The systemwide problems in the Air Force DLR supply chain discussed in Chapter Two point to the need for a broad set of changes in how the Air Force programs and budgets for DLR spares. This chapter outlines a package of seven closely related changes:

- Explicitly reframe all logistics issues relevant to DLRs in the PPBS process to represent a realistic level of readiness achievable within designated resource constraints.

- Have logisticians participate more actively in the planning segment of the Air Force PPBS process to promote the approach above and ensure that logistics is considered fairly in higher-level PPBS considerations.

- Define an APPG process that uses a resource-constrained version of high-level strategic goals to provide effective oversight of MAJCOM POM submissions.

- Define a HAF closed-loop process that monitors disconnects within the PPBS process itself and between logistics budgets and actual logistics needs relevant to DLRs identified during the year of execution.

- Strengthen the responsibility and authority of the AF/IL to integrate horizontally the entirety of logistics requirements relevant to DLRs and represent these requirements in the PPBS process.

- Rebuild the human capital capability within the Air Force logistics community to participate effectively in the PPBS process.
• Build and sustain a credible analytic capability to support the efforts above.

These changes constitute an integrated package (see Figure 3.1). Each is likely to be more effective if the others are made. Although this chapter breaks them apart to simplify its description of them, they are all really elements of a single, unified change.

**Proposed Change Number One: Explicitly reframe all logistics issues relevant to DLRs in the PPBS process to represent a realistic level of readiness achievable within designated resource constraints.**

The first step in any attempt to integrate a DLR supply chain is to identify appropriate systemwide goals that can be used to align all parts of the supply chain to a single purpose. The best goals to use are typically those relevant to the final customers of the supply chain. For the Air Force supply system, the dominant customers are operational Air Force wings, which must be prepared to provide services to a wide range of combatant commanders and other customers with a variety of needs. Other customers include other U.S. military services and foreign military organizations. In each case, the dominant concerns of these customers are the following:

- Availability of suitably operational MEIs, when and where needed.
- Safety of operations.
- Total ownership costs.¹

The Air Force DLR supply chain, then, should focus on seeking policies that improve the availability of any support to MEIs demanded, when and where needed, and the reliability of this support when it is provided. These concerns can be summarized as a "readiness" con-

---

¹"Total ownership cost" refers to the total cost to the Air Force of serving any customer, no matter what the source of the cost. For example, agile combat support increases the direct costs of support by increasing use of premium transportation. But shorter cycle times and higher reliability of delivery reduce the demand for total inventory. Even though the direct costs of agile combat support may look higher than before, the total ownership costs associated with agile combat support is often lower.
Figure 3.1—Integrated Package of Proposed Changes

cern. The DLR supply chain should also focus on reducing the total ownership cost of any level of readiness achieved, as conceived in these terms. Another way to state these goals is to say the supply chain should seek to maximize the level of readiness it provides its customers, given the resources it has available to do so.

This kind of focus is important to three different kinds of resource allocation settings.

First, presenting DLR issues in these terms in the current PPBS process would immediately emphasize the importance of DLRs as a force multiplier, not as a bill-payer. Clarifying how any expenditure on DLR spares, or “delta” in expenditure on such spares, for exam-
ple, affects the readiness of MEIs would encourage the PPBS process to compare such expenditures to other direct contributors to readiness, such as pilot training or technical modifications, rather than other activities viewed primarily as bill-payers, such as real property maintenance or base operating support.² This clarification should change the terms of the trade-offs examined in the current process.

Consider current plans in the Air Force logistics community to use the SRRB process to identify a consensus estimate for future total Air Force spares requirements and allocate the funding requirements implied by this estimate to the primary players in the PPBS process—the MAJCOMs with responsibility to prepare operative POMs. After the SRRB identifies the Air Force–wide spares requirement, it must still persuade each MAJCOM responsible for providing a share of this funding of the importance of this total to the Air Force as a whole. If the Air Force can translate specific deltas in spares funding to specific changes in readiness, the individual MAJCOMs will more likely consider such deltas in the company of other changes that they know can affect readiness. This will tend to move spares up on a MAJCOM’s priority list. As long as a MAJCOM cannot actually own and control a DLR spare, it will value a spare’s expected contribution to readiness less than the Air Force as a whole would. But the ability to link spares funding to readiness will make that distinction between MAJCOM and Air Force interests more visible and, perhaps, more difficult to sustain. If the HAF cannot demonstrate how the level of MAJCOM support for spares funding affects Air Force readiness, understanding why the MAJCOM would pay its “full share” of funds to support the SRRB requirement becomes difficult. No matter how authoritative the SRRB requirement is, it will remain in dollar terms and hence compete at a lower priority level in each MAJCOM than initiatives understood primarily in terms of their effects on readiness.

