

CENTER FOR ACQUISITION MANAGEMENT POLICY SERIES
DEFENSE SYSTEMS MANAGEMENT COLLEGE FORT BELVOIR, VIRGINIA

OUTCOMES, PRINCIPLES, AND CRITERIA

A FRAMEWORK FOR ASSESSING CHANGES
TO THE DEFENSE ACQUISITION SYSTEM

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OUTCOMES, PRINCIPLES AND CRITERIA:
A Framework for Assessing Changes to the
Defense Acquisition System

Center for Acquisition Management Policy
Department of Defense Systems Management College
Fort Belvoir, Virginia

January 1989

WHY HAVE A FRAMEWORK?

Proposals to change (i.e., "improve") the defense acquisition system come in the form of proposed legislation, regulations and policy issuances, and recommendations contained in reports from interested observers. With a new Administration and new Congress taking over in 1989, the prospect for more proposed changes is highly probable.

However, to our knowledge, no comprehensive mechanism exists for evaluating a proposed change during its deliberation period for its potential worth and workability.

For a bill undergoing the congressional hearing process, the perception often is the bill is predetermined to pass or fail regardless of conditions raised, the overriding concern being to "do something positive." Within DOD, budget and other analysts examine the parts but not necessarily the whole. The perception is there is no over-arching conceptual or quantitative format - a model - with which to make a judgment.

Lacking this fundamental perspective, there is no guarantee that a proposal is given the examination it deserves, or that its impact on the rest of the acquisition system is adequately assessed.

For these reasons, we at the Defense Systems Management College feel it is absolutely essential for the defense acquisition community to have and use such a model. If ever there were a time, why not now? Therefore, we derived a plain, common sense framework - to form the perspective we need - with which a proposal can be evaluated easily and quickly. The framework is based on

Outcomes - What do we want and expect from the acquisition system?

Principles - What acquisition management guidelines do we uphold?

Criteria - What theoretical and pragmatic questions do we ask as tests of the proposal's worth and workability?

In view of the present perceived vacuum, this framework is a beginning.

Lynn H. Stevens

LYNN H. STEVENS
Major General, USA
Commandant

Defense Systems Management College

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FOREWORD

The Department of Defense acquisition system is perhaps the most studied, analyzed and criticized operating system of the United States government.

Relatively speaking, it also is perhaps the most public, in spite of the security classification of many of the weapons it produces. Because it is under glass, and because it consumes such a large portion of the government's budget, it is considered fair game for scrutiny.

Often employing diverse viewpoints and methodologies, observers reporting on the system share at least one goal: they all want to help. While adverticing its failures and pinpointing its flaws, they usually advance solutions. These solutions range from fundamental reorganizations to quick fixes. Some may work, others not. Regardless, the solutions represent a serious effort to improve, even "reform," the system. Each deserves objective assessment.

However, what seldom appears are detached, systematic, clinical and measurable evaluations of the proposed solutions themselves and how they would impact the entire acquisition system. Conceivably, this condition exists because there is no visible, standard, accepted framework with which decision makers can exercise such value judgments.

This paper offers such a framework.

Noting the obvious plethora of accomplished and proposed changes to the defense acquisition system in the last few years, and anticipating more, the Defense Systems Management College (DSMC) assembled a team of its own observers to produce such a framework.

However, our team's objective was to develop only a framework for assessing any proposed solution. It was not to suggest an agenda for improvements, which in large measure would be redundant to others.

Our team reviewed a number of authoritative publications and many recent changes, along with other recent proposals. Our paramount concerns were: how can we tell if a proposed change will satisfy certain essential acquisition needs, and can it be implemented?

Since we at DSMC are part of the system but also somewhat removed in our capacity as an academic institution, we felt we had both the experience and objectivity for developing such a model. Our

payoff will be acceptance and use of the framework, particularly its evaluation criteria, by decision makers.

For the reader desiring an update on the structure, organization and processes of the defense acquisition system, we have covered it briefly in Appendix C. A natural by-product of any such study is the identification of findings in addition to those used to establish our criteria. These findings are presented in Appendix D for the reader's perusal. As part of our study process we examined allied and Soviet defense acquisition systems for possible alternatives to the U. S. system. We concluded it would be very difficult to superimpose any distinct entity of another country's system into the U. S. for various political, cultural and economic reasons, and consequently avoid any linkage in this report.

We invite comments on the model and its suggested applications.



EDWARD HIRSCH
Brigadier General, USA (Ret.)
Chairman,
Center for Acquisition Management Policy
Department of Defense Systems Management College

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EXECUTIVE SUMMARY



SECTION ONE

EXECUTIVE SUMMARY

The United States strategy for national security is deterrence. If deterrence fails, the armed forces must retaliate and defeat an enemy.

The Department of Defense, in its responsibility for national defense, has a massive and complex system to acquire its defense materiel. The system is composed of the structure, people and money which allow it to perform, the process for managing programs, the technical and business aspects of developing, producing, fielding and supporting defense materiel, institutions such as the Congress and industry, and the environment in which it must operate.

Efforts to change the system and correct specific problems frequently take the form of legislative, regulatory or other policy proposals. In this study, DSMC examined a number of these changes and proposals and identified problem areas which were synthesized, condensed and categorized.

This process uncovered related, recurring themes. These themes evolved into a set of "theoretical criteria" for evaluating proposals for change. Coincidentally, the study group developed a set of "pragmatic criteria" for determining if a proposal can actually work.

We submit that if these criteria were applied in the decision making process, the value added and potential impact of such proposals could be assessed more rationally.

We determined the defense acquisition system:

Must generate defense materiel that will achieve the following desired outcomes:

Desired Outcomes

- Meet the need of the user.
- Be delivered on schedule.
- Be delivered at planned cost.
- Be available when needed.
- Be supportable with ease.
- Be affordable through its life cycle of use.
- Be compatible with other weapon systems.

Should operate under the following nine guiding principles of acquisition management:

Principles

Place the most ethical and competent persons into acquisition leadership positions, provide them the resources and authority to perform, minimize constraints on their flexibility, and let them do their jobs.

Consider as wise counsel--not direction--the views, observations, findings, and recommendations of advocates, special interest groups, auditors, and other non-line authorities.

Subordinate local, regional, and parochial interests to national objectives.

Hold constant the resources allocated to a specific acquisition activity for at least 36 months. (Exception: Do not let obligational authority expire before it can be used.) Life cycle resource implications must dominate resource allocation considerations.

Make no laws or regulations which attempt to prevent all wrong doing. Enforce reasonable laws and regulations, and prosecute, relentlessly, the wrongdoers.

Create no policy which discriminates either for or against small or large business or any other special interest not directly related to product quality.

Require DOD contracts to provide the opportunity for a risk adjusted rate of return comparable to other opportunities available to the investor.

Materially consider factors other than price in all contract awards. Quality and past contractor performance, in particular, must be major considerations.

Make no industrial policy and take no acquisition action until the industrial base implications have been considered and found not to be damaging.

Should be changed only if the proposal would increase the likelihood of achieving the desired outcomes in some of the following ways:

Theoretical Criteria

Improving the capability to match system requirements with the predicted threat.

Reducing ambiguity in the chain of authority, and its control over required resources (personnel, money, facilities).

Reducing acquisition redundancy among the services.

Reducing mismatches between resources and requirements.

Efficiently reducing waste, fraud, and abuse.

Reducing unnecessary organizational layering.

Reducing non-value added reporting, reviews and audits.

Enhancing the technological base.

Enhancing the industrial base.

Enhancing the training opportunities of the work force

Reducing excessive turnover in program personnel.

Enhancing the selection of competent personnel.

Reducing instability in planned top line funding.

Reducing instability in internal funding allocations.

Improving the cost and budget estimation processes.

Enhancing the initial definition and stability of the program baseline.

Should be changed only if consideration of these pragmatic criteria indicates the proposal can or should be implemented:

Pragmatic Criteria

Approval: What is the likelihood the proposal will become a law or policy, and what will it take to make that happen?

Public Relations: Will it be perceived as "fixing" the problems?

Acceptance: Will the people who must make the proposal work, both in government and industry, be willing to actually make it work?

Internal DOD Relationships: What will be the reactions, roles and interplay of the Services, Defense Agencies and the Office of the Secretary of Defense affected by the proposal? Is the proposal unacceptable to any major stakeholder?

Political: What will be the impact on relations with the Congress, industry, other activities within the Administration. and NATO and other allies?

Implementation: How and when should the change be placed into effect?

Measurement: After implementation, how will we know when progress has been made (i. e., whether this change is actually improving the process)?

A Framework for Assessing Acquisition Management

Ultimately acquisition management decision makers must:

Produce materiel that achieve the required outcomes;

Conduct business in accordance with the guiding principles of acquisition management; and

Satisfy the theoretical and pragmatic criteria to assess the potential value of any proposed change to the defense acquisition management system.

Together, this framework of outcomes, principles and criteria with which a decision maker can evaluate a proposed change has distinct advantages.

It provides a basis for common understanding and communication about proposals for change.

Principals or experienced staff can make determinations with little or no added costs.

The methodology can be applied with reasonable speed.

While the desired outcomes and principles are constant, the criteria can be modified to suit a particular situation.

It can be as subjective as desired by using any amount of "inner (street) smarts" rationalization.

It is probably as close to reality as one can get.

Therefore, we strongly encourage decision makers in the defense acquisition system to use this framework to evaluate proposals to change the system.

STUDY REPORT



SECTION TWO

OUTCOMES, PRINCIPLES AND CRITERIA:

THE FRAMEWORK

In the following three Sections we will expand on the framework which has to this point been only introduced.

Behind the successful prosecution of DOD's mission of "deter or defeat" is the materiel means with which to perform. Consequently, every item of defense materiel--whether weapon hardware or support equipment--must possess fundamental qualities to withstand the rigors of operational use.

Every item must be effective, alone or in combination with other materiel, in accomplishing its designed purpose.

It must be available when needed.

It must remain available as long as it is needed, with minimal maintenance.

It must provide substantially more military value than its cost of purchase and operation.

It must be affordable so that sufficient quantity and necessary supplements such as ammunition can be purchased.

It must be easily understood, maintained and used by ordinary human beings under hostile conditions.

Desired Outcomes

We translated these qualities into seven objectives we call "**desired outcomes**." These outcomes represent optimal qualities of materiel end products of the defense acquisition system. That is, if everything worked efficiently, the system would generate materiel conforming to the seven outcomes below:

Therefore, every item acquired for national defense must:

1. Meet the needs of the user.
2. Be delivered on schedule.
3. Be delivered at the planned cost.
4. Be ready when needed.

5. Be supportable with ease.
6. Be affordable through its life cycle of use.
7. Be compatible with other weapon systems.

We used these desired outcomes continuously throughout the study to screen and evaluate mechanisms of the defense acquisition system. We deduced that any attempt to change the system eventually must produce improvements in these materiel outputs. If not, then the most one logically could expect from the change would be marginal improvements.

In effect, the outcomes are the "ground level" hallmark against which any proposed change to the acquisition system should be weighed. Furthermore, as we derived the criteria for evaluating a proposed change, we instituted these outcomes as the foci on which we would base the criteria.

Guiding Principles of Acquisition Management

As we began the study we recognized some other key element was necessary for a total perspective. We had established the desired outcomes, and would work toward the criteria that support them. The element we wanted would link outcomes and criteria, guide the behavior of study participants, set the theme and form a practical, comprehensive management tool for potential subsequent use. The element became a doctrine we call "guiding principles of acquisition management." These principles were developed earlier by the Center for Acquisition Management Policy, published in the Fall 1988 issue of Federal Management Journal and are presented in Appendix F.

Any acquisition system designed to satisfy the stated outcomes must operate under the following nine guiding principles.

1. Place the most ethical and competent persons into acquisition leadership positions, provide them the resources and authority to perform, minimize constraints on their flexibility, and let them do their jobs.
2. Consider as wise counsel--not direction--the views, observations, findings, and recommendations of advocates, special interest groups, auditors, and other non-line authorities.
3. Subordinate local, regional, and parochial interests to national objectives.
4. Hold constant the resources allocated to a specific acquisition activity for at least 36 months. (Exception: Do not let obligational authority expire

before it can be used.) Life cycle resource implications must dominate resource allocation considerations.

5. Make no laws or regulations which attempt to prevent all wrong doing. Enforce reasonable laws and regulations, and prosecute, relentlessly, the wrongdoers.

6. Create no policy which discriminates either for or against small or large business, or any other special interest not directly related to product quality.

7. Require DOD contracts to provide the opportunity for a risk adjusted rate of return comparable to other opportunities available to the investor.

8. Materially consider factors other than price in all contract awards. Quality and past contractor performance, in particular, must be major considerations.

9. Make no industrial policy and take no acquisition action until the industrial base implications have been considered and found not to be damaging.

A Framework for Assessing Proposed Changes to Defense Acquisition

Having established desired outcomes and guiding principles, two pieces of our framework for assessing proposed changes, we began to examine the third piece, the list of criteria questions the proposal must satisfy.

We determined up front that to be included in our list of criteria, each criterion must meet these three mandatory requirements:

First, a criterion must focus on the set of seven outcomes of the acquisition system outlined herein.

Second, it must harmonize with the nine guiding principles of defense acquisition management also outlined herein.

Third, it must positively address one or more known or suspected problem areas of the current acquisition system and give value-added to the entire system.

From this determination of requirements, we reached the conclusion that

these three requirements are the context and framework in which all changes to the defense acquisition system must be assessed. They are constant. Only the specific criteria need be evolutionary. Their nature gives them flexibility to meet diverse demands.

Whatever system is examined, ultimately it should be characterized by the nine principles. Comporting itself accordingly, the seven outcomes are achievable. Having met these two benchmarks, criteria assessment is expedited and improves the likelihood of successful conclusions.

