美軍武器系統獲得及當前之改革

Defense Acquisitions: How DOD Acquires Weapon Systems and Recent Efforts to Reform the Process

譯者簡介

胡元傑退役少將，陸官校41期、陸院74年班、南非陸院1986年班、戰院84年班；曾任連、營長、師砲兵及軍團砲兵指揮官、聯參執行官、駐馬來西亞小組長、副校長、國立中興大學總教官等職。

Summary

The Department of Defense (DOD) acquires goods and services from contractors, federal arsenals, and shipyards to support military operations. Acquisition is a broad term that applies to more than just the purchase of an item or service; the acquisition process encompasses the design, engineering, construction, testing, deployment, sustainment, and disposal of weapons or related items purchased from a contractor.

摘要

國防部透過合約商、兵工廠、造船廠，獲得軍品及勞務，以支援軍事作戰。「軍品獲得」是個廣義的字眼，並不單純是採購行為，其過程包括設計、工程、建造、測試、成軍部署、後勤維持，及武器之最終處理，或從合約商採購相關軍品(譯註：Acquisition一辭本文混譯為「武獲」、「獲得」)。

As set forth by statute and regulation, from concept to deployment, a weapon system must go through a three-step process of identifying a required (needed) weapon system, establishing a budget, and acquiring the system. These three steps are organized as follows:

1. The Joint Capabilities Integration and Development System (JCIDS)-for identifying requirements.

2. The Planning, Programming, Budgeting, and Execution System (PPBE)-for allocating resources and budgeting.

3. The Defense Acquisition System (DAS)-for developing and/or buying the item.

根據當前法規，武器系統從構想到發展，必須循3道程序：確認需求、設定預算、系統獲得進行。其3個步驟如下：

1.「聯合戰力整合發展體系」(JCIDS)負責確認需求；

2.「計畫預算及執行體系」(PPBE)負責分配資源及預算；

3.「國防武獲體系」(DAS)負責研發及採購。

The Defense Acquisition System uses "milestones" to oversee and manage acquisition programs. At each milestone, a program must meet specific statutory and regulatory requirements before the program can proceed to the next phase of the acquisition process. There are three milestones:

* Milestone A-initiates technology maturation and risk reduction.

*Milestone B-initiates engineering and manufacturing development.

*Milestone C-initiates production and deployment.

國防武獲體系以「里程碑」來監管專案計畫。計畫在每一里程碑，必須符合特定之法規及所訂需求，方能進入次一階段。基本上有3道里程碑：

1. 里程碑A-技術成熟度與風險降低；

2. 里程碑B-工程及製造發展；

3. 里程碑C-生產與成軍部署。

Both Congress and DOD have been active in trying to improve defense acquisitions. A comprehensive legislative effort to improve weapon system acquisition occurred in May 2009, when Congress passed and the President signed into law the Weapon Systems Acquisition

Reform Act of 2009 (S. 454/P.L. 111-23). Key provisions in the act include appointment of a Director of Cost Assessment and Program Evaluation within DOD to establish guidance on cost estimating; appointment of a Director of Developmental Test and Evaluation; appointment of a Director of Systems Engineering; and a requirement that the Director of Defense Research and Engineering periodically assess technological maturity of Major Defense Acquisition Programs.

國會及國防部均致力於改進國防武獲。在立法上，2009年5月國會通過並經總統簽署成為法律的「2009年武器系統獲得改革法案」，以全面改進武器系統的獲得。該法案主要條款，包括在國防部內設置「成本及計畫評估主任」負責制定成本估算指導；設置「研發測試評估主任」、「系統工程主任」，以及要求「國防研究及工程主任」針對「重大國防武獲計畫」定期檢驗其技術之成熟度。

DOD has undertaken a comprehensive effort to improve defense acquisitions, including rewriting elements of the regulatory structure that govern defense acquisitions and launching the Better Buying Power and Better Buying Power II initiatives aimed at "implementing practices and policies designed to improve the productivity of the Department of Defense and of the industrial base."

國防部已全面採取行動改進國防武獲，包括改寫各項與國防武獲結構有關之法規，同時推出旨在「以實務與政策，提高國防部及工業基地之生產力」的「優化採購力」與「優化採購力II」方案。

An oversight issue for Congress is the extent to which the Weapon Systems Acquisition Reform Act and the various DOD initiatives are having a positive effect on acquisitions, and what additional steps, if any, Congress can take to further the effort to improve defense acquisitions.

國會對「武器系統獲得改革法案」及國防部各項作為之監督，都對武獲產生正面影響，而且國會將進一步致力於國防武獲之精進。

Introduction

This report provides an overview of the process by which the Department of Defense

(DOD) acquires weapon systems and briefly discusses recent major efforts by Congress and DOD to improve the performance of the acquisition system. For a discussion on the process for dealing with significant cost growth in weapon systems, see CRS Report R41293, The Nunn-McCurdy Act: Background, Analysis, and Issues for Congress, by Moshe Schwartz.

前言

本報告概述國防部武獲武器系統的程序，並扼要討論國會和國防部近期提高武器系統獲得功能的重大作為。有關武器系統成本大幅增長的討論，請參閱國會研究室許瓦茲(Moshe Schwartz)所撰第R41293號報告：《努恩－麥卡迪法案之背景、分析與國會議題》。

Background

The Department of Defense acquires goods and services from contractors, federal arsenals, and shipyards to support military operations. Acquisition is a broad term that applies to more than just the purchase of an item or service; the acquisition process encompasses the design, engineering, construction, testing, deployment, sustainment, and disposal of weapons or related items purchased from a contractor.[1] From a policy perspective, federal regulations and federal law generally use the terms acquisition and procurement interchangeably.[2] The term procurement, when used within the context of acquisitions, is different from the budget definition of procurement that generally references the Procurement budget appropriations account-a funding stream that is distinct from Research and Development, Operations and

1 《聯邦獲得規範》(Federal Acquisition Regulation, FAR)說明：「武獲的起點在於部會產生需要，同時明確說明：滿足其要求的條件、資源的獲得與選擇、招標、履約財源、合約性質、合約行政、各項合約律定與滿足部會需要直接相關的科技與管理功能。」參閱FAR 2.101.

2 《聯邦獲得規範》對採購的定義，引用美國法典第十部，第137章(一般採購)，明訂採購的定義為：「包含獲得財產或服務過程中的各個階段，始用於確定對該財產或服務的需要，一直到合約完成與結案。」參見10 USC§2302。同時參考第41部，§111。41部，§131，獲得之定義為：「以適當之撥款，透過合約，採購、租用與部會執行任務有關之財產或服務獲取(包括構建)，整個過程從執行部會建立需求開始……」包括研發，邀商，簽約和合約表現，到最後交貨和付款。

Maintenance, and other budget categories.

背景

國防部透過合約商、兵工廠、造船廠，獲得軍品及勞務，以支援軍事作戰。「軍品獲得」是個廣義的字眼，並不單純是採購行為，其過程包括設計、工程、建造、測試、成軍部署、後勤維持及最終處理，或從合約商採購相關物件。[1]從政策面看，聯邦法規通常將軍品的「獲得」與「採購」兩名辭交互運用。[2]採購一辭，在獲得與預算方面的定義不同，預算方面的定義通常與「採購預算撥款帳戶」有關，其籌資流向與研發、作業和維持，以及其他預算類別有所不同。

DOD's acquisition process is highly complex and does not always produce systems that meet estimated cost or performance expectations. Congress has been concerned with the structure and performance of the defense acquisition system for many years. For example, the House Armed Services Committee's report of the FY2007 defense authorization bill stated

國防部武獲過程極其複雜，不一定都能獲得滿足預估成本或期望性能的系統。國會一直關心的是行之多年的國防武獲體系的結構和功能。眾議院軍事委員會的2007年度國防授權法案報告中說明如下段所述。

Simply put, the Department of Defense (DOD) acquisition process is broken. The ability of the Department to conduct the large scale acquisitions required to ensure our future national security is a concern of the committee. The rising costs and lengthening schedules of major defense acquisition programs lead to more expensive platforms fielded in fewer numbers. The committee's concerns extend to all three key components of the Acquisition process including requirements generation, acquisition and contracting, and financial management.[3]

簡言之，國防部武獲程序已然支離破碎。本委員會關注的是國防部進行大型武獲時，必須確保未來國家安全所需。重大國防武獲計畫之成本上揚與期程延宕，將導致得以成軍的平台更昂貴，數量更少。委員會關切與武獲有關的3大步驟，包括作戰需求產

3 H.Rept. 109-452. Report of the Committee on Armed Services, House of Representatives on H.R. 5122. May 5, 2006,p. 350.

生、採購與招標、財務管理。[3]

Over the decades, congressional oversight has focused on many aspects of the acquisition process, from "micro-level" practices, such as characteristics of a particular contract, to "macrolevel" practices, such as management and execution of the Joint Strike Fighter and other Major Defense Acquisition Programs (MDAPs).[4] Congress has held oversight hearings and enacted legislation in an effort to improve the defense acquisition structure and its practices.[5]

幾十年來，國會監督都擺在獲得過程中從「微觀」，如某合約的特點；到「宏觀」，如聯合攻擊戰機等「重大專案」(MDAPs)層面之管理與執行。[4]國會曾舉辦監督聽證會並採取各種立法行動，以改進國防獲得結構。[5]

Statutory and Regulatory Foundation

Title 10 of the United States Code governs the organization, structure, and operation of the Armed Forces of the United States. Several sections within the title charge the secretaries of the military departments (Army, Navy, and Air Force) with responsibility to "equip" the armed forces. General procurement provisions, many of which apply to MDAPs and MAISs (Major Automated Information Systems), are spread throughout the title, including assignment of responsibilities, establishment of acquisition procedures, and requirements for reporting to Congress. The annual National Defense Authorization Acts are one of the principal mechanisms by which Congress modifies the defense acquisition structure, also set forth in Title 10.

