

Developing a Supplier Scorecard: Devising What Aspects of Supplier Performance Should be Measured, Traced and Acted Upon



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Introduction

Organizations have attempted to measure supplier performance in a number of ways as a part of their quality management program, based on customer requests, or as part of the effort to manage supply chain risk. Supplier measurement systems have been in place since the mid 1970s with varying degrees of success, both in the product and service industries. Typically, suppliers are provided measures and targets as performance indicators, data is collected on performance and published, and the buyer works with the suppliers to evaluate shortfalls in performance and to develop corrective actions. In some rare cases, the supplier receives incentives and rewards such as being able to provide additional products or services or being designed into future products or services by the buyer. The Balanced Scorecard method has created a significant level of interest and compliance in determining how a specific organization is performing and a supplier measurement system is the underlying way to measure supply chain performance.

This article addresses the best practices in the creation and management of supplier scorecards with the goal of further improving supplier performance. In manufacturing industries, supplier value added represents up to 70 percent of the costs of a final product. In service industries, the value added may only represent about 30-40 percent. In any event, the performance of suppliers greatly affects the cost, quality, delivery and responsiveness of the buyer's organization in the market.

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The Current Situation

Most large organizations have some sort of supplier performance management system. Companies such as Bank of America and Hewlett Packard have long standing and relevant systems. Most systems are a combination of scorecard or published measurements as well as the system to track and provide data on performance. There have been great strides made over the last 10 years in standalone and integrated systems to measure supplier performance. The more progressive organizations have the supplier performance system tracking to Six Sigma or Lean Management, or underlying ISO or TQM initiatives within the firm.

Yet there is a sense that perhaps the methods and approaches that have been established are not providing the level of improvement and value as expected. The following elements are influencing this perception:

1. Measures are easy to develop but targets, the quantitative goals, are very difficult to establish
2. Measures tend not to be predictive in nature
3. Measures are not rolled up into an overall result such as an overall scorecard summary
4. Performance data is inaccurate
5. Regular reviews are not conducted with key suppliers
6. The entire system doesn't provide alignment to the achievement of the organization's goals

Overall Structure of the Supplier Performance Management System

The overall structure of the system starts with the development of the aspects of supplier performance that will be measured. These measures should track directly to the overall business objectives of the organization. This would mean that the measures should track with financial performance, customer satisfaction, and innovative/new product or service development.

So the first task would be to determine the business objectives in the three areas. Hypothetically, the various business objectives could be as follows:

1. Increase return on investment or increase profit margins
2. Improve customer satisfaction
3. Increase the number of innovative solutions

Underlying these objectives are the specific performance measures that suppliers should pursue to improve overall business level performance. So the supplier measures could be as follows:

Business Objectives and Corresponding Supplier Measures

1. Increase return on investment or increase profit margins
 - a. Cost savings year over year
 - b. Total cost improvement
2. Improve customer satisfaction
 - a. Quality improvement
 - b. Delivery performance improvement
 - c. Responsiveness
3. Increase the number of innovative solutions
 - a. Number of ideas accepted
 - b. Value Engineering

Note that the number of supplier measures has been kept to a manageable few. This is due to the observation made that too many measures are difficult to focus on, track, improve, and differentiate. The plight of Florida Power and Light is well documented to prove this point. Having over 50 corporate wide measures, and the desire to track, measure and report on all of the measures created led to so much confusion (and low performance) that the entire system was discarded. This was a startling development for the Shingo Prize winner. We believe that a system of not more than two key measures per key business objective is ideal.

Once the measures are agreed upon, the supplier scorecard can then be developed. The scorecard is best developed using a double weighted system. This means that each of business areas is weighted, and the specific supplier measures are also weighted. Here is an example of what is meant by a double weighted system using the above framework:

1. Increase return on investment or increase profit margins (40 percent)
 - a. Cost savings year over year (60 percent)
 - b. Total cost improvement (40 percent)
2. Improve customer satisfaction (40 percent)
 - a. Quality improvement (40 percent)

- b. Delivery performance improvement (40 percent)
 - c. Responsiveness (20 percent)
3. Increase the number of innovative solutions (20 percent)
- a. Number of ideas accepted (70 percent)
 - b. Value Engineering gains (30 percent)

Note that the business objective weights add to 100 percent and the weights of the underlying supplier measures also add to 100 percent. Once this framework is agreed upon by both the supplier and the buyer, then the definition of the measures should be developed.

Develop the Definitions of the Measures

Standard definitions of each measure should be developed and agreed upon. Industry and procurement/quality standards can be used for the development of the definitions to provide an independent and consistent approach. Here are the definitions that we would propose for each of the above supplier measures.

