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A Review and Update of Public Budgeting in Defense: Leveraging a New Management Model for Government

Francois Melese, Christopher Appleby, Bob Larsen

Driven by public demand for a more efficient and accountable government, together with growing pressure from the President's Office of Management and Budget (OMB) to implement the 1993 Government Performance and Results Act (GPRA), Federal agencies have increasingly embraced performance budgeting. The logic of this natural transformation of PPB is illustrated through the application of a new management model for government called "SUCCESS." Today, a new Planning, Programming, Budgeting and Execution (PPBE) process is being implemented to make high-level defense resource allocation decisions that culminate in the annual defense budget submitted by the President to Congress.

Defense Resources Management Institute
School of International Graduate Studies
Naval Postgraduate School
Building 234
699 Dyer Road
Monterey, CA 93943-5138
831-656-2306
www.nps.navy.mil/drmi

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Title—*A Review and Update of Public Budgeting in Defense: Leveraging a New Management Model for Government*¹

Dr. Francois Melese
Defense Resources Management Institute (DRMI)
School of International Graduate Studies
Naval Postgraduate School
Monterey, CA 93943
(831) 656-2009
fmelese@nps.navy.mil

Mr. Christopher Appleby
Senior Management Analyst
Office of the Secretary of Defense (OSD/DA&M)
Directorate of Organizational and Management Planning
1950 Defense, Pentagon
Washington, DC 20301-1950
Chris.appleby@osd.mil

Colonel Bob Larsen, PhD
Senior Service College Fellow
Institute for Advancing Technology
University of Texas
3925 W. Braker Lane, Suite 400
Austin Texas 78759
Bob.larsen@us.army.mil

ABSTRACT

Driven by public demand for a more efficient and accountable government, together with growing pressure from the President’s Office of Management and Budget (OMB) to implement the 1993 Government Performance and Results Act (GPRA), Federal agencies have increasingly embraced performance budgeting. The magnitude of the challenge of shifting government’s focus from inputs to outputs is manifested in the way legislatures authorize and appropriate funds to “buy things” (inputs), and only indirectly to “do things” (outputs). For example, whereas Pentagon planners emphasize output-oriented defense programs, Congressional debates largely focus on input-oriented defense budget appropriations. This paper provides a brief history, explanation, and update of the performance budgeting framework employed by the U.S. Department of Defense (DoD), the “planning, programming and budgeting” (PPB) system. PPB is designed as a high level constrained optimization whose objective is to achieve a form of “allocative efficiency” within defense—to maximize national security subject to fiscal constraints. As originally conceived PPB was meant to assist senior defense officials to establish priorities within the budget, and to shift resources among defense programs—and across the military services—from less to more productive uses in response to changes in the national security environment. The model has recently been modified to emphasize a fourth component, “Execution.” The logic of this natural transformation of PPB is illustrated through the application of a new management model for government called “SUCCESS.” Today, a new Planning, Programming, Budgeting and Execution (PPBE) process is being implemented to make high-level defense resource allocation decisions that culminate in the annual defense budget submitted by the President to Congress.

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1. Introduction

The Government Performance and Results Act [GPRA 1993] is the latest in a series of performance-based budgeting initiatives to shift the spotlight from inputs (what government buys) to outputs (what it does), and to tie budgets to performance. [GAO 1995, Premchand 1999, McNab & Melese 2003] The GPRA’s ambitious agenda includes three principle objectives: 1) To “improve congressional decision-making by providing...information on...the relative effectiveness and efficiency of...program spending,” 2) To “improve [the] internal management of the Federal Government,” and 3) To “improve...accountability...service quality, and customer satisfaction” and “the confidence of the American people...by holding agencies accountable for achieving...results.” [GPRA, Public Law 103-62]

Driven by public demand for a more efficient and accountable government, together with growing pressure from the President’s Office of Management and Budget (OMB) to implement the GPRA, the Department of Defense (DoD) and other Federal agencies have increasingly embraced performance budgeting. [McNab & Melese, 2003;] This paper provides a brief history, explanation, and update of the performance budgeting framework employed by DoD. The “planning, programming and budgeting system” (PPBS) is designed as a high level constrained optimization whose objective is to maximize national security subject to fiscal constraints.² [Carlson 1969, Davis 2000, Fisher 1965, Schick 1966] This paper also provides a brief history and explanation of the foundation principles of PPBS, along with an update and review of recent modifications to the process that have taken place in DoD—where it is now called the “Planning, Programming, Budgeting and Execution” (PPBE) process.

The next section discusses the challenge of shifting government’s focus from inputs to outputs. Section 3 reveals drawbacks of traditional control (or input) government budgeting systems. Section 4 reviews the basic building blocks of DoD’s original program (or output) budgeting system—PPB. Section 5 discusses an integrated management model that takes an economics “production function” approach to government operations.³ [Melese, Blandin and O’Keefe, 2004] The so-called “SUCCESS” model reveals several gaps in PPB—notably how it largely overlooks

² It will be convenient in this paper to use PPB interchangeably to refer to the generic performance budgeting model first developed for use in the department of defense and other federal agencies, and as the original model actually used by the department of defense. The context should determine which interpretation to use.

³ The SUCCESS (Super-Unified Customer & Cost Evaluation Strategic System) framework is a new management model for government currently being implemented by the Joint Chiefs of Staff (JCS) that combines key principles of Activity-Based Costing (ABC), the Balanced Scorecard (BSC), and Total Quality Management (TQM) with the spirit of the Planning, Programming and Budgeting (PPB) system. (Melese, Blandin & O’Keefe, 2004) The multi-level performance budgeting and management framework that emerges offers a valuable conceptual model and mechanism to understand the new PPBE process, and to guide GPRA implementation to improve defense decisions over time. Combined with appropriate incentives, implementing a framework with these

“operational efficiency,” including customer-focused product and process improvements such as those automatically driven by competitive market forces in the private sector. Section 6 combines SUCCESS with PPB to generate a framework that offers both an illustration and guide to recent updates and ongoing modifications that have shaped DoD’s new Planning, Programming, Budgeting and Execution (PPBE) process. Section 7 concludes.

2. Shifting the Focus from Inputs to Outputs

The magnitude of the challenge of shifting government’s focus from inputs to outputs is manifested in the way legislatures authorize and appropriate funds to “buy things” (inputs), and only indirectly to “do things” (outputs). For example, whereas Pentagon planners emphasize output-oriented defense programs, Congressional debates largely focus on input-oriented defense appropriations (expenditures on Research & Development (R&D), Procurement, Operations and Maintenance (O&M), Military Construction, and Military Personnel). Evidence from Congressional testimony by a longtime senior defense analyst suggests that, even under threat of terrorist attacks: “budget battles between the Pentagon and Congress often degenerate into context-free food fights over appropriations inputs rather than policy-based deliberations over programmatic outputs” (Spinney 2002 p. 4).

Recognizing this input bias, a noted authority on public budgeting reminds us “a well-developed [performance budgeting] process should serve...three objectives...fiscal discipline, allocative efficiency, and operational efficiency.” (Schick 2001 p. 26) The planning, programming and budgeting (PPB) system developed for DoD was designed as

features would facilitate realization of the three chief aims of GPRA: to improve executive decision-making, to promote better internal management of government programs, and to increase accountability to taxpayers.

a high level constrained optimization whose objective is to achieve a form of “allocative efficiency” within defense—to maximize national security subject to fiscal constraints.⁴ As originally conceived PPB was meant to assist senior defense officials to establish priorities within the budget, and to shift resources among defense programs—and across the military services—from less to more productive uses in response to changes in the national security environment. (Schick 1966) PPB directly addresses two of the three components of what Schick calls a “well-developed [performance] budget process”—fiscal discipline, allocative efficiency, and operational efficiency. Whereas the intent of PPBS is to encourage “allocative efficiency” and to ensure “fiscal discipline,” it largely presumes “operational efficiency.” “It is not designed or intended to supplant or override the organizational and functional management responsibilities and structure of DoD.” [Joint DoD/GAO Working Group on PPBS, GAO/OACG-84-5, Sept. 1983, p. 15]

3. Control (Input) Budgeting

Budgets can be thought of as a contract between “principals” (elected representatives) and “agents” (government agencies) that governs the production of public goods and services. (See Prendergast 1999 for an excellent review of principal-agent models) The starting point of most public budgeting systems is the “*control* (or input) *budget*.” (Shick 1966) Control budget “contracts” passed into law each year by legislatures constrain agencies to purchase specific inputs, over specified time frames,

⁴ When John F. Kennedy was elected President of the United States in 1960 he looked for a Secretary of Defense to unify the Armed Forces—the (unfulfilled) objective behind the creation of the Department of Defense (DoD) in 1947. Hiring Charles Hitch as his Comptroller (then the director of the economics division at RAND where Hitch along with Alain Enthoven and others had developed the basic conceptual foundation of PPBS), McNamara concluded that in order to achieve the goal set for him by President Kennedy—“security for the nation at the lowest possible cost”—he would have to control the budget process. Prior to McNamara, military planning and budgeting processes were performed separately. Plans were expressed in terms of outputs (e.g. missions, weapon systems, forces, etc.) and budgets expressed in terms of inputs (e.g. personnel, operations, maintenance, construction, etc.). The aim of PPBS was to bridge the gap between planning and budgeting. The “Programming” phase of PPBS introduced a production function approach to identify and evaluate alternative force structures (combinations of inputs) to conduct military operations (outputs).

and to spend no more than specified amounts. For example, Congressional defense appropriation committees specify line items, define periods of availability for funds, and “earmark” certain funds for specific projects or activities.

