



Military personnel work with local, state, and Federal agencies during Exercise Lifesaver 2005, conducted by Homeland Security/ National Disaster Medical System

Combat Camera Squadron (James M. Bowman)

Whither Capabilities-based Planning?

By MICHAEL FITZSIMMONS

The 2001 *Quadrennial Defense Review (QDR) Report* heralded a “paradigm shift in force planning,” announcing that “the new

defense strategy is built around the concept of shifting to a ‘capabilities-based’ approach to defense.”²¹ Since then, the 2005 National Defense Strategy and 2006 QDR have reaffirmed this approach, and major changes in processes and organizations have been undertaken throughout the Department of Defense (DOD) to implement capabilities-based planning (CBP).

In light of such prominent endorsements of CBP and the bureaucratic upheaval it has wrought, it is remarkable that no official definition of the concept exists. But there are probably as many definitions in the Pentagon as there are phone numbers, and debate continues over just what the concept is, as well as

whether it is appropriate or even feasible as a framework for defense planning and decisionmaking. The persistence of these debates raises fundamental questions: What is CBP?

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Is DOD in the midst of a revolution in force planning, or is CBP a hollow concept destined only to proliferate PowerPoint slides?

This article argues that CBP is neither revolutionary nor hollow but is rather a label for a few simple ideas that could generate significant improvements in DOD management. At the same time, its virtues are at risk of getting lost in sloganeering. Perhaps like *transformation*, CBP’s simple ideas may become victims of their own rhetorical success.

Its successful implementation will depend on a more precise understanding of goals and limitations than has been articulated to date. This article aims

to separate what is essential about CBP from what is not and identify the challenges to its implementation.

A Simple Concept

Capabilities-based planning traces its roots to the days immediately following the Cold War, as defense planners began to think about the implications of a radically altered security environment. The concept at that time rested on two basic and related principles that endure today. First, the diversity of the U.S. military’s mission set has expanded since the Cold War. Second, forces should be planned to optimize their output, not their input. In other words, the Department of Defense ought to manage and organize people and weapons systems as a means of mitigating national security risk rather than as an end in itself.

The first of these principles was truly new for DOD planning, which for decades had focused overwhelmingly on the Soviet military threat. The second was not new at all. It was embedded in traditional mission analysis frameworks and precisely matches

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ADM Edmund Giambastiani, USN, Vice Chairman, discusses *Quadrennial Defense Review Report* with Representative John Spratt, Jr. (D-SC)

JFQ (D. Myles Cullen)

the principles of modern management and analytical practices that were brought to the Pentagon in the 1960s. Nevertheless, the complexity of the post-Cold War security environment breathed new life into these time-worn ideas. For all its danger, the Cold War provided a measure of stability that inhered not only in political relations but also in force planning. The translation of strategic objectives into conventional force structure was a process that had become relatively well understood and exhaustively analyzed. With the collapse of this strategic clarity, and an austere fiscal environment in tow, it was natural for defense planners to turn back to these reliable principles of analysis and resource allocation.

The concept of CBP solidified and gained influence among defense intellectuals over the 1990s. Perhaps its most mature and important explication can be found in Paul Davis's 2002 monograph, which defines *capabilities-based planning* as "planning, under uncertainty, to provide capabilities suitable for a wide range of modern-day challenges and circumstances, while working within an economic framework."²² To a significant degree, in other words, CBP means simply institutionalizing common sense. But this is not a trivial task. As DOD has discovered, when it comes to implementation of simple concepts, the devil is in the details.

An Elusive Concept

The elaboration of capabilities-based planning over the course of its bureaucratic history has been somewhat uneven. Even the language announcing CBP's arrival in official

policy in the 2001 QDR left considerable room for debate over its precise meaning, asserting that the concept:

reflects the fact that the United States cannot know with confidence what nation, combination of nations, or nonstate actor will pose threats to vital U.S. interests . . . decades from now. It is possible, however, to anticipate the capabilities that an adversary might employ. . . . A capabilities-based model . . . broadens the strategic perspective.

