown
	Max	Employees earning \$48,000 or less: lesser of 1.5x basic yearly earnings or \$50,000; employees earning more than \$48,000: 1x basic yearly earnings +\$2,000; supplemental = 1x or 2x basic to a max of \$200,000	1x or 2x basic salary rounded to the next higher \$1K + optional up to 2x basic amount; 2x salary, basic \$250,000, max optional \$500,000	1x basic annual earnings +\$2K; optional up to 4x basic annual earnings to a max of \$500,000; or up to 6x basic annual earnings to a max of \$750,000 with statement of health form (rates for optional coverage vary by age, amount of coverage)	Employee's annual pay rounded up to the next higher thousand plus \$2,000; optional 1 = equal amount; optional 2 = equal amount
	Cost per thousand	Unknown	\$0.14/thousand (both employer and employee for basic family coverage) biweekly	\$0.094 - Basic life per 1,000 biweekly	Unknown
	Family members (spouse / child)	\$5,000/\$2500 or \$10,000/\$5,000	\$5,000/\$2500	\$10,000, \$25,000, or \$50,000 / \$5,000 or \$10,000	\$5,000/\$2500 or \$10,000/\$5,000 or \$15,000/\$7,500 or \$20,000/\$10,000
	Volume	Unknown	Unknown	\$535 million volume	\$194 million volume
	Total coverage	Unknown	Unknown	\$1.2B billion—total coverage	Unknown
	Total premiums	\$2.3 million premiums		\$2.4–2.5 million—total premiums	\$1.5 million premium

Table B.1—Continued

Benefits	Measure	Air Force	Army	CNIC	Marine Corps
Long-term disability	Provider	None	None	MetLife	None
	Contract dates	N/A	N/A	\$200 million volume	N/A
	Premiums	N/A	N/A	\$1.4 million—annual premiums	N/A
	Employer portion of premium	N/A	N/A	75%	N/A
	Cost to employee	N/A	N/A	Cost to employee monthly earnings/100 * 0.65	N/A
	Claims	N/A	N/A	Unknown	N/A
	Anticipated value of coverage	N/A	N/A	\$17.6 million—value of all coverage if everyone was on it	N/A
Short-term disability		None	None	None	None
Flexible spending account ^d	Provider	Pending	Aetna	Aetna	Aetna
	Fee per participant	Unknown	Unknown	Unknown	Unknown
	Total anticipated profit	Unknown	Unknown	Unknown	Unknown
	Total contract cost	Unknown	\$18,000/year		\$18,000 per year
Long-term care	Provider	None	CNA	Federal Long Term Care Insurance Program	CNA
	Contract dates	N/A	Unknown	Unknown	Unknown
	Premiums	N/A	Unknown	Unknown	Unknown
	Claims	N/A	Unknown	Unknown	Unknown
	Anticipated value of coverage	N/A	Unknown	Unknown	\$143,436 premium paid by employees
Employee assistance program ^e	Provider	None	None	ACI	Magellan
	Contract dates	N/A	N/A	Unknown	Unknown
	Premiums per employee	N/A	N/A	\$0.95 per employee	\$0.60 per employee
	Total premiums	N/A	N/A	\$0.2 million premium	\$106,200-per-year fees

Table B.1—Continued

Benefits	Measure	Air Force	Army	CNIC	Marine Corps
Unemployment				\$2.0 million claims Statutory requirement	\$2 million FY 2013 Statutory requirement
<p>^a U.S. Army Family and Morale, Welfare, and Recreation Programs, undated-a; Commander, Navy Installations Command, undated-a and undated-c; U.S. Air Force Services, 2015; Marine Corps Community Services, undated-a.</p> <p>^b U.S. Army Family and Morale, Welfare, and Recreation Programs, undated-c; Commander, Navy Installations Command, undated-b; U.S. Air Force Services, undated.</p> <p>^c DoD, 2016.</p> <p>^d U.S. Army Family and Morale, Welfare, and Recreation Programs, undated-b; Marine Corps Community Services, undated-c.</p> <p>^e Commander, Navy Installations Command, undated-d; Marine Corps Community Services, undated-b.</p>					

Resources for Benefits Metrics

There are several resources that can guide future discussions of appropriate and applicable metrics and comparative benchmarks. One important resource is surveys performed by regional and national professional associations, such as the Human Resources Association for the National Capital Areas, Society for Human Resource Management (SHRM), and International Public Management Association for Human Resources, as well as those conducted by private consulting groups, such as Aon Hewitt and Mercer. These surveys provide HR metrics, often organized by sector, on which internal data can be benchmarked. These groups also share best practices from recognized leaders that can help assess effectiveness of HR core practice areas and offer useful methods that may be integrated into the organization. Common HR metrics included in these publications include, but are not limited to

