

LIFE

CYCLE

ASSET

MANAGEMENT

Good Practice Guide
GPG-FM-020

Performance Measurement

July 1996

Department of Energy
Office of Field Management
Office of Project and Fixed Asset Management

This page intentionally left blank.

1. INTRODUCTION 1

2. PRINCIPLES AND PROCESSES 3

3. MEASURING FOR RESULTS 7

 3.1 What to Measure 7

 3.2 Supporting the Strategic Plans 8

 3.3 Strengths and Weaknesses 8

 3.4 The “Critical Few” versus the “Insignificant Many” 9

 3.5 Headquarters to Field Office 10

 3.6 Field Office to Contractors: Performance Measures in a Contract 10

 3.7 Field Office to Contractors: Performance Measures not in a Contract . 11

4. SUGGESTED READING 13

5. ASSISTANCE 15

This page intentionally left blank.

1. INTRODUCTION

This Guide is intended to explain performance measurement and to help DOE Headquarters, field office, and contractor personnel comply with the Government Performance and Results Act (GPRA) of 1993 and DOE O 430.1, LIFE-CYCLE ASSET MANAGEMENT (LCAM). The GPRA mandates that each Federal agency:

- establish strategic plans that contain results-oriented performance goals and objectives which identify the levels of performance to be achieved;
- use measurable performance indicators or criteria; and
- compare planned performance with actual results.

The GPRA also requires that budgets be tied to results stated in the strategic plans and that organizations develop annual performance plans and reports. The performance indicators or criteria and the actual performance achieved should be compared with the performance goals expressed in the plan for the fiscal year.

Consequently, each tier of an organization should be concerned with the flow of information concerning strategic plans and performance measurement. Each tier of an organization should have a strategic plan that supports the next tier up in the organization and performance measurements to gauge the level of achievement against performance goals and objectives.

Some of the other drivers for performance-based management include:

- National Performance Review by Vice President Gore in 1994, which asks for improvements in measuring contractor performance to streamline government and save money.
- Congressional Galvin Report of 1994, which cited excessive, redundant, and onerous DOE requirements and too much and duplicate oversight of DOE site contractors.
- DOE's Contract Reform of 1994, which established requirements for contracting systems and practices for quality performance and customer satisfaction.
- DOE's Accelerated Directives Reduction of 1994, to streamline Orders and reduce burdensome requirements.

This page intentionally left blank.

2. PRINCIPLES AND PROCESSES

The DOE Strategic Plan emphasizes the use of “best-in-class” management practices and results-oriented, integrated management systems. The Strategic Plan identifies four critical success factors: Communication and Trust; Human Resources; Environment, Safety, and Health; and Management Practices. LCAM will help achieve three goals of the Management Practices critical success factor:

- **Meet or Exceed Customer Expectations:** reconcile customer requirements within resources and increase satisfaction;
- **Respond To and Be Supportive of Mission Needs:** define owners, clarify roles/ and responsibilities, meet schedules, save money, lower decision levels; and
- **Mirror Our Best Public- and Private-Sector Counterparts:** improve timeliness, accuracy, cost, training, and controls.

2.1 Key Elements for Developing Performance Measures

A well-written strategic plan and personnel trained in performance measurement are key elements for developing performance measures. As stated in the GPRA, performance goals and objectives in the strategic plan should identify the desired outcomes and results of an organization. The strategic plan becomes the road map for the organization. Performance measures are developed to support the goals and objectives established in the strategic plan. Developing performance measures without a well thought out strategic plan significantly increases the chances that the items being measured will not motivate performance to achieve the organization’s desired results. Personnel should be trained so that they have the skills necessary for developing and using performance measures and performance measurement systems. Having trained personnel will smooth implementation of the performance measures. A lack of trained personnel could result in poorly stated performance measures that are focused on compliance or process, measure the wrong thing, or are not measurable at all. The outcome of a good performance measurement system should be better management, not just better measurement.