Consequently, we believe, evaluation according to the suggested framework:

Adds credibility and substance to a proposed positive solution, therefore

Providing confidence to those proposing it or those who must make it work, and

Subsequently builds support for the proposal; or,

Identifies weaknesses which restrict its installation or utility, and

Leads either to its modification in more acceptable terms, or provides rationale for its outright rejection.

Applying the Framework to Real-time Proposals

We reviewed several possible ways to apply the criteria to real-time, contemporary proposals as a test of the model. In doing so, we made no judgments on the overall value of proposals we evaluated, but concentrated on matching the criteria with both stated and implied assertions in the proposals.

We chose six proposed pieces of legislation of the 100th Congress, two Senate and four House bills. Summaries of these bills are contained in Appendix A. We then performed an analysis of each bill using the framework for evaluation proposed in this report.

In utilizing the framework, we had to bear in mind that the intent of the framework is for evaluation purposes only. It is not intended to generate ideas or provide solutions.

We recognize that the legislative proposals vary in scope and focus. Whether a proposal is comprehensive (e.g., the Goldwater-Nichols Defense Reorganization Act of 1986 and the Report of the President's Blue Ribbon Commission on Defense Management), or one-issue specific (e.g., S.2732 of the 100th Congress: Senator Roth's suggestion for a centralized defense procurement agency), there still are common core questions that must be asked.

Whether taken individually or combined with others seeking similar effects, a proposal's acceptance and installation would cause a ripple effect throughout the acquisition system. The impact of this ripple effect also must be analyzed by the decision maker either analytically or judgmentally as part of the entire assessment.

Application of the framework to a proposed change is shown in Figure 1.

USING THE FRAMEWORK

OUTCOMES

Every item acquired for national defense must

- Meet user needs
- Be on schedule
- Meet planned cost
- Be available
- Be supportable
- Be affordable
- Be compatible

PRINCIPLES

An acquisition system must operate under these guiding principles

- Leadership by competent persons with authority to do the job
- Consider opinions of non-line authorities as counsel only
- Subordinate non-national interests to national interests
- Hold resources constant for 36 months
- Try not to prevent all wrong doing but enforce existing rules
- Create no discriminatory policies
- Provide for risk adjusted rate of return
- Consider factors other than price in contract awards
- Consider industrial base implications

CRITERIA

Theoretical - Will the change

- Match requirements with threat
- Reduce ambiguity in authority chain
- Reduce redundancy among Services
- Reduce resources-requirements mismatches
- Reduce fraud, waste, abuse
- Reduce organizational layering
- Reduce reporting, reviews, audits
- Enhance technological base
- Enhance industrial base
- Enhance workforce training
- Reduce personnel turnover
- Enhance competent personnel selection
- Reduce topline funding instability
- Reduce internal DOD funding instability
- Improve cost and budget estimating
- Enhance program baseline definition and stability

Pragmatic - What is the

- Likelihood it will be instituted
- Perception of "fixing" problems
- Acceptance by people who must make it work
- Internal DOD reaction
- Impact on political relationships
- Time to implement
- Measure of progress



FIGURE 1

SECTION THREE

THEORETICAL EVALUATION CRITERIA

The primary thrust of our study effort was development of a set of criteria--a model--for evaluating and assessing proposals to change the defense acquisition system.

We call these criteria "**theoretical criteria.**" That is, in theory, when these criteria are applied, the decision maker can rationalize in advance whether the proposal, if put into place, would meet certain necessary structural, procedural, organizational, technical, financial, performance and related objectives. In essence, the criteria are a checklist of "alert items."

Coincidental to developing these theoretical criteria, we developed a corresponding set of "**pragmatic criteria**" to add realism and practicality to an evaluation. We examine these pragmatic criteria in Section Four.

To our knowledge, no similar models exist. We have no copyrights. Therefore, we encourage others to appropriate our criteria - indeed, or entire framework - and use them as their own.

Applying Theoretical Criteria

In concert with the outcomes and principles, the criteria provide a framework for assessing both proposed changes to the acquisition system and any acquisition problem areas. The framework enhances managerial judgment by reducing risk associated with choosing unknowns. It increases the likelihood that required system objectives can be met, mistakes avoided, and time, resources and effort best spent.

Application of these criteria is hardly restricted to DOD. Their utility allows use by decision makers in the Congress and the defense industry as well. In fact, they were derived with multiple applications and multiple users in mind.

Methodology Used to Develop the Theoretical Criteria

Having established the three mandatory requirements for our criteria, we then developed the methodology for formulating the criteria. The methodology was as follows:

We examined seven recent significant published treatises on defense acquisition (Appendix B), ranging from books critical of the process to

findings of the President's Blue Ribbon (Packard) Commission, reports of a recent conference of senior acquisition officials and statements before Congress.

. From these sources we extracted more than 200 "problem statements" (e.g., things "wrong" with the acquisition system).

. We condensed these statements into approximately 70 non-redundant problem areas.

. These were further divided into six broad problem issue categories (discussed below).

. Each issue category was divided into three sub-categories of environment, process or structure.

. Following sub-categorization, we analyzed this complex of problems and identified 16 common or recurring themes and formulated them into our 16 criteria.

We believe the resultant criteria meet our three mandatory requirements and are valid for evaluating a proposed change.

Problem Issue Categories

1. Instability (the instability of requirements, resources, and system configuration).
2. Personnel (qualifications of assigned acquisition personnel).
3. Planning aspects (inadequate planning in various phases of the life cycle).
4. Industrial aspects (detriments to a strong industrial base).
5. Review process (time and effort spent, and value gained).
6. Organization (organizing so that all functional areas are performed).

When these problem areas from the defense acquisition "system" were placed in juxtaposition with the concept and definition of a "system" (in which people, structure, procedures and environment meld to achieve specific objectives), it was apparent there were recurring themes in the problem questions.

These themes became critical to the analysis of the defense acquisition system.

First, there had to be a clearly defined and empowered organization and process. That organization must consist of competent, qualified, motivated and trained personnel who would implement the process. Second, the organization and process must operate within an environment that adjusts to changing threat and affordability, yet is as stable as possible while allowing that adjustment.

These themes were played against the basic goals of any weapon program. Resultant questions were developed to determine what would be necessary to increase the likelihood that a change to the current system would better achieve the desired outcomes. These questions were added to the six problem areas and the sub-categories of environment, process and structure to form the criteria which follow.

Throughout this development process and in reviewing the findings, we added the experiences and insight of acquisition professionals on the DSMC faculty. This "seasoning" added equilibrium to our deliberations as well as fresh dimensions. For further breakdown of these six categories into specific questions within the subcategories of environment, process and structure, see Appendix G.

The Criteria Defined

The criteria take the form of a question: Will the proposed change increase the likelihood of achieving the required outcomes by:

1. Improving the capability to match system requirements with the anticipated threat?

[The process of evaluating the threat involves understanding the potential adversary's war making systems and force level trends. These must be matched with U.S. defense systems. The process for accomplishing this match--current and future--must be as effective as possible to ensure the balance remains favorable to the U.S. The proposed change should enhance this process.]

2. Reducing mismatches between resources and requirements?

[Once requirements are determined, they must be made compatible with available resources. These resources primarily are fiscal, but manpower availability as well as physical resources (bases, ports, etc.) need consideration. The proposed change should improve the tradeoff process that matches system requirements with resource constraints. Normally requirements are decreased

to accommodate the resources; however, the process can lead to increasing the resources.

3. Reducing acquisition redundancy among the Services?

[While some redundancy may be acceptable from a risk viewpoint, this should be carefully justified. Redundancy evolving from lack of coordination between Services must be reduced. Evaluation of available allied systems also should be a consideration.]

4. Reducing ambiguity in the chain of authority, and its control over required resources (personnel, money, facilities)?

[Acquisition matters should not be controlled from different organizational sources. The program manager should not be required to respond to incompatible demands from acquisition managers, from operational managers, and from resources sponsors. These can all influence the acquisition process, but the command chain to which the program manager responds should be clear and non-conflicting. Similar considerations should be applied to commanders above the program manager.]

5. Reducing unnecessary organizational layering?

[Every effort should be made to reduce overlap, duplication and unnecessary reviews and reports, whether within DOD or other government agencies, and from Congress. Obvious exceptions are realistic checks and balances, such as in independent cost estimation.]

6. Efficiently reducing fraud, waste and abuse?

[Of course, fraud, waste and abuse should be reduced, but not necessarily at any cost. An excessive audit process may reduce each, but may slow the acquisition process to the point where very few systems are procured. "Waste", at any rate, must be a comprehensive concept, including time as well as physical resources.]

7. Reducing non-value added reporting, reviews and audits?

[For example, the practice of inspecting quality into the finished product must be changed to total quality throughout the process, including planning and management procedures. Audit and review processes should be subject to review

themselves, particularly before implementation, to ensure the value added justifies audit requirement total cost.]

8. Enhancing the technological industrial base?

[The proposed change should encourage independent research and development and should prevent unwarranted transfer of U. S. technology capability to other countries. It should not discourage internal research and development in defense technical areas.]

9. Enhancing the defense industrial base?

[A proposal should be evaluated regarding its effect on the defense industry, particularly whether industry will be reasonably encouraged to join or remain in the defense business if the proposal is enacted. At least the proposed change should not encourage flight from doing business with the government.]

10. Enhancing the training opportunities of the work force?

[A major element of acquisition professionalism is personnel development and must be fully appreciated in attempts to improve acquisition. Proposals should encourage professional skill and personal motivational development without appearing to waste resources.]

11. Reducing excessive turnover in program personnel?

[The effect of rotating personnel internally and outside for reasons other than acquisition skill development must be carefully considered. Consequently, the potential disruption of moves from operational to acquisition billets, losses to industry and unnecessary early departures, all should be weighed.]

12. Enhancing the selection of competent, qualified personnel.

[Opportunity for growth and advancement must exist to attract and retain competent, qualified acquisition personnel. Selection procedures, compensation and career patterns, along with means of dispatching non-performers, should be improved.]

13. Reducing instability in planned top line funding?

[Methods for projecting realistic top line fiscal availability should be improved. This requires considering the DoD/Congressional interface within the context of economic realism (regarding GNP growth, inflation estimates, international exchange rates, and other economic factors), as well as controlling changes to the top line plan once it is made.]

14. Reducing instability in internal funding allocations?

[DOD's internal process of allocating the top line fiscal limit to selected programs should be improved so that reallocations to various appropriation and program categories become less frequent. Even stable top line funding cannot preclude internal instability.]

15. Improving the cost and budget estimation processes?

[Given top line funding stability and proper internal fund allocations, planned acquisitions can suffer instability if the cost and budget estimates behind them were in error or unduly optimistic. The method of obtaining system acquisition cost estimates, and translating them into budget requirements should be improved.]

16. Enhancing the initial definition and stability of the program baseline?

[Funding, planning, economics and cost estimation are not the only sources of instability. For example, configuration design changes to a system cause a degree of program instability; therefore, any proposed change should improve configuration stability.]

SECTION FOUR

PRAGMATIC EVALUATION CRITERIA

Having applied the theoretical criteria to a proposal, and concluding the proposal on the surface will benefit the acquisition process, a decision maker should then address the question of whether the proposal can actually work.

This is not difficult and can be accomplished readily by substituting a pragmatic point of view for the theoretical one. Coincidentally with development of the "theoretical criteria," we developed a set of "pragmatic criteria."

Subsequent application of these "real world" criteria should provide a more complete analysis of a proposal's workability and worthiness and be a valuable adjunct to the decision maker.

Pragmatic Criteria Developed Experientially

We developed these criteria experientially from the broad knowledge of the study group. This knowledge is wide-ranging within defense acquisition, represents substantive accomplishments, embraces multi-disciplines, and reflects intuition gained from numerous years of working inside the Washington, DC, environment (Appendix E).

Application of Pragmatic Tests

The criteria are not all-inclusive. In fact, the categories and number of pragmatic criteria actually are boundless, depending upon the scope and nature of the proposal and the instincts, inclinations and background of the evaluator. As a minimum, criteria on the order of these tests should be applied. To be workable and worthy, a proposal must:

- . Be enacted by Congress and signed into law; or, if not established by legislation, it must be adopted internally as policy by DOD top management.

- . Actually be implemented (i. e., issued as a policy directive and the machinery established to administer it).

- . Be accepted positively by the people who must make it work.

- . Be perceived by the public (i. e., those outside the acquisition community) as progress toward a solution.

. Produce meaningful progress toward accomplishing the objectives of the acquisition system.

Regardless of how attractive a proposal appears in theory, particularly when enjoined by a recognized need to "do something positive," it must proceed through realistic gateposts in order to succeed. Proponents seeking defense acquisition reform who fail to consider criteria such as these, and who would endorse a proposal grounded on appearance and need alone, run the high risk of disappointment and disillusionment when the proposal does not accomplish its purpose. Thus, we also call these pragmatic criteria "street criteria." They superimpose a sense of reality in evaluating any proposal.

Properly evaluating a proposal using these criteria requires keen insight, sensitivities and judgment. In all likelihood, many responses will be judgmental. This is all right, because one's best judgment, an essential ingredient of pragmatism, is also a mandatory commodity of the decision maker's leadership required to make a proposal work once it is accepted. "If, after close examination of all the issues, I am convinced it will work, so it shall."

The Pragmatic Questions

The five pragmatic tests evolve into the following questions:

1. Approval: What is the likelihood the proposal will pass, and what will it take to make that happen?
2. Public Relations: Will it be perceived as "fixing" the problems?
3. Acceptance: Will the people who must make the proposal work, both in government and industry, be willing to actually make it work?
4. Internal DOD Relationships: What will be the reactions, roles and interplay of the Services, Defense Agencies and the Office of the Secretary of Defense affected by the proposal? Is the proposal unacceptable to any major stakeholder?
5. Political: What will be the impact on relations with the Congress, industry, other activities within the Administration, and NATO and other allies?
6. Implementation: How and when should it be placed into effect?
7. Measurement: After implementation, how will we know when progress has been made (i. e., whether this change is actually improving the process)?

