

***Integrated Performance Measurement***  
***The Importance of Performance Measurement***  
***& How to Develop Performance Metrics***



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# Why Measure Performance?

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- 1. Because it works!***
- 2. Because we are required to do so.***



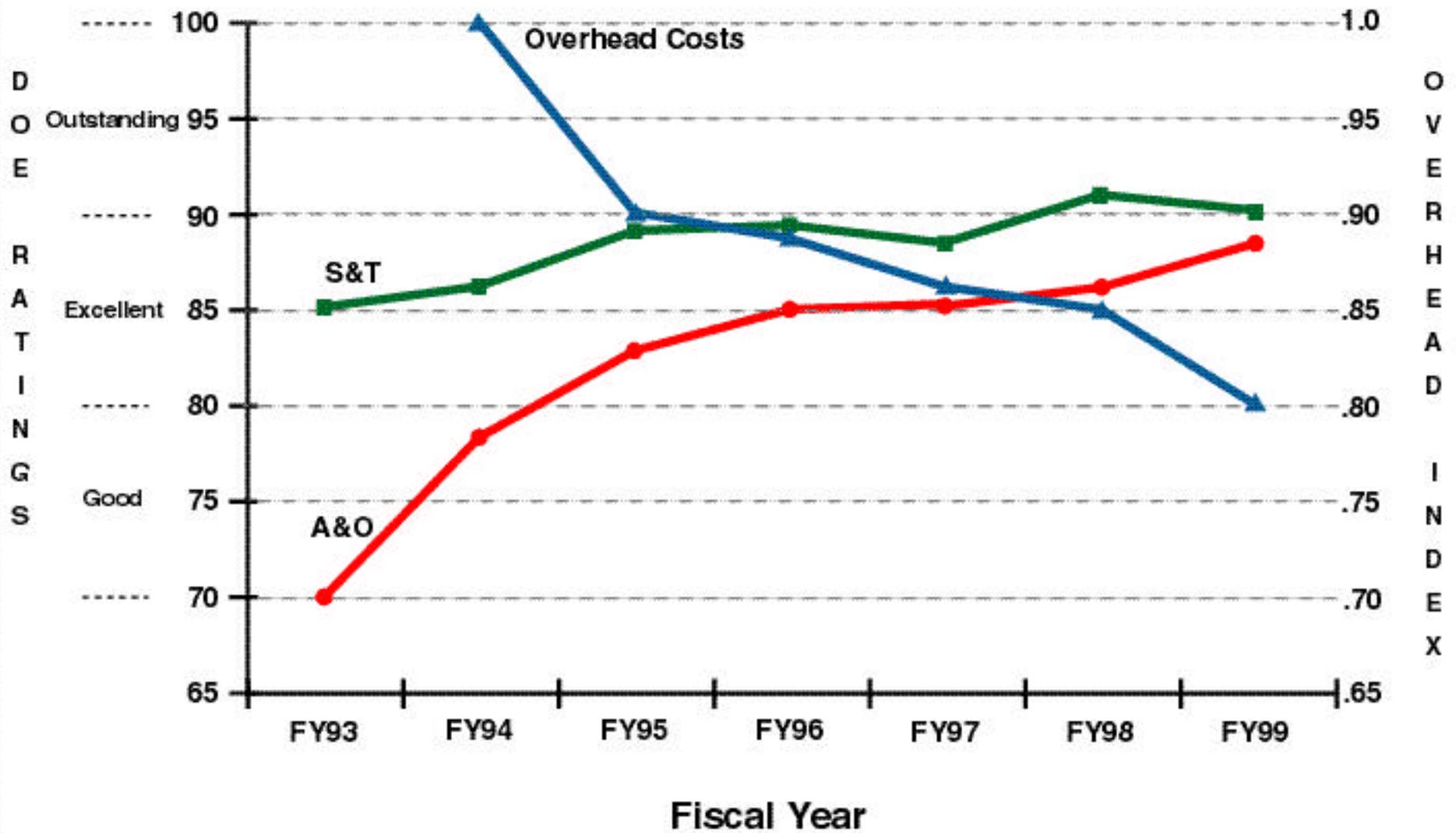
# Why Measure Performance? (continued)

