

Educating Our Defense Managers

A Way Ahead

Thomas P. Galvin, EdD

Andrew A. Hill, DBA

Abstract

This paper presents an architecture for defense management education tailored to the needs of officers and civilians with different managerial skill requirements—from those on the command track to lifelong defense-management practitioners. As essential as good management is, it remains on the margins of professional development in the military. A cultural bias favors leadership but treats managers as second-class officers even though management skills remain vital to the defense enterprise—the Department of Defense and all other public and private organizations that contribute to national defense. The authors aim to start a discussion about defense management education that will help ensure the defense enterprise can provide combat-ready forces to combatant commanders while preparing for the future.

Large, complex organizations succeed through the combination of effective leadership and good management. The Department of Defense (DOD) enterprise is exceptionally large and complex, and it demands outstanding management skills from its senior leaders. *Defense managers* are responsible for planning, organizing, leading, and controlling DOD activities. However, like all managers, they do so at a rapid and unrelenting pace.¹ In the words of Peter Drucker, managing requires “very hard, demanding, risk-taking work.”² Indeed, it takes the concerted, combined effort of senior military and civilian leaders throughout DOD to support current war efforts while preparing for future needs. As the military experiences another postwar force reduction and faces complex questions about its future role, management skills will be vital to ensuring that the *defense enterprise*—DOD and all other public and private organizations that contribute to national defense—sustains the ability to provide combat-ready forces to combatant commanders while preparing for the future.³

Despite the importance of expert management in running complex organizations, management as a professional discipline remains on the margins of officer development

in the military. In a recent commentary, we decried a military cultural bias that favors leadership but treats managers as “impediments, barriers, gatekeepers, and naysayers,” and management as evil and mind-numbing because of a supposed preoccupation with “processes and procedures.”⁴ In reality, effective executive-level managers are agenda setters and consummate networkers who understand how to translate strategic direction into action, including setting goals, allocating resources, evaluating progress, and capturing knowledge gained.⁵ These skills and competencies differ from those cultivated in leadership education but are highly relevant for managing the defense enterprise with its hundreds of processes and systems designed to help translate strategy into ready forces for the combatant commanders.⁶

Unfortunately, our experience with professional military education (PME) suggests that, compared to leadership, management is undervalued both by students and PME institutions.⁷ Thus, the PME system does not adequately prepare its senior officers and civilians to assume the roles of defense managers. As a result, systemic organizational dysfunctions emerge and foster the waste of time, talent, and money across the DOD. Examples of these dysfunctions include chronic and well-documented problems with the defense acquisition system and efforts to institutionalize talent management, even as the DOD continues to struggle with rapidly increasing personnel costs (well above rates in the private sector).⁸ Furthermore, the DOD struggles to effectively exercise the fundamental management responsibilities of creating, growing, maintaining, reducing, and divesting its suborganizations.⁹ Instead, growth is the rule and contraction the exception. “Organizations and functions that have gradually been added to the department since its founding in 1947 have only rarely been eliminated, even if their original purpose has long since changed or gone away entirely.”¹⁰

This essay first examines the need for management-focused education tailored to the defense context. It then presents a multilayered architecture for a defense management curriculum within PME to foster managerial skills and competencies in defense leaders. The architecture addresses foundational concepts and skills required

Thomas P. Galvin, EdD, is assistant professor of leadership studies at the U.S. Army War College, where he has taught in the resident program for six years. He holds a doctor of education degree in human and organizational learning from The George Washington University. He retired from active duty in the U.S. Army after twenty-nine years of service, including several tours in executive assistant positions among various service, joint, and combined commands.

Andrew Hill, DBA, is an associate professor at the U.S. Army War College and director of the Carlisle Scholars Program. His research focuses on innovation and complex systems. He holds a doctorate in business administration from Harvard Business School, a master’s in public policy from University of California, Berkeley, and a bachelor’s degree from Brigham Young University.



of all defense managers at one end and strategic decision making at the national political and economic environment at the other end. The curriculum is tailorable to suit the needs of career-long managerial practitioners and those who will occasionally serve in DOD management positions.

What Defense Managers Need

The U.S. military is a public-sector professional organization. Thus, fundamentals of public-sector management (e.g., informed decision making, engagement with the public, talent management, and collaboration with the private sector) are very important.¹¹ The military's professional character adds other critical skills and competencies, such as sustaining its unique domains of expert knowledge (e.g., warfighting), certifying and policing its members, and protecting its autonomy from societal or governmental intrusion.¹² All these requirements are familiar to the military's tactical and operational leaders, but they take on different meaning when these officers and civilians advance and become senior defense managers. They now experience how much the interplay among politics, economics, and law influences strategic decisions.¹³

This is vital because, as Henry Mintzberg writes, "synthesis is the very essence of management," and managers must have the skills for developing "coherent visions, unified organizations, integrated systems, and so forth."¹⁴ This is echoed in the writings of PME commentators such as former U.S. Army War College commandant Robert H. Scales, who writes that successful senior defense managers are "engaged in the decision-making processes in all national-level staffs, both civilian and military," to develop capabilities and provide combat-ready forces to combatant commanders.¹⁵

These core functions may not differ in nature from those of private businesses, but they do differ in character.¹⁶ Therefore, simply grafting management education on top of military PME is not the best answer. While general management principles may apply, the defense context includes a wide, complex, and unique array of decision-support tools that constantly evolve due to strategic, functional, or political pressures. Defense managers must appreciate the decision-support architecture, both its capabilities and limitations, to ensure their decisions are well informed and defensible to Congress and the U.S. public.¹⁷

Defense managers must also master the political context. While management sometimes overcomes politics, the reverse is more often true. More important, all defense management decisions find management and politics inextricably connected in a sometimes uneasy, shambling relationship. One of the essential roles of defense managers is to help their senior political leaders manage that relationship. In effect, leaders must be able to critically evaluate the processes and systems in place and then present that evaluation within the political context. Thus, when the Army determines through rigorous analysis that it no longer requires new M1 Abrams tanks, it must anticipate and address the concerns of the legislators in whose districts those tanks would be made.



However, because of the military's career management systems, many officers reach senior rank without having gained sufficient DOD-level experience to prepare them. Although each service has communities of practice in certain functions such as acquisition or force development, overall, the services rightfully incentivize and reward proficiency in core warfighting functions.¹⁸ The downside is that many officers arrive at the senior service colleges with limited knowledge in how the services run, yet they are expected upon graduation to immediately adapt to senior defense managerial roles. In reality, these officers must undergo a full transition to their new roles and develop new skills and competencies to be effective as senior defense managers.¹⁹

In our experience, senior leaders intuitively recognize the critical importance of both leadership and management in delivering trained and ready forces to commanders while preparing for future needs. They also recognize that defense management assignments tend to dominate the career patterns of senior PME graduates, and that enterprise issues dominate the agendas of flag-officer-level commanders.²⁰

Insufficient Emphasis on Management in Professional Military Education

Unfortunately, while the current approach to PME has a foundational approach to leader development supported through developmental assignments that prepare officers for strategic command success, there is no equivalent on the managerial side. Why?