法律法規基礎

美國法典第十部，律定美軍的組織、架構，以及作業。其中若干條文賦予各軍種部

4 重大專案為國防部價格最高的專案。在美國法典第十部§2430對重大專案之法律定義為，以1990年度幣值計，其研究、發展、測試、評估經費超過3億美元(2009年幣值換算約為4.42億美元)，採購金額18億美元(2009年幣值約為25.78億美元)之購案，或由主管獲得、科技、後勤之次長指定者，稱之為「重大專案」。

5 由國會進行國防武獲程序重整的權力，來自憲法第1條第8節：「增強並支持陸軍……供應並維持海軍……〔同時〕幫政府律定地面及海軍規範。」

長負責「裝備」各軍。一般採購規定，其中有許多適用於重大國防武獲專案計畫與重大自動化資訊系統(MAISs)，包括責任分擔，建立獲得程序，並向國會報告的要求。該法典律定「年度國防授權法案」，為國會修改國防武獲結構的主要機制之一。

DOD procurement activities are generally governed by three sets of federal government regulations:

*The first set of regulations applies to the entire federal government (including DOD unless stated otherwise) and is found in the Federal Acquisition Regulation (FAR).

*The second set of regulations applies only to DOD and is found in the Defense Federal Acquisition Regulation Supplement.

*The third set of regulations applies only to individual DOD components and is found in component-unique FAR Supplements.[6]

國防部採購行為，基本上受下列3套聯邦政府規定約束：

1. 第一套為聯邦政府一體適用之「聯邦採購規定」(FAR)。
2. 第二套為適用於國防部之「國防聯邦採購補充規定」。
3. 第三套為適用於國防部特定部門之「部門專屬聯邦採購補充規定」。[6]

Procurement actions in DOD must adhere to the various regulations, and program managers must take the regulations into account during the planning and execution of their programs.

國防部採購行為必須遵守各項規定，計畫管理者進行計畫與執行時，必須先考量這些法規。

The Process for Buying a Weapon System

Every weapon system in the U.S. arsenal is intended to satisfy a specific military need (often referred to as a requirement), must be paid for by the federal budget, and is designed and built within an acquisition system. From concept to deployment, a weapon system must go

6 這些部門包括陸軍、空軍、海軍、陸戰隊、國防後勤機構、特戰指揮部。

through the three-step process of identifying the required weapon system, establishing a budget, and acquiring the system. These three steps are organized as follows:

1. The Joint Capabilities Integration and Development System-for identifying requirements.

2. The Planning, Programming, Budgeting, and Execution System-for allocating resources and budgeting.

3. The Defense Acquisition System-for developing and/or buying the item. These three steps (each of which is a system onto itself), taken together, are often referred to as "Big 'A'" acquisition, in contrast to the Defense Acquisition System, which is referred to as "little 'a'" acquisition (see Figure 1).

購買武器裝備之程序

美軍軍火庫裏，所有的武器系統無不旨在滿足某一特定軍事需求，也全都由聯邦預算買單，在此一獲得體系內進行設計與製造。從概念到部署，武器系統必須通過3道步驟：確認需求、設定預算、武獲體系，其結構如下：

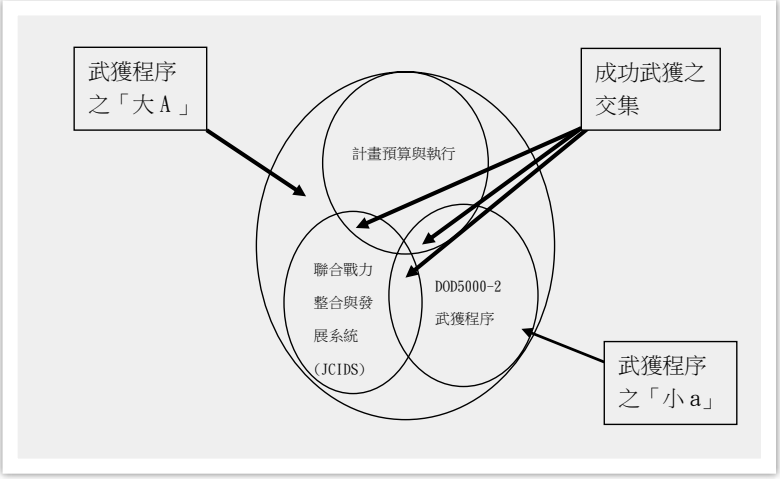
1.「聯合戰力整合發展體系」負責確認需求。

2.「計畫預算及執行體系」負責分配資源及預算。

3.「國防武獲體系」負責研發或採購。

這3道步驟(各自有其獨立系統)合起來，被稱為武獲的「大A」，另有一被稱為「小a」的國防武獲體系(如圖一)。

圖一　國防採購系統



The Requirements Process: Joint Capabilities Integration and Development System (JCIDS)

The Joint Capabilities Integration and Development System is the process by which

DOD identifies, assesses, and prioritizes what capabilities the military requires to fulfill its mission. As such, JCIDS is often referred to as the requirements generation process. Requirements identified through JCIDS can be addressed in a number of ways, including changes in doctrine, training, and organization, or the acquisition of a new item, such as a weapon system.

作戰需求擬訂程序：聯合戰力整合與發展體系(JCIDS)

聯合戰力整合與發展體系為國防部對其達成任務所需戰力之確認、評估、建立優先順序的程序。因此，其通常被認為是需求的產生源頭，透過該體系之需求確認有幾項，包括準則、訓練、編組之改變，或武器系統等新物件之獲得。

The JCIDS process was created in 2003 in an effort to fundamentally change the way DOD developed requirements. Prior to 2003, DOD used a threat-based approach to identifying warfighter requirements.[7] With the advent of JCIDS, DOD shifted to a capabilities-based approach to identifying warfighter needs. In other words, instead of developing, producing, and fielding systems based on specific perceived threats to the nation, DOD adopted a policy of identifying what capabilities it needs to meet the strategic direction and priorities set forth in high-level strategy and guidance documents such as the National Military Strategy, National Defense Strategy, and Quadrennial Defense Review.[8]

該體系程序於2003年建立，使國防部作戰需求擬定程序大幅改變。在此以前，國防部採用「威脅導向」來辨識戰鬥人員之需求。[7]該體系出現後，國防部改為「戰力導向」來確定作戰需求。換句話說，不再依據國家認知的威脅，進行研發、生產、部署武器系統，而是根據國家軍事戰略、國防戰略，及「四年期國防總檢討」等高層指導文件，所設立的戰略方向與優先順序，來決定所需戰力。[8]

Many analysts suggest that under the threat-based approach, each military service

7 威脅評估被認為是作戰需求之依據。.

8 參謀首長聯席會主席第3170.01H號指令：「聯合戰力整合與發展系統」(Joint Capabilities Integration and Development System)。

identified a threat, and in response to the threat developed its own independent weapons. The shift to a capabilities-based approach served to promote a more collaborative method of identifying capability gaps across services instead of each service developing its own response. As a result, weapon systems are expected to be developed jointly among services.

許多分析師認為，在「威脅導向」下，軍種各有其認定的威脅，並各自據以發展其獨立武器系統。「戰力導向」則促進各軍種合作確認彼此戰力之差距，而非自行其是，其結果則使各軍種能彼此共同發展武器系統。

JCIDS is governed by the Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3170.01H and utilizes the procedures described in the Manual for the Operation of the Joint Capabilities Integration and Development System. According to DOD policy, the first step in the process is to conduct a Capabilities Based Assessment (CBA), which analyzes the military's capability needs and gaps, and recommends both materiel[9] and non-materiel ways to address the gaps.[10] If, as a result of a CBA or a comparable study a materiel solution (such as a weapon system) is considered, an Initial Capabilities Document (ICD) is prepared.[11] The ICD justifies the need for a materiel solution to satisfy the identified capability gap.