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## ***Because Performance Measurement:***

- ***Improves products and services***
- ***Improves communication***
- ***Helps justify programs and their costs***
- ***Helps to demonstrate Stewardship***
- ***Is mandated by GPRA***

## LBNL, LLNL, LANL - Seven Years of Progress Bringing Administrative Excellence into Balance with Science while Reducing Overhead Costs





# How to Develop Performance Measures

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## ***OUTLINE***

- ***Basic steps***
- ***Structure of objectives, criteria, and measures***
- ***Balanced scorecard approach***
- ***Use of best practices***
- ***Alignment to organizational objectives***



# Basic Steps in Developing Metrics

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- *Assemble the people who actually do the work or are very familiar with it.*
- *Identify and focus on a limited number of critical work processes and internal and external customer requirements that can be effectively managed.*
- *Identify and align critical desired results with customer requirements.*
- *Develop specific measurements to reflect critical work processes and results.*
- *Establish performance goals, standards, or benchmarks.*
- *Create gradients for rating degree of success.*



# POCM Structure

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- **Performance Objectives:** *Broad, general areas of review that generally reflect the end goals based on the mission of a function. The overall set of PO's should characterize the organization's level of performance in the functional area over time.*
- **Criteria:** *Specific areas of accomplishment that satisfy major divisions or responsibility within a function. May be thought of as performance indicators.*
- **Measures:** *What is actually being measured. Should be quantifiable if possible and appropriate. Some cases include specific goals. Are designed to drive improvement and characterize progress made under each criterion.*

# Example of a Performance Objective, Criteria and Measure - POCM

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## Performance Objective #2 Compliance

*The Laboratory will comply with applicable Federal, State and local ES&H laws, regulations and ordinances and with applicable and accepted DOE directives.  
(Weight = 15%)*

### Criterion

- 2.2** *Regulatory Response*  
*The Laboratory will be responsive to regulatory agencies.  
(Weight = 3%)*

### Performance Measure:

- 2.2.a** *Regulatory Commitments*  
*All funded regulatory consent agreement milestones will be met. If such milestones cannot be met, the Laboratory must inform the DOE in writing at the earliest possible time before the milestone passes and seek written concurrence from the appropriate regulatory agency on a revised schedule.  
(Weight = 3%)*

# POCM Assumptions, Agreements and Gradients (continued)

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## Assumptions:

- *For FY XX the performance period will be July 1, XX, to June 30, XX.*
- *CAA, CWA, and RCRA are equally weighted.*

## Gradients:

### Good:

- *70% of milestones met.*
- *Requests generated by the Laboratory for written concurrence on a revised schedule are submitted at least 30 days prior to the due date.*

### Excellent:

- *Accomplish milestones ahead of schedule as defined through dialogue with the local DOE office.*
- *90% of the completed milestones met are submitted to the DOE for transmittal to the regulator at least 30 days in advance of the commitment.*

### Outstanding:

- *100% of the completed milestones met are submitted to DOE for transmittal to the regulator at least 30 days in advance of the commitment.*



# A Balanced Approach

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***When developing Performance Measures, use a balanced approach such as the “Balanced Scorecard” modified for the DOE environment.***

- ***Operational Effectiveness (Financial)***
- ***Stewardship (Compliance)***
- ***Customer Satisfaction***
- ***Learning and Growth***

