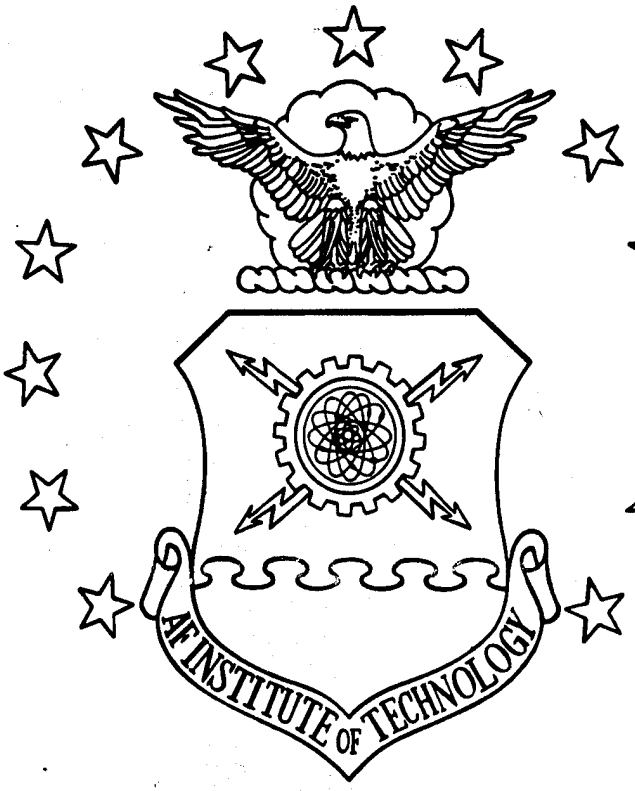

STRATEGIC PLANNING, PERFORMANCE MEASUREMENT, AND THE GOVERNMENT PERFORMANCE AND RESULTS ACT OF 1993: AN EXPLORATORY STUDY OF AERONAUTICAL SYSTEMS CENTER

THESIS

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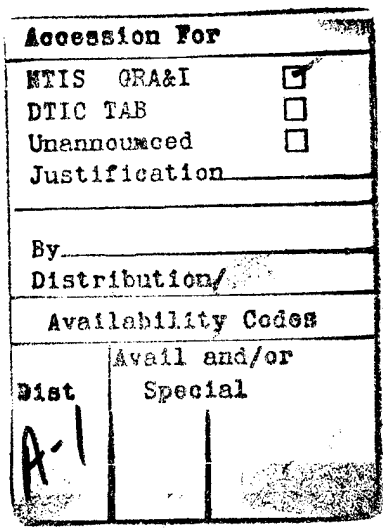

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THESIS

Presented to the Faculty of the

School of Logistics and Acquisition Management of the

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Air University

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Degree of Master of Science in Systems Management

Miro Skrodzki, B.S.

Captain, USAF

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Miro Skrodzki

Table of Contents

Page

Page

List of Figures

List of Tables

Abstract

This study evaluates strategic planning and performance measurement within Aeronautical Systems Center (ASC) to determine if these processes are conducive to effective implementation of the Government Performance and Results Act of 1993 (GPRA). GPRA is a law that will soon affect every federal government agency, and is intended to redirect government attention from internal activities, processes, and products to external outcomes and results.

A review of literature allowed the researcher to identify two elements of strategic planning and performance measurement that are critical to effective implementation of GPRA: measurable strategic goals and objectives related to outcomes; and measurement of external outcomes. Interviews and document analysis were conducted to determine the extent to which these elements exist within ASC.

The results of the interviews and document analysis led the researcher to conclude that strategic plans within ASC generally lack external focus, lack measurable goals and objectives, and are not fully implemented. Also lacking is measurement of organizational outcomes. Consequently, these conditions within ASC pose a significant challenge to effective implementation of GPRA.

STRATEGIC PLANNING, PERFORMANCE MEASUREMENT, AND THE GOVERNMENT PERFORMANCE AND RESULTS ACT OF 1993: AN EXPLORATORY STUDY OF AERONAUTICAL SYSTEMS CENTER

I. Introduction

The Government Performance and Results Act of 1993 (GPRA) is a law that will soon affect every federal government agency. As part of the Department of Defense (DoD), the Air Force Materiel Command's (AFMC) Aeronautical Systems Center (ASC) will soon be required to implement the strategic planning and performance measurement provisions of GPRA.

This purpose of this research effort is to determine if strategic planning and performance measurement within ASC is conducive to effective implementation of GPRA. To make this determination, the research identifies the elements of strategic planning and performance measurement that are critical to effective implementation of GPRA, and evaluates the existence or absence of these elements within ASC. The research effort consists of a literature review, in-depth interviews of managers and functional experts familiar with strategic planning and performance measurement within ASC, and an analysis of related ASC documents. The findings and conclusions of this research should provide ASC with essential information that can be directed toward effective implementation of GPRA.

Background

GPRA is drastically changing the way the federal government conducts business. The Act has:

> ...the potential to create more revolutionary change in the way government does business than any other federal management improvement initiative of the last 30 years. First, the GPRA is an act of Congress; and second, it requires that the government become an achieving organization. (Allen, 1995:15)

GPRA is intended to shift the attention of government from providing service activities to achievement of outcomes. The entire thrust of GPRA is to instill strategic planning and performance measurement within all agencies of the federal government. The intent of the Act is to redirect government attention from activities, processes, and outputs to outcomes and results. Under GPRA, strategic planning and performance measurement will take the place of legislation expressed in terms of managing inputs and resources, and spending money (Allen, 1995:15). Consequently, "...GPRA will result in intense scrutiny, competition for scarce and political resources, and the engendering of a politically-determined performance science" (Henderson, 1995:7).

According to the Committee on Governmental Affairs of the U.S. Senate, GPRA is structured on three key components of an effective performance measurement system: strategic plan, performance plan, and performance report. The strategic plan lays out the fundamental mission of a government agency and the long-term goals for implementing that mission. Although many government agencies already have what they refer to as "strategic plans," they are generally inadequate and

poorly used (U.S. Senate, 1993:14). This is primarily because the strategic plans have little direct linkage to the agencies' daily operations. This linkage is provided by the performance plan (U.S. Senate, 1993:14).

The annual performance plan is meant to provide the linkage between an agency's strategic plan and what the agency does on a day-to-day basis. When applicable, the plan should be hierarchical in nature, indicating the goals/objectives that need to be accomplished at each level of an organization. The goals should relate to agency and program "outcomes" rather than "outputs," and should be as specific as possible. Additionally, the performance goals should specify the human, budgetary, and physical resources necessary to achieve the goals. Performance goals should specify quantity and quality of effort in the most measurable terms possible (U.S. Senate, 1993:14).

Finally, the annual performance report will provide feedback to an agency's management, the Congress, and the public as to what the agency actually accomplished with the resources it expended. The report should directly match actual outcomes with the goals specified in the performance plan. It should also address any goals that are not met, and the corresponding reasons why the agency did not achieve these goals (U.S. Senate, 1993:14).

GPRA is currently in the pilot project stage, involving a tiny fraction of federal government agencies. However, its impact will be felt by all government agencies (with few exceptions, such as the CIA) by 30 September 1997. At that time, all

agencies will be required to submit initial strategic plans to the Office of Management and Budget (OMB) and Congress.

Despite the overwhelming bipartisan support of Congress for GPRA, a number of challenges confront all federal agencies implementing GPRA. These challenges are:

- making [implementing] the mission of GPRA;
- managing the GPRA process;
- determining appropriate metrics for GPRA;
- deriving accurate and useful meaning from these metrics; and
- marketing those meanings as results and molding public policies capable of sustaining, expanding, and improving those results (Henderson, 1995:8).

Of these challenges, the most significant and troubling is the issue of metrics, or performance measurement (Henderson, 1995:8).

An initial assessment of FY 1994 GPRA pilot project performance plans highlights performance measurement as one of OMB's main concerns. Approximately 20% of the plans were found to lack goals or measures that could be useful in managing a program or measuring performance. A few agencies involved in the pilot project struggled to even define their goals or measures. Only 20% of the plans were considered exemplary in terms of their goals and measures (OMB, 10 August 1994). Goals pertain to the strategic planning aspect of GPRA, while measures pertain to the performance measurement aspect of GPRA.

The strategic planning and performance measurement challenges affect all government agencies primarily due to the inherent nature of government organizations. "The public sector has difficulty measuring success, particularly in outcomes" (Blackerby, 1994b:22). The transition from activity to outcome

management within government will not be easy. "The world of the federal manager is permeated with duties as assigned, position descriptions, and performance evaluations, all couched as activities to be performed, not as outcomes to be achieved" (Allen, 1995:17). As part of DoD, ASC must overcome the same strategic planning and performance measurement challenges.

Research Question

Is strategic planning and performance measurement within Aeronautical Systems Center conducive to effective implementation of the Government Performance and Results Act of 1993?

This research question is an important issue to ASC because some DoD managers and performance measurement experts believe that DoD does not face the same challenges that other federal agencies must overcome in order to effectively implement GPRA. For example, the DoD Comptroller has stated that DoD:

> ...is well suited to implement the [Government Performance and Results] Act, because it has a long history of planning and executing based on performance goals. The Department's [Planning, Performance, and Budgeting System] PPBS process already depends on long range planning to identify strategic goals. (Hamre, 1994:15)

Is ASC ready for GPRA? Does it perform strategic planning and performance measurement in a manner conducive to easy implementation of GPRA? These are immediate issues facing the leaders of ASC.

Research relating to effective measurement of strategic goals and objectives within ASC will undoubtedly benefit the Center's ability to efficiently and effectively

implement GPRA. Previous research efforts have been conducted relating to strategic planning (Corey:1985, Coomer and Moynihan:1994) and measurement (Hayes and Miller:1992, Hamner and La Fleur:1993). However, these research efforts addressed specific issues within either strategic planning or performance measurement. Literature reveals performance measurement to be an integral part of strategic planning (Blackerby, 1994a:18), and little research has been conducted from this perspective.

Investigative Questions. In order to answer the research question, the following investigative questions guide this research:

1. What are the elements of strategic planning and performance measurement that are critical to effective implementation of GPRA?
2. Do the elements of strategic planning and performance measurement that are critical to effective implementation of GPRA exist within ASC?

The first investigative question is answered through a review of literature in the areas of strategic planning and performance measurement. The question is answered through identification of the specific elements of strategic planning and performance measurement that pose the greatest challenge to effective implementation of GPRA. The researcher then seeks to determine the extent to which these elements exist within ASC. The results of this effort provide the answer to the second investigative question. With both investigative questions answered, the researcher is then able to answer the overall research question: Is strategic planning and performance measurement within ASC conducive to effective implementation of GPRA?

Scope and Assumptions

GPRA is a federal law that will soon affect most federal government agencies. As a legal requirement, some federal managers may view GPRA as another required activity that must be accomplished along with a realm of other mandates. Some managers will:

> ...want to know only how to comply with the law, learning only enough to complete the reports that will keep higher levels off their backs. Although it is fairly easy to convince most managers that the GPRA's requirements represent good management practice and not just another paperwork drill, helping them develop strategic plans and performance measures is another matter. (Allen, 1995:17)

Managers who view GPRA as just another required activity are missing the main point of GPRA, which is to change the mindset of the federal manager from activities to results (Blackerby, 1994a:21). As such, this research was conducted under the premise that effective strategic planning and performance measurement within government are highly valuable pursuits even in the absence of the statutory requirements of GPRA. Additionally, this research is based on the premise that rather than being just another political tool of Congress, GPRA reflects sound and desirable management practices.

Strategic planning and performance measurement are very broad and complex issues. This study does not attempt to address all aspects of strategic planning or performance measurement. Literature reveals a multitude of issues in these two areas (Mintzberg, 1994, Nutt and Backoff, 1992). In order to place manageable bounds on this research, many critical aspects of strategic planning and performance

measurement have been simplified. Consequently, this study was limited to research of strategic planning and performance measurement within ASC in the context of the contemporary challenges that these pose to successful implementation GPRA.