One possibility is that the organization assumes that preparation for command equates with preparation for senior managerial roles. Unfortunately, success in command does not necessarily assure later success in a service staff or other management-level organization.²¹ There are important skill differences between leaders and managers, although some senior officers and civilians are capable of exhibiting both. Strategic leadership competencies include articulating vision, setting strategic direction, and inspiring followers.²² Meanwhile, executive managers must be adept at setting agendas, operating informal networks, and routinizing complex activities.²³ While managerial and leadership skills may overlap, they are developed differently.²⁴

If the joint community is to build and maintain managerial talent, it needs to embrace two things: sound principles of good management adapted to the military context, and sound methods for teaching the principles to officers and defense civilians. Defense managers must be prepared to advise senior leaders on how to optimize enterprise activities yet keep them aligned with key stakeholder needs.²⁵ The issues facing defense managers are complex and broad, such as federal budgetary pressures, consolidation of the defense industrial base, sustaining the all-volunteer force, providing sufficient trained and ready forces to combatant commanders for current and future operations, and many others.²⁶ Unit-level perspectives are important but insufficient; students of defense management must



situate themselves in the perspectives of the secretaries, chairman, or service chiefs to render proper military advice.

A second explanation is that military leadership is simply more conceptually developed as a field than is defense management. This is apparent when reading the policy in Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 1800.01, *Officer Professional Military Education Policy*. It identifies “strategic leadership” among its joint learning areas across joint PME institutions.²⁷ Subordinate learning objectives include skills and competencies drawn from the fields of psychology (e.g., strategic thinking, decision making, and communication), ethics, and organizational studies (e.g., culture, change, climate, and learning). Management-centric concepts are largely absent from the policy’s joint learning objectives, and (predictably) PME curricula only give rudimentary introductions to these areas. Yet, management is a highly developed field. Indeed, one can argue that from a scientific standpoint, much more is known about what is needed for good management than for good leadership. Measurement, inferential statistics, behavioral and organizational economics, decision analysis, and accounting (analogous to programming and budgeting) are all highly developed fields of great relevance to effective defense management. To look at the current PME system, one would not know that they exist.²⁸

A third explanation for the lack of a comprehensive approach to managerial development is the notion that management consists only of knowing a process. Mintzberg warned of management education devolving into the mere study of decision making; then declining to only an analysis activity, and finally falling to the rote “the use of a formula.” This devolution served to undermine the proper development of managers.²⁹ Despite Mintzberg’s warning, a survey of defense-management-related curricula across PME suggests heavy emphasis on gaining familiarity with existing processes and systems, predominantly in matters of materiel acquisition and force development.³⁰ This is aggravated by the persistent growth in the number and scope of the DOD’s and services’ management processes and systems, challenging both students, faculty instructors, and curriculum developers to keep current. Thus, senior PME is unable to pursue the type of management synthesis advocated by Mintzberg.

There are three unfortunate consequences. First, the management focus is mostly on *what* things are done, as opposed to *how* they are done. Most important to management education is *why* things are done a certain way, what are the alternative approaches, and what are the tradeoffs in pursuing those approaches. For example, lessons in senior PME now present contracting as an available tool or capability, but the lessons do not address the basic question of how to think about instances where contracting is unsuitable.³¹ This is the classic *make or buy* decision: What causes an organization to decide to buy something from the market instead of producing it itself? There is of course no simple answer to that management question, which is why it belongs in the curriculum.



The second consequence is that without understanding the basic questions of management, students are not prepared to take the next steps such as understanding the analytical tools, assessing the system and, if needed, proposing different approaches or pursuing redesign. Instead, students walk through management processes from input to output, with limited opportunities to discuss dysfunctions or improvements. Predictably, such classes are tedious and boring, which reinforces the cultural bias against management. In contrast, management education scholars favor experiential learning techniques that help students define issues and develop choices.³²

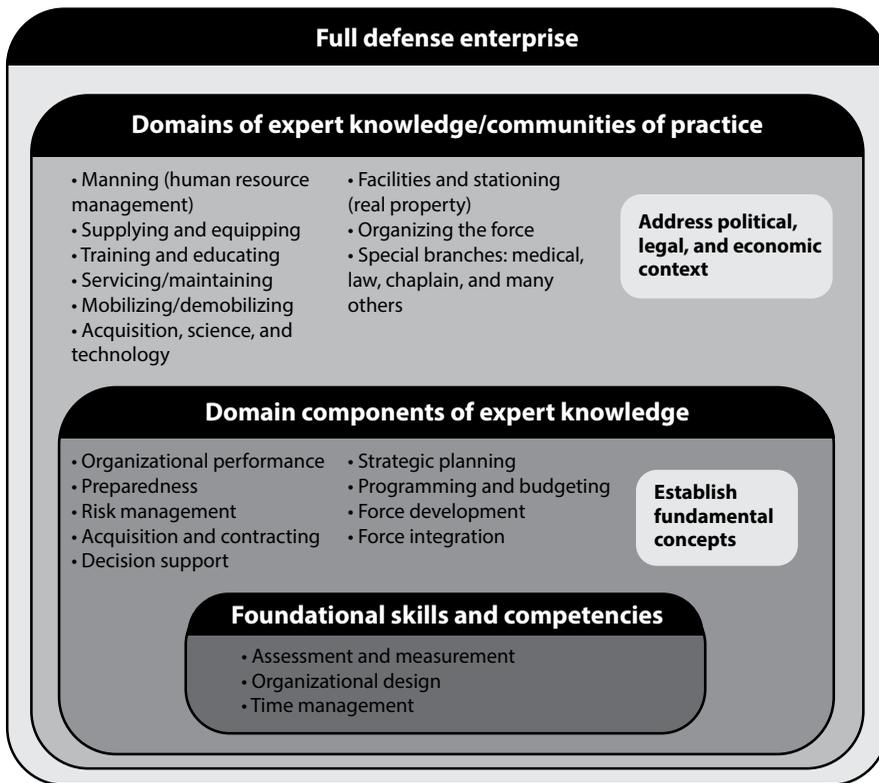
Third, effective management education is made even more difficult because of challenges in sustaining expert knowledge among the faculty. Military faculty often arrive as experts in a specialized area within the enterprise. Lacking a broad base of management competencies, they find it difficult to expand to a strategic perspective because they must relearn topics outside their specialty. Moreover, when they depart, their specialized expertise leaves with them, as there is limited ability to transfer their knowledge to the PME institution. Although proponency for management-related issues rightly belongs at the secretariat level and associated chief management officer or equivalent, stewardship of the expert knowledge on management matters should be a PME institutional responsibility.³³

To foster synthesis skills, defense management education must address the same relevance-rigor tension that business schools and other higher education institutions face.³⁴ For defense, the tension manifests itself as a conflict between how things should ideally be done and how things are done within the political, economic, and legal context. To be successful, defense managers must master both sides of the debate. For example, there exist fundamental principles regarding measures of readiness that should guide the distribution of resources to ensure services can generate sufficient trained and ready forces for operations.³⁵ However, DOD may assign collateral missions that override the distribution of resources and disrupt the force generation process. Mastery of these principles helps defense managers articulate the risks associated with such decisions, while mastery of the political context allows managers to synthesize alternatives and render actionable advice.