# Operational Effectiveness

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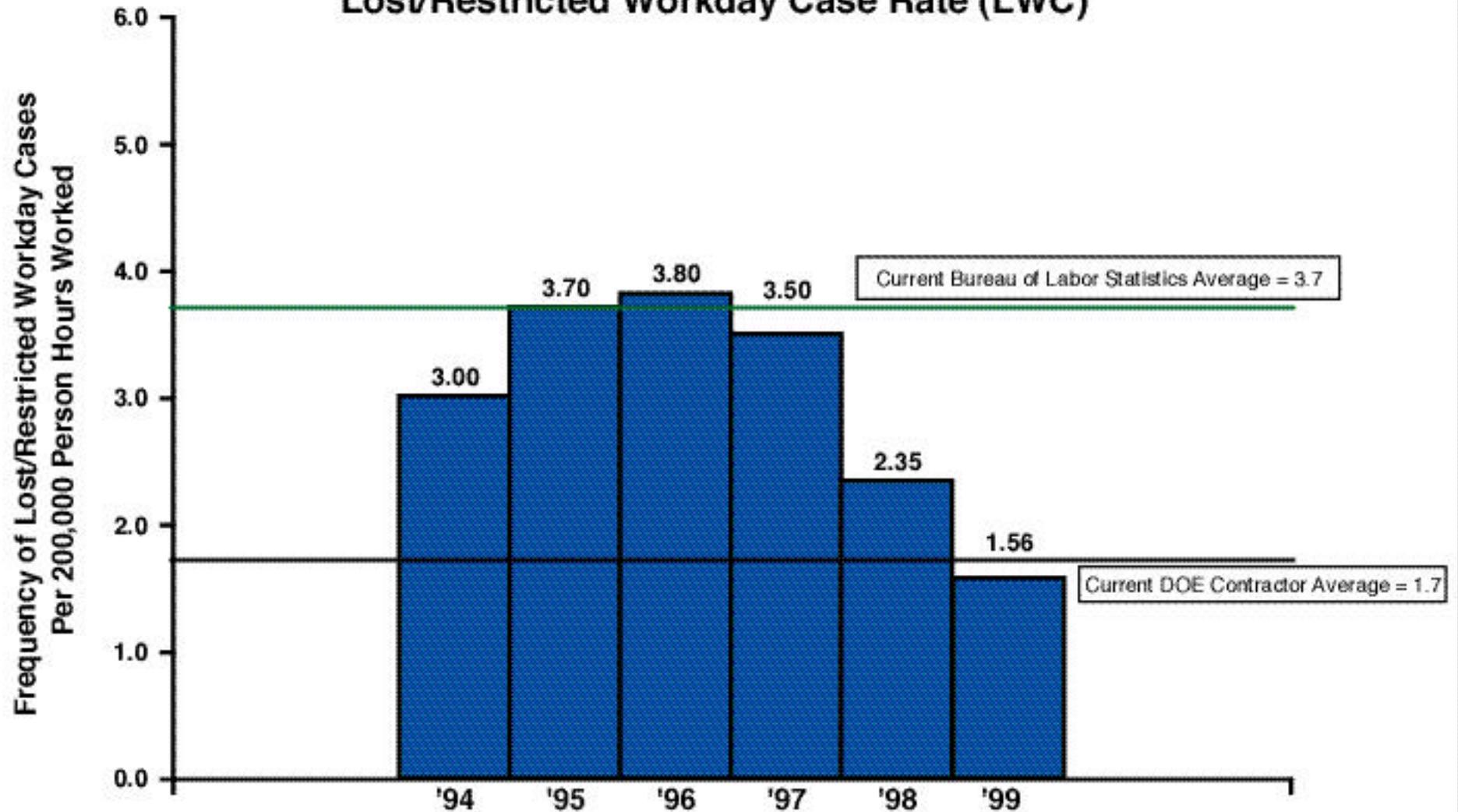


## ***Managing cost and performance:***

- ***Focus on cost effectiveness, economy of operations, and supporting mission productivity.***
- ***Focus on best business practices using tools such as benchmarking.***
- ***Compare performance against DOE and non-DOE organizations, as appropriate, using performance and cost data plotted over time.***