As applied research, this study was conducted on a specific management problem within a specific organization. Nevertheless, the results and conclusions of this research may be applicable to other organizations throughout the Air Force, DoD, and other government agencies. Strategic planning and performance measurement are management concerns at all levels of the federal government.

Key Terms

Literature reveals a lack of consensus regarding definitions of strategic planning and performance measurement. Nevertheless, a conceptual baseline is essential for the reader to better understand this research effort. Hence, the following definitions are applicable to this research:

> **Strategic planning** is "...a continuous and systematic process by which people make decisions about intended future outcomes, how outcomes are to be accomplished, and how success is measured and evaluated" (Blackerby, 1994a:17).
>
> **Performance measurement** is the process of gathering "...objective indicators of program effectiveness and/or efficiency that are directly tied to program results" (DoD, 1992:1).

Research Plan

This research effort is an exploratory, applied study with the purpose of addressing a specific organizational problem. The study was conducted in the five stages depicted in Figure 1. Chapter II provides the reader with essential

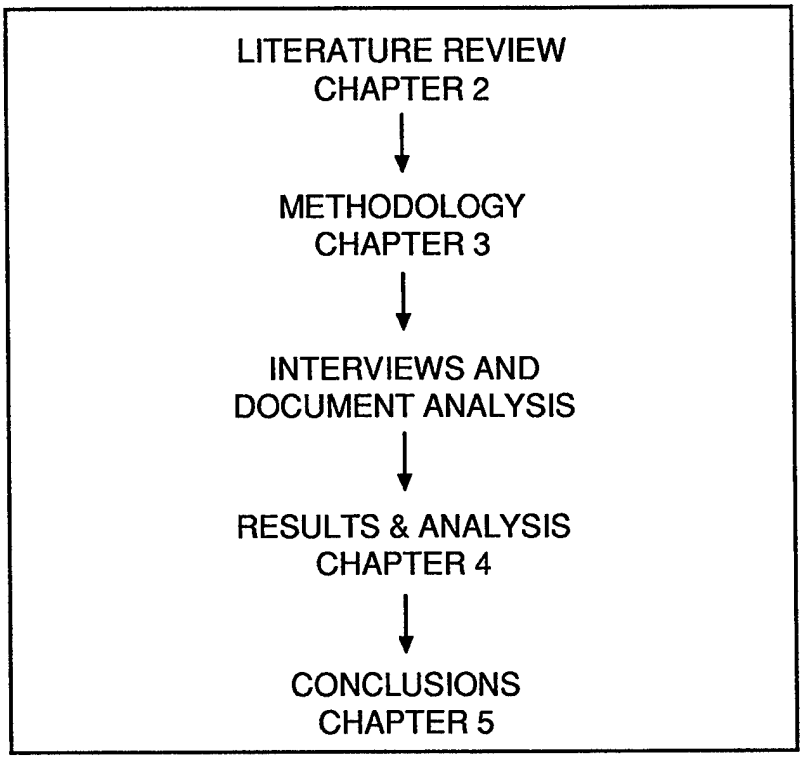

Figure 1. Research Plan

information from literature on GPRA, strategic planning, and performance measurement. It also answers the first investigative question by identifying the elements of strategic planning and performance measurement that are critical to effective implementation of GPRA. Chapter III describes the methodology the researcher used to answer the second investigative question: Do the elements of strategic planning and performance measurement that are critical to effective

implementation of GPRA exist within ASC? The methodology consists of in-depth interviews and document analysis. Interviews were conducted with the most knowledgeable managers and designated experts in strategic planning within the organizations that comprise ASC. A document analysis of existing strategic plans was used to complement the interviews. Chapter IV provides the results and analysis of the interviews and document analysis, and concludes with the answer to the second investigative question. Finally, Chapter V addresses the limitations of the research, provides the research conclusions, answers the research question, and provides recommendations for further research.

Summary

GPRA is a law that will soon affect every federal government agency. The thrust of GPRA is to instill strategic planning and performance measurement within government. An initial assessment of GPRA pilot projects revealed several strategic planning and performance measurement challenges to effective implementation of GPRA (OMB, 10 August 1994). However, the DoD Comptroller believes that DoD is well suited to implement GPRA (Hamre, 1994:15). This research centers on the GPRA implementation challenge within ASC: Is strategic planning and performance measurement within ASC conducive to effective implementation of GPRA?

II. Literature Review

Introduction

The purpose of the literature review is to answer the first investigative question: What are the elements of strategic planning and performance measurement that are critical to effective implementation of GPRA? To answer this investigative question, four objectives were pursued during the literature review:

1. Describe GPRA
2. Describe strategic planning
3. Describe performance measurement
4. Identify the elements of strategic planning and performance measurement that are critical to effective implementation of GPRA

The first three objectives provide the reader with sufficient information to understand this research effort. The fourth objective mirrors the first investigative question related to the research question introduced in Chapter I.

Government Performance and Results Act of 1993 (GPRA)

GPRA was enacted by Congress on 3 August 1993 to provide "for the establishment of strategic planning and performance measurement in the Federal Government" (U.S. Congress, 1993). More specifically, GPRA has six purposes:

1. improve the confidence of the American people in the capability of the Federal Government, by systematically holding Federal agencies accountable for achieving program results;

2. initiate program performance reform with a series of pilot projects in setting program goals, measuring program performance against those goals, and reporting publicly on their progress;
3. improve program effectiveness and public accountability by promoting a new focus on results, service quality, and customer satisfaction;
4. help Federal managers improve service delivery, by requiring that they plan for meeting program objectives and by providing them with information about program results and service quality;
5. improve congressional decisionmaking by providing more objective information on achieving statutory objectives, and on the relative effectiveness and efficiency of Federal programs and spending; and
6. improve internal management of the Federal Government. (U.S. Congress, 1993:285)

To accomplish these objectives, the Act mandates three separate yet interdependent requirements: strategic planning, performance planning, and performance reporting.

For the first element of GPRA, strategic planning, the Act requires the head of each federal agency (with few exceptions) to submit a strategic plan to the Director of the Office of Management and Budget (OMB) and to the Congress no later than 30 September 1997. The strategic plan shall cover a period of five years and contain the following:

1. a comprehensive mission statement covering the major functions and operations of the agency;
2. general goals and objectives, including outcome-related goals and objectives, for the major functions and operations of the agency;
3. a description of how the goals and objectives are to be achieved, including a description of the operational processes, skills and technology, and the human, capital, information, and other resources required to meet these goals and objectives;
4. a description of how the performance goals included in the plan required by section 1115(a) of title 31 shall be related to the general goals and objectives in the strategic plan;
5. an identification of those key factors external to the agency and beyond its control that could significantly affect the achievement of the general goals and objectives; and

6. a description of the program evaluations used in establishing or revising general goals and objectives, with a schedule for future program evaluations. (U.S. Congress, 1993:286)

The strategic goals and objectives are linked with day-to-day management of an agency through the second element of GPRA, performance planning. Each agency is required to annually submit a performance plan covering each program identified in the agency's budget. The performance plan shall:

1. establish performance goals to define the level of performance to be achieved by a program activity;
2. express such goals in an objective, quantifiable, and measurable form unless authorized to be in an alternative form under subsection (b);
3. briefly describe the operational processes, skills and technology, and the human, capital, information, or other resources required to meet the performance goals;
4. establish performance indicators to be used in measuring or assessing the relevant outputs, service levels, and outcomes of each program activity;
5. provide a basis for comparing actual program results with the established performance goals; and
6. describe the means to be used to verify and validate measured values. (U.S. Congress, 1993:287)

The third element, performance reporting, is intended to provide feedback to the agency and to Congress on the agency's success in achieving it's planned performance objectives. To accomplish this, federal agencies will be required to submit annual performance reports comparing what was actually accomplished against the goals presented in the plan. The performance reports shall:

1. review the success of achieving the performance goals of the fiscal year;
2. evaluate the performance plan for the current fiscal year relative to the performance achieved toward the performance goals in the fiscal year covered by the report;
3. explain and describe, where a performance goal has not been met (including when a program activity's performance is determined not to have met the criteria of a successful program activity under section 1115(b)(1)(A)(ii) or a corresponding level of achievement if another alternative form is used)-

A. why the goal was not met;
B. those plans and schedules for achieving the established performance goal; and
C. if the performance goal is impractical or infeasible, why that is the case and what action is recommended;

4. describe the use and assess the effectiveness in achieving performance goals of any waiver under section 9703 of this title; and
5. include the summary findings of those program evaluations completed during the fiscal year covered by the report. (U.S. Congress, 1993:288)

The performance report compels management to evaluate the effectiveness of an agency's processes in achieving forecasted outcomes at the budgeted cost, and requires subsequent planning to address any shortfalls. Performance reports also institute a framework to reward organizations that accomplish their objectives and accountability for those that fall short (Hamre, 1994:15).

Various initiatives over the years have tried to institute strategic planning in the federal government, such as Defense Secretary Robert S. McNamara's planning, programming, and budgeting system (PPBS) and President Carter's zero base budgeting (Blackerby, 1994b:24). However, unlike reforms at organizational restructuring that tend to last a long time, they were process reforms that faltered (Rosenbloom, 1995:5). In fact, Mintzberg reduces PPBS to a capital budgeting process rather than the strategic planning mechanism it was intended to be (Mintzberg, 1994:122). The attempted reforms failed to redirect the government's focus from internal program issues and activities to external outcomes. Today, government agencies remain focused on program inputs such as funding, staffing levels, management information systems, fraud, waste, and fat (Blackerby, 1994b:23).

It is the intent of Congress to redirect the government's focus away from program and agency inputs toward outcomes. GPRA has:

> ...the potential to make radical changes in the way government operates. For the first time, it mandates a continuous and systematic process where people make decisions about intended future outcomes, how the outcomes are to be accomplished, and how success is measured and evaluated. This process is strategic planning. (Blackerby, 1994a:22)

Implementation of strategic planning is one of the primary purposes of GPRA. Consequently, a good conceptual understanding of strategic planning is essential to this research.

Strategic Planning

Strategic planning is not a new concept to government. Its roots lie in the military concept of managing battles to win wars rather than managing troops to win battles (Nutt and Backoff, 1992:56). Business has extensively adopted strategic planning since the 1960's, during which time it became a standard management tool in virtually every Fortune 500 company (Blackerby, 1994b:23). Through the 1980's, few government and non-profit organizations had even made the initial steps toward strategic planning (Wortman, 1988). However, in the early 1990's, many state legislatures passed bills requiring strategic planning. Advances at the state level prompted members of Congress to pass the Chief Financial Officers (CFO) Act of 1990 (P.L. 101-576) requiring, among other things, the systematic measurement of performance. Although the CFO Act is limited to internal measures rather than

outcome measures, it paved the way for GPRA, which focuses on the measurement of outcomes based on strategic plans (Blackerby, 1994b:24).

Definition of Strategic Planning. Literature reveals numerous definitions of strategic planning with no consensus on its meaning (Mintzberg, 1994:1-34). In fact, the definition of strategic planning depends on which one of the ten different schools of thought on strategic planning is used (Mintzberg, 1994:2). One academic definition of strategic planning is "...the process by which guiding members of an organization envision its future and develop the necessary procedures and operations to achieve that future" (Goodstein, Nolan, and Pfeiffer, 1993:3). A field definition of strategic planning, and also the definition used throughout this research effort, is "...a continuous and systematic process by which people make decisions about intended future outcomes, how outcomes are to be accomplished, and how success is measured and evaluated" (Blackerby, 1994a:17). This second definition includes performance measurement as a subset. However, "...managers should realize that planning and control, while diverse, are parts of the same process" (Lorange, 1988:264). Other definitions describe strategic planning as a part of management, a process that cannot be separated from other management functions such as organizing, directing, motivating, and controlling (Steiner, 1977:6). As such, strategic control may be viewed as an integral part of the strategic planning process.

Despite the lack of a common definition, most academicians and practitioners agree that strategic planning focuses on the "big picture," and is much more concerned with defining the ultimate outcomes of an organization than it is with

determining how the organization will achieve these outcomes. In other words, it's purpose is to define *what* shall be done, in contrast to *how* to get the job done which is the focus of tactical or operational planning (Goodstein, Nolan, and Pfeiffer, 1993:3).