2.2 National Standards Criteria

The Presidential Award for Quality under the President’s Quality Award Program national standard criteria is the Federal Government’s equivalent of the Malcolm Baldrige National Quality Award. Another award under the President’s Quality Award

Program is the Quality Improvement Prototype Award. The award criteria include 7 categories and 24 items that address customer and mission-related performance, productivity in the use of all resources, speed and flexibility, product and service quality, cost effectiveness, and overall financial performance. Using national standards criteria can help an organization do a better job of creating performance measures by forcing a realistic self-assessment from an external point of view consistent with other organizations; developing a better understanding and use of performance-based management principles and tools; and clarifying the distinction between typical performance and world-class performance.

2.3 Business Management Systems

DOE management oversight reviews in three significant functional areas: Business Management Systems; Technical Program; and Environmental, Safety, and Health. Business Management Systems are the normal business functions of an organization. LCAM is a part of DOE's Business Management Systems. Examples of other DOE Business Management Systems are legal, information resources, procurement, personnel, property, budget, security, and travel. Performance-based management oversight reviews and self-assessments are conducted for Business Management Systems. In addition to the performance measures developed in response to LCAM, DOE Program Offices will issue Program-specific performance measures.

Management oversight reviews are conducted for other functional areas of the Department, including Technical Program and Environmental, Safety, and Health, cited above. However, it is beyond the scope of this Guide to provide details on these other systems. Suffice it to note that additional performance measures may be developed by the Program Offices responsible for these other functional areas.

2.4 Components of Performance Measurement

The LCAM Order provides definitions for three components of performance measurement:

1. **Performance Objectives.** A statement of wants, needs, and expectations of customers that sets the direction for all contract effort.
2. **Performance Criteria.** A condition or set of conditions that, when satisfied, indicate successful completion of the performance objective.

3. **Performance Measures.** Any evaluation, comparison, or judgement toward meeting the performance objective.

Some organizations use other words to describe components of their performance measurement systems, such as performance expectations, targets, metrics, indicators, etc. Early in the process of developing a performance measurement system, an organization should ensure that all parties involved agree on the meanings of various terms.

It is important to agree not only on the desired objective (result), but also on a clear description of the criteria “stretches” (ranges or levels of achievement) against the objective. In the past, minimum requirements were established as the desired level of achievement against an objective, and the measurement was a “yes” (a requirement was met) or “no” (a requirement was not met). This motivated people in organizations to strive to meet only the minimum requirement. Now, the charge is to establish the criteria for an acceptable performance range as the minimum requirement, and then establish the “stretch” criteria, the levels of achievement where performance falls below and exceeds expectations. The challenge is to develop performance measures that motivate and, if possible, reward performance above and beyond the minimum acceptable level—to motivate “world-class” performance.

This page intentionally left blank.

3. MEASURING FOR RESULTS

Performance measures should be results-oriented. The tendency is to write performance measures that focus on the steps in a process. Focusing on the process is a natural tendency because we like to know how we will get to where we are going, on a step-by-step basis. However, the focus of performance measures should be on clearly identifying where we want to be—the outcome. Don't prescribe the process; do prescribe the results. This does not mean the process is not important, only that performance measures should not dictate the process that must be used to get to the desired outcome.

Performance measures should identify challenging, but feasible levels of achievement in the performance criteria stretch. Establishing unrealistically high performance criteria stretches causes dissatisfaction because no matter how much effort is exerted or how intelligently the work is accomplished, meeting or exceeding expectations is not possible or cost effective. Establishing performance criteria stretches too low causes a false sense of accomplishment and a lack of motivation to excel.

3.1 What to Measure

Measure performance *quantitatively* rather than *subjectively*. Quantitative measures are clear on the values that define performance. Subjective measures require extensive descriptions of performance and are frequently controversial because of their many interpretations. The GPRA specifies that an Office of Management and Budget (OMB) exemption is required for performance measures that are not quantified.

