



Article Number 2

Performance Measurement and the Balanced Scorecard

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How are we doing?

How can we do better?

Are we achieving the results that we want?

These are such simple questions. Why is it so difficult to get answers?

Companies who want to grow are always looking for new and different ways to serve customers better, improve processes, innovate new products, and provide better returns to investors. Similarly, new and improved tools and techniques are routinely developed to manage better and lead better. Unfortunately, a high number of companies are seeking use of Balanced Scorecard, Six Sigma, lean manufacturing, etc., as tools to achieve better results. However, no Balanced Scorecard or Six Sigma or Lean Manufacturing or other "latest tool" is the answer. In fact, attempting to implement any of these without a foundation that provides sound management theory will not only lead to failure, but will cost the company precious time, money, energy and morale.

This is not a "how to" piece that identifies the "twelve easy steps" to implement Balanced Scorecard to improve your business. The aim of this article is to introduce and overview the theory and practice of the Balanced Scorecard and to place it in a context of a broader theory of management and continual improvement, that can serve as a framework for successful implementation.

What is the Balanced Scorecard?

The Balanced Scorecard is "a strategic, measurement-based management system, originated by Robert Kaplan and David Norton, which provides a method of aligning business activities to the strategy, and

monitoring performance of strategic goals over time." (www.balancedscorecard.org). Specifically, the Balanced Scorecard focuses management's attention on four interrelated and interdependent perspectives:

- Customers
- Internal business processes
- Innovation and learning
- Financial

Within these four domains, the company identifies and monitors several relevant key goals and metrics. Kaplan and Norton give the following examples:

- Customer goal: new products; measure: percent of sales from new products.
- Internal business processes goal: design productivity; measure: engineering efficiency.
- Innovation and learning goal: product focus; measure: percent of products that equal 80% of sales.
- Financial goal: survive; measure: cash flow.

There would, in fact, be three to four goals each with one to two measures within each of the four perspectives.

The concept is relatively simple and easy to accept- the company is a system; its parts are related and interdependent; and any attempts to change one aspect of the system will affect other subsystems. The scorecard "establishes goals, but assumes that people will adopt whatever behaviors and take whatever actions are necessary to arrive at those goals. The measures are designed to pull people toward the overall vision." (Kaplan and Norton)

Because specific goals, measures, etc. will be a function of the company, its industry, etc., Balanced Scorecard does not provide any theory to know what specific measures to choose. These are subject to introspection, discussion and negotiation. Similarly, it does not provide a theory or method for accomplishing the goals, measures, etc.

To that end, the remainder of this article will connect the Balanced Scorecard to a theory that can provide direction for successful implementation and for identifying places where the Balanced Scorecard can be misused-a theory first articulated by Dr. W. Edwards

Deming in 1993.

In 1993, W. Edwards Deming articulated a System of Profound Knowledge, comprised of four interdependent elements:

- Appreciation for a system. A system is a network of interdependent components that work together to try to accomplish the aim of the system.
- Knowledge about variation. Variation comes from the environment, from processes, from equipment, from material, and from people. Too often, managers tamper with systems that are in control, making things many times worse. Or, they blame people, when ninety-five percent of the results are attributable to the other four sources.
- Theory of knowledge. The theory of knowledge helps us to understand that management in any form is prediction.
- Theory of psychology. Psychology is more than personality types. Psychology helps us to understand people and circumstances, interaction between customer and supplier, interaction between teacher and student, interaction between a manager and his people and any system of management. -W. Edwards Deming

It is with this framework that the discussion of the Balanced Scorecard will be conducted.

Appreciation of a System

As defined above, a system is a network of interdependent components that work together to try to accomplish the aim of the system. The greater the interdependence between components, the greater will be the need for communication and cooperation between them. The obligation of any component is to contribute its best to the system, not to maximize its own production, profit, or sales, nor any other competitive measure (Deming).

The Balanced Scorecard contends that it would be counterproductive to try to maximize any aspect of the system without regard to the effects that part has on the whole, which is consistent with Deming's (and others) explanation of a system. For example, in "The Fifth Discipline," Senge describes an awakening to systems thinking that occurred in the automobile industry. When American automobile manufacturers began to take

Japanese competition seriously, they dissected engines from their cars and from Japan. They found that three subassemblies in the American car engine used three differently sized bolts. This necessitated three sets of tools, three sets of inventory, and so on. The Japanese car used the same sized bolt throughout. The conclusion was that each American subassembly worked to be independently effective (and possibly efficient). In the Japanese production system, someone was also responsible to make sure that the entire assembly was interdependently effective as well.

The Balanced Scorecard connects well to systems thinking, with some warnings. First, while the four perspectives of the balanced scorecard (customer, process, innovation, and financial) can cause broader thinking about the system of production taken as a whole, they are interdependent also. What percentage of financial results can be achieved through exquisite customer service and satisfaction? How much of customer satisfaction can be achieved through effective processes that simultaneously improve quality and reduce cost? How much of customer satisfaction can be achieved through innovative products and processes? Thus, how much "effort" should be expended to "improve financial results" separately from improving processes and innovating products? That is, if top management focuses on continually improving processes and innovating products and transforming the company to one that strives first and foremost to make a difference with its employees, with its industry and with society, won't financial success be a natural result?