該體系是由參謀首長聯席會主席第3170.01H訓令，及聯合戰力整合發展系統運作準則中敘述的程序所規範。根據國防部政策，此一程序第一步，經由「戰力導向評估」(CBA)分析軍事戰力之需求與差距，並針對彌補差距所需之實體[9]或非實體提出建議。[10]如其結果是建議採取實體(如武器系統)來彌補差距，就撰寫「初步戰力文件」(ICD)，[11]說明為何必須以該實體來彌補差距。

The Joint Requirements Oversight Council (JROC), the organization responsible for identifying and prioritizing warfighter requirements, must approve the ICD.[12] To approve the

9 所謂實體品項(包括船艦、戰車、自走砲、飛機等，與相關之零、附件、勤務裝備，但不包括房地產、設施、工具)為裝備、操作、維持、支援軍事活動所必須，而不限其應用於行政或戰鬥目的。請參閱《國防部軍語彙編》。

10 CJCSI 3170.01H

11 若因緊急作戰所需要，則依據「緊急作戰需要文件」，而不必初步戰力文件。

12 於下頁。

ICD, the JROC reviews and validates

*the capabilities required to perform the defined mission,

*the gap in capabilities required to perform the mission, and

*how the identified capability gap will be addressed (in whole or in part).

負責辨認作戰需求並賦予優先順序的「聯合需求監督委員會」(JROC)必須核准初步戰力文件，[12]其要能獲得批准必須符合以下各點：

1.遂行某一任務所需戰力。

2.遂行任務所需戰力之差距。

3.如何辨識出該差距(全面或局部)。

The JROC may approve an ICD and recommend a non-materiel solution to meeting the military need, such as a change to strategy or tactics. If the JROC approves a materiel solution, the program enters the Defense Acquisition System ("little 'a'"). The documentation developed during the JCIDS process serves as the basis for decisions throughout the acquisition process.

該委員會得以核准某項「初步戰力文件」，並建議一項能符合軍事需求的非實體方案，例如改變戰略或戰術。若該委員會核准了實體方案，計畫就進入「國防武獲體系」(小a)。在聯戰整合與發展體系過程所擬定之文件，成為整個武獲過程各項決心下達的基礎。

Despite its important role, the JROC does not have binding authority; it serves in an advisory role to the Chairman of the Joint Chiefs of Staff. The Chairman is responsible for advising the Secretary of Defense on "the priorities of the requirements identified by the commanders of the unified and specified combatant commands" and on the "extent to which the program recommendations and budget proposals of the military departments and other components of the Department of Defense" conform to the priorities established in strategic

12 其所呈現之戰力需求文件，在某種環境下可以代表該部門。聯合需求監督委員會是依據美國法典10 U.S.C. §181.法定設立的委員會，其角色與責任載於CJCSI 5123.01F。參謀首長聯席會議副主席擔任聯合需求監督委員會主席。各軍種都派有代表，同時鼓勵地區指揮部也派代表參加「會前會」。請參閱：CJCSI 5123.01F, p. A-4.

plans.[13] Ultimately, the Secretary of Defense, as head of DOD, has authority, direction, and control over requirements and acquisitions (subject to the President and Congress).[14]

雖然該委員會角色重要，但屬於參謀首長聯席會主席的顧問角色，並未具有約束力的權責，參謀首長聯席會主席負責向國防部長建議有關「各統一及特戰司令認定之需求優先」以及相關「各種軍事部門及國防部其他部門計畫建議和預算提案之事宜」，在既定的戰略計畫中，確定其優先順序。[13]最終，國防部之首腦國防部長(在總統與國會授權下)負有整個需求與獲得的權責、指導，及管制之責。[14]

The Budgeting Process: Planning, Programming, Budgeting and Execution System (PPBE)

The Planning, Programming, Budgeting, and Execution system develops DOD's proposed budget for all acquisitions, including MDAPs.[15] The PPBE is intended to provide DOD with the best mix of forces, equipment, manpower, and support within fiscal constraints.[16]

預算程序：計畫預算與執行制度

計畫、建案、預算及執行系統(PPBE)，國防部提出所有武獲專案預算之建立，包括「重大武獲專案」(MDAP)，[15]該制度旨在年度預算之限制下，為國防部提供最佳之部隊、裝備、人員、後勤支援的組合。[16]

The PPBE is an annual process consisting of four stages: planning, programming, budgeting, and execution.

*Planning: During this stage, a national defense strategy is defined and a plan is developed for executing the strategy. The plan sets forth priorities for developing programs (including military force modernization, readiness, and business processes and infrastructure support)

13 10 U.S.C. §153(a)(4).

14 10 U.S.C. §113.

15 DAU 開辦PPBE線上課程： https://learn.dau.mil/html/clc/Clc.jsp.

16 國防部訓令第7045.14號：《計畫預算與執行程序》(The Planning, Programming, Budgeting, and Execution, PPBE) Process, January 25, 2013, p. 2.

and is published in the Joint Programming Guidance.[17] This document helps guide the DOD components' efforts to propose or modify acquisition programs.[18]

*Programming: During this stage, proposed programs are fleshed out and a Program Objective Memorandum (a document that outlines the anticipated missions and objectives of the proposed weapon system and anticipated budget requirements) is submitted. These memoranda are reviewed and, as deemed appropriate, integrated into an overall defense program.

*Budgeting: Budgeting occurs concurrently with the programming stage. Proposed budgets are reviewed in a different manner than proposed programs. Upon completion of a program decision or as a result of a budget review, Program Budget Decisions are issued.

*Execution: During execution, programs are evaluated and measured against pre-established performance metrics, including rates of funding obligations and expenditures.

該制度是項年度的過程，包含4階段：計畫、建案、預算、執行。

1.計畫：在此一階段，確認國家戰略，並擬定執行該戰略之計畫。計畫設定各項計畫之優先順序(包括部隊現代化、整備、事務處理、基礎建設支援)，該計畫以「聯合建案指導」發布。[17]國防部各部門根據此文件，建議或修改武獲計畫。[18]

2.建案：在這個階段，提出方案充實並提交「計畫目標備忘錄」(概述預判的任務和提出的武器系統目的與預判預算需求文件)。這些備忘錄進行審查，並酌情整合到一個整體國防計畫。

3.預算：預算與建案階段同時進行，但兩者審查的方式不同。一旦下達計畫決心，或預算完成審查，就發布「計畫預算決心」。

4.執行：在執行過程中，計畫就根據預先建立的功能指標進行評估，包括預算款項和支出之比率。

The Defense Acquisition System

17 See https://dap.dau.mil/aphome/ppbe/Pages/Programming.aspx.

18 國防部之部門包括國防部長辦公室、軍事部(Military Departments)、參謀首長聯席會主席、聯戰指揮部(Unified Combatant Commands)、國防局(Defense Agencies)、國防領域之機構(DOD field activities)。

The Defense Acquisition System is the management process by which DOD develops and buys weapons and other systems.[19] It is governed by Directive 5000.01, The Defense Acquisition System,[20] and Instruction 5000.02, Operation of the Defense Acquisition System,[21] and utilizes the procedures described in the Defense Acquisition Guidebook.[22]

國防武獲體系

國防武獲體系為國防部武器及其他系統研發與採購的管理系統，[19]受「國防武獲體系」[20]及「國防武獲體系運作」之規範，[21]同時運用《國防武獲指導手冊》內載之程序。[22]

The Defense Acquisition System is not intended to be a rigid, one-size-fits-all process. Acquiring information technology systems is different than acquiring missiles, which is different than acquiring a nuclear attack submarine. As Instruction 5000.02 states:

「國防武獲體系」並非一項死板板，一體通用的程序。資訊科技系統之獲得與飛彈不可一概而論，也和獲得核能攻擊潛艦不同。5000.02指令說明如下段。

the structure of a DOD acquisition program and the procedures used should be tailored as much as possible to the characteristics of the product being acquired, and to the totality of circumstances associated with the program including operational urgency and risk factors.