Elements of Strategic Planning. Most strategic planning models include six basic elements: mission, needs assessment, strategic objectives, outcome measures, strategies, and performance measurement (Blackerby, 1994a:18). Table 1 provides a condensed description of these elements as defined by Blackerby.

Benefits of Strategic Planning. The principle benefit of strategic planning is that it provides a framework for action that is common among all members of an organization and provides a single direction for everyone to move in. Strategic planning also allows an organization to efficiently and effectively utilize all available resources toward a common vision (Goodstein, Nolan, and Pfeiffer, 1993:6). To work toward that vision, strategic planning drives an organization to create realistic, measurable, and results-oriented goals and objectives (Blackerby, 1994a:20). An integral aspect of strategic planning is measurement of organizational performance in achieving goals and objectives. In other words, effective strategic planning is highly dependent on performance measurement.

Performance Measurement

Performance measurement is essential for any organization. "What gets measured gets done" (Osborne and Gaebler, 1992:146). Measurement allows an

Table 1

Strategic Planning Elements (Blackerby, 1994:18-22)

Element	Characteristics
Mission, Goals, and Values	
Mission	• Describes the organization's purpose • Externally focused • Describes ultimate impacts of activities on customers
Goals	• Describe results or outcomes • Externally focused • Describe the direction in which the organization intends to make progress • Frequently measurable, but usually not measured
Values	• Describe things other than goals that are still important to the organization
Needs Assessment	
External	• Analysis of key outside forces influencing success • Opportunities or threats
Internal	• Analysis of organization's strengths & weaknesses
Strategic Objectives	• Written statements that describe intended outcomes • Describe measurable targets of achievement • Must be accompanied by outcome measure • Six primary characteristics –Link mission and goal statements –External focus –Measurable –Achievable –Clear –Comprehensive
Outcome Measures	• Measures of success in achieving strategic objectives • Assess actual impact of organization's activities • Expressed in terms identical to corresponding strategic objective • Usefulness depends on the quality of the strategic objective
Strategies	• Approach or implementation methodology that will lead to achieving strategic objectives • Describes overall organizational approach • Forms basis of "tactical" performance plans
Performance Feed Forward	• Systematic procedure for comparing actual performance to planned performance • Evaluates progress toward strategic objectives using outcome measures • Feeds information forward into next planning cycle to improve performance

organization to guide steady advancement toward established strategic goals and identify performance shortfalls (Rose, 1995:63). "Measurement is at the heart of any improvement process. If something cannot be measured, it cannot be improved" (Harrington, 1988:19). "What you measure is what you get" (Rosenbloom, 1995:6). Performance measurement is integral to effective strategic planning. This linkage is reflected in Blackerby's definition of strategic planning, and in the requirements of GPRA.

Purposes of Performance Measurement. Different academicians and practitioners define performance measurement in different ways. One academic perspective is provided by Carl Thor. He proposes three reasons for measuring: to plan, to screen, and to control (Thor, 1989:44-48). Planning measures are used to communicate to management the organization's progress in achieving the long-term strategic vision and mission. These measures capture the performance of the entire organization rather than specific activities, products, or processes. Specifically, these measures are tied to an organization's strategic plan. Screening measures ask the question, "Are the functional areas performing in ways that demonstrate understanding and support of the organization's strategic goals" (Cupello, 1994: 80)? Screening measures are used to gauge the performance of the organization's functional areas. Control measures are the most frequently addressed category of measurement due to all the recent attention provided them by the quality community. Control measures are much more focused than planning measures. They are used to communicate the progress of employees, machines, products, services, and processes

in meeting specific parameters or standards. Control measures focus on immediate, day-to-day activities (Cupello, 1994: 80).

From a practitioner standpoint, the Department of Defense (DoD) Comptroller defines performance measures as "...objective indicators of program effectiveness and/or efficiency that are directly tied to program results. Program results are, in turn, directly justified by the Department's or agency's mission" (DoD, 1992:2). According to DoD, performance measures used in the private sector and government typically fall under three categories: factor of production indicators, outcome indicators, and work process indicators:

1. Factor of production measures typically describe the resource to output relationship.
   - Input Measures describe the resources, time, and staff utilized for a program (e.g. total funding and end strength).
   - Output Measures describe goods or services produced (e.g., line items shipped).
   - Efficiency is defined as the measure of the relationship of outputs to inputs usually expressed as a ratio.
   - Effectiveness is defined as the measure of output conformance to specified characteristics sometimes referred to as "doing the right thing."
2. Outcome measures describe the direct results achieved by the product being produced with given characteristics. These measures assess the effect of output against given objective standards (e.g. materiel readiness rate, or health status of eligible population provided with medical care).
3. Work process measures are indicators of the way work gets done in producing the output at a given level of resources, efficiency, and effectiveness. These measures are a direct by-product of the technique, but do not measure the attributes of the final product per se. However, work measures and trends typically correlate with the characteristics of output. For example, improved process control results in improved product quality. (DoD Comptroller, 1992:2-7)

Figure 2 depicts how these performance measures should be integrated into an organization's transformation process. As shown in the figure, the primary purpose

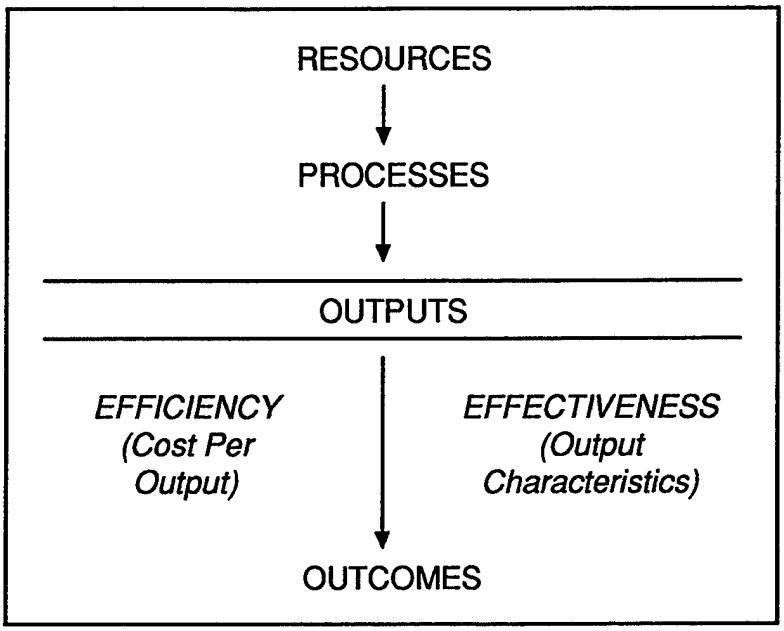

Figure 2. DoD Performance Measurement Model (DoD, 1992:12)

of organizational measures of efficiency and effectiveness should be to gauge the organization's progress toward achievement of desired outcomes. They are not intended to measure processes and outputs in a vacuum, irrespective of the organization's desired outcomes expressed in the form of strategic goals and objectives. This concept reinforces Blackerby's inclusion of performance measurement as an integral element of strategic planning. Furthermore, Blackerby considers performance measurement to have relevance only in the context of defined measurable goals and objectives (Blackerby, 1994a:21).

Critical Elements for GPRA Implementation

A major hurdle to successful implementation of GPRA is performance measurement. "Indeed, the term measurement may be among GPRA's greatest

enemies" (Henderson, 1995:8). In a survey conducted by the Washington Public Affairs Center of the University of Southern California to determine topics for discussion for an upcoming seminar on GPRA, 54 of the 72 respondents cited the "selection of results-oriented performance measures" as their greatest area of concern (Kimm, 1995:11). Since GPRA affects government programs as well as government agencies, its reach extends far beyond the immediate confines of the federal government. For example, GPRA will affect the scientific community whose research is funded by the federal government:

> The law covers every type of science - from the most basic research supported by the National Institutes of Health (NIH) and the Science Foundation (NSF) to the applied research conducted by the Department of Defense laboratories and the National Oceanic and Atmospheric Administration (NOAA)...The concern expressed mostly frequently by research managers is the difficulty of finding nontrivial measures with which to judge research productivity. (Science, 1995:20)

Why does measurement pose such an obstacle for government implementation of GPRA? A review of recent literature allowed the researcher to identify two elements of strategic planning and performance measurement that are critical to effective implementation of GPRA:

1. Measurable strategic goals and objectives related to outcomes/results
2. Measurement of external outcomes/results

When viewed in terms of Blackerby's elements of strategic planning in Table 1, these elements are essential components of strategic planning (Blackerby, 1994a:18). The following two sections describe some of the reasons that these elements of strategic planning pose so much difficulty for government organizations.

Measurable Strategic Goals and Objectives. Much of the difficulty that government organizations have in developing measurable strategic goals and objectives related to outcomes can be attributed to inherent differences between the private sector and the public sector.

First, nearly all private sector measures of organizational success are based on a single, well established concept: profitability. Numerous variants of profitability are used in the private sector, such as net profit, gross sales, market share, stock value, and net worth. Additionally, the private sector has a consistent unit with which to measure success: dollars. The public sector, on the other hand, lacks a common measure of success. Because the public sector lacks the equivalent of profitability to use as a measure of performance, government agencies have instead focused on internal program inputs and outputs, such as taxes, program funding, organizational staffing, processes, and activities (Blackerby, 1994a:20-21).

Another difficulty with developing measurable goals and objectives lies with the existence of multiple constituents. Public sector organizations do not have a single directional pull like that provided by the board of directors of a company in the private sector. Government organizations receive direction from multiple stakeholders such as the President, Congress, special interest groups, other government agencies, and tax payers. Government agencies are pulled in different, often conflicting, directions. A good example of this is the inconsistency in DoD procurement between obtaining the best possible price for a product and maintaining a viable defense industrial base (Blackerby, 1994a:21).

Finally, the private sector knows who the customer is. It's the person or organization that pays for the company's product or service. On the other hand, the federal government has many customers, ranging from the general public, federal employees, other internal organizations, external organizations, all the way to foreign governments. The "customer" is often difficult to define. Additionally, Congress and the President provide the money to federal agencies, but the products and services are intended for the benefit of the public. The significance of this last point is that government agencies tend to be more responsive to the sources of funds (inputs) rather than the service customers (outcomes) (Blackerby, 1994a:21).

These inherent differences between the public and private sector are a few of the reasons that make the development of measurable strategic goals and objectives so difficult for government agencies. However, the multitude of state governments that have successfully developed measurable strategic goals and objectives related to outcomes serve as evidence that it can be done in government (U.S. Senate, 1993:9).

One of the critical prerequisites in establishing measurable goals and objectives is consensus among an agency's stakeholders. A basis for developing consensus is to define the agency's customers as well as the customer-supplier relationships. After this is accomplished,

> ...Public sector strategic planners will be ready to answer , 'What do our customers want? ...or need?' 'What are their interests?' Once they answer these questions, they can begin the process of meeting these needs based on realistic, measurable, results-oriented strategic objectives. (Blackerby, 1994a:21)

After the organization's mission is defined, the subsequent goals and objectives must consist of four essential components amenable to measurement:

1. what is to be done (content);
2. for or with whom (who);
3. at what rate, level, quantity, or quality (assessment target); and
4. in order to achieve, accomplish, prohibit, create, or recreate what (outcome target). (Henderson, 1995:8)

After measurable goals and objectives are developed, the government agency must then channel its performance measurement system toward the measurement of external outcomes and results as well as internal processes, activities, outputs, and products. However, this shift in measurement emphasis will not be easy. Part of the difficulty lies with the internal focus of Total Quality Management (TQM).

Measurement of External Outcomes and Results. Since the late 1980's, the TQM movement has permeated the DoD, as well as many other branches of the federal government. "TQM has been the most widely adopted strategy for improving productivity and competitiveness during the past five years" (Kutz, 1995:105). Additionally, surveys by the Conference Board of 1991 show that 93% of manufacturing companies and 69% of service companies have implemented some form of quality management between 1988 and 1992 (Olian and Rynes, 1991:303-330).