Good ↓

# LANL Environment, Safety & Health Performance Measure Lost/Restricted Workday Case Rate (LWC)

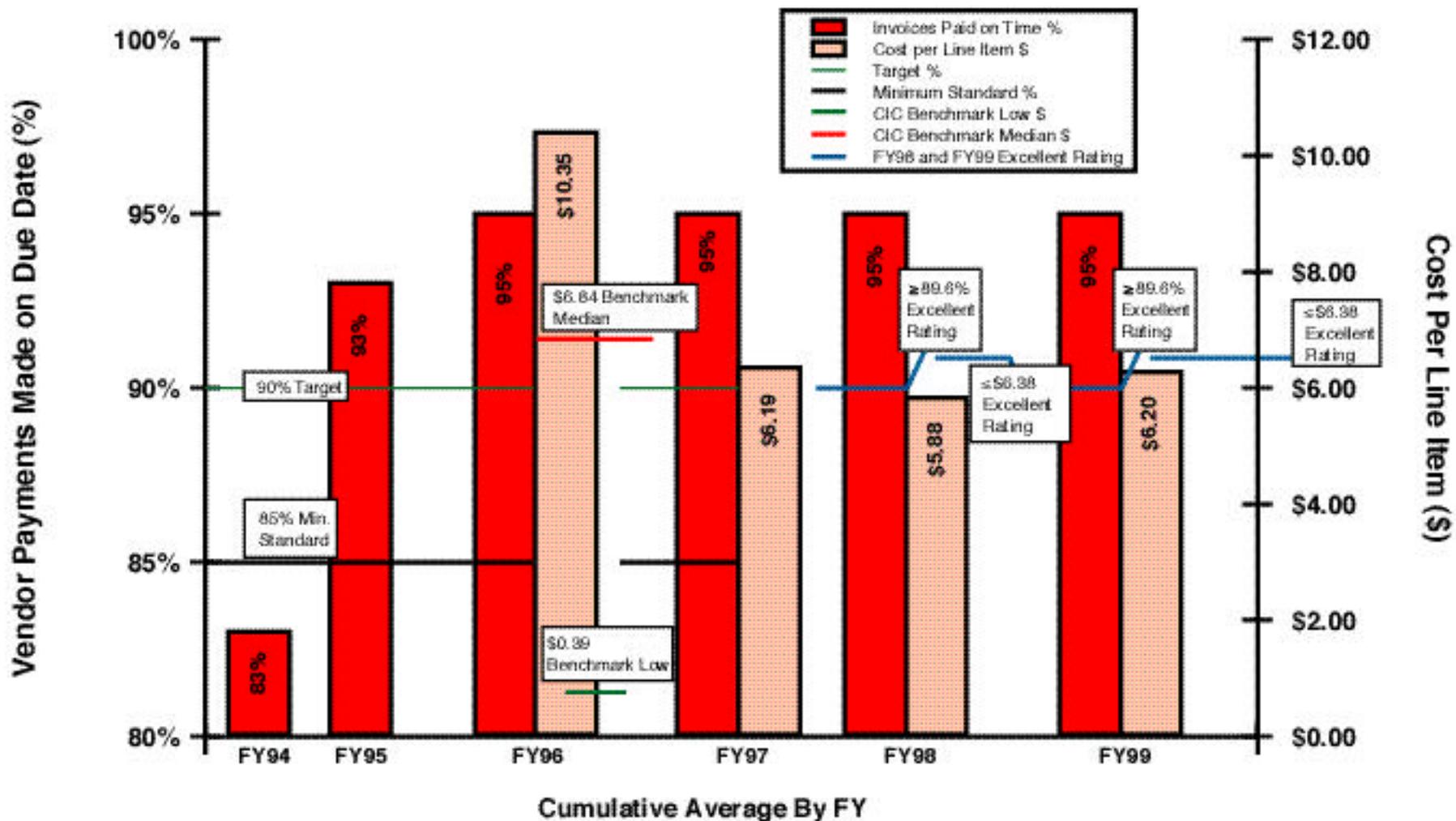




# LLNL Financial Management

## Performance Measure 2.2.a - Quantification of Improvement

### (Accounts Payable Vendor Invoices Paid On Time and Cost Per Line Item)



Note: FY94 vendor payments cumulative average % is through August. September data was not available.  
Laboratory Cost Results Prior to FY99 Have Been Adjusted For Inflation

