

PROCESS IMPROVEMENT

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The increased use of computers in the workforce has caused changes in the way work is processed. Some of these changes are improving work processes, but, unfortunately, many of these changes are achieving only a small portion of their potential and some are actually resulting in less effective processes. The products and services are worse rather than better.

This session covers:

What is a process?

The philosophy and practice of process improvement.

Best and worst outcomes.

Bottom-line effectiveness.

What is a Process?

A process is a particular series of actions that accomplish something. It has a start point and an end point between which various items (materials, forms, records) are worked on usually by a number of different people located in different places and using various equipment. During the process, certain items are changed thus completing the process.

For instance a hospital admits a patient by checking records, completing forms, and performing various tests and briefings. The items worked on include the patient, perhaps a blood, urine or tissue sample and various forms and records some of which are manual and others are electronic. Most of the tasks involve information which is read, sorted, calculated and written while a few tasks involve physical work such as mixing chemicals, preparing slides, and so forth. The tasks are performed by administrative staff, medical staff, nursing staff, laboratory staff and occasionally by the patient. Various pieces of equipment are used as the items wend their ways through various locations.

Likewise, a sales office processes a customer's order by checking records, completing forms and assembling and packaging the products ordered. The items worked on include the products, the packaging materials and various forms and records some of which are manual and others are electronic. Again, most of the tasks involve information which is read, sorted, calculated and written while a few tasks actually involve physical work such as lifting, assembling, wrapping, and so forth. The tasks are performed by office employees including inventory clerks, credit clerks, order clerks, by warehouse and shipping employees and on occasion by the customer. And, once again various pieces of equipment are used as the items wend their ways through the various locations.

And, so it is with other processes. A contract is written, a case is tried in court, a commercial airliner completes a flight, a new product is developed, a new employee is hired, a salary review is completed. In every case people using various pieces of equipment work in various locations on items that wend their ways through the processes.

The Philosophy and Practice of Process Improvement.

To improve a process we change the tasks. Tasks may be eliminated or combined. The sequence in which they are performed may be changed. The location where they are performed or the people doing them may be changed. And, the method of accomplishing them may be changed, often by changing tools and equipment. When these changes are well conceived they can produce positive results in two ways, better results and lower costs.

Better Results

Some examples of better results include, patients achieving better health, students being better educated, court cases settled more justly in less time, the nation being more secure, products that are stronger, taste better, last longer, are easier to maintain and so forth. In all of these cases greater value has been created in the form of quality.

Lower Costs

Costs are lowered when less resources are expended. The total cost of labor, materials, equipment, facilities and energy required to achieve a given result such as building a car, performing a surgical operation, painting a house, repairing a telephone line, cooking a meal, etc., are reduced. Because costs are down (per unit of output) it is possible to drop prices a portion of the drop in cost and still increase profits or surpluses. This generates more business and once again more value is created, this time from volume.

Philosophy

Where knowledge and ingenuity are used well, we get both better results and lower costs. Thus private industry provides better products and services at lower prices every year (as we have seen in some industries, notably electronics in recent years) and the government provides better services for lower taxes every year (as we see less often because of intervening politics that make it difficult to concentrate on the tasks). There is more available and standard of living rises. In spite of lower prices, profits grow because costs drop more than prices. The difference between the amount of the drop in costs and the drop in prices provides a surplus with which to reward the ingenuity that lowered the costs and improved the results.

The key that makes all of this work is that we are smart enough to increase the amount of value that we create, not by working longer hours but by using our hours more wisely. We make better use of our time and energy and thus we have more. In a nutshell, we work smarter not harder.

This is a philosophy of winning. When we win there is more for everyone. Customers get better products and services at lower costs. Stock-holders share in greater profits. Wages go up for both management and employees. And, when this philosophy is widely practiced across a society, individual earnings are up, prices are down and standard of living climbs steadily.

The Practice of Process Improvement

To achieve these benefits we do not start by messing around with wages and prices. Rather we study the work processes that create the value for which these dollars change hands. And we do this, one process at a time.

Within each process we study the flow of the items (records, forms and materials that wend their ways through the processes). We pay special attention to tasks that change these items. We do not focus on the resources that work on these items (people, machines and software) or on their

prices and costs. Later we will be very interested in the affect of our ideas on our resources and the dollars but first we study the flow of the work itself using all the experience, common sense and ingenuity we can muster with a constant focus on creating value and reducing waste.