DoD defines TQM as "both a philosophy and set of guiding principles that represent the foundation of a continuously improving organization" (DoD, 1990:1). TQM within the federal government is based on several fundamental tenets that provide a roadmap for an organization to pursue the course of continuous improvement. These principles are: "focus on achieving customer satisfaction; seek continuous improvement; and full involvement of the workforce" (FQI, 1991, iii). TQM applies human resources and quantitative methods for improving materials,

services, and processes (Hunt, 1993:10). An essential, if not the most important, ingredient for continuous improvement is performance measurement (Hunt, 1993:10). Reliance on performance measurement, whether pertaining to customers, employees, financial data, or operations, continues to increase (Olian and Ryan, 1991:303-330).

Despite TQM's tremendous emphasis on measurement, many organizations have experienced lackluster performance after incorporating TQM into their organization (Albrecht, 1992:16). Literature reveals that TQM alone is not a precursor to success. One reason for this condition is that performance measurement conducted under TQM is predominantly limited to operational control measures. TQM emphasizes measurement of processes, activities, and products. TQM is too often treated as an initiative separate from an organization's strategic goals and objectives. Consequently, strategy is often separated from quality (Butz, 1995:105). There has been a lack of guidance to assist managers in understanding the relationship between internal performance (activity, process, output) measures and an organization's external (outcome, results) measures (McMann and Nanni, 1994:55). In essence, the link between performance measurement and strategic planning has been neglected (Glaser, 1991:309).

The DoD recognizes the lack of integration (linkage) between various types of performance measures and strategic goals and objectives:

> The DoD system allows for measures to be developed by multiple functional communities with limited coordination. For instance, financial performance measures (efficiency) may be developed by the financial management community independently from the effectiveness measures developed by the functional community. The functional community may be setting goals in their area of oversight without the benefit of financial information (e.g., supply effectiveness

> indicators and goals set by the logistics community may be independent of those set in the budget process). Outcome measures are developed by yet a different community. Outcome measures have been less systematically tied into the system of financial and effectiveness review systems. These measures have typically been indirect proxies, such as the readiness rating system. Integration is lacking both in articulation of goals and resource levels, and in the development of data bases to provide effective oversight. The process of communication of financial management, outcome measures, and work process measures are frequently ad hoc and confusing. (DoD, 1990:10)

An example of the missing link between TQM metrics and strategic planning is found in recent research that studied the metrics development process used within Aeronautical Systems Center (ASC) at Wright-Patterson AFB, Ohio. The research team found that in many organizations, only ten to twenty percent of metrics collected were useful to the organization's management. One organization used only one out of every twenty-five metrics it collected (Hamner and La Fleur, 1993:1-4). In a related research effort, Hayes and Miller concluded that in order to be used correctly, metrics should be linked with objectives (Hayes and Miller, 1992:5-1).

Performance measurement must be linked with the strategic plans of an organization. In order for an organization to focus on achievement of desired outcomes and results, these outcomes and results must be measured. "Senior managers understand that an organization's measurement system strongly affects the behavior of managers and employees" (Kaplan and Norton, 1992:71). TQM's emphasis on measurement of internal processes, activities, and products directs managerial focus on internal rather than external aspects of the organization. Many organizations suffer from misdirected performance measures because their internal

measures lack congruence with the organizations' strategic goals and objectives (McMann and Nanni, 1994:56).

TQM's focus on internal control measures does not mean they are not important to an organization's success. They have been and will continue to be essential for the continuous improvement of internal processes, activities, products, and outputs. For example, results measures are commonly used for system or product development. Two typical results measures are cost and schedule. "But the fact that a program is six months late and $2 million over budget doesn't tell anyone what went wrong or what to do differently" (Meyer, 1994:97). Internal measures of processes, activities, and products cannot be replaced by outcome measures. Instead, internal control measures must be linked with strategic goals and objectives:

> Thus, the application of TQM requires that we first develop a strategic plan that identifies mission, goals, objectives and targets, and that plan should include outcome-related goals and objectives that have a customer focus. Quality planning, quality control and quality improvement are then driven by the strategic plan. (Duquette and Stowe, 1993:40)

TQM must be fully integrated into the strategic plans of an organization (Butz, 1995:105). If TQM is not linked with the strategic plans, an organization may find itself measuring processes, activities, and products that do not necessarily contribute to organizational outcome. "Measurement becomes a waste of time with little or no organizational value when an organization measures items that have no influence on organizational success" (Rose, 1995:63).

Integrating strategic planning with TQM requires three links to be made between strategic planning and performance measurement, or TQM:

1. The strategic plan must be customer driven.
2. Strategic planning must provide the direction and context for TQM and must precede other TQM initiatives.
3. The TQM culture and continuous improvement efforts must focus on achieving results that increase value to customers and ensure long-run success (Butz, 1995:107).

Another approach is to re-focus TQM from quality to value. Fitz-Enz clarifies the difference between the value and quality:

> The most overworked term in the current management lexicon is quality. It is used to describe just about any process or result. As such, it has become a cliché for the inarticulate. Quality is just one type of outcome from operations and administration. The other two are productivity and service. Collectively, quality, productivity, and service should constitute value...Organizations do not survive because they provide quality. Their reason for being is that they provide value to the customer. The value may be expressed in terms of quality, cost, quantity, timeliness, or some human desire. (Fitz-Enz, 1993:19)

A comprehensive list of criteria for performance measures that aligns performance measurement with an organization's strategy is provided by Dixon, Nanni, and Vollman (1990). This list embodies the critical attributes of performance measures that link internal measurement of processes, activities, and outputs with an organization's external performance (results and outcomes):

1. Supportive and consistent with an organization's:
   - goals
   - actions
   - people/culture
   - key success factors
2. Strategically relevant and facilitating
3. Simple to implement
4. Not complex
5. Driven by the customer
6. Integrated throughout the functional departments
7. Appropriate to the organizational level
8. Appropriate to the external environment
9. Promotive of cooperation both horizontally and vertically throughout the organization

10. Accountable for the results that emanate from those being measured
11. Developed, when appropriate, by a combined top-down and bottom-up effort
12. Communicated throughout the relevant parts of the organization
13. Understandable
14. Agreed upon
15. Realistic
16. Directed to factors that matter and make a difference
17. Linked to activity so a clear relationship exists between cause and effect
18. Focused more on managing resources and inputs, not simply costs
19. Geared to providing real-time feedback
20. Committed to providing action-oriented feedback
21. Not necessarily an additive measure in the sense that the measures must add up and down across functional and management levels
22. Supportive of individual and organizational learning
23. Promotive of continuous and perpetual improvement (McMann and Nanni, 1994:56)

Linkage between an organization's strategic planning process and its performance measurement system is critical for effective implementation of GPRA. Measurable goals and objectives related to outcomes are not enough. The organization must also *measure* outcomes/results, not just internal processes, activities, and products. Linkage between strategic planning and performance measurement is created when the organization identifies external, outcome oriented performance measures related to its strategic goals and objectives. Consequently, the following two elements of strategic planning and performance measurement, depicted in Figure 3, are critical to effective implementation of GPRA:

1. Measurable strategic goals and objectives related to outcomes/results

2. Measurement of external outcomes/results

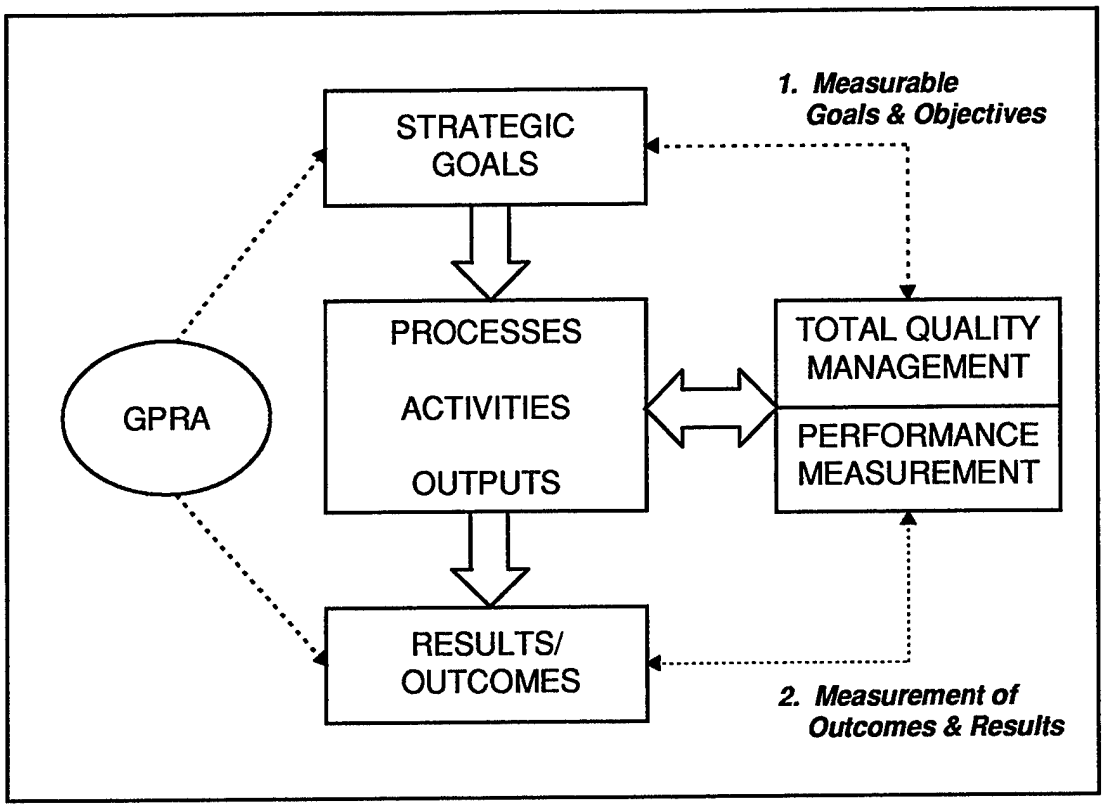

Figure 3. Critical Elements for GPRA Implementation

Summary

This chapter provides the reader with information fundamental information on GPRA, strategic planning, and performance measurement. It also provides the answer to the first investigative question: What are the elements of performance measurement that are critical to effective implementation of GPRA? From a review of literature, the researcher identified two key elements of strategic planning and performance measurement that are critical to effective implementation of GPRA:

1. Measurable strategic goals and objectives related to outcomes/results
2. Measurement of external outcomes/results

The first element is a challenge to government agencies because government has traditionally focused on management of inputs, outputs, processes, activities, and products rather than outcomes and results (Blackerby, 1994a:20-21). The second element is a challenge to government agencies because of TQM's focus on measurement of internal processes, activities, and outputs (Butz, 1995:105). In essence, the government has traditionally focused its plans and performance measures on internal processes, activities, and outputs as opposed to external outcomes and results. The remainder of this research is aimed at determining the extent to which these two elements that are critical to effective implementation of GPRA exist within ASC. Chapter 3 describes the methodology used in this effort.

III. Research Methodology

Introduction

The literature review documented in Chapter II serves two purposes. First, it provides the reader with enough information on the GPRA, strategic planning, and performance measurement to understand the research problem. Second, it answers the first investigative question initially presented in Chapter I: What are the elements of strategic planning and performance measurement that are critical to effective implementation of GPRA? These critical elements are:

1. Measurable strategic goals and objectives related to outcomes/results
2. Measurement of external outcomes/results

This chapter describes the research methodology employed during the study to answer the remaining investigative question: Do the elements of strategic planning and performance measurement that are critical to effective implementation of GPRA exist within ASC?

Research Purpose

Cooper and Emory (1995) categorize research into four purposes: reporting, description, explanation, prediction, and control. At the most elementary level, reporting aims to simply inform by providing data. Description tries to discover answers to the questions of who, what, when, where, and sometimes how. In not-for-

to the administrator and policy analyst for planning, monitoring, and evaluating. In this context, 'how' questions address such issues as quantity, cost, efficiency, effectiveness, and adequacy (Cooper and Emory, 1995: 9). Explanation reaches beyond description and attempts to explain the reasons for a phenomenon that was observed by a descriptive study. Finally, prediction goes one step further by attempting to forecast future values of a phenomenon that has been explained (Cooper and Emory, 1995:9-10).