Toward a Curricular Solution

Therefore, what should a defense management curriculum look like? We reviewed management literature, along with current defense management courses, and determined that the domains of knowledge for each managerial subject area had common components, as shown in figure 1 (on page 37). These components constitute the language of defense management, allowing disparate domains (e.g., military medicine, human resource management, science and technology, or stationing) a common vocabulary to help align activities toward enterprise goals. They capture





(Figure by authors)

Figure 1. Four-Layered Architecture of a Defense Management Curriculum

the fundamentals governing these domains and the real-world political, legal, and economic factors that complicate decision making in them.

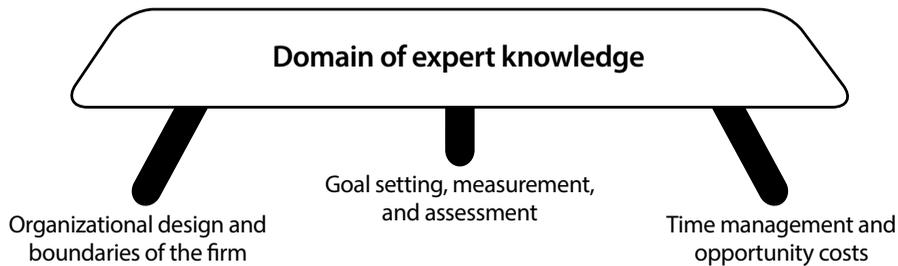
We assembled these elements into a broad architecture from which one can construct learning materials, courses, and entire programs in defense management. We present these in the next section, from the inside out. Then, we show how varied programs can address the needs of different leaders.

Three Foundational Skills and Competencies

Using the management literature, we have identified three foundational skills and competencies that are common across all defense management domains of expert knowledge. These are shown in figure 2 (on page 38).

Goal setting, measurement, and assessment. Military personnel dislike dealing with statistics because it requires “mastery of a technical field [well] outside their





(Figure by authors)

Figure 2. Foundational Skills and Competencies for Defense Managers

personal experience.³⁶ Moreover, the specter of Secretary of Defense Robert McNamara colors the discourse, as critics decried his reliance on quantitative methods as replacing or inhibiting good judgment.³⁷ Consequently, military officers generally distrust statistics, believing they can be capriciously manipulated.³⁸ Still, as Amy Gallo writes in an article at *Harvard Business Review* online, “because more and more companies are relying on data to make critical business decisions, [statistical significance is] an essential concept for managers to understand.”³⁹ Senior leaders and managers do not necessarily need to be mathematicians, but they must be sufficiently comfortable with numbers to critically evaluate those presented to them.⁴⁰ Managers should guide and prioritize activities based on clear measures of performance and effectiveness, accurately assessing both the visible and hidden costs of those activities.⁴¹ The increased interconnectivity of everything we use in daily life offers great opportunities to better understand the environment. It can also improve strategic decision making and the design of decision-support tools.

A defense management curriculum would present the analytical approaches without necessarily delving into the detailed mathematics, although students must master common terms from descriptive and inferential statistics.⁴² Instead, the curriculum could concentrate on three things: (1) setting and articulating goals, (2) establishing feasible and meaningful measurements, and (3) usefully interpreting the data collected.⁴³ In general, defense managers find the first very challenging. How does one establish a strategic goal that can be operationalized into measurable performance objectives? Mapping goals to objectives and relating those to organizational activities are important management competencies.

The curriculum should help managers understand the different and relevant ways to read and interpret data, and thereby develop measures that will accurately reflect what and how the manager needs to gauge organizational performance. Managers must know how to judge the appropriateness of a measure; the levels of precision necessary for useful analysis; the feasibility, representation, and consistency of the mechanisms available to collect data; and the validity and reliability of the results. Absent this knowl-



edge, the manager risks acting on unreliable or unrepresentative information. For example, when discussing matters of metrics and statistics, military officers may default to the “bell curve” metaphor, which represents normally distributed events with a single identifiable mean. However, most defense management phenomena are not normally distributed, which in our experience has led to managers taking steps to “normalize” the data for easier interpretation, but instead they bias the measures.⁴⁴

Organizational design and boundaries of the firm. Choices of organizational design are among the most fundamental decisions managers can make. Organizational design first determines what is inside versus outside the organization; it then establishes the structures for carrying out internal activities. Design is an essential function of military leadership and a perpetual part of senior military decision making, especially at the Pentagon. The recent attempts to reform the DOD and build on the Goldwater-Nichols Department of Defense Reorganization Act of 1986 (itself an exercise in design) are emblematic of the strategic significance of organizational design.⁴⁵

Management scholar Gill Corkindale states, “Managers design and implement organizations to serve ... assigned missions. This is more than merely drawing box charts and establishing formal duty descriptions. It includes delegating responsibilities, setting expectations, managing relationships, and aligning activities with requirements.”⁴⁶ It also involves what must go on inside the organization versus its interface with the environment, and how to integrate the outputs of whatever the organization provides to stakeholders and customers.

Military leaders work with policy makers and Congress to decide what the services must do themselves versus what they must purchase from the market. The short answer is that activities categorized in regulations as “inherently governmental” must be insourced, and everything else is a candidate for outsourcing. Yet, this is no answer at all, for apart from the regulations themselves, there is questionable logic behind the inherently governmental distinction. In other words, inherently governmental regulation can be changed if the case is strong. Leaders therefore need to understand how to evaluate where organizational sourcing boundaries can and should be drawn.