- absence rate
- coverage eligibility
- total benefit cost per employee
- benefit costs as a percentage of salary
- minimum hours worked for eligibility
- first date of eligibility
- health plan diversity and enrollment numbers
- premium cost changes year over year before plan design changes
- premium cost changes year over year after plan design changes
- total premium costs per employee
- percentage employee contribution for premiums
- death and disability
- retirement plans and employer matching
- paid leave
- workers compensation costs per employee
- workers compensation incident rate
- other fringe benefits: child care benefit, alternative work schedules, etc.

Additional data sources for employee benefits comparison include the Bureau of Labor Statistics, the U.S. Chamber of Commerce, the Employee Benefit Research Institute, and the International Foundation of Employee Benefit Plans.

In future discussions, it will be important for each service first to identify what is really important to the service and which employee benefits make the most sense for the service. Next, each service should determine which metrics should be tracked, which data are needed, how to collect the data, and against which organizations those data should be benchmarked. Each service should be careful to track only those that are most important to the service and provide actionable information to promote continuous improvement. Benchmarking should help organizations set priorities, provide a way to gauge progress, and encourage planning for new program implementation.

When assessing which metrics to track, it may be helpful to place employee benefits in categories. Doing this may streamline data collection and ensure all important data elements are being captured. For example, the SHRM's 2013 Employee Benefit report organizes survey results into the following categories:

- health care and welfare benefits
- preventive health and wellness benefits
- retirement savings and planning benefits
- financial and compensation benefits
- leave benefits
- family-friendly benefits
- flexible working benefits
- employee programs and services
- professional and career development benefits
- housing and relocation benefits
- business travel benefits
- other benefits

Metrics can also be considered in context of core HR functional areas and bottom-line impact, as the consulting group Peoplefluent¹ recommends (Peoplefluent, undated). This group defines these key areas as

- absenteeism
- benefits/educational reimbursement
- development/management training program
- employee attitudes
- overall HR
- recruiting hiring selection
- retention employee separation
- safety program
- work-life balance initiatives.

¹ Peoplefluent is a talent management consulting firm that provides software solutions for workforce planning and analytics (Peoplefluent, undated).

Background Information for Case Studies

To preserve flow within the body of the document, we eliminated much of the background information from the cases we present. However, as it provides potentially useful context regarding the process these organizations undertook to implement change, and some of the impetus behind a desire for change, we present that broader background here for the interested reader.

TRICARE Regional Consolidation

Program Purpose

TRICARE is the health care program for military personnel and their dependents. DoD's Military Health System oversees all military health organizations, and the DHA is the program manager for TRICARE.¹ Under TRICARE, beneficiaries can receive health care either through MTFs or civilian providers. MTFs make up DoD's direct care system for beneficiaries, while networks of civilian providers represent DoD's purchased care system. Beneficiaries are able to receive services through both MTFs and civilian providers.

Within the purchased care system, DoD uses MCSCs to develop networks of civilian providers to serve TRICARE beneficiaries in geographic regions called Prime Service Areas (GAO, 2014a, pp. 1–2). The MCSCs are also responsible for such activities as claims processing, customer service for beneficiaries and providers, and other administrative functions.

Program Status

Beginning in 1995, the TMA (the precursor to DHA) implemented TRICARE through seven health care delivery contracts that covered 11 geographic health care regions across the United States (GAO, 2005, p. 15). These contracts were competitively bid and awarded as fixed-price, at-risk contracts (Backhus, 2001, p. 3). The contracts were awarded for a specific base period and five option years, with all TRICARE contracts eventually needing to be resolicited and awarded. Each of these contracts was solicited through separate RFPs and included unique regional requirements. A May 2001 report found shortcomings with the existing contract process, and it considered contract management as a high-risk challenge for DoD (Backhus, 2001, p. 1). The U.S. Government Accountability Office noted that DoD and most contractors considered the then-current health care delivery contracts to be too large, complex, and

¹ The DHA was established on October 1, 2013. Prior to that date, TRICARE's program manager was the TMA, which was disestablished on October 1, 2013.

prescriptive in nature, limiting innovation and competition (Backhus, 2001, p. 2). Additionally, the complex and expensive bidding proposal process was too onerous for all but the largest, most-complex, and best-resourced private companies (Backhus, 2001, pp. 4–5). Lastly, contract adjustments due to changes in laws, regulations, and DoD guidance led to program instability, change order backlogs, and unpredictable program costs (Backhus, 2001, pp. 7–8).