Cooper and Emory also differentiate research as either basic or applied research. Basic research attempts to solve problems or answer questions of a theoretical nature. It has little direct impact on any particular organization's action, performance, or policy decisions. On the other hand, applied research emphasizes practicality and applicability to some organizational problem. Applied research is directed toward making decisions. One form of applied research is business research. Business research is defined as "...a systematic inquiry that provides information to guide business decisions" (Cooper and Emory, 1995:10).

Patton (1990) delineates research purposes in a somewhat different manner than do Cooper and Emory. He provides five categories of research purpose: basic research, applied research, summative evaluation, formative evaluation, and action research. Under basic research, knowledge is an end in itself. Applied research attempts to understand the nature and sources of human problems. Summative evaluation is used to determine the effectiveness of a program, policy, organization, or product. In summative evaluation, the research focuses on the goals of the

particular element. Formative evaluation is similar to summative, except that it is used to improve a program, policy, organization, or product in the context of a specific setting. Finally, action research is used to solve immediate problems in an organization, program, or community as quickly as possible (Patton, 1990:160).

This study is geared toward providing answers that will assist ASC in effectively implementing GPRA. Using the definitions provided by Cooper and Emory, it is most appropriately categorized as applied (business) research with the purpose of description. According to Patton's definitions, the intent of the research is summative in that the research is directed toward describing the extent to which ASC develops measurable strategic goals and objectives that are outcome oriented and the extent to which ASC measures organizational outcomes.

Research Method

This research effort is designed as an exploratory, qualitative study. It is exploratory because it's main purpose is to determine the general nature of a particular organizational problem. "Exploratory studies tend toward loose structures with the objective of discovering future research tasks" (Cooper and Emory, 1995:115). It is qualitative because it seeks to describe, rather than quantify. Qualitative techniques research are predominantly used in exploration (Cooper and Emory, 1995:118). Qualitative techniques are well suited for exploring differences among people, organizations, and programs (Patton, 1990:104).

Under the realm of qualitative research, nine basic approaches are available to the researcher for exploratory investigations of management questions:

1. In-depth interviewing (usually conversational rather than structured).
2. Participant observation (to perceive firsthand what participants in the setting experience).
3. Films, photographs, and videotape (to capture the life of the group under study).
4. Projective techniques and psychological testing (such as a Thematic Apperception Test, projective measures, games, or role-play).
5. Case studies (for an in-depth contextual analysis of a few events or conditions).
6. Street ethnography (to discover how a cultural subgroup describes and structures its world at the street level).
7. Elite interviewing (for information from influential or well informed people in an organization or community).
8. Document analysis (to evaluate historical or contemporary confidential or public records, reports, government documents, and opinions).
9. Proxemics or kinesics (to study the use of space and body motion communication, respectively). (Cooper and Emory, 1995:118-119)

Of the nine approaches, two were considered appropriate for this study: in-depth interviewing and document analysis. These specific approaches are described below.

Since this study is applied research, data from the field was essential to answering the research question. This data was obtained through in-depth interviewing of managers and experts most knowledgeable in the areas of strategic planning and performance measurement within each of the major organizations comprising ASC. In-depth interviewing was used because it provided a means to obtain data that was less prone to variance due to numerous definitions of strategic planning and performance measurement.

The in-depth interviews were complemented by document analysis of the organization's strategic plans. Document analysis provided the researcher with more

objective data regarding the organization's strategic goals and objectives. This data was then compared to the data obtained from the interviews. The benefit of using more than one method of data collection is that several methods improve the validity of the research findings through the benefits of triangulation.

Triangulation in a study involves the use of a multiple methodologies in the attempt to increase the validity of the study's conclusions. Triangulation allows the researcher to more accurately locate his position, similar to that of a surveyor, by using several methods instead of relying on a single method (Patton, 1990:187). Four basic types of triangulation may be used:

1. Data triangulation - the use of a variety of data sources
2. Investigator triangulation - the use of several different researchers
3. Theory triangulation - the use of multiple perspectives to interpret a single set of data
4. Methodological triangulation - the use of multiple methods to study a single problem or program (Patton, 1990:187).

This study employed methodological triangulation through the use of in-depth interviewing and document analysis.

Interview Type. Patton divides interviews into three categories: informal interview, interview guide, and standardized open-ended interview. The informal interview is an unstructured conversation in which the researcher develops questions during the interview. This type of interview is very flexible and allows the researcher to tailor each interview to the situation and person being interviewed. However, it is very time consuming and makes data analysis and comparisons across cases very difficult. With an interview guide, the researcher begins with a general outline of questions but does not limit himself to a specific structure or depth. The interview

guide somewhat limits flexibility, but it also eases data analysis and comparison between cases. Finally, a standardized open-ended interview is one in which the researcher asks a specific number of identical questions in the same order to each person he interviews. This type of interview severely limits flexibility for the researcher. However, it minimizes the bias associated with variation between interviews. Additionally, its high focus ensures the interviewee's time is carefully used (Patton, 1990:280-284). Data for this study was collected using the interview guide method in order to transcend dissimilar views of strategic planning and performance measurement that exist in the field, and to afford ease of data analysis and comparison between cases.

Level of Analysis. The focus of this study is strategic planning and performance measurement within ASC. In this context, the level of analysis is organizational rather than individual. Specifically, the level of analysis is at the mission unit level, the organizations that comprise ASC:

- Acquisition Support Wing (ASW): Consists of System Program Offices (SPO), Product Support Offices (PSO), and five supporting functional organizations. These organizations are responsible for acquiring and sustaining quality systems for the Air Force.
- Wright Laboratory (WL): The largest of the four 'super' labs within the Air Force, WL provides leadership in the development and transition of new technology to war-fighting systems.

- 74th Medical Group (MG): Is the medical care component of ASC, with a 300-bed hospital.
- 88th Air Base Wing (ABW): Provides base operating support to all of Wright-Patterson AFB (ASC, 1995:6).

Although individual interviewee responses are reported for each interview question, these responses are considered to be representative of the respective organization. This representation was deemed appropriate since only the most knowledgeable managers and strategic planning/performance measurement experts within each organization were interviewed. The researcher considered knowledgeable managers and experts to be the people most involved with, or responsible for, strategic planning an performance measurement within their organization. Consequently, the interview results are reported at the mission unit level. These results are then synthesized to draw conclusions at the ASC organizational level, which is the level at which this research is aimed.

In addition to interviews within ASC, the researcher also conducted interviews within Air Force Materiel Command (AFMC) Headquarters, ASC's parent organization. Because of the explicit guidance ASC receives from AFMC, these interviews were deemed to be relevant and important to this research.

Sample Size. Determining the appropriate sample size for a qualitative study is very difficult. "It depends on what you want to know, the purpose of the inquiry, what's at stake, what will be useful, what will have credibility, and what can be done with available time and resources" (Patton, 1990:184). The sample size for this study

is 12 managers and strategic planning/performance measurement experts inside ASC, and two in ASC's parent organization, Air Force Materiel Command (AFMC) Headquarters. However, sample size was not deemed as important as sample representation of the entire organization. An important aspect of this study was to insure a cross-sectional representation of all the organizations that comprise ASC.

A cross-sectional representation of ASC was obtained by interviewing the most appropriate people within each ASC mission unit based on their knowledge of strategic planning and performance measurement within their organizations. To this effect, interviews within ASC Headquarters, WL, MG, and ABW are more appropriately classified as surveys, rather than samples. Factors relating to sample size are most applicable to the ASW since the researcher sampled two SPOs, from a population of approximately 25, to obtain data representing ASW.

Data Analysis. Two forms of data analysis are often used to interpret interview results and report them in an easily understood form: case analysis and cross-case analysis (Patton, 1990:376). Case analysis involves interpretation of data from one unit of analysis at a time. Cross-case analysis involves grouping results from all units to indicate strengths, weaknesses, similarities, and differences between cases. With cross-case analysis, results can be interpreted for each interview question using data obtained from all respondents (Patton, 1990:376). This study employed case and cross-case analysis. Case analysis was used in the reporting of results from each interviewee. Cross-case analysis was used when these results were synthesized during the organizational analysis of ASC, and in deriving research conclusions.

Interview Questions. The purpose of the interviews was to determine if the following elements of strategic planning and performance that are critical to effective implementation of GPRA exist within ASC:

1. Measurable strategic goals and objectives related to outcomes/results
2. Measurement of external outcomes/results

The researcher formulated direct, clear, and unbiased questions to determine the existence or absence of these elements. The questions were then screened by the faculty research advisor and modified accordingly. The interviews were conducted on a non-attribution basis to facilitate honest responses and increase the validity of results.

Question 1: Does your organization have strategic goals/objectives related to its mission?

The purpose of this question is to determine if the organization has strategic goals and objectives linked to its mission.

Question 2: Would you describe your organization's strategic goals/objectives as outcome/result oriented or activity/process/product oriented?

The purpose of this question is to determine if the organization's strategic goals are related to outcomes/results. This question directly relates to the first critical element of strategic planning and performance measurement: Measurable strategic goals and objectives related to *outcomes/results*. Outcome/result orientation is essential for the goals and objectives to be considered strategic rather than tactical or operational (Blackerby, 1994a:18).

Question 3: How would you assess the measurability of your strategic goals/objectives? In other words, do the following components of measurability apply to your goals and objectives:

1. what is to be done (content);
2. for or with whom (who);
3. at what rate, level, quantity, or quality (assessment target); and
4. in order to achieve, accomplish, prohibit, create, or recreate what (outcome target)? (Henderson, 1995:8)

The purpose of this question is to determine if organizational goals/ objectives have the four essential components described above that make a goal or objective measurable. This question directly relates to the first critical element of strategic planning and performance measurement: *Measurable* strategic goals and objectives related to outcomes/results.

Question 4: How does your organization assess it's progress in achieving its goals/objectives?

The purpose of this question is to determine if the organization measures its progress in achieving the specific goals and objectives. If the goals and objectives are not measured, then strategic planning is incomplete. As the literature review revealed, measurement is essential to effective strategic planning (Blackerby, 1994a:18).

Question 5: Does your organization measure outcomes/results?

The purpose of this question is to determine if the organization measures outcomes or results. If the organization's goals and objectives are not being measured, which Question 4 should reveal, this does not necessarily mean the organization does not measure any outcomes or results. This question directly relates

to the second critical element of strategic planning and performance measurement: *Measurement* of external outcomes/results.

Question 6: What is the main purpose of the metrics that your organization collects?

The purpose of this question is to determine the primary purpose (internal or external) of metrics within the organization. Internal metrics relate to processes, activities, or products, whereas external metrics relate to outcomes or results. This question directly relates to the second critical element of strategic planning and performance measurement: Measurement of *external outcomes/results*. Additionally, if the primary purpose of the metrics is internal rather than external, this would be indicative of a performance measurement system that is not integrated with the strategic planning process (McMann and Nanni, 1994:56).

Summary

This study is exploratory, applied (business) research conducted to answer a specific organizational issue: Is strategic planning and performance measurement within ASC conducive to effective implementation of the Government Performance and Results Act of 1993? The literature review documented in Chapter II was conducted to uncover the elements of strategic planning and performance measurement that are critical to effective implementation of GPRA:

1. Measurable strategic goals and objectives related to outcomes/results
2. Measurement of outcomes/results

The remainder of this research is directed toward answering the second investigative question: Do the elements of strategic planning and performance measurement that are critical to effective implementation of GPRA exist within ASC? To answer this question, the researcher pursued a two-fold methodology consisting of in-depth interviewing and document analysis. The use of several methodologies allowed the researcher to employ triangulation to derive conclusions that are likely to be more valid than those derived from a single methodological approach. Direct, clear, and unbiased questions were then developed for the interviews. The relationship of these interview questions to the second investigative question is depicted in Figure 4.