# Stewardship

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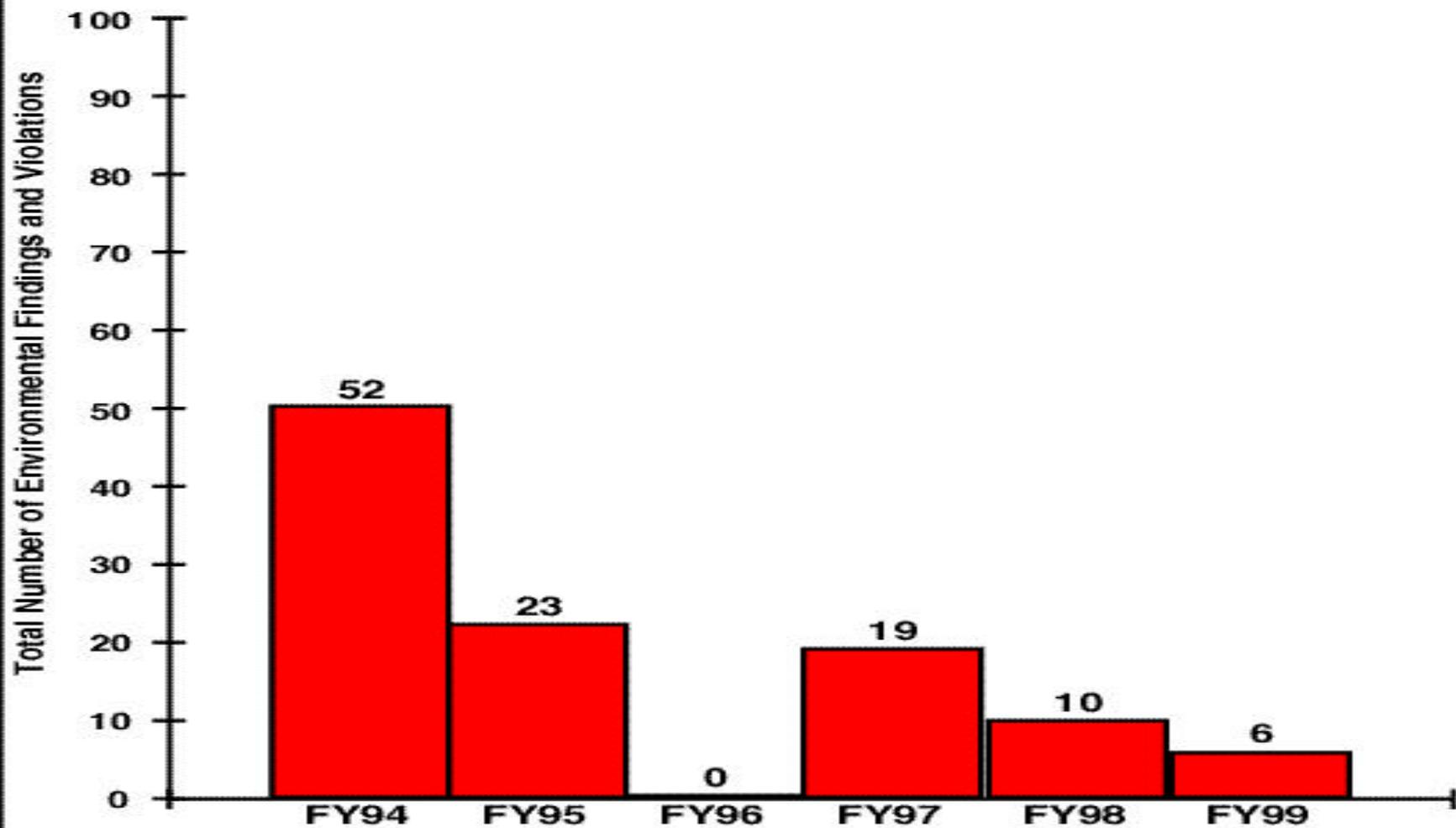
## ***Managing compliance to requirements and commitments:***

- ***The POCMs, where appropriate, must provide adequate coverage of the management of compliance related to contractual, legal, and regulatory requirements are managed.***
- ***Performance Measures are developed by functional area teams to assess the effectiveness of managing commitments jointly agreed upon between the DOE and the Laboratories.***

# LLNL Environment, Safety & Health Performance Measure

Good ↓

## Tracking & Trending of Environmental Findings & Violations





# **Customer Satisfaction**

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***Performance measures are aligned with DOE and internal customer needs. The general goal for all POCMs is to focus on improving the quality of our overall product in a manner that is timely and aligned to customer requirements.***