Here the emphasis is on increased uncertainty about the future and, as a way of compensating, a proposal to focus on enemy capabilities rather than enemy identities. The report goes on to say that a capabilities-based approach also "requires identifying capabilities that U.S. military forces will need to deter and defeat adversaries who will rely on surprise, deception, and asymmetric warfare to achieve their objectives."²³ The vision, then, is not only about broadening our view of adversaries' capabilities, but also of our own capabilities. So on which "capabilities" is CBP based, ours or theirs? Or both?

Another source of confusion has been the ambiguity of the word *capability*. In common usage as well as in DOD processes, the word is used interchangeably to refer to objectives (for example, taking a hill), the tasks that need to be accomplished in support of that objective (fire and maneuver), and the wherewithal to conduct those tasks (an infantry company). Which can be properly characterized as a *capability*? In fact all can,

but this flexibility of usage wreaks havoc on a system meant to be "capabilities-based."

Recognizing this stumbling block, DOD set out in the summer of 2004 to create a universal definition of *capability* to provide an anchor for the conduct of CBP. The result of this effort provides a good measure of the difficulty involved in negotiating the meaning of CBP. The definition agreed on, and still in use today, states that capability is "the ability to achieve a desired effect under specified standards and conditions through combinations of means and ways to perform a set of tasks."²⁴ For an effort aimed at clarification, this must be the lexicographical equivalent of destroying a village to save it.

Ambiguity, however, has not resulted in inaction. To the contrary, organizations throughout DOD have launched new initiatives aimed at implementing CBP. For example, the influential Aldridge Study, which was the basis for major revisions to the Planning, Programming, and Budgeting System, identified, evaluated, and developed "capabilities" as the focus of its final report.⁵ Also, the Office of the Secretary of Defense and the Joint Staff have launched the Analytic Agenda, dedicated to creating a diverse set of planning scenarios and associated databases. The joint requirements generation process has been realigned around the Joint Capabilities Integration and Development System, and each of the Services has constructed staff processes and organizations dedicated to CBP.

As of this writing, a cross-functional Institutional Reform and Governance team is exploring ways to realign DOD acquisition and management structures around "capability portfolios," and the Joint Staff is drafting a codification of how various planning processes relate under a common CBP framework. In some sense, and to some degree, most organizations in DOD are "doing" capabilities-based planning. Indeed, a great deal of valuable work continues to be conducted in each of these areas.

The problem with CBP is not with the quantity or quality of the activity, but rather with its coherence from a *strategic* perspective. Lost in the proliferation of CBP activities is clarity about the ideas that gave birth to it in the first place and a vision of how to relate it to good decisionmaking.

Four Key Principles

Capabilities-based planning is perhaps best thought of not as a concept but as a

collection of four simple principles. These principles are not the only measures of merit for a planning or management system. Some principles, such as managing toward outputs rather than inputs and considering needs and costs simultaneously, are fundamental to reaching the goals of any organization. The four described here are not only fundamental to good management but also are peculiar to the context of defense planning. The promise of CBP will be fully realized if, and only if, Pentagon planning takes them to heart.

Broaden the Range of Missions for Which Forces Are Prepared. This notion is the most commonly asserted and firmly entrenched principle related to CBP. Invoking the strategic uncertainty of the post-Cold War world

less from an appreciation for uncertainty than simply from recognition of the status quo.

Regardless of which of these viewpoints is taken, the implications for planning are the same: DOD needs to diversify the missions it analyzes so the future force will be flexible enough to respond to different kinds of challenges and security environments. This principle, as noted, is widely accepted in DOD, and a great deal of progress has already been made in broadening the apertures of analytical and planning processes.

Make the Joint Perspective Predominant in All Planning and Programming Activities. If a history were written of U.S. defense planning during the past 25 years, a major theme would be the advancement of the