In the U.S., the Anti-Deficiency Act of 1870 explicitly forbids agencies from spending more than their appropriations. In theory then, control budgets are designed to achieve fiscal accountability to track expenditures on inputs to ensure public agencies (agents) use resources in the manner Congress (the principal) intended. In practice, legal, administrative, and financial constraints tied to control budgets often frustrate attempts to achieve operational efficiency. (Melese 1997; Niskanen 1968, 1971) For example, in defense little flexibility is allowed during the contract (“budget execution”) period to substitute inputs, transfer investments, or increase the quantity or quality of output in response to shifts in (derived) demand (say from changes in the threat environment).⁵

Meanwhile, the Budget and Impoundment Control Act of 1974 inadvertently discourages cost savings. It explicitly cautions managers “against *not* spending what the appropriations act intended be spent.” [Gore, 1993, p.57] Compounding this pressure to spend is the fact most cost-savings and many appropriated funds cannot be carried over from one year to the next. Combined with a fear that any cost-savings might signal Congress to cut future budgets, the inflexibility of a control budget “contract” helps explain a popular phrase among government managers: “use-it-or-lose-it.”

Complicating these challenges is the fact that, since Congress largely depends on government agencies for cost data, the presence of asymmetric information and monopolistic supply can lead to “moral hazard.” In other words, it drives managers: 1) to

maximize budgets, 2) to emphasize inputs over outputs, and 3) to spend (or “obligate”) their entire budget by the end of the fiscal year, however small the marginal benefit of the last dollar—since the marginal (opportunity) cost of funds at the end of the fiscal year is near zero in view of the fact any leftover funds must be returned to the Treasury. (Niskanen 1971; Mueller 1989; Melese 1997)

Recognizing these limitations, the GPRA represents a significant shift in emphasis of federal budgeting and accounting systems from principally a control function, to more of a management function, or from tracking inputs to generating outputs.⁶ [GAO 1997] The lead agent responsible for implementing the GPRA is the Office of Management and Budget (OMB). OMB requires yearly performance reports from all federal agencies. [OMB Circular A-11, 1998] In response, the 2001 Annual Report of the Secretary of Defense [SECDEF 2001] dedicates over 70 pages to GPRA-related measures of ongoing defense activities. For example, one performance (output) goal is defined as “Maintain Trained and Ready Forces.” This performance goal is supported by a set of (input) measures that includes “flying hours per month,” “tank miles per year,” “steaming days per quarter,” etc. [SECDEF 2001]

The challenge for defense and other federal officials is to continually evaluate and refine such measures guided by a framework that emphasize outputs over inputs, encourages both “allocative” and “operational” efficiency (continuous process and product innovation), and that can be used for budget presentation and to ensure fiscal

⁵ Under the new biennial cycle of PPBE, in principle the budget is developed for two years. There is limited opportunity in the 2nd “off year” to make changes through “Program Change Proposals” (PCP) and “Budget Change Proposals” (BCP) as long as offsets are identified such that any changes made are revenue neutral...or do not impact the budget.

⁶ Augmenting a control budget’s capacity to measure and track inputs, performance budgeting initiatives like the GPRA attempt to focus officials on “activities” (intermediate products and processes), “outputs,” and “outcomes”—the utility or effectiveness derived by other agencies or taxpayers. The ultimate goal of the GPRA is to move from “control budget contracts” to “performance budget

discipline. A high-level management information system like PPB offers a point of departure, especially when coupled with a lower level government management model like SUCCESS.

According to Halachmi [1996] the most significant obstacle in shifting from control (input) measures to performance (output) measures is “to develop a concept, framework, or mechanism for generating and sharing information within the organization...” (p.97) This paper offers a brief history, explanation and update of DoD’s performance budgeting model—PPB. As originally conceived, PPB was meant to serve as a formal structure to assist defense officials to generate and share information, construct a defense budget, and improve the effectiveness, efficiency and accountability of their operations. This paper explores some limitations of PPB, then couples PPB with a new management model for government called “SUCCESS” [Melese, Blandin, & O’Keefe 2004] to explain the recent evolution of PPB in DoD into what is now called the Planning, Programming, Budgeting and Execution (PPBE) process.

4. Program (Output) Budgeting: The Planning, Programming, and Budgeting (PPB) System

First installed in the Pentagon in 1961 as a decision-making framework to support the President’s budget formulation process, PPB has helped shape U.S. national security investments for over forty years. The fundamental contribution of PPB is the middle P, “Programming.” Programming can be thought of as a high-level constrained optimization—selecting investments in defense capabilities that maximize national security (minimize vulnerabilities) subject to a budget constraint. Directed by the

contracts”—or to relate data on program performance (outputs and outcomes) to appropriation account structures (inputs), to form the basis for improved budget and resource allocation decisions. [GPRA, 1993]

President and greatly influenced by Congressional appropriation decisions, the introduction of PPB was the first time mostly military-led “Planning” activities were explicitly linked to mostly civilian-led “Budgeting” activities. “The ultimate objective of PPB is to provide operational commanders the best mix of forces, equipment, and support attainable within fiscal constraints.” [DoD Directive 7045.14, 1984] Today a modified version of PPB called the Planning, Programming, Budgeting and Execution (PPBE) system continues to provide the structure and process under which military strategy is translated into an annual defense budget.

A key attribute of PPB is that it encourages defense officials to think in terms of programs or defense capabilities (collections of activities or outputs), instead of line-item expenditures (inputs). In evaluating programs that compete for scarce budgetary resources, the PPB process generates expected costs (and to a lesser extent benefits or capabilities), and forecasts of the future costs and consequences of current decisions. The “Programming” phase of PPB encourages an analytical, multiyear approach to investments based on cost-benefit/effectiveness analysis and a “systems” view. The multiyear aspect of PPB focuses on calculating discounted life-cycle costs of investments, and on intertemporal trade-offs between current and future readiness.⁷ The “systems” approach emphasizes a complete assessment of alternative investments, including any necessary complementary investments and the likely impact of any negative or positive externalities. [see Hitch & McKean 1966]

⁷ The original goal of PPBS was to link threat assessments, and the policy intentions of political leaders, to decisions on force structure, readiness, and modernization. This problem is equivalent to choosing a point on a production possibility frontier that represents intertemporal trade-offs between “consumption” (current readiness) and “investment” (modernization or future readiness).⁷ For 2000 the “optimum” derived through the PPBS process and reported in the FYDP resulted in roughly 33% of the defense budget dedicated to “investment” (combining R&D, Procurement and Military Construction), with the remainder (expenditures on O&M and Military Personnel) largely reflecting current readiness or “consumption.” [SECDEF 2001]

A dilemma quickly emerged in the implementation of the systems approach in DoD. This dilemma involves an ongoing tension between the global optimization concerns of Combatant Commanders, Joint Chiefs of Staff and the Secretary of Defense, and the sub-optimization of military service-specific investment decisions. The services (Air Force, Army, Navy, and Marine Corps) are responsible for producing the capabilities needed to conduct military operations (combining inputs → intermediate products/activities → outputs i.e. trained and equipped forces). Combatant Commanders employ the forces produced by the services to conduct military operations to deter aggression and prevail in time of conflict (convert intermediate defense outputs → final outputs/outcomes).

.In the past, the Services sub-optimized, investing in highly tuned service-specific military programs that focused almost exclusively on their piece of a military operation. The Services still have a strong bias to continue to promote this kind of framework for planning future force development and current operations (e.g., Operation Anaconda and the cause for chaos on Takur Gar, Robert’s Ridge). However, as U.S. forces are increasingly directed to operate as an interdependent joint force, the sub-optimization of service program investments has increasingly come to light—reflected in visible “shortages” (e.g. excess demand for sealift and airlift capability) and much publicized “surpluses” (e.g. excess supply of air-to-air and air-to ground combat capabilities).⁸

In 1986, the Goldwater-Nichols Act sought to address the sub-optimization taking place in decisions made by the services in the PPB process. It emphasized joint

⁸ Referring to the excess capacity generated by the Army, Navy and Air Force, President Eisenhower once commented the problem was not duplication, but “triplification.” In the PPBS process, reconciliation of shortages and surpluses mostly took place at the end of the process and involved costly political battles fought by the Office of the Secretary of Defense (OSD-Policy Analysis & Evaluation) that contributed to an adversarial relationship between OSD and the Services. One of the key modifications in the PPBE process is to develop joint programs “up-front” and not “after the fact.”

operations and global optimization across Service boundaries. Coupled with the dramatic shift in threat scenarios that took place with the disintegration of the Soviet Union after 1989, this eventually led to the “capabilities based planning” approach formally launched in the 2001 Quadrennial Defense Review (QDR).⁹ (see Paul Davis, 2002 “Analytic Architecture for Capabilities-Based Planning, Mission System Analysis, and Transformation,” RAND corp.)