Second, the Air Force planning community is currently developing another approach to identifying Air Force–wide requirements and

²In programming and budgeting parlance, a “delta” is typically a change in dollars or staffing between one program or budget document and another—typically a baseline document and a corresponding document that follows it. For example, a “delta” might state the change in funding for a particular item in FY 2006 between the FY 2004 POM and the FY 2005 amended POM (APOM). It can also state the change in staffing for a particular item in FY 2006 between the FY 2004 POM and the FY 2004 BES.
linking this requirement to resource implications in a standard way. The Air Force Resource Allocation Process (AFRAP) will use a standard “capabilities construct” to document systematic links between high-level DoD strategies and specific Air Force tasks. It will link resources associated with capabilities in each of the MAJCOMs and other organizations that participate directly in the PPBS process.\(^3\) If this approach works as anticipated, the planning stage of the PPBS process will use the capability construct to organize specific data requests that can support trade-offs among options with well-defined effects on military readiness and costs.

By definition, this top-down approach to PPBS captures resources associated with logistics by looking at the specific capabilities that logistics resources support and attributing these resources to these capabilities. For example, the capability construct would support the following logic:

- Given high-level national defense priorities, PACAF must maintain a capability to provide stated levels of specific kinds of air-to-air and air-to-ground capabilities.
- F-16Cs in PACAF contribute to these capabilities.
- Given PACAF’s operational plans, its F-16Cs must maintain a specified level of availability and a specified ability to generate sorties under the conditions in the operational plans.
- Target F-16C availability and sortie rates presume a stated TNMCS rate associated with landing gears.
- To attain this TNMCS rate, PACAF must sustain an expected level of reliability for landing gear, certain stated performance levels of pipelines and repair times, certain inventory levels of the sub-assemblies associated with landing gear, and certain support levels for DLR spares and repair from other parts of the Air Force.
- Resources can be attached to the list of factors above, by year of plan. Changes in each of these factors can be associated with resource implications and implications for PACAF’s readiness.

---

\(^3\)For details, see Wehrle (2000).
By creating a structure to capture information on all the points above, a capability construct provides an explicit way to walk from specific military requirements to resources.

Trade-offs relevant to logistics then occur as the result of trades between capabilities or the result of trades among different ways of providing capabilities. Such trades will be more likely to affect logistics resources productively the more effectively logistics resources can be linked to readiness- and cost-related outcomes. The better these links are, the more the current terms of reference in the PPBS process will change. Chapter Four discusses AFRAP at greater length as a potential enhancer of the seven changes discussed in this chapter.

Third, the PPBS process will produce better results over time if it can monitor the execution of the budgets it creates and develop information that the Air Force can use to develop more-effective budgets in the future. In an uncertain world, the Air Force will never actually do what it had planned to do when it created a budget. Differences will arise every year. It is important to understand the extent to which these differences resulted from unrealistic assumptions about how the logistics system works and from unrealized expectations about the threat environment. The more accurately the Air Force can parse the reasons for differences between plan and execution, the better able it will be to create new budgets better attuned to Air Force expectations.

An ability to link outcomes to decisions about DLR issues during the PPBS process is critical to any effort to understand the differences between plan and execution. Without such links, the Air Force simply cannot say what difference was made by any decision of the logistics system regarding readiness or resource consumption. It can measure differences in various readiness levels, but it cannot explain convincingly why these differences arose. It can measure differences in cost levels, but it cannot link these to readiness levels. In sum, any systematic effort to monitor decisions made during the PPBS process and learn from them is predicated on a clear understanding of how decisions affect desired outcomes. The better this understanding, the faster the Air Force can learn from its experience. In an uncertain world, rapid learning is particularly important. In an uncertain world, systematic learning becomes a critical element of discipline.
Proposed Change Number Two: Have logisticians participate more actively in the planning segment of the Air Force PPBS process to promote the approach above and to ensure that logistics is considered fairly in higher-level PPBS considerations.