國防部武獲之計畫與程序結構，應因預期獲得產品的特性，及與計畫有關之環境，如作戰之緊急性與風險因素而加以調整。

19 國防部指導5000.01,《國防武獲系統》(The Defense Acquisition System)，載有國防武獲程序相關政策與規則(僅10頁，簡要說明武獲原則)，在國防部訓令第(DODI) 5000.02《國防武獲系統運作》(Operation of the Defense Acquisition System) 有更詳細說明(共150頁，說明武獲程序及要求)。《國防武獲指南》為武獲專業人員食物有關之重要參考資料。國防部指導5000.01(初板2003.5.12，現行採用版本於2007.11.2610頒布)，國防部訓令第(DODI) 5000.02《國防武獲系統運作》(最新版本於2013.11.26頒布)，兩者均為靜態文件，指南則經常更新，以2013.9.16版本為例，多達1,200頁。

20 國防部2007.11.20頒，指令5000.01《國防部武獲系統》(The Defense Acquisition System)

21 國防部武獲科技後勤次長2013.11. 26頒指令5000.02《國防部武獲系統運作》(Operation of the Defense Acquisition System)。

22 該指南可自下列網站瀏覽：https://acc.dau.mil/CommunityBrowser.aspx?id=654219

Despite these differences, and the variations of the process contained in the 5000.02 instruction, the general framework of the acquisition system remains the same. This section of the report outlines that framework (based on the hardware-intensive model), pointing out selected instances where deviations may occur.

雖然國防武獲系統運作指令內的這些差異及程序上不同，但基本上，武獲體系的全般架構是相同的。本節報告強調可能發生架構變化的狀況。

Generally, the defense acquisition system uses "milestones" to oversee and manage acquisition programs (see Figure 2). The milestones serve as gates that must be passed through before the program can proceed to the next phase of the acquisition process. To pass a milestone, a program must meet specific statutory and regulatory requirements and be deemed ready to proceed to the next phase of the acquisition process. There are three milestones:

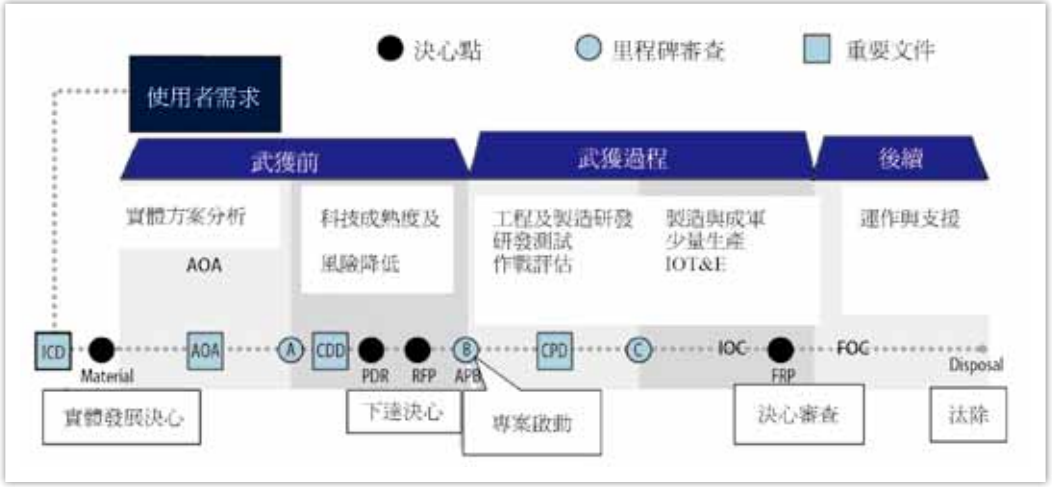
- Milestone A-initiates technology maturation and risk reduction.
- Milestone B-initiates engineering and manufacturing development.
- Milestone C-initiates production and deployment.

一般而言，國防武獲體系採用「里程碑」來監督並管理獲得計畫(如圖二)。「里程碑」為計畫進入次一武獲階段的必要門檻。計畫通過里程碑，必須符合特定的法律與規定，並視做已為進入下一階段之獲得程序做好了準備。3個「里程碑」如下：

1.里程碑A-科技成熟度與風險降低。

2.里程碑B-工程與製造研發。

圖二　國防武獲里程碑



3.里程碑C-生產與成軍部署。

Each acquisition program, such as the F-35, Littoral Combat Ship, or Joint Light Tactical Vehicle, is managed by an acquisition program office. The program office is headed by a Program Manager. Program managers can be military officers or federal civil servants. They are supported by a staff that can include engineers, logisticians, contracting officers and specialists, budget and financial managers, and test and evaluation personnel. Program managers usually report to a Program Executive Officer.[23] Program executive officers can have many program managers who report to them. Like program managers, program executive officers can be military officers or federal civil servants. They, in turn, report to a Component Acquisition Executive.[24] Most component acquisition executives report to the Under Secretary of Defense for Acquisition, Technology, and Logistics, who also serves as the Defense Acquisition Executive.[25]

每一武獲計畫專案，如F-35、濱海戰鬥艦、聯合輕型戰鬥車，均由武獲專案辦公室管理。專案辦公室以專案經理為首，可能為軍官，也可能是文職人員擔任。其幕僚包含工程師、後勤人員、合約軍官及專業人員、預算及財務經理人，測試評估人員。專案經理通常向專案執行官回報，[23]專案執行官可能有多位專案經理向其回報。專案執行官可能是軍官，也可能是文職人員。他們轉而向武獲執行部門回報，[24]基本上向國防部主管武獲、科技、後勤之次長回報，他也是國防部之國防武獲執行官。[25]

The official responsible for deciding whether a program meets the milestone criteria and proceeds to the next phase of the acquisition process is referred to as the Milestone Decision Authority (MDA). Depending on the program, the MDA can be the Under Secretary of Defense (Acquisition, Technology, & Logistics), the head of the relevant DOD component, or the component acquisition executive.

決定計畫是否符合里程碑條件，並進入次一獲得程序者，為「里程碑決策權責單

23 某些專案經理被稱為「直接報告專案經理」，他們直接向部門獲得執行官或里程碑決策權責單位報告。

24 某一軍種的部門獲得執行官(如陸、空軍)，也是軍種獲得執行官。

25 國防部 5000.1指令說明：所有武獲事務國防武獲執行官直接向副部長報告，國防資訊系統署武獲執行官直接向該署署長報告，特戰指揮部門或執行官向該指揮部指揮官報告。

位」(MDA)，依據不同專案，其可能是次長(主管武獲、科技、後勤)、國防部相關部門首長，或武獲執行部門。

Entering the Defense Acquisition System－Materiel Development Decision

For a program to enter the Defense Acquisition System, it must pass a Materiel Development Decision review, which determines whether a new weapon system is required to fill the identified gap (or whether a non-materiel solution, such as a change in training or strategy, is sufficient). The Material Development Decision is based on the requirements validated by the JROC and set forth in the Initial Capabilities Document (or equivalent document).

進入國防武獲體系－實體研發決心

任一計畫進入國防武獲體系，必須先通過實體研發審查，決定是否此一武器系統，是彌補某一差距所必須(或只需改變訓練或戰略等非實體方案即可)。實體研發決心是依據聯合需求監督委員會的需求驗證，及「初步戰力文件」(或類似文件)所律定。

To pass the Material Development Decision, the MDA must

- determine that a material solution is necessary,
- approve the plan for developing an Analysis of Alternatives (described in the next section),
- designate the DOD component that will lead the program, and
- identify at which phase of the acquisition system the program should begin.[26]

欲通過實體研發決心，它必須具備以下各項：

1.決定實體方案為必須。

26 一個專案計畫可以從任何一個點進入武獲體系，只要能滿足在這一個階段的要求。例如，若實體研發決心已經下達，滿足國防部規定的進入里程碑B(或C)要求，里程碑決策權責單位可以授權該專案從里程碑B(或C)。

2.核准研擬「備案分析計畫」(本文下一段詳述)。

3.指定國防部接管該案之部門。

4.辨識該案在獲得系統中，何階段應開始。[26]

Material Solution Analysis Phase-Determining the Right Solution

The Materiel Solution Analysis Phase is where competing systems are analyzed to determine which one is best suited to meet the validated requirements. This phase occurs prior to any of the milestones (see Figure 3).

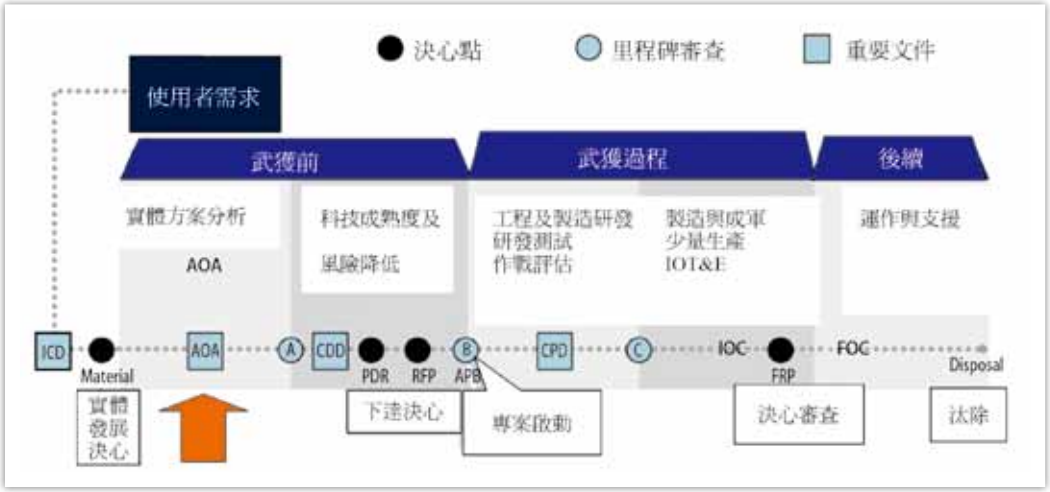
實體解決方案分析階段－決定正確的方案

實體方案分析階段將不同方案加以比較，以決定何者最適於滿足需求。該階段在進入每一里程碑前實施(如圖三)。

During this phase, the Analysis of Alternatives is conducted. The Analysis of Alternatives explores the competing methods of meeting the identified requirement. This analysis should include the comparative effectiveness, cost, schedule, concepts of operations, overall risks, and critical technologies associated with each proposed alternative, including the sensitivity of each alternative to possible changes in key assumptions or variables. The Analysis of Alternatives also addresses total life-cycle costs. During this phase, a program manager is selected and a program office is established.

