

**MANAGEMENT OBJECTIVE(S)**

Ensure that progress toward achieving entity goals and objectives is routinely and accurately measured and that the information is used to improve performance.

**BACKGROUND**

Entity management is responsible for allocating resources and ensuring that quality services are provided at a reasonable cost. Meaningful and valid performance information is critical in fulfilling these responsibilities. Measuring such performance can be difficult since legislative mandates may only broadly address complex conditions which are themselves often affected by factors beyond the control of the entity. It is essential to identify the entity's role in this complex environment and to define the means for measuring task accomplishment. Thus, entity performance measures should align with its enabling legislation, policy environment, mission statement, goals, objectives, plans, and strategies.

State government's movement toward performance-based budgeting relies heavily upon statutorily mandated strategic planning and associated performance measures. Legislative approval of future appropriations requests may well depend on whether state entities meet their key performance targets as set out in the General Appropriations Act. These key performance targets include outcome measures associated with strategic planning objectives, the output measures linked to those strategies, and measures of efficiency. State agencies are required to report progress toward meeting key performance targets on a yearly basis for outcome measures and a quarterly basis for output and efficiency measures. See the module on Strategic Planning for more information.

While statutes mandate reporting certain categories of performance measures, an effective management system should also develop and utilize additional entity-specific indicators to monitor and improve the processes that produce ultimate results/outcomes. These could be designated as internal measures.

Note: The Legislative Budget Office, Legislative Budget Board, Sunset Advisory Commission, and State Auditor's Office can help state entities define and classify measures in accordance with the categories required in budget requests.

**DEFINITIONS (in alphabetical order)**

**Performance measures** are indicators used to evaluate effectiveness and efficiency. These indicators quantify the results of entity actions (outputs) and the impact of these results on target goals and service populations (outcomes). These outcomes are then compared to the entity's operational objectives. Many types of measures exist which, when used together, can track performance from the beginning of a process through to the desired result. Some of these measures are:

- **Cost of quality** measures the total cost incurred by an entity for mistakes, errors, and defects. Cost of quality has four components (Carr, pp. 219-220, and Harrington, pp. 44-45):

- prevention cost: all costs incurred to prevent errors or defects
- appraisal cost: all costs incurred by quality control and inspection
- internal failure cost: all costs incurred to rework the service/product before delivery to the external customer
- external failure cost: all costs incurred to rework or repair the product/service after delivery to the external customer

Cost of quality in the private sector typically represents 20 to 40 percent of sales price (Carr, p. 10). In terms of productivity, the cost of poor quality is the closest approximation government agencies have to the private sector's "bottom line" (Carr, p. 268). Real improvement in operations occurs when both efficiency measurements and quality measures improve or when one measure improves while the other remains unchanged (Harrington, p. 103).

- An **efficiency** indicator measures organizational or individual productivity and is calculated by dividing outputs by inputs. Another indicator of efficiency is unit cost which is derived by dividing inputs by outputs.

Although efficiency is traditionally defined as the relationship between inputs and outputs, a more comprehensive measure might factor in the cost of quality. For example, outputs (minus the number of defective units) divided by inputs more closely captures overall productivity and relative efficiency.

- **Explanatory information** provides information on barriers preventing an entity from meeting a performance target or goal. State entities are required to evaluate and explain key factors that would hamper achievement of their mission and goals.
- **Inputs** measure the amount of resources used. Examples are staff hours, operating costs, and budgets committed.
- **Outcomes** measure the extent to which the activity has met the desired objective. Outcomes are difficult to define and measure since they can be affected by entities and forces outside an entity's control. Therefore, care must be taken to focus on measuring results directly related to entity activities. Appropriately formulated outcome measures should not permit an entity to receive credit or blame for accomplishments or failures beyond its control.

For example, in developing a performance measure for the desired outcome of crime reduction, the entity should carefully control for the effects of such external factors as education and economic or health

status. Moreover, this outcome should more narrowly focus on a specific type of crime, and the inputs and outputs should directly tie to effecting change in the level of only that crime.

Another reason outcomes can be difficult to measure is that the actual outcome may not occur until long after the activity occurs. For example, the desired outcome from a drug treatment program may be 6 months of abstinence. In such instances, interim outcomes, such as completion of a drug treatment program, are often used.

- **Outputs** measure units produced or services provided. Examples are miles of highway built, AFDC clients processed, and hunting licenses issued. The unit measured should be tied to the mission of the entity or the goal/objective of the program/function.