The Criteria Questions

1. Approval

1.1 Who are its sponsors and advocates, and what is their relationship to defense acquisition?

1.2 What are the motives and agendas of the sponsors and advocates?

1.3 Who are the key staffers involved?

1.4 How frequently has it surfaced in one form or another; what was the outcome?

1.5 What pressures will be brought to bear against it; in what form will they be presented; what are the chances of them succeeding?

1.6 What pressures can be mustered in its support; how should they be utilized; what is their record of success on these issues?

1.7 If not during this Congress, or session of Congress, or this Administration, what are its chances of resurfacing and being approved?

1.8 What sort of support does it have in The White House and OMB?

1.9 What sort of support does it have with key Members of Congress, the defense committees and congressional leaders of the President's party?

1.10 What sort of support does it have with industry, influential DOD observers and think tanks?

2. Public Relations

2.1 Will it enhance public perceptions, impressions and opinions of defense acquisition?

2.2 Is it likely to be received by the defense acquisition community as a positive change to improve acquisition; if not, what can be done to achieve that end?

2.3 Is it likely to be received by the public as a radical change to improve acquisition, a marginal change, or as "cosmetic"?

2.4 Is it necessary to have and therefore actively seek public support for the changes to be brought by the proposal?

2.5 Will it be perceived approvingly by the media; if not, what can be done to influence the media?

3. Acceptance

3.1 Will it shorten or facilitate the acquisition process?

3.2 Will it improve the contracting process?

3.3 Will it eliminate or reduce "requirements creep," "gold plating" and other non-value added elements to weapon systems?

3.4 Will it improve relations between customer and provider; does it establish provision for arbitration and resolution of disputes between customer and provider?

3.5 Will it enhance the credibility of civilian acquisition managers with the customer?

3.6 Does it open up probability of "we against they?"

3.7 Does it apply to acquisition of all defense goods and services rather than just to weapon systems and equipment?

3.8 Will it solve the problem of duplication of programs, equipment, systems and components, and attendant support functions, and therefore enhance commonality?

3.9 Will it impact the "revolving door" through which government and industry officials go to work for the other party?

3.10 What kind of incentives must be offered?

4. Internal DOD Relationships

4.1 Does it clearly establish the roles of the Services and Defense Agencies in requirements setting, ordering the product to be developed, influencing the acquisition process to obtain the product they desire, and ultimate acceptance and use?

4.2 Can the politics of the Services, and their interface with OSD, be disregarded?

4.3 Does it clarify who controls R&D funding and activities, and procurement funding?

4.4 Does it establish the USD(A) with budgetary responsibility and authority for all acquisition?

4.5 Will it lead to streamlining the DOD budget process to facilitate application to acquisition programming and funding?

4.6 How will it impact the careers of military officers and civilian acquisition personnel; how will it impact "dual compensation" and hiring of former military officers as civilians?

4.7 Does it address military acquisition officers retiring or taking discharges to enter a totally civilian acquisition organization at comparable grades and positions without loss of tenure or benefits?

4.8 Does it make mandatory the requirement that operational experience in a weapon system is necessary prior to being assigned to a program in that warfare area; if so, how does it provide for civilians attaining such experience?

4.9 Does it require more military officers than are now in the acquisition workforce; if so, to what extent?

4.10 Does it require more civilian personnel than are now in the acquisition workforce; if so, to what extent?

4.11 Does it clarify who controls developing activities, test facilities, laboratories, the technology bases, plant representative functions and other key acquisition functions?

4.12 Does it open up possibility of defense contractors exploiting "uniformed military experts" against "pin striped technocrats; or, side-choosing and finger-pointing?

4.13 Does it clarify the role of the DCAA?

5. Political

5.1 Is it a short, medium or long-term solution; what is acceptable, and how is it achieved?

5.2 What sort of expectations will it raise: productive or counterproductive?

5.3 Will it impact congressional oversight; will it strengthen or weaken DOD-Congress working relationships?

5.4 Will it save the government money in the long run?

5.5 Is it similar in concept to the U. S. General Services Administration; if not, should it be?

5.6 Will it do for weapon systems what the Foreign Service has done for foreign policy?

5.7 Will it impact on NATO, other allies and friendly nations?

5.8 Does it foster or discourage institutionalization of an acquisition elitist bureaucracy?

5.9 Will it reduce "intervention points" where influence can be injected in the process?

5.10 What is its impact on the military's interface role with industry, and relations with industry in general?

5.11 Will industry be expected to organize along the same lines as government?

5.12 Will it foster strong improvements in ethics, morality and conduct between government employees and contractors?

5.13 What sort of "price" will have to be paid if it is rejected?

5.14 What advantages accrue to DOD if it is accepted?

6. Implementation

6.1 Can it be implemented with the stroke of a pen; is issuance of policy directives and reorganization shuffling sufficient?

6.2 Will it require gradual, deliberate and continued action over a period of time?

6.3 How should it be "sold" to the acquisition community, the Congress and the public?

6.4 What legal, institutional, administrative, and personality obstacles, etc. pose potential risky handling; how can they be dealt with?

6.5 Will house-cleaning of senior officials be required?

6.6 Has it been discussed with the Office of Personnel Management, employee unions, etc.?

7. Measurement

7.1 Does it clarify who provides DOD analysis and evaluation perspectives such as those now provided by ASD(PA&E) and DOT&E?

7.2 Will it require more reports and feedback than before?

7.3 How will the Inspector General's role impact it?

7.4 Can realistic milestones and checkpoints be established and adhered to?

7.5 Should these targets be part of the implementation plan?

CONCLUSIONS

The history of reform of the defense acquisition system is marked by a few comprehensive and thoughtful changes and reorganizations, interspersed with innumerable ad hoc and usually hasty fixes to emergent shocks and revealed or perceived problems.

Almost without exception one finds that the fixes (and, to a lesser extent, the major reforms) target only the symptoms of larger or more diffuse causal problems deep within the system; such fixes usually produce new and different problems of their own.

What is urgently needed is a broad framework within which to perform a thorough evaluation. Such a framework would be a means of assessing proposed changes to the system in advance - not after they are indelible; one that would enable the gauging of the full effects of potential alternations upon the entire system; and that would highlight probable system-wide costs and benefits.

This report is an attempt to provide such a framework.

APPENDIX A



APPENDIX A

DESCRIPTION OF SELECTED PROPOSALS OF 100TH CONGRESS

During the study we evaluated 15 bills of the 100th Congress against the theoretical criteria discussed in Section Three. These bills principally were proposals to improve the defense acquisition system by instituting one or more changes. Of those 15, six were selected for presentation herein as representative of the more comprehensive proposals. They best asserted or implied conditions which enabled the study group to answer the majority of questions expressed in the criteria.

Language of the remaining nine addressed very specific items in the broad topic of acquisition (e.g., restrictions on post-government employment for officers and employees of certain federal agencies) rather than the total system. The potential impact of these bills on the acquisition system would be to a lesser degree than would the six bills we selected.

Bills Evaluated

- S 237 Integrity in Post-Employment Act of 1988; Sponsor not identified; introduced to the House by Representative Bilbray (D-NV) as HR 4921
- S 2621 Department of Defense Procurement Improvements Act of 1988, Sponsored by Senator Dixon (D-IL)
- S 2674 Consultant Regulation and Reform Act of 1988; Sponsored by Senator Pryor (D-AR)
- S 2732 Department of Defense Acquisition Reorganization Act of 1988; Sponsored by Senator Roth (R-DE)
- HR 3345 The Office of Federal Procurement Policy Act Amendments of 1987; Sponsored by Representative Brooks (D-TX)
- HR 4319 Government Ethics Enforcement Act; Sponsored by Representative Schroeder (D-CO)
- HR 4900 Independent Defense Inspector General Act; Sponsored by Representative Boxer (D-CA)
- HR 4921 Integrity after Federal Employment Act of 1988; Sponsored by Representative Bilbray (D-NV)

- HR 4950 Defense Acquisition Agency; Sponsored by Representative Hertel (D-MI) and 65 co-sponsors
- HR 4956 Conflict of Interest in Defense Procurement; Sponsored by Representative Bennett (D-FL) and co-sponsors
- HR 5016 Defense Consultant Reform Act of 1988; Sponsored by Representative Bennett (D-FL)
- HR 5043 Post Employment Restrictions Act of 1988; Sponsored not identified
- HR 5048 Independent Procurement Corps Act of 1988; Sponsored by Representative Boxer (D-CA) and Representative Bennett (D-FL)
- HR 5106 Prohibition on Use of Certain Information in Award of Defense Contracts; Sponsored by Representative Hochbreuckner (D-NY)
- HR 5158 Consultant Registration and Reform Act of 1988; Sponsored by Representative Bennett (D-FL)

Summaries of Selected Legislation

1. S 2621: DEPARTMENT OF DEFENSE PROCUREMENT IMPROVEMENTS ACT OF 1988

Sponsor: Senator Dixon (D-IL)

DESCRIPTION OF BILL

1. Establishes responsibilities of the USD(A) to include:
 - . Centralized procurement of all property and services for DOD.
 - . Establishment and implementation of procurement policies and approval of exceptions.
 - . All contract administration functions.
 - . Authority over all competition advocates.
2. USD(A) may delegate authority to Senior Acquisition Executive (SAE) of Services if that delegation results in savings or is necessary to provide timely and efficient property or service.

SECDEF, in consultation with USD(A), appoints the SAE of each Service by and with the advice and consent of the Senate. SAEs report directly to USD(A).

3. USD(A) approves all major system FSD contracts.

4. Establishes "Unlawful Procurement Conduct," which essentially is the same as the provisions of paragraph 7, HR 3345, provided below. In addition: contractor to certify in writing to contracting officer that nothing unlawful under these provisions has taken place, and that those who participated in procurement will comply. The same requirement applies to government employees.

HR 3345, paragraph 7:

"7. Establishes "procurement integrity," making it unlawful for:

. A contractor to offer or promise future employment or business opportunity to a government employee whose agency is involved in procurement with the contractor.

. A contractor to give, offer or promise anything of value to government employee whose agency is involved in procurement with the contractor.

. Likewise, a government employee to seek anything of value, including future employment.

. A government employee involved in procurement to divulge to a contractor any bid or proposal, proprietary data or related contract information of other contractors.

. A contractor to receive any of the foregoing information.

. Other related restrictions on involvement of government procurement employees and contractors."

2. S 2732: DEPARTMENT OF DEFENSE ACQUISITION REORGANIZATION ACT OF 1988

Sponsor: Senator Roth (R-DE)

DESCRIPTION OF BILL

1. Centralizes procurement authority under USD(A) for all acquisitions including construction.

USD(A) is final decision authority for selection for the weapon system for which R & D is to be conducted and acquired.

2. Establishes a Defense Acquisition Agency (DAA) within DOD headed by USD(A), through which the USD(A) conducts systems acquisition.

Requires SECDEF to establish a special personnel system for DAA civilian employees regarding pay, removal, suspension, performance awards, recruiting, training, etc.

Allows military personnel to be detailed to DAA.

3. Terminates procurement authority of Services. Requires Service Secretaries and heads of Defense Agencies to determine and define their procurement needs and report such to USD(A). SECDEF and USD(A) may not revise those needs.

4. Requires USD(A) to approve all major programs prior to proceeding into each phase, evaluating:

- . The program's plans, requirements and need.
- . Commonality of parts and components if joint program.
- . The program's complexity and practicality.

Requires foregoing USD(A) review prior to obligation or expenditure of funds.

USD(A) may not delegate any of the foregoing duties to Service Secretaries.

5. Grandfathers all previous contracts, determinations, regulations, etc. made or begun prior to this Act. SECDEF may prescribe regulations for orderly transfer of proceedings.

3. HR 3345: THE OFFICE OF FEDERAL PROCUREMENT POLICY ACT AMENDMENTS OF 1987

Sponsor: Representative Brooks (D-TX)

DESCRIPTION OF BILL

1. Amends OFPP Act (41 U.S.C. 405) by giving OFPP Administrator authority for:

. Overall direction of procurement policy and procurement systems, and

. Authority for prescribing policies, regulations, procedures and forms relating to procurement and procurement systems.

The policies, et al, are implemented by the Federal Acquisition Regulatory Council and followed by the executive agencies.

. Procurement includes property, other than real property services, including R & D; and construction, alteration and repair of real property.

2. Provides provision for OFPP prescribing when DOD, NASA and GSA cannot agree on or fail to issue government-wide regulations.

3. Administrator directs Federal Acquisition Institute, located within GSA, which:

- . Promotes career management programs for professional procurement workforce.

- . Promotes and coordinates research and studies to improve procurement process.

4. Re-authorizes OFPP from 1988.

5. Establishes FAR Council to assist in directing and coordinating procurement policy and regulatory activities. Members are DOD (USD(A)), NASA, GSA and OFPP. Responsibilities:

- . Eliminate or reduce levels of review.
- . Coordinate and issue changes to FAR.

6. Establishes Cost Accounting Standards Board within OFPP, consisting of:

OFPP Administrator (chairman); 2 from Federal Government (1 DOD, 1 civilian agency); 2 from industry (1 financial, 1 acquisition/contracting); 2 CPAs from public firms.

Board has exclusive authority to make and regulate cost accounting standards and most principles to achieve equity, uniformity, and consistency governing measurement, assignment and allocation of costs to contracts.