備案分析在此一階段實施。備案分析旨在尋找能滿足所望需求的其他方案。分析應

圖三　物質方案分析與進入里程碑前階段



含括相對效益、成本、時程、作戰構想、整體風險，及相隨之重要科技，包括對關鍵假設事項或變數之改變。備案分析同時說明「全壽期成本」。在此一階段，選定專案經理，同時成立專案辦公室。

The materiel solution phase ends when the Analysis of Alternatives is completed, a specific solution is chosen to continue through the acquisition process, and the program meets the criteria for the milestone where the program will enter the acquisition system.

當備案分析完成，特定方案被選定，而計畫能滿足進入里程碑的條件，實體方案階段結束。

Milestone A and the Technology Maturation and Risk Reduction Phase

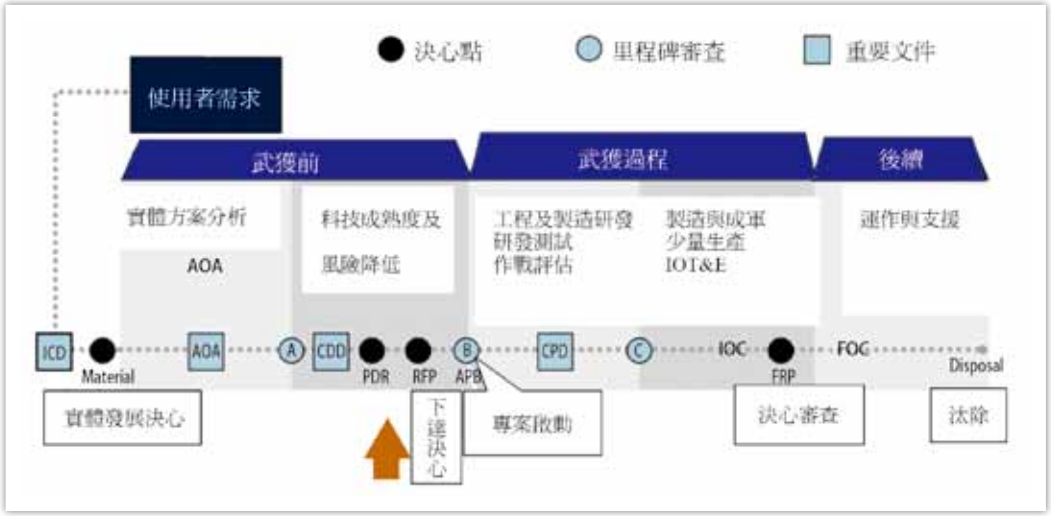
A program must pass through Milestone A to proceed to the Technology Maturation and Risk Reduction phase (see Figure 4).

里程碑A與技術成熟度及風險降低階段

計畫必須通過里程碑A，方進入技術成熟度及風險降低階段(如圖四)。

To pass Milestone A,

圖四　里程碑A：科技成熟度及風險降低階段



• the Milestone Decision Authority must approve the proposed materiel solution (based on the Analysis of Alternatives) and the Acquisition Strategy,

• the lead component must submit a cost estimate for the proposed solution (including life-cycle costs),[27]

• the program must have full funding for the length of the Future Years Defense Program,[28] and

• if technology maturation is to be contracted out, the program must have a Request for Proposal (RFP) that is approved by the MDA and ready for release.

欲通過里程碑A，必須具備以下各項：

1.里程碑決策權責單位必須核准實體方案(依據備案分析)，及武獲策略。

2.主管部門必須呈報建議方案之成本估算(含壽期成本)。[27]

3.計畫必須在未來各年度中擁有完整預算。[28]

4.若科技成熟度不足，計畫必須有經由權責單位核准的「建案要求」(RFP)，備妥發布。

MDA decisions made at this milestone are documented in an Acquisition Decision Memorandum

里程碑決策權責單位在里程碑過程中下達之決心，將記錄在「武獲決心備忘錄」內。

The Technology Maturation and Risk Reduction phase is when nascent technologies and the system design are matured to the point that a decision can be made with reasonable confidence that a system can be developed to meet military requirements and fit within affordability caps. To meet these twin objectives, requirements are refined and cost caps are finalized.

27 壽期成本為全案整個生命期，從研發、測試、生產、設備、操作、維護、人事、環保、最終處理的總成本。

28 「爾後年度國防專案計畫」各項文件是國防部資源與專案之間的聯繫。逐年綜整與該專案有關之各項資源(如人力資源、裝備、部隊)的報告，反映出各項計畫預算與執行文件的內容，如戰略計畫指導。「爾後年度國防專案計畫」根據每年提交給OSD及總統的年度預算加以更新。

科技成熟度和降低風險階段，乃是當新科技與系統設計成熟度足以下達決心，且研發過程經濟能力可以承受的限度下，能夠滿足軍事需求。為了達到這兩個雙重目標，需求必須完整，成本的上限必須確定。

During this phase, a Capability Development Document[29] and Reliability, Availability, and Maintainability strategy[30] must be developed and approved. These documents will inform the Preliminary Design Review, which is held during this phase to ensure that the preliminary design and basic system architecture are complete, and that there is technical confidence the capability need can be satisfied within cost and schedule goals.[31] This phase is also where competitive prototyping occurs, which is when industry teams develop competing prototypes of a required system.

在此一階段，亦須擬定並核准「戰力發展文件」[29]及「可靠度、可用度、可維持度策略」。[30]這些文件應通知實施「初期設計審查」，旨在確保初步設計和系統基本架構已完成，且確認在成本及期程下，科技可以滿足戰力需求。[31]這一階段也是由各工業團隊針對需求，爭取原型機研發，不同的原型系統之相互競爭。

The Development RFP Release Decision Point is held during this phase. This is one of the critical decision points in the acquisition process because this is when the acquisition strategy is initiated and industry is asked to bid for the development contract. As the DODI 5000.02 emphasizes,

在此一階段，有「研發建案要求釋出決心點」，這是武獲程序中相當重要的決心點，因為事關獲得策略之啟動，同時工業界也要求就研發合約競標。如國防部第5000.02

29 「戰力發展文件」詳細說明發展的系統，其作戰性能參數。

30 可靠度、可用度、可維持度(Reliability, Availability, and Maintainability, RAM) ，可靠度說明一項系統在某一條件與時間內執行某一特定功能的機率；可用度以該系統可以執行任務之時間計算；可維持度為該系統可以持續運作或在某一條件下恢復的範圍。請參閱2005.8.3令頒之《達成可靠度、可用度、可維持度指南》p. 1-1。該指南可自下列網站瀏覽：http://www.acq.osd.mil/sse/docs/RAM_Guide_080305.pdf.

31 參閱《國防武獲指南》(Defense Acquisition Guidebook)(https://acc.dau.mil/docs/dag_pdf/dag_complete.pdf), p. 261. 初步設計審查(Preliminary Design Review)若非因該案屬重大專案(MDA)，否則在進入里程碑B前實施。請參閱DODI 5000.02, p. 19.

號指令所載：

[P]rior to the release of the final RFP(s), there needs to be confidence that the program requirements to be bid against are firm and clearly stated; the risk of committing to development and presumably production has been or will be adequately reduced prior to contract award and/or option exercise; the program structure, content, schedule, and funding are executable; and the business approach and incentives are structured to both provide maximum value to the government and treat industry fairly and reasonably.[32]

最終的建案要求發布之前，招標計畫說明必須明確。在合約簽訂前，或備案實施前，參與開發與生產的風險已經，或即將獲得適當降低。該計畫的結構、內容、期程和預算是可執行的。商務導向與激勵作法，都為政府爭取最大價值，同時也讓工業界獲得合理對待。[32]

Milestone B and the Engineering and Manufacturing Development Phase

Most programs begin at Milestone B, the point at which a program becomes a program of record. A program must pass through Milestone B to proceed to the Engineering and Manufacturing Development Phase (see Figure 5).