Once an activity is designated for internal execution, leaders must establish structures and processes to generate those capabilities. At the enterprise level, the boundary between insourcing and outsourcing is fluid and evolving, and managers must continuously manage that boundary so capability development is as effective and efficient as possible.⁴⁷

Consider the case of military cyber organizational design, a current organizational design challenge. Given the extensive civilian cyber capabilities, which cyberdefense functions must be federal? Of those, which should be assigned to the military? How should military cyber elements be designed to facilitate necessary internal and external coordination? Given the transcendent nature of cyber, how should a cyber service be staffed and organized? Should we count on the current



uniformed services to do so, or should we establish another service? These are hard questions, and economic and management research can provide leaders with useful tools for working through them.

Although political, legal, and economic factors may interfere with implementing the best designs, they should not prevent defense managers from developing efficient and effective organizations. Principles of organizational design are plentiful and can be adapted for military use.⁴⁸ Defense management curricula should provide the building blocks of design, such as delegation, span of control, functional versus project-oriented divisions of labor, purposes for hierarchical division, and how to reorient and surge resources where and when needed.⁴⁹

Time management and opportunity costs. Military officers understand the importance of managing one's time to accomplish individual tasks. However, time management at the enterprise level "isn't just a personal-productivity issue over which companies have no control."⁵⁰ Defense managers who cannot set and maintain their own agendas and influence those of the whole organization become overwhelmed and lose their effectiveness.⁵¹ Yet, counterintuitively, John Kotter found that effective managers use their time quite inefficiently, at least to a casual observer.⁵² However, effective time management is how they overcome the challenges of uncertain environments, deal with the great diversity of issues and stakeholders, and sort through the massive amounts of information.⁵³

A defense management curriculum can foster better time management and agenda setting through important economic concepts such as opportunity cost, marginal cost, horizontal and vertical integration, asset specificity, and others.⁵⁴ Opportunity cost is particularly important in measuring the cost of options not pursued, such as the cost of borrowed military manpower.⁵⁵ The goal is for managers to think in terms of cost when tasking subordinates, especially for requirements falling outside their normal areas of expertise.

The inability to consider these three skills and competencies creates conditions that can lead to the adoption of dysfunctional behaviors. Discomfort with complexity combined with the inability to develop useful metrics can cause managers to overemphasize what can be easily measured instead of what best represents organizational performance. Poor time management at senior levels limits junior managers to externally imposed calendars and denies them the latitude and autonomy to prioritize their own activities.

Nine Domain Components of Expert Knowledge

The above three foundational skills and competencies form the basis for the nine defense management domains of expert knowledge shown in figure 3 (on page 41). Each domain employs a set of *fundamentals*, which can include concepts, constructs, and best practices describing the optimal discourse on that domain. For ex-



ample, fundamental measures of *preparedness* for military operations include having sufficient quantities of ready on-hand capabilities, overmatch of capabilities against an opponent, the balance of readiness and modernization, and the will to employ them.⁵⁶ These measures may apply differently between the unit level (e.g., personnel and materiel on hand and available) and the national level (e.g., number or capability of forces to meet combat commanders' missions).⁵⁷ However, understanding these fundamentals should help defense managers address commonalities and differences between the two perspectives to present a synthesized assessment.

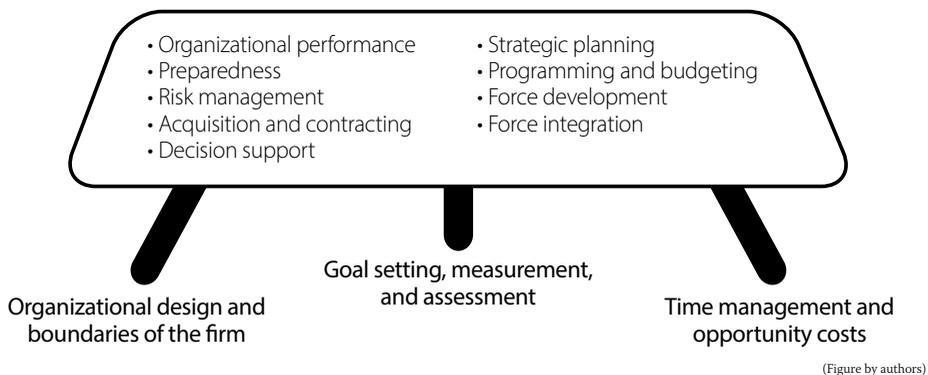


Figure 3. Nine Components of Defense Management Domains of Knowledge

We propose that each domain is comprised of nine components, as shown in figure 3. They represent core areas of study that defense managers should master regardless of their chosen communities of practice and level in the defense hierarchy (e.g., DOD agency, joint, service, component, or subordinate community). Moreover, each area of study integrates management skills and competencies with those of leadership, such as organizational change, climate, decision making, and communication. The nine components would represent modules comprising the core in the defense management curriculum.

Organization performance. This component represents understanding and evaluating the organizational context. It requires advanced or applied critical thinking, addressing questions such as *what is wrong* and *how did we get here?* Managers would learn how to derive the best possible explanations, relying, where appropriate, on inferential statistics that could inform decision on causality.⁵⁸

Preparedness. This module presents concepts of measuring an organization's current and future capability and capacity to conduct and sustain military operations.⁵⁹ Students would learn about how to model and measure national military power as expressed in its organic military capability, defense industrial base, and other elements of national power.⁶⁰



Risk. Risk is about the recognition of hazards, the consequences of failure, paradoxes of assessing risk, and principles of managing risk.⁶¹ Students would learn the fundamentals of risk management systems, defining levels of risk such as low, moderate, or high based on likelihood or consequences, and decisions to accept risk.⁶²

Acquisition and contracting. This module focuses on fundamentals of contract theory, including information asymmetry, large and small numbers bargaining, contract incompleteness, and principles of contract design.⁶³ Students would synthesize factors such as the determination of an organization's core functions, the export of governance (i.e., decisions regarding insourcing or outsourcing), and drawing threshold boundaries for "inherently governmental" determinations.⁶⁴

Decision support. Decision support is the combination of manpower and technologies designed to enable sound decision making.⁶⁵ This module addresses questions of what constitutes "key" or "critical" decisions, design principles for decision-support systems such as the appropriate use of qualitative and quantitative tools (e.g., operations research), and political factors influencing the decision environment.⁶⁶

Strategic planning. This module presents concepts related to developing and implementing processes and systems for establishing and articulating strategic direction, building strategies and plans, and acquiring and allocating resources.⁶⁷ It also addresses limits and challenges to systematizing strategic planning due to political and economic factors.