Measure *performance* rather than *compliance*. At a minimum, establish ranges for the following levels of performance:

- performance that meets expectations,
- performance that exceeds expectations, and
- performance that is below expectations.

Depending on the complexity and importance of a measure, additional ranges for levels of performance should be considered, such as “performance that significantly exceeds expectations” and “performance that is significantly below expectations.”

When identifying what to measure, start with the end in mind. Ask the question, “How will I measure this?” Then, instead of simply thinking it through, write down the steps for measuring the performance so that any flaws in the measuring process can be identified

and a workable process can be documented. *Don't wait until all performance measures are approved and issued before performing a test to ensure measurement is feasible.*

Finally, consider the cost of what will be measured. Measuring against objectives for which the measurement data are readily available is much less expensive than measuring against objectives for which huge data systems must be built and maintained. Considering the cost of measuring, including obtaining and analyzing data, will help focus attention on measuring only what is really important.

3.2 Supporting the Strategic Plans

Strategic plans should be developed at each level of the organization, and performance measures should be written to support them. Conversely, performance should be measured at each level of organization and the results should flow up through the organizational hierarchy so performance can be assessed against the objectives in the strategic plans. In DOE, the Office of Field Management (FM), and LCAM, the performance process should flow from the top of the organizational hierarchy to the bottom and then back up again, as follows:

- GPRA (Congress/President/OMB)
- DOE Strategic Plan
- Performance Agreement between the President and the Secretary
- FM-1/FM-20 Strategic Plan
- Field Office Strategic Plans
- Site Strategic Plans
- LCAM performance measurement (objectives, criteria, measures)
- LCAM self-assessment reporting and feedback

For each level of organization listed on the left, objectives, criteria, and measures should be written to support the strategic plan. Subsequently, each organization should perform self-assessments and submit the comparison of planned performance and actual performance to the higher levels of the organizational hierarchy.

3.3 Strengths and Weaknesses

There is no perfect performance measure. All performance measures have strengths and weaknesses. Usually, even an imperfect performance measure will encourage improved performance better than no performance measure at all. A list of some performance measures strengths and weaknesses follows.

Strengths

- Measures things we care about
- Simple, but not too simple
- Meaningful comparisons possible
- Measured values are improved only by improved performance
- Can be audited and validated
- Multiple objectives of compound criteria are mutually consistent
- Measurement is possible and worth the cost
- Level of detail corresponds to the intent of the objective
- Can be combined consistently with other criteria
- Recognizes existing site conditions at the starting point
- Achievable but not trivial

Weaknesses

- Measuring the wrong thing to some extent
- Complicated or simplistic
- Measuring relative negotiated values
- Not amenable to baselining
- Measured value or definition may be easily manipulated
- Difficult to audit
- Compound criteria with potential inconsistencies
- Measurement difficult or costly
- Level of detail differs from the intent of the objective
- Weighting of criteria may not correspond to overall goals
- Assumes that “more of a good thing” is always better
- Assumes that “less of a bad thing” is always better
- Unrealistically challenging or trivially easy

3.4 The “Critical Few” versus the “Insignificant Many”

An old adage may apply to performance measures: “Give me a day and I’ll give you a page. Give me a week and I’ll give you a paragraph.” It is easy to identify numerous items for measurement but difficult to weed out the less important items and define the criteria that indicate the overall performance of the subject being measured. More items for measurement usually mean more money needed to measure them. Generally, keeping the total number of performance measures down will keep the cost of measuring down. So, it would be in an organization’s interest to keep the total number of performance measures to a minimum. Regardless of the total number of performance measures for periodic evaluation, consider identifying three to five performance measures that provide an overall picture of performance for a topical area.

