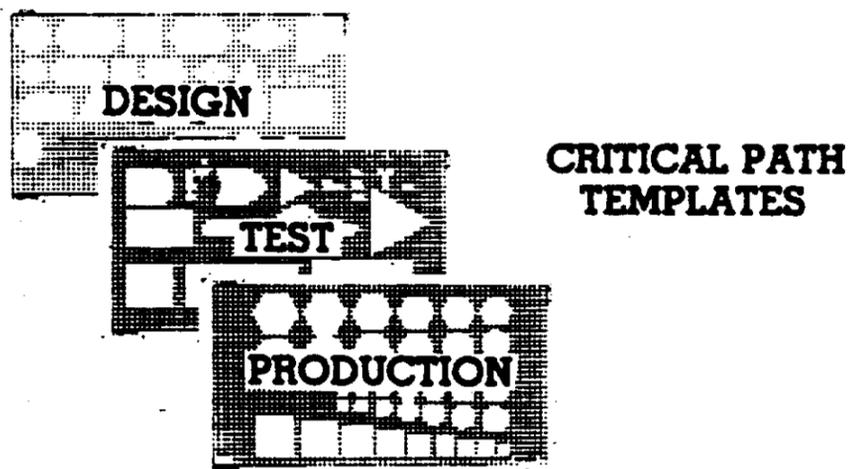


DEPARTMENT OF DEFENSE



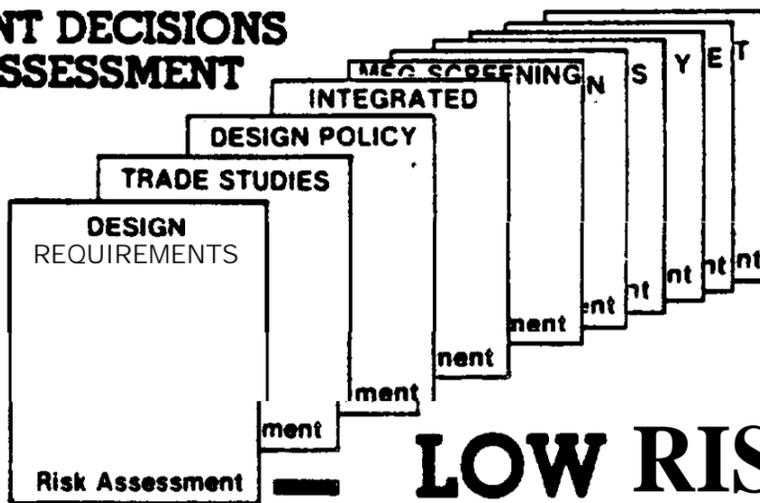
TRANSITION FROM DEVELOPMENT TO PRODUCTION

...SOLVING THE RISK EQUATION



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MANAGEMENT DECISIONS
BASED ON ASSESSMENT
OF RISK



LOW RISK TRANSITION

SEPTEMBER 1985

ASSISTANT SECRETARY OF DEFENSE
ACQUISITION AND LOGISTICS



THE ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D. C. 20301

ACQUISITION AND LOGISTICS

FOREWORD

This Manual is issued under the authority of DoD Directive 4245.7, "Transition from Development to Production," January 19, 1984. It provides assistance in structuring technically sound programs, assessing their risk, and identifying areas needing corrective action.

This Manual applies to the Office of the Secretary of Defense (OSD), the Military Departments, the Organization of the Joint Chiefs of Staff, and the Defense Agencies. The Term "DoD Components," as used herein, refers to the Military Departments and the Defense Agencies.

This Manual is effective immediately and is authorized for use by all DoD Components. The guidance contained in this document shall be used in and tailored to individual acquisition programs. Heads of DoD Components may issue supplementary instructions, when necessary, to provide the unique requirements within their respective Components. The Commandant, Defense Systems Management College, shall review the guidance set forth in this Manual and incorporate the material in College curricula.

