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## ABSTRACT

Over the years there has been a great deal of discussion about the length and quality of the acquisition process. Plans have been developed to improve the management of this complex process, sharpen its focus, and shorten the time it takes to complete it. Has this attention created a better mousetrap? Yes. Is there still room for improvement? Definitely yes.

This article addresses recent attempts to improve the Army acquisition process, the problems associated with the current process, and suggests that methodologies exist that can improve the acquisition process. These methodologies are the Army Streamlined Acquisition Process (ASAP) and the Manpower and Personnel Integration (MANPRINT) program. The premise of this paper is that when properly used together, the result will be an abbreviated yet more efficient time line.

## INTRODUCTION

"The purpose of this article is to present some new and innovative ideas for shortening acquisition time." This quote is from an earlier article that addressed the length of the acquisition process. Unfortunately, despite the attention, and years of interest, there still exists a need for a shorter, streamlined acquisition process that works.

Maybe the lack of progress in shortening the acquisition process is related to the fact that the length of the acquisition process is only one part of a many faceted cycle. The set of problems listed below surfaced after World War II

Acquisition Problems

- o Growing Defense Budgets
- o More Complex Systems
- o Decrease in Manpower
- o Longer Acquisition Timelines

and still plague both DoD and industry acquisition procedures. Although it is generally accepted that the longer acquisition times imply a higher end item cost, the cost is not the only concern. Excess time in the acquisition process also increases the likelihood that there will be adjustments in technology and/or changes in the threat before the system is fielded. Without time constraints and adequate information inputs that address all of the acquisition problems, the length of the acquisition process will continue to increase with the results being more costly, less effective systems being fielded.

A valid approach to streamlining the acquisition process has to involve more than just eliminating time and activities. To be successful, it must be based on using information that is available before program initiation. Knowing, recording and updating data available from front-end analyses will support the streamlining process. The ASAP is a good start on shortening the

process, but it lacks the integration techniques necessary to make it a success. MANPRINT with its focus on combining manpower, personnel, training (MPT), health-safety, and human factors engineering can supply the missing link to better define what is needed and when it is needed. The balance of the paper will discuss some attempts that have been made to shorten system acquisition and suggest that an integration methodology, like MANPRINT, is what is needed to make an abbreviated cycle work.

## WHAT HAS BEEN DONE

1981 Time Period

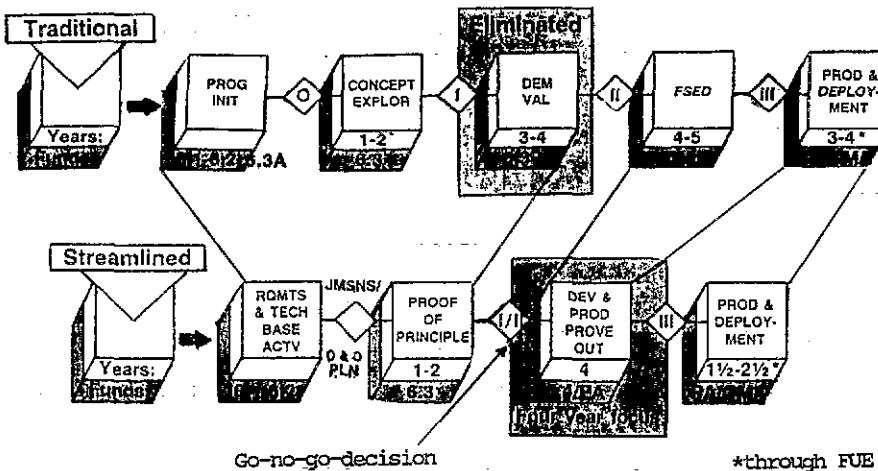
Frank Carlucci, as Deputy Secretary of Defense, set in motion a review of the acquisition process based on better management techniques. He tasked industry to contribute by designing the best, least complicated operating and support features. DoD worked with industry to review instructions and directives that had accumulated over the years, so that unnecessary steps could be eliminated. This review of the entire defense acquisition process culminated in thirty-two initiatives. Some of the initiatives are highlighted here.

Actions to Improve the Acquisition Process

1. Management Principles
2. Preplanned Prod: Improvement
3. Encourage Capital Investment
4. Front-End Funding
5. Standard Operational/ Support System
6. Funding Flexibility
7. Government Legislation
8. Increase Competition

These and the other initiatives supported the idea that the acquisition process needs to be a team effort between DoD and industry. Carlucci's plan stressed management and operational functions. His review was based on the realization

### Acquisition Process Comparison



that the increase in the Soviet threat necessitated a rebuilding of basic defense industries. His initiatives focused on management, but did little to shorten the acquisition cycle. The plan likewise did not appear to adequately address the design considerations needed to compensate for operating and maintaining more complex systems with fewer, less skilled soldiers. Thus, Carlucci's modified acquisition process was a point for departure, rather than the final solution.

