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Improving Productivity — Part I

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You can improve the productivity of almost any work process, but don't waste your time improving the wrong thing. Keep in mind that improving productivity (whether of people or equipment) is all about increasing capacity. Whether it also increases cash or profitability depends on what you can do with your new capacity.

There are two reasons to increase productivity: either the work has increased or the number of people available has decreased. If neither of these applies, improving productivity (capacity) does nothing for you. Nature abhors a vacuum and so does a workforce – especially in uncertain economic times. People will stretch out the time it takes to do the remaining work or think up new ways to look busy.

One of my first big "successes" in productivity improvement was actually a waste of time because I didn't understand the powerful role incentives played in productivity improvement. Twenty-some years ago the Corporate Controller asked me to help one of his managers streamline the work because he insisted he needed more people. I showed him how to redesign the processes to require 80% less people-hours while substantially improving his business controls. What a success! It took the manager many weeks to identify enough new stuff to make his staff look busy again. At least the control improvements lasted. (Note to self: if a manager's job classification depends on the number of people reporting to him, the last thing he'll want is a more efficient way of doing things.)

But assuming you have the incentives right, there are two ways you can approach improving productivity. You can focus on the **process productivity** or focus on **people productivity**. Both of these approaches require the collection of facts and data, combined with analysis and problem solving.

But the best tools and methods for process improvement differ from the best tools to improve people productivity.

- Focus on process productivity if your main goal is to increase the throughput of work that involves a sequence of steps and people. Examples include production, order processing, product development, processing of financial transactions, etc. Improving process productivity increases the speed while usually improving the quality as well. It might not enable the process to operate with fewer people. For example, if the improvements free up 20% of everyone's time but the jobs cannot be consolidated, these improvements will not help you operate with fewer people.

- Focus on people productivity if you want to increase the capacity of a particular group or individual who may participate in one or many processes. Many sales persons, IT departments, engineers, managers, software developers and other knowledge workers have jobs that include a variety of different activities during the course of a day. Even groups that spend a substantial amount of time on one process have some responsibilities or distractions outside the work process. Increasing individual or group productivity can enable people to spend more value adding time on the main process.

To learn about the second type, look for our next issue or give us a call. In this article, we'll focus on improving *process* productivity.

5 Steps to Improving Process Productivity

1) To improve process productivity, begin by documenting and measuring the current "as is" process with brutal honesty. Do not pull out an existing process flow chart of how it is supposed to work. Don't jump into creating a flow of how you want it to work. First, **document the current reality**, including all the process glitches that currently mess up the smooth flow of work. These glitches are golden nuggets you can analyze to find ways to remove. To find them, you have to be talking to the people actually

A good way to document, analyze and improve a work process is to use our Process Evaluation Chart and Methodology. You can learn more about this with ***Conway Charting Solutions +*** *Plus.*

doing the work and watch as they deal with the messiness of their current reality.

2) Once you have the process steps down, including the stupid work-arounds that often get informally added to the process flow, **measure** the elements. For each decision step, document what percent of time the work follows which path. For example, with a decision diamond "Is the order complete?" you document what percent of the time it is not complete. For each work step, document how much "clock time" (the time the step takes from start to finish) is consumed and how much "people time" is spent. For example, if a step takes 2 people 10 minutes each, "clock time" is 10 minutes and "people time" = 20 minutes. If the work sits on your desk for an hour awaiting your 1 minute review and signature, "clock time" is 60 minutes and "people time" is 1 minute. Begin with people's estimates, but verify the important estimates with actual data. Also, make a note in the comments about steps with a lot of variation (e.g. 5 minutes to 5 hours). The variation itself reduces efficiency.

3) **Analyze the elements** of the process to identify those steps that are pure value and identify all the steps that are either unnecessary or are necessary only because they compensate for problems that have not yet been solved. Inspection, rework, wait time and, quite often, hand-offs generally fall into this second category.

Once you have the current situation documented, take the steps that are pure value and make a flowchart with just these to **create a picture of the perfect process**. Add up the times associated with these pure value steps. This is the amount of time it would take if everything were just right. Your objective, now, is to reduce the gap between today's process and that "perfect world."

4) Next **study and reduce the gap**. What is causing it? What can you trace to the root cause? Which ones will you target for elimination first?

Rule of thumb: Standardize the work as much as possible and then specialize only if a specialist could get much better speed and accuracy than a generalist— enough to more than compensate for the inefficiencies due to variation.

Every process is unique, but some process productivity leaks are found most frequently. Here are some tips about designing or redesigning processes:

- Avoid the temptation to sort the work so as to distribute it to specialists. Not only does sorting add time and cost without adding value, it makes your operation more vulnerable to volume mix variation. For example, a call center with staff in 3 locations had staff divided to specialize among 8 different call types. The variation in the mix of incoming calls had meant that some call type specialists were swamped while others were idle. Furthermore, even if the work volume were predictable, it didn't come in "full worker chunks." So with eight people each specializing on their own call type, the volume might keep each 65-75% busy. If the work were done generalists, it would keep six people 87-100% busy. Even though the incoming callers "self-sorted" by selecting menu options, the call center increased productivity by over 25% by consolidating into fewer sites and specialties.
- Know when to combine steps and when to pass the baton. Generally speaking, if each person does as big a chunk of the job as possible before handing it off, the whole process moves more quickly. Why? Every time you hand off the work, either the work waits for the next person or the next person is waiting for the work. Either way has a bad effect on throughput and productivity. Exceptions? Sure, depending on the role of capital equipment, and the impact of repetition on speed and quality. But you can usually get productivity improvements by redesigning your process with fewer hand-offs.
- When the work must be handed off between people or operations, locate them next to each other so that communication is quick and clear.
- Eliminate rework by identifying and quantifying the most frequent types of problems. Then develop poke-yokes or failsafe tools for the most frequent types of errors or defects. Your poka-yokes should be aimed at reducing the possibilities of error so you never need to do rework for that error again. But if you have not yet found a way to prevent the problem, find a way to make that error easily identified so that you can speed inspection. For example, a mail order processing organization identified the most frequent mistakes and then redesigned the forms based on that data. The solution did not prevent the error, but by making it easier for

the customer to do it right, it reduced the number of errors by 33% and also made the incoming quality inspection a snap.

You cannot foolproof everything— at least not all at once! An FMEA can help you foolproof your process by identifying where to target your "poka-yokes". Learn more about FMEAs and poka-yokes in an upcoming newsletter or in the ***Conway Charting Solutions +Plus.***

5) Depending on how rigorously and creatively your team analyzes and improves the process, you should get time reductions ranging from 15-85%! But once you have the improvements in place, make sure you implement process measures and other controls to make sure that the waste does not drift back in.

In our next issue, we will discuss a very different approach to improving productivity of the individuals or groups who are involved in a variety of processes and kinds of work.

We are always glad to hear from you! Please send your comments, questions, suggestions, or additional observations to us at mj.king@conwaymgmt.com.