## OVERVIEW OF THE PROCESS

The basic phases of a performance measurement process are:

- **Obtain information on the entity's enabling legislation, mission, strategic plan, and organization structure from the mission, policy environment, strategic planning, and organization structure processes; design performance measures accordingly.**
- **Analyze and select appropriate benchmarks for comparison.**
- **Design the system to collect, report, and evaluate entity processes and results.**
- **Document the system.**
- **Monitor and reevaluate the system.**

## PROCEDURES

Suggested procedures, organized according to the elements of a finding, are listed below. They should be expanded or tailored to fit the specific entity being reviewed.

### **Certifying performance measures:**

See Appendix A: *Guide to Performance Measurement for State Agencies, Universities, and Health-Related Institutions*. This guide has been distributed (via diskette) to Presidents, Executive Directors and Commissioners throughout the state. This guide should be reviewed before certifying performance measures.

Note: The following procedures and the process described above are normative, rather than prescriptive. That is, they represent "average" or baseline thinking since they assemble information which repeatedly appeared in the various resources used to prepare this module. Do not be too hasty or literal in applying a given criterion or procedural step to a specific entity. While omissions or variations may be obvious, judgment must still be used to determine whether such omissions or variations are material.

**Review criteria:**  
**General criteria**

General criteria applicable to the performance measurement process are as follows:

- A well-designed performance measurement system (Keegan, pp. 30-38):
- is a communication tool that facilitates the alignment of effort and initiative with entity strategy
  - measures important business processes, not just results
  - has an integrated set of measures that are balanced in their application
  - has externally benchmarked measures
  - recognizes that using the measurements is more complex than designing the measurement system

In addition to providing a mechanism to align and improve operations, performance measures in the public sector are increasingly relied on as a means to demonstrate agency accountability.

**Specific criteria**

The criteria related to the basic phases of the performance measurement process are as follows:

**Obtain information on the entity's enabling legislation, mission, strategic plan, and organization structure from the mission, policy environment, strategic planning, and organization structure processes; design performance measures accordingly.**

An entity's key performance targets should be drawn from three categories of measures -- outcome, output, and efficiency -- and should be associated with each goal/objective and strategy. Outcome measures for objectives should reflect the significant results to be achieved by funding the related strategies. At a strategy level, outputs should be the main focus, but significant and relevant efficiency measures may also be displayed (Hawkins and Kopp, p. 2).

Performance measures should tie to the entity's mission statement as it is distilled from enabling legislation. If this does not occur, consistency of purpose is lost, and efficiency and effectiveness may occur accidentally rather than purposefully.

Performance measurement systems should link to the entity's goals and objectives and be consistent with organization structure. These measures enable the entity and others to evaluate attainment of stated goals and objectives. Performance measurement systems should use those targets of measurement which originate in relevant state law.

The scope of key performance targets for each entity should be limited and focused on significant results, functions, and tasks. Focus should be on measures that present a basic view of entity effectiveness, productivity, and efficiency (Hawkins and Kopp, p. 1).

Guidelines management should consider when creating measures of outputs and outcomes include (Governor's Office of Budget and Planning and Legislative Budget Board, 1992, p. 5):

- **Cost-effectiveness** -- A measure is cost-effective if the control and information it provides outweighs the cost of producing the data.
- **Coverage** -- Performance measurement systems should address all significant aspects of entity operations. To the fullest extent possible, unit cost measures should be included for all programs and activities.
- **Relevance**-- A measure should logically and directly relate to entity goals, objectives, strategies, and functions and be useful for assessment and decision-making.
- **Reliability** -- A measure should be verifiably accurate over time. Management should ensure that definitions of performance measures include all essential components and that responsible personnel clearly understand how to use data gathered to calculate performance.
- **Validity** -- A measure should capture the attributes intended. Measures that logically relate program scope and activities to entity objectives are valid.

**Analyze and select appropriate benchmarks for measuring performance**

Benchmarks should be drawn from objective sources to the maximum extent possible. Some sources of criteria are:

- applicable laws, rules, and regulations
- generally accepted management practices
- historical performance
- policies and procedures of the entity
- performance of comparable public, quasi-public, or private entities
- industry and trade associations
- Legislative Budget Board (LBB) analyst's input for the agency

**Design the system to collect, evaluate, and report entity processes and results**

Regardless of requirements for planning, management, administration, or operations, the performance measurement process should function as a communications tool which provides ongoing feedback. It should facilitate and determine effectiveness by being (Governor's Office of Budget and Planning and Legislative Budget Board, 1992, p. 5):

- **Accessible** by requiring periodic and systematic disclosure of the results of agency efforts
- **Reliable** by ensuring that data are accurate and consistent over time
- **Results-oriented** by focusing on outcomes and outputs
- **Selective** by concentrating on significant indicators of performance
- **Useful** by providing information of value to entity management

Performance measures should provide a basis for valid assessment of actual performance as compared with projected performance. Data should provide

a consistent evaluation of the process for producing outputs and achieving outcomes. Data should be appropriate to charting progress toward accomplishment. Key performance targets should include selected standard measures to assure consistency and may include some entity-specific measures (Hawkins and Kopp, p. 2).