3.5 Headquarters to Field Office

LCAM is a policy document directed from the Headquarters Federal personnel to the field office Federal personnel. LCAM is the first performance-based policy issued by DOE. The LCAM Order states that LCAM is implemented on a site-by-site basis through the establishment, by contract or financial assistance agreements, of site-specific performance criteria and a performance measurement system. Accordingly, field offices implement LCAM by contract or financial assistance agreements. FM-20 is reaching agreements with each field office on the performance measures for use in the field office self-assessments of LCAM under Business Management Systems.

3.6 Field Office to Contractors: Performance Measures in a Contract

Historically, DOE contracts have been cost plus award/incentive-fee contracts (not-for-profit) or firm, fixed-price plus award-fee contracts (for profit). The new performance-based contracts are ideal for implementing LCAM. In performance-based contracts, the statements of work focus on desired outcomes and performance measures are usually found in a contract appendix. Each performance measure included in the contract will probably require a significant amount of money to measure and administer.

Some performance measures are tied to fee structures (incentivized) in a contract, and others are not. When a performance measure is incentivized (usually by an award fee or incentive fee), the fee the contractor earns depends on the extent to which the performance measure is achieved. Although a contractor does not earn a fee on performance measures that are not tied to a contract fee structure, the extent to which the performance measure is achieved may affect the contractor’s performance evaluation under the contract.

Today, DOE contracts are frequently a combination of firm fixed-price, cost-plus, award fees, and incentive fees. The contractor assumes more risk on a firm fixed-price contract because a given scope of work must be accomplished at an established cost regardless of changing conditions outside the contract. The contractor assumes the least risk on cost-plus contracts because all allowable expenses for the contract work are reimbursed in addition to profit. A contract that includes an award fee allows the contractor to reduce some of the risk because the contractor will be paid a base fee plus an additional fee for scoring high on predetermined elements in the contract. Incentive fees can place a high risk on the contractor because performance alone may determine the amount of the fee earned.

Many DOE contracts are for a 5-year term with annual performance reviews. Modifications can be issued at any time during the contract period. Some field offices are modifying their contracts to include provisions for LCAM. LCAM implementation is not an all-or-nothing proposition. Though some portions of LCAM may be applied in a contract, other portions may still be covered by one of the 13 DOE Orders LCAM is replacing. However, all LCAM implementation is predicated on performance-based management principles.

3.7 Field Office to Contractors: Performance Measures not in a Contract

Because significant amounts of administration and money are required to manage performance measures when they are included in contracts, many performance measures are not in contracts. DOE and the contractor can agree to these performance measures, which are usually good business practices that will be measured periodically, but not with the vigor or impact of a contractual performance measure. Great care should be exercised when establishing performance measures that are not in a contract because, if significant levels of effort are necessary to administer the performance measure, the contractor may request a contract modification for additional funding. Again, evaluating how performance will be measured before the performance measure is established, can provide a better understanding of the feasibility and cost associated with a measure.

This page intentionally left blank.

4. SUGGESTED READING

- DOE O 430.1, LIFE-CYCLE ASSET MANAGEMENT, dated 8-24-95.
- DOE G 120.1-5, GUIDELINES FOR PERFORMANCE MEASUREMENT, dated July 1996.
- Government Performance and Results Act, 1993.
- The President's Quality Award Program (1997), U.S. Office of Personnel Management, Washington, D.C.
- *How to Measure Performance, A Handbook of Techniques and Tools*, PBM SIG of TRADE, October 1995.
- DOE Headquarters Business Management Oversight Self-Assessment Guide, dated July 1996.

This page intentionally left blank.

5. ASSISTANCE

For assistance with any of the topics covered in this Guide, please contact:

Mr. Nestor T. Folta
U.S. Department of Energy
FM-20, Room 1F-024
1000 Independence Avenue
Washington, D.C. 20585
telephone: 202-586-4554
fax: 202-586-9060
e-mail: nestor.folta@hq.doe.gov

Electronic copies of this Guide are available through the Internet on
the FM-20 Home Page: **<http://WWW.fm.doe.gov>**