In August 1999, the Deputy Secretary of Defense formed the DMOC to provide oversight on TRICARE, including its contract management. DMOC's membership consisted of the Under Secretary of Defense (Personnel & Readiness), the four service Vice Chiefs, the military department Under Secretaries, the Under Secretary of Defense (Comptroller), the Director of Logistics from the Joint Staff, the Surgeons General, and the Assistant Secretary of Defense (Health Affairs).

The first generation of health care delivery contracts was due to expire in 2003. In anticipation of this expiration, TMA in August 2002 announced significant changes to the next generation of TRICARE health care delivery contracts, including changing its existing regional structure. Contracts were changed to a performance-based approach with great lenience for MCSCs to prescribe how contract standards were met.

In 2004, the TMA and the military services established a new regional infrastructure, called the governance structure, to manage and oversee both the direct care and purchased care systems within TRICARE (Backhus, 2001, p. 17). This is the current TRICARE program structure. The 11 existing regions were realigned into three large regions. These regions are known as TRICARE North,² TRICARE South,³ and TRICARE West.⁴ Each TRICARE region has an MCSC, as well as a TRO. The TROs oversee health care delivery within their respective regions, and each contract with different health insurance providers. Each TRO also has a regional director who reports to DHA. Because the TROs contract with different civilian providers, the information on topics such as reimbursement rates and contracts are considered proprietary and not shared among the TROs.

Auditability Issues Within the Defense Finance and Accounting Service

Program Purpose

In an effort to capitalize on post–Cold War defense savings and strengthen DoD financial management, DFAS was founded in 1991 to standardize, consolidate, and improve DoD (including the military services) accounting and financial functions (DFAS, 2015). DFAS provides both finance services (e.g., payroll for DoD military, civilian, and contractor personnel) and accounting services (e.g., tabulation and analysis of customer obligations and expenditures) to DoD customers. DFAS is a DWCF organization, meaning it charges its customers

² The North Region includes Connecticut, Delaware, the District of Columbia, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia, Wisconsin, and portions of Iowa (Rock Island Arsenal area), Missouri (St. Louis area), and Tennessee (Ft. Campbell area).

³ The South Region includes Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Oklahoma, South Carolina, Tennessee (excluding the Ft. Campbell area), and Texas (excluding the El Paso area).

⁴ The West Region includes Alaska, Arizona, California, Colorado, Hawaii, Idaho, Iowa (excluding Rock Island Arsenal area), Kansas, Minnesota, Missouri (except the St. Louis area), Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Texas (the southwestern corner, including El Paso), Utah, Washington, and Wyoming.

for services to cover its operating costs. DFAS is headquartered in Arlington, Virginia, and has five regional centers that largely support differing military customers. Three of the five regional centers also have operating locations reporting to them. DFAS is a large part of the DoD support infrastructure.

Program Status

DFAS has partially achieved its creators' objectives in standardizing, improving, and consolidating DoD accounting and financial functions. Since 1991, DFAS has consolidated more than 300 installation-level offices into nine DFAS regional sites, and it has reduced the number of individual systems used from 330 to 111 (DFAS, 2015). However, DFAS is still mired in many of the financial management issues that have affected DoD for decades.

Immediately prior to DFAS's creation, the CFO Act of 1990 mandated improvements in systems of accounting, financial management, as well as in internal controls and production of complete, reliable, timely, and consistent financial information (Khan, 2014, p. 4). As part of the response to the problems preceding passage of the CFO Act, the U.S. General Accounting Office in 1990 issued its first high-risk list for vulnerability to waste, fraud, abuse, and mismanagement, and DoD was placed on that list (Khan, 2014, p. 5). Since its inception in 1990, DoD has remained on GAO's high-risk list due to long-standing weaknesses in its financial management. In May 2014 congressional testimony, GAO Director for Financial Management and Assurance Asif A. Khan stated: "DoD is one of the few federal entities that cannot accurately account for its spending or assets and it is the only federal agency that has yet to receive an opinion on at least one of its department-wide financial statements" (Khan, 2014, p. 6). Similar to the rest of DoD, DFAS has had difficulties with financial management and improving auditability, a problem noted by GAO as early as 1995. These problems continue to be highlighted in recent GAO reports. To deal with these and other issues, the NDAA for FY 2000 required DoD to create a detailed plan for DFAS improvements. The congressionally required plan focused on the following actions:

- improving DFAS internal controls and review processes
- ensuring DFAS's establishment and use of a single SGL and integrated database for financing and accounting functions
- providing a single, consistent use of policies and procedures for financial transactions throughout DoD
- ensuring compliance with applicable policies and procedures for financial transactions throughout DoD
- reviewing safeguards for preservation of assets and verifying the existence of assets (U.S. General Accounting Office, 2001c.)