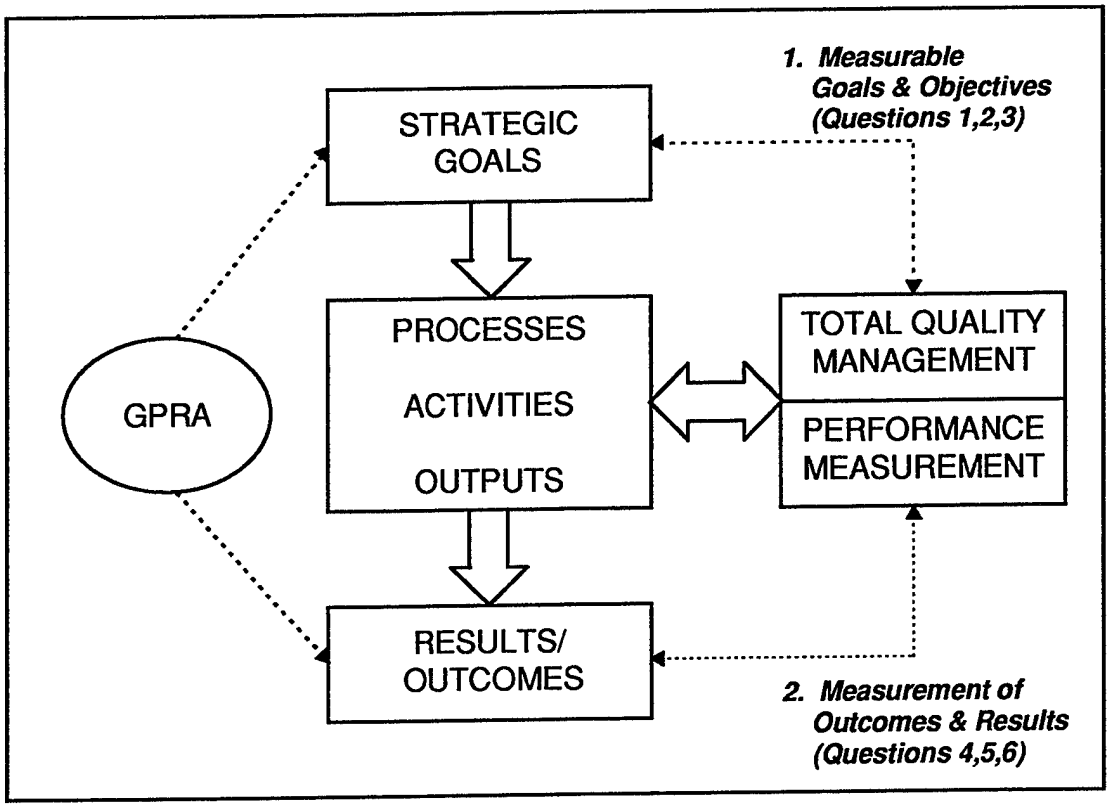

Figure 4. Relationship of Interview Questions to Investigative Question 2

Fourteen managers and strategic planning/performance measurement experts within ASC and AFMC Headquarters were interviewed. The interviews were conducted on a non-attribution basis to facilitate honesty and increase the validity of results. Chapter IV provides the results of these interviews and related document analysis.

IV. Results and Analysis

Introduction

This chapter presents the findings of the interviews and document analysis conducted to answer the second investigative question: Do the elements of strategic planning and performance measurement that are critical to effective implementation of GPRA exist within ASC? The results are presented as significant findings from interviewee responses to each interview question. The interviews were conducted on a non-attribution basis in order to facilitate candid responses. Results of the document analysis of organizational strategic plans are addressed in conjunction with the interview results and cited accordingly. However, in those cases where citation of referenced documents would reveal the identity of an interviewee, the citation was omitted. Finally, significant findings that surfaced outside of the interview guide questions are presented after the findings to the individual interview questions.

During the course of the research, fourteen people were interviewed. Ten people were recognized experts in strategic planning and performance measurement within Air Force Materiel Command (AFMC) Headquarters, Aeronautical Systems Center (ASC) Headquarters, and the four ASC mission units: Acquisition Support Wing (ASW), Wright Laboratory (WL), 88th Air Base Wing (ABW), and the 74th Medical Group (MG). Four people were high level managers responsible for strategic planning within these organizations. Table 2 contains a detailed organizational breakout of the interviewees.

Table 2

Organizational Breakout of Interviewees

ORGANIZATION	EXPERT	MANAGER
AFMC Headquarters	1	1
ASC Headquarters	3	0
ASW	N/A	N/A
Major SPO No.1	1	1
Major SPO No. 2	1	1
WL	1	0
Laboratory Directorate	0	1
ABW	1	0
MG	2	0

ASW conceptually exists as a separate mission unit within ASC. However, at the time of this research, ASW did not exist as a separate organization similar to WL, ABW, and MG. The headquarters of these three mission units were comprised of dedicated managers and staff members. ASW had no dedicated personnel or facilities. It was still a conceptual organization under development. This fact precluded interviews with any managers or experts at the ASW mission unit level. Consequently, the researcher interviewed managers and experts of two System Program Offices (SPO) within ASW to obtain a representative sample of ASW. However, in those areas where results between ASC Headquarters and ASW conflict, the researcher believes more validity should be placed on the results from interviews with ASC Headquarters due to the fact that ASC Headquarters has overall cognizance of all SPOs within ASW.

Results of Interview Question 1: Does your organization have strategic goals/ objectives related to its mission?

AFMC Headquarters. The following strategic goals were documented in the AFMC strategic plan:

1. Satisfy our customers' need -- in war and peace
2. Enable our people to excel
3. Sustain technological superiority
4. Enhance the excellence of our business practices
5. Operate quality installations

In conjunction with the above goals, AFMC had the following command objectives:

1. Plan and meet all commitments through interaction with our customers and suppliers
2. Meet all AFMC deployment and wartime support requirements
3. Ensure our people have the knowledge, skills, abilities, work climate, and leadership to accomplish the mission
4. Continuously improve the quality and relevance of technology development and its timely application
5. Aggressively share our dual use technology and technical capabilities with the US public and private sectors
6. Improve the quality and reduce the cost of our products and services through continuous improvement and reengineering of our processes and through aggressive interservicing
7. Aggressively plan and execute environmental pollution prevention, compliance, and restoration programs
8. Continuously improve facilities, infrastructure, services, working and living environments for all our people
9. Champion solutions that facilitate joint requirements and services (AFMC, 1995:11).

ASC Headquarters. The following strategic goals were documented in the ASC strategy plan:

1. Core Competence - Develop, balance and mature team core competencies
2. World-Class Reputation - With all customers

3. Program Excellence - Maintain excellence in everything we do. (ASC, 1995:9)

In addition to these goals, ASC had the following objectives:

1. Capabilities - Provide the capabilities to produce quality products and services for our customer
2. People - Give our people what they need to do their jobs
3. Process - Implement efficient, disciplined, integrated processes to provide responsive products and services
4. Technology - Organically develop and transition technologies to maintain the global edge in aerospace
5. Infrastructure - Provide a quality living and working environment to support and enhance the readiness and mission capability of our customers. (ASC, 1995:9)

ASW. As mentioned earlier, ASW did not yet exist as full mission unit, and therefore had no goals/objectives at the mission unit level.

Within ASW, SPO No. 1 reported its overriding strategic goal over the past two years as survival - to keep the program viable. The SPO's remaining goals/objectives were to meet major program milestones.

SPO No. 2 reported having no strategic goals, just key processes. The document analysis confirmed the lack of identified goals.

WL. WL reported having no strategic goals/objectives of its own. It's strategic plan supported AFMC and ASC goals, objectives, and action plans.

The laboratory directorate manager reported having no unique goals/objectives, only those of higher level organizations.

ABW. The ABW reported no strategic goals of its own. As a base operations support organization, the ABW's goals bypassed those of ASC Headquarters, and were identical to the goals of AFMC Headquarters.

MG. The MG experts cited the following processes/systems as MG's goals/objectives:

1. Direct Patient Care - Return employees to work ASAP, minimizing disability, suffering and death. Provides emotional and psychological as well as physical support.
2. Individual Focused Prevention - Encourage healthy lifestyle management to reduce coronary artery disease, cancer, and alcohol and drug abuse.
3. Environmental/Occupational Disease, Illness and Injury Prevention - Maximize productivity by minimizing disease and injury before the fact; creating an occupational environment for our people which is both safer and more pleasant, contributing to better productivity and improved job satisfaction; and minimizing time, attention, and money spent on after the fact environmental clean-up.
4. Readiness - Quickly and effectively respond to situations which threaten lives and/or disrupt operations of people and units within ASC and the neighboring community.
5. Education and Training - Coordinate military and civilian programs to ensure access to the best education and training experience possible.
6. Managed Care - Create efficiencies which lead to cost savings and continued good access to quality care, ultimately reducing lost duty time and allowing resources to go further.
7. Management Infrastructure - Support manpower, money, space, and other resources necessary for the execution of the other key processes

The document analysis of MG's strategic plan uncovered a different set of goals than those identified during the interview:

1. Develop and integrate a comprehensive health care system with DoD Region 5 to meet customer needs
2. Integrate information and technology to improve technical outcome, cost and delivery of health care service and business practices
3. Develop a marketing program to assess customer needs and our capabilities in order to influence resource allocation
4. Create a physical image reflective of the quality health care we are committed to providing; create a modern, aesthetically pleasant medical facility, supportive of a highly technical environment and responsive to changing missions
5. Become a center of excellence for organizational education
6. Create a flexible and responsive manpower system, maximizing cross-utilization of our personnel to meet readiness and peacetime customer needs
7. Create an environment of respect and continued personal growth

8. Improve individual quality of life, unit effectiveness, and readiness through education, early diagnosis and intervention, reduction of risk factors, and strengthening the sense of partnership with our customers (our patients)
9. Build a network of health care alliances to improve resource sharing and reduce duplication
10. Become the definitive DoD tertiary medical facility in Region 5, maximizing access and minimizing cost while maintaining our graduate medical education programs
11. Enhance our Quality culture; people self-energized to spontaneously practice TQM
12. Improve mulitdirectional communication to: improve unit effectiveness and efficiency by knowledgeable empowerment, improve customer and supplier relationships, and improve unit cohesion and teamness. (MG, 1994:3.1a.)

Analysis. ASC appeared to have strategic goals and objectives related to its mission. However, some organizations within ASC did not have any unique goals or objectives. Instead, they adopted the goals or objectives of their parent organization.

Results of Interview Question 2: Would you describe your organization's strategic goals/objectives as outcome/result oriented or activity/process/product oriented?

AFMC Headquarters. The expert described the strategic planning process within AFMC as "broken." In theory and on paper, the intent of the strategic planning process was to develop real strategies toward achievement of results and outcomes. In practice, strategic planning was oriented toward internal processes. The expert categorized the goals within AFMC as being "good and nice, but vague." Some examples of goals are improving quality and reducing costs.

The manager stated that the intent of the goals/objectives was strategic in theory, but process oriented in practice. The mission of AFMC was external - to

support the warfighters. However, AFMC's goals and objectives are primarily directed inward.

ASC Headquarters. The first expert categorized ASC's goals and objectives to be more like core competencies and capabilities rather than actual goals and objectives. Examples of core competencies included people, processes, technology, and infrastructure. Consequently, the focus areas and action plans resulting from the goals/objectives are more operational than strategic in nature.

The second expert categorized the vast majority of goals/objectives as being focused on internal activities rather than external customers.

The third expert also labeled the goals/objectives as activities instead of strategic goals. He added that what most organizations seemed to do was not strategic planning but "fire fighting."

ASW. SPO No. 1 described its goals/objectives as product oriented. SPO No. 2 reported having key processes as its goals/objectives.

WL. The expert at WL described the aim as outcome/result, but described the existing goals/objectives as product/process oriented.

The manager of the laboratory directorate described his draft goals/objectives to be process oriented.

ABW. The expert described some of the AFMC goals as outcome oriented, but most as process oriented.

MG. The goals/objectives were described as process/activity oriented.