Programming and budgeting. This module covers the fundamentals of program design in public-sector organizations including considerations for resources, time, and authorities.⁶⁸ It also encompasses the intersection of programs with budgeting processes (e.g., authorizations versus appropriations in the federal government's system).⁶⁹

Force development. This module addresses the fundamentals of capability development and improvement and applies skills of organizational design for creating, growing, maintaining, reducing, or divesting organizations.⁷⁰ Students would learn how to integrate military strategies with technology, materiel solutions, manpower, and doctrine to develop combat-ready capabilities for the warfighter.⁷¹

Force integration. This module provides the skills and knowledge associated with task organizing to meet a specified requirement—whether an integrating working group or entire joint task force to conduct combat operations.⁷² In the defense context, this include strategic human resource management decisions, material distribution, and force generation concepts.⁷³

Communities of Practice

The top layer of the architecture in figure 1 (on page 37) applies these domains of knowledge to the efforts of organizations or networks of military and civilian personnel working toward a common goal. These are called *communities of practice*.⁷⁴ In the DOD context, many such communities typically include a staff proponent, a



network of subject-matter experts, a primary customer (e.g., combatant commanders, bases or installations, individual service members, civilians, and their families), facilities and infrastructure, and specialized knowledge. Each community has its own frameworks and standards of acceptable organizational performance; metrics for current and future readiness to support military operations; understandings of risk; and exercise of planning, programming, and budgeting.

The communities of practice could represent any number of ways of subdividing the DOD. As depicted, these could be (a) Title 10, U.S. Code, functions such as servicing, maintaining, recruiting, administering, or organizing; (b) branches or communities within a service that encompass specific capabilities such as infantry, surface warfare, strategic airlift, or special branches such as medical, law, or chaplaincy; (c) institutional practices imported from outside the military such as human resource management and real property management; or (d) an entire service or joint forces.⁷⁵ Also, the whole defense enterprise is itself a domain, encompassing the full DOD, defense industrial base, and relevant entities of other U.S. and state government agencies.

At this level, the political, legal, and economic contexts become central to the curriculum. They represent how decisions present themselves to defense managers in real-world situations. Using acquisition as an example, procuring a capability at “least cost” or “best value” to the government would be a principle of acquisition decisions. However, political factors may drive the government to choose higher-cost options, modifying or violating that principle. Thus, a central component of this advanced part of the curriculum is navigating these externally imposed tensions. Should managers accommodate the politics of the decision or should they confront them, affirming their principled approach to the decision? What are the risks of either choice?

The curriculum should also address tensions between communities of practice, especially as they relate to strategic-level decisions. Different perspectives exist among services, among components within a service, between conventional and special forces, between operating and generating forces, and so on. These differences present possibly conflicting ways of defining organizational performance metrics, measuring preparedness, exercising strategic plans, and pursuing programs and budgets. Senior defense managers must synthesize these disparate perspectives into a single defense budget.

Building Courses and Programs

We stress that this architecture does not necessarily require a massive PME overhaul, nor does it necessitate new, lengthy programs be developed at high cost to the military while the DOD overall faces budget cuts. Rather, operationalizing this architecture provides a number of choices about how to construct courses and programs tailored



Table. Operationalizing Architecture into Courses

	Students	Goal	Foundational skills and competencies	Domain components	Communities of practice	Whole defense enterprise
Generalist track	Operational leaders	Familiarization	Focused	Introductory	Limited	Issue based
	Enterprise leaders	Conversance	In depth	Introductory	In depth	In depth
Defense management specialist track	Community practitioners	Domain mastery	In depth	Focused	Focused	Issue based
	Full practitioners	Full mastery	In depth	In depth	In depth	In depth

(Table by authors)

to the needs of students. The table provides an illustrative approach with four different curricula tailored to the requirements of different defense managers.

It is important to emphasize that the foundational skills and competencies would be required of all defense managers. Educating these skills would permeate PME down to basic-officer level as an adjunct to leadership education. This would benefit junior officers who, under the philosophy of mission command, are being granted greater authority and autonomy over the management aspects of unit leadership.

The first two program lines are generalist oriented and provide sufficient breadth for senior leaders without much prior defense management experience to exercise future DOD management roles. The *Operational Leaders* program line represents the minimum requirements of all senior leaders, and it would comprise a core defense management course at the senior service colleges.⁷⁶ Some senior leaders might only occasionally serve in management assignments, and therefore would only require familiarity with defense management concepts. They would benefit from exposure to the core defense management skills and competencies at an introductory level, with a focus on the political context of routine management decisions such as those related to weapons system programs and Title 10 functions.

The *Enterprise Leaders* program line represents additional education for senior leaders who are transitioning from an operational career path to senior management roles for the remainder of their careers. They must become highly conversant in defense enterprise and community-level issues, and they must interact with defense management practitioners assigned to them for foundational expertise. Senior service colleges could offer defense management-oriented electives or concentrations or other follow-on programs offering higher levels of engagement with active practitioners and in-depth study of current topics.⁷⁷

Community Practitioners are senior leaders with significant prior experience who will lead communities of practice or take senior leadership positions requiring manage-



ment expertise. Therefore, they require mastery of the core defense management curriculum. Such leaders may include Army branch chiefs, program executive officers, programmers, information managers, strategic logisticians, and others requiring greater management expertise. Their PME experience would be tailored to their domain-specific needs, focusing on critically evaluating issues of their community.

The *Full Practitioners* program line is for leaders who take on defense management positions earlier in their careers. These might include acquisition officers, force managers and developers, human resource managers, comptrollers, and other management-centered positions, both military and civilian. They will reach senior PME with significant operational defense management experience and subject-matter expertise. Therefore, they will benefit from more advanced education. PME will probably best satisfy practitioner needs in a separate PME program or “track,” as these practitioners will require complete immersion into the material to achieve full mastery of the objectives.

Any of these approaches would be suitable for both in-residence and distance education. Many of the core curriculum modules can easily be delivered by distance education programs and tailored for leaders at all levels. The foundational skills are useful for managing at the small-unit level and the domain component modules applicable to many junior officers serving in their first staff assignment.

Operationalizing the Architecture

A key next step is to develop core defense management curricula for presentation to current practitioners at joint and service levels. This will help evaluate the effectiveness of the proposed curriculum structure and identify ways to deliver the material at introductory levels for nonpractitioner audiences. This could be followed by pilot programs aimed at junior and senior joint PME institutions.

Separately, the PME policy in CJCSI 1800.01 should be reviewed for inclusion of joint learning areas and objectives to support defense management. This would necessitate a review of which PME institutions are best suited for presenting the curricula and managing the domains of expert knowledge. We believe current PME institutions are suitable for the task, and that there is no need to create a separate one.

Finally, we encourage the development and sustainment of a defense management education community of practice. Key to the success of this venture is building and maintaining domains of expert defense management knowledge, which are distributed across the DOD and too often become hidden in the exigencies of day-to-day practice. This community would establish or repurpose outlets for scholarly publication and would conduct outreach with external agencies such as management schools and defense interests to keep the domain of knowledge current and relevant.