Although many in the logistics community would argue that they actively participate in the Air Force planning process through the Agile Combat Support Panel, such participation is not enough. First, ACC manages the Agile Combat Support core competency, not the logistics principals in either the HAF or at AFMC, who might be more inclined to look Air Force–wide at logistics issues. Second, Agile Combat Support focuses on the future operational aspects of combat support (see Volume Three, Strategic Plan) rather than on ensuring that current operational demands for DLR spares are sufficiently addressed in the planning guidance and carried over into the programming and budgetary decision processes.

To overcome the stovepipes created by the decentralized Air Force PPBS process and the way individual logistics functions operate in that process, the logistics community could develop a top-down strategic plan that provides an integrated look across Air Force logistics. Currently, no formal planning mechanism exists by which the various logistics initiatives are discussed in terms of their interdependencies, desired outputs (e.g., their performance goals), and operational time frames. A strategic plan could provide the single point in the logistics community to examine its priorities and identify potential operational gaps. The development of a strategic logistics plan could provide a basis for the total logistics community to assess how it is progressing toward achieving its goals over several PPBS cycles.

As noted in the fifth proposed change below, the AF/IL should have the authority and responsibility to ensure that the Air Force maintains a strategic logistics plan, keyed to broader Air Force strategic goals, that sets the stage for each year’s PPBS process. The AF/IL would produce such a strategy in concert with the AF/XO, AF/XP,

---

4For an examination of the extent to which the AF/IL has this effective authority and responsibility today, see the discussion of Proposal Number Five below on pp. 63–67.
and the MAJCOM/LGs. The Logistics Panel and IL/LG Meeting\textsuperscript{5} could provide forums in which AF/IL would pursue coordination. Execution of a well-coordinated strategic logistics plan will require a formal process with higher visibility than current planning efforts receive. The planning envisioned must be tied closely enough to current operational plans to set the stage for the discipline envisioned in the next proposed change.

**Proposed Change Number Three:** Define an APPG process that uses a resource-constrained version of high-level strategic goals to provide effective oversight of MAJCOM POM submissions.

The Air Force initiated the APPG in 1998 to translate planning goals and objectives into fiscally constrained programming guidance. The document aims to provide an audit trail for the Air Force on how well it allocates resources to its key strategic objectives in the POM and beyond. The APPG for FY 2003 included very specific programming guidance for those initiatives associated with supporting Agile Combat Support. The MAJCOMs were also directed to pay the AFCAIG bill and fund spares requirements (U.S. Air Force, 2000b). However, the document did not provide guidance on how the MAJCOMs were to fund the AFCAIG bill and what the consequences would be if they did not. The current adjudication does not hold them accountable to this guidance.

The APPG can be a valuable mechanism to link planning objectives to program guidance. The Air Force can also use it as a vehicle to help determine over time whether it is meeting its near-, mid-, and long-term objectives. The APPG can become a more active management tool if the Air Force leadership decides to use it to measure how the MAJCOMs have responded to the key planning and programming objectives stated in the APPG. The POMs would be adjudicated based on the MAJCOMs’ ability to show how they have responded to the APPG’s guidance.

To adopt this approach, the Air Force must focus the APPG’s guidance more precisely. The Air Force leadership must induce the MAJ-

\textsuperscript{5}The IL/LG Meeting replaced the Logistics Board of Advisors (BOA) Panel in 2001. The meeting plays a similar role but is limited to principals on the AF/IL staff and from the MAJCOM/LGs.
COMs to respond to the guidance. If the MAJCOMs choose not to comply, they must demonstrate why and how they are going to remedy the situation in the out-years. Such an approach would require stronger, clearer, and more direct HAF leadership at the front-end of the PPBS cycle. The HAF would need the clout to induce the MAJCOMs to comply with the guidance and then to carry through with the agreements reached in the program build. This approach would attempt to counterbalance the current MAJCOM-centric approach with a stronger HAF that developed specific planning and programming guidance and ensured that it was met or that alternatives were provided and debated.

Such changes in the APPG and its use would provide a specific document and process in which to make the integration across logistics planning, proposed in the first change above, real. This document would also provide an integral step in any process to compare the Air Force plan each year with its execution and to monitor longer-term implementation of the plan over a series of PPBS cycles. The next proposed change returns to these themes.