***DOE, customer satisfaction should consider inputs such as:***

- ***DOE Strategic Plans***
- ***HQ functional area objectives, where available***
- ***Routine customer interaction, interviews and/or surveys***



## **Customer Satisfaction (continued)**

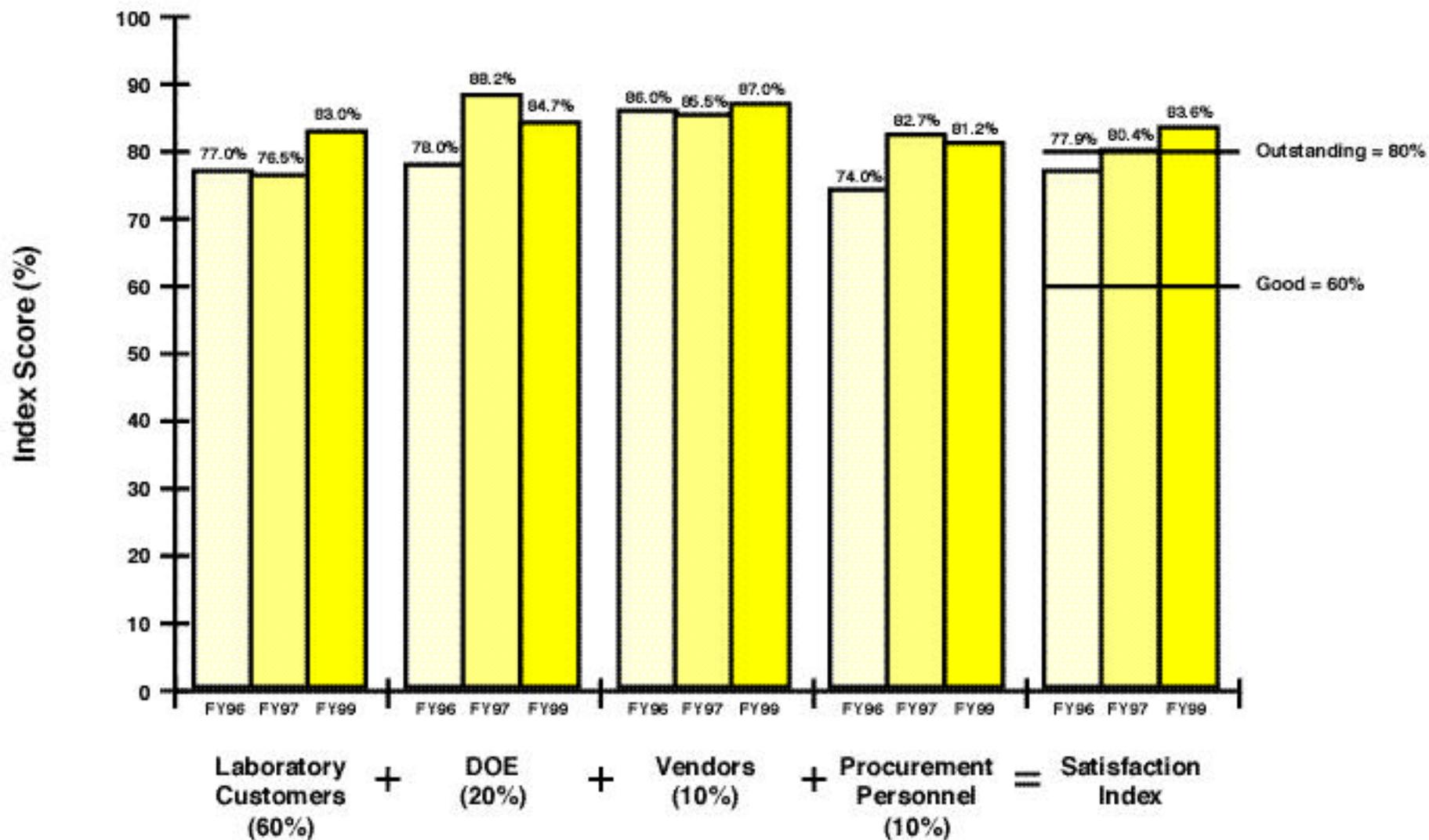
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***Internal customer satisfaction should consider inputs such as:***