Analysis. This question directly relates to the first element of strategic planning and performance measurement that is critical to effective implementation of GPRA: Measurable strategic goals and objectives related to *outcomes/results*. Outcome/ result orientation is essential for the goals and objectives to be considered strategic rather than tactical or operational. (Blackerby, 1994a:18). The vast majority of ASC's goals and objectives were process or activity oriented. A few were product oriented. Very few, if in fact any, were outcome/result oriented. The researcher's document analysis of available strategic plans supports the interview results. The vast majority of goals and objectives listed under Interview Question 1 are appropriately considered as activity or process oriented.

Results of Interview Question 3: How would you assess the measurability of your strategic goals/objectives? In other words, do the following components of measurability apply to your goals/objectives:

1. what is to be done (content);
2. for or with whom (who);
3. at what rate, level, quantity, or quality (assessment target); and
4. in order to achieve, accomplish, prohibit, create, or recreate what (outcome target). (Henderson, 1995:8)

AFMC Headquarters. The expert reported AFMC goals/objectives to be stated in an unmeasurable way.

The manager characterized the goals/objectives as nebulous, and therefore it was very difficult to measure achievement of those goals.

ASC Headquarters. All three experts characterized ASC goals/objectives as unmeasurable. One of these experts added that the goals/objectives were not discrete enough to measure. Another expert described the goals/objectives as platitudes or categories of activities.

ASW. SPO No. 1 described its goal (program survival) as very measurable. The primary means of measurement was achievement of major milestones. The SPO's product orientation made measurement very easy.

SPO No. 2 reported that since its goals are product and process oriented, they are very measurable.

WL. The expert described some of WL's process oriented goals/objectives as measurable. However, most are unmeasurable. Additionally, the few goals that are measurable are not being measured.

The manager within the laboratory directorate described his organization's products and activities as very measurable. However, results and outcomes, which are somewhat informally understood among the directorate's upper management, are not measurable.

ABW. The AFMC goals adopted by ABW as its own goals are not directly measurable, but instead are indirectly measurable in terms of operational performance and customer satisfaction.

MG. The processes, recognized by the experts as MG's goals, are not directly measurable.

Analysis. This question directly relates to the first element of strategic planning and performance that is critical to effective implementation of strategic planning and GPRA within government: *Measurable* strategic goals and objectives related to outcomes/results. Of the few outcome oriented goals, none are measurable, except for possibly customer satisfaction. The process/activity oriented goals within ASC are somewhat measurable. Product oriented goals, most evident within the SPOs of ASW, are very measurable.

Results of Interview Question 4: How does your organization assess it's progress in achieving its goals/objectives?

AFMC Headquarters. The expert reported the use of over 40 command metrics to measure achievement of the Command goals. There are too many metrics, and they are not integrated. Many of the 40 metrics are simply measures of customer satisfaction. According to the expert, the Command needs four to five metrics that measure external outcomes.

The manager stated that AFMC has fairly good measures for its internal processes. However, the Command is not measuring outcomes.

ASC Headquarters. The first expert reported the measurement of goals/objectives in terms of establishment of processes to achieve the goals/objectives. Once a process is established, the goal/objective precipitating this process was considered to have been accomplished.

The second expert described measurement of subsequent action plans as indirect measurement of goal/objective attainment. Additionally, unit self-assessment scores provide a measure of goal/objective attainment.

The third expert reported extrapolation of indirect measures of processes/activities/products as the primary means of measuring attainment of goals/objectives. The goals/objectives are not directly measured.

ASW. SPO No. 1 described measurement in terms of accomplishment of scheduled activities. Accomplishing program milestones is the primary form of measurement.

SPO No. 2 reported the same form of measurement - completion of scheduled activities.

WL. The expert reported that goals/objectives are not being measured. The laboratory directorate manager reiterated the expert's position.

ABW. Metrics reviews are conducted on a periodic basis. Metrics reviews are a management review of the various metrics being collected by ABW. These metrics are indirect indicators of the organization's progress in attaining the goals/objectives.

MG. The MG conducts a semi-annual subjective assessment of its operational areas. This assessment is used as the measure of success in achieving strategic goals.

Analysis. The purpose of this question is to determine if the organization does measure its progress in achieving strategic goals/objectives. If strategic goals and objectives are not measured, then strategic planning is incomplete (Blackerby, 1994a:20). Very little measurement of strategic goals/objectives occurs within ASC.

Process oriented goals are measured the least. Existing measurement is in the form of metrics reviews (subjective assessments of goals by the organization's staff) or customer satisfaction surveys. Some activity oriented goals are measured, but mostly in the sense of activity completion. Product oriented goals are measured the most, specifically within ASW.

Results of Interview Question 5: Does your organization measure outcomes/results?

AFMC Headquarters. The expert reported no direct measurement of outcomes/results. The only indirect measurement of outcomes is in the form of customer satisfaction surveys.

The manager reiterated the expert's position.

ASC Headquarters. All three experts reported little if any measurement of outcomes/results. One expert estimated the percentage of outcomes/results measured by each of the mission units is 0% for ASW, 10% for WL, 15 % for ABW, and 20% for MG. He added that SPOs measure products fairly well, but they do not measure their principle business activities.

ASW. SPO No. 1 reported most if its metrics to be related to outcomes or results since its main purpose is to produce a product.

SPO No. 2 reported little measurement of outcomes/results, since these outcomes/results had not been identified.

WL. The expert reported no measurement of WL goals or objectives, and consequently no measurement of outcomes or results.

The laboratory directorate manager reported no measurement of external achievement of customer needs, nor of internal processes.

ABW. The expert reported good measurement of customer satisfaction. This is the only measure of outcomes/results.

MG. Both experts view the vast majority of MG's metrics as measures of internal processes. Only customer surveys measure outcomes/results.

Analysis. This question directly relates to the second element of performance measurement that is critical to effective implementation of strategic planning and GPRA within government: *Measurement* of external outcomes/results. Customer satisfaction and product performance are the only examples of measured outcomes.

Results of Interview Question 6: What is the purpose of the metrics that your organization collects?

AFMC Headquarters. The expert reported the measurement of processes as the main purpose. The manager reiterated the expert's position. Both interviewees agreed that metrics are almost exclusively focused on internal processes/activities/ products.

ASC Headquarters. The first expert reported the purpose of almost all metrics as the measurement of activities.

The second expert viewed the measurement of processes as the main purpose. However, many of the processes that are measured do not relate to ASC's goals and objectives.

The third expert viewed the purpose as measurement of processes and products. He added that SPOs measure products fairly well, but they do not measure their principle business activities.

The general consensus of ASC experts is that the purpose of ASC metrics is to gauge the effectiveness and efficiency of internal processes/activities.

ASW. SPO No. 1 reported measurement of activity achievement and product performance as the primary purpose of its metrics.

SPO No. 2 reported the same perspective, adding that it has over 100 different processes it tracks.

WL. The expert reported its metrics are a response to upper management's request for measurement. ASC Headquarters required its mission units to have metrics, and WL is meeting this requirement. The metrics measure internal processes that are not linked with external outcomes.

The laboratory directorate manager reported a preponderance of metrics that exist for the sake of counting. The metrics do not facilitate either the measurement of external achievement of customer needs or internal process improvement.

ABW. Metrics are used to measure internal efficiency and effectiveness. Almost all metrics are at the operational level.

MG. Both experts viewed the purpose of MG's metrics as measurement of internal processes.

Analysis. The purpose of this question is to determine the primary purpose (internal or external) of metrics within the organization. Internal metrics relate to

processes, activities, or products, whereas external metrics relate to outcomes or results. This question directly relates to the second element of performance measurement that is critical to effective implementation of strategic planning and GPRA within government: Measurement of *external outcomes/results.*

The vast majority of metrics relate to internal processes and activities. Some of the metrics are for products. Few measures relate to external outcomes.

Other Significant Findings

During the interviews, many significant issues and viewpoints were addressed outside the immediate scope of the interview guide questions. The issues and viewpoints that have direct relevance to this research are presented below.

AFMC Headquarters. The expert reported that most people within AFMC view GPRA as just another reporting requirement. In his opinion, people are scared of tying funding to performance. Additionally, he believes the most important aspect of strategic planning is the process itself, not necessarily the final plan that gets published. The plan all too often gets shelved after the process is completed.

The manager viewed strategic planning as important to any organization, but GPRA itself is perceived as a regulatory requirement.

ASC Headquarters. The first expert reported that until recently, strategic planning stopped after a plan was published. The plan was never really implemented. Today, strategic plans are more likely to be implemented. It is being done both because implementation is required and because it is a good thing to do. GPRA

forces DoD to develop a vision and strategic goals. This will facilitate strategic planning throughout the organizations within DoD.

The second expert reported three major obstacles to implementation of GPRA:

1. Developing measurable strategic goals that are outcome oriented
2. Measuring the outcomes
3. Identifying a trend in performance

The third expert stated that one of the major problems with the strategic planning process within ASC is that ASC is not a coherent organization. For example, major operational organizations (SPOs) receive funding outside of the ASC organizational structure. However, the strategic goals/objectives of ASC should flow down to all ASC mission units. Finally, the expert reported that GPRA is not taken seriously throughout ASC.

ASW. SPO No. 1 reported that its outcomes are directly related to major program activities and schedules. For example, achieving initial operational capability by a specified date is considered an outcome.

SPO No. 2 reported the strategic plan to be what the SPO director wants it to be. However, the plan is not used much after it is set in writing.

WL. The expert reported that "no one pays attention to the strategic plan." Once action plans are identified, no one follows-up on them. One problem is that WL has considerable difficulty in identifying its real customers. Another problem is that good strategic goals/objectives are difficult to identify because no one wants to

eliminate any existing business areas of WL. Finally, GPRA is viewed as just another report that must be submitted to headquarters.

The laboratory directorate manager reported that most of the people in his laboratory are too focused on the laboratory's products and activities, and lose sight of the ultimate application for these products and the outcomes/results of the laboratory's activities. He added that performance is very difficult to measure in the research and development arena. Many metrics are used, but none exist for measuring fulfillment of customer needs. He is concerned that emphasis on performance will result in too much focus on short term technology applications as opposed to long term research efforts.

ABW. The expert reported that the strategic planning process had been made too difficult within AFMC. It has become an involved process in itself. The resultant purpose of this process is to get the plan written. It is to "fill a square." The purpose should be for real, common sense planning. Additionally, planning is done by a select few within upper management. It is not a participative process, one that results in "buy-in" of all employees. Finally, the strategic planning process is reactive rather than proactive.

Analysis. Three general observations can be made from the above responses. First, strategic plans are not implemented very well throughout ASC. Strategic planning generally stops once the plans are published. When viewed in terms of Blackerby's six elements of strategic planning (mission, needs assessment, strategic objectives, outcome measures, strategies, and performance measurement), strategic

planning within ASC stops with the third element (Blackerby, 1994a:18). Secondly, many people are concerned with committing their organizations to specific levels of performance, or restricting their activities by delineating them in terms of specific outcomes. Finally, the view of GPRA as another "square filler" is widespread within ASC.

Summary

This chapter provides the results of the interviews and document analysis conducted to answer the second investigative question: Do the elements of strategic planning and performance measurement that are critical to effective implementation of GPRA exist within ASC? As the literature review documented in Chapter II reveals, the following two elements of strategic planning and performance are critical to effective implementation of GPRA:

1. Measurable strategic goals and objectives related to outcomes/results
2. Measurement of external outcomes/results

Table 3 provides a summary of the results obtained from the interviews and document analysis. These results provide considerable evidence that the above two critical elements are lacking within ASC. Despite the multitude of existing "strategic" goals and objectives, most of these are neither measurable nor related to outcomes/results. A few measurable goals related to outcomes do exist, but these are dependent on the classification of customer satisfaction and weapon system

performance as outcomes. The vast majority of the "strategic" goals and objectives within ASC are not related to outcomes and are not measurable.

