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LESSONS FROM THE PRIVATE SECTOR ON PERFORMANCE-BASED MANAGEMENT

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ABSTRACT

Implementation of the Government Performance and Results Act of 1993 (GPRA) has provided a unique challenge for Federal Agencies, such as the Department of Energy (DOE) Office of Waste Management (OWM). While performance measurement, as required by GPRA, is new to Federal Agencies, private industry has applied it at all organizational levels to better manage their operations for some time. There has been significant discussion about how the private sector uses performance measures, but there have been very few empirical studies systematically examining their use.

To gather information on comparable private industry practices, waste management industry firms were surveyed through questionnaires and follow-on interviews. Questionnaires were sent to 75 waste management firms throughout the United States and Canada. Twenty-four percent of the firms responded to the questionnaire and participated in the follow-on interviews. The questionnaires were typically completed by vice-presidents or senior financial officers. Information collected from the questionnaire and follow-on interviews provided valuable insight into industry practices in the area of performance measurement. This paper discusses the study results and how they can be incorporated in the DOE OWM performance measures and influence the character of the "critical few" metrics used by senior DOE managers.

INTRODUCTION

The Government Performance and Results Act of 1993 directed Federal Agencies to develop annual performance measurement plans for their program activities. Private industry successfully uses performance measurement at all organizational levels to better manage operations. These private enterprises, particularly those in the waste management industry, are a valuable source of information for DOE OWM on current performance measurement practices. Of particular interest is the character of those "critical few" performance metrics or indicators used by corporate executives, the position which best corresponds to the operational oversight responsibilities of the

DOE Deputy Assistant Secretary for Waste Management and the Assistant Secretary for Environmental Management.

To gather information on private industry practices, waste management firms were surveyed, first through the distribution of a survey questionnaire, and then with follow-on discussions after the questionnaires had been returned and reviewed. The survey was sent to 75 waste management firms throughout the United States and Canada. Information collected from the survey and follow-on discussions provide valuable insight into industry practices in the area of performance measurement.

The responding firms represent a cross section of the waste management industry. The core businesses of over 50% of the respondents is waste disposal and/or waste treatment, though the wastes which they manage pose less handling problems than those faced by the DOE. Of the firms which responded, eight (44%) have annual revenues of over $100 million and several core business lines, requiring the chief executive officer (CEO) to manage multiple performance centers, a management complexity similar to that facing the Deputy Assistant Secretary for Waste Management.

SURVEY METHODOLOGY

Although performance measurement is used across all industry sectors, those firms in the waste management business were judged to be in the best position to provide the type of performance measurement practices most useful to the DOE OWM. Candidate firms were identified using a variety of sources, and a screening process. Telephone contacts were made to identify the specific types of services the companies provided and the corporate representative who should receive the survey questionnaire.

The survey form transmittal package included a cover letter summarizing the DOE efforts to increase the use of performance measurement practices. Twenty-four percent of those receiving the survey responded. As the survey questionnaires were received, data was compiled and analyzed. This information was reviewed and used during follow-on discussions with the eight largest responding firms. A profile of the participating firms is shown in Figure 1. The follow-on discussions with the respondents, who were typically vice presidents or senior financial officers, and the corporate CEOs were worthwhile. However, it was evident that though they were interested and supportive of the study, other time demands limited their participation and accessibility.