**Proposed Change Number Four: Define a HAF closed-loop process that monitors disconnects within the PPBS process itself and between logistics budgets and actual logistics needs relevant to DLRs identified during the year of execution.**

In effect, the Air Force uses the PPBS process as a tool to pursue a vision of improved performance—such as higher levels of readiness and lower levels of resource expenditure—wherever possible. Run as an open-loop control mechanism, the PPBS process creates specific programs and budgets and, in effect, simply hands them over to the operational Air Force for execution. Without further ado, such an approach washes its hands of the budget produced, effectively assuming that no further attention is required because the Air Force will execute it as planned. Run as a closed-loop control mechanism, the PPBS process would not simply assume that it could hand off programs and budgets for implementation. Rather, it would “close the loop” for these programs and budgets by monitoring differences between the programs and budgets on the one hand and their implementation on the other. It would ask why these differences occurred. It would then try to incorporate what it learned about these differences in future PPBS cycles.
Put another way, the current open-loop PPBS process limits attention to tracking differences between its targets and their achievement, in any cycle or over the long run. A closed-loop PPBS cycle would anticipate differences and expect to improve the Air Force’s performance over time by using information about these differences and thus improve performance in subsequent cycles. An open-loop system may be acceptable in a static environment, where informal learning eventually helps programmers and budgeters get close to their stable target. Such a system cannot keep up with a continually changing environment, as the world is today. A closed loop is critical to success in managing any complex process or tool if the initial conditions do not sit still while the process or tool is in use or the process does not perform exactly as predicted. A dynamic threat environment and continual adjustment of the Air Force logistics system create important sources of both kinds of uncertainty.

The Air Force PPBS process would benefit from at least two kinds of formal closed loops not in use today.

The first would look at the mechanics of the PPBS process itself. For example, are the DLR budgets and prices that all players in the PPBS cycle use in any cycle internally consistent with one another? Today, they are not, because prices actually charged during the year of execution are not the prices used to build the budgets for this same year. A closed-loop process would monitor such a disconnect during each cycle and trace it back to root causes until solutions aimed at the apparent root causes actually yielded an acceptable level of internal consistency. The causes probably lie primarily in particulars about the PPBS process itself, such as the timing of inputs, that can be changed.

Another example: Do the MAJCOMs in fact comply with higher-level guidance on logistics resources? Again, they do not. For example, the guidance laid out in the 03–07 APPG directs the MAJCOMs to address their supply chain issues and, more important, address how their “fair share” of the AFCAIG bills were to be paid. The operational MAJCOMs built their individual POMs arguing that they were balanced, were executable, and assumed acceptable risk. All the MAJCOM representatives argued that they had not paid the AFCAIG bills in the FYDP years and assumed this debt as part of their “acceptable risk” strategy. Although this stance violated senior lead-
ership guidance and policy, it was ultimately accepted by the Air Force because no corporate mechanism exists by which the corporatewide implications of the individual MAJCOM’s position could be evaluated prior to execution.

A closed-loop process would monitor such a disconnect each cycle and identify relevant root causes until solutions aimed at the apparent root causes yielded effective solutions. The PPBS process, like any complex process, is full of disconnects of this kind. Closed-loop monitoring is a practical way to reduce these disconnects, and their negative effects, over time.

The second kind of loop looks beyond the PPBS process per se and asks, systematically, why programs and budgets in any year differ from execution in that year and why, over longer intervals, long-term plans differ from outcomes over time. Such variances can result from two fundamentally different kinds of sources:

- The world behaved differently from what was expected, in terms of threats, the behavior of sources, the reliability and maintainability of aging systems, and so on. Such changes are in effect beyond the Air Force’s control. Better information about such surprises might help the Air Force reduce the importance of such surprises in the future, through better forecasting or through more-robust plans that can tolerate such surprises more easily.

- The Air Force logistics system behaved differently from what assumptions indicated. Cycle times were longer, maintenance-man-hours were higher, bills of material were less complete and accurate, customer expenditures were lower, and so on, than expected. Because these factors are generally considered within the Air Force’s control, programmers and budgeters in recent years have systematically assumed that they would improve. In fact, they have improved more slowly than expected.