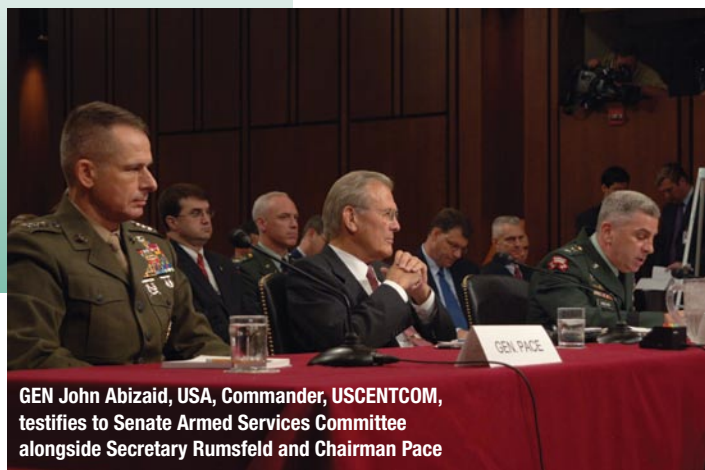
Use Risk as a Strategic Measure of Effectiveness. If a planning system measures success by its output, what is the output of the Department of Defense? Strictly speaking, DOD contributions to national security are too numerous to reduce to a few metrics. Indeed, this complexity accounts in large part for the difficulty of reliably assessing major decisions and capability tradeoffs according to their impact on strategy. But there is one metric that is cited throughout strategic planning documents⁶ as the key to discriminating among alternative strategic choices: *risk*. Just as corporate strategy is about maximizing profits, national security strategy is about mitigating risk.

Measures of effectiveness at tactical and technical levels are highly developed and understood in the defense analytic community. In comparing alternative tactical aircraft systems, for example, performance measures such as probability of kill, radar cross-section, range, and payload provide good bases for assessment and choice. At the operational level, comparing the relative effectiveness of alternative force packages for a broader mission (for instance, Special Operations Forces versus naval fires for neutralizing a given target set) is more difficult. However, we can still fairly readily develop metrics such as total target value destroyed, number of casualties, or enemy rate of fire. But how can we assess a tradeoff between homeland defense capabilities and major combat operations capabilities? Ultimately, the only basis for comparison across such broad missions is the impact of strategic decisions on the risk facing the Nation.

While the 2001 QDR established a DOD-wide risk framework, and the Chairman of the Joint Chiefs of Staff issues an annual assessment of risk to the military's operational plans, strategic risk assessment remains a relatively immature process. DOD must develop a common framework for assessment, or else senior leaders must continue to rely on shifting and poorly integrated bases for their most critical judgments about strategic planning.

Shift the Requirements Generation Process away from a Platform/System-centric Focus. The final key principle of CBP is that capabilities development should reallocate some attention from platforms and systems to nonmateriel aspects of capabilities. The best solution to every problem is not always in more powerful engines, smaller circular

joint perspective over the Service perspective in the planning and operation of military forces. The centerpiece of this story is the Goldwater-Nichols Department of Defense Reorganization Act of 1986, but the task continues of ensuring that the military both fights and is designed accord-



GEN John Abizaid, USA, Commander, USCENTCOM, testifies to Senate Armed Services Committee alongside Secretary Rumsfeld and Chairman Pace

U.S. Army (Gary Hilliard)

is now routine, and DOD has recognized for several years the importance of designing forces for conflicts beyond major conventional campaigns. In one sense, the post-9/11 world has vindicated this emphasis on uncertainty in defense planning. Even 5 years ago, who would have envisioned the particular mix of demands now facing the U.S. military? In another sense, the post-9/11 world has given rise to a new vision of the future security environment framed by a generational struggle against terrorists and Islamic radicals. So, while threats may be more diverse than during the Cold War, it is not clear that uncertainty has grown. To the extent that DOD needs to be prepared for a wider range of threats than during the Cold War, this insight may come

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ing to a holistic understanding of objectives and resources rather than four separate Service views. CBP represents another avenue for pursuing this important effort.

One example of progress is the establishment of the Analytic Agenda, which generates authoritative DOD-wide scenarios and databases. A critical goal of the Analytic Agenda is that budget debates should center on what the analysis of scenarios means, not on arguments over differing Service scenario selections, assumptions, or data. Another example is the growing role played in force planning by the combatant commanders, whose perspectives are not only operationally oriented but also decidedly joint. While progress continues, the further institutionalization of the joint perspective remains one of the key goals of CBP.



Contract mechanics load AGM-114 Hellfire missile onto MQ-1 Predator

U.S. Air Force (Brian Ferguson)

error probables, or faster network connections. Capabilities also grow out of innovative concepts of operations, new types of training and skill sets, and streamlined business processes. Previous requirements generation processes were not completely insensitive to these issues, but nevertheless, raising the profile of the nonmateriel elements of the full range of DOTMLPF (doctrine, organization, training, materiel, leadership and education, personnel and facilities) resources is another key imperative for CBP.