Some factors to consider in developing a performance measurement system are:

- **Appropriateness** -- Performance measures should align with entity strategic plans.
- **Definition** -- Performance measures must clearly define and reflect the impacts of entity activities. The definitions should explicitly state the components to be used to calculate the measure. State entities work with Legislative Budget Board analysts to derive both measures and definitions.
- **Environment** -- Performance measures should embody and respond to information gathered from the policy environment assessment.
- **Measurement** -- The entity must provide an auditable trail from performance to measurement which can be used to verify calculations of reported performance. Again, a system of keeping documentation for the calculation in a folder and assessing the information received for reliability is a crucial component of the process.
- **Timeliness** -- Performance measures should be current, i.e. based on current technical knowledge or relevant to the current operating cycle.
- **Usage** -- Performance measures should be used to help develop the entity's budget request and to monitor daily operations.

#### **Document the system**

Policies and procedures for the development and use of the performance measurement system should be documented. Measurement criteria should be clearly stated. Performance data should be tracked and recorded on a consistent and regular basis. Performance measurement reports should include supporting documentation **and** evidence of feedback.

The system should clearly specify how measures align with strategies to achieve targeted objectives and goals. It should focus both on measuring results of activity and the process for attaining such results. Furthermore, it should provide for communication of performance throughout the entity.

#### **Monitor and reevaluate the system**

An entity should continually monitor and review its performance measurement system to ensure its accuracy, usefulness, and effectiveness. Performance reports should be audited (by the agency). Management and employee awareness, comprehension, and use of the system should be regularly assessed. Changes in entity mission or structure should be promptly translated into changes to the performance measurement system. A consistent periodic

review and update of the performance measurement system demonstrates an entity's commitment to maintenance of the system.

**Assess Condition:  
Determine the actual  
process used**

Conduct interviews, observe operations, and identify and collect available documentation in order to gain an understanding of the entity's actual performance measurement process and controls. Included in the actual process are both official/unofficial and formal/informal processes and controls. An official process may exist even if it is not documented. Possible procedures include, but are not limited to:

- Determine where the performance measurement process resides in the entity, who participates in the process, and how the participants are selected.
- Determine the process used to develop and implement the entity's performance measurement system.
- Obtain and review the entity's enabling legislation, and identify the entity's mission and philosophy. Update this information by reviewing all currently applicable legislation and riders. These data will be used later to assess the alignment of performance measures.
- Obtain and review any manuals, policies, and forms that could document any phase of the performance measurement process, including its relationship to entity goals, objectives, strategies, and plans.
- Determine if and how management consciously selects and employs the assumptions, criteria, methods, process, and techniques used in the performance measurement process. Obtain and review available documentation on the assessment of risks, costs, and benefits.
- Determine how performance measures are used to develop the entity's budget request.
- Identify the measurements used and determine if they are results or process focused.
- Interview management and key employees about the type and frequency of performance measurement reporting and the relevance of actual performance measures.
- Obtain information on the process the entity uses to monitor, evaluate, and modify its performance measurement system.



In addition to gaining an understanding of the actual process, also try to find out:

- how the participants view their own process
- what parts of the process they see as successful or unsuccessful and why
- what they think is important about the process and why

This information may help identify causes and barriers.

### **Determine the strengths and weaknesses of the actual process**

Using the tailored criteria, the understanding of the entity's process gained above, and the procedures in this section, analyze the actual process to determine if it:

- is designed to accomplish the management objective (this module, page 1)
- has controls that provide reasonable assurance that the process will work as intended (i.e. determine what controls over the information being used for the calculation are in place and is the information reliable)
- is implemented and functioning as designed
- is actually achieving the desired management objective(s)

Suggested procedures for each of these four analysis steps are detailed below. In executing these procedures, remember to identify and analyze both strengths and weaknesses.