Both kinds of differences are relevant to the PPBS process. The first, if better understood, would encourage better or more realistic forecasting about the external environment in the PPBS process itself and more support for robust policies and technologies among the Air Force organizations that use the PPBS process. The second, if better understood, would encourage players in the PPBS process to use more realistic planning factors. By reducing differences of the sec-
ond kind through the use of greater realism, the PPBS process could focus leadership attention on differences of the first kind, where high-level decisions are most important.

The dilemma for the Air Force is that its decentralized POM process focuses the leadership on addressing the resource issues that could not be resolved within the MAJCOMs or through the lower levels of the corporate structure. The process does not facilitate tracking key issues to ensure that high-level decisionmakers systematically address and review them in the PPBS process. Initiatives currently under way in the Air Force to redesign aspects of the Corporate Structure and improve the senior leadership’s visibility of major resource issues might ameliorate some of the problems identified in this report, but solutions are still being studied as of this writing. Whatever the proposed solutions are, to address problems identified in this research, the proposed remedies must identify a mechanism that provides a strong horizontal integration function that pulls together the disparate elements of sustainment and their linkage to operational readiness.

Questions about differences between expected and actual outcomes point to a Shewhart version of the PPBS cycle that not only plans, programs, and budgets but also evaluates outcomes and develops explicit adjustments for gaps between expectations and realization.6 Such an approach can support quick reaction to surprises that occur when insoluble uncertainty yields a realization that differs from that planned. It can fill in holes where analytic models are not complete enough to support policy. It can monitor models and refine them over time to ensure that they are as empirically based as possible. Such an approach would be helpful within segments of the supply chain but particularly helpful in guiding decisions and refining understanding about the links in the supply chain that tie segments together. It will work in a decentralized system, such as that in the Air Force, only if an organization with a supply-chain-wide perspective takes responsibility for it and relevant cycles are monitored in terms of performance relevant to the whole DLR supply chain, not just parts of it.

---

6For a useful description of a Shewhart or “plan-do-check-act” cycle, see Holmes (1994, p. 1).
As noted above, such a closed-loop approach will be more effective

- the better the shared understanding of the link between readiness and resource outcomes on the one hand and policy decisions on the other (Change Number One above),
- the more complete the high-level consensus on a strategic logistics plan (Change Number Two), and
- the more precise the statement of the leadership’s expectations of the performance of the logistics system and the leadership’s ability to enforce those expectations (Change Number Three).

As the fifth change will explain, the most likely office in which to pursue a closed-loop approach to learning in the PPBS process is AF/IL, which would coordinate with all relevant parts of the Air Force.

**Proposed Change Number Five: Strengthen the responsibility and authority of the AF/IL to integrate horizontally the entirety of logistics requirements associated with DLRs and represent these requirements in the PPBS process.**

It would be natural to ask the senior logistician in the Air Force to act as the advocate for the DLR supply chain. Observers disagree on who the senior logistician is and what authority he or she possesses to act as an active advocate. A natural choice is the three-star AF/IL, who has responsibility for Air Force–wide logistics policy and for coordinating appropriation resourcing for logistics activities in the HAF. The head of AF/IL chairs the IL/LG Meeting, which includes the senior logisticians in all of the MAJCOMs and the AF/IL executive leadership. This group coordinates issues of mutual interest to its members. Personnel in AF/IL oversee the Logistics Panel in the HAF, which could potentially take on crosscutting logistics issues now handled primarily by other panels. Can the AF/IL stand up to the commander of AFMC, often seen as the senior logistician in the Air Force and who has four stars? What authority does the AF/IL have

---

7This perspective appears to carry over from the 1980s, when the four-star commander of Air Force Logistics Command was the senior logistician in the Air Force. AFMC, of course, has broader concerns; its commander is often not a logistician. Today, this is a question of perception and authority. Does the AF/IL have the effective authority, devolved from the Chief of Staff, to act as the principal for Air Force logistics policy?
to influence the logistics proposals of any other four-star MAJCOM commander? The segmentation of the Air Force DLR supply chain in effect leaves it without a single, clear-cut champion.

Formal Air Force policy already gives AF/IL considerable responsibility to coordinate logistics issues during the PPBS process. For example, Air Force Pamphlet 38-102 (U.S. Air Force, 1999, pp. 139–162) gives all of the following responsibilities to AF/IL and its constituent elements:

- Formulate Air Force logistics programs, policies, and procedures for weapon systems, including supply, maintenance, transportation, and logistics plans.