Clearly, this is a long-term venture, and there are pressing needs for better defense management practices now. Changing culture takes time, and cultivating the



knowledge called for in this proposal is a complex and challenging task. We hope that initiating dialogue on matters of defense management education will help improve current practice and encourage reflection on how the defense enterprise can function more smoothly in the future. ❧

Notes

1. Henry Mintzberg, "Managerial Work: Analysis from Observation," *Management Science* 18, no. 2 (1971): B97–B110.
2. Peter F. Drucker, "Managing for Business Effectiveness," *Harvard Business Review* 41, no. 3 (May–June 1963): 53–60.
3. Don M. Snider, *Once Again, The Challenge to the U.S. Army During a Defense Reduction: To Remain a Military Profession* (Carlisle, PA: Strategic Studies Institute, 2012).
4. Andrew A. Hill and Thomas P. Galvin, "In Defense of Defense Management," War on the Rocks website, 5 July 2016, accessed 6 April 2017, <http://warontherocks.com/2016/07/in-defense-of-defense-management/>.
5. John P. Kotter, "What Effective General Managers Really Do," *Harvard Business Review* 60, no. 4 (July–August 1982): 156–67; Stephen J. Carroll and Dennis I. Gillen, "Are the Classical Management Functions Useful in Describing Managerial Work?," *Academy of Management Review* 12, no. 1 (1987): 38–51.
6. Gary Yukl, *Leadership in Organizations*, 5th ed. (Upper Saddle River, NJ: Prentice-Hall, 2002), 22–24; David W. Barno et al., *Building Better Generals* (Washington, DC: Center for a New American Security, October 2013), accessed 6 April 2017, <http://www.cnas.org/building-better-generals>.
7. Thomas Spoehr, "Leading and Managing High-Performing Army Organizations," *Military Review* 96, no. 4 (July–August 2016): 8–17; R. T. E. Bowler III and D. R. Bowler, "Naval Officer: Manager or Leader?," Real Clear Defense website, 17 February 2015, accessed 6 April 2017, http://www.realcleardefense.com/articles/2015/02/17/naval_officer_manager_or_leader_107628.html.
8. Laura Baldwin and Cynthia Cook, "Lessons from a Long History of Acquisition Reform," The Hill website, 16 July 2015, accessed 6 April 2017, <http://thehill.com/blogs/congress-blog/economy-budget/248116-lessons-from-a-long-history-of-acquisition-reform>; Tim Kane, "Commentary: Military's Management Practices Can't Compete," *Military Times* website, 3 June 2015, accessed 6 April 2017, <http://www.militarytimes.com/story/military/pentagon/2015/06/03/military-weak-talent-management/27530353/>; Leon Panetta et al., *The Military Compensation Conundrum: Rising Costs, Declining Budgets, and a Stressed Force Caught in the Middle* (Washington, DC: Bipartisan Policy Center, September 2016), accessed 6 April 2017, <http://cdn.bipartisanpolicy.org/wp-content/uploads/2016/09/BPC-Defense-Personnel-Compensation.pdf>; *Issue Brief: Rapid Growth in U.S. Military Personnel Costs Driven by Pay and Benefit Increases* (Washington, DC: Bipartisan Policy Project, July 2014), accessed 6 April 2017, <http://cdn.bipartisanpolicy.org/wp-content/uploads/sites/default/files/BPC%20Military%20Personnel%20Cost%20Growth.pdf>.
9. Joseph L. Bower, *Managing the Resource Allocation Process: A Story of Corporate Planning and Investment* (Boston: Harvard Business School, 1970); David W. Barno et al., *The Seven Deadly Sins of Defense*



Spending (Washington, DC: Center for a New American Security, June 2013), accessed 6 April 2017, <http://docplayer.net/20611074-The-seven-deadly-sins-of-defense-spending.html>; Mandy Smithberger, "Will the Pentagon Ever be Able to be Audited?," Project on Government Oversight website, 28 March 2016, accessed 6 April 2017, <http://www.pogo.org/strauss/issues/defense-budget/2016/will-the-pentagon-ever-be.html>. In summary, the Department of Defense (DOD) and the services, what we call the *defense enterprise*, has long struggled with the challenges of management. These struggles are in part rooted in a failure to understand and teach core management operations and principles to its current and former leaders. In addition, despite congressional legislation and intense internal effort, the DOD is still not auditable, further demonstrating its overall inability to properly execute and resource organizational actions.

10. Barno et al., *Seven Deadly Sins*.

11. Diana Farrell and Andrew Goodman, "Government by Design: Four Principles for a Better Public Sector," McKinsey website, December 2013, accessed 6 April 2017, <http://www.mckinsey.com/industries/public-sector/our-insights/government-by-design-four-principles-for-a-better-public-sector>.

12. Don M. Snider, "The U.S. Army as a Profession," in *The Future of the Army Profession*, eds. Don M. Snider and Lloyd J. Matthews, 2nd ed. (New York: McGraw-Hill, 2005), 13-17.

13. William J. Weida and Frank L. Gertcher, *The Political Economy of National Defense* (Boulder, CO: Westview Press, 1987), 4-8.

14. Henry Mintzberg, *Managers Not MBAs* (San Francisco: Berrett-Koehler, 2004), 37.

15. Robert H. Scales, "Achieving Strategic Excellence in Army University," War on the Rocks website, last modified 14 November 2014, <http://warontherocks.com/2014/11/achieving-strategic-excellence-in-army-university/>.

16. John McCain, "It's Time to Upgrade the Defense Department," War on the Rocks website, 10 November 2015, accessed 6 April 2017, <http://warontherocks.com/2015/11/its-time-to-upgrade-the-defense-department/>.

17. Lou Yuengert, ed., "Introduction," in *How the Army Runs: A Senior Leader Reference Handbook, 2015-2016* (Carlisle Barracks, PA: U.S. Army War College, 2015), 1-2 to 1-3, accessed 6 April 2017, <https://ssl.armywarcollege.edu/dclm/publications.htm>.

18. Barno et al., *Building Better Generals*.

19. Thomas P. Galvin, *Enhancing Identity Development in Senior Service Colleges* (Carlisle, PA: U.S. Army War College Press, 2016).

20. Thomas P. Galvin, "A Phenomenological Study of Identity Construction among Military Officers Promoted from the Middle Ranks to the Roles of Senior Leaders" (doctoral dissertation, The George Washington University, 2015), accessed 17 April 2017, <http://pqdtopen.proquest.com/doc/1664831125.html?FMT=AI>. Unpublished data from the U.S. Army War College show that the typical resident cohort has 84 percent of its students coming from tactical assignments, but upon graduation, 61 percent would be assigned to a military department, strategic-level headquarters, joint command or joint staff, or high-level operational command; Thomas P. Galvin, "Assignment: Special Assistant to the Commander," *Military Review* 95, no. 2 (March-April 2015): 33-38, accessed 6 April 2017, http://usacac.army.mil/CAC2/MilitaryReview/Archives/English/MilitaryReview_20150430_art008.pdf.