Although numerous GAO reports note improvement efforts that DFAS has made to increase efficiency and accuracy in financial reporting, certain recurring problems persist. These problems are exacerbated by DFAS's reliance on financial information and documentation from the military services to fulfill its accounting and reporting obligations, making it difficult for DFAS to bridge the auditability gap with effective, repeatable processes for certain activities (Khan, 2014, p. 26). For example, the General Accounting Office reported in 2003 that DFAS's lack of modern, integrated financial management systems required intensive, daily, manual effort to prevent and resolve payroll errors (U.S. General Accounting Office,

2003, pp. 25–26.) In 2011, GAO reported that DFAS personnel continued to use manual work-arounds and several different systems to obtain the financial information needed to perform daily tasks (Khan, 2011, p. 19.) Moreover, and importantly, DFAS has not provided final resolution to the issue of DoD auditability; GAO notes it is critical to have modernized business systems and financial management practices in place to support DoD’s auditability goals, and prolonged use and funding of existing duplicative, stovepiped systems impairs DoD’s ability to become auditable (Khan, 2011).

The Defense Integrated Military Human Resources System

Program Purpose

DIMHRS was “intended to provide a joint, integrated, standardized personnel and pay system for all military components (including active and reserve components)” (Farrell, 2008, p. 1). It was intended to correct high-profile payroll and accounting errors following the 1991 Gulf War, which included reserve soldiers not being paid and others being paid twice for the same period of service. The goal of the program was to “move to a single, all-Service and all-component, fully integrated personnel and pay system, with common core software” (Farrell, 2008, p. 1). DIMHRS was to provide DoD with improved and coordinated processes, including (1) accurate and timely personnel data, (2) standard data for comparison across the services and other components, (3) tracking information on reservists for both pay and service credits, (4) tracking information on military personnel both in and out of theater, and (5) integrated personnel and pay functions (Farrell, 2008, p. 4).

Program Status

The program failed. The Army was selected as the first branch to implement the program, which was scheduled to begin in FY 2006. DoD canceled DIMHRS in February 2010. Ultimately, the DIMHRS program involved approximately 12 years of unsuccessful effort at a cost of \$1 billion.

NAF Accounting Cost Detail

Cross-Walk Calculations

One possible way to avoid a major system upgrade while still reaping the advantages of an SGL is to construct and implement a “cross-walk” between all military services. This would serve to translate ledgers across the services, ultimately allowing for faster compilation and comparison of accounting transactions among services. This solution, while considered a temporary solution, would accomplish one of the more pressing requirements of the RIE, providing some buffer time for the services to deliberate other, more costly courses of action. However, the cross-walk does not meet the requirements set out in the recent memo requiring the services to identify a new common accounting structure (Office of the Assistant Secretary of Defense, Readiness and Force Management, 2013), so relief from that requirement would need to be granted to allow for this investment.

The Navy advised that the effort required to implement a cross-walk would likely be equal to approximately two FTEs for three months. To encompass possible challenges that may arise, and to provide more buffer time for implementation and education, we assumed the effort would require two FTEs for ten months. For each service, this is equal to approximately \$100,000, which is significantly less expensive than the previously identified COA. It may allow the services more time to approach COA 2 or COA 3 without fully implementing COA 1, which would reduce the required investment but would not meet the deadline for compliance with a new SGL in 2015.

Feeder Systems

One large portion of COAs 2 and 3 that we have omitted from the main body of our estimates is that of feeder systems. Each service has multiple feeder systems that assist NAF employees with providing MWR services at bases internationally. These financial systems must interact with accounting systems to record transactions and other financial data. The services’ current feeder systems are shown in Table D.1.