- Hold responsibility for all phases of logistics planning and policy, including strategic planning, deliberate/time-sensitive planning, and contingency/war-planning assessments. Develop links among logistics strategic planning and other Air Force planning activities and the Air Force PPBS.

- In coordination with AF/XO, develop operational goals (i.e., aircraft availability) for logistics systems. As a member of the OPS-LOG Working Group, develop methods to improve Air Force logistics availability to support operational requirements. Evaluate logistics impacts of changes in the Air Force Wartime Flying Program, determining their logistics feasibility.

- Determine Air Force logistics resource requirements. Resolve contradictory policy and guidance between the operational and logistics communities concerning DLR spare parts requirements determination.

- Prepare logistics availability and sustainability documentation. Document the logistics sustainability posture for the Air Force POM.

- Develop Air Force logistics budget/program strategies. Provide a single point of contact for logistics budget, programs, policies, and procedures. Ensure a coordinated response to logistics issues in the program/budget reviews. Direct budget submission preparation, provide justification through all review levels, and advocate the logistics program in the POM. Prepare logistics principals on the Air Force Council and other high-level Air Staff
Operational and strategic bodies on matters affecting logistics. Justify and defend logistics budget requests through OSD and congressional review. Serve as the focal point in the OSD program and budget reviews for receiving, tracking, and coordinating responses to logistics management, program, and budget issues.

- Serve as the focal point for modeling and simulating inventory management policies and their impacts on both peacetime and wartime capability. Develop concepts and programs to improve capability assessment and the programming system. Develop, maintain, and operate logistics capability assessment models that translate selected funding and inventory levels into projected weapon system capabilities, in support of the PPBS.

These responsibilities, as well as its role representing the logistics perspective at each level in the Corporate Structure, give AF/IL many formal and designated opportunities to shape the PPBS process and to participate in the process as it proceeds.

These responsibilities and points of entry into the PPBS, however, will not allow AF/IL to take on the responsibilities and authorities identified above without some important changes in formal and informal policy. They include the following:

- The Secretary and Chief of Staff of the Air Force must explicitly verify their support for these responsibilities and authorities to ensure that all other players in the PPBS process—particularly players in the MAJCOMs—accept that AF/IL holds these responsibilities and authorities. Until that occurs, AF/IL cannot act with the confidence that it has full authority to match its responsibilities. The Secretary and Chief of Staff should renew their support periodically so that natural turnover in the leadership team does not dilute AF/IL’s power.

- AF/IL needs additional resources to provide effective integrative capability. It needs people with the skills required to participate in the strategic planning process and to coordinate a resource-constrained APPG with real teeth. It needs people with the skills and capacity to review each POM submission from the MAJCOMs and to assess in detail how closely the submissions comply with the APPG. It needs people with the skills and capacity to
support AF/IL’s presentations on disconnects between the APPG and the MAJCOM submissions throughout the Corporate Structure review process to ensure that the Corporate Structure receives a clear, integrated picture of Air Force–wide logistics priorities to complement the MAJCOM-centric views reflected in MAJCOM submissions. Adding personnel will be extremely difficult as headquarters sizes come down. It may be necessary to conduct some of this work in a field operating agency (FOA) that reports directly to AF/IL. But the Air Force should keep in mind that most of the skills noted here are skills of coordination and that the coordination in question occurs in the HAF itself.

- AF/IL needs to review systematically all submissions relevant to DLRs. The review needs to address how logistics issues are addressed in terms of current and future operational readiness. For example, although AF/IL reviews submissions to the Agile Combat Support Panel, the assessments do not systematically address how operational readiness will be affected over the course of the FYDP. The submissions are not evaluated in terms of how they comply with APPG instructions on logistics issues and the impacts on operational readiness of deferred or ignored logistics issues. The Agile Combat Support Panel focuses on a narrowly defined slice of operational readiness—the ability of the Air Force to support current and a few projected missions—while AF/IL is responsible for looking across the totality of the Air Force in terms of logistics issues and their potential resource impacts.

- AF/IL should have access to analytic methods, tools, and databases required to ensure that it can exercise all of the capabilities identified effectively.