Establishes mandatory requirements for use of cost accounting standards and principles by all executive agencies, and by contractor and subcontractors in contract dealings with Government in excess of \$100,000, with two exceptions. Administrator authorized waivers and to exempt classes or categories of contractors and subcontractors.

7. Establishes "procurement integrity," making it unlawful for:

- . A contractor to offer or promise future employment or business opportunity to a government employee whose agency is involved in procurement with the contractor.

- . A contractor to give, offer or promise anything of value to government employee whose agency is involved in procurement with the contractor.

. Likewise, a government employee to seek anything of value, including future employment.

. A government employee involved in procurement to divulge to a contractor any bid or proposal, proprietary data or related contract information of other contractors.

. A contractor to receive any of the foregoing information.

. Other related restrictions on involvement of government procurement employees and contractors.

Prescribes debarment procedures for contractor violations of the foregoing.

4. **HR 4900: INDEPENDENT DEFENSE INSPECTOR GENERAL ACT**

Sponsor: Representative Boxer and co-sponsors

DESCRIPTION OF BILL

1. Establishes Office of Defense Inspector General within the Executive Branch - "an independent and objective office," headed by the Inspector General, appointed by the President, Senate confirmation required.

. Terminates the DOD Office of Inspector General.

. The IG neither reports to nor is supervised by SECDEF.

. The IG cannot have been employed by a defense contractor or have been a military officer within 5 years prior nomination.

2. This office:

. Conducts and supervises audits and investigations relating to DOD programs and operations.

. Provides leadership and coordination, recommends policies for activities to promote economy, efficiency and effectiveness, and to prevent and detect fraud and abuse.

. Provides the means for informing the President and Congress.

3. The IG:

. Provides policy direction for, conducts and supervises audits and investigations of DOD.

. Reviews existing and proposed legislation relating to DOD and makes recommendations on its impact on economy and efficiency.

. Recommends policies to DOD for promotion of economy and efficiency in administration and preventing fraud and abuse.

. Recommends policies for DOD, other Federal agencies, state and local governmental and nongovernmental entities re economy and efficiency, prevention of fraud and abuse, and identification and prosecution of participants in latter.

. Be principal advisor to SECDEF re fraud and waste prevention and detection.

. Investigates; recommends corrective actions; reports expeditiously to Attorney General on potential violations of criminal law.

. Develops policy, monitors and evaluates adherence.

. Requests assistance from DOD audit, inspection and investigative units.

. Avoids duplication and insures cooperation with Comptroller General of the United States.

4. Requires semiannual report to Congress.

5. Establishes process for receipt and investigation of information from DOD employees.

5. HR 4950: DEPARTMENT OF DEFENSE ACQUISITION REORGANIZATION ACT OF 1988

Sponsor: Representative Hertel (D-MI) and co-sponsors

DESCRIPTION OF BILL

1. Establishes a Defense Acquisition Agency (DAA) within DOD, headed by the USD(A).

2. Prescribes DAA duties as responsibility for all DOD acquisition functions.

3. Establishes a civilian Defense Acquisition Corps, headed by the USD(A).

4. Establishes a Defense Acquisition University (DAU) to include all acquisition-related defense schools.

5. Requires SECDEF approval of major programs prior to entering initial R & D, FSD and production.

. Prohibits SECDEF or Service Secretary from obligating or expending funds until SECDEF approval.

. Prohibits SECDEF from delegating these powers to Service Secretaries.

DAA

6. Establishes DAA responsibility for all DOD acquisition functions, including construction.

7. Requires SECDEF to establish personnel system for DAA civilians, including:

- . Excepted from competitive service
- . Pay not to exceed SES maximum rates.
- . Removal.
- . Performance awards.
- . Career recruiting and training.

8. (Although bill language is unclear, it is believed initial appointments to the DAA staff would include military.)

DAU

9. Provides for separate schools within DAU to specialize in different acquisition areas.

Establishes standards and procedures for admission. Requires each graduate complete central curriculum of contracting and acquisition methodology.

6. HR 5048: INDEPENDENT PROCUREMENT CORPS ACT OF 1988

Sponsors: Representative Boxer (D-CA) and
Representative Bennett (D-FL)

DESCRIPTION OF BILL

1. Establishes an Independent Procurement Corps within the Executive Branch, headed by a Director, appointed by the President, Senate confirmation required.

2. Establishes an Office of the Inspector General for Defense Procurement as independent office within Executive Branch, headed by the IG, appointed by the President, Senate confirmation required.

Corps

3. Prohibits Director from having been employed by a defense contractor or served as military officer on active duty during 5-year period prior nomination. Director cannot

accept compensation for 5 years after leaving office from any company under contract with DOD during period in which Director served.

4. The Corps staff is civilian. Initially, military personnel can be assigned to the Corps but must be less than 1/2 the total staff numbers. Military personnel cannot be involved in supervisory or decision making. No military can serve in the Corps after 5 years from date of enactment of this Act.

5. Civilian personnel matters prescribed include:

- . Civilian staff are paid comparable with private industry but not to exceed SES pay scales.

- . Must be trained professionals in acquisition fields.

- . Are under merit pay system.

6. Prescribes Corps duties:

- . Receive information from Armed Forces re need and justification for major systems.

- . Develop and produce major systems.

- . Operate as sole negotiator with private sector in doing business with DOD.

7. Prohibits staff members from accepting compensation for 3 years after employment terminated from any company under contract with DOD during period served on staff.

8. Establishes USD(A) as chief liaison between DOD and Corps, and allows direct communication between Corps and DOD personnel.

9. Requires annual report to President, Congress and SECDEF.

IG

10. Prescribes duties of IG:

- . Initiate, conduct, supervise and coordinate audits and investigations of programs and operations of Corps.

- . Review legislation and regulations for impact on economy and efficiency.

- . Provide policy direction for Corps, and recommend policies for Corps and other Federal and other governmental and non-governmental entities on economy and efficiency.

. Monitor and evaluate Corps adherence to policies and procedures.

. Coordinate with Comptroller General.

. Submit semiannual reports.

11. Prescribes powers of IG:

. Access to all records available to Corps.

. Make investigations and reports relating to administration of Corps.

. Request information and assistance from other activities.

. Require information by subpoena.

. Receive and investigate information provided by Corps employees re possible violations.

APPENDIX B



APPENDIX B

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APPENDIX C



APPENDIX C

THE DEFENSE ACQUISITION SYSTEM DESCRIBED

A Managed Acquisition System

The reader needing to be refreshed in the defense acquisition system may find this Appendix helpful.

DOD Directive 5000.1 (September 1, 1987), the basic acquisition management document, defines the system:

[The] Department of Defense Acquisition System [is] a single uniform system whereby all equipment, facilities, and services are planned, designed, developed, acquired, maintained and disposed of within the Department of Defense. The system entails establishing policies and practices that govern acquisitions, determining and prioritizing resource requirements, directing and controlling the process, contracting, and reporting to Congress.

We recognize that defense acquisition is a managed system. Therefore, in this report, the term "defense acquisition system" subsumes the word "management" after "acquisition."

Acquisition vs Procurement

The terms "acquisition" and "procurement" are often incorrectly used as synonyms. The term "acquisition" (as the above definition indicates) means the entire process that begins with requirements establishment and is followed by the research, development, fabrication, test and evaluation, production, purchase, support, and ultimate disposal of military systems that respond to those requirements. The narrower term "procurement" means the mechanical process of legally contracting for and buying goods and services for the Government. The process of "procurement" is subsumed in the word "purchase" above. "Procurement", therefore, is a sub-set of the broader term of "acquisition".

An informal description of the DOD acquisition management system might be stated as follows:

It is a system of people and organizations, the purpose of which is to support national strategy by (1) determining what materiel should be in the hands of the Armed Forces at specific times in the future, so they may optimally fight against foreseeable forces, and (2) providing that materiel in a cost-effective mix, properly supported, at a cost the country can afford.

The U. S. Approach to Acquisition Management

The U.S. defense acquisition process is a joint undertaking of three national institutions: the Executive Branch, the Legislative Branch, and the private sector, chiefly defense industry and supporting financial markets. Each has a unique role.

. The Executive Branch (DOD), with industry and academic advice, develops and proposes the materiel acquisition program, and supervises competition in (and operation of) industry in the actual execution of the approved program.

. The Legislative Branch (Congress), through both legislation and less formal expressions, adjusts, authorizes, and funds the acquisition program proposed by DOD, and then oversees and audits the execution of the program.

. The private sector (industry), primarily the firms that constitute the defense industry, competing in a relatively open market and seeking to earn a competitive return on invested private capital, develop, build, deliver and provide support for the materiel items making up the program.

These entities constitute the major stakeholders in the defense acquisition management system. They interact with each other and depend upon each other. When considering a specific item of defense materiel, the separate elements interact with the organization in DOD which has responsibility for management of that specific item, the program manager (PM) for the given weapon system. This interaction is portrayed in Figure 2.

ACQUISITION PARTICIPANTS INTERACTIONS

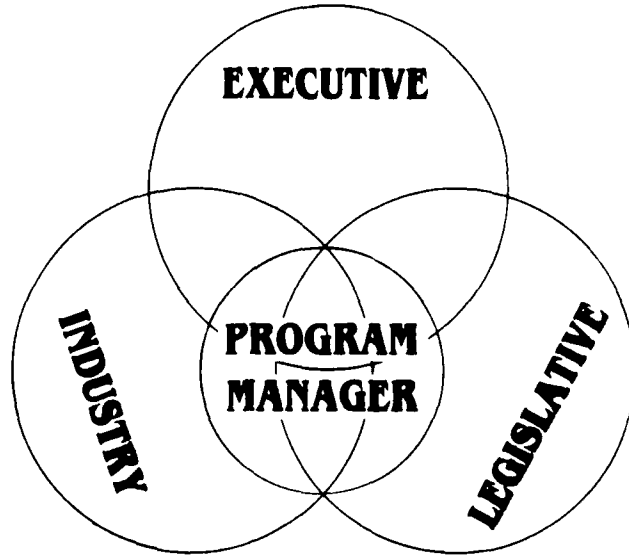


FIGURE 2

The DOD Element of the Defense Acquisition System

A Description of the DOD Element

Before we can discuss useful changes to the defense acquisition system, we must understand the structure and process of the present system. Significantly, most proposals appear to target only the DOD element. Apparently the imperative to change the other elements is secondary or peripheral. However, discussing changes to DOD is more difficult than it may seem because recent legislation, as well as changes in DOD policy, have produced a number of revisions to the system, not all of which have been firmly placed into practice.

There is a single acquisition system for the entire Department. Policy definition, the integration function, oversight responsibilities and the authority for major program milestone decisions reside in the Office of the Secretary of Defense (OSD). Day to day management responsibility is delegated to the military Services and, for particulars, to the PM. The Service headquarters, intermediate commands and individual program offices are staffed with both military officers and civilian officials. The military generally rotate between acquisition assignments and operational tours, some specializing in acquisition and others in operations. The civilians usually are career acquisition career specialists. Both military and civilian professionals may be either dedicated to a particular program or may provide their speciality services to a number of programs.

In addition to DOD Directive 5000.1, DOD Instruction 5000.2 (also September 1, 1987) provides implementing and detailed guidance as described below.

DOD Acquisition Philosophy

Defense acquisition management is governed by an eleven-point philosophy that includes both effectiveness and efficiency considerations. For major acquisition programs (essentially, those large dollar or high visibility programs requiring approval in OSD), the system must:

1. Support the operational objectives of the U.S. Armed Forces in a timely, efficient, and effective manner, and conform to the requirements of OMB Circular A-109.

2. Operate a streamlined command structure, with no more than one management tier between the program manager (PM) and his Service Acquisition Executive (SAE), and no more than two tiers between the PM and the Defense Acquisition Executive (DAE).

3. Normally be divided into five well-defined development phases, with Secretary of Defense (SECDEF) decision points (milestones) marking the transitions between phases. For each program, however, the activity in each phase will be individually tailored to minimize acquisition time and life-cycle costs, consistent with appropriate treatment of program risk, urgency, and test results.

4. Cause the military departments to engage in continuous analysis and review of assigned mission areas, to identify deficiencies and recommend more effective ways of performing assigned military tasks, particularly by reducing deficiencies, establishing new capabilities, and reducing the costs of ownership and operation of military systems.

5. Validate the need for proposed new systems and show that the need cannot be satisfied by better use of existing or modified systems, or by a cooperative Allied development program.

6. Thoroughly investigate the possibility of satisfying emergent requirements through common-use (joint) solutions and programs.

7. Consider affordability, in terms of cost, priority, and the probable availability of fiscal and manpower resources, at every program decision point and annually in the DOD Planning, Programming, and Budgeting system (PPBS). A new program may not start unless sufficient resources can be programmed to permit its rational accomplishment.

8. Minimize changes to program funding and requirements to promote stable program planning and efficient execution.

9. Tailor the acquisition strategy of each program to minimize the time required to deliver the product, consistent with common sense and sound business practice (see point 2).

10. Explicitly consider the short- and long-term implications of proposed acquisition programs on the viability of the U.S. defense industrial base.

11. Seek appropriate opportunities for international cooperative development programs, in order to promote the highest practicable level of Allied system standardization and interoperability.

Even though less-than-major program management is delegated to the Services, DODD 5000.1 nevertheless states that the above philosophy applies across the board to all DOD programs. Only the

details of management can be altered to suit individual Service needs.

Administrative Machinery

This philosophy is implemented by administrative machinery including elements of each of the Services, the Joint Chiefs of Staff (JCS) and OSD.

