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The Army acquisition community stands at a critical juncture. The Future Combat System, the centerpiece of Army transformation, has proven to be more expensive and technologically more complicated than originally anticipated, and the rapid pace of ongoing operations means that many key weapon systems will reach the end of their service lives sooner than planned or will require intensive maintenance to keep functioning. The future presents even more challenges for which the Army must prepare, including a wide range of dangerous adversaries, the potential reallocation of combat tasks across and among the services, and the prospect of budget pressures.

Taken together, these circumstances raise some important questions for the Army acquisition community. In particular, what should a robust acquisition investment strategy look like—one designed to perform well against all of the anticipated threats? Further, how should the Army acquisition community assess the appropriateness of its investment strategy as time goes by? This study seeks to provide insight into these questions by describing a new way for the Army to assess investments across a broad range of options. This method, the Acquisition Investment Management (AIM) model, incorporates Assumption-Based Planning (ABP), a tool developed by RAND to assist in planning during uncertain times.1

1 Dewar (2002).
Assumption-Based Planning Can Be Used to Assess Army Acquisition Plans

ABP is a technique for evaluating plans to ascertain the degree to which they rely on assumptions that might be vulnerable. We used this technique to assess the Army acquisition community’s current plans and to determine whether they were robust or resting on fragile, questionable assumptions. ABP is based on the notion that an organization’s operations or plans will change if its corresponding underlying assumptions about the world change. The main steps in the ABP process are shown in Figure S.1.

We applied the five main steps in the ABP process to Army acquisition policy, first by identifying the assumptions that underlie that policy. Next, we identified load-bearing assumptions, i.e., important assumptions that underpin and shape Army acquisition plans. If a load-bearing assumption fails or becomes “broken,” the organization’s plans would be at risk. Therefore, we identified a series of signposts, i.e.,

Figure S.1
The Assumption-Based Planning Process

[source: adapted from Figure 3.1 in Dewar (2002).]
indicators that an assumption is becoming vulnerable. We also identified *shaping actions* that can be used to keep assumptions viable and *hedging actions* that can be taken to prepare for unwelcome but unpreventable developments. For the acquisition community, shaping and hedging actions both take the form of investments.

**The AIM Methodology Also Incorporates Information About Current and Potential Future Threat Environments and Likely Army Involvement**

The traditional ABP process would involve just the five steps described in the previous paragraph. However, AIM goes further by also incorporating information about current and alternative threats and the relative likelihood of Army involvement in each. This step was needed to ensure that the Army’s acquisition strategy can respond to emerging new threats that require high levels of Army involvement. To understand the threat environment, we examined the current Department of Defense (DoD) *Strategic Planning Guidance* and, more specifically, its threat characterization of irregular and conventional adversaries and of disruptive to catastrophic effects.\(^2\) We evaluated each threat in terms of its level of potential consequences for the United States and the potential likelihood of Army involvement. We used this information to build a plot that relates the level of threat posed to the United States (disruptive to catastrophic) to the likelihood and depth of Army involvement (from low to high). We populated the plot with alternative sets of plausible circumstances, as shown in Figure S.2.

**The AIM Methodology Can Be Used to Specify an Army Investment Strategy**

The ultimate objective of the AIM process is to identify an appropriate balance of investments that takes into account the relative severity of

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the plausible alternative circumstances and the relative likelihood of Army involvement. To do this, we associated each signpost of vulnerability with different alternative circumstances and related shaping and hedging actions. For the acquisition community, the appropriate responses to signposts are investments: investments in shaping activities to negate the effect of dangerous signposts and investments in hedging activities to cope with circumstances when an assumption becomes vulnerable and begins to fail.

Thus, as the alternative sets of circumstances move about the plot of threat and likelihood over time—as measured by intelligence products and the collective judgment of the leadership—this movement engages the shaping and hedging strategies, expressed in terms of adjustments to acquisition investments. The resulting redistribution of funds across accounts becomes the adjusted acquisition investment strategy. The strategy is biased toward circumstances that seem more likely and most dangerous and thus gives the Army the flexibility, agility, and responsiveness to meet emerging conditions.
The AIM Methodology Can Be Used at Several Points in the Army’s Planning and Programming Process

If adopted, the AIM methodology would allow the acquisition community to review its plans and investment decisions regularly to check their congruence with national-level planning guidance. The process would also provide a check on the recommendations from the bottom-up activities that typify current acquisition and force development decision support. Thus, the new process overcomes the problem of competing visions and preferences and replaces them with a new calculus that acquisition leaders can use to guide their investment strategy decisionmaking.