Secondly, the balanced scorecard approach suggests developing a handful of metrics within each of the four perspectives. It will be important to remember that optimization of the system does not result from optimization of the individual pieces. The next part of the article will discuss the Balanced Scorecard and how the understanding of psychology, variation, and knowledge can contribute to a successful implementation.

Knowledge about Variation

Variation is normal. Numbers go up. Numbers go down. The 'trick' is knowing how to manage variation (not just reduce it) and knowing when to react. Knowing when to react and when to be "hands off" is important to a successful implementation of a Balanced Scorecard; otherwise, things that aren't broken get

"fixed" (tampered with), and things that are broken are left unattended.

Six Sigma can be a metric of quality within the balanced scorecard strategy. Six Sigma is an application of statistical process control whereby you attempt to improve processes so that there are only 3.4 defects or mistakes per million. Mistakenly, many managers do not understand what Six Sigma is and how to use it and have bundled many dysfunctional practices with it to sup-optimize their organizations.

Understanding variation is key to reading any measurement of a process. While a Balanced Scorecard approach does have managers looking at many different measures, if the data are presented in improper ways (e.g., this month compared to last month or this month this year compared to this month last year), then managers will be extremely inclined to react inappropriately.

Theory of Knowledge

"The theory of knowledge helps us to understand that management in any form is prediction. Rational prediction requires theory and builds knowledge through systematic revision and extension of theory based on comparison of prediction with observation." -W. Edwards Deming

Balanced Scorecard is a method for measuring results. In addition, people managing systems and working in them need to work together to develop *methods* by which processes can be improved and results achieved. Consider the following three questions suggested by Langley (et al) in "The Improvement Guide": 1. What are we trying to accomplish? (or a more important question: "What are we trying to accomplish TOGETHER?")
2. How will we know that a change is an improvement?
3. What changes can we make that will lead to improvement?

As a system, the company cannot merely set goals and measures without also, simultaneously discussing the methods by which progress towards those goals might be achieved. A failed Balanced Scorecard approach will simply impose more measures on workers.

Psychology

"What you measure is what you get: the measures you use strongly affect the behavior of your managers and employees."
--Robert Kaplan and David Norton

Furthermore, Kaplan and Norton assert that the Balanced Scorecard "establishes goals but **assumes** that people will adopt whatever behaviors and take whatever actions are necessary to arrive at those goals" (emphasis added).

Although easy to understand, not everyone subscribes to the "carrot and stick" Skinnerian psychology of management. To many others (Coens & Jenkins, Deming, Kohn, Scholtes), this approach presumes that employees don't want to work hard and therefore need to be bribed, cajoled, and/or threatened by management in order to be "motivated."

Brian Joiner (in "Fourth Generation Management") would agree with Kaplan and Norton's critical assumption about measures and behavior. However, Joiner would not be very optimistic about the prospects. Joiner identified the following three "strategies" that managers will use when faced with the edict of higher sales, lower costs, etc.: 1. Improve the system. Make fundamental changes that improve quality, prevent errors and reduce waste. 2. Distort the system. Get the demanded results at the expense of other results. (However, it is precisely this approach that the Balanced Scorecard attempts to address.) 3. Distort the figures. Use creative accounting. (If you don't think this happens, read "Free, Perfect and Now" by Rob Rodin.)

Results (e.g., financial results, sales quotas, customer satisfaction, etc.) and variation in results are caused by the environment, by processes, by equipment, by material, **and** by people. Most of the time, we attribute all results (and variation) to people, and most often the closest people.

- We tip a waitress less because the food was improperly prepared (variation in the process) or service was slow (variation in the environment because two other waitresses called in sick).
- In the wake of September 11th, many fund developers found it difficult to gather money (variation in the environment).
- The manager whose results are compared to budgets, quota, or goals, is successful or

unsuccessful based on how well the negotiations went during last year's budgeting meeting.

- Sales people will hold or accelerate sales and/or sales returns (distort the figures) in order to meet goals and quotas. That is, if a sales rep has met his/her quota for the period five days "early" they might hold sales orders until the first of the next period in order to better ensure that they will meet next period's quota.

Top management is responsible for the system. Employees work in the system and while they are **responsible** for their own behavior, they cannot be held **accountable** for the results of the system. For example, when we were in college, how often did we cram for exams? We hold students **accountable** for all learning and we "measure" their learning by exams! Cramming for exams is how students attempt to distort the system (i.e., the learning system) in order to get demanded results. In his fourteen points of management, Deming called for the elimination of management by numbers and numerical goals; substituting leadership.

Summary

The Balanced Scorecard is "a strategic, measurement-based management system." To that end, it is not a panacea. It is one small part that may, with significant commitment from top management, help an organization transform into a thriving, dynamic, growing, learning organization. Transformation is the real key. An organization that is unable to achieve its potential must transform, which means that first, its leaders must personally transform. What the company did from its beginning got it to this place. In order to be a different organization and to achieve better results, you need to **think, do and feel** differently, not just **measure** differently.

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