21. Barno et al., *Building Better Generals*.



22. Stephen J. Gerras, ed., *Strategic Leadership Primer*, 3rd ed. (Carlisle, PA: U.S. Army War College Press, 2010), 28–33.

23. Kotter, “What Effective Managers Really Do.”

24. Abraham Zaleznik, “Managers and Leaders: Are They Different?,” *Harvard Business Review* 55, no. 3 (May-June 1977): 67–78.

25. Joe Byerly, “Anti-Intellectualism and the Army: The Sky Isn’t Falling ... Yet,” From the Green Notebook website, 21 January 2014, accessed 6 April 2017, <https://fromthegreennotebook.com/2014/01/21/anti-intellectualism-and-the-army-the-sky-isnt-falling-yet/>. Byerly writes, “Growing a military intellect through education should not be for the sake of accumulating knowledge; it should serve the purpose of informing judgment that may be called upon to make critical decisions during a time of war.”

26. Regarding the federal budget, see Donald B. Marron, “America in the Red,” *National Affairs*, no. 3 (Spring 2010): 6–19, accessed 6 April 2017, <http://www.nationalaffairs.com/publications/detail/america-in-the-red>; regarding the defense industrial base, see Barry D. Watts, *The US Defense Industrial Base: Past, Present, and Future* (Washington, DC: Center for Strategic and Budgetary Assessments, 2008), accessed 6 April 2017, <http://csbaonline.org/uploads/documents/2008.10.15-Defense-Industrial-Base.pdf>; regarding the all-volunteer force, see Institute of Land Warfare, *Sustaining the All-Volunteer Force: A Readiness Multiplier*, Institute of Land Warfare Torchbearer Paper (Arlington, VA: Association of the United States Army, 14 April 2016), accessed 18 April 2017, <https://www.ausa.org/publications/ilw-torchbearer-sustaining-all-volunteer-force>; regarding trained and ready forces, see U.S. Senate, Committee on Armed Services, *Subcommittee on Readiness and Management Support: Hearing to Receive Testimony on the Current Readiness of U.S. Forces*, 118th Cong., 2nd Sess., 8 February 2016, accessed 6 April 2017, http://www.armed-services.senate.gov/download/17-07_02-08-17. During the mid-2010s the services have regularly reported to Congress that U.S. forces are not sufficiently ready to meet the requirements of the National Military Strategy.

27. Chairman of the Joint Chiefs of Staff (CJCS) Instruction 1800.01E, *Officer Professional Military Education Policy* (Washington, DC: U.S. Government Publishing Office [GPO], May 2015), accessed 6 April 2017, http://www.dtic.mil/doctrine/education/officer_JPME/cjcsi1800_01e.pdf.

28. Ibid., Enclosure E, “Joint Professional Military Education,” in appendixes E and F, establishes the joint learning areas and objectives for the senior service colleges and National War College, respectively. Each appendix devotes a learning area to strategic leadership with outcomes in self-awareness; decision making; communication and negotiation; organizational climate, culture, and change; and strategic thinking. “Accountability” is mentioned in the context of leader personal responsibilities, not as a management skill.

29. Mintzberg, *Managers Not MBAs*, 38–39.

30. The authors reviewed the defense management-related courses, modules, or lessons from other senior service colleges and the Eisenhower School at Fort McNair. Overall, they focused more on comprehending and applying the processes and systems employed in the defense enterprise and little in regard to theory or principles underlying the decisions those tools support. Distance education programs were found to devote less time to defense management issues than resident programs.

31. Lessons related to contracting across senior professional military education (PME) focus broadly on the mechanics of the Defense Acquisition System or on specific topics such as operational contract support. Both topics assume that a particular “make or buy” decision has been made, otherwise these tools would not be used. A general discussion of this issue is provided in Matthew Bidwell,



"Politics and Firm Boundaries: How Organizational Structure, Group Interests, and Resources Affect Outsourcing," *Organization Science* 23, no. 6 (2012): 1622–42.

32. Sidney Mailick and Stephen A. Stumpf, *Learning Theory in the Practice of Management Development: Evaluation and Applications* (Westport, CT: Quorum Books, 1998), 28.

33. Douglas L. Bland, "Issues in Defence Management: An Introduction," in *Issues in Defense Management*, ed. Douglas L. Bland (Kingston, ON: Queen's University, 1999), 1–12, accessed 18 April 2017, http://www.queensu.ca/dms/DMS_Course_Materials_and_Outline/Readings-MPA833/Issues%20in%20Defence%20Mgmt-An%20Intro.pdf.

34. Warren G. Bennis and James O'Toole, "How Business Schools Lost their Way," *Harvard Business Review* 83, no. 5 (2005): 96–104.

35. S. Craig Moore et al., *Measuring Military Readiness and Sustainability* (Palo Alto, CA: RAND Corporation, 1991), accessed 6 April 2017, <http://www.rand.org/pubs/reports/R3842.html>.

36. Charles Weko, "How to Talk Statistics to Military Officers," AmStatNews, American Statistical Association website, 1 November 2012, accessed 18 April 2017, <http://magazine.amstat.org/blog/2012/11/01/how-to-talk-statistics/>.

37. Phil Rosenzweig, "Robert S. McNamara and the Evolution of Modern Management," *Harvard Business Review* 88, no. 12 (December 2010): 86–93, accessed 6 April 2017, <https://hbr.org/2010/12/robert-s-mcnamara-and-the-evolution-of-modern-management>.

38. Weko, "How to Talk Statistics."

39. Amy Gallo, "A Refresher on Statistical Significance," *Harvard Business Review* online, 16 February 2016, accessed 18 April 2017, <https://hbr.org/2016/02/a-refresher-on-statistical-significance>.

40. Ibid.

41. Drucker, "Managing for Business Effectiveness."

42. See Jack R. Fraenkel, Norman E. Wallen, and Helen H. Hyun, *How to Design and Evaluate Research in Education*, 8th ed. (New York: McGraw-Hill, 2012). In addition to mastering the vocabulary such as mean, standard deviation, and correlation, students would learn to critically assess claims of causation based on apparent correlation or statistical significance.

43. Philip M. Morse and George E. Kimball, *Methods of Operations Research*, revised 1st ed. (Alexandria, VA: Military Operations Research Society, 1998), 1.

