Constraints management

Business, Management

In operations management, a constraint is any factor that limits the performance of a system and restricts Its output. The existence of constraints causes capacity imbalance and as a result, the overall performance of an organization will be affected. Constraints can occur anywhere within the supply chain, that is, with Suppliers or customers, or within the internal processes. In Gladiator's definition, there are two types of constraints that companies may encounter: physical and non- physical.

A physical constraint is usually a capacity-constrained resource, such as aching capacities, the width of a work-centre, time on a particular work center, or raw materials, finances or the capacity of a vehicle. Nonphysical constraints include policies, procedures, organizational structure and mindset, or consumer demand. Constraints can be Internal or external to the system. Internal constraints (bottlenecks) are usually characterized by the limitation of capacities (of working centers, capital, etc. , or the management operating policy limiting the working time (working In one shift, five working days per week, suspension of working time during lunch, etc.). An external constraint exists when the system can produce more than the market will bear (Specter, 2006). A special type of constraint is known as a bottleneck. It is defined as any resource whose available capacity limits an organization's ability to meet the service or product volume, product mix, or fluctuating requirements demanded by the market (Noreen, McKay & Smith, 1995).

Constraints force management to think smarter and be more innovative and they get challenged to do more with less. Managing constraints requires inter-functional cooperation In any organization since one will have to make appropriate capacity hoicks at the Individual-process level, as well as at the organizational level. Usually, eliminating a bottleneck in one section of an organization might not have the desired effect unless bottlenecks in other parts of the organization are also addressed. Constraints management recognizes that organizations succeed or fall as a whole.

Even If one department performs superbly, If the organization fails, that superb performance has no value. The constraints will determine the output of the system whether they are acknowledged and managed or not so management should be so unconscious about such constraints in the organization if they are to achieve the goal of makingmoneynow and In the future. Once a constraint has been eliminated, the system needs to be reassessed to verify whether the constraint has not relocated to another link (Coplay, Hashed 2008).

Contrary to conventional thinking, TCO views constraints as positive, not negative. Because constraints determine the performance of a system, a gradual elevation of the system's constraints will improve Its performance [pica Source: Policy constraint: This Is a management-imposed guideline for how a process Is to be inducted which may be written or unwritten. Policy constraints can be divided Into the categories of " mindset constraints," " measures constraints," and " methods is mindset that organizes the company's thinking and assigns priorities to different courses of action.

New measures that contradict the prevailing mindset have little chance of being implemented. Measures constraints may be responsible for creating situations that encourage behaviors that have a negative effect on the performance of a business. Bonuses that have an overall negative impact on the bottom-line of a firm would fall into this category. Methods constraints refer to the procedures and techniques that determine how the day-to-day operation of the organization is carried out.

For instance, there may be a rule regarding the minimum batch size that should be run through a machine, or the economic order quantity to be ordered from a supplier, or the quantity of parts that should build up next to a production cell before it is transported to the next production cell. Unless carefully monitored, these policy constraints can interfere with the orderly flow of work through a business which will in turn affect the overall throughput of the system.

Policy constraints are difficult to determine, since they often stem from long-established and widely accepted policies thus one must track backwards to them by observing their effects on the business. It may be equally difficult to eliminate such a constraint, since it may have been used by employees for many years. Bottlenecks must be exploited efficiently and effectively and policy constraints must be broken. It is typically much easier for an external party to identify policy constraints, since an external party is less likely to take existing policies for granted.

Laws, labor agreements, internal leslies and procedures as well ashealthand safety policies can contribute individually or conjointly to firm performance. Policy orphilosophyconstraints are part of an organizationcultureand are often unwritten. When a policy constraint is associated with a firmly entrenched paradigm like " we must always keep our equipment running to lower the manufacturing cost per piece", a significant investment in training and coaching is likely to be required to change the paradigm and eliminate the constraint.

Browser, (2001) posits that tackling policy and culture constraints is similar to slaughtering sacred cows and that n order to tackle a universal belief, the logic of the negative effects of the behavior supporting the sacred cow must be clearly shown and discovered by the people who must make and adopt the new. Policy constraints are addressed through application Thinking Processes: What needs to be changed? What should it be changed to? What actions will cause the change?

Employee policies such as attendance, leave oreducationor training, often affect organizational performance even when the link between Job tasks and the policies affected is not linear. When the change to employee policies is viewed as disciplinary or reactionary, the result is often grunted employees who are resistant to change, even if these changes will clearly create a better workingenvironment. Employee dissatisfaction and low morale are well-recognized as negative to an organization's performance, and policy changes especially unpopular changes can be expected to affect both morale and satisfaction (Herrington and Malone, 2009).