Objectivity

We follow each of the items that is processed, step by step, and prepare a chart that shows how the items affect one another. A team of experienced employees representing different parts of the process then reviews the chart. Team members can see what happens to the items not only in their own work areas but also before they see them and after they are done with them.

Opportunities for improvement become apparent. Large portions of the processes are often found to be completely unnecessary and can be dispensed with. Circuitous routing with costly delays are discovered and lend themselves to short cuts and or electronic delivery. Redundancies in processes can be eliminated by sharing records. Often minor modifications in a part of the process are discovered that will provide major advantages to the process as a whole. This approach encourages team members to think together about what is best for the organization rather than being limited by parochial views of their own work areas. A process orientation keeps the teams attention on results and discourages their getting caught up in politics.

Elemental Level

Process charts should be prepared at the elemental level (tasks, transportations and delays). Then the team questions each step as if it were the only step in the procedure trying to come up with the best way of doing (or not doing) that step. The team does not have to worry about unforeseen consequences in other parts of the process because the chart makes clear the relationships between the steps and because the team includes experienced people from all parts of the process.

This simplifies the challenge of improvement enormously. Instead of trying to juggle all of their changes simultaneously the team works on them **one step at a time**.

Common Sense and Ingenuity

When this is done well the team members find themselves naturally giving free rein to their common sense and ingenuity so that many of the changes they make have the flavor of, "We've been meaning to do something about that one of these days". Now, "one of these days" has come and the team members find themselves doing what they have been thinking they ought to do for years. The changes appear to belong and shortly after they have been made people look back on their previous processes as something they would never return to.

Best and Worst Outcomes.

Best Outcomes

The work is easier and faster, with fewer items requiring fewer steps for completion. Customers know they are getting more for their money. The changes have relieved employees of time consuming and often nonsensical bureaucratic requirements which they are glad to be shed of. They find they are less rushed and have more time to give personal attention to transactions that require it. It is clear that technology is being used to supplement the experience and judgment of the employees and in spite of dramatic advancements in technology the process still retains a flavor of common sense.

Worst Outcomes

Processes that should not be done in the first place are automated using the most expensive equipment that money can buy. There is no increase in value created while significant resources are squandered. Customers are treated impersonally while processes that were previously performed manually in minutes are replaced by automated processes that take weeks. Processes that included experienced humans giving personal attention to unique requirements are replaced by standardized processes based on superficial assumptions that do not allow for the variations. Employees are stretched thin and most of the veteran employees, whose experience is badly needed to correct these problems, are gone.

Bottom-Line Effectiveness

When bottom line effectiveness is pursued in-and-of-itself, it tends to encourage changes that are temporary. Rather than studying processes step by step, sweeping changes are imposed that have not been worked through. Staff is viewed as an expense to be reduced. The staff that survives the cuts find themselves stretched thin because their work processes have not been realistically improved. But, for the time being (until the customers leave) the bottom line looks very good. Executives who are concerned only about the bottom line during "their watch" pat themselves on the back and vote themselves huge salaries as rewards for their contribution to the immediate prosperity. By the time the organization suffers the consequences of their actions their bank accounts will be very full and it will be "someone else's watch".

When business does fall off the organization may be unable to take the detailed actions necessary to correct the situation. More sweeping changes follow including further staff cuts and corporate decisions to divest itself of divisions, product lines, etc. that are unprofitable. (Who knows how profitable they might have been if their staffs were enthusiastic and proud.) In this way the corporation works its way from crash diet to anorexia.

However, when bottom line effectiveness is pursued by process improvement, creating better results and lower costs per unit, the results are healthy. Changes are made that have been thought through and when they are put into practice they work. Staff is treated as a resource rather than an expense. Rather than being stretched thin they find themselves more relaxed, proud and enthusiastic, the masters of their work. And, over time, they will improve the processes again and again, embracing change rather than dreading it. The people of the organization have the capacity to do the work well and change it continuously. This is the complexion of healthy process improvement.

In a way, healthy process improvement is like eating nourishing food and exercising. Most people know that it is good for them but few do it. But, those that do get much more out of life. Organizations that practice continuous process improvement also get much more out of life, pride in the way they do their work, a relaxed work climate that stems from being on top of things, camaraderie with coworkers they respect and trust and prosperity that they have earned.