1. **Cost savings year over year**- The reduction of product or service costs resulting price decreases in the current year expressed as a percentage
2. **Total cost improvement**- The reduction is total costs such as transportation, financing, tooling, and inventory in the current year expressed as a percentage
3. **Quality improvement**- The increase in the delivered quality of the product or service measured against specifications or a statement of work (expressed as a percentage)
4. **Delivery performance improvement**- The increase in the delivery performance of the product or service measured against the date that performance was expected (expressed as a percentage)
5. **Responsiveness** - The amount of time that it takes for the supplier in question to respond to buyer inquiries (measured in days)
6. **Number of ideas accepted**- The number of ideas that were proposed by the supplier and accepted and implemented by the buyer representing a key change to the supply chain measured in days/hours
7. **Value Engineering gains**- The amount of cost savings driven by value engineering ideas related to product or service design proposed by the supplier and accepted by the buyer (measured in dollars saved)

Once the weights and the definitions have been developed, you can now start developing and implementing the most difficult part of the measurement system: developing targets and then measuring results and providing feedback.

Developing Targets for Performance

This is clearly the most important aspect of the system. Having unreasonable targets will not motivate [supplier performance](#) due to the perception that the stated target is not achievable. Having easy to obtain targets will result in the supplier meeting the lowest expectations. As Dr. Deming noted, one of the ways that this can be overcome is to just measure improvement year over year. This can clearly be done, but most organizations do want to establish a goal that tracks with the business objectives. So targets appear to be needed in any event.

There are a number of effective methods to use to arrive at the best targets to use. You should always first evaluate any existing data for the established data in your organization. If you have accurate data in one or more of the dimensions, you could use the average performance and then ask the supplier for annual improvements. Another way is to benchmark others in your industry through a search of the public domain. This would include reviewing peer organizations and best-in-class organizations outside your industry. Here are some targets that could be set for the measures discussed in this article:

- Cost savings year over year - 5 percent
- Total cost improvement - 3 percent
- Quality improvement - 10 percent
- Delivery performance improvement - 10 percent
- Responsiveness - 10 percent
- Number of ideas accepted - at least 1 per month
- Value Engineering gains - 5 percent per year

These targets would then be reflected in a supplier scorecard with all of the elements described. The scorecard would look like this:

Supplier Scorecard						
Supplier:						
Period:						
Date of Scorecard:						
	Weights	Target	Performance	Difference	Corrective Action Needed	Date Required
Financial (40%)						
a. Cost Savings Year Over Year	60%	5%				
b. Total Cost Improvement	40%	3%				
Customer Satisfaction (40%)						
a. Quality improvement	40%	10%				
b. Deliver Performance Improvement	40%	10%				
c. Responsiveness	20%	10%				
Innovation (20%)						
a. Number of Ideas Accepted	70%	1/month				
b. Value Engineering Gains	30%	5%				
Overall Score						
Score Last Period						
Difference						

Rounding out the Scorecard

As noted, data is entered (with respect to the supplier's performance) on the supplier scorecard and the difference against the planned target is noted. Corrective action is required under certain conditions. Here is some direction on how to complete the final aspects of the scorecarding system.

1. Define the responsible party to collect, analyze, and determine the performance level. There may be one or more parties responsible for this.
2. Develop a criterion for corrective action. If the supplier doesn't reach the target, corrective action aimed at reaching the target should be established by the supplier
3. Establish an acceptable range of overall performance. We would recommend that there would be three levels
 - a. **Green:** Overall performance of 90 percent of target achieved with no target under performed by more than 10 percent
 - b. **Yellow:** Overall performance of 80 percent of target achieved with no target under performed by more than 20 percent
 - c. **Red:** Overall performance under 80 percent.

The supplier should be asked to develop a corrective action plan if they reach a yellow or red status. Time frames and actions should be provided to the buyer to improve performance to Green status. We would suggest that reviews be completed at least every three months for new suppliers and red status suppliers, every six months for yellow status suppliers, and yearly for green status suppliers. When suppliers are acquired or management changes, more frequent reviews should be conducted.

Introduction of Predictive Measures

In addition to the scorecard, we would suggest that a few predictive measures be established to be able to "get in front of" future performance issues. These measures would include:

- Amount of increase in raw or intermediate material costs
- Layoff of 10 percent of staff by supplier
- Increase or decrease in PPI
- Trends in industry profitability

Next Steps

An organization should develop these measures based on cross-functional input. Create a working group to develop, communicate and implement the new scorecard. Hold initial meetings with suppliers to introduce the system, then measure performance on a quarterly basis.

Dr. George L. Harris specializes in the areas of procurement, materials management, and quality management. He has performed supply management studies for private and public sector clients such as Harley Davidson, Motorola, Rio Tinto, United Technologies Corporation, Energizer, Tyco, Texas A&M University, Bright Horizons, GSA, U.S. Army, FTA, U.S. Department of Education, and the State of Oregon Department of Human Services.

Since founding [Calyptus Consulting Group, Inc.](#), Dr. Harris has conducted more than 300 courses related to supplier management and strategic sourcing, and has prepared and implemented action plans for improvement.

Dr. Harris has directed or collaborated in the development and preparation of training materials of over 120 training programs in supply management and quality including the following subject areas:

- *Supplier Management Training*
- *Supplier Evaluation and Selection*
- *Supplier Identification and Implementation*
- *Supplier Quality*
- *Strategic Sourcing*
- *Cost and Price Analysis*
- *Contract Negotiations*
- *Working With International Suppliers*

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