里程碑B及工程與製造研發階段

大多數計畫，是從里程碑B開始，在該點成為納入紀錄之專案計畫。專案計畫必須通過里程碑B，才能進入「工程及製造研發階段(如圖五)。

To pass Milestone B,

*a program must have passed the Development RFP Release Decision Point;

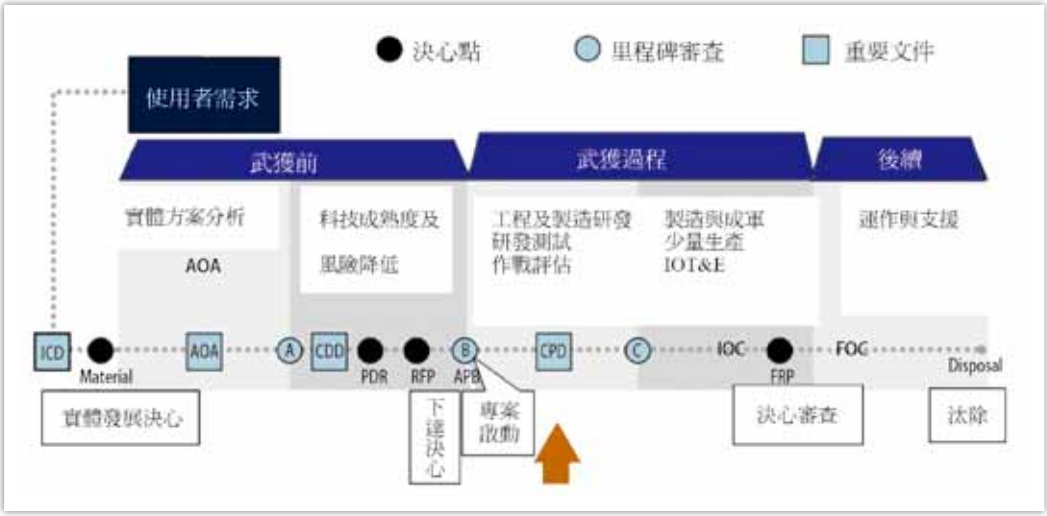
*requirements must be validated and approved;[33]

*the program must have full funding for the length of the Future Years Defense Program;

*an independent cost estimate must be submitted to the MDA;

32 Ibid., p. 22.

圖五　里程碑B：工程與製造研發階段



*all sources of risk (including cost, technology development,[34] integration, and sustainment) must be sufficiently mitigated to justify fully committing to the development of the program; and

*the Milestone Decision Authority must approve an updated Acquisition Strategy.

欲通過里程碑B，必須具備以下各項：

1.必須通過研發建案要求之決心點。

2.需求須經過驗證與核准。[33]

3.專案必須在未來年度國防計畫框列充分預算。

4.獨立的成本估算必須提交給里程碑決策權責單位。

5.所有風險均經降低(包含成本、技術開發[34]、整合、後勤維持)，證明該專案可以全面投入。

6.里程碑決策權責單位必須核准最新的採購策略。

Upon passing Milestone B, the MDA approves the Acquisition Program Baseline (APB),

33　進入工程及製造階段前，「重要性能參數」(Key PerformancParameters, KPPs)必須獲得核准，該KPP可於事後修正。

34　武器系統所需科技並不一定要成熟才能進入里程碑B，若干尚未成熟的科技可以繼續研發，其他已經成熟者則進入里程碑B。國防部讓已經成熟科技進行細部設計與整合，而較不成熟科技繼續進行風險減少，隨後納入整合，這種方式稱之為「演進式武獲」(Evolutionary Acquisition)。

which details the performance, schedule, and cost goals of the program.[35] The APB is signed by the MDA and the program manager, and serves as the basis against which execution of the program will be measured. MDA decisions made at this milestone are documented in an Acquisition Decision Memorandum.

一旦通過里程碑B，權責單位就核准「武獲專案基準」(APB)，詳細說明性能、時程和成本。[35]由權責單位及專案經理簽署的該文件，即為專案執行的評量基準。權責單位在此里程碑所作的決心，都記錄在「武獲決心備忘錄」內。

The Engineering and Manufacturing Development Phase is where a system is designed and developed, all technologies and capabilities are fully integrated into a single system (full system integration), and preparations are made for manufacturing (including developing manufacturing processes, designing for mass production, and managing cost)

工程和製造發展階段是一個在設計和開發的系統，所有的技術和功能完全整合到一個單一系統內(全系統整合)，並備便進行製造(包含新製程、量產設計及管理成本)。

During the detail design effort, the office of Developmental Test and Evaluation tests the maturity and adequacy of the design and provides the results of its analyses to the Program Manager. During system integration, the various subsystems are integrated into one system and a development model or prototype is produced.[36] For example, on an aircraft carrier, system integration would be when the aircraft launching system, radar, nuclear reactor, and other subsystems are all integrated onto the ship. Operational testing and evaluation also takes place during this phase, both at the subsystem and integrated-system level. Operational testing and evaluation is intended to determine whether a system is operationally effective, suitable, and survivable.

在細部設計工作過程中，發展測試和評估辦公室測試其成熟度與適切性，並將其分析結果提供給專案經理。在系統整合過程中，各個子系統被整合到一個系統，然後製成

35 武獲專案基準包含所望目標及可接受門檻價值。

36 極其價昂之專案計畫，如人造衛星及船艦，可以不必先製造原型機，此時里程碑B與C可能同時發生，第一件產品測試後成軍。請參閱 DODI 5000.02, p. 26.

模型或原型機。[36]例如，航空母艦必須將飛機彈射系統、雷達、核子反應爐及其他子系統全數整合上艦。作戰測試和評估也在本階段進行，達到子系統及系統整合標準。作戰測評指在確認系統是否在作戰上有效、適切，並且能存活。

Milestone C and the Production and Deployment Phase

A program must pass through Milestone C to proceed to the Production and Deployment phase (see Figure 6).

里程碑C生產及成軍部署階段

專案通過里程碑C後，才能進入生產及成軍部署階段(如圖六)。

To pass Milestone C,

*the production design must be stable,

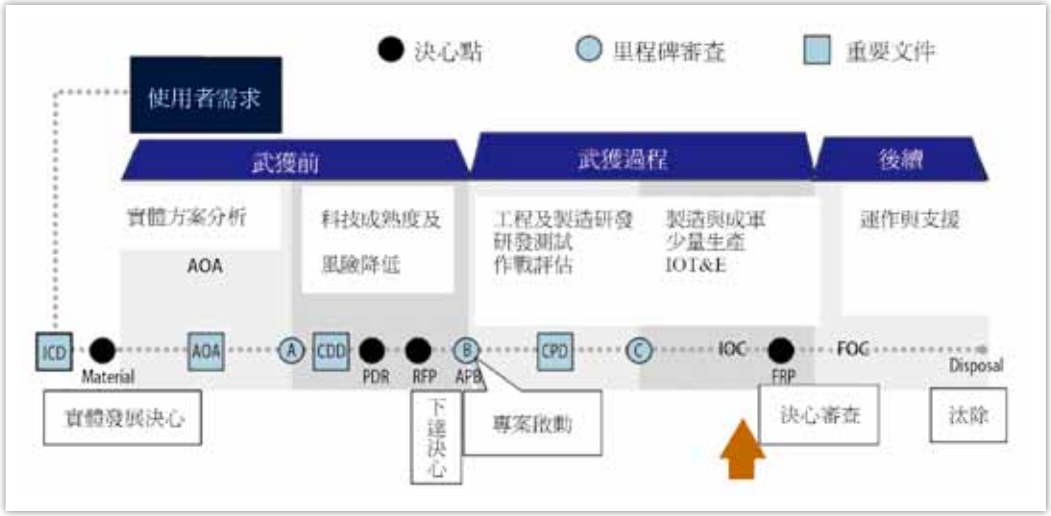
*the system must pass developmental testing and operational assessment,

*software must meet the predetermined maturity,

*the system must demonstrate that it is interoperable with other relevant systems and can be supported operationally, estimated costs must be within the cost caps,

*the program must have full funding for the length of the Future Years Defense Program,

圖六　生產及成軍部署階段



*the Capability Production Document must be approved,[37] and

*the Milestone Decision Authority must approve the updated Acquisition Strategy.

MDA decisions made at this milestone are documented in an Acquisition Decision Memorandum.