. **The Defense Acquisition Board (DAB).** This is the primary forum for resolving acquisition issues and providing advice on acquisition matters to the SECDEF. The DAB is chaired by the Defense Acquisition Executive (i.e., the Under Secretary of Defense (Acquisition) and vice-chaired by the Vice Chairman of the JCS. DAB membership includes senior officials of OSD and the SAEs. The DAB is supported by ten warfare/mission oriented committees that review acquisition programs in preparation for milestone decision meetings, and who are charged to identify and, where possible, reach consensus on program issues, to identify issues for DAB consideration, and to make recommendations to the DAB.

. **Major Players: The Acquisition Operations Chain.** The four key operating executives in the acquisition management chain are:

The Under Secretary of Defense (Acquisition), USD(A), the third ranking official in DOD and the principal acquisition official. The USD(A) chairs the DAB and recommends acquisition actions to the SECDEF.

The Service Acquisition Executive (SAE). Appointed by the Service Secretary, the SAE is the senior acquisition executive of each military department responsible for administering that Service's acquisition programs.

The Program Executive Officer (PEO) is a senior military or civilian official who reports to the SAE and administers an assigned set of a Service's programs. (There are multiple PEOs in each Service.)

The Program Manager (PM) is the official responsible for managing a specific acquisition program and reports to a PEO or to the SAE.

Phases and Milestones of the Acquisition Life-Cycle Management Process

Defense systems normally take from 8-12 years to complete. Completion means deploying, or fielding, the system so that a pre-designated number of operational forces have the system and

the capability of using it, a point called initial operational capability (IOC).

During those 8-12 years, the system, called a program, is controlled through a series of steps involving periodic business and technical decisions. These decisions are scheduled into the overall strategy to acquire the system. They provide acquisition officials the framework with which to review major programs, monitor and administer progress, identify problems and make corrections. Most new systems follow the same formatted and predictable life cycle.

Phases

Pre-Initiation. Although not a formal phase of the life cycle process, the Pre-Initiation period prior to Milestone 0 program approval consists of months or years of mission area analysis (MAA) and other evaluations and analyses to determine the requirements for a new start. The result of this effort is a document called the Mission Need Statement (MNS) which is submitted prior to or with the program objectives memorandum.

Concept Exploration/Definition (CE) Phase.

Alternative concepts are identified and explored to satisfy the mission needs. Information is acquired to select the best alternatives for system concept development. An acquisition strategy is developed to guide the program emphasizing transition into demonstration/validation phase. CE is a relatively short (1-2 years), intense period of activity focusing on selecting best alternative solutions for development. Uncertainty is high, and thorough planning is critical to program success. Innovativeness is essential. The phase's output is paper--studies, reports, recommendations. No hardware is built; models are optional.

Concept Demonstration/Validation (D/V) Phase

The purpose of D/V is to verify the preliminary technical design, engineering and feasibility of competing concepts, and to select the best alternative systems for full scale development. Usually, the system is not a complete ready-to-go system, but a series of subsystems yet to be assembled. Key activities include demonstrating and validating candidate concepts and performing tradeoff analyses, risk analyses and laying the groundwork for production and support. D/V is usually 2-3 years. D/V success depends upon acquisition strategy, reducing risk, adequacy of prototypes and adequacy of contractor-furnished data. The bottom line issue top management must resolve: is this program really what we want to do the job?

Full Scale Development (FSD) Phase

The purpose of FSD is to complete system design and development, achieve readiness for production, and reduce risk to production and support of the selected system. Key activities include transitioning from development to production, system engineering (making sure all the activities and disciplines come together properly) and T&E - both development (DT&E) and operational (OT&E). The user -- operating forces -- who ultimately will use the system in the field become increasingly involved, particularly regarding planning for deployment. The program will be approved for production only if test requirements are met. As a general rule, production on large systems begins slowly during late FSD at a low rate, called LRIP (low rate initial production). The output of FSD is a completed system ready for production. It is perhaps the most complex, difficult phase (3-5 years).

Full Rate Production/Initial Deployment (P/D)

The purpose of P/D is to produce authorized quantities on schedule and within budget, achieve a high level of operational readiness for the deployed system and meet the established IOC date. The schedule objective all along has been to meet IOC. Driven by the threat, IOC has been determined as the time when enough systems are deployed in a pre-determined number of the operating forces so the Service has the capability to warfight with this system. Subsequently, when virtually all systems scheduled for deployment are deployed, the system then reaches full operational capability. At some eventual point the program usually is turned over to another office for management for the remainder of the life cycle (including disposal). P/D is characterized by a shifting of emphasis from engineering design and development to producing, fielding and supporting the system.

Operations Support (OS) Phase

The OS phase accounts for the system in use and in inventory. The phase begins at about IOC or, 1-2 years after production begins, when the Milestone IV decision is made. The milestone reviews the system's operational readiness for use and whether its logistics support system is established and open for business, i. e. if the network of training facilities, supply depots, maintenance activities, requisitioning procedures, etc., and the anticipated spares, technical manuals, test equipment, etc. are available. The milestone also reviews affordability and life cycle costs now that the system has been in service use. Feedback from users in the field to the PM or management office is essential during the OS phase. Feedback generates product improvements, alterations and plans for future modifications or follow-on systems.

Milestones

Milestone decisions for major programs are made by the Secretary of SECDEF after program review by the DAB and recommendation by the DAE.

There are six milestone decision points, 0 through V. Milestones IV and V were added in 1987 to reflect the most recent revision to DOD Directive 5000.1.

Milestone 0 - Program Initiation/Mission Need Decision. After submission of a Mission Need Statement setting forth requirements needed to meet the threat, MS 0 occurs when the MNS is first approved either in the POM as part of the resource allocation process, or by separate means. The SECDEF makes the decision for a major program through issuance of the Acquisition Decision Memorandum (ADM). Permission is granted to proceed with CE when funds are available.

Milestone I - Concept Demonstration/Validation decision. Progress to date is assessed and permission is granted to proceed to next phase, Concept Demonstration/Validation.

Milestone II - Full Scale Development decision. Progress to date is assessed, and permission is given to proceed to next phase, Full Scale Development. It is also called the Program Go-Ahead decision, with an okay to complete development and produce the system as long as significant program breaches do not occur.

Milestone III - Full Rate Production decision. Progress to date is assessed, and permission is given to begin full rate production and deploy the system.

Milestone IV - Operational Readiness and Support Review. Reviews deployed (fielded) programs 1-2 years after initial deployment to re-examine the areas of logistics readiness, sustainability, support objectives, training and manpower.

Milestone V - Major Upgrade or System Replacement Decision. Review occurs 5-10 years after initial deployment and encompasses modifications, upgrades, changes in threat, changes in technology and consideration of whether to start a major new program.

DOD policy requires the tailoring of the above process to fit the needs of each individual system, with specific emphasis on skipping or shortening the content of any particular phase, where appropriate, in order to shorten acquisition time or lower life-cycle costs.

Obstacles to Doing Things Right

As is the case with all policy, the above process represents an ideal. Obstacles to its realization have frustrated, and will continue to frustrate, early or even eventual installation of an efficient acquisition system, whether it be the one that DOD now utilizes, or some alternative.

Some difficult obstacles to "doing things right" include:

. Legitimate and intractable differences of interests among the stakeholders of the military acquisition process. In the absence of a national military emergency, a panoply of special and regional interests, none of which contribute to efficiency and most of which frustrate it, clamor for consideration.

. Legitimate differences in the purpose, and therefore the results of, the life cycle management process, and the planning, programming and budgeting system. The life cycle management system considers each program in isolation, judges it on its programmatic merits, and attempts to optimize its efficiency of execution. On the other hand, the PPBS annually places each program against all others in a funding-constrained utility-maximization competition. PPBS decisions frequently drive programs away from the execution optimum and thereby substantially increase the total costs and lengthens schedules.

. Conflicts between normal command chains (which judge an officer's performance for promotion purposes) and the new, shortened, acquisition executive chain.

. The impacts of special advocacy. When special needs arise (either operationally or politically) for consideration of criteria not immediately related to programmatic efficiency (e.g., small business), an advocate with go/no-go power is often made the action mechanism. This mechanism is inordinately powerful, and, when not discreetly exercised, can lead to program paralysis.

. The requirement for appropriations of budget authority to fund programs over multiple years. This leads to instability in plans, with resulting increases in acquisition costs, when annual appropriations are inconsistent with funding requirements during those multiple acquisition years.

. The practice of responding to individual instances of wrongdoing by attempting to constrain the total system so as to make such wrongdoing impossible. The system becomes unable to perform its designated function and new forms of wrongdoing often emerge.

. The practice of attempting to use audits and reviews as real-time control devices rather than post-mortem devices to obtain information for future system improvement. This practice can freeze the system and diminish efficiency.

-
For defense acquisition officials, making acquisition efficient--doing things right--therefore is very difficult. It is likely real improvements will be small and incremental rather than sweeping and highly visible.
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APPENDIX D



APPENDIX D

FINDINGS

In using the methodology described in Section Three to evaluate certain bills of the 100th Congress, the study group naturally identified a number of by-product issues pertaining to improving the defense acquisition system.

These additional "findings" are listed below for the reader's perusal.

. A comprehensive set of criteria with which to evaluate proposed changes to the defense acquisition system did not exist.

. There were three limiting factors pertaining to most legislative proposals evaluated. They tended to be quite limited in scope; most addressed only one or two aspects of the acquisition spectrum rather than the totality of the system. The proposals are not specific enough to determine whether the change envisioned would actually accomplish the results indicated in the legislative language and the apparent intent of the sponsoring member(s) of Congress. Most proposals do not adequately treat the transition phase from the current status to the proposed system.

. Weapon systems, unlike consumer goods, do not come completely within the normal professional purview of civilians. A purely civilian weapon acquisition agency has an obvious drawback: unless they had applicable military service, most civilians have neither used the weapons being acquired nor been involved in military tactical operations.

. It is generally accepted in the acquisition community that an individual who has actually lived in the using environment has a better understanding of special needs of that using organization. Because of this, military personnel have not only a rightful but an essential place in the acquisition process.

. There is a need for a more professional acquisition community. This virtually requires a dedicated acquisition organization, made up of competent professionals. There should be adequate opportunity for experience and advancement, well established education and training requirements and facilities, and there must be means to remove persons not performing. True professionalism leads to better planning, less likelihood of fraud and abuse, and less turnover in personnel. Better planning will result in

fewer changes to planned baselines and perhaps more realistic costs and schedules.

. The acquisition community should include both civilians and military. Excluding either group would mean an automatic loss of a qualified labor pool and the loss of expertise the excluded community brings to process (i.e., civilians with business and production experience, military with operational experience). The civilian professionals should emphasize persons with experience in industry. This will help ensure that considerations of the industrial base, its profit needs and risk factors, will be acknowledged in acquisition, and that current knowledge on production methods is implemented in contracts.

. The military acquisition personnel should be designated acquisition professionals and their careers managed toward that end. Their rotation should be to operational commands for experience in weapon use, but their advancement must depend primarily on their acquisition experiences. This concept would be a change from the system currently used by some Services wherein "operational" personnel spend most of their career in operational assignments with an occasional tour in acquisition.

. The acquisition community should be established within the defense department. Changing to an external agency will cause turmoil in the short (five year) term, ambiguity in the lines of authority during the transition, increases in the review process in both the short and long term, and perpetual difficulty in coordination between multiple agencies.

. Sensitivity to "revolving door" issues should be tempered by the need to incorporate modern research and production methods into defense acquisition, and to ensure that defense acquisition policies aid the industrial base. Restrictions on career changes from defense to industry and vice versa entail both obvious and hidden costs to the acquisition community. Unless each sector has familiarity with the other, the costs of possible abuse will be more than offset by losses in expertise. Again, the development of a professional cadre of acquisition personnel will tend to reduce abuses.

. Instability--particularly fiscal--whether generated within or outside the acquisition community is a major source of problems.

. An increased stability to the topline defense budget is needed. Concepts such as five year budget growth commitments and two year budgets are considered

positive steps. While not independent of threat, the topline budget is also dependent on the economy; changes that incorporate the best economic planning into the requirements/threat tradeoff would be considered beneficial.

Improvements to internal planning of resource allocations are needed. Even if topline budgets are known, internal planning does not currently ensure reasonable stability in allocations. Developing the methodology for comprehensive planning, within fiscal constraints, and still matching resources and requirements, is now possible with modern computers, software, and advances in information system technology and simulation methods. The defense acquisition system has not incorporated these planning system advances.

The influence of cost estimating should be strengthened. While costs estimates for a separate system may be accomplished as required, and may be proposed in early POM preparations, those cost estimates do not necessarily constitute the amounts entered into the final program and budget submission. Approved results of independent cost estimates (ICEs) should become the driving force in a continuing affordability evaluation of that program. Assuming it remains affordable, the estimates should constitute the appropriate program and budget estimates. Such direct linkage would enhance the required periodic affordability assessments and better ensure resource requirements are accurately identified and thereafter included in the budget process. It is vital that the ICEs be truly independent and unbiased.

APPENDIX E



APPENDIX E

STUDY GROUP MEMBERS

Defense Systems Management College

BG Edward Hirsch, USA (Ret.), Study Director

Chairman, Center for Acquisition Management Policy

For virtually all of his 35 years of active military service, eight years in defense industry and four years at DSMC, General Hirsch has been either a user, evaluator or acquirer of military weapons systems. This experience includes service as a systems staff officer on the Department of the Army (DA) Staff, senior evaluator for the OSD Weapons System Evaluation Group, Director of the Air Defense Directorate at Headquarters DA, Senior Air Defense Advisor to the Army Chief of Staff, Deputy Director of Requirements at HQDA and the industry Deputy Program Manager for a major program. As Chairman of the Center for Acquisition Management Policy, he directed the OSD sponsored Acquisition Enhancement Program that is currently striving to improve the professionalism of the defense acquisition work force. His views and articles have been published in Defense News, Program Manager Magazine, Signal Magazine, and the Federal Management Journal.