Shortly after the collapse of the Soviet Union, Congress directed that the Secretary of Defense of each new Administration review future threats to the nation as well as the ability of existing forces to adequately defend against those threats. The Secretary’s recommendations are now included in a report that accompanies the first budget of each Administration. The QDR report has become accepted as the Department’s publicly releasable strategic planning document as required by Public Law 103-62. Based on this document, a set of core capabilities for the military are identified (e.g. Command & Control, Intelligence Assessment, Battle-space Awareness, Force Application, Force Protection, Focused Logistics, Joint Training). The 2001 QDR’s key recommendation—to focus more on generic and flexible global defense capabilities, as opposed to service-specific forces designed to counter specific threats—eventually led to the 2004 Joint Defense Capabilities Study recommendations. (Aldrige, et. al. 2004)

Thanks to these recommendations the PPB system was modified to focus on developing joint capabilities up-front in the process, an attempt to pre-empt the services’ sub-optimization by providing early “globally optimal” guidance. This was meant to

⁹ The capabilities-based approach to joint needs centers on desired outputs/outcomes (effects) rather than on specific weapon systems and platforms (inputs). Strategic objectives define the desired outcomes (“effects”) that in turn reveal the capabilities required, and ultimately, alternative mixes of platforms and weapon systems that can generate those capabilities. Ideally, near- and far-term capability requirements are “born joint” and drive DoD resource allocation and acquisition policies and decisions.

avoid the historical “train wreck” that had routinely taken place in the past, as conflicting demands from the services were hastily reconciled near the end of the budgeting process. The other major modification of PPB was to attempt to provide department-wide transparency and accountability (feedback from the actual execution of the budget) to ensure the continual improvement of U.S. capabilities—especially important given the dynamic nature of the new security environment. The newly transformed and renamed Planning, Programming, Budgeting and Execution (PPBE) process provides the new structure under which military strategy is translated into an annual defense budget that accounts for over three percent of U.S. GDP. This section of the paper will briefly review the original PPB system. Sections 5 and 6 leverage a new management model for government (“SUCCESS”) to provide insights into several key updates to PPB embodied in DoD’s new PPBE process.

Federal agencies like DoD typically have procedures in place to accomplish three objectives: 1) To Forecast Demand: predict the (derived) demand for public services (say based on threats to national security), 2) To Identify Alternatives: discover the most promising activities and investments to meet that demand, and 3) To Allocate Resources: choose among competing alternatives and prepare budgets for review by elected officials. [Business Executives for National Security (BENS) 2000] These three objectives correspond to the three phases of PPB (Planning—What to do? Programming—How to do it? and Budgeting—What will it cost?). PPB offers a valuable mechanism for top-level decision-makers to make budget allocation decisions—to seek “allocative efficiency”—to translate high-level program outputs into input appropriation recommendations to achieve fiscal accountability. [Enthoven & Smith, 1971] The recent introduction of a fourth

phase, “Execution” in the new PPBE process emphasizes a new objective of accountability: evaluation of actual budget expenditures and performance—How did we do and what can we learn for the future?

The “Future Year Defense Plan” (FYDP) is designed as an accounting tool to support this analytical effort. FYDP spreadsheets combine multiple “program elements” (intermediate products)—e.g. basic building blocks of defense like the F-18 program, in order to form fighter attack squadrons that feed into major output-oriented program categories, in this case “General Purpose Forces”—to achieve multi-year objectives—say Readiness or Deterrence. Each row of the FYDP matrix is made up of a program element that includes a five-year stream of cost (and budget appropriations) forecasts for that specific function or activity. The FYDP ultimately translates the U.S. defense “program structure”—today a collection of eleven major output-oriented Major Force Program categories used in Planning and Programming—into the five input-oriented Congressional appropriations used in Budgeting defense activities.¹⁰ The FYDP generates the budget request for the next fiscal year together with budget forecasts for the next several years. For example, the FYDP for Fiscal Years 2008-13 is DoD’s output-oriented forecast of the future consequences (including future investments) of Congressional approval of the 2007 budget request.¹¹

¹⁰ The eleven major defense programs are: Strategic Forces; General Purpose Forces; C3I, Intel, Space; Mobility Forces; Guard and Reserves; R&D; Supply & Maintenance; Training and Personnel; Administration; Support of Other Nations; and Special Operations Forces. Could “Homeland Security” become the twelfth major program category? A recent paper by Tom Davis [WEA meetings 2001] investigates this possibility. He suggests that DoD rethink its major programs for planning purposes to better align the defense program structure with the current threat environment. Also important is the challenge of ensuring major program categories are mutually exclusive, collectively exhaustive, and support performance budgeting—to help achieve fiscal discipline as well as allocative and operational efficiency.

¹¹ Because of the conflicting objectives of participants in the process (Secretary of Defense, Services, President, Congress, Defense Industry, etc.), changing the FYDP to reflect new capabilities and the new national security environment can be a slow process that takes years if not decades.

The PPB system offers a mechanism to match national military strategy (through DoD's major output-oriented programs) with scarce tax dollars (through Congress' input-oriented appropriations). To accomplish this, PPB requires a two-way flow of information: top-down planning and fiscal guidance regarding program objectives, and bottom-up proposals and budget estimates of activities and investments to achieve those objectives.¹²

The basic components of the PPB process include: a) formulating a strategy through planning, b) translating planning-generated capability (output) requirements into an integrated (cross-service) multi-year defense program that minimizes the cost of obtaining those capabilities, c) formulating a budget that converts output-oriented defense programs into input-oriented budget appropriation categories included in the President's budget submitted to Congress, and finally d) executing the budget authorized and appropriated by Congress.

Figure 1 illustrates several key steps in the original PPB process. Major players are listed along the left hand side and the steps of the PPB process across the top. A brief explanation of each step follows. Sections 5 and 6 of the paper illustrate the key modifications that have lead to the new PPBE system, some of which are mentioned below. (The original PPB framework appears as Figure 1, the new PPBE as Figure 5).

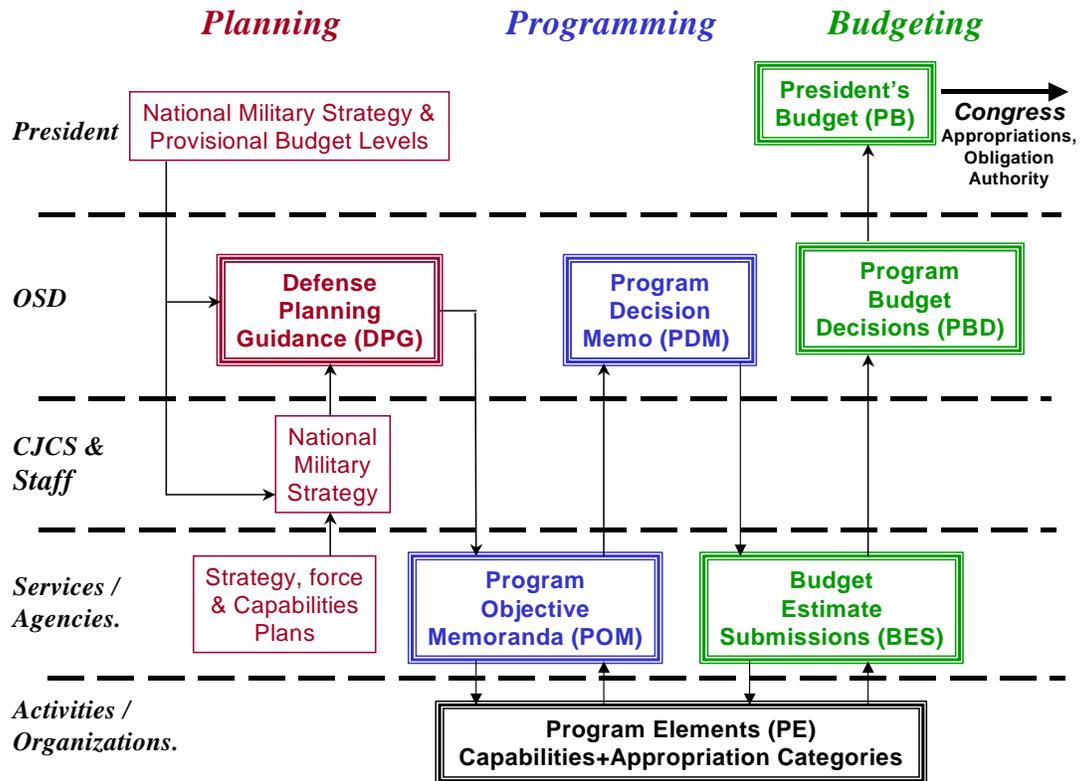
Planning: Defense Planning Guidance (DPG)

As illustrated in Figure 1, the Office of the Secretary of Defense (OSD) (combining inputs from the President, the Joint Chiefs of Staff (CJCS & Staff), and the

¹² The challenge is to ensure incentives reward the timely and accurate submission of cost and output data into the budget process. In an environment characterized by asymmetric information and monopolistic supply, it is especially important that the incentives of military departments and defense agencies be aligned with those of OSD. Recent modifications to PPBS as reflected in the new PPBE framework (discussed in Sections 4 and 5) offer a step in that direction.

Military Services and Defense Agencies), issued the defense planning guidance (DPG) to the Services and Agencies each year “directing defense policy, strategy, force and resource planning, and fiscal guidance...” (DoD Instruction 7045.7, 1984 p.2-1) The Defense Planning Guidance (DPG) has since been replaced by two documents produced sequentially and separated by a decision process known as the Enhanced Planning Process (EPP): the Strategic Programming Guidance (SPG) and the Joint Programming Guidance (JPG). (See Section 6)

FIGURE 1: PPB (The Ooriginal)



Programming: Program Change Proposals and Program Objectives Memos (POM)

The Military Services and Defense Agencies applied the DPG together with fiscal guidance (FG) to maintain, modify or invest in new individual program elements (combinations of forces, activities, and organizations) under their control. As discussed

earlier, PPBS was not designed to address operational efficiency issues. Thus lower-level organizations and activities that receive planning and fiscal guidance are mostly left to fend for themselves. The SUCCESS model discussed in Section 5 was designed to assist lower-level organizations to frame their responses to any planning and fiscal guidance from above. SUCCESS emphasizes identifying customer- and cost-focused investments (and incremental adjustments in activities) to improve the “operational efficiency” and performance (utility or “effectiveness”) of programs [Melese, Blandin & O’Keefe 2004].