#### Army Streamlined Acquisition Process (ASAP)

Many of those goals have been carried forward to become the starting point for the ASAP. The ASAP as an acquisition methodology expanded on Carlucci's plan and defined demanding timelines. The objective of the process is to provide industry with greater flexibility in determining how best to meet Army materiel requirements. Skeptics say that it is just another attempt at modifying the process and will simply disappear, again with no visible signs of improvement remaining.

In defense of the ASAP, it uses the Carlucci plan as the point for departure and continues the delegation of management responsibility and accountability. It encourages managers to focus on what technology is available or scheduled to be available when a system is fielded. They are encouraged to spend time in the planning stages defining and clarifying the deficiency before a program is initiated. The ASAP invites industry to become involved much earlier in the acquisition process and to help solve the problem rather than just provide a product.

In relation to the Traditional Acquisition model, the ASAP is able to tailor the previously lock-step acquisition process. The Acquisition Process Comparison displays a simplistic comparison of these processes. The ASAP consolidates

the Concept Exploration and Demonstration-Validation phases into the Requirements/Tech Base Activities and Proof of Principle phase. This approach permits greater RD&E funding flexibility by removing the artificial barriers (6.2A and 6.2B funds) between nonsystem and system-related advanced development.

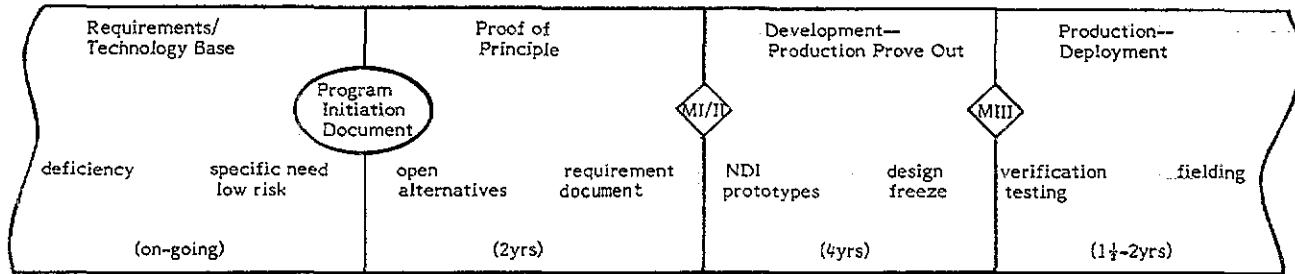
During Proof of Principle the ASAP gains insight into the maturity of the technology, as well as the operational concept, when a brass board prototype system is demonstrated by user troops. This user test also enables MANPRINT to assess the impact of the soldier requirements before a final design is selected. Alternative solutions are still possible at this point in the acquisition process. The system will not advance further if a high risk technology, manpower shortage, or other problem is identified during tests.

A successful demonstration of associated technologies and an approved requirement document, e.g., Required Operational Capability (ROC), ends the Proof of Principle phase. This constitutes a total commitment by the Army to fully fund and field this system and marks the beginning of the Development-Production Prove Out phase. Once the system concept progresses this far, all proposed changes to the design must be challenged. Test-analyze-and-fix (do it now) is key to this phase. Program stability is required from here to fielding in order to move rapidly towards and through the Production Deployment phase and deliver the system sooner to the soldier.

#### RESULTS THUS FAR

The ASAP is continuing to gain momentum and support. Activities within the acquisition process are trying to react to these quicker process time constraints with varying levels of success.

Army Streamlined Acquisition Process (ASAP)



Subsection (a) of Section 2434 of title 10, United States code (as designated by section 101(a) of the Goldwater-Nichols Department of Defense Reorganization Act of 1986) stated that before approval of a major system, manpower estimates must be presented to Congress prior to full-scale engineering development or production and deployment of that major system.

These actions support the hypothesis that the ASAP and MANPRINT are making a positive impact on the acquisition process.

Several concerns remain:

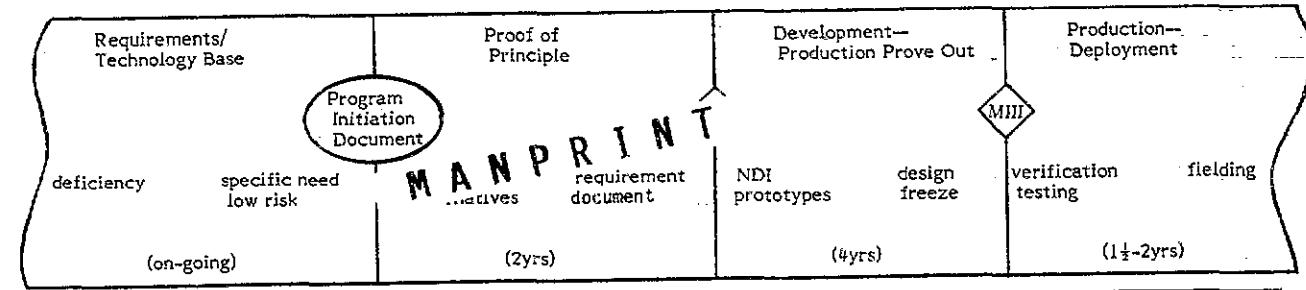
The process is still operations oriented. Manpower estimates are not due until after Army commitments to support the system concept is made, and

Other MANPRINT domains, e.g., safety, human factors engineering, are not included in the Congressional approval procedure.