Because AIM is designed to help increase the strategic responsiveness of materiel acquisition in the Army, it should be used as part of the planning and programming—not the budgeting—process. AIM might be incorporated into existing processes and activities in several ways.

The Office of the Assistant Secretary of the Army for Acquisition, Logistics, and Technology (OASA(ALT)) could use AIM to help support G-8 in maintaining and updating the Research, Development, and Acquisition Plan (RDAP) database for the Program Objective Memorandum (POM). The RDAP is a forward-looking 15-year plan that provides a detailed view of what the Army intends to spend on the development and production of technologies and materiel. These RDAP updates could be used to help inform the development of Army POMs, which specify how the Army intends to allocate its budget. Under the current biennial approach, “full” POMs, i.e., POMs that address how every dollar is allocated, are prepared only in even calendar years. In odd calendar years, the full POM from the preceding year may be updated as necessary. Therefore, OASA(ALT) would perform AIM runs in time to support the regularly scheduled RDAP updates that G-8 makes each year, whether before a “full” POM-build in an even year or a “POM-update” in an odd year.

The G-3 could use AIM outputs to help support the Army’s input to the DoD Strategic Planning Guidance (SPG). G-3 is responsible for providing strategic planning guidance to the Army
planning and programming process; this guidance is used by the Secretary of Defense to drive overall DoD planning and programming. This would be a natural place to incorporate AIM outputs.

The Army’s deliberative forums for assembling the POM could also use AIM in performing their development, oversight, and review roles. These forums include the Council of Colonels, the Planning Program Budget Committee (PPBC), the Senior Review Group (SRG), and the Army Resources Board. All of these have a role in the POM-building process.

AIM outputs could also play a role in the capabilities needs analysis (CNA) that Training and Doctrine Command (TRADOC) performs to assess battlefield materiel capabilities and determine modernization alternatives for input to the Army POM. The CNA is an interactive process involving TRADOC’s schools, proponents, and Army Headquarters staff. AIM could help inform those interactions and the conclusions they produce regarding how materiel-development resources should perhaps be reallocated if important changes occur in the projected national security environment.

Recommendations for Implementing AIM

The AIM process relies on judgments about threats and likelihood and on acquisition officials to interpret intelligence reports and make decisions—decisions some officials may believe are beyond their authority or that are best the product of group judgment and consensus. The process may also seem to require the inputs of subject matter experts, many of whom may not reside in the acquisition community. Such concerns can be properly addressed through carefully coordinated staff actions, such as the following:

- Form an acquisition strategy working group. An informal (although official) working group could be formed to meet periodically to consider the location of alternative sets of circumstances within the threat-likelihood plot and to conduct the necessary assessments and recommend reallocations of funds across
accounts in response to movement of some of those conditions. The working group might include G-2 staff members and other intelligence officers, representatives from the Combatant Commands, congressional liaison, and the Joint Capabilities Integration Development System (JCIDS) community. It would also be prudent to include representatives from the Program Executive Office (PEO), and perhaps a representative from Office of the Secretary of Defense (OSD) Industrial Policy.

- **Consider other alternative circumstances.** The different sets of circumstances posited in this monograph represent our translation of global security trends onto the Strategic Planning Guidance’s threat-likelihood space. Other analysts might have better information and might populate that space somewhat differently. Moreover, as time passes, other concerns may become plausible. Therefore, the Army acquisition community should periodically convene the acquisition strategy working group to consider new influential factors that could recast the threat-likelihood space. Such meetings might include the relevant National and Defense Intelligence Officers responsible for the regions and topics of concern.

- **Exploit Assumption-Based Planning.** It is important to review key plans periodically and to search them for indications of new or different assumptions. Where new assumptions are found, the acquisition community will want to generate new signposts and associated shaping and hedging strategies. The signposts and shaping and hedging should then be associated with alternative sets of circumstances to keep the acquisition investment strategy development process current.

- **Plan acquisition investment strategy reviews.** We also recommend that the acquisition community establish a schedule to begin these activities. The process might begin in the off-budget year. One possible approach would be to look for emergent alternative futures and to consider where alternative futures might lie in the threat-likelihood plot every other year.