Send recommended changes to the Manual through channels to:

Director, Major Systems -Acquisition
Assistant Secretary of Defense for Acquisition and Logistics
Room 2A330, The Pentagon
Washington, D.C. 20301

DoD Components may obtain copies of this Manual through their own publications channels. Other Federal agencies and the public may obtain copies from the Department of Defense, Technical Information Center, Cameron Station, Alexandria, VA 22304, and from the U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

A handwritten signature in black ink that reads "James P. Wade, Jr." with a stylized flourish at the end.

James P. Wade, Jr,
Assistant Secretary of Defense
Acquisition and Logistics

PREFACE

We have been developing and producing material with which to defend this country ever since our independence over 200 years ago. Unfortunately, we do not handle the job as well as we should. Even the programs we classify as successful can be improved.

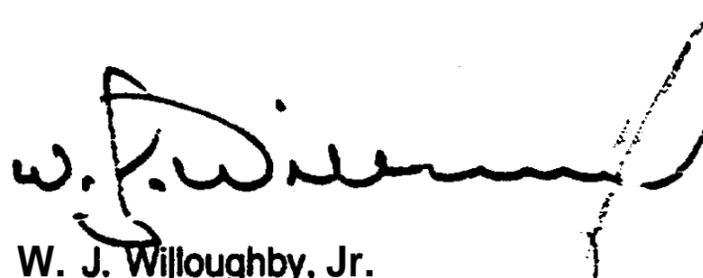
To my way of thinking, there has been, is now, and may always be one principle in which we must strive for further improvement. That principle is disciplined engineering. It is of such fundamental importance that it drives all aspects of development and production in any successful material acquisition. When recognized, disciplined engineering dictates all facets of management. In short, everything in the acquisition process in the Department of Defense should be subservient to it; yet most of our management systems are designed to circumvent it or excuse its omission. The irony is that in today's explosion of computer utilization and the attendant time it takes to incorporate changes, we should be seeing disciplined engineering in all of its grandeur and splendor: disciplined engineering in design, disciplined engineering in test, and disciplined engineering in production.

Additionally, we must strive for improvement in the understanding and the timing of the disciplines of design, test, and production. Successfully accomplishing the engineering tasks on schedule is the important "key" to reducing the risk of a program. This has a direct and profound impact on the quality of the decisions we make on individual programs, and, in my judgment, has a more immediate and potentially much greater return on investment in time and effort (and thereby on both cost and performance as well). Most importantly, we can achieve this return on investment with the application of current policy cited in the parent document to this Manual (DoD Directive 4245.7) and using established procedures within the presently defined acquisition process. "

The key word is discipline! This document is designed to facilitate that discipline that will help us collectively make wiser decisions on ongoing programs. The term selected to describe this discipline pretty well conveys its purpose and manner of use in a figurative sense. The term is "template." We would like to be able to compare ongoing programs with these templates to see whether our decisions and the actions on which they are based fall within the boundaries of an effective and efficient, low risk program.

I know full well that sound professional judgment always will be needed, and these templates are not offered as a substitute. I also know that we tend to repeat mistakes in certain key areas in the acquisition process and that these mistakes are correctable largely by better technical decisions well within existing policies and established procedures. Therefore, these templates are provided to introduce discipline into the system, to identify and give visibility to high risk factors, and then to provide the tools by which risk can be minimized progressively.

Accordingly, I strongly commend this document to you and urge you to use it diligently.



W. J. Willoughby, Jr.
Chairman, 1982 Defense Science Board
Task Force on "Transition from
Development to Production"

TRANSITION FROM DEVELOPMENT TO PRODUCTION

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- (d) Military Handbook 727, "Design Guidance for Producibility," **April 5, 1984**
- (e) Military Standard **785B**, "Reliability Program for Systems and Equipment Development and Production," September 15, 1980
- (**9**) Military Standard 781 C, "Reliability Design Qualification and Production Acceptance Tests: Exponential Distribution," October **21, 1977**
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- (h) DoD Directive 4245.6, "Defense Production Management," January 19, 1984
- (i) DoD Directive 4245.7, "Transition from Development to Production," January 19, 1984
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- (k) DoD Directive 5000.39, "Acquisition and Management of Integrated Logistic Support for Systems and Equipment," November 17, 1983