The previously mentioned Defense Reorganization Act set manpower data requirements. The short-fall in the Act is the time period required for the reporting and approval of that data. Recall that in the ASAP, the commitment to fully fund a system is made at end of Proof of Principle. This equates to at least two years' development time and dollars before the FY87 Act calls for a manpower estimate. This can mean a great deal of resources expended, and halted, if a major manpower impact is reported. Chances are that after six or more years into the acquisition process, the system under development would be continued in hopes the people-system would be able to cope.

The FY87 Act, as with Carlucci's acquisition model, is a good idea and can be classified as either another innovative idea or as a point for departure. It is not the final answer.

Army Streamlined Acquisition Process (ASAP)



**WHAT CAN BE DONE**

MANPRINT. Let the integrating baseline of MANPRINT start early in the material acquisition process, prior to program initiation. Right now MANPRINT has the visibility and supportability that is required to make this happen.

MANPRINT guidance begins before program initiation when a deficiency is identified. In most cases there are either entire predecessor systems or components in which to draw information. It is the MANPRINT manager that sets up the management plan at this early point in the acquisition process. Although the answers may not all be available, the points of contacts and questions are. This period is still within the Requirements/Tech Base Activities phase of the ASAP.

During Proof of Principle the deficiency requirements are solidified. Again MANPRINT is able to keep track of MPT, safety-hazard and human factors environment implications that have been defined to this point. Testing and resulting data can be evaluated and used to assist with the materiel selection process. At this point MANPRINT people-constraints assist in defining or eliminating alternative selection possibilities.

When the requirement document, e.g., ROC, is developed, high driver (big problem) Military Occupational Specialties can be identified by either the predecessor descriptions or by reviewing available manpower authorization tables. Utilizing MANPRINT for its integrating values, a manpower estimate could be made to Congress when the Development-Production Prove Out phase is entered. Since alternative solutions are still being considered, this might be a system/manpower band rather than a set of single values.

By the end of this phase a much more definitive number could be presented for Congressional approval. The validity would be much greater than the widely used "MANPOWER estimate = NO IMPACT" statement. Although this statement is popular, it is also the cause of design failures when the system is fielded to a command with an inadequate MOS structure.

So what can be done? Streamline the acquisition process with a flexible and tailored methodology. Overlay an interactive, integrating MPT oriented plan. Then create a system for the soldier that enables him to maintain readiness and successfully counter a wartime threat.

#### SUMMARY

ASAP has the time constraints identified and defined for a shortened acquisition process. It is time for this procedure to be MANPRINTed.

There has been too much talk by both the MPT and weapons systems communities about the length of the acquisition process. It is the quality of the resources spent during ASAP that need to be addressed. The youth population decrease and limitations on highly skilled individuals are now part of our data bases. If the people system is inadequately addressed or addressed too late, there is a chance that a multi-billion dollar, state-of-the-art weapons system will be fielded in eight years, and sit unused. Reason: no one is able to operate or maintain it.

MANPRINT has the potential to offer this people-system integration mechanism. It needs to be, as Carlucci foresaw the acquisition process, a team effort between DoD and industry. The acquisition players have all the pieces available. The factors only need to be identified, recorded, updated, and fed back into the system (weapons and people) development process.

#### REFERENCES

Making the Acquisition Process Efficient. Frank C. Carlucci, Deputy Secretary of Defense, Program Manager, Vol X, No. 5, Sep-Oct 1981

Another Look at Shortening Acquisition Time. John R. Shoderly, David D. Acker, Program Manager, Vol. X, No. 6, Nov-Dec 1981

Army Regulations AR 70-1, Sys Acq Policy and Procedures. AR 602-2, MANPRINT

A New Agenda for Manpower Analysis. LTC Wm Blackwood, MANPRINT Bulletin Vol. 1, No. 10, Apr 1987

Excerpts from Materiel for Winning Mar 1987 AMC/TRADOC

The Acquisition Process. IIG Robert L. Moore, AMC Deputy CG for RD&A, Army RD&A Magazine, Sep-Oct 1985

#### ABOUT THE AUTHOR

Anne Sicilia is currently a Management Analyst with Advanced Technology, Inc., and is supporting the Army effort to integrate ASAP and MANPRINT as they relate to ongoing and planned Army projects. Ms. Sicilia previously worked for the Project Manager for Training Devices (PM TRADE) and concentrated on Army policies, implementation strategies, regulations and procedures for the ASAP and MANPRINT processes. Before moving with her family from Washington, D. C. in 1984, she was employed by the Center for Naval Analyses (CNA). Efforts there focused on training and support available for the Naval Resource forces.