Historically, recommendations from lower-level organizations were consolidated by the Services and reported in new program elements (PEs) or program change proposals (PCPs). PCPs offer a sketch of expected future capabilities combined with initial budget forecasts included in the FYDP. The product of these recommendations (PCP consolidation) appeared as a “Program Objective Memorandum” (POM) prepared by each Military Service and Defense Agency. (See Figure 5) These POM’s outlined all activities and investments proposed over the FYDP period to achieve DoD’s goals. “[E]ach Military Department and Defense Agency...prepare[s] and submit[s] to the Secretary of Defense a POM that is consistent with the strategy and guidance, both programmatic and fiscal, as stated in the DPG.” (DoD Instruction 7045.7, 1984 p.2-1)

Traditionally, the highlight of the Programming phase was a late-stage constrained optimization largely carried out by the Office of the Secretary of Defense (specifically, OSD Policy, Analysis & Evaluation (PA&E)) after the Military Service and Defense Agencies presented their POMs. Collectively, the sum of the costs of the

proposed Service POM proposals invariably broke the overall budget constraint for DoD, resulting in what was referred to as a “train wreck.”¹³

The objective of the OSD review was an ex-post attempt to achieve something resembling “allocative efficiency” across DoD. These “program reviews” required OSD to identify and select the best approaches among competing programs across military services and defense agencies, to eliminate unnecessary duplication, and to ensure the resulting defense program reflected the most recent planning and fiscal guidance. Wherever necessary, OSD directed changes to the POMs through a Program Decision Memorandum (PDM). (See Figure 1) These PDMs marked the end of the Programming phase and the beginning of the Budgeting phase.

Budgeting: Budget Estimate Submissions and Program Budget Decisions (BES & PBD)

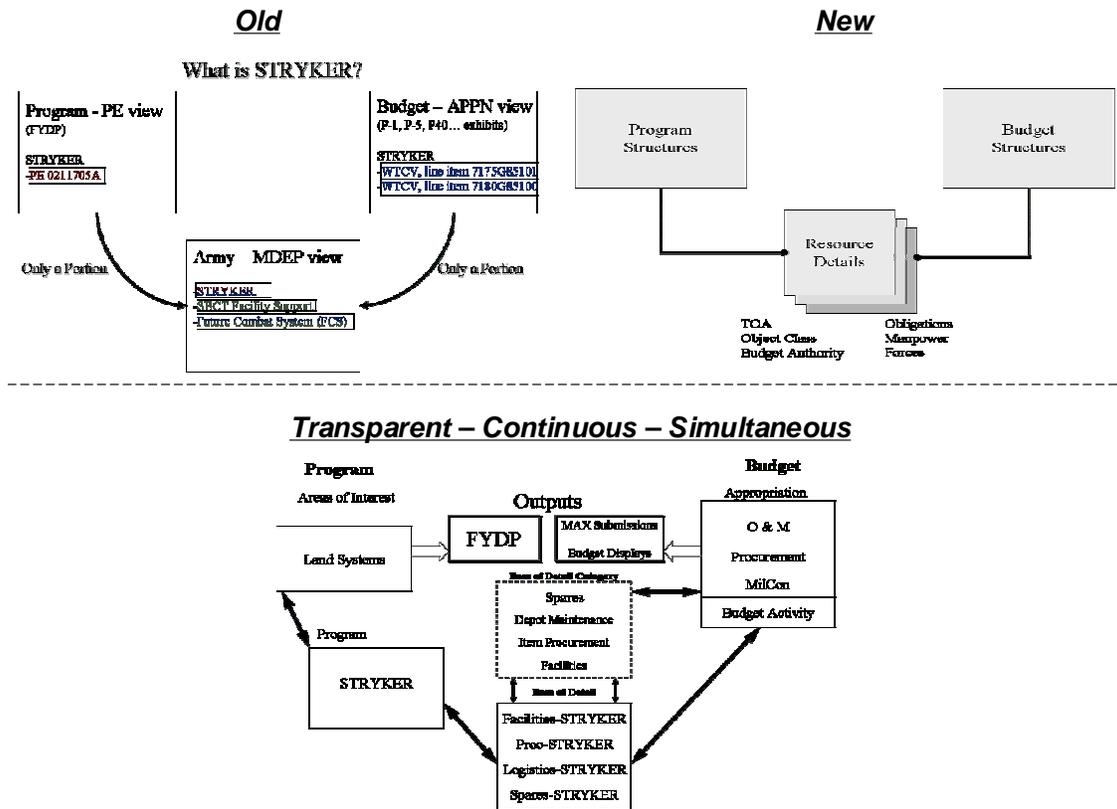
With POM and PDM guidance in hand, the Military Services and Defense Agencies prepared their final Budget Estimate Submissions (BES). “Budget estimates shall be prepared and submitted based on the program as approved in the PDMs, and on economic assumptions related to pay and pricing policies.” (DoD Instruction 7045.7, 1984 p.2-3) The combined BES submissions are vetted through a budget review process conducted by staffs from OSD and OMB. The DoD’s ability to accomplish its goals at planned funding levels is carefully examined. Following the Budget Review, OSD approves either estimates from the BES submissions or alternative estimates developed in the budget review process. Final decisions are announced in a series of Program Budget Decisions (PBD). With the issuance of these decisions, the FYDP allows DoD to translate its output-oriented defense programs into Congressional (input-oriented)

¹³ The Aldrige study instrumental in ongoing developments of PPBE referred to this process as the “December train wreck.” The report recommended changing PPBS to ensure programs were “born joint,” rather than forced into jointness later in the process.

appropriation categories. This completes the defense component of the President's Budget (PB). (See Figure 1)

An illustration of the contrast between the old and new program and budget integration appears in Figure 1a.

Figure 1a – Program and Budget Integration



A key attribute of PPB is that, while respecting fiscal constraints, it encourages senior DoD and elected officials to focus on output-oriented programs to defend the nation against existing and emerging threats. Among its many limitations (see Appendix 1), PPB does not explicitly account for incentives, especially those generated by the political process.

For example, PPB does not account for countervailing Congressional and Service pressures on OSD. The Secretary of Defense and his advisors (e.g. PA&E), operating largely at the end of the process in an attempt to reconcile sub-optimized service proposals, were historically under considerable political pressure not to cancel weapons or significantly alter the proportion of the budget allocated to a particular Service. Casual empirical evidence that reveals pressure from the Congress and the Services to preserve the status quo is given by the small ratio of recommended cancellations of existing programs to new launches, and the large ratio of congressional reversals in the event cancellations were recommended by OSD. Another indicator is the relatively stationary (over time) fraction of the defense budget allocated to each service. [SECDEF 2004] Finally, whereas the intent of PPBS was to encourage high-level “allocative efficiency” and to ensure “fiscal discipline,” it largely presumes “operational efficiency.”

5. A Performance Management Framework: Leveraging the SUCCESS Model

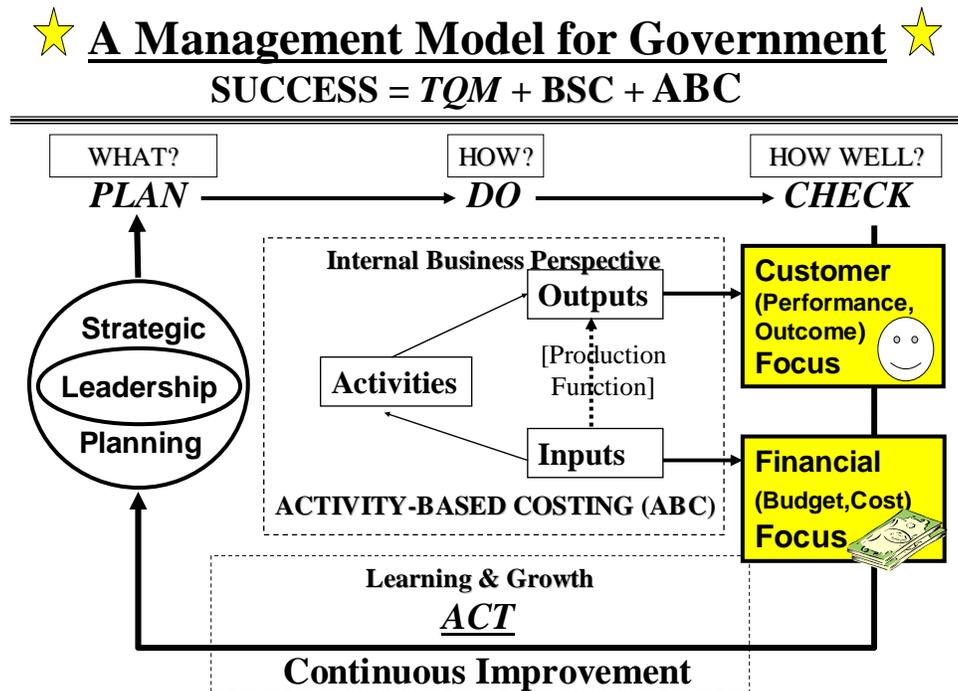
Resting on fundamental economic and accounting principles, a new management model for government called “SUCCESS” [Melese, Blandin & O’Keefe 2004 (www.ipmr.net)] focuses more on operational (and technical) efficiency. It integrates three key business management frameworks that underpin many commercial Enterprise Resource Planning (ERP)¹⁴ applications: Activity-Based Costing [ABC: Johnson & Kaplan 1987, Brimson & Berliner 1988; Player & Cobble 1999]; the Balanced Scorecard [BSC: Kaplan & Norton, 1992; 1996a,b; 2001]; and Total Quality Management

¹⁴ A descendent of the management information systems (MIS) and Material Resource Planning (MRP) movements, Enterprise Resource Planning (ERP) was initially led by SAP, a German software company. Today, multiple suppliers including IBM, Microsoft, PeopleSoft, Baan, Seibel, and others offer ERP applications designed to streamline and integrate operation processes and information flows in a company to increase productivity and cut costs. These customized software solutions apply the latest data base, reporting and analysis tools in an attempt to measure, monitor and integrate various functional areas like: manufacturing, sales and marketing, distribution, customer service, accounts payable/receivable, purchasing, inventory and material planning, human resources, financial accounting, asset management, project scheduling, etc.

