

CONF-9609306--1

Weapons Complex Monitor Decisionmakers Forum
Amelia Island Plantation Executive Conference Center
Jacksonville, Florida
September 24-27, 1996

Invited Workshop I
Benchmarking: A Tool to Enhance Performance
Thursday, September 26, 1996

John F. Munro, ORNL
Joel Kristal, EM-333
Gary Thompson, LANL
Tom Johnson, LANL

RECEIVED
NOV 21 1996
OSTI

Introduction

The Office of Environmental Management is bringing Headquarters and the Field together to implement process improvements throughout the Complex through a systematic process of organizational learning called benchmarking. Simply stated, benchmarking is a process of continuously comparing and measuring practices, processes, or methodologies with those of other private and public organizations. The EM benchmarking program, which began as the result of a recommendation from Xerox Corporation, is building trust and removing barriers to performance enhancement across the DOE organization.

The EM benchmarking program is designed to be field-centered with Headquarters providing facilitatory and integrative functions on an "as needed" basis. One of the main goals of the program is to assist Field Offices and their associated M&O/M&I contractors develop the capabilities to do benchmarking for themselves. In this regard, a central precept is that in order to realize tangible performance benefits, program managers and staff -- the ones closest to the work -- must take ownership of the studies. This avoids the "check the box" mentality associated with some third party studies.

This workshop will provide participants with a basic level of understanding why the EM benchmarking team was developed and the nature and scope of its mission. Participants will also begin to understand the types of study levels and the particular methodology the EM benchmarking team is using to conduct studies. The EM benchmarking team will also encourage discussion on ways that DOE (both Headquarters and the Field) can team with its M&O/M&I contractors to conduct additional benchmarking studies. This "introduction to benchmarking" is intended to create a desire to know more and a greater appreciation of how benchmarking processes could be creatively employed to enhance performance.

What is Process Bench-marking?

Benchmarking employs comparative analyses with other organizations, called benchmarking partners, to generate creative solutions to process inefficiencies. A wide range of partners may be selected for a benchmarking study. It is not necessary to select partners that have identical

MASTER

27

DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

organizational missions, only similar processes. One well-known example of utilizing benchmarking partners from different industries is the case of a shotgun manufacturer who sought help from a cosmetics company. Because the cosmetics company was doing an outstanding job producing lipstick cases, their manufacturing process was successfully adapted to produce higher quality shotgun shell casings.

Process benchmarking is different from cost comparison studies (which are often referred to as outcome or competitive benchmarking). Cost comparison studies do identify cost differences but do not address *why* the differences exist or affect changes. These studies are often conducted by third parties with little or no direct involvement by day-to-day managers and other participants. In contrast, the EM benchmarking approach requires both M&O and EM manager to look at the selected process in detail in order to identify changes that can *get* the job done faster, better, and sometimes cheaper. To succeed, M&O and EM managers must acknowledge the need for change and be willing to implement necessary changes. Finally, participants must have the authority to make improvements once they are identified and validated.

The EM Benchmarking Model

The EM benchmarking model has 23 unique steps that are divided into four phases. The four primary phases and the specific steps in each phase are displayed directly below. The approximate time commitment for each phase as a percentage of the total time required to complete a study is shown in parentheses.

PLANNING (40%)	DATA COLLECTION (20%)	ANALYSIS (20%)	ACTION (20%)
Clarify the objective	Conduct background research	Analyze quantitative data	Report findings
Select the Process	Distribute surveys	Analyze qualitative data	Develop implementation plan
Choose the team	Conduct site visits	Determine the performance gap	implement process improvements
Define the scope	<i>Brief management</i>	<i>Brief management</i>	track progress
Develop a process flow chart			Recalibrate process
Refine flow chart			<i>Brief management</i>
Establish process measures			
Identify partners			
<i>Brief Management</i>			

The EM benchmarking process model also includes three different types studies that require

different levels of organizational sophistication and commitment:

- **Outcome Based Studies:** These studies are designed to tell the organization that a performance difference exists between organizations. It does not tell the team how to enhance performance. To date, most EM benchmarking studies have been of this type.
- **Process Studies:** These benchmarking studies examine the process being used while also identifying how to enhance performance through the adaptation of various concrete improvements. With these types of studies, the organization is bringing about real change.
- **Full Vertical Studies:** This is third and most sophisticated type of benchmarking study. These studies apply systems analysis methods to identify the interrelationship of program processes to effect corporate (or systemic) types of improvements.