Identify and review the steps in the actual process to determine if the process is designed to accomplish the management objective(s). Possible procedures include, but are not limited to:

- Determine if all major steps in the criteria (for certifying measures the criteria is the definition) are included in the actual process. If steps are missing, determine if their absence is likely to have a materially negative effect on the performance measurement process at the entity you are reviewing.
- Determine if all the steps in the process appear to add value. If there are steps that do not appear to add value, try to get additional information on why they are included in the process.
- Review the order of the steps in the process to determine if it promotes productivity. Review the definitions of "efficiency" and "cost of quality" on page 2 of this module, if needed.
- Review the level of technology used in the process to determine if it is up-to-date and appropriate to the task. Besides computer, electronic, communications, and other mechanical technology, you should also consider what kinds of management technology are used (Gantt charts, process maps, decisions matrices, etc.). See the Appendix to the module on Problem-Solving and Decision-Making for more information.

Identify the controls over the process and determine if they provide reasonable assurance that the process will work as intended. These controls should be appropriate, placed at the right point(s) in the process, timely, and cost effective. Possible procedures include, but are not limited to:

- Draw a picture of the process, the controls, and the control objectives. Flowcharts of the performance measurement process can help identify inputs, processes, and outputs.
- Determine if the control objectives are in alignment with the overall management objective(s) (this module, page 1).
- Identify the critical points in the process (i.e. those parts of the process most likely to determine its success or failure or expose the entity to high levels of risk) and the controls related to them. Consider whether the controls are:
  - in the right location within the process (input, operations, output)
  - timely (real time, same day, weekly, etc.)
- Compare the cost of the control(s) to the risk being controlled to determine if the cost is worth the benefit.
- Determine what controls are in place for monitoring and evaluating the overall effectiveness of the performance measurement process and making sure that changes are made in the process if it does not yield the desired results.
- Identify, describe, and assess the process used to gather input from employees who might reasonably discover flaws in the process.

Review observations, interviews, documentation, and other evidence and design specific audit procedures as needed to determine if the process and/or the controls have been implemented and are functioning as designed. Depending upon the objectives of the project, these procedures may include both tests of controls and substantive tests). Possible procedures include, but are not limited to:

- Determine if any evidence of management override exists.
- Walk through the actual process, i.e. follow a transaction involving the development and/or use of a performance measure through the people and documents involved, and compare to the official process.
- Review evidence to determine how performance criteria are actually used to attain objectives. Obtain information of how progress or lack of progress is actually communicated to key employees and management. Compare with policies and procedures.
- Review measurement reports to determine how often evaluation of progress is actually conducted. Compare with policies for frequency.
- Determine whether performance measures are clearly defined, based on relevant sources of information, well understood, and accompanied by clear instructions for their use in calculating operational results.
- Compare performance measures in use to those articulated in entity plans, goals, and objectives. Compare the last revision of the

measures vis-a-vis changes in entity plans, goals, and objectives. Determine from these if the performance measurement process is responsive to changes in the policy environment.

- Select a representative sample of reported outcomes, outputs, and efficiency measures. Review the system for collecting and reporting results on each of these performance measures to determine if the controls are sufficient to ensure the accuracy, validity and reliability of data. Based upon the control risk, conduct substantive and/or control tests. For example, you could recalculate a sample of the data using the entity's formulas and calculations to verify accuracy. For certifying a measure, if the reported result is relatively small and easily accessible, recount the source documents. If the reported results are large, a sample is used to assist in certifying the measure.

Review and analyze any reports used by the entity to monitor the outcome(s) of the performance measurement process and/or any other information available to determine if the process is actually achieving the desired management objective(s) (this module, page 1). Possible procedures include, but are not limited to:

- Assess these process reports over time for trends. For example, do projected and actual performance consistently vary over time?
- Analyze the capacity of measures to clearly track the entity's progress toward its goals and objectives.
- Discuss any apparently material negative or positive trends with management.
- Determine if and how management acts upon these process and trend reports and what changes, if any, were made in the process or controls as a result. Some process refinements, especially those affecting entity mission, goals, and outcome measures, may need to wait until the next appropriation cycle.
- Review the entity's assessment, "Agency Performance Based on the Key Performance Target Quarterly Report, Legislative Budget Board." Investigate action taken by entity for any negative assessment.

**Determine causes**

Determine what circumstances, if any, caused the identified weaknesses in the performance measurement process. Possible procedures include, but are not limited to:

- Determine if the participants in the performance measurement process understand the entity's mission, goals, and values and support them through their management of the performance measurement process.
- Determine if the participants understand both the purpose of and their role in the performance measurement process.
- Determine if the relationship between the performance measurement process and other entity processes is clear. For example, compare a program's actual progress toward objectives measured at the end of the operations cycle with its projected progress at the beginning of the

cycle. Do subsequent budget reports reflect evaluation of this measured progress?