(TQM)—captured here primarily through the Shewhart-Deming “Plan-Do-Check-Act” cycle [PDCA: Deming 1986, Senge 1997]. Combining and reinterpreting these competing business frameworks using an economic “production function” approach, an integrated public management model emerges that bridges the gap between business and government. [Melese, et.al. 2004]

Figure 2 illustrates the first pillar and foundation of SUCCESS: the “PLAN-DO-CHECK-ACT (PDCA) cycle of continuous improvement and learning. The Shewhart-Deming PDCA cycle—a cornerstone of total quality management (TQM)—emphasizes constant learning, and continuous improvement, innovation and investment. (Deming 1986; Senge 1997) This involves four fundamental and familiar questions that capture the spirit of PPB: Plan—What to do? Do—How to do it? Check—How well did we do? and Act—What should we do next? (See Figure 2)

FIGURE 2: SUCCESS—A New Management Model for Government



The first cycle through SUCCESS is launched with a Strategic (threat- and capability-based) Planning exercise that focuses on DoD Customers (e.g. Combatant Commanders) and Costs (defense budgets). This dual focus guides Defense “Leadership” (The Joint Chiefs of Staff (JCS) and the Office of the Secretary of Defense (OSD)) to establish “What to do?” Combining the Balanced Scorecard’s “Internal Business Perspective” (Kaplan & Norton 1992) with the accountants’ Activity-Based-Costing (ABC) model and the economists’ production function approach, reveals the next component of SUCCESS: “How to do it?” [See Melese, Blandin & O’Keefe, 2004]

The Balanced Scorecard’s “Customer Perspective” and “Financial Perspective” (Kaplan & Norton 1992) are two “Checks” any private business must continually review to survive. (See Figure 2) In the private sector, success in satisfying customers is reflected in sales and revenues. Combining customer-generated revenues with the cost consequences of the input mix chosen to generate customer outputs results in a measure routinely used in the private sector to evaluate how well a business is doing—profits. In stark contrast, the public sector has no such measure. In the public sector this cost and customer focus is implicitly (or explicitly) reflected in cost-benefit or cost-effectiveness analyses. While production choices and cost consequences of generating customer outputs may be similar, special customer-driven measures of effectiveness need to be developed to check performance (i.e. customer surveys, revealed preferences, cardinal utility measures, “winning” a war, etc.).

While private companies typically plan “what to do?” in anticipation of and in response to consumer/customer demand, most public organizations face the delicate task of “goal congruence”—or of soliciting and balancing the often conflicting tastes and

preferences of multiple customers (stakeholders or “principals”). Moreover, unlike the private sector where a consumer typically combines roles of user, payer and evaluator, in government these tasks are often separate and distinct. For example, in the case of an engine repair for an attack aircraft, the fighter pilot is the user, the maintenance activity (or Wing) the payer, while third parties may evaluate the quality of that repair. SUCCESS reserves the term “Customer” exclusively for *users* and *evaluators* who may or may not also be the payers.¹⁵ (See Figure 2)

Interestingly, the very act of developing customer-focused performance measures in government can be contentious. It often implicitly ranks the preferences of one set of principals (users/evaluators) over another. The public choice literature is replete with examples of how rent-seeking and political gamesmanship on the part of competing stakeholders restricts government’s ability to achieve either “operational” or “allocative” efficiency.¹⁶ [Niskanen 1968, 1971; Tullock 1971] This points to two (related) obstacles in operating a performance budgeting system like PPB: first, the challenge of limiting rent-seeking, and second, that of achieving goal congruence. Ultimately, any public performance measures chosen are likely to reflect the relative power of multiple competing principals.

Ideally, given proper incentives, whatever an organization learns in the “Check” phase (see Figure 2), they will “Act” upon (allocate resources and make new investments) to continually improve their processes or products. Kaplan and Norton

¹⁵ One objective of recent transfer pricing initiatives in DoD (alternately called revolving fund or working capital fund activities) is to make users pay for the inputs and intermediate products and services they consume. This increases cost awareness, revealing true user demand curves. (for example see Melese 1997)

¹⁶ For instance, while most principals may initially support the concept of base realignment and closure (BRAC) to reduce costs by eliminating excess infrastructure and consolidating activities to achieve economies of scale, the emergence of concentrated costs borne by a sub-set of principals (those whose base is to be closed) soon leads to active opposition.

(1992) refer to this as “Learning and Growth.” An important consequence of the PDCA cycle through SUCCESS is that it emphasizes continuous monitoring and evaluation of customer-driven measures of performance, along with costs/budgets to reveal returns on investments.¹⁷ This ongoing (real time) evaluation of planned vs. actual budgets and planned vs. actual performance/effectiveness can guide Leadership in developing and modifying the organization’s Strategic Plan.¹⁸ This completes the closed-loop feedback cycle built into SUCCESS.

SUCCESS offers a simple, economically-motivated management framework for public activities and organizations that emphasizes operational (and technical) efficiency. The first recommendation generated by SUCCESS is to use the FYDP data base retrospectively to learn from the past and to apply these lessons to current and future planning activities. While this feedback and evaluation was not explicitly built into PPB [Spinney 2002], it now appears as part of the “Execution” phase recently added to create the new PPBE process. (Aldrige, et. al. 2004)

High-level PPB decisions are only as good as the information provided by lower-level organizations. Given the complexity and uncertainty surrounding many large purchases (weapon system R&D, software development contracts, etc.), problems of asymmetric information, and incentives, estimating costs and benefits in the public sector—and in defense in particular—is an enormous challenge. It should be no surprise that the defense acquisition system that operates in tandem with PPB tends to reward

¹⁷ Post-audit mechanisms could be designed to review and evaluate past choices, and to generate a portfolio of experience—augmenting a data base like the FYDP—to improve future decisions. The late economist, Bryan Jack (tragically killed in the terrorist attacks of 9/11/01), was instrumental in the contemporary development of the FYDP. He recognized the cumulative experience collected in the FYDP offers an opportunity to use past experience as a guide to improve future decisions. He also recognized the key challenge of performance budgeting—collecting output-oriented data that accurately reflects government performance (utility or effectiveness). (Jack 1997).

¹⁸ SUCCESS is currently being implemented in the Pentagon by the Joint Staff Comptroller for the Joint Chiefs of Staff (JCS).

optimistic numbers and punish pessimistic ones, often leading to systematic forecasting errors. [Spinney 2002]

For instance, suppose it was determined cost (or benefit) estimates of new major weapons systematically underestimated future Operations & Maintenance (O&M) expenditures (or overstated performance). [RAND] This could result in a growing readiness problem coupled with rising O&M costs, and thus significantly constrain future decisions. To continue to support such weapons would require: corresponding cuts in current procurement (raising unit production costs), cuts in other DoD appropriations, calls to increase defense budgets—resulting in other cuts in government expenditures, tax increases, or greater government borrowing (impacting future generations). More importantly, if a systematic bias in FYDP data were uncovered, OSD could take steps to adjust the PPBS process to compensate for these distortions, perhaps by modifying incentive structures to reward more accurate forecasts.

Optimistic estimates support programs that tend to be approved in the PPB process. Pessimistic estimates mostly guarantee rejection of those projects and investments in the competition for funds in the PPB process. If optimistic agents are inadvertently rewarded in DoD's PPB system (and by its promotion/compensation system), we would expect this to yield systematic underestimates of actual procurement and other costs (and overestimates of performance).¹⁹

¹⁹ If PPBS is an unbiased decision-making process, the predictive errors in a succession of FYDPs should be randomly distributed. If the distributions of predictive errors are systematically skewed, we can conclude that behavioral biases are shaping long-term decisions. FYDP data recently examined by Spinney [2002] confirms that long-range cost predictions made during the development and early production phase of a major weapon's life cycle "almost always understate its eventual production costs by large amounts...The F-18 is a typical albeit unusually clear example of the bias to grossly underestimate the unit costs of a weapons program in the early stages of its acquisition life cycle." [p.10] Moreover, the underestimates "continued year after year, notwithstanding feedback that actual costs were exceeding predicted costs." [p.11]

One attempt to circumvent this problem appears in the way the new PPBE system engages the major players jointly at the beginning of the process, rather than iteratively throughout the process. Bringing the consumers/demanders (Combatant Commanders) tastes and preferences early into the process and giving them a prominent role in defining future defense capabilities required ensures that the Services respond as suppliers, competing to offer cost-effective weapon system solutions. Besides systems being “born joint,” this new approach presumably provides a collective check on overoptimistic estimates...a type of truth revealing Prisoner’s Dilemma.

An important corollary to the problem of overoptimistic cost and performance estimates is a more strategic rent-seeking concern—what Spinney [2002] refers to as a “Milestone II Buy-In.” Once an acquisition program is approved and moves into engineering and manufacturing development, it is almost impossible to kill. The explanation is that, at this point, the prime contractor receives contract (tax) money that is strategically spent to build a geographically dispersed production base, and nationwide network of suppliers. Distributing subcontracts and production facilities throughout key congressional districts creates powerful political lobbies. [Spinney 2002 p.12] These “investments” create barriers that make it costly (politically) to terminate programs whose high economic costs (or low performance) might later be revealed.