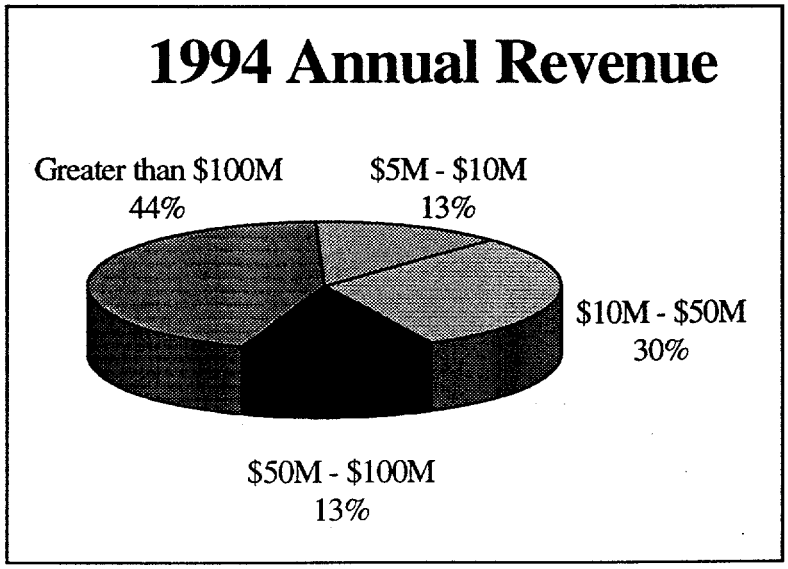

Figure 1. Distribution of Participants by Annual Revenue

FINDINGS

The survey findings are divided into those performance metrics or indicators used by the chief corporate executive, typically the CEO, and those used by other organizational levels. Universally, the performance measures used by the CEO subsume the more detailed measures from other organizational levels.

Overall Performance Measurement Practices

Key results extracted from the questionnaire are:

- 94% of the respondents use organizational goals as the focus of performance measures.
- 78% of the respondents use performance measures to monitor organizational progress toward corporate mission and goals.
- 67% of the respondents share mission statements and goals with employees.
- Smaller firms tend to use fewer performance indicators.
- Performance measurement information is distributed to the executive level at least monthly and often weekly.

No organization used purely financial measures, such as revenue or cost per ton of waste stored or treated. While 17% of the respondents used purely nonfinancial performance measures, such as customer satisfaction or volume of market share captured, the majority used a combination of financial and nonfinancial measures. The performance measurements used at one level in the organization often helped explain the performance results at the next higher level. Examples of typical measures appear in Tables I and II.

Table I. Typical Financial Performance Measures

Annual percentage of gains and losses	Earnings
Cash Flow	Gross Profit
Cost per minute	Loaded miles
Cost per production hour	Monthly income statement
Cost per run	Overall profitability
Cost per service episode	Profit by Operating Unit
Cost per ton	Return on assets
Cost per unit	Return on labor
Cost per unit of treatment	Return on equity
Cost per hour	Revenue per gallon
Credit rating	Revenue per mile
Days Sales in Receivables	Revenue per person
Drums per person	Revenue growth

Table II. Typical Nonfinancial Performance Measures	
Absenteeism	Marketing excellence
Accident free hours	Missed pickups
Associate attitudes	Operational excellence
Cleanliness	Personal health and safety
Customer satisfaction	Price
Customer service facilities	Productivity
Cycle time	Quality
Efficiency by volume	Recycling percentage
Employee turnover	Regulatory violations
Environmental compliance	Reportable spills
Environmental quality	Service
Lost accounts	Volume
Market share	Zero defects

Senior managers generally rely upon five to seven key financial and nonfinancial indicators and focus on division or product line performance. Below senior management, the variety and number of indicators increases and are predisposed toward quantitative measurements such as unit cost, resources expended, and achievement verses time unit. Middle managers tend to focus on their specific work centers. Performance measures for each work center are defined and collected for consolidation into divisional or product measures and for comparison with similar corporate operations. Such a systematic approach was the basis for the Fiscal Year 1996 OWM performance measures for waste treatment, storage, and disposal.

While the OWM does not generate revenue or operate for profit, the underlying principle of producing quality products for the least possible cost is consistent in both sectors. The respondents use performance measures for monitoring, evaluating, and controlling costs. The performance metrics used for financial measures were similar among the firms surveyed. The key condition for optimum use of performance measurement indicators, which seemed to be taken for granted by the respondents, were effective communications and cost collection, and a quantity tracking system which provided relevant, timely, accurate, and consistent information. Unique financial, cost estimating and collection systems across the DOE complex could make consistent performance data collection difficult. Standard definitions for direct labor, material, and indirect cost pools are necessary for credible complex-wide measures for waste management operations.

Qualitative measures, while fewer than quantitative measures, did also exist at all management levels and tended to focus on customer satisfaction. This is akin to stakeholder interest measures for DOE. Because of the diverse DOE stakeholder population, measurement focus should start with an objective area such as satisfying regulatory issues and as the system matures, proceed toward the more esoteric stakeholder issues. Stakeholder-related measures are important but will require OWM and stakeholder cooperation for mutual acceptance.