Table 3

Summary of Interview and Document Analysis Results

Interview Question	Overall Results for ASC
1. Does your organization have strategic goals/objectives related to its mission?	Many goals/objectives within ASC
2. Would you describe your organization's strategic goals/objectives as outcome/result oriented or activity/process/product oriented?	Most are activity/process, some product, few outcome/result oriented
3. How would you assess the measurability of your strategic goals/objectives?	Few goals/objectives are measurable
4. How does your organization assess it's progress in achieving its goals/objectives?	Very little measurement of goals/objectives
5. Does your organization measure outcomes/ results?	Very little measurement of outcomes/results
6. What is the purpose of the metrics that your organization collects?	Mostly internal measures of processes/activities

Regarding measurement of external outcomes/results, the results of the interviews and document analysis provide little evidence of measurement of external outcomes/results within ASC. The few examples, such as customer satisfaction and weapon system performance, are dependent on their classification as outcomes. Most measurement within ASC is related to internal processes, activities, or products.

The results of this chapter allow the researcher to derive a number of conclusions. These conclusions, along with the answer the research question, are presented in Chapter V.

V. Conclusions and Recommendations

Introduction

The results presented in Chapter IV allowed the researcher to answer the second investigative question of this research: Do the elements of strategic planning and performance measurement that are critical to effective implementation of GPRA exist within ASC? As the answer to the first investigative question, the literature review presented in Chapter II revealed the following two elements of strategic planning and performance measurement as being critical to GPRA implementation:

1. Measurable strategic goals and objectives related to outcomes/results
2. Measurement of external outcomes/results

The interview results and document analysis indicate these critical elements to be lacking within ASC.

This chapter begins with the limitations that affect this research. Next, it presents the conclusions the researcher derived from the results presented in Chapter IV. The conclusions are followed with the answer to the overall research question: Is strategic planning and performance measurement within Aeronautical Systems Center conducive to effective implementation of the Government Performance and Results Act of 1993? Finally, the researcher presents some recommendations for further research.

Research Limitations

The conclusions derived from this research are subject to a number of limitations. However, none of these limitations should significantly impact the study's validity. This research is subject to the following limitations:

1. Specific Definitions of Important Concepts: Strategic planning, performance measurement, and other major concepts that form the basis of this research are subject to numerous definitions and interpretations. The researcher attempted to provide adequate descriptions of the major concepts throughout this thesis. The use of definitions other than the ones selected for this research could possibly result in different results and conclusions. Since the focus of this research was on critical elements of strategic planning and performance measurement in respect to the requirements of GPRA, the researcher believes the definitions actually used to be the most appropriate ones for this study.
2. Qualitative Nature of the Study: As described in Chapter III, this research is a qualitative study. As such, the research provides no data or results of statistical significance. In the researcher's view, the definition limitation discussed above prevents a quantitative approach to the research problem.
3. Sample Size: The sample size for this research is fourteen, which may be viewed as being too small to adequately represent ASC. However, the selection criteria for each interviewee was based on in-depth knowledge of, or managerial responsibility for, strategic planning and performance

measurement within the interviewee's organization. The researcher believes that the quality of the sample is more important to this research effort than the quantity of the sample.

4. Scope of the Research: This research focused on implementation of GPRA within ASC based on specific elements of strategic planning and performance measurement that are critical to GPRA implementation. However, it should be clear that these elements are not the only aspects of strategic planning and performance measurement that will impact implementation of GPRA. Many other factors, outside the scope of this research effort, will also affect the implementation of GPRA within ASC. Nevertheless, the existence of other factors does not detract from the importance of the ones addressed by this research.

Research Conclusions

As a result of this study, the researcher was able to derive four conclusions regarding existing strategic planning and performance measurement within ASC. These conclusions are presented below.

Lack of External Focus in Strategic Planning. ASC lacks strategic goals and objectives that relate to external outcomes or results. The vast majority of goals and objectives relate to internal activities, processes, and outputs. For example, most goals describe organizational core competencies or key processes. A few goals related to products (weapon systems) may be considered as being outcome oriented.

Although products are generally not equated with outcomes, this interpretation for a SPO is highly debatable. However, this issue is outside the scope of this research.

The internal focus of ASC's goals and objectives is contrary to the fundamental purpose of strategic planning - to define *what* shall be done, in contrast to *how* to get the job done. This focus on *how* is appropriate for tactical or operational goals, but not for strategic ones (Goodstein, Nolan, and Pfeiffer, 1993:3). The vast majority of goals and objectives within ASC relate to processes and activities, not something to be accomplished. As one strategic planning expert stated during his interview, the goals and objectives are "nice and good," but they do not describe outcomes or results.

Lack of Measurable Strategic Goals and Objectives. Nearly all the stated goals and objectives throughout ASC are stated in unmeasurable terms. The vast majority of goals and objectives throughout ASC do not meet the last two criteria for strategic goal/objective measurability:

1. what is to be done (content);
2. for or with whom (who);
3. at what rate, level, quantity, or quality (assessment target); and
4. in order to achieve, accomplish, prohibit, create, or recreate what (outcome target). (Henderson, 1995:8)

Only the few product oriented goals within ASC seem to exhibit most or all the above criteria. The primary form of measurement for most activity/process oriented goals is initiation or completion of the activities. As a case in point, none of the following eight ASC strategic goals and objectives, as identified in ASC's strategic plan, are stated in unmeasurable terms:

- Goals
  - Core Competence - Develop, balance and mature team core competencies
  - World-Class Reputation - With all customers
  - Program Excellence - Maintain excellence in everything we do
- Objectives
  - Capabilities - Provide the capabilities to produce quality products and services for our customer
  - People - Give our people what they need to do their jobs
  - Process - Implement efficient, disciplined, integrated processes to provide responsive products and services
  - Technology - Organically develop and transition technologies to maintain the global edge in aerospace
  - Infrastructure - Provide a quality living and working environment to support and enhance the readiness and mission capability of our customers. (ASC, 1995:9)

A number of strategic planning and performance measurement experts within ASC expressed the view that goals and objectives are deliberately stated in unmeasurable terms so that the organizations do not constrict or eliminate their business activities.

Lack of Strategic Plan Implementation. Most of the managers and experts interviewed for this research expressed the view that strategic planning usually stops after the plans are published. As one interviewee stated, "The strategic planning process is broken." Another interviewee stated that "No one looks at the plan." A large number of interviewees reported that strategic plans go no further than the published document. Implementation and execution of the strategic plans are lacking. Without implementation, the strategic planning process is incomplete and ineffective.

Lack of Measurement of Outcomes and Results. Performance measurement within ASC is not directed toward measurement of outcomes and results. It is primarily restricted to measurement of internal processes, activities, outputs, or

products. One reason for this situation may be a lack of defined outcomes and results stated in terms of strategic goals/objectives. ASC lacks a reason to measure outcomes, since the internal focus of its goals and objectives does not drive a need to measure external outcomes or results.

Answer to Research Question

Is strategic planning and performance measurement within Aeronautical Systems Center conducive to effective implementation of the Government Performance and Results Act of 1993? Based on this exploratory study, the answer is "no." The results of this research effort show strong evidence that the following elements that are critical for effective implementation of GPRA are lacking within ASC:

1. Measurable strategic goals and objectives related to outcomes/results
2. Measurement of external outcomes/results

Unless the above elements are instituted within ASC, implementation of GPRA within ASC is likely to be ineffective. In the researcher's opinion, the first element is a prerequisite for the second element. The results of this research reinforce the view that performance measurement has relevance only in the context of defined measurable goals and objectives (Blackerby, 1994a:21).

Nevertheless, the GPRA process has begun. Many interviewees expressed the opinion that although ASC is not conducting strategic planning as they believe it should be conducted, ASC is "on the right track." Recent changes in the top levels of leadership within AFMC have led to immediate changes to AFMC's strategic planning

process, and these changes will undoubtedly impact strategic planning within ASC. Emphasis is being placed on the development of measurable strategic goals and objectives that are related to outcomes rather than processes and activities.

Recommendations for Further Research

As a result of this research effort, the researcher has four recommendations for future research. First, criteria for effective strategic performance measures should be studied. Strategic performance measures relate to outcomes and results. A vast amount of research has been conducted on internal performance measures related to activities, processes, and products under the domain of Total Quality Management. Do strategic performance measures require different criteria than internal product or process measures?

Next, strategic goals related to outcomes and results within government should be studied. Specifically, the criteria for developing outcome related strategic goals should be researched. At what level, within an organization as large as DoD, should outcome goals stop, and activity, process, or product oriented goals begin. For example, to what level should outcome related goals be required? DoD, AFMC, ASC, a SPO, a division within the SPO, an Integrated Product Team, or down to each individual employee?

A third area of research involves the level of participation required in strategic planning. This research revealed that strategic planning is predominantly accomplished at ASC by planning experts at the exclusion of managers and employees

throughout ASC. Does the involvement of managers and employees influence the success of the strategic planning process, or is implementation of the final plan sufficient? Can individual employees of an organization really assist in strategic planning, or are they more effectively utilized in tactical and operational planning?

Finally, the issue of the strategic planning process itself should be studied. A few of the interviewees in this study reported that the strategic planning process itself was too complicated. Research should be conducted to identify the essential elements of strategic planning for application within ASC. How can ASC's strategic planning process be simplified yet made more effective?

Summary

The results of the interviews and document analysis presented in Chapter 4 allowed the researcher to derive the following conclusions regarding strategic planning and performance measurement within ASC:

1. Lack of External Focus in Strategic Planning
2. Lack of Measurable Strategic Goals and Objectives
3. Lack of Measurement of Outcomes and Results
4. Lack of Strategic Plan Implementation

The above conclusions are subject to the following limitations on this research effort: specific definitions of important concepts; qualitative nature of the study; sample size; and scope of the research. Nevertheless, these limitations do not substantially affect the validity of the research findings and conclusions.

The research conclusions allowed the researcher to answer the overall research question: Is strategic planning and performance measurement within Aeronautical Systems Center conducive to effective implementation of the Government Performance and Results Act of 1993? The answer to this question is "no." Fundamental changes to ASC's strategic planning and performance measurement processes are required in order for GPRA to be effectively implemented within ASC. These changes should begin with the first element identified by this research as being critical to effective implementation of GPRA: Measurable strategic goals and objectives related to outcomes/results. Once measurable, outcome-related goals are developed, then ASC needs to measure achievement of organizational outcomes and results.

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Vita

Captain Miro Skrodzki was born on 27 May 1962 in Obrytki, Poland. He emigrated to the U.S. with his family in 1966. He graduated from Holy Cross High School in River Grove, Illinois in 1980 and attended the U.S. Air Force Academy, graduating with a Bachelor of Science degree in Management in 1985. Upon graduation, he received a commission in the USAF and was assigned as an Acquisition Project Officer to the Air Force Plant Representative Office, USAF Plant 44, Hughes Missile Systems Group, Tucson, Arizona. In 1989, he was assigned to the F-16 System Program Office at Wright-Patterson AFB, Ohio where he managed procurement of F-16A/B aircraft for the Royal Norwegian Air Force. In 1990, he became the Deputy Program Manager for the F-16A/B Mid-Life Update Program, a major avionics modification program. In 1991, he was assigned to Brussels, Belgium where he worked for the Office of the Assistant Secretary of the Air Force (Acquisition) as Chief of the Permanent Secretariat, F-16 Multinational Fighter Program. He completed Squadron Officer School in residence in 1992. Captain Skrodzki entered the Graduate School of Logistics and Acquisition Management in May 1994. Upon graduation, he will be assigned to the Evolved Expendable Launch Vehicle System Program Office, Los Angeles AFB, California.

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13. ABSTRACT *(Maximum 200 words)*

This study evaluates strategic planning and performance measurement within Aeronautical Systems Center (ASC) to determine if these processes are conducive to effective implementation of the Government Performance and Results Act of 1993 (GPRA). GPRA is a law that will soon affect every federal government agency, and is intended to redirect government attention from internal activities, processes, and products to external outcomes and results.

A review of literature allowed the researcher to identify two elements of strategic planning and performance measurement that are critical to effective implementation of GPRA: measurable strategic goals and objectives related to outcomes; and measurement of external outcomes. Interviews and document analysis were conducted to determine the extent to which these elements exist within ASC.

The results of the interviews and document analysis led the researcher to conclude that strategic plans within ASC generally lack external focus, lack measurable goals and objectives, and are not fully implemented. Also lacking is measurement of organizational outcomes. Consequently, these conditions within ASC pose a significant challenge to effective implementation of GPRA.

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