To counter this “buy-in” phenomenon, FYDP data could be used retrospectively to provide accountability—checking realized costs (Financial Focus) and benefits/performance (Customer Focus) relative to those planned or forecasted. (See Figure 2) This feedback and evaluation is one of the updates to PPB that appears as “Execution” in the new Planning, Programming, Budgeting and Execution (PPBE)

process. However, this new feedback and monitoring opportunity requires transparency in terms of historical data and proper incentive mechanisms for organizations to make use of what they learn. This might include constraints on the “revolving door” between government and industry to ensure those responsible for generating and using strategically biased estimates are not later rewarded—hired by contractors that profit from overly optimistic estimates.²⁰

FIGURE 3: PPBS + SUCCESS

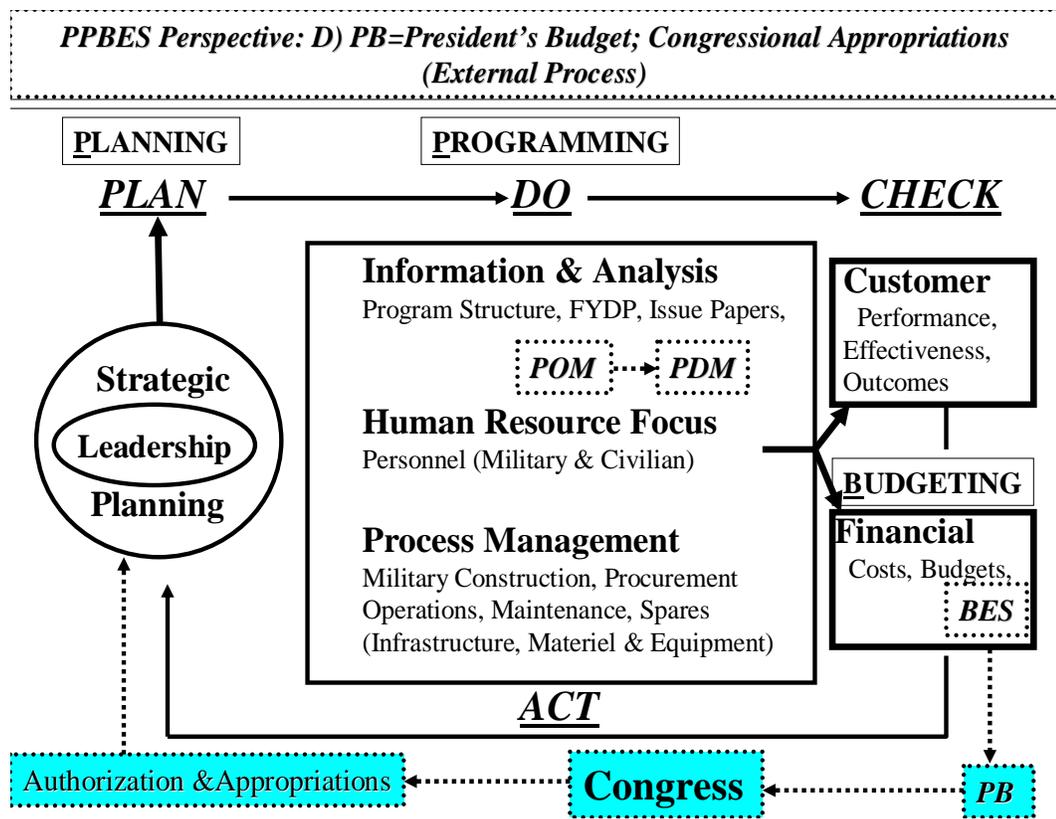


Figure 3 illustrates the connection between PPBS and SUCCESS. Whereas the intent of PPBS is to encourage “allocative efficiency” and to ensure “fiscal discipline,” it

²⁰ Collecting and analyzing historical FYDP data could improve decisions made in the PPBS process, and supports performance budgeting initiatives like GPRA. Moreover, savings generated from employing unbiased forecasts in PPBS would likely more than offset increases in data monitoring and incentive costs.

largely presumes “operational efficiency.” The SUCCESS framework augments the PPB system, offering a guide for lower-level activities to achieve “operational efficiency.”

PLANNING: In the spirit of PPB, Figure 3 illustrates how the first-loop **PLAN** phase of SUCCESS is launched when defense planning and fiscal guidance trickles down to lower-level organizations (the Services and Defense Agencies) as “*demand*” for their services, prompting a review of missions, goals and objectives in light of that planning and fiscal guidance.

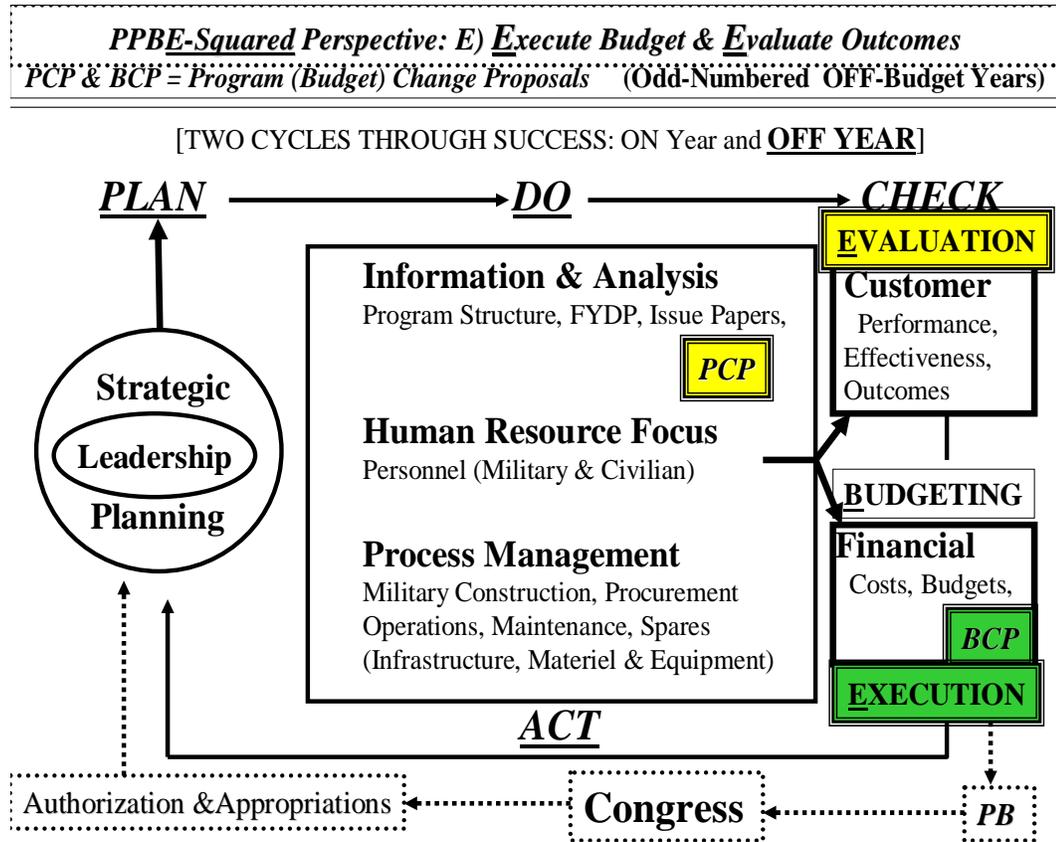
PROGRAMMING: The subsequent **DO** phase in SUCCESS corresponds to the Programming phase in PPB. In this phase organizations review existing activities, and identify incremental adjustments and investments in “Enterprise” processes (input substitution, outsourcing opportunities, etc., to increase efficiency) and/or “Military” capabilities (development of new products or services to increase effectiveness), to “*supply*” services that respond to PPBS guidance. (See Figure 3)

BUDGETING: The **CHECK** phase in this first loop requires organizations to develop budget estimates eventually rolled up into the budget estimate submissions (BES) of the Services and Defense Agencies. After being vetted at different levels, these budget proposals ultimately find their way into defense budget estimates included in the President’s Budget (PB) and submitted to the Congress. (see Figure 3).

EXECUTION & EVALUATION: After extensive review, Congress passes defense budget authorization and appropriation bills that become law. These laws grant DoD “obligation authority” stating the maximum dollar amount of contracts, etc. that can be entered into in the budget year. As illustrated in Figure 4, the passage of these

Congressional authorization and appropriations bills launches a second loop through SUCCESS.

FIGURE 4



Whereas the first loop has a Planning, Programming, and Budget *estimation* or *forecasting* focus (See Figure 3), the second loop through SUCCESS focuses on actual “Execution” (Converting defense inputs into outputs, i.e. spending the defense budget on troops, equipment, etc.) and “Evaluation” (producing capabilities and evaluating the outcomes). [See Figure 4]

Significantly, given GPRA’s emphasis on performance budgeting, the second loop through SUCCESS focuses on the realized costs and benefits of government programs. This feedback loop links budgets to performance (also a key component of the

President's Management Agenda), providing the foundation for performance-based budget contracts to improve defense decisions over time. One of the most significant recent updates to PPB in DoD has been to add "Execution" (with an implied "Evaluation" component) to form what is now called PPBE. The new PPBE system is discussed in the next section.