Mr. James W. Abellera

Professor of Research Management

Mr. Abellera formerly directed the defense and foreign policy studies program of the American Enterprise Institute (AEI), and was Secretary of the Institute from 1981-86. He was managing editor of the bimonthly AEI Foreign Policy and Defense Review Journal. While at AEI he published policy studies on the future of the U. S. and Soviet navies. U. S. defense budgets and spending decisions, and worldwide arms sales. Prior to AEI he served as senior economist for the President's Defense Manpower Commission and authored the Commission's Ten-Year Outlook for the All-Volunteer Force. Currently he conducts research at DSMC on the costs of spending instability in defense acquisition. He is a graduate of the U. S. Air Force Academy and UCLA.

Mr. C. Del Babb

John Richardson Memorial Industry Chair, Executive Institute

Mr. Babb came to DSMC from IBM, Manassas, Virginia, where he was Director of Programs, Full-Scale Development. His service with IBM began in 1950 and includes duties: Technical Engineer responsible for advanced development of a high-accuracy digital resolver; participant in MA-2 bombing and navigational equipment; AN/ASQ-28(V)BNS (Owego, NY) program office, including Technical Coordinator responsible for engineering effort and later Systems Engineering Manager; Gemini Program Manager; overall IBM FSD Manager of space programs; Director of Avionics Systems (Owego); overall FSD Manager of MK II computer program; TRIDENT Program Manager; Director of development programs for submarine ACS. He holds a BSEE degree from California (Berkeley).

Dr. Rolf Clark

Professor of Systems Acquisition Management

Dr. Clark is a former Naval officer with considerable Pentagon based experience in defense economics, planning and cost analysis. He has conducted research in defense acquisition and resource allocation, leading to a published book on system analysis, and numerous articles relevant to defense acquisition, budgeting and planning. He has conducted analyses for Brookings Institution, Office of Naval Research, The George Washington University, Georgetown Center for Strategic and International Studies, American Enterprise Institute, Center for Naval Analyses, and Institute for Defense Analysis. Currently at DSMC he is engaged in research on the effects of instability on defense spending and force levels. Dr. Clark earned his MS (industrial administration) from Yale, MA (operations research) from the Naval Postgraduate School and Ph.D. (managerial economics) from Massachusetts.

Mr. Wilbur D. Jones, Jr.

Professor of Systems Acquisition Management

Mr. Jones has held a wide variety of positions during his 25 years of government service. He has been the Speech Writer to the Under Secretary of Defense (Acquisition); Head, Acquisition Logistics Branch, Office of the Chief of Naval Operations; Assistant to Congressmen Ed Reinecke (R-CA) and Barry Goldwater, Jr. (R-CA); Staff Assistant and Advance Representative to President Gerald R. Ford; and Assistant to two U. S. Cabinet Officers. He is a Captain, USNR (Ret.). At DSMC, he has taught more than 600 platform hours on nearly 40 acquisition subjects. He has authored numerous publications while at DSMC: the book Congressional Relations and Involvement: A Guide for Department of Defense Acquisition Managers, First Edition 1986 and Second

Edition to be published January 1989; the book Glossary: Defense Acquisition Acronyms and Terms, Second Edition 1985, Third Edition 1987; the pamphlet Introduction to Defense Acquisition Management, to be published December 1988; as well as articles in Program Manager Magazine and other media on the subjects of acquisition program management, ethics and congressional activity in acquisition.

COL J. Gerald Land, USA (Ret.)

Professor of Systems Acquisition Management

Prior to joining the DSMC faculty in 1987, Colonel Land served twenty-six years active duty with the U. S. Army. His principal duty specialities included comptrollership (separate specific involvement with appropriations for operations and maintenance, procurement and research, development, test and evaluation), acquisition management and intelligence. Organizational levels of assignment included three tours on the Department of the Army staff, the staff of Army Materiel Command, the staff of a medical research institute, and with several operational elements, to include commanding two intelligence units. In addition to holding advanced degrees in accounting and contracts management, he is a Certified Public Accountant and is currently pursuing a Ph.D. in Higher and Adult Education.

Dr. Fred Waelchli

Professor of Management; Associate, Center for Acquisition Management Policy

Educated as a physicist, Dr. Waelchli worked for 15 years in a spectrum of acquisition management operating positions, primarily related to financial management of Navy Department Research, Development, Test and Evaluation program. Since joining the DSMC faculty in 1979, he has taught, conducted research, consulted, and published in the areas of acquisition management policy and process, systems management, strategic management, defense industry finance, cost estimating, decision analysis, DOD financial management and the Planning, Programming and Budgeting System. His consulting associations include congressional committees, defense industry associations and firms, government activities such as the Central Intelligence Agency, General Accounting Office, and the Office of the Secretary of Defense, and acquisition program management offices in all four services and the Coast Guard. Dr. Waelchli holds a BS degree from Penn State and a Masters and Doctorate from George Washington University.

Mr. Gregory T. Wiersbicki

Provost

Mr. Wiersbicki's government service career spans 19 years, beginning as a Navy jet aviator and member of the Air-to-Air Missile Branch, Naval Air Systems Command (NAVAIR). As a civilian, he served in the Project Control Branch of the F/A-18 Program Office, NAVAIR; the RPMA Branch, Naval Facilities Engineering Command; Assistant to the Chief of Naval Operations for RPMA Management; Assistant Director for Construction Programs, Office of the Secretary of Defense. Holder of an MS in electrical engineering (Rensselaer Polytechnic Institute), an MBA (George Mason) and masters in Management Science (Tulane), he is pursuing a doctoral degree in strategic management systems and general management systems (George Washington). He came to the DSMC faculty in 1983. His primary responsibilities as Provost are Chief Academic Officer and Deputy Commandant for the College.

APPENDIX F



APPENDIX F

**TOWARD A SET OF GUIDING PRINCIPLES FOR
DEFENSE ACQUISITION MANAGEMENT**

**BG EDWARD HIRSCH, USA (RET)
DR. FRED WAELCHLI**

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office or person.**

December 1988

**TOWARD A SET OF GUIDING PRINCIPLES FOR DEFENSE ACQUISITION
MANAGEMENT**

The defense acquisition system does its work--millions of transactions that consume billions of the taxpayers' dollars every year--in the intense light of public scrutiny. This is as it should be. But this scrutiny (well-intentioned or otherwise) is seldom performed at the level of strategic goals and objectives, nor is it focused on systemic inadequacies or flaws in the process itself. Too often, the oversight or critical review is triggered by some jolting event: an actual or perceived anomaly or an instance of waste, fraud or abuse; and the analysis is conducted at the level of the visible symptoms. The resulting actions are almost always quick-fix solutions, designed to repair the most recent specific defect. Even those solutions developed more deliberately rarely consider the total national defense picture.

Any significant attempt to improve our acquisition system must consider the full scope and diversity of the great triumvirate of institutions that form the system. It is the purpose of this paper to "elevate our sights"--to critically consider the culture within which the acquisition system operates, and to offer for consideration a set of broad guiding principles which, if applied to day-to-day acquisition activities, could create an environment which permits and supports constructive cultural changes in the acquisition system.

The acquisition management system is a joint undertaking of three mighty U.S. institutions--the great triumvirate of the Executive branch, the Legislative Branch, and the defense industry. These institutions encompass a host of infinitely varied individuals, with equally varied agendas and motives, some of which overlap, but most of which do not. Each of these institutions is, in turn, accountable to a particular community of constituents or stakeholders. These stakeholder communities are as diverse as the national population (which, in fact, is what they are). The area of direct overlap of stakeholder interest, therefore, is necessarily limited. Absent some powerful unifying force, such as a national defense emergency, there is no long-term shared imperative to enforce coherence of effort and purpose.

The acquisition-focused organizations and individuals in each of the three institutions make up what is called the "acquisition community". This community recognizes a set of common interests in systems acquisition, but its members must also respond to divergent agendas, motivations, and perspectives of their root organizations and stakeholders.

The problems produced by this divergence of interests have been recognized for a long time. A special form of management, program management (a single program manager for each significant program, vested with sufficient authority, responsibility, and resources to successfully prosecute the program), has evolved to cope with the institutional diversity and the inherent complexity of weapon systems development. Program management and the program manager have become institutionalized in DOD and are a critical

element of the acquisition environment. However, in practice, the program manager generally has not been given the requisite authority and resources to do the job.

The system described above is sketched in Figure 1. The four interior circles represent the defense acquisition segments of the three national institutions, and the program manager (strictly speaking, a member of the Executive branch), who is symbolically (and perhaps actually) in the middle. He or she holds the ultimate responsibility for fusing appropriate elements of the three institutions into an effective management system that will design produce, field, and support an economical and capable weapon system.

The lines joining the circles represent relationships between the acquisition-focused elements of the three institutions and the program manager. This part of the sketch (the four connected circles) represents the "acquisition community". The outer ring of overlapping segments represents the institutional stakeholders and their interrelationships; the full diagram of the ring and the four inner circles is called the "Stakeholder model" of the entire acquisition management system.

In a rudimentary sense, the acquisition management system can be represented as the sum of the processes that go on within each of the interior circles, plus the relationships that join the circles. Each interior process and each relationship that connects members of the acquisition community, however, is conditioned by the interests of the various colonies of stakeholders in the outer ring.

A STAKEHOLDER MODEL OF THE DEFENSE MATERIAL ACQUISITION SYSTEM

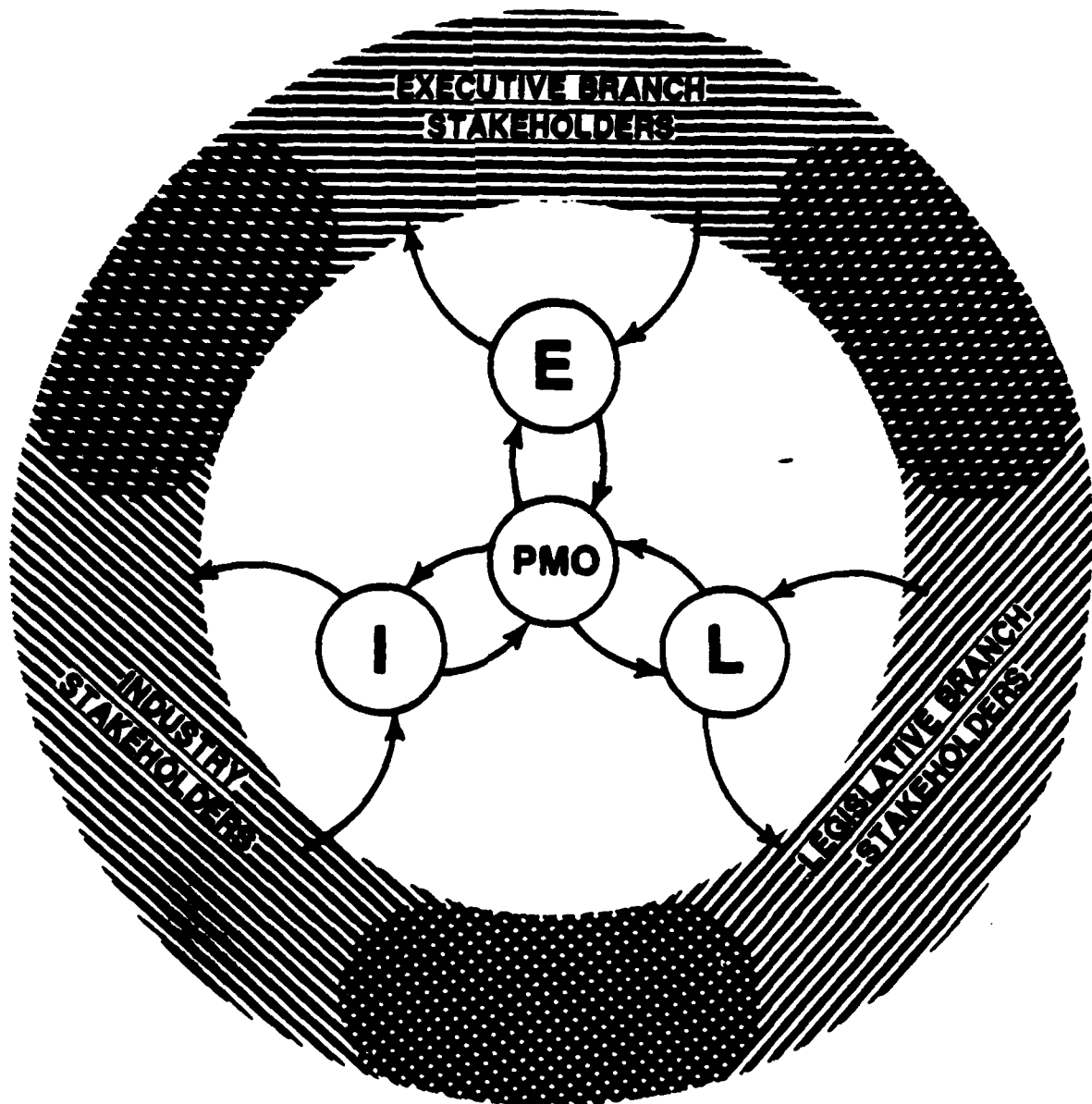


FIGURE 1

PMO - PROGRAM MANAGEMENT OFFICE

The challenge historically has been (and remains to this day) as follows: Given the great diversity of the acquisition world, represented by the model, how can we best acquire the military material necessary to support our strategic objectives?

As a nation, we choose to acquire our military material and equipment through a privately financed, privately managed, relatively free, and non-coercive market system. In this system, privately owned assets are invested in the defense industry, with the expectation of a competitive return.

The use of a for-profit industry is a deliberate choice. Although the industry is (and has always been) partially regulated, and notwithstanding the enduring and spirited debate between supporters of a relatively free-market defense industry and those who favor further regulation or even nationalization, we currently seem to operate on the belief that a relatively free industry will do a "better" job of weapons development and support than would government, or a more stringently regulated, or nationalized, industry.