欲通過里程碑C，必須具備以下各項：

1.生產設計必須穩定。

2.系統必須通過開發測試和作戰評估。

3.軟體必須滿足預定的成熟度。

4.系統必須展示其與其他相關系統的互通性與彼此支援能力

5.預估成本必須在成本限額內。

6.在未來年度國防計畫中，專案有充分框列預算。

7.戰力生產文件必須核准。[37]

8.里程碑決策權責單位必須核准更新的武獲策略。

權責單位進入該里程碑的決心，納入「武獲決策備忘錄」紀錄。

During the Production and Deployment phase, the MDA authorizes the beginning of low-rate initial production, which is intended to both prepare manufacturing and quality control processes for a higher rate of production and provide test models for operational test and evaluation. A program can enter full-rate production when it has completed sufficient operational testing and evaluation, demonstrated adequate control over manufacturing processes, and received approval of the MDA to proceed with production.

在生產與部署階段，里程碑決策權責單位授權少量初始生產，一方面為全面生產與品管做準備，同時為作戰測評提供裝備。當完成作戰測評，展示適切的生產流程，就會獲得該權責單位之生產核准。

When enough systems are delivered and other predefined criteria are met, an Initial Operating Capability can be attained, allowing for some degree of operations. Full Operational

37 「戰力產生文件」(Capability Production Document)詳細說明戰力歸屬與重要性能參數。此文件尚包含成本和工程詳細估算。

Capability is achieved when the system is ready to operate as required.

當交運系統數足夠，標準也符合，則初始作戰能力形成，可以參加若干程度的作戰。當系統已經完全準備好依照需求作戰，則全面作戰能力達成。

Operations and Support Phase

Operations and Support is the final phase of a weapon system's life (see Figure 7). In this phase, the system is fully deployed, operated, supported, and ultimately retired. Up to 70% of the total life cycle costs of a system can occur in the operations and support phase.[38]

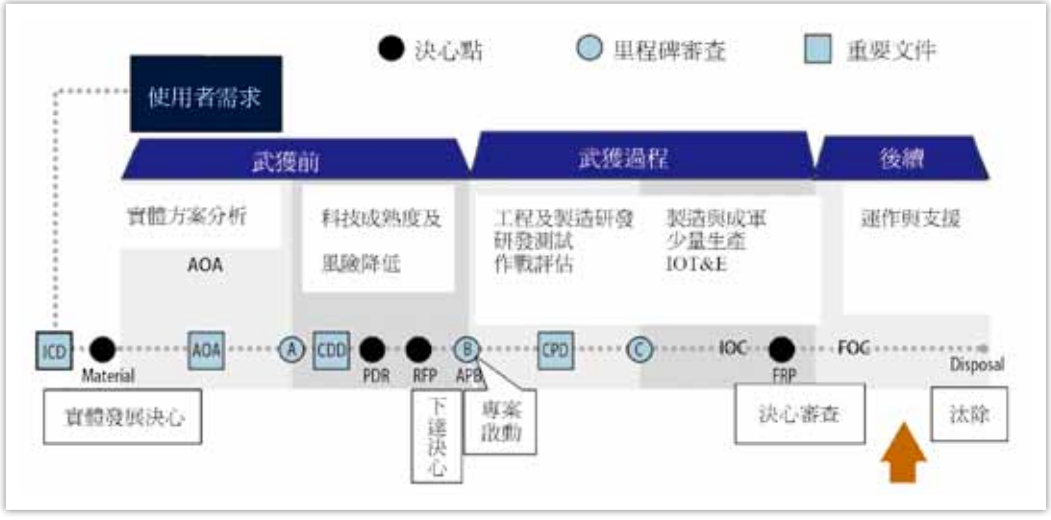
作戰及支援階段

作戰及支援階段為武器系統發展的最後階段，本階段系統全面部署、作戰，至最終退除現役。全系統成本有70%，出現在本階段(如圖七)。[38]

Acquisition Categories

Programs are divided into acquisition categories (ACATs) based primarily on program

圖七　運作與支援階段



38　消耗燃油的系統需要經常維修，而且需要比較多的支援設施，因此運作與支援成本亦較高，因此飛機或船艦這方面占總成本之百分比較高，人造衛星或飛彈就比較低。

cost. The level of management oversight of an acquisition program increases as the cost of the program increases. The most significant DOD and congressional oversight activities apply to MDAPs,[39] which are categorized as ACAT I programs.[40] Table 1 illustrates the thresholds and decision authorities for all ACATs.

武獲分類

專案計畫根據成本區分不同種類(acquisition categories, ACATs)，專案價格成本愈高，管理監督層級愈高。國防部及國會監管動作，以MDAP為主，[39]也就是分類為ACAT I之專案計畫。[40]表一說明ACAT各類別門檻及決策權責單位。

Acquisition Reform

Concerns over defense acquisitions generally center around significant cost overruns, schedule delays, and an inability to provide troops in the field with the equipment they need when they need it. Many analysts believe that cost overruns and schedule delays have a debilitating effect on the nation's military and threaten America's technological advantage and military capabilities.[41] For more than 50 years, both Congress and DOD have initiated numerous attempts to improve defense acquisitions. Despite the numerous initiatives, studies and reports (many of which echo the same themes and highlight the same weaknesses in the acquisition process), congressional hearings, and legislative fixes, DOD acquisition reform efforts have failed to rein in cost and schedule growth.

武獲改革

武獲專案備受關切的核心無非成本大幅增加、期程延誤，以及成軍裝備無法在作戰時提供部隊所需。許多分析師認為成本大幅增加及期程延宕，將削弱軍隊戰力，並威脅美國的科技優勢。[41]50餘年來，國會及國防部作了很多努力來改善，也有無數的方案、

39 若干僅適用重大武獲計畫專案的法律報告及監督，列載於at 10 U.S.C. §144.

40 重大自動化資訊系統 (Major Automated Information Systems, MAIS) 與武獲案之金額門檻不同，參閱表一。

41 其他問題包括國防武獲整體成本對聯邦預算，及國防工業基地健康之影響。

Table 1. Description of Acquisition Categories

Category	Reason for Acquisition Category (ACAT) Designation	Decision Authority
ACAT I	Program is a Major Defense Acquisition Program • Value of the program (including all increments) is estimated by the Under Secretary of Defense (Acquisition, Technology, and Logistics) to require - Research, Development, Technology, and Engineering in excess of $480 million; or - is estimated to have priocurement costs of more than $2.79 billion (in FY2014 constant dollars) or • Milestone Decision Authority designates program as an ACAT I	ACAT ID:Under Secretary of Defense (Acquisition, Technology, and Logistics)or as delegated ACAT IC:Head of DOD Component or, if delegated, the Component Acquisition Executive
ACAT IA[a,b]	Program is a Major Automated Information System (MAIS) • An Automated Information System[b] that is estimated(in FY2014 constant dollars) to require more than - $40 million for all expenditures directly related to the system, incurred in any single year (including all increments); or - $165 million for all expenditures directly related to the system, incurred from the start of the Material Solution Analysis Phase through deployment at all sites (including all increments); or - $520 million for all expenditures directly related to the system, incurred from the start of the Material Solution Analysis Phase through sustainment for the estimated life of the system (including all increments) or • Milestone Decision Authority designates program as an ACAT IA	ACAT IAM:Under Secretary of Defense (Acquisition, Technology, and Logistics) or as delegated ACAT IAC:Head of the DOD Component or, if delegated, the Component Acquisition Executive
ACAT II[c]	Program does not meet criteria for ACAT I or IA and is Major System • Value of the program estimated to require - Research, Development, Technology, and Engineering in excess of $185 million; or - is estimated to have priocurement costs of more than $835 million (in FY2014 constant dollars) or • Milestone Decision Authority designates program as an ACAT II	Component Acquisition Executive as delegated
ACAT III	Program does not meet criteria for ACAT I, IA, or II, or is an Automated Information System that is not a Major Automated Information System	As Designated by the Component Acquisition Executive

研究、報告(甚多回應都強調武獲程序方面的問題)、國會聽證及立法，國防部卻仍無法改善成本及期程方面的問題。

In recent years, DOD and Congress have taken another look at defense acquisitions and

表一　武獲分類說明

分類	武獲分類指定之理由	決策權責
I	重大武獲案 一、主管武獲、科技、後勤次長估計專案價值(含所有增值) (一)研發、科技、工程價值超過4.8億美元。 (二)採購價格超過2,790億美元(2014年度幣值)。 二、里程碑決策單位代表為I類武獲專案	ID：主管武獲、科技、後勤次長或其代表。 1C：國防部相關單位主管，或經授權之武獲執行官。
IAa,b	重大自動化資訊系統專案 一、估計額度(2014年度幣值) 超過以下任一項： (一)直接與系統有關(含各項增強)之單一年度支出4,000萬美元。 (二)從實體解決方案分析階段到部署各陣地，直接與系統相關的支出1,650萬美元。 (三)從實體解決方案分析階段到系統預估壽限前，語系同直接相關的支出為5,200萬美元。 二、里程碑決策機構指定為IA類之專案計畫。	IAM：國防部次長(主管獲得、科技、後勤)或其代表。 IAC：國防部部門主管，或代表其部門的武獲執行官。
IIc	不符合I或IA類標準之主要系統 一、計畫估計值需以下任一項： (一)研究、發展、科技、工程所需預算超過1,850萬美元。 (二)採購預算超過8,350萬美元(依據2014年度幣值計算) 二、里程碑決策機構指定為II類之專案計畫。	部門武獲執行官或其代表。
III	不符合I, IA,或II類之計畫專案標準，或非重大自動化資訊系統之計畫專案。	武獲執行官之代表。

embarked on an effort to improve the process. Some analysts believe that the efforts currently underway are the most comprehensive in more than 20 years.

