

Metrics 101: A Primer

Author(s):
Keith Wagoner

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The Baldrige National Quality Award says metrics are needed, ISO 9000 expects them to be used, and Six Sigma and lean cannot exist without them. Metrics are encountered on all fronts.

Yet, supply management professionals are often stumped on how to measure processes, contracts and statements of work. Here, we present a practical approach to demystify the measurement process.

With an ever-increasing need for metrics — especially those that support management by fact — the question is often asked: *As a supply management professional, how do I measure my process?*

This is a complicated question if a process is service-related and no widgets are produced. (At least widgets have attributes that can be physically measured.) Even so, we want to know how well order fulfillment was executed. In general, an overall lack of understanding regarding the metrics associated with these and other processes can hinder improvement and optimization.

So, where should we start?

To begin understanding how metrics apply, it is important to know the differences between *process metrics*, *process control metrics* and *process output metrics*. Later in the journey, the use of a simple tool to facilitate the development of *process metrics* will be shared and discussed.

What is a *Process Output*?

Stated simply, a *process output* is what you get when a process is executed. For example, customer satisfaction is a *process output*, as are the placement of orders for supply management departments, contract turnaround time for sourcing activities, and cumulative cost reduction for the combined organization.

The ability to access *process output metrics* is valuable, but it is complicated when an individual needs to improve that *process output metric*. Contrary to popular belief, *process output* cannot be improved just by doing a better job of tracking the output.

Process output metrics, also called "lagging indicators," are the result of how well the process has worked or been executed. Whether we know it or not, process execution is done incrementally. These increments, or process steps, generate data that can become metrics, even though they might not be collected.

These metrics, also called "leading indicators," are referred to as *process metrics*, or *process control metrics*. The premise is simple: There is a relationship between *process control metrics* and *process output metrics*. Understanding that relationship and hitting the marks for the *process control metrics* ensures that *process output metrics* will always be good.

A business or department cannot be totally focused on *process output metrics* — that would be likened to guiding your car forward using the rearview mirror. To successfully drive the car down the road, we must be looking through the windshield. In other words, we must focus on *process control metrics*, with an occasional glance at the *process output metrics*.

Process Output Metrics Versus Process Control Metrics: What It All Means

As much as one would wish problems would go away and outcomes would always be favorable, wishing accomplishes nothing. Contract turnaround time is a metric which cannot be improved simply by mandate. As

the degree to which contract turnaround execution improves, so will contract turnaround time. The secret to improving contract turnaround time is *process control metrics*.

Process control metrics result when you truly understand the process. We must realize that the process can be deconstructed into its component parts. Deconstruct the process, measure the resulting component parts or process steps, and you have the makings of *process control metrics*.

As departments learn how to hit the marks for *process control metrics*, the outcome metrics will end up where they should. Notice the difference: Management will no longer hope the latest report indicates a good month; instead, they can say, "We had a good month because we hit our process control measures."

In this case, a simple four-column matrix tool can be of tremendous benefit for identifying these metrics. It is only necessary to build a table with columns for "section," "item," "discussion" and "measure" to create a process metrics development tool:

Section	Provides traceability to the metric
Item	That which is measured; part of a noun/verb relationship; the process task at hand, who, what, when; defines success for step
Discussion	The part of the metric that defines how it will be used to drive improvement; focus on process information, person, problems
Measure	Define data source and owner; define the numerator and denominator; use this field to make data repeatable and reproducible

Navigating a process, only to deconstruct it, is an eye-opening experience. Many times, this exercise will identify flaws in the process which need to be corrected. Another outcome of this exercise is the identification of vague, or poorly defined, process steps.

Finally, a better understanding of process control is gained by forcing the group undertaking this exercise to answer the question: *How do we define success for this process step? What is a logical measure?*

Understanding the content enables one to help others understand how a process is controlled, tracked and improved. Use this tool to help shorten the learning curve on process metrics. As more people obtain a better grasp of these concepts, improvement will accelerate.