Corporate Oversight

Specific chief executive performance measurement practices were solicited through follow-on discussions from the eight largest respondents. This approach validated the questionnaire input and provided the opportunity to discuss how performance measures were used. These discussions were used to validate methodology for developing "critical few" measures for DOE management. The title "critical few" indicates the awareness by senior DOE management that they could not evaluate each performance measure for every EM office, a fact supported by the CEO interviews. The discussions provided significant insight and focus for the OWM "critical few."

While each firm uses a variety of indicators or metrics to monitor performance within the organization, at the highest corporate level, typically the CEO or president, financial/business indicators were primarily and universally used to measure performance. These included corporate earnings, earnings per share, return on investment or assets, total revenue, and total cost. This is the type of information included in annual reports issued by the company and is targeted toward stockholders.

Financial/business performance metrics, in the form of tables, charts, or curves were typically provided monthly. This provided actual versus planned performance through a specified period and occasionally included performance projections. These metrics conveyed "what" had occurred but did not typically provide much analysis or detail. Supplemental information on operational performance at the product or service level was available, however, and provided insight into trends. Consequently, corporate executives could look down into their organizations and pinpoint those areas or operations which had contributed to the successes or problems.

There were no reported instances where aggregating or indexing of dissimilar performance metrics, produced through sophisticated mathematical modeling, was used by the CEO. In one case, the aggregated performance of similar activities, landfill operations, were provided to the CEO as a key performance measure. The differences in the waste handled and landfill sites were normalized, using weighting factors. Variance from the corporate planned cost would be explained by examining the actual volumes handled by each site as compared to the planned volumes for each site.

At several companies, along with key financial performance indicators, the CEO received performance metrics which evaluated customer satisfaction such as: on time deliveries, work in progress, milestones achieved, and other performance measures which they considered significant when evaluating overall performance. The selection of metrics appeared to reflect the overall size of the company, the variety of products and services it provided, and the management style of the CEO.

The CEO feedback supported the position that no single metric could be developed to measure the performance of the DOE Waste Management Program. A single metric would have been especially difficult in the case of the Waste Management Program anyway, because managers must deal with various types of existing waste and an indeterminate amount of waste generated by ongoing operations and decommissioning of closed facilities. Several metrics would be required to measure performance in key program areas. To mirror its private sector counterparts, the DOE Waste

Management "critical few" should be composed of metrics measuring production, cost of operations, and customer satisfaction. A program analysis by staff and management should be conducted to determine what measures, reported at the operations level, meet these key program parameters.

CONCLUSION

Private waste management firms generally use performance measures to monitor their operations. Performance metrics used within the organizational levels complement those received by the chief executive by identifying areas which have contributed to overall corporate performance. Performance indicators recognized as significant by senior and executive management generally ranged between five and seven. This suggests that too many performance indicators are either not manageable and/or useful. From the study results, chief executives use two to three key performance metrics. These high-level performance indicators most often measure financial/business performance. Below the executive level, managers use a combination of financial and nonfinancial indicators which relate to a specific product, process, service, or organizational unit.

The objective of this study was to examine private sector performance measurement practices and to identify potential areas where the DOE OWM could benefit. As the DOE moves toward implementing GPRA, the practical lessons from the private sector are helpful in designing the performance measurement system. Key lessons learned from this study are:

- Focus on a small number of meaningful measures.
- Develop a system where more detailed information is available, if requested.
- Establish an effective process for defining and communicating the performance measures within the organization and for relating measures to the overall organizational goals.
- Implement a cost collection and quantity tracking system that provides relevant, timely, accurate, and consistent information.

While the DOE neither generates revenue nor is operated for profit, performance measures can monitor operations execution and efficiency. The cornerstone to these measures is a consistent system for measuring output and collecting costs. The ability of the existing systems to meet the criteria of consistency will have to be evaluated as part of the performance measure development effort. Additionally, the "critical few" program parameters must be clearly defined, and they should contain production, cost of operations, and customer satisfaction measures. Additional interactions with private sector waste management firms, both at the headquarters level and in the field, can be beneficial as the DOE continues to improve the overall effectiveness of waste management operations.