Much of this system's appeal seems to lie in the idea of "competition," as that concept is idealized in the economist's "free" market model; an automatic regulator that insures (among other things) lowest prices for commodities and also fosters the entrepreneurial desire to escape the commodity market; to find or develop niche products that are not commodities.

Defense, however, does not deal (in this instance) in commodities. Weapon systems are innovative products developed

specifically for (and in continuous consultation with) the DOD customer. In DOD developmental procurement the customer and supplier maintain a continuous relationship, in contrast to the transactional, one time, relationship that typifies a commodity market. The form of the defense material market is partially-regulated oligopolistic competition. A salient question then: are we attempting to impose on acquisition a form of free-market competition that is not effective in this kind of market?

Historically, the Government has relied on the defense industry to provide the government with military material and related services in accordance with contracts awarded (generally) through free and open competition. Recently, we have increasingly demanded that such competition be price oriented and be introduced (and re-introduced) into the process at virtually every juncture.

Given the competitive nature of our society and the long history of apparent benefits from free-market competition, this approach, rationally applied, often makes good sense. In fact, we have written this philosophy into law in the Competition In Contracting Act (CICA).

But there is also another, almost diametrically opposed, practical, proven, philosophy of competition, based on quality and life cycle cost considerations. It is the approach espoused by Dr. W. Edwards Deming and his followers. A key element of this approach is the idea of the "Loyal Supplier". In this concept, the customer initially competes to find the "best" supplier and then, in effect, makes him a member of the family. Once the

original competition ends, and delivery of quality goods or services begins, new suppliers are no longer actively or routinely sought at every development or production decision point. When competition is appropriate, a new supplier may be selected when he can establish his superiority over the incumbent in terms of quality and life cycle costs.

Central to this approach is Dr. Deming's Conviction that we must:

End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.

Of course, the Department of Defense, in determining its competition policy, cannot blindly adopt the Deming philosophy, any more than it should blindly adhere to a doctrine of price-only competition. Surge capability and industrial base issues must be considered along with quality and price. The crux of the matter is the intelligent application of competition when and how it makes good sense--which is what any wise and prudent buyer should do. And that, above all, is what the Department's acquisition participants should be--the Government's wise and prudent buyers.

Top officials of the Department of Defense have indicated a desire to turn the acquisition process in the direction of the Deming philosophy. Dr. Robert Costello, the Under Secretary of Defense for Acquisition, has initiated a policy movement toward Deming's concept of Total Quality Management (TQM)".

But this shift will not be easy. It will require more than mechanical changes in procedures. It will require cultural changes throughout the entire "Great Triumvirate". DOD leadership must continuously and vigorously promote the cultural and environmental changes necessary if the "Total Quality Management" approach is to succeed. This will have to be a long-term effort that lives beyond the tenure of today's political appointees and elected officials. Significant changes must be launched and sustained by top management and must be supported and nurtured by every participant in the system. These kinds of changes, even in well-managed organizations, take many years to institutionalize.

Our democratic state does not normally permit authoritarian control to dictate the behavioral changes and impose the "correct" course of action needed (as one example) to bring about the timely institutionalization of "TQM" in DOD and in the defense industry. Yet, for successful national defense, it seems essential that we do in fact pursue common goals--at least most of the time--with a long-term constancy of purpose. Is there a middle way between authoritarian control and no control at all?

The Judeo-Christian ethic provides a moral imperative to guide human conduct--The Ten Commandments. At times they are not observed; but they are always there to guide behavior. Dr. Deming's "Fourteen Points" are the foundation upon which his quality management philosophy is based. Similarly, at times they are not observed; but they are always there to guide behavior.

A shared set of Guiding Principles of Acquisition Management, if such a set could be developed, might serve a similar purpose for the acquisition community. A "correct" set of Guiding Principles, honored in observance, yet able to tolerate an occasional breach, could provide the managerial compass and improved environment necessary to sustain a constancy of purpose needed to support national strategic objectives with a viable acquisition system.

A candidate set of nine Guiding Principles of Acquisition Management (listed and discussed below) has been developed by the Center for Acquisition Management Policy.

These principles may seem too simple and too naive to be useful in the tough world of acquisition management. Our experience tells us differently. The principles are simple, but they are not naive. They are statements that derive from long familiarity with the complex social system that governs acquisition. It is our experience that each principle exemplifies an effective behavior, a behavior that tends to produce long-term salutary results (often, to be sure, preceded by short-term sacrifices). It is also our experience that violation of any principle carries with it a cost.

No principle is, or should be, inviolable. Sometimes Congress, OSD, or an acquisition manager will override a principle with full knowledge of the probable consequences, choosing to accept the costs for the sake of a deeper need. But at other times an acquisition participant transgresses out of ignorance and is "blindsided" by the costs when they inevitably appear.

Our purpose in writing this paper is to put these principles (and there may well be more of them) "into the acquisition bloodstream," in the hope that future decisions will be made in the light of these principles, with a full awareness of the costs of deviation. In this way we hope to diminish some of the pain from the blindside hits. But, more important, we also hope to promote the kind of cultural changes that may permit a philosophy such as TQM to take root, grow, and flower in DOD.

PROPOSED GUIDING PRINCIPLES OF ACQUISITION MANAGEMENT

1. Place the most ethical and competent persons into acquisition leadership positions, provide them the resources and authority to perform, minimize constraints on their flexibility, and let them do their jobs.
2. Consider as wise counsel--not direction--the views, observations, findings, and recommendations of advocates, special interest groups, auditors, and other non-line authorities.
3. Subordinate local, regional and parochial considerations to national security and national defense objectives.
4. Hold constant the resources allocated to a specific acquisition activity for at least 36 months. (Exception: do not allow obligational authority to expire before it can be used.) Life cycle resource implications must dominate resource allocation considerations.
5. Make no laws or regulations which attempt to prevent all wrongdoing. Enforce reasonable laws and regulations, and prosecute, relentlessly, the wrongdoers.

6. Create no policy which discriminates either for or against small business or large business or any other special interest not directly related to product quality.

7. Require DOD contracts to provide the opportunity for risk-adjusted rate of return comparable to other opportunities available to the investor.

8. Materially consider factors other than price in all contract awards. Quality and past contractor performance, in particular, must be major considerations.

9. Make no industrial policy and take no acquisition action until the industrial base implications have been considered and have been found not to be damaging.

This set of principles embodies a clear and over-arching objective: "First, do no harm; then strive to do better." This modification of the Hippocratic oath reminds us that dedicated professionals, determined to correct a perceived wrong or improve a faulty process, must first consider the long-term implications of their proposed actions for each element of the acquisition community. If, after such consideration, the contemplated action is then taken, it will be with some understanding of the impact of that action throughout the community.

Actions taken in accordance with the nine principles will be based on knowledge and sensitivity to potential system-wide impacts, not merely on good intentions and the desire to solve an instant problem. The nine principles are discussed separately in the paragraphs that follow.

1. Place the most ethical and competent persons into acquisition leadership positions, provide them the resources and authority to perform, minimize constraints on their flexibility, and let them do their jobs.

The first of the nine principles is philosophically the alpha and omega, the beginning and end, the only principle required. If it were observed there would be no need for any other. This principle melds two ancient and proven management canons: that authority should match responsibility; and that responsibility should be pushed down in the organization to the locus of the information necessary to do the job. This principle is also called "Intelligent Decentralization". Ancient wisdom or not, however, the implications of this principle for each of the institutions in the acquisition triumvirate are profound.

For the Legislative branch this principle demands recognition that industry and DOD have also embraced intelligent decentralization and are meeting the implied responsibilities; that these institutions are training and educating their acquisition leaders properly and have fulfilled their management obligation to provide them with short, clean lines of communication and the wherewithal to perform. Absent this faith, and the discipline to shun incessant meddling, little good can ever come from efforts to "improve" the acquisition system.

The Legislative branch has produced, in recent years, a plethora of laws to guide acquisition leaders in the conduct of their business. DOD, in turn, has responded with interpretive

regulations (and some regulations of its own) to further assist those leaders. The result has been a movement toward greater centralization and more operational oversight. A disturbing outcome of these actions has been a trend toward the doctrine of "risk aversion".

This doctrine is a negative, mind-numbing, debilitating mindset that takes refuge in check lists, a work-to-the-rule ethic, and an adamant refusal to say "yes" to any innovative proposal or deviation from established procedures. Efforts to inject innovation into the acquisition process have met with some success when they were vigorously pursued by strong personalities in high leadership positions. Such efforts have been--unfortunately--short-lived, since they depended upon their (transient) sponsor for impetus and support. Historically, when the sponsor departed, the initiative withered and died.

Long term improvements to the process can come only in an environment in which the competent decision maker is granted the flexibility to exercise his good judgement free from arbitrary constraint. Congress must be a party to the establishment of such an environment.

For the Executive branch, successful application of the principle of intelligent decentralization requires the "best and the brightest"; men and women with demonstrated capabilities on positions of leadership. But no one new to the field; neither political appointees, nor senior military officers, nor senior career civil servants, is anointed, upon assuming an acquisition

responsibility, with the acquisition knowledge and the skills of leadership required to succeed in this field. The acquisition business is complex and arcane; no outside experience adequately prepares a person for instant assumption of high-level duties in this field.

Therefore, at all levels within the Department of Defense--including the Office of the Secretary of Defense (OSD) and the military departments--civilian and military personnel assigned to acquisition leadership positions must be given the education and training needed to prepare them for these duties. Performance in those positions must then be appropriately recognized.

For the defense industry community this principle demands leadership--at all levels--dedicated to the delivery of goods and services of the highest quality, in accordance with intelligently developed contractual instruments. The integrity of this leadership must persuasively and positively permeate the industry and the whole acquisition community. The absolute bedrock of a successful acquisition management process is the integrity of the defense industry on which the entire process necessarily rests.

2. Consider as wise counsel--not direction--the views, observations, findings, and recommendations of advocates, special interest groups, auditors, and other non-line authorities.

The most competent leader cannot perform effectively if his authority to control critical resources is impaired. The acquisition community today is populated with legions of officials without line responsibility but with authority (granted or

usurped) to assign, delay, or deny the responsible leader his resources and decision-making power. Even the best acquisition manager is no match for those who sit safely in defilade and imperiously sling barbs and arrows of equivocal decisions. Numbered among these dedicated, determined, well-intentioned, (and long-lived) non-decision makers are service headquarters and OSD staff members, legislators and legislative staffers.

The problem is getting worse. There has grown up an entire universe of persons authorized to view and overview, sight and oversight, check and double-check, audit, inspect, advocate, counsel, and advise the few who lead the acquisition process. Some of those functions, properly coordinated and conducted, are necessary. But the responsible manager must have the right to accept, modify, or reject this advice when his priorities require it. Coordination efforts must be performed at a sufficiently high level to minimize redundancy and overlap. This streamlining is necessary at the Departmental and OSD levels of DOD, and is at least as important within the Legislative branch.

3. Subordinate local, regional and parochial considerations to national security and national defense objectives.

This principle recognizes the dualism dictated by Article I of the constitution. Members of Congress are servants of their constituents; but they are also servants to the entire nation in the discharge of their legislative tasks. Constituent interests and national legislative responsibilities frequently conflict, sometimes excruciatingly. Nevertheless, action taken by our

legislators in matters relating to acquisition of material to support national defense must be governed by national--not local--interests.

This principle presents moral and practical dilemmas to the legislator. It presents a similar dilemma to the acquisition manager professionally convinced that his Service's parochial dogma is suboptimizing the total defense effort. Within the DOD, national interests must prevail over service, branch, and organizational interests. Service-unique aspirations and considerations cannot come first when acquisition decisions are taken. For Industry, this may mean acceptance and support of dual-sourcing, teaming or other arrangement to ensure surge capacity or industrial base expansion and loss of the comfort of a sole producer position.

4. Hold constant the resources allocated to a specific acquisition activity for at least 36 months. (Exception: do not allow obligational authority to expire before it can be used.)
Life cycle resource implications must dominate allocation considerations.

The itch to alter resource allocations infects both the Legislative and Executive branches. But every experienced acquisition leader knows that the impact of every significant resource change reverberates destructively throughout the entire activity spectrum of a program. The prudent leader will concern himself with that entire spectrum and will reject the simple, easy, short-sighted solution that deals only with the near term

and a one-dimensional view of the program. Resource decisions based on anything other than a life cycle approach to the total program will inevitably prove to be poor ones.

Program stability (surely a close cousin of Deming's "Constancy of Purpose") has long been recognized as perhaps the single most important contributor to efficiency and effectiveness in the acquisition process. The Packard Commission asserted:

Our study of acquisition reveals, and our collective experience fully confirms, that there are certain common characteristics of successful commercial and governmental projects. Short, unambiguous lines of communication among levels of management, small staffs of highly competent professional personnel, an emphasis on innovation and productivity, smart buying practices, and most importantly, a stable environment of planning and funding--all are characteristic of efficient and successful management.

These characteristics should be hallmarks of defense acquisition. They are, unfortunately, antithetical to the process the Congress and the Department of Defense have created to conduct much of defense acquisition over the years. With notable exceptions, weapon systems take too long and cost too much to produce. Too often, they do not perform as promised or expected. The reasons are numerous.

Over the long term, there has been chronic instability in top-line funding and, even worse, in programs. This eliminates key economics of scale, stretches out programs and discourages contractors from making the long-term investments required to improve productivity.