Because so many factors and organizational factors affect contractor performance, full vertical benchmarking studies are the best way to identify performance enhancements. The goal of the EM benchmarking team is to ultimately move the EM organization to implement as many full vertical studies as possible given resource constraints.

Benchmarking to Improve Contractor Performance

There are many factors that affect contractor performance. The following table identifies some primary performance barriers and corresponding remediating features of the benchmarking process.

Barriers to Contractor Performance	Benchmarking Features	Process Requirements
Poorly defined scope of work	The discipline of benchmarking requires the DOE and M&O/M&I to fully articulate and understand scope of work	Requires highly disciplined, team-based process of defining scope of work for each activity.
Poorly understood performance measures	Promotes the articulation of concrete performance measures that are validated through studies of external performers.	Benchmarking studies would identify performance measures through studies of successful analogous projects conducted within or outside the DOE Complex.
High cost of identifying what factors would improve performance	All process activities are closely examined to ensure that they are relevant to work process and performance objectives.	Only vital measures are selected that actually measure performance against performance objectives selected.

Differing expectations regarding what is good performance	Bench-marking promotes the development of realistic expectations that are shared by the service provider and customer alike.	Benchmarking process promotes effective communications between customer and the service provider through team building and the sharing of performance responsibilities.
---	--	---

Poor contractor performance often results from a lack of understanding of how best to complete a particular function or project rather than from some intention to perform poorly. The benchmarking process enhances performance by allowing team members to identify and isolate the critical elements of success by building relationships with individuals and organizations that are carrying out similar or analogous functions more effectively and/or at a lower cost. Benchmarking is a systematic way of learning and a systematic way of ensuring that participants “buy-in” to what is learned by encouraging team members to take full ownership of the activity.

Success To Date

Twenty introductory presentations involving over 500 Department of Energy and contractor personnel have been conducted across the Complex. There are currently approximately 15 studies either started or being considered across four Field Offices. Current benchmarking studies include processes for tank waste characterization, waste water treatment, and hazardous waste collection, storage, and disposal procedures. In addition, there are two other Field Offices that have indicated an interest in exploring benchmarking.

Benchmarking is already generating tangible results. During FY 1996, for example, one Benchmarking team working with the Field and M&O identified over a million dollars in potential mortgage reductions. This works out to approximately a 5:1 return on investment.

During FY 1997, we expect the return on investment to approach a 7:1 savings as full integrated benchmarking studies are conducted across the Complex.

How We Can Help You Get Started

The participation and support of management and stakeholders is essential to the success of a benchmarking effort. Consequently, the first step in establishing an EM benchmarking project is for the a Field Office and/or associated M&O/M&I to issue an invitation to the EM Benchmarking Team to provide an introductory training session using the EM Benchmarking Guide. If there is interest in Field Office representative applying benchmarking to a particular site activity, the EM Team will then offer an all day session to orient interested individuals with a working-level knowledge of process benchmarking. The Team provides the following services as requested:

- Benchmarking orientation and workshop.

- Identify those processes that would be most receptive to a benchmarking activity.
- Facilitation of process benchmarking meetings.
- Assist in the development and analysis of assessment surveys.
- Support the development of partners both internal to DOE and with external organizations such as other federal agencies and the private sector.
- Assist with the development and writing of the resulting report.
- Facilitate the implementation process.

At the conclusion of the initial benchmaking study, if the organization has found value added, it will be asked to help start up another study at a separate site and provide some additional funding that can offset future HQ costs. The concept is that process improvements should generate dollar savings and that a small portion of these savings should be reinvested in subsequent benchmarking activities.

EM Benchmarking Team Members

If you have questions or an interest in sponsoring a training workshop or starting a project, please contact any of the individuals listed below.

Name	Position	Phone Number	Fax Number
Joel Kristal	EM Team Leader	301-903-7143	301-903-5777
Gary Thompson	M&O/M&I Team Leader	301-601-1804	301-601-1809
Tom Johnson	Field Team Leader	505-665-4718	505-665-4872
John F. Munro	Field Team Leader	202-479-0009	202-479-0575

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.