44. Pierpaolo Andriani and Bill McKelvey, "Managing in a Pareto World Calls for New Thinking," *M@nagement* 14, no. 2 (2011): 89–118.

45. Kathleen J. McInnis, *Goldwater Nichols at 30: Defense Reform and Issues for Congress*, CRS [Congressional Research Service] Report no. 44474 (Washington, DC: CRS, June 2016; James R. Locher III, "Has It Worked? The Goldwater-Nichols Reorganization Act," *Naval War College Review* 54, no. 4 (2001): 95.

46. Gill Corkindale, "The Importance of Organizational Design and Structure," *Harvard Business Review* online, 11 February 2011, accessed 6 April 2017, <https://hbr.org/2011/02/the-importance-of-organization>.

47. R. H. Coase, "The Nature of the Firm," *Economica*, New Series 4, no. 16 (November 1937): 386–405.

48. Michael Goold and Andrew Campbell, "Nine Tests of Organizational Design," *Ashridge Journal* (Summer 2002): 4–9, accessed 6 April 2017, <https://www.ashridge.org.uk/Media-Library/Ashridge/>



[PDFs/Publications/NineTestsOfOrganisationDesign.pdf](#); Michael Goold and Andrew Campbell, "Do You Have a Well-Designed Organization?," *Harvard Business Review* 80, no. 3 (March 2002): 117–24.

49. Richard L. Daft, *Organizational Theory and Design*, 7th ed. (Cincinnati, OH: South-Western College Publishing, 2001). Chapter 3 on the fundamentals of organizational structure discusses these elements.

50. Frankki Bevins and Aaron De Smet, "Making Time Management the Organization's Priority," McKinsey Quarterly online, January 2013, accessed 6 April 2017, <http://www.mckinsey.com/business-functions/organization/our-insights/making-time-management-the-organizations-priority>.

51. Kotter, "What Effective Managers Really Do," 158.

52. John P. Kotter, *The General Managers* (New York: The Free Press, 1982), 137.

53. *Ibid.*, 20.

54. Mintzberg, *Managers Not MBAs*, 260. The statement derives from operationalizing Mintzberg's "personal competencies" of managing self and "actional competencies" of scheduling and administering the activities of others.

55. Hill and Galvin, "In Defense of Defense Management."

56. Thomas P. Galvin, "A 'First Principles' Approach to Readiness," *ARMY* 66, no. 8 (August 2016): 16–18.

57. Ashley J. Tellis et al., *Measuring National Power in the Postindustrial Age* (Santa Monica, CA: RAND Corporation, 2000).

58. *The Oxford Dictionary of Philosophy*, 3rd ed., comp. Simon Blackburn (New York: Oxford University Press, 2016), s.v. "abduction," which is the "process of using evidence to reach a wider conclusion, as in inference to the best explanation."

59. Galvin, "First Principles."

60. Tellis et al., *Measuring National Power*.

61. Ortwin Renn, "White Paper on Risk Governance: Towards an Integrative Approach" (International Risk Governance Council, Geneva, Switzerland, September 2005).

62. CJCS Manual 3105.01, *Joint Risk Analysis* (Washington, DC: U.S. GPO, October 2016), B-5, accessed 7 April 2017, <http://www.jcs.mil/Portals/36/Documents/Library/Manuals/CJCSM%203105.01%2%A0.pdf?ver=2017-02-15-105309-907>. The manual describes four levels of risk—low, moderate, significant, and high—based on measuring the factors of probability and consequence.

63. Patrick Bolton and Mathias Dewatripont, *Contract Theory* (Boston: MIT Press, 2005).

64. John R. Luckey, Valerie Bailey Grasso, and Kate M. Manuel, *Inherently Governmental Functions and Department of Defense Operations: Background, Issues, and Options for Congress*, CRS Report no. R40641 (Washington, DC: CRS, July 2009).

65. Wayne Zachary, "A Cognitively-Based Functional Taxonomy of Decision Support Techniques," *Human-Computer Interaction* 2, no. 1 (1986): 31.

66. Peter G. W. Keen and Michael Scott Morton, *Decision Support Systems: An Organizational Perspective* (Reading, MA: Addison-Wesley, 1978).

67. Leonard D. Goodstein, Timothy M. Nolan, and J. William Pfeiffer, *Applied Strategic Planning: An Introduction* (San Diego: Pfeiffer, 1992).

68. William F. West, *Program Budgeting and the Performance Movement: The Elusive Quest for Efficiency in Government* (Washington, DC: George Washington University Press, 2011), 10.

69. *Ibid.*



70. Yi Yue and Michael Henshaw, "A Holistic View of UK Military Capability Development," *Defense and Security Analysis* 25, no. 1 (March 2009): 53–67.

71. Edward J. Filiberti, ed., "Force Management," chap. 3 in Lou Yuengert, ed., *How the Army Runs: A Senior Leader Reference Handbook*, 2015–2016, 3-9.

72. *Ibid.*, 3-31.

73. *Ibid.*; Edward J. Filiberti, "Generating Military Capabilities" (faculty paper, U.S. Army War College, 2016).

74. Etienne Wenger, *Communities of Practice: Learning, Meaning, and Identity* (Cambridge, UK: Cambridge University Press, 1998).

75. Secretary of the Army, 10 U.S.C. § 3013 (2011), accessed 18 April 2017, <https://www.law.cornell.edu/uscode/text/10/3013>.

76. The following illustrates how the Army could operationalize these tracks in resident senior service college programs. At the U.S. Army War College (USAWC), the *Operational Leaders* line would correspond to the current resident program's Defense Management course, adjusted to include focused introductions to the foundational skills and domain components while de-emphasizing the detailed processes and systems used at joint and service levels. The USAWC's advanced defense management area of concentration would correspond to an *Enterprise Leaders* program, while other electives or programs focused on specific communities of practice could satisfy a *Community Practitioners* program. *Full Practitioners*, such as experienced acquisition officers and force managers, would be educated much earlier in their careers and therefore might join the *Enterprise Leaders* track or other advanced programs to be determined. *Full Practitioners* might also prioritize attendance at the Dwight D. Eisenhower School for National Security and Resource Strategy (formerly known as the Industrial College of the Armed Forces), which emphasizes defense management topics more than the other senior PME institutions. USAWC's distance education program and fellowships would be adjusted in kind, most likely along the *Operational Leaders* track. This approach would be offered to the other senior service colleges for their use as appropriate to their mission; however, we assume that their adoption would be predicated on changes to the PME policy in CJCSI 1800.01, as discussed in the main text.

77. For an example of a follow-on curriculum, the USAWC's resident program includes a concentration in advanced defense management during its elective period. It includes courses in joint processes and systems, force management, and defense resource management.