These systems are in various points in their life cycles, and will need to be replaced as they become obsolete. The COAs also dictate that feeder systems should be standardized and implemented across all military services. Given that these systems would need to be replaced regardless, we omitted them from our main analysis, as they would be considered to be adding no marginal additional cost. However, the cost of updating these systems would be a significant burden. The Navy’s 1997 estimate projected costs to implement feeder systems in the Navy

Table D.1
Existing Feeder Systems

System	Air Force	Army	Navy
Timekeeping/payroll	E-Time: SETS		Kronos, ADP
Golf	VSI GolfTrac	VSI GolfTrac	VSI GolfTrac
Other recreation	VSI RecTrac, Qubica (Bowling)	VSI RecTrac	VSI RecTrac, AMF Bowling, Qubica (Bowling)
Child development	VSI CYMS	VSI CYMS	VSI CYMS
Lodging/property management	Epitome, Defense Lodging System	Epitome	Epitome, Defense Lodging System
Financial/reporting			Business Warehouse
Food and beverage, clubs and dining facilities	Aloha		MICROS, VSI RecTrac, Food Track, Catermate, Cater-Ease
Banking/procurement/purchase card	JP Morgan Chase		JP Morgan Chase, Bank of America, American Express, Discover

alone was approximately \$31 million (in FY 2015 dollars, see Table D.2). While this number likely includes new hardware and infrastructure across the Navy, it still represents a significant cost to the services. We also calculated that the Air Force spent slightly more than \$400,000 per system on two systems purchased in the mid-2000s. While some systems may not be as complex as those the Air Force purchased, and thus may require less than \$400,000, we believe that figure is a reasonable starting point for our feeder system estimate.

If we assume the current systems need to be upgraded for each military service at that cost, the total cost for all services would be \$13 million for software alone. If we assume that all services would want to purchase and implement the same outlay of systems, and we assume that they decide on approximately 12 systems total for each military service, the total cost would be approximately \$15 million. These figures do not include the cost for middleware, which would be required to connect the feeder systems to the main ERP system. Middleware costs would add an additional \$1.5–4.3 million total, assuming the current system outlay. These values come from two to six months of burdened software developer time per feeder system, as calculated by the Bureau of Labor Statistics.

One significant caveat to our assessment is that we have not included the assumption that the feeder systems will be implemented in a staggered manner in COA 2. As a result, that particular COA would not yield any savings from bulk purchase, as each system would be implemented separately and would become uniquely adapted to each military service over time.

Given the possibly steep costs of feeder systems, we recommend that NAF accounting seriously look at the possible costs of standardized feeder systems for COAs 2 and 3. They are

Table D.2
POS/Feeder System Cost Summary (FY 2015\$ in millions)

Cost	Air Force	Army	Navy	Total
Feeder systems (current):	3.8	1.7	7.5	13.
Feeder systems (assumes 12 identical systems per service):	5.0	5.0	5.0	15.1
Middleware (2–6 months developer time)	0.4–1.3	0.2–0.6	0.8–2.5	1.5–4.3

NOTE: 12-system estimate assumes 10-percent reduction for bulk purchase.

likely to add significant cost to the total estimate, and should not be ignored while planning for a new, standardized ERP system.

Army System Costs: System Support to COA 1

The aforementioned solution to COA 1 for the Army implies no additional marginal cost, because it focuses solely on the SGL. However, there is real cost associated with purchasing an accounting system that could support the SGL, so all costs should be considered. Assuming Rosa et al.'s methodology for development and deployment (2010), costs are as shown in Table D.3.

Maintenance costs would also be significantly reduced from \$2.2 million per year to \$1.3 million per year. In addition, personnel costs are estimated to be reduced by approximately \$100 million ten years after implementation. It is worth noting that this estimate assumes that the Army will purchase an ERP system similar to the Navy and Air Force. If they choose an alternative, less-standard ERP system, or a separate, stand-alone accounting system, COAs 2 and 3 become more difficult to achieve, and this estimate would likely be moot.

Table D.3
Army Proposed Accounting System Costs

Activity	Cost (FY 2015\$ in millions)
Development	\$5.3
Deployment	\$16.7
Total	\$22.0
Maintenance	\$1.3

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The Department of Defense (DoD) routinely seeks ways to become more efficient and reduce costs. Each military service provides its members and their families with a wide range of services supported by resources that are paid for using congressionally appropriated funding (APF), nonappropriated funding (NAF), or a combination thereof. DoD was interested in determining whether any administrative NAF activities could be consolidated—and, if so, whether consolidation would save costs. DoD created a task force to explore these issues and identified several areas for improvement, ranging from contracting to information technology. DoD Military Community and Family Policy asked the RAND National Defense Research Institute to review the work of the task force and provide an independent assessment of specific recommendations. In collaboration with the sponsor, RAND provided intensive analysis of recommendations in two areas for improvement that the task force identified. Researchers determined that application of consolidation could achieve improvement and savings in some NAF accounting activities, but that there is considerably less potential in the case of NAF employee benefits.



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