When an organization has in place a bundle of 'progressive' or 'high performance' HER policies and practices there is a positive response from employees (expressed in terms of Job satisfaction, motivationor improve their performance. This means that employees tend to work beyond contract, going the extra mile without having to be coerced into doing so. Having the right organizational policies and practices in place for employees, is not enough. These have to be 'brought to life' by the line managers with whom staff interact on a day to day basis.

Unless employeesrespectand are motivated positively by their immediate supervisors, the positive impact that 'organizational policies have will not be realized. Organizations which manage people well are more likely to enjoy success and to grow than those who do not (Purcell et al. 2003). Including employees in the process of planning new policies and practices can help foster the buy-in that's essential to employee acceptance of change. A well formulated organizational policy enables an organization to keep sight of its priorities in face of the pressure of changing business environment and adopt a stable balanced approach.

Goldwater maintains that the biggest problem in managing the constraint is the erroneous assumption that maximizing throughput on every resource (machines and manpower) will decrease costs and improve profits throughout the global system (Goldwater, 1990). People constraint Management: This is probably the most important constraint of all. Shortage of skilled labor, restrictive labor practices and inflexible working attitude can play a significant role in the expansion of output and overall achievement of the organizational goal.

In today's competitive business environment, organizations can no longer afford to waste the potential of their workforce. People in firms need the skills and ability to do their Job effectively (Chandeliers, 2011). Chandeliers argued that people are fundamentally concerned about physical, psychological and social aspects of their lives in ways that p both workplace and private life. The people who make up an organization -human resources- are considered to be one of the most important resources of today's firms.

People and how they are managed are becoming more important because many other sources of competitive success are less powerful than they used to (Sera, 2010). Managing people effectively in organizations is a skill that requires constant planning and development. Management is concerned with the optimum attainment of organizationalgoalsand objectives with and through other people. Tea firms are characterized by many strategies, wide ps of control, democracy, and autonomy.

Their management practices cannot be reduced to one standard set of operating guidelines that will work for all organizations continually. However, all managers of various organizations face the same challenge: to manage one's time, objectives, and resources in order to accomplish tasks and implement ideas (Waldron, 1994). Managers of tea firms are painfully aware of the need for revision and development of the new skill sets held by today's high performing organizations. If change is not handled correctly, it can be ore devastating than ever before.

High performers reflect, discover, assess, and act people in their organization is necessary. A key aspect of managing employees in organizations is to find the right people for the right Jobs. Much of one's success as a manager is related to appropriate human resource planning. Organizations motivate employees by investing in them. A motivated workforce has more productive employees and this translates into bottom line cost savings. On the other hand, motivated employees positively impact corporate culture, resulting in many intangible but equally important returns.

Happy, motivated employees are indeed better workers and will help to generate a positive work environment that both customers and employees will better appreciate. Gregory P. Smith in the article Happy Employees Make Productive Employees, found that " When employee attitudes improved by 5%, customer satisfaction Jumped 1. 3%, consequently increasing revenue by . 5%. Seeking ways to motivate and build worker morale pays dividends to any business or organization since a motivated worker is more committed to the Job and to the customer. The end result when an organization invests in employees both emotionally and financially is happy customers and increased revenues. Employee motivation impacts organizational performance by turning work beyond their normal expectations. They are always on the lookout for opportunities that will bring them to the attainment of whatever goal they have set for themselves. They unleash their energy and look at their work as a key to realization of their desired aspirations.

Effective people management supports the appropriate business strategy and produces a desired level of organizational performance (Runaway, Cert. and Fieldsman, 2002). Human resource management aims to ensure that the organization obtains and retains the skilled, committed and well motivated workforce it needs. This means taking steps to assess and satisfy future people needs and to enhance and develop the inherent capacities of people - their contributions, potential and employability - by providing learning and continuous development opportunities.

It involves the operation of recruitment and selection procedures, management development and training activities linked to the needs of the business (Berger, 1984). Organizations are becoming aware that successful human resource policies and practices may increase performance in different areas such as productivity, quality and financial performance. Resource-based view, asserts that the basis for a competitive advantage of a firm lies primarily in the application of the bundle of valuable resources at the firm's disposal.

In implementing an integrated value system, organizations are continually faced with the challenge of managing the " people" part of the equation. Relationship management affects all areas of the supply chain and has a dramatic impact on reference. A number of value chain initiatives fail due to poorcommunicationof expectations and the resulting behaviors. Managers often assume that the personal relationships within and between organizations in a value chain will fall into place once the technical systems are established.