國防部與國會近年來從不同角度觀察武獲程序，並從事改進流程，若干分析師認為這是以往20年來最廣泛的。

DOD Reform Efforts

In recent years, DOD has embarked on a number of initiatives aimed at improving the process for buying weapon systems. For example:

*On January 10, 2012, DOD issued updated versions of the instructions Charter of the Joint Requirements Oversight Council and Joint Capabilities Integration and Development System.

*On January 19, 2012, DOD issued an updated version of the Manual for the Operation of

the Joint Capabilities Integration and Development System.[42]

*On November 26, 2013, DOD issued an updated "interim" instruction Operation of the Defense Acquisition System (5000.02).

國防部之改革作為

近年來國防部啟動一系列作為，改革武器採購的程序，舉例如下：

1.2012年1月10日，國防部發布最新版的《聯合需求監督》及《聯合戰力與系統研發》等訓令。[42]

2.2012年11月9日，國防部頒布新版《聯合戰力整合及系統研發準則》。

3.2013年11月26日，國防部頒布新版《國防武獲系統運作(5002.02)》

DOD has also undertaken a comprehensive effort to improve the overall operation of the defense acquisition system. On September 14, 2010, then-Under Secretary of Defense for Acquisition, Technology and Logistics Ashton Carter issued the memorandum Better Buying Power: Guidance for Obtaining Greater Efficiency and Productivity in Defense Spending. The memorandum outlined 23 principal actions to improve efficiency, including making affordability a requirement, increasing competition, and decreasing the time it takes to acquire a system. In November 2012, Secretary Carter's successor, Frank Kendall, launched the Better Buying Power 2.0 initiative, an update to the original Better Buying Power effort, aimed at "implementing practices and policies designed to improve the productivity of the Department of Defense and of the industrial base that provides the products and services" to the warfighters.[43] Better Buying Power 2.0 contained 34 separate initiatives, including reducing the frequency of senior-level reviews and improving requirements and market research.[44] According to officials,

42 該手冊可從下列網站瀏覽： https://dap.dau.mil/policy/Documents/2012/JCIDS%20Manual%2019%20Jan%202012.pdf. 2012.9.20出版1份4頁的勘誤表 (請瀏覽下列網頁：https://dap.dau.mil/policy/Documents/2012/JCIDS%20Manual%20Errata%20-%2020%20Sept%202012.pdf)。

43 基本上內容與原版無大變化，改變部分如：原版推廣採用「固定價格合約」(fixed-price contracts)，新版推廣依情況採用「最合理合約」(appropriate contract)。參考國防部提供之優化購買力2.0摘要。

44 《優化購買力2.0備忘錄》全文可自下列網站瀏覽： http://bbp.dau.mil/doc/USDATL%20Memo%2024Apr13%20-%20BBP%202.0%20Implementation%20Directive.pdf.

Better Buying Power 3.0 is in development.

國防部也採取廣泛的作為，以改善國防武獲的整體作業。2010年9月14日國防武獲、科技、後勤次長卡特(Ashton Carter)頒布「優化國防支出之採購以獲得效率及生產力指導」備忘錄。該備忘錄列出23項主要行動以改善效率，其中包括可負擔之需求、增加競爭、縮短系統獲得時間。2012年11月次長卡特之繼任者坎達(Frank Kendall)，推動「優化購買力2.0」，讓原構想「更具實務，政策性設計，旨在改善國防部及工業界的生產力。」[43]「優化採購2.0」包含34項個別的作為，包括減少高階視察及改善需求與市場研究。[44]官方表示，3.0版正在擬定中。

These and other related DOD initiatives generally focus on

*rewriting the rules and regulations to create a more efficient and effective acquisition process,

*improving the culture and professionalism of the acquisition workforce,

*and improving the overall performance of the acquisition system.

Although these efforts are not aimed solely at weapon system acquisition, if such efforts succeed in improving acquisitions writ large, weapon system acquisitions should similarly improve.

其他各項作為，針對方向如下：

1.改變規則與法規，建立更有效率及效益的程序。

2.加強武獲團隊之專業水準。

3.全面改進武獲系統功能。

雖然這些作為旨在改善武器系統獲得，但系統改善，武器系統就隨之改進。

Congressional Reform Efforts

In recent years, the primary mechanism through which Congress has exercised its legislative powers to reform the defense acquisition structure has been the annual National Defense Authorization Act (NDAA). Sections of the acts have prescribed requirements applicable to both specific acquisition programs and acquisition structure overall, the latter of which has typically been addressed in Section VIII, usually titled "Acquisition Policy,

Acquisition Management, and Related Matters." Generally, the requirements prescribed in this section have focused on specific issues rather than a comprehensive overhaul of the entire defense acquisition structure. In the National Defense Authorization Acts for FY2008-2012, the titles dealing with acquisitions included more than 240 sections.[45]

國會推動之改革

近年來國會改革武獲的機制，主要透過年度「國防授權法案」(NDAA)。該法案律定特定武獲案及整體之武獲結構，而後者基本上呈現在第八節「武獲政策、管理及相關事項」。2008～2012年度授權法案，與整體結構有關條文超過240節。[45]

The most recent legislation that had a significant impact on weapon system acquisitions was enacted in May 2009, when Congress passed and the President signed into law the Weapon Systems Acquisition Reform Act of 2009 (S. 454/P.L. 111-23). Key provisions in the act included

最近對武獲系統產生重大影響的立法作為，是2009年5月經國會通過，同時由總統簽署生效成為法律的「2009年武器系統獲得改革法案」(S.454 / P.L.111-23)。該法案主要條文如下：

*the appointment of a Director of Cost Assessment and Program Evaluation within DOD who communicates directly with the Secretary of Defense and Deputy Secretary of Defense and who issues policies and establishes guidance on cost estimating and developing confidence levels for such cost estimates;

*the appointment of a Director of Developmental Test and Evaluation who serves as principal advisor to the Secretary of Defense on developmental test and evaluation and develops polices and guidance for conducting developmental testing and evaluation in DOD, as well as reviewing, approving, and monitoring such testing for each Major Defense Acquisition Program;

*the appointment of a Director of Systems Engineering who serves as principal advisor to

45 國會對年度國防授權法案之審查。

the Secretary of Defense on systems engineering and who will develop policies and guidance for the use of systems engineering, as well as review, approve, and monitor such testing for each MDAP;

*a requirement that the Director of Defense Research and Engineering periodically assess technological maturity of MDAPs and annually report findings to Congress, requiring the use of prototyping, when practical;

*a requirement that combatant commanders have more influence in the requirements-generation process;

*changes to the Nunn-McCurdy Act, including rescinding the most recent milestone approval for any program experiencing critical cost growth;

*a requirement that DOD revise guidelines and tighten regulations governing conflicts of interest by contractors working on MDAPs; and

*a requirement that a principal official in the Office of the Secretary of Defense be responsible for conducting performance assessments and analyses of major defense acquisition programs that experience certain levels of cost growth.

1.國防部內設置「成本與專案計畫評估主任」，直接與國防部部長和副部長溝通，並發布成本估算與發展信心程度相關政策及指導。

2.設置「研發測試評估主任」擔任部長對此一領域的首席顧問，同時負責發不相關政策與指導，及重大武獲專案計畫的審查、核准和監督。

3.設置「系統工程主任」擔任國防部長系統工程的首席顧問，並負責發布相關政策與指導，及重大武獲計畫專案之審查，核准和監控。

4.要求「國防研究與工程主任」定期評估重大計畫專案之科技成熟度，每年將調查結果及是否需要運用原型機向國會報告。

5.要求各戰鬥指揮官積極參與作戰需求之研擬。

6.修改努恩-麥卡迪法案，廢除任何專案產生重大成本增加核定進入次一里程碑之規定。

7.要求國防部修改法規，並加強參與重大購案廠商之管理，避免與國家利益相衝突。

8.要求國防部主要官員負責對曾經歷成本增加達某一程度的重大武獲案件實施評估與分析。

作者：許瓦茲(Moshe Schwartz)　來源：國會研究報告　2014年5月23日