Some object that such responsibilities and authorities would disproportionately favor AF/IL relative to other players in the PPBS process. The approach proposed here does not intend to give AF/IL a mandate to dictate to, to veto, or to shout down others in the PPBS process. Rather, it takes seriously AF/IL’s responsibility and authority to coordinate, to evaluate, to communicate, to advocate, and in the end, to mobilize an integrated vision. The decentralized Air Force PPBS necessarily empowers the MAJCOMs relative to the HAF. It seeks only countervailing arrangements to ensure that the PPBS pro-
cess sees not only each MAJCOM’s vision of logistics but also an Air Force–wide vision. The importance of scale economies to Air Force DLRs, discussed in Chapters One and Two, makes such an integrated, Air Force–wide vision particularly important for logistics resource issues. This proposal does not seek to allow AF/IL to dictate its terms on DLR resource issues to the PPBS process, but rather it intends that AF/IL would help the MAJCOMs develop a common vision and inform the PPBS process effectively on how PPBS decisions will affect the performance of the logistics system, Air Force–wide.

Proposed Change Number Six: Rebuild the human capital capability within the Air Force logistics community to participate effectively in the PPBS process.

A workforce knowledgeable in the PPBS process is critical to improving the logistics community’s ability to articulate its resource needs. This recommendation is particularly difficult to implement given current turbulence in the Air Force and, in particular, ongoing congressionally directed headquarters reductions. In 2002, the Air Force, like the rest of the DoD, had to take an additional 15 percent personnel reduction in its headquarters staffs. In prior years, the Air Force had dealt with headquarters staff downsizings by supplementing the workforce with contractor labor and by relocating a function to the field. Turbulence among the military personnel and reductions in the civilian workforce provide little time to mentor or to train individuals in the PPBS process. In the logistics community, knowledge of the PPBS process is not critical to career progression.

To improve in this area, the logistics community must ensure that selected individuals—military and civilian—receive training and on-the-job experience in the planning, programming, and budgeting environments. Given the increasingly decentralized nature of the Air Force PPBS process, these individuals need tours in a MAJCOM’s planning and programming organizations. If possible, given the increasingly joint environment of DoD, they would benefit from time in the Joint Staff or OSD. Some of these assignments should be outside the logistics community so an individual can gain a more strategic perspective on how logistics issues are viewed and addressed within the broader Air Force and in DoD in general. This recommendation does not require the Air Force to train a large
number of people in PPBS matters, but the number needs to be sufficient so the Air Force can maintain a cadre of knowledgeable people. To the extent that the Air Force relies on contractors to perform PPBS-related work in the HAF—even if relying on contractors is a direct response to downsizing of the HAF—relevant human capital critical to inherently governmental decisions is accumulating outside the Air Force.

Logistics personnel getting such PPBS training should be promotable. Otherwise, such training will not interest the best logisticians in the Air Force. And no matter how much training and experience the Air Force provides, its general-officer logisticians will not benefit directly from it themselves.

The recent pace of change in Air Force policies and procedures has complicated each of these problems. The role of the Air Force DLR supply chain is changing as logistics concepts change. The Air Force PPBS process is changing. Headquarters is shrinking. Very few Air Force logisticians have the skills required to represent a current view of the Air Force DLR supply chain in the current PPBS process or efforts to change the supply chain, such as the AFRAP review. Unfortunately, continuing change on all these fronts depreciates skills accumulated in the past. Without such skills, any single advocate or integrator for the supply chain in the Air Force PPBS process can have only a limited effect.

The Air Force logistics community recognizes these challenges and is discussing solutions. Some discussion has focused on reestablishing certification programs for resource allocation managers within the logistics community to ensure that they understand their roles and the processes and tools relevant to their work.

**Proposed Change Number Seven: Build and sustain a credible analytic capability to support the efforts above.**

Although the Air Force logistics community uses a variety of tools to identify and manage its resources, these analyses and tools have limited credibility in the broader Air Force. They are not firmly linked to flight line and fleet, readiness-related outcome metrics that warfighters emphasize. Operating commands do not understand the contribution of basic investments in logistics pipelines and other DLR spares not directly tied to their own operations and their own
performance. In part, this is because, until recently, the Air Force has not attempted to manage its logistics analytic tools, their configuration, and associated analytic processes systematically.