The adverse impact that our current "saw-tooth" resource allocation process has on virtually all acquisition activities is seen most clearly in our acquisition system program offices. In his letter to the President, dated July 10, 1987, Mr. Packard said:

... Our recommendations last year stated that more defense can be provided per dollar appropriated within a stable program, sustained and predictable over several years. That stability has not been achieved. Opposition in the Congress to adequate and stable levels of funding for defense--however, understandable as part of our normal, vigorous democratic debate over such issues as deficits, spending, and revenues--is beginnings to pose serious problems for our long-term security.

The tendency on the part of congress and DOD to "muck around" with programmatic resources is so great, and the effects so devastating, that it must somehow be eliminated, curtailed or moderated.

Once competent leaders have been given the resources required to perform their missions, those resources must not be downwardly adjusted--absent their permission--for at least 3 years.

5. Make no laws or regulations which attempt to prevent all wrongdoing. Enforce reasonable laws and regulations and prosecute, relentlessly, the wrongdoers.

No amount or kind of legislation can eliminate wrongdoing. Attempts to install rules that block every form of evil in a social system not only fail, they so constrain the system that it loses the ability to accomplish its primary purpose. There already exists a vast body of law, and a supporting network of implementing regulations, devoted to the well-intentioned objective of suppressing all wrongdoing (and even the perception of wrongdoing) within the acquisition community. There is little need for additional legislation or DOD regulations. There is, rather, the need for consistent, persistent, intelligent enforcement of existing law throughout the acquisition community.

Would-be violators should fear the reality of assured, swift, effective investigation of alleged wrongdoing followed by equally swift exoneration or conviction, and with conviction, harsh penalties.

6. Create no policy which discriminates either for or against small business or large business or any other special interest not directly related to product quality.

It is essential that our defense industry be healthy, capable, effective and efficient. We now have laws and regulations designed to aid small businesses (or large businesses or special interests of other kinds). What is good for one special group is often bad for others. Because our acquisition community is dependent upon the totality of the defense industry, that entire industry requires support. Every action contemplated to assist one population must be tested to ensure that it will not unacceptably damage others.

Demographic, environmental, economic, social, cultural, ethnic, racial, military and political considerations are important. They may at times threaten to dominate national security concerns. We should not permit this; security concerns are paramount, and one of them is the requirement that decisions must not unfairly discriminate for or against any segment of the acquisition world.

7. Require DOD contracts to provide the opportunity for a risk-adjusted rate of return comparable to other opportunities available to the investor.

Members of the Legislative branch and the Executive branch must recognize that, despite the importance of their institutions, only the defense industry can provide the weapons and materials necessary to wage war. The Legislative branch does not design weapons; the Executive branch does not bend metal. The checkers, reviewers, auditors, speech makers, analysts, staffers and decision makers in those institutions do not produce so much as a single small caliber bullet. Only the defense industry produces war material. This defense industry is complex and its actions are multifarious, but the fundamental issue for this industry is quite simple.

As we noted above, this nation chooses to acquire its military material and equipment through a privately financed, privately managed, relatively free, and non-coercive market system. In this system, privately owned assets are invested to obtain a return, and these assets flow inexorably to those investments that appear to offer the best risk-adjusted returns. An investment that offers a less-than-competitive risk-adjusted return will not attract capital.

If, in the rough-and-tumble of competition among various stakeholder interests, the government--who holds most of the high cards--in some combination of legislative and administration actions, forces the aggregate risk-adjusted return on defense work below the competitive range, the result must be the flight of capital (new and replacement) from the defense industry.

Threats to the defense industry manager's capability to earn a reasonable return take many forms. One of the more insidious is the governments's pattern of actions relating to data rights.

The question of rights to data is an issue in virtually every negotiation of a development contract. The Packard Commission confronted this problem squarely:

DOD must recognize the delicate and necessary balance between the government's requirement for data and the benefit to the nation that comes from protecting the private sector's proprietary rights. That balance must exist to foster technological innovation and private investment which is so important in developing products vital to our defense. DOD should adopt a data rights policy that reflects the following principles:

-If a product has been developed with private funds, the government should not demand, as a precondition for buying that product, unlimited data rights even if the government provides the only market. The government should acquire only the data necessary for installation, operation, and maintenance.

-If a product is to be developed with joint private and government funding, the government's needs for data should be defined during contract negotiations. Government contribution to development funding should not automatically guarantee it rights to all data.

-If a product is developed entirely with government funds, the government owns all the rights to it but may under certain circumstances make those rights available to the private sector.

This equitable policy should guide acquisition managers at all levels. All actions taken in the area of data rights must balance the proprietary rights of the private sector against the proper demands of the government.

In short, we must provide the entrepreneur the opportunity to realize as much or more of a risk-adjusted return on his investment in the defense segment of our economy as he could realize if he invested his resources elsewhere.

8. Materially consider factors other than price in all contract awards. Quality and past contractor performance, in particular, must be major considerations.

The application of this principle will have a most profound impact on the acquisition community. It requires an understanding of Deming's theory of management and acceptance of his views that high quality products and services are usually less costly over time than those whose initial lower price is achieved by sacrificing quality; that "quality doesn't cost; it pays". It also requires (as noted above) a balance between the demands for relentless competition in the contract award process and the cost and quality advantages that result from long-term relationships with dedicated, loyal, qualified providers.

Competition makes sense during the search for the essential providers to develop and support the system throughout its life cycle. The chosen providers must then be committed to continuous improvement of their product or service to merit the continued loyalty of the government. Competition may also be warranted when a potential provider has positioned himself to augment or surpass the current supplier.

A commitment to constancy of purpose and loyalty to proven providers of quality requires us to stand firm against the demands for "competition for its own sake".

9. Make no industrial policy and take no acquisition action until the industrial base implications have been considered and have been found not to be damaging.

The establishment, enhancement and maintenance of an industrial base tailored to support national military objectives and war fighting scenarios is a fundamental element of our national strategy.

The Packard Commission addressed this issue as follows:

The president, through the National Security Council, should establish a comprehensive and effective national industrial responsiveness policy to support the full spectrum of potential emergencies. The Secretary of Defense, with advice from the Joint Chiefs of Staff, should respond with a general statement of surge and mobilization requirements for basic wartime defense industries, and logistic needs to support those industries, and the essential economy. The DOD and Service Acquisition Executives should consider this mobilization guidance in formulating their acquisition policy, and program managers should incorporate industrial surge and mobilization considerations in program execution.

In his 10 July, 1987 letter to the President, Mr. Packard said:

...A national industrial responsiveness policy must be established, and industrial responsiveness requirements must be incorporated in acquisition policy.

At the functional, operating level these lofty objectives can be given meaning by ensuring that industrial base concerns are considered at contract award.

SUMMARY OF THE ARGUMENT

This completes the discussion of our candidate set of Guiding Principles for defense acquisition management. Formulating and enunciating such a set of principles begins the evolutionary

process of altering the culture and environment of our acquisition system. Application of the principles in normal day-to-day acquisition activities is the final goal. Conscious awareness and understanding is the necessary first step.

If this set of principles makes sense, awareness and understanding derived from their internalization, plus a commitment to apply them daily, can change our management culture and improve the acquisition process. The principles are guides. Responsible acquisition leaders must weigh the benefits of observing a particular principle against the cost of violating it. Invoking or violating a principle should be a conscious decision made individually by acquisition decision-makers as each action is considered. To the extent that the principles are followed and violations avoided, we believe positive acquisition results will accrue and positive evolutionary changes to the acquisition culture and environment will continue.

Individual commitment to constancy of purpose in this long-term culture change is the one indispensable ingredient.

APPENDIX G



APPENDIX G

CRITERIA DEVELOPMENT

The research led to a set of approximately 200 problem statements. These resulted in the following set of questions, broken into six categories (see section Three of the study report), each further delineated into the three subcategories of environment, process and structure. This set of questions led to the 16 criteria.

1. Instability

1.1. Environment:

1.1.1. Are the fiscal limits assumed by DOD planners consistent with the TOA to be provided by Congress?

1.1.2. Is the inflation assumed by DOD planners consistent with the best estimates (use Council of Economic Advisors projections?)

1.1.3. Is the funding available for acquisition (R&D plus procurement) consistent with system requirements planned?

1.1.4. Is multiyear budgeting used?

1.2. Process:

1.2.1. Are system cost estimates within the given system unbiased?

1.2.2. Are system costs controlled for follow-on systems?

1.2.3. Is multiyear procurement of systems used?

1.2.4. Are program managers (PM's) and program executive officers (PEO's) allowed adequate flexibility in resource reallocation within their domains?

1.2.5. Is emphasis given to preventing the lengthening of the production cycle?

1.2.6. Are systems properly "tailored" at program initiation to avoid changes?

1.2.7. Are baseline designs used to stabilize performance, schedule, and supportability?

1.2.8. Are firm controls placed on the design phase?

1.2.9. Is prototyping and T&E used adequately to avoid system redesign later?

1.2.10. Are opportunities for contractor intervention into the acquisition process reduced?

1.3. Structure:

1.3.1. How stabilized are resources and assets of the program management office?

1.3.2. Are manpower billets stabilized?

1.3.3. What demands will be placed on outside functional specialist or contractor assistance?

2. Personnel

2.1 Environment:

2.1.1. Are system users appropriately involved in the acquisition process?

2.1.2. Are operational assignments for military acquisition personnel adequately reduced to allow for substantial experience in acquisition?

2.1.3. For military acquisition personnel, does acquisition training begin at the appropriate time in their career to achieve optimum benefit to the Service?

2.2. Process:

2.2.1. Is the civilian personnel system for acquisition being strengthened?

2.2.2. Are adequate training opportunities in acquisition being increased substantially?

2.2.3. Does training provide both practical and theoretical education?

2.2.4. Is the transfer of expertise from industry to DOD enhanced?

2.2.5. Are military acquisition personnel incentivized to remain in the service for close to a 30 year span?

2.2.6. Is there provision to summon forth the enthusiasm and dedication of acquisition staff personnel?

2.2.7. Is research encouraged to determine what aspects of acquisition need to be emphasized?

2.3. Structure:

2.3.1. Are the promotion opportunities in acquisition being enhanced (i.e., both military and civilian personnel)?

2.3.2. Would acquisition training facilities be improved?

3. Planning

3.1. Environment:

3.1.1. Are the theater commander-in-chiefs' inputs promoted and linked to the PPBS process?

3.1.2. Is a net assessment required?

3.1.3. Is cross service military planning enhanced, and is a compatible mix of systems planned?

3.1.4. Are the roles of each service reassessed?

3.1.5. Are the program (i.e., Defense Acquisition Board) and budget (i.e., Planning, programming and budget system) processes consistent with each other and with force level requirements?

3.1.6. Are PM's allowed flexibility in reprogramming of resources?

3.2. Process:

3.2.1. Is the upgrading of fielded systems emphasized?

3.2.2. Does planning call for properly phased transitions from the full scale development phase through production and operation?

3.2.3. Are subsystem development times adequate?

3.2.4. Is there a procedure for ensuring unbiased cost estimation in both development and production programs?

3.2.5. Is the stretchout of existing program(s) disallowed as a means to enable new program starts?

3.2.6. Is the pre-milestone I phase used to enhance competition for ideas by limiting guidance to mission need, environment, and resource constraints?

3.2.7. Is the planned level and type of test and evaluation (T&E) appropriate for the program and is it executed?

3.2.8. Is the use of austere prototyping required?

3.2.9. Is planning increased for post-milestone III activities such as modifications, logistics, and support?

3.2.10. Is the importance of non-major acquisitions, such as spares, minor systems, certain logistics items, and construction properly considered and adequately planned?

3.2.11. Is science and technology funding stabilized?

3.2.12. Is there increased emphasis on software planning and costing?

4. Industrial Aspects

4.1. Environment:

4.1.1. Is global competitiveness of U.S. industry improved?

4.1.2. Are there adequate potential U. S. suppliers?

4.2. Process:

4.2.1. Is contractor past performance considered in contract award?

4.2.2. Is independent R&D encouraged?

4.2.3. Is industry encouraged to participate in defense production through adequate return on investment?

4.2.4. Is there encouragement of plant modernization and long term investment?

4.2.5. Is the surge capability enhanced?

4.2.6. Is reasonable competition enhanced (e.g., through the use of dual sourcing)?

4.2.7. Is the technology base enhanced?

4.2.8. Are criteria other than strictly low bid used in source selection?

4.2.9. Is the use of commercial components encouraged?

5. Review Process

5.1. Environment:

5.1.1. Is excessive micro-management of programs reduced?

5.1.2. Are congressional level redundant reviews reduced?

5.1.3. Is there a well defined channel for congressional inquiry and DOD response?

5.1.4. Are DOD level redundant reviews reduced?

5.1.5. Are all level reviews better coordinated?

5.1.6. Are redundant and overlapping rules and regulations reduced?

5.2. Process:

5.2.1. Does the acquisition community conduct the detailed acquisition planning?

5.2.2. Is there a well defined and coordinated auditing and review structure within the acquisition system?

5.2.3. Is an increase of industry internal review encouraged by DoD agreeing to reduce its external review of those participating firms?

6. Organization

6.1. Environment:

6.1.1: Are the functions of the acquisition chain (Defense Acquisition Executive, Service Acquisition Executive, PEO, PM) and the organization chain (OSD, Service, Major Command, Operational Command) clarified -and workable?

6.1.2: Is there a reduction of congressional organization layers impacting upon defense acquisition?

6.1.3: Is there a reduction of DOD organization layers impacting upon defense acquisition?

6.2. Structure:

6.2.1: Does the PM have direct access to decision makers?

6.2.2: Does the PM have authority over his support staff?

6.2.3: Do the heads of acquisition organizations have responsibility and authority for both material acquisition and for acquisition personnel assignments?

6.2.4: Is there a single acquisition chain of authority?

6.2.5: Are acquisition lines of communication shortened?

6.2.6: Are government supply and inventory systems being improved through the use of modern business equipment and practices?