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Taking it to a different level...

This article takes the concept of working on the right things to a different level, as it goes beyond the common approach of focusing on cost or head-count reduction and instead focuses on studying and more effectively using the most universal and, arguably, most valuable component of work and work processes: time.

Bill Conway

It's About Time

by: Sheila Julien, Senior Associate

When we are faced with the challenge of evaluating and improving a business, we have many metrics to choose from. We can 'follow the money' — study the spending: where does it go, how does it compare to previous periods or to competitors. We may look at market share or wallet share, or we might measure revenue per employee or benchmark against the competition. But one of the most powerful measurements for helping to make breakthrough improvements is also one of the simplest: following where the time goes.

By determining how much time it takes to complete a cycle of value (i.e., building a widget, closing the books, making a sale, completing a project, etc.) and how much of that is truly adding value, an organization captures information that provides a motivating vision and roadmap for making improvements. Key areas to study are: delays, over-processing, rework, transportation, and inspection. And measuring the time is something anyone can do.

Why Use Time as a Measure Instead of Financial Data or Other Metrics?

Using time as a measure to find and focus opportunities for improvement has three big advantages:

- time drives important business results
- it is universally applicable, and
- it is very simple to do.

We live in an impatient age. Time is a major driver of customer satisfaction for nearly every internal or external customer — whether it is supplier lead times, time to market, emergency response time, repair time, delivery time on a new car or a consultants' report, time to get your watch repaired or your clothes dry cleaned, time in the line, time to close the books or open up a grocery store, time to prepare and execute an advertising campaign. Wherever you look, internal and external customers care a great deal about time.

Not only does time affect customer satisfaction, time is a marker and often a driver of costs. The more hours and days required to complete a deliverable, the higher the labor costs and capital investment. The longer it takes to change over or set up the equipment, the more downtime and the higher the labor costs and capital investment. The more days, weeks, or months something sits in inventory, the higher the cost of capital and the greater the obsolescence costs. The time elapsing between customer demand and satisfying that demand amounts to a delay of revenue, and also provides a wider window for change orders that also add cost. It may also lead to a loss of the sale.

Furthermore, quality tends to deteriorate wherever the trail grows long and cold. It becomes much harder to locate and correct the root cause of a defect or error in a slow moving process. And the longer the delay between making the error or defect and finding it, the greater the likelihood that more errors or defects are made in the meantime. Time is also often a marker for complexity: hand-offs, multiple steps, starts and stops — all of which increase both errors and costs.

So improving the ratio of total time to the time spent actually adding value will produce important business results. But that's not all. Time is also almost universally applicable.

Every function and operation of every organization consumes time. This means that we can use the Total Time/Value Time-ratio to baseline and measure improvements in manufacturing, engineering, sales, accounting, marketing, product design, and services. Conway Management has used this method of identifying and eliminating waste in countless diverse applications (click here for examples). Every endeavor consumes time and in every endeavor, time is a driver of cost, quality, and customer satisfaction.

The third reason time that time makes such a useful measurement for improvement is that it is so simple to do. No fancy technology is required. Everyone can become engaged in measuring the time to execute their key processes and evaluating how much of that total time is of value.

The Simple Steps

1. Identify the process to study and improve: where it starts and where it ends.

2. Confirm with the customer (internal or external) the key element of value the process yields. Sometimes this is obvious, but in some cases not so much. An accurate understanding of what the customer considers of real value is key to any improvement effort.

3. Determine how long the process actually takes today. This number— in minutes, hours, days, or weeks, whichever is best suited to the process — is the TOTAL component of the ratio we will calculate in step 5. Some questions often arise at this step:
   - Should we collect "person hours" or elapsed time? Measure elapsed time. If you study and improve elapsed time, you increase customer satisfaction and quality as well as costs. Person hours spent on the work almost always decline when an organization focuses on elapsed time.
   - How precise do we need to be? It is valuable to get good data about the total time elapsed from start to finish, if only through a modest sample. Of course, there will be variation — and the variation can be quite substantial for some processes. Keep the raw data, and calculate the average TOTAL.

4. Determine which steps actually add value and how much time is spent on those. For a step to be considered to add value, it must:
   - Be directly related to what the customer values and would pay for,
   - Actually *change* something of value — the product, database, approval status, whatever, (inspecting something or moving something does not actually change the thing, so does not 'add value'), and
   - Do so for the first and only time. Fixing or reworking something does NOT add value, because it compensates for not being done completely or correctly the first time. Often these steps must be done today, because they compensate for an imperfection somewhere in the process. Correcting those imperfections is what will yield the improvements.

   What if we disagree about what is truly adding value? When categorizing work, aim to be as rigorous as possible about applying the criteria for value-added. If you misclassify a non-value step as adding value, you will lose out on the opportunity to study and possibly eliminate all or part of it. But it is not a fatal mistake; you can always circle back. Once a group has eliminated a first round of waste, they are able to scrutinize what is left more rigorously and find a whole new round of opportunities that may well exceed the first round.

How precise must we be about the amount of time the specific steps take? *Knowledgeable approximations* of the individual components that consume time are usually sufficient to produce really great improvements.

5. Study the differences between the total time and the value adding time to identify and eliminate the root causes. Then calculate again.

To calculate the ratio: if total time today is 55 hours and value adding time is 2 ½ hours, then the ratio would be either:

- Total-to-Value: 55 divided by 2.5 = 22, which means that the organization spends 22 hours for every 1 hour of value add, or
- Value-To-Total: 2.5 divided by 55 = 4.5%, which means that 4.5% of total elapsed time is actually spent adding value.

It doesn't matter which you use, as long as you are consistent.

Launching The Method

If you decide to introduce this method to your organization, take care to prepare the organization by ensuring that the following points are thoroughly understood:

- The waste in the system is not the fault of the people doing the work; it is there because of the way the process is designed or because of the way that the supplying processes are designed.
- The people closest to the work can help you find and fix what is wrong with the way the processes are designed.
- Recognizing non-value-adding work does not mean that you can simply make it go away. It only means it is a *candidate* for elimination or reduction. An effective solution may not yet be at hand. That's OK. Recognizing the waste is the first step to searching for a better way.
- Many processes will have Total-to-Value ratios on the order of 100 to 1. Even the best organizations that have been doing this for decades are no better than 5 to 1.
- Someone who has never done this before might come up with a ratio of just 2 to 1, because it is hard to recognize the waste in standard operating procedures. The ratio itself says far more about how capable an organization is at *distinguishing between* waste and value-add than it says about *how much* waste is buried in the work. If we have *always* had to do something, it usually seems that it *surely* must add value. Often rework compensates for a problem that is so familiar that everyone takes it for granted. Recognize and improve as much as you can, then circle back and look again.
- With practice and coaching (and amnesty) people can identify more opportunity.
- Everyone must have amnesty. If people are afraid for their jobs, either because they might be blamed for the waste or be no longer needed if the work is streamlined, there is every *disincentive* to find and eliminate waste.
- Successes in reducing the actual time will be celebrated.

If you are looking for a simple yet important measurement everyone can use to study and improve the value delivery processes throughout your organization, introduce the Total-to-Value Adding Time method.