As explained in Chapter Two, given the stovepiped nature of the logistics community, many tools are not linked among themselves nor do they link to Air Force–wide methodologies or analytic processes. As execution of Air Expeditionary Forces (AEFs) becomes routine, effective combat support command and control will require development of more-integrated logistics models realistically calibrated to reflect actual operations. The models the Air Force uses to support its participation in the PPBS process will benefit if they can take advantage of these new analytic capabilities.

The changes suggested above will benefit particularly from analytic methods that do the following:

- They link readiness and resource outcomes to specific high-level decisions that might be addressed in the PPBS process.
- They help decisionmakers in the PPBS process look across logistics disciplines and link these disciplines as a group to operations. Such improvements are critical to the capability construct currently under development. More generally, they would support more-effective trade-offs between logistics alternatives and between logistics and operational alternatives.
- They are calibrated to current operational concepts and the actual current performance of the logistics system.
- They are transparent and available to all players with an interest in the PPBS process.
- They are simple enough to use in the short response times required to participate effectively in the PPBS operating environment.

As noted above, AF/IL already has a responsibility to serve as a focal point for modeling and simulating logistics policies and their impacts on both peacetime and wartime capability and to develop, maintain, and operate logistics capability assessment models that translate selected funding and inventory levels into projected weapon system capabilities in support of the PPBS. These capabili-
ties need not exist within AF/IL. In fact, the Air Force’s deepest capabilities to analyze logistics policies lie in AFMC and the Logistics Management Agency (AFLMA). These are natural places to build better capabilities. But AF/IL must take the lead to ensure that the methods, models, and databases developed properly reflect Air Force–wide priorities for the DLR supply chain. AF/IL is the natural source of leadership on these issues.

The changes proposed above depend critically on an ability to improve the credibility of the methods the Air Force uses to link readiness to resources. Those proposals should always be viewed in terms of the capabilities available to make these linkages. This suggests three things:

- Efforts to implement the changes proposed here should give careful attention to the capabilities of the analytic models and databases available to support them.
- Efforts to make the changes suggested here will be more successful as the Air Force’s analytic capabilities improve.
- Any effort to make the changes proposed here should include an active effort to improve complementary analytic methods.

**SUMMARY**

As illustrated in Figure 3.1, the changes proposed above constitute an integrated package. They begin by seeking a way to think about DLRs routinely as a force-multiplier rather than a bill-payer in the PPBS process. They seek to bring logistics into a top-down Air Force strategic planning process that develops clear guidance on logistics resource decisions relevant to DLRs to the MAJCOMs. The APPG

---

8AFLMA is a field operating agency that supports AF/IL with analysis, consulting, and development of guidance on logistics issues, particularly issues outside AFMC.

9The Air Force Studies and Analyses Agency (AFSAA), a direct reporting unit that reports to the Vice Chief of Staff of the Air Force, has a responsibility to integrate analytic models in the Air Force. It might offer a useful place to improve links between warfighting models and logistics models to address many of the disconnects discussed in this report. To date, AFSAA has not taken on such responsibility. Given the decentralized structure of the Air Force, AFSAA appears to have little effective authority to do so at this time.
translates this guidance into specific, resource-constrained terms that the HAF can use to review MAJCOM inputs to the PPBS process and to maintain an Air Force–wide view of logistics resource issues relevant to DLRs that places MAJCOM submissions in perspective as they move through the Corporate Structure. As an integral part of the PPBS process, the HAF monitors a set of closed-loop processes that compare plans with execution and help accelerate the Air Force’s learning about how to adapt logistics resource policy relevant to DLRs to the dynamic threat and sourcing environments it faces. AF/IL is the most logical focal point for these changes. The Chief of Staff and Secretary of the Air Force should clearly endorse AF/IL as the champion for these changes, with the responsibility and authority required to implement them. To take on this responsibility, AF/IL will need logisticians better prepared to work in a PPBS environment and analytic methods, models, and data that link logistics resources relevant to DLRs as clearly to high-level Air Force system metrics—readiness and total ownership costs—as possible. Such analytic methods will allow AF/IL to close the loop by demonstrating in the PPBS process exactly how logistics resources relevant to DLRs act as force-multipliers.

Three policy changes already under way in the Air Force today should make it easier to pursue an integrated package resembling the proposal above. Chapter Four describes these.