- ***Laboratory strategic and tactical plans***
- ***Mission and program plans and support requirements***
- ***Routine customer interaction, interviews and/or surveys***

Good ↑

# LBNL Procurement Performance Measure 2.1.a & 3.1.a - Customer Satisfaction Index



# Learning and Growth

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- *Managing the workforce in a manner that ensures personnel are qualified and effective.*
- *Focus tends to be on training and making necessary information available to staff.*



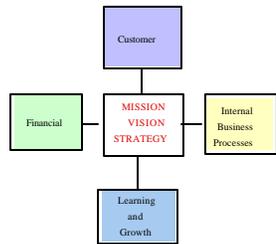
# **Science and Technology Evaluation Criteria**

- ***Quality of Science and Technology***
- ***Relevance to National Needs and Agency Missions***
- ***Performance in Technical Development and Operation of Major Research Facilities***
- ***Programmatic Performance and Planning***

# DOE/LAB/UC Alignment With DOE/HQ Mission, Vision & Strategy - Template



BALANCED SCORECARD  
PERSPECTIVES AND EXPECTATIONS



<b>MISSION</b>
<b>VISION</b>
<b>STRATEGY</b>

Achieved Through  
Four Perspectives

Name of area

PERFORMANCE PERSPECTIVES	PERFORMANCE EXPECTATIONS	PERFORMANCE MEASURES
<i>Customer</i>		
<i>Financial</i>		
<i>Internal Business Process (Stewardship)</i>		
<i>Learning and Growth</i>		



# Implementing Measurements

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***The following steps are important, when implementing a performance measurement program:***

- ***Give control over implementing changes and designing the measurements to those held responsible for performance and improvement.***
- ***Use measurements to promote improvement, not to identify poor performers or penalize them.***
- ***Train managers in quantitative methods to acquaint them with what measurements are, what they mean, and how they relate to customer requirements.***

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***- from DOE TQM Guidelines***

# Teamwork

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***Coming together is a beginning.  
Keeping together is progress.  
Working together is success.***

***- Henry Ford***

# **Attachment**

*Examples of Performance Measure Types*



# Level of Performance - People Level

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	Descriptions	Definitions	Examples
<b>COST</b>	<b>Compensation</b>	Acquiring and deploying the skills of people	<ul style="list-style-type: none"> <li>• Salary Costs</li> <li>• Benefit Costs</li> </ul>
	<b>Development</b>	Training and Education	<ul style="list-style-type: none"> <li>• Training meetings</li> <li>• Seminars</li> <li>• Coaching</li> <li>• Mentoring</li> </ul>
	<b>Motivation</b>	Encouraging people to continuously improve	<ul style="list-style-type: none"> <li>• Sharing sessions</li> <li>• Reward/Recognition programs</li> </ul>
	Descriptions	Definitions	Examples
<b>QUALITY</b>	<b>Reliability</b>	Consistency of performance and dependability	<ul style="list-style-type: none"> <li>• Performance to schedule or promise</li> <li>• Error rates</li> </ul>
	<b>Credibility</b>	Trustworthiness, believability, and honesty	<ul style="list-style-type: none"> <li>• Personal characteristics</li> </ul>
	<b>Competence</b>	Possession of required skills and knowledge	<ul style="list-style-type: none"> <li>• Skill level/proficiency</li> <li>• Certification</li> </ul>
	Descriptions	Definitions	Examples
<b>TIME</b>	<b>Responsiveness</b>	Willingness and readiness of employees to provide prompt service	<ul style="list-style-type: none"> <li>• Time to respond to questions, inquiries, etc.</li> </ul>
	<b>Resilience</b>	Flexibility and positive attitude toward change	<ul style="list-style-type: none"> <li>• Number of Skills</li> <li>• Individual readiness to change</li> <li>• Number of suggestions submitted</li> </ul>

# Level of Performance - Process Level

(continued)