Challenges

The key principles are simple enough and seem relatively uncontroversial. So what is so hard about CBP? If these principles truly represent the essence of capabilities-based planning, why has implementation been so halting and fraught with confusion and disagreement?

The implementation of capabilities-based planning has struggled with several challenges. A few are comparatively minor and may be overcome with more clarification from DOD leaders regarding their intent for CBP. Others are more systemic and demand ongoing attention from defense leaders.

The simpler obstacles facing CBP essentially amount to myths or misunderstandings about ideas that have developed over recent years. The first is the confusion over the relationship between CBP and threat-based planning. It is often stated that the CBP framework supersedes or otherwise replaces threat-based planning. That is simply false.

Even if the strategic threat environment is less predictable than during the Cold War, it does not follow that specific scenarios are no longer appropriate bases for force planning. What does follow is that the number and diversity of specific threat scenarios used for force planning must be expanded, and a premium must be placed on forces that are flexible enough to adapt and respond to multiple threat types or conditions. Far from being replaced by CBP, specific threat scenarios remain integral to defining requirements for force planning.

Another lingering misperception is that conducting CBP means not talking about military needs in terms of programs. This notion is a misapplication of the essential concept of managing a system by its outputs rather than inputs. It is true that a rational planning process ought to identify needs first in terms of missions, tasks, and standards of performance—and only after that in terms of alternative combinations of resources. However, that does not suggest that capabilities can be assessed in the abstract or mixed and matched with infinite flexibility to perform various missions. On the contrary, analysis and decisionmaking will always depend on a concrete appreciation for the way capabilities are instantiated by programs, as well as by the full range of available resources.

Capabilities-based planning also faces challenges that will require more concerted

effort to overcome. Four loom largest: one is conceptual, two managerial, and the last organizational.

CBP's main conceptual challenge is the same one that has bedeviled analysts and programmers for decades: many military assets, including both systems and people, have capabilities relevant to multiple mission areas. The problem this creates is that input costs have complex, even unpredictable, relationships to output values. This is a serious issue for an analytical framework built around cost effectiveness. How should a Predator's costs, for example, be allocated between its intelligence, surveillance, and reconnaissance mission and its strike mission? Should part

of that cost be allocated to the deterrence mission as well? What about the cost of a Special Forces Soldier, who could conceivably be engaged in direct action, information operations, humanitarian assistance, and intelligence-gathering within a single day? Such allocation rules are tricky even in the most constrained analytical contexts, but their difficulty is magnified by the broadened scope of missions and variability demanded by CBP.

This challenge is closely related to one of CBP's main managerial challenges: bringing to bear sufficient analytical capacity and capability. The broadened, diversified scope of missions now targeted for serious analysis by DOD is creating new analytical frontiers in terms of quantity and quality. Reflecting uncertainty translates into considerations of not only more scenarios but also more variability within scenarios. Additionally, enhancing the joint perspective in analysis entails comparative assessment of a broader range of capability options for any given mission. All of this translates into greater demand for analysis.

The variety of analyses in demand has also expanded. The growing importance of asymmetric warfare, information operations, human intelligence, and interagency operations, to name a few, all contribute to a need for new analytical tools and methods. Traditional attrition-based

many military assets, including both systems and people, have capabilities relevant to multiple mission areas

campaign models, to which most manpower and investment in defense analyses have been devoted throughout the modern era, are of declining relevance. Some benefit may come from trading depth for breadth in prioritization of analyses, but effective implementation of CBP will most likely depend on significant additional investments in analytic capacity. And even with more investment, the nature of 21st-century warfare may force decisionmakers to proceed with lower confidence in the results of analysis than they would like.

Another managerial challenge for CBP is effectively addressing the needs of both the future force planning and operational planning communities. While the importance of coordination between these communities is clear, managing that coordination is not straightforward. In addition to the organizational and cultural differences separating the two, there is a key difference in their respective time horizons.