6. A Performance Budgeting and Management Framework: PPBS + SUCCESS

Historically, the PPB system emphasized the equivalent of the preliminary (Planning, Programming, and Budget estimation) loop through SUCCESS. [Figure 3 above] Two major modifications to PPB occurred in DoD in 2002. First, a shift to a two-year cycle was implemented, and second an "Execution" phase was added. The name was changed to the Planning, Programming, Budgeting and Execution (PPBE) system to reflect the new emphasis on budget "Execution" and the "Evaluation" of results. [OSD Management Initiative Decision (MID 913)]

While Congress still appropriates the defense budget on an annual basis, DoD now commits to a two-year budget, partly to reduce redundant and costly program reviews. Arguably, the most significant change is that in every even or "On-Year" of a two-year cycle, an attempt is now made to accomplish department-wide global optimization at the front-end of the process instead of at the back-end i.e. to make across-service trade-offs early to guide the production of joint capabilities (outputs), and the corresponding program decisions on platforms and weapon systems (inputs). The theory is that if programs are "born joint" instead of being cobbled together late in the process, this will improve "allocative efficiency" (increasing military effectiveness) and contribute to "operational efficiency" (cutting defense costs).

The SUCCESS model offers a convenient framework to help illustrate the current version of PPBE. The change to a two-year cycle in PPBE roughly corresponds to the two loops through SUCCESS illustrated in Figures 3 and 4. The planning, programming, and budget estimate and submission work is mostly done in even years, and corresponds to the first “On-Year” cycle through SUCCESS. This first cycle culminates in the defense budget (BES) included in the President's budget submitted to Congress in Figure 3 above. The “Off-Year” cycle through SUCCESS highlights the "E" in PPBE: Execution and Evaluation. (See Figure 4 above) What is strikingly revealed by SUCCESS, but still difficult to accomplish in the contemporary application of PPBE, is the value of the second (“Execution and Evaluation”) Off-Year cycle launched after Congress passes the defense budget. “Systematic programmatic feedback from program and budget execution to subsequent planning and programming cycles was not originally built into the PPBS concept.” [The Joint DoD/GAO Working Group on PPBS, GAO/OACG-84-5, Sept. 1983, p. 17]

This second “Off-Year” loop emphasizes “Execution” and stability of the budget approved by Congress, and more importantly for performance budgeting, emphasizes the “Evaluation” of realized cost and performance of programs to guide future planning.²¹ The value of this feedback loop goes back to the earlier recommendation to use historical FYDP data to learn from the past and to uncover any systematic forecasting errors.

²¹ Once defense appropriations are passed by Congress, in the second cycle Defense leadership must PLAN how to use/distribute these funds based on existing and emerging threats, congressional intent, and legal constraints. Next, activities and organizations within defense that receive the funds obligate those funds and actually DO their jobs. At this point there are opportunities for (revenue-neutral) Program or Budget Change Proposals. Finally, the CHECK phase in this second cycle through the model involves checking that funds were Executed as they were intended (variance of actual vs. expected spending), and also to conduct an Evaluation of the results of that spending (variance of actual vs. expected output/outcomes). Ideally, whatever is learned in this "Execution" & "Evaluation" (CHECK phase) feeds back into the next ON YEAR cycle (ACT--"learning & growth" or continuous improvement). (See Figure 4)

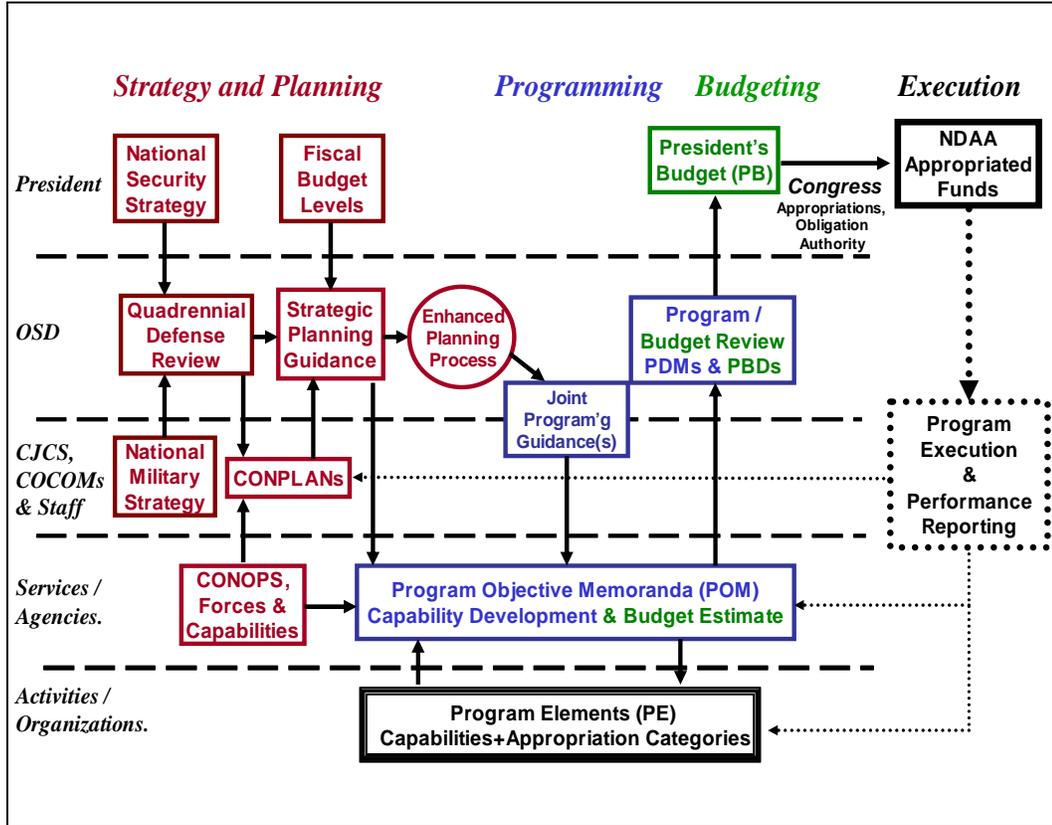
OSD can use FYDP data retrospectively to evaluate organizations and activities by comparing patterns (variances) of predicted costs and performance (first loop budgeting—estimation i.e. Figure 3) to the pattern of actual costs and performance (second loop management—execution and learning i.e. Figure 4). Continuously monitoring variances between predicted and actual costs (and performance) not only satisfies the spirit of GPRA, but also reveals the actual returns on the nation’s defense investments. This has the potential to increase transparency and accountability in DoD, resulting in more realistic estimates generated by the PPBE process.

In turn, improving defense resource allocation and investment decisions enhances our capacity to shape and adapt DoD to the changing threat environment. Whereas “Execution” is mostly concerned with improving fiscal accountability and is driven more by the 1990 Chief Financial Officer’s Act (CFO), “Evaluation” is primarily geared to improving decision-making, driven by the 1993 Government Performance and Results Act (GPRA).

- Execution (1990 CFO Act): Improve Fiscal Accountability
 - Planned vs. Actual Budget
 - Financial Audit (Legal & Regulatory Compliance)
 - Focus: Stay out of Jail
- Evaluation (1993 GPRA): Improve Decision-Making
 - Planned vs. Actual Performance
 - Economic, Managerial, or “Strategic” Audit
 - Focus: Efficiency & Effectiveness

Figure 5 below illustrates the new Planning, Programming, Budgeting and Execution (PPBE) process currently being implemented in the Department of Defense.

FIGURE 5: PPBE (New)



Planning: QDR and Strategic Planning Guidance (SPG)

As part of every even year (“On-Year”) cycle, the Defense Planning Guidance (DPG) that once launched the PPB process has been replaced by the Strategic Planning Guidance (SPG) and Joint Programming Guidance (JPG), separated by what is called the Enhanced Planning Process (EPP). (See Figure 5) The Strategic Planning Guidance (SPG) is derived from the National Security Strategy (NSS), the National Military (Defense) Strategy, and the Quadrennial Defense Review (QDR), and involves early high-level agreement by OSD and the service chiefs (suppliers) and combatant commanders (customers) on fiscally constrained joint capabilities needed to shape the defense environment, deter aggression, and ultimately to prevail in time of conflict. The

SPG also assigns combatant commanders a key role in providing guidance and direction to the military departments and defense agencies in terms of strategic objectives, priorities, and risks.

The SPG provides the initial guidance required for the Enhanced Planning Process (EPP), one of three components (SPG, EPP, and JPG) that comprise the new up-front Joint Capabilities Development process. As illustrated in Figure 5, the SPG provides specific strategic direction for the development of joint programs (inputs) by the Services and Defense Agencies to provide military capabilities (outputs) to the Combatant Commanders. Launched in 2004, the EPP was intended to fundamentally change the defense resource management cycle from a process that made challenging decisions on service proposals at the back-end of the cycle, to a process that attempted to make many of the significant “trade-off” decisions at the front-end of the cycle. Governed by OSD, the EPP collects demanders (combatant commanders) and suppliers (the services, and defense agencies) early in the planning process to assess the joint capabilities required to meet the strategic objectives defined in the SPG. Combatant Commanders’ are largely responsible for defining desired “Military” or defense capabilities (outputs), while OSD and the Services are responsible for identifying desired “Enterprise” or internal business capabilities (investments) to increase the efficiency and effectiveness of those outputs. (Aldrige, et. al.) “The EPP translates strategic guidance into joint capability needs, gaps, and overlaps; then considers a wide range of solutions that integrate warfighting and enterprise concerns.” (OSD PA&E “The New PPBE System” 2004) The EPP involves early high-level agreement by the service chiefs and more importantly the final customers (combatant commanders) on fiscally constrained

joint capabilities needed to shape the defense environment, deter aggression, and ultimately to prevail in time of conflict and

The Enhanced Planning Process (EPP) supports capability assessments to meet the joint needs of the Combatant Commanders' operational plans. The Joint Programming Guidance (JPG) reflects the decisions made within EPP and provides specific fiscally executable programming guidance to the Department's components (the services and defense agencies). The EPP process is an ongoing continual process that may provide direction to the Services at any time in the cycle. The new "Deputies Advisory Working Group" (DAWG) reviews Enhanced Planning Process proposals, develops alternatives and issues the JPG. The JPG captures joint capabilities decisions made over the year in the EPP and translates them into fiscally constrained programming guidance to the Services and Defense Agencies. (See Figure 5)

Programming & Budgeting: Program Elements (PE) and Program Objectives Memoranda (POM); Budget Estimate Submissions (BES), Program Decision Memorandum (PDM) and Program Budget Decisions (PBD)

As illustrated in Figure 5, following the planning and fiscally constrained programming guidance of the SPG and JPG, the Services and Defense Agencies build their POMs. The emerging Joint Capability Portfolio Categories are intended to help reduce overlap and redundancies in the service POMs by accomplishing a "system of systems" analysis across DoD. These "program reviews" require OSD to identify and select the best approaches among competing programs across military services and defense agencies, to eliminate unnecessary duplication, and to ensure the resulting

defense program reflects the most recent planning and fiscal guidance from SPG, EPP and the current year's JPG.

