

LEAN – The ULTIMATE SURVIVAL TOOL

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About 10 years ago many industries were moving operations into Mexico and lately the trend is to relocate into Brazil, Bulgaria, China, and Malaysia to take advantages of the low labor costs. It seems that no industry is safe from the search for lower costs by relocating to developing countries. Even highly-skilled crafts such as design, research, and technical development are being moved to third world developing countries.

The lure for attracting manufacturing jobs is the low labor costs; in Mexico labor and benefits may cost \$1.50 to \$3.00, in interior China may cost 15 cents. While rates vary widely across the North America, a minimum wage contract costs 60 times as much. The same ratio of salaries exists for skilled positions such as engineers, programmers, scientists and managers. The lower costs of materials, generally a result of suppliers having lower costs is also a factor. Along with these economic factors, in many cases, these countries are using the latest manufacturing productivity-enhancing technologies. The Internet communications now make it easy to coordinate with offshore facilities and documents, drawings, photos are only a computer click away.

The Lean Answer

The only way that we can stop this trend is to use better technology and Lean Manufacturing and Management principles that involve the elimination of waste at all levels of an organization to stop the job loss. This is not an overnight or painless solution but one we must commit to in order to stop this trend.

In addition, Lean Manufacturing principles must be followed closely and thoroughly at all levels of the supply chain to make a difference. Even so, the late adopters of Lean may still find it necessary to trim workforces since productivity-enhancing technologies and opportunities to grow market share through efficiency may have already been seized by more progressive competitors. This sometimes is a better alternative than the one faced by those companies who have waited too long to implement Lean.

Lean Manufacturing has evolved from the teachings of Dr. Deming and Dr. Juran in the 1950s and was spread into the Toyota Production System so now most major manufacturing companies have some form of Lean programs in operation.

- Smaller companies and non-manufacturers have generally been slower to adopt the Lean technology. Only about 25% of the companies/organizations in the world are using some form of Lean.
- The power of Lean lies in its ability to reduce costs in all areas. This is done by challenging every activity to find if it adds value to the customer.
- Business processes that may have been used for decades and taken for granted are candidates for elimination or dramatic revision.
- The emphasis is not on doing things more efficiently - instead, the first question that should be asked is why is a certain operation necessary.
- A good example of this approach is the process of inspection, which in the past was considered to be a benefit to the final customer. A great deal of time and money was spent in assuring that the product was correct *after it was manufactured*.
- Companies using Lean Manufacturing Principles assumed that no customer wants to pay a company for finding their own mistakes.
- Other processes such as setup, packaging, equipment adjustments, material handling, inventory control, and rework must also be examined.
- Lean Manufacturing uses a variety of tools and techniques to identify and redesign processes, improve them to eliminate any form of waste.

The Ultimate Lean Payoff

As the economics of Lean Technology reduce the incentive to focus strictly on low labor and direct costs, other factors begin to become more important.

- A large inventory is a form of waste because it is expensive to store, subject to damage, and can become obsolete quickly.
- By eliminating non-value added activities, big improvements can be made in the time it takes to deliver products/services to customers. Reductions in the total response time of 50% to 90% are common.
- Many companies have slashed lead times of products built to unique customer requirements from months to a matter of hours. This allows Lean companies to use superior customer response as a competitive weapon.
- The advantage often goes to the company that can innovate, respond, and deliver in the shortest time. No known technology can overcome the fact that products built in Asia are

a week or so from North American markets and involve costs and delays in transportation and border crossings.

- Lean enterprises also find that the pace of innovation increases as they continuously reduce waste in products and processes. Many have discovered the value of making rapid redesigns to processes as further opportunities to reduce waste are identified.

The Future of Lean

Lean Technology will continue to spread since many businesses/companies are starting to realize the benefits of Lean and even those that are considered leaders today realize that they have just scratched the surface of opportunities. Toyota, the company that invented many of the concepts, has been working on its form of Lean for 50 years and says it has as much work yet to do as when it first started. Furthermore, Lean is also finding many applications in non-manufacturing fields. The potential for applying the Lean principles in the service sector, health care, military, education, and government is staggering. The waste in these areas has always been considered normal costs which few people ever questioned.