



THEORY OF CONSTRAINTS: A Holistic Approach to Transformation

By Daniel P. Walsh

First and foremost Theory of Constraints (TOC) must be viewed as an overarching management approach uniquely providing an organization's leadership the ability of focusing on what is best for the enterprise rather than the individual pieces. One must view an organization as a system, therefore all organizations have two fundamental traits; the individual parts do not act in isolation, indeed they are all interconnected and variability is always present.

Most organizations have the individual links in their value chains doing what is best for their individual area of responsibility. In fact the links are evaluated according to how well they perform against industry standards and or locally developed metrics. This inevitably focuses the organization on improving their links. This happens in spite of our best attempts of having everyone doing what is best for the organization. So if most of the links are performing well, why are we not always satisfied with the throughput or productivity of the enterprise? Perhaps it is because of failing to recognize that we should not be focusing on improving all of the links, rather the few that are impeding our ability to improve throughput.

So, we must focus on the linkages rather than the individual links. This means all of our efforts must improve throughput. Therefore, it is imperative the links are measured and scheduled accordingly. Regrettably, most of our current metrics are not measuring contribution to throughput by the individual links, rather some sub-optimized stand-alone measurement. TOC offers a way out of this dilemma, providing the organization with cohesive throughput contribution based metrics. In essence, all levels of leadership and management, recognizing the interdependencies of the links, now will have firm cause and effect connectivity to effectively run the enterprise.

This brings us to variability, the second trait all organizations have. TOC does not focus on attempting to eliminate variability rather emphasizing management of the variability. There are many fine tools such as LEAN and Quality improvement programs that effectively address reducing process variability. TOC compliments those efforts by providing real time early warning indicators that highlight the potential impact the variability will have on your ability of accomplishing the mission. In most cases this information is provided far enough in advance, telling you precisely where action must be taken before it will impact your performance.

The high performance organization of the future must fundamentally change the way it plans, schedules and controls all work. In the past much of this was done without leveraging the information now available. If we do not recognize this and demand this from our legacy and future information systems we will be left behind.

The high performance organization recognizes the requirement for all levels of management to be involved in ensuring the planning, scheduling and control has the connectivity that focuses the enterprise on throughput. Furthermore, each link has to be measured on their individual contribution to throughput. This means we must have visibility on which link is constraining throughput in a relatively real time horizon. This will require that data be turned into information while retaining connectivity, accessed across and vertically within the enterprise. This information must be sorted and presented at the appropriate levels to facilitate making better throughput focused decisions.

Summary:

In a dynamic environment where the product mix and requirements are continuously changing we must quickly identify what is constraining the enterprise from delivering ever increasing value and responsiveness at a reasonable cost to our customers. These are the hallmark characteristics of a high performance organization. Readily available relevant information focused on contribution to throughput is crucial for making better decisions. The information has to be real time in order to influence operational decisions and can be rolled up to provide performance metrics.

Of equal importance is receiving the information far enough in advance in order to take the necessary action to protect the organization from jeopardizing commitments made to their customers. The information must provide advanced warning before the inevitable variability de-stabilizes the system, precisely showing what is causing the disturbance with enough time remaining for corrective action.

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