	<b>Descriptions</b>	<b>Definitions</b>	<b>Examples</b>
<b>COST</b>	<b>Input</b>	<b>Cost of process inputs</b>	<ul style="list-style-type: none"> <li>• Raw Materials</li> <li>• Capital costs</li> </ul>
	<b>Activities</b>	<b>Cost of performing a process activity</b>	<ul style="list-style-type: none"> <li>• Cost of vouchering</li> <li>• Cost of billing</li> <li>• Cost of preparing a blueprint</li> </ul>
<b>QUALITY</b>	<b>Conformance</b>	<b>Effectiveness of a process: usually an attribute performance measure of whether the output of a process meets and exceeds customer satisfaction</b>	<ul style="list-style-type: none"> <li>• Product/Service characteristics</li> </ul>
	<b>Productivity</b>	<b>Efficiency of a process: doing the right activities in the right way</b>	<ul style="list-style-type: none"> <li>• Units produced or processed per given input (e. g., rate per hour, number of attempts)</li> <li>• Process path length</li> <li>• Number of activities in a process</li> </ul>
<b>TIME</b>	<b>Velocity</b>	<b>Speed of delivery of the process output</b>	<ul style="list-style-type: none"> <li>• Cycle time</li> </ul>
	<b>Flexibility</b>	<b>Ability of the process to respond to varying demands</b>	<ul style="list-style-type: none"> <li>• Setup time</li> <li>• Multi-task equipment</li> </ul>

# Level of performance - Organizational Level

(continued)



	<b>Descriptions</b>	<b>Definitions</b>	<b>Examples</b>
<b>COST</b>	<b>Financial</b>	<b>Historical financial information reported under external rules</b>	<ul style="list-style-type: none"> <li>• IRS</li> <li>• SEC</li> </ul>
	<b>Operational</b>	<b>Financial information used to run the business on a day-to-day basis</b>	<ul style="list-style-type: none"> <li>• Sales backlog</li> <li>• Sales</li> <li>• Cash balances</li> </ul>
	<b>Strategic</b>	<b>Financial analysis used to support long-term decisions</b>	<ul style="list-style-type: none"> <li>• Make/Buy analysis</li> <li>• Product cost analysis</li> <li>• Target cost analysis</li> </ul>
	<b>Descriptions</b>	<b>Definitions</b>	<b>Examples</b>
<b>QUALITY</b>	<b>Empathy</b>	<b>Individualized attention</b>	<ul style="list-style-type: none"> <li>• Customer satisfaction rating</li> <li>• Employee satisfaction rating</li> </ul>
	<b>Productivity</b>	<b>Organizational efficiency</b>	<ul style="list-style-type: none"> <li>• Sales per employee</li> <li>• Units produced within a time frame</li> <li>• Outputs divided by input</li> </ul>
	<b>Reliability</b>	<b>Consistent and dependable performance</b>	<ul style="list-style-type: none"> <li>• Product returns</li> <li>• Customer complaints</li> </ul>
	<b>Credibility</b>	<b>Stakeholders' perception of organization</b>	<ul style="list-style-type: none"> <li>• Image surveys</li> <li>• Public relations scores</li> </ul>
	<b>Competence</b>	<b>Skills required to perform</b>	<ul style="list-style-type: none"> <li>• Third-party certification</li> <li>• Client references</li> </ul>

# Level of Performance - Organizational Level

(continued)



	<b>Descriptions</b>	<b>Definitions</b>	<b>Examples</b>
<b>TIME</b>	<b>Velocity</b>	<b>Speed at which an organization delivers various outputs</b>	<ul style="list-style-type: none"> <li>• Order fulfillment cycle time</li> <li>• New product development time</li> </ul>
	<b>Flexibility</b>	<b>Ability of an organization to respond to various demands</b>	<ul style="list-style-type: none"> <li>• Number of organizational levels and span of control</li> </ul>
	<b>Responsiveness</b>	<b>Ability and willingness to provide prompt service</b>	<ul style="list-style-type: none"> <li>• Time required to act on customer requests</li> <li>• Average time it takes to reach the person called</li> </ul>
	<b>Resilience</b>	<b>Flexibility and positive attitude towards change</b>	<ul style="list-style-type: none"> <li>• Organizational change readiness index</li> <li>• Number of suggestions implemented</li> </ul>