- For all programs seeking renewed funding, analyze all explanatory information related to failures to meet program objectives to determine if the explanations are reasonable.
- If the process occurs at multiple locations, determine the nature and scope of the communication and coordination among them.
- Determine if the performance measurement process has adequate human, dollar, time, information, and asset resources. If they appear inadequate, determine if entity resources have been allocated according to the materiality of the performance measurement process relative to other entity processes.
- Determine if the entity has considered using alternative resources such as industry associations, non-profit organizations, academic institutions, or other governmental entities to meet its resource needs.
- Determine if resources available to the performance measurement process have been allocated and used in a manner consistent with the importance of that resource to the performance measurement process.
- If there are negative trends in the reports used to monitor the outcome(s) of the performance measurement process, determine if these reports are communicated to and used by the appropriate parties to modify the process.

Determine what internal or external constraints or barriers, if any, must be removed in order to successfully overcome these weaknesses. Possible procedures include, but are not limited to:

- Review the applicable entity, state, or federal laws or regulations to determine if any of them prevent the necessary changes from being made in the process.
- Determine if any key employees are unwilling to change the process and why they are unwilling.

### Determine effect

Compare the actual entity process to a recommended alternative process(es) and determine if each weakness in the entity process is material. Alternatives can be developed by using the criteria contained in this module, applying general management principles to the process, using the processes at comparable entities, etc. Materiality can be measured by comparing the dollar cost, impact on services (either quantity or quality), impact on citizens, impact on the economy, risks, etc., of the actual process to the recommended alternative process(es). Measurements can be quantitative, qualitative, or both. Possible procedures include, but are not limited to:

- Identify performance benchmarks (industry standards, historical internal data, other comparable entities, etc.) for the process in question and compare to actual performance. Measure the difference, if possible. Include the cost of the additional controls or changes in the process.

- Estimate the cost of the actual process and the alternative process(es) and compare.
- Estimate the quantity and/or quality of services provided by the actual process and by the alternative process(es) and compare.
- Identify the risks associated with the actual process and with the alternative process(es). Measure and compare the risks.

**Develop recommendations**

Develop specific recommendations to correct the weaknesses identified as material in the previous section. In developing these recommendations, consider the tailored criteria, kind of process and control weaknesses identified, causes and barriers, effects, and additional resources listed at the end of this module. Possible procedures include, but are not limited to:

- Identify alternative solutions used by other entities.
- Identify solutions for removing barriers.
- Provide general guidelines as to the objectives each solution should meet; then the entity can tailor the solution to its specific situation.
- Provide specific information, if available, on how each recommendation can be implemented.

**RESOURCES****Articles**

Hawkins, Albert, and Larry Kopp. "Key Performance Targets." Memorandum to Legislative Budget Office Program Analysts and Budget, November 11, 1992. Location: Methodology Project Information Resources Folders.

Keegan, Daniel P., Charles R. Jones, and Robert G. Eiler. "To Implement Your Strategies, Change Your Measurements." *Review* 35:1:30-38, February 1991. Location: Methodology Project Information Resources Folders.

**Books**

Carr, David K., and Ian D. Littman. *Excellence in Government: Total Quality Management in the 1990's*. Arlington, VA: Coopers and Lybrand, 1990. Location: The University of Texas, Public Affairs Library (JF C27 1990)

Governor's Office of Budget and Planning and Legislative Budget Board. *Detailed Instructions for Preparing and Submitting Requests for Legislative Appropriations for the Biennium Beginning September 1, 1993: Executive, Administrative, Human Service and Selected Public Education Agencies*. Austin, TX: Governor's Office of Budget and Planning and Legislative Budget Board, June 3, 1992. Location: Methodology Project Information Resources Folders.

Harrington, H. James. *The Improvement Process: How America's Leading Companies Improve Quality*. New York, NY: McGraw-Hill Publishers, Incorporated, 1987. Location: The University of Texas at Austin, Engineering Library (TS 156 H34 1987)

**Professional Associations  
and Research Entities**

Hatry, Harry, and Marita Alexander. *Service Efforts and Accomplishments Reporting: Its Time Has Come*. Norwalk, CN: Governmental Accounting Standards Board. 1990. Location: Methodology Project Information Resources Folders.

Academy of Management  
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American Educational Research Association  
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