The objective is to achieve something resembling “allocative efficiency” across DoD. Wherever necessary, OSD directs changes in Service or Defense Agency program proposals through a Program Decision Memorandum (PDM). These PDMs once marked the end of the Programming phase and the beginning of the Budgeting phase. (Figure 1) Today, PDMs and Program Budget Decisions (PBDs) are issued nearly simultaneously and collaboratively to support strategic objectives directed by OSD.

In the past with their POM and PDM guidance in hand, the Military Services and Defense Agencies prepared their final Budget Estimate Submissions (BES). Today, a streamlined process allows a joint POM/BES to be submitted by each Military Department. The ability to accomplish overall defense goals at planned funding levels is carefully examined. In the Fall Program/Budget Review, OSD approves either estimates from the Services' submissions or alternative estimates developed in the budget review. Final decisions are announced in a series of Program Budget Decisions (PBD). With the issuance of these decisions, the FYDP enables DoD to translate its output-oriented defense programs into Congressional (input-oriented) appropriation categories. This “On-Year” programming cycle completes the defense component of the President’s Budget (PB). (See Figure 5)

Execution: Program Execution and Performance Feedback

The first (even) year of every two-year PPBE cycle now involves an extended Planning phase and a combined/streamlined Programming and Budgeting phase. The second “Off-Year” loop emphasizes “Execution” of the budget approved by Congress,

and more importantly for GPRA and other performance-budgeting initiatives, an “Evaluation” of the realized costs and performance of defense programs to guide future plans and budgets.

In the second (odd) year of every two-year PPBE cycle, only revenue neutral Program Change Proposals (PCP) and corresponding Budget Change Proposals (BCP) are allowed, in order to adapt to any new realities in implementing the President’s two-year defense budget commitment. Any proposed budget increase in one program must be offset with a compensating decrease in some other program.

The new “Execution” phase of PPBE focuses on performance assessments organized around new defense capability categories and objectives outlined in the SPG and JPG.²² This should soon begin to provide valuable feedback to Secretary and Defense Chiefs. The ultimate goal is to Check: “How well did we do?” and to Act: “What should we do next?” (Figure 2) The answers must ultimately come from customers (Combatant Commanders, JCS.), suppliers (the Services and Defense Agencies), and OSD (representing the President and the American public). This new, valuable feedback mechanism will underpin and guide future strategic planning and joint programming guidance developed as part of the new PPBE process.²³

7. Conclusion

In conclusion, budgets can be thought of as a contract between principals (say elected representatives) and agents (government agencies). Many of the current

²² The SPG, Enhanced Planning Process, JPG, internal defense budget, and assessment reports are all organized by capability categories. Outcome oriented capability categories spanning both operational and enterprise functions serve as the framework for every phase of the new PPBE process

²³ While the Integrated Priority List process is continuing to develop, feedback and grading ourselves is a notoriously weak area for the Department. Results in this area will see some hard fought battles and in the end what gets measured, gets done--DoD will emphasize what is graded and reported.

challenges faced by DoD, and other federal agencies striving to improve performance, can partly be traced to inefficiencies generated by too heavy a focus on control (or input) budget contracts. Recognizing these limitations, the GPRA represents a significant shift in emphasis of federal budgeting and accounting systems from principally a control function, to more of a management function, or from tracking inputs to generating outputs. Substituting performance-based budget contracts for control budget contracts involves another challenge—measuring performance.

This paper proposes a new integrated management model for government to guide and support this effort. Resting on fundamental economic and accounting principles, the SUCCESS framework is a new management model for government that combines key principles of Activity Based Costing (ABC), the Balanced Scorecard (BSC), and Total Quality Management (TQM) with the spirit of the Planning, Programming and Budgeting (PPB) System.[See Melese, et. al. 2004] The multi-level performance budgeting and management framework that emerges offers a valuable conceptual model and mechanism to understand the new PPBE process, and to guide QDR and GPRA implementation to improve defense decisions over time. Combined with appropriate incentives, implementing a framework with these features could facilitate realization of the three chief aims of GPRA: to improve executive and congressional decision-making, to promote better internal management of government programs, and to increase accountability to taxpayers. [GPRA 1993: Public Law 103-62]²⁴

²⁴ Whereas there exists a well-known risk of strategic (budget-maximizing) behavior on the part of participants in the process (see Niskanen), the underlying hypothesis in SUCCESS is that this behavior is not malicious, but instead is a natural response to incentive structure, promotion systems, and budget allocation mechanisms under which basically well-intentioned people operate. To implement SUCCESS thus requires an overhaul in the thought process of government managers, driven by a revolution in the incentive structures found in government organizations. This involves giving managers more freedom and responsibility to improve operational efficiency in exchange for accountability, say through performance incentives built into performance contracts, and monitoring outputs. “[O]ver the years, most OECD member countries have relaxed ex ante controls by consolidating line items into broader categories, increasing the threshold for expenditures that agencies may make without prior approval, and giving managers more flexibility in implementing

APPENDIX 1

This appendix lists some of the challenges that face DoD in implementing PPBS.

Legislative control: Congressional concerns and wishes must be considered early in the programming and budgeting phases of PPBS. Better to anticipate and accommodate congressional desires in building programs than to have Congress tear apart those programs later to reflect congressional priorities and concerns. Concerns with DoD's spending proposals and their implications for regions and constituents must be balanced with the broader interests of the nation.

Timing, time horizon, work intensity, and uncertainties: Lack of appropriations at the beginning of the fiscal year adds to the uncertainty and work intensiveness of preparing the next year's budget, and the FYDP for the next PPBS cycle, especially when the baseline for those decisions—the current year budget—remains in doubt.

Cross-service analysis: OSD must assure that each service has allocated sufficient funds for the various support functions it provides to the other services (e.g. sealift, airlift, and ground-based defense) and that the final DoD program provides a balanced, cost-effective force mix to meet the perceived threat. Competition among the services is a fundamental feature of resource allocation in DoD. The challenge is to channel and use that competition to generate innovation and increased efficiency that is essential to maximizing the return from investments in national defense.

Reliance on committees: Committee decision-making in PPBS spreads responsibility, making it difficult to hold anyone accountable, and fails to provide a record of decisionmaking for later assessment and review. Key PPBS decisions are made, in large part, by various committees within DoD and the military departments. Most of these committees do not provide written rationale for their decisions. Although this allows a wide range of views to be considered, it limits accountability and fails to provide a record of decisionmaking for later assessment and review.

Turnover: The constant rotation of both top civilian and career military personnel places a premium on the continuity of civil servants and military personnel whose careers follow a particular specialty. These individuals provide analysis, advice, and institutional memory that are not otherwise available.

Games people play and ways around them: Departments can withhold the information needed to make trade-offs; can enter into logrolling coalitions with other claimants to protect their respective budgets against cutbacks and reallocations; and can mobilize support among affected special interests and within the government. Politically savvy claimants can hide the full cost of policy initiatives, take programs off budget (e.g. black programs), and strategically underestimate (or overestimate) budgetary impacts. Australia has adopted a system in the spirit of PPBS and the GPRA where "allocative efficiency" is promoted by "shifting the initiative for proposing policy changes to the spending departments and by encouraging these departments to initiate trade-offs among their programs within the prescribed budget constraints...having departments nominate the programs to be cut or expanded...the government decide[s] which of the proposed savings and additions are to be incorporated into the budget. Departments are free to propose trade-offs within their area of responsibility." [Schick OECD 2001 p.22]

the budget. In their pioneering work, Osborne and Gaebler [1992: 210] recommend gain-sharing and transfer-pricing as a starting point: "sharing [cost] savings with agencies, using savings as innovation capital, and setting up revolving funds to provide incentives for agencies to become entrepreneurial." A massive revolving fund (transfer-pricing) initiative called the "Defense Working Capital Funds" (DWCF) is currently underway. [SECDEF Report to the President 2000] Like its predecessors in the Department of Defense, its key objectives are: to increase cost visibility, to tie budgets to performance, and to motivate managers through performance contracts and gain-sharing to make more informed trade-offs and improve performance. (Melese 1997) Incentive mechanisms envisioned under GPRA would tie federal agency budget requests to annual performance plans: "[e]ventually the annual performance plan will be integrated with the agency's budget request...[to] display...the amount of funding being applied to achieve performance goals....[and will] crosswalk between performance goals and the specific budget account(s) funding those goals."(OMB Circular A-11 1998) Although beyond the scope of this study, a necessary condition to implement the augmented (PPBS+SUCCESS) framework is the alignment of incentives—through internal performance contracts, external incentive contracts, and through the budgeting process—to reward efficiency and effectiveness. Prendergast (1999) reviews the literature on the provision of incentives in firms.

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