While many activities in DOD headquarters focus on planning years into the future, the combatant commands and most of the operating forces must plan and be ready for current and near-term contingencies. This temporal difference has significant implications for the applicability of certain planning principles. CBP's focus on system outputs is certainly relevant to operational planning. On the other hand, its emphasis on broadened consideration of missions and alternative capability options presents a particular challenge for those who are responsible for executing specific war plans today with whatever capabilities are available. In short, the appreciation of uncertainty inherent in capabilities-based planning and its resulting broad analytical palette are more constrained by the near-term focus of the operational environment than by the future force planning environment.

The managerial challenge, then, is to put into effect a set of common terms and metrics that facilitates coordination between these two communities while enabling them to address their distinct planning imperatives. Ultimately, this will require relating future force planning activities more explicitly to the nascent DOD Global Force Management and

Adaptive Planning efforts within a common strategic framework.

Perhaps the most significant challenge facing CBP is organizational incentives. The President and Secretary of Defense dictate strategy. Combatant commanders execute

missions, while the military Services generate budgets and maintain the preponderance of DOD analytical capacity. It is no secret that this division of labor can impede viewing problems through a joint lens. This judgment

was one of the principal findings of the Aldridge Study, and of the Beyond Goldwater-Nichols defense reform panel as well.⁷ The importance of inter-Service politics in forming the defense budget is also evident in the striking stability of Service budget shares throughout very different security and fiscal environments over the past few decades. There are sound arguments for keeping the Service responsibilities as they are, including maintenance of strong domain expertise, the value of competition in developing concepts and technologies, and the centrality of Service tradition and culture to operational effectiveness.

Nevertheless, in the current system, only the Secretary of Defense has the authority to adjudicate disputes between the Services over budgets, but there is a limit to how much time, knowledge, and political capital a Secretary can afford to expend on a given issue. In theory, a larger, more robust staff in the Secretary's office could help. Some fear that civilian analysts may not have the operational expertise to make good decisions on military requirements. On the other hand, military officers serving in joint billets are handicapped in their ability to adjudicate Service disputes because their careers remain dependent on approval from their Service chains of command and because the Joint Staff has no significant authority over the Services.

So a fundamental tension remains. CBP demands that the translation of strategy into military capabilities be conducted in a joint framework, but military resources are developed and funded almost entirely by the Services. Managing this tension will likely be the most significant challenge facing CBP.

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Building and enacting a comprehensive plan for implementing capabilities-based planning will take great and sustained effort. The good news is that much of the necessary work is already well under way throughout the Department of Defense and its planning community. Any such plan would benefit from a single concise statement of guidance from the Secretary of Defense and the Chairman of the Joint Chiefs of Staff regarding their vision for capabilities-based planning. This guidance has been notably absent to date.

The important principles that have been advanced under the banner of capabilities-based planning are both simple and sensible. That is not to deny the complexities of institutionalizing them or to ignore the superheated political environment in which defense planning and programming inevitably occur. These conditions will persist largely independent of which framework is used to govern strategic planning. Rather, the hope behind these comments is that more clarity of purpose with regard to implementing capabilities-based planning will help leaders to think less about managing bureaucratic processes and more about managing the risks facing national security. **JFQ**

NOTES

¹ *Quadrennial Defense Review Report* (Washington, DC: Department of Defense, 2001), 13–14, 17.

² Paul K. Davis, *Analytic Architectures for Capabilities-Based Planning, Mission-System Analysis, and Transformation* (Santa Monica: RAND, 2002), 1.

³ Both quotations are from *Quadrennial Defense Review Report*, 2001, 13–14.

⁴ Chairman of the Joint Chiefs of Staff Manual 3170.01B, *Operation of the Joint Capabilities Integration and Development System*, May 11, 2005, GL–5.

⁵ See *Joint Defense Capabilities Study: Improving DOD Strategic Planning, Resourcing, and Execution to Satisfy Joint Capabilities, Final Report* (Washington, DC: Department of Defense, January 2004).

⁶ See, for example, *Quadrennial Defense Review Report* (Washington, DC: Department of Defense, February 6, 2006), 67, 70–71, and *National Defense Strategy of the United States of America* (Washington, DC: Department of Defense, March 2005), 11.

⁷ *Joint Defense Capabilities Study*, 2–4, 2–5; Clark A. Murdock et al., *Beyond Goldwater-Nichols: Defense Reform for a New Strategic Era; Phase I Report* (Washington, DC: Center for Strategic and International Studies, March 2004), 19–20, 47–48.