However, managing relationships among SCM initiative. Moreover, the single most important ingredient for successful supply chain management may well be trusting relationships among partners in the supply chain, where each party in the chain has confidence in the other members' capabilities and actions. Without positive interpersonal relationships, the other systems cannot function effectively (Rob, 2002). Sera, (2010), concluded that the way an organization manages its human resources has a significant relationship with the organization's performance.

Equipment Constraints: The way the manufacturing equipment is in its current configuration and usage, may make it difficult to achieve organizational goal since it is unable to achieve the level of output required by the market. The existing scale and capacity of buildings and machinery used in the production process determines the level of output for an organization. The existence of constraints presents improvement opportunities for an organization, therefore, the location of an organization's constraint, should always be known, in order to concentrate in dealing with such a constraint properly.

The constrained resource's full exploitation, and possibly constraint elevation, should firmly be on the management agenda (Raman 1998). Constraints never disappear, but migrate either within an organization either to the next poorly functioning or low capacity production capital unit, or to a sales department with insufficient capabilities or resources, or to the surrounding environment. This can be embodied as low demand for a company's products or poorly performing business partners (Screaming & Demeter 2001).

Production lines, warehouses, transportation equipment or facilities, have capacity constraints that determine the maximum level of physical goods flow in a supply chain (Copra & Median 2001). Usually the capacities are the subject of long term planning since they cannot be changed overnight, but require investment planning procedures or negotiations for outsourcing. Decisions concerning the strategy, design, and planning policies, therefore set the parameters or the ministrations for optimization that a company must subject its operations to (Copra & Mental 2001).

The objective of the firm is to improve system performance, the ability to make money for its owners now and in the future, by looking at the entire system as opposed to a group of non-interacting components. The focus of Constraints Management is on the output of the entire system rather than breaking down the system into components because these small entities have very little or no impact on the performance of the entire system (Demeter, 1997).

Goldwater, (1997), argued that by 988, the rapidly evolving understanding exposed that the main constraints in organizations were not physical constraints but policy constraints. Specter, (2006), argued that the greatest improvements come from addressing issues at the weakest links in the chain. Improvements at non-constraints have very little management provides a framework for measuring the impact of local operations on throughput, inventory and operating expense. Excess capacity in the form of people is as waste.

Hence cutting capacity to match existing demand leaves little room for increases in demand, once capacity has been reduced, it's not easy to increase it gain as it takes time and money to find and hire skilled workers (Specter, 2006). Specter goes ahead to argue that Constraints management can be used to focus on the right problem and the right solution at the right time in the right place Ways of identifying a Constraint or Bottleneck A bottleneck is defined as any resource whose capacity is less than the demand placed on it.

A bottleneck can be for example a machine, scarce or highly skilled labor, or a specialized tool. A non-bottleneck is any resource whose capacity is greater than the demand placed on it. A non bottleneck, therefore should not be irking constantly because it can produce more than is needed (Chase et al, 1998). According to Aerates et al, (1996), the symptoms of a bottleneck are: high stock in front of the bottleneck, a work pressure above 100 %, bottleneck parts that are missing at the assembly and the bottleneck gets special attention (due to the constant fire fighting).

It is better to identify a bottleneck by interviewing operators than by interviewing higher level managers because the senior managers will not have an understanding of the real inventory waiting to be processed (Aerates et al, 1996). Constraints are easy to locate when they are physical but when one has to deal with invisible constraints such as policies, training and measurement; it becomes more difficult to identify them. These constraints can cause a person to undertake an action that makes the company incur a loss (Kendall, 1998).

Peterson and White (1992) posit that it is the employees' perceptions of their work-culture and work-climate that influence their motivation and thus leads to changes in the work environment that may result in increased employee satisfaction and productivity. A successful Constraints management implementation will have the following benefits: increased profit, fast improvement, improved capacity, reduced lead times and reduced inventor.

To manage a bottleneck, management can use both the short-term and long-term capacity expansions.

The short term capacity options during the peak periods include temporary employment, part time employees, temporarily outsourcing etc. The managers are needed to find alternatives to increase the effective capacity utilization at bottlenecks, without experiencing the higher expense and poor customer service that are common whereas maintaining output rates at peak capacities. Firm's financial performance shall be increased through developing schedules that focus mostly on bottlenecks.

Theory of constraints or drum-buffer-rope method, is a way available to management that focuses on all the types of blockage or obstacle that are in the way of obtaining maximum flow of value added funds or sales less overloaded procedure such as order entry, a manufacturing operation, or new product development. The central idea of this theory is to focus on the blockages or bottlenecks to increase their throughout, thereby increasing the flow of whole value- added funds. The performance of the overall systems lies in the scheduling of the bottlenecks (Goldwater, 1990).