Strategy to Reality

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Turn your Strategy into Reality with TXM

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Welcome again to the TXM E-Newsletter for July 2008. If you wish to discuss the topics further or are interested in how TXM can help your business, please don't hesitate to contact Tim Mclean on 0404 480 517 or email us at info@txm.com.au. You can also learn more about TXM and what we do by visiting our website at www.txm.com.au.

TXM Executive Breakfast—2 May 2008

Keynote Speaker: Phil Binns, Varian Australia

In May TXM hosted its first Executive Breakfast in the elegant Treetops Room at Melbourne Museum.. The function was attended by 30 senior managers from a wide range of leading manufacturing businesses.

Philip Binns, the Managing Director of Varian Australia addressed the breakfast. Varian Australia is a world leader in the design and manufacture of precision optical scientific instruments for chemical analysis. The business is an Australian manufacturing success story with double digit revenue and profit growth in recent years. Varian exports over 97% of its Australian designed and manufactured products.

Phil attributed much of Varian's success to its knowledge of its markets, its commitment to continuous improvement and its success at harnessing the inventiveness of its people. Inventiveness is the ability to develop new ideas that can change the market by creating outstanding value for customers. As a leader, Phil emphasized the importance of focusing on the two or three key issues that are critical for the business rather than loading the organization with too many initiatives and goals and then failing to deliver on these goals. TXM support in managing the Varian Sheetmetal Outsourcing Project has enabled Varian to accelerate the pace of change without overloading the organization. Good strategy is of little value without effective execution and Phil believes that this depends on recruiting good people and setting high expectations for them. Good communication is also essential and Varian makes effective use of visual management and short "stand up" meetings in the factory and office.

Varian had benefited from Continuous Improvement and Lean Manufacturing over the years and Phil highlighted successful implementation of 5S, self managed work groups and Agile software development as good examples. Looking to the future Phil was positive about Varian's long term future in Australia and is committed to leverage lean manufacturing and product innovation to ensure the business remains a globally competitive.

Above: Phil Binns, Managing Director of Varian Australia presenting at the TXM Executive Breakfast at Melbourne Museum

Varian Sheetmetal— Lean Supply Chain

Over the past 18 months TXM has assisted Varian with the outsourcing of its sheetmetal fabricating department to local and Chinese suppliers. TXM Principal, Tim McLean, presented at the breakfast about this project.

A key element of this project was establishing an effective supply chain between the Chinese supplier and Varian Melbourne. At the Melbourne end the goal was to integrate the supply of sheetmetal parts into Varian's existing Kanban system and avoid storing large quanities of sheetmetal on site. From the Chinese suppliers' perspective the system needed to be simple with clear expectations of what they were required to deliver and when.

Varian opted to extend their kanban system back to the China supplier and "pull" inventory from China. Toll Auto Logistics were selected as a third party logistics supplier who could managing the shipping of the parts from the supplier to Varian's factory. Toll also hold a buffer of supplier-owned inventory in Melbourne. Varian pull stock daily from the Toll store which in turn is replenished weekly with parts pulled from the supplier in Shanghai. This approach minimizes lead time, the level of inventory in the chain, and the risk of shortages. It is also simple and transparent for all players in the supply chain

Combining Two Plants Into One

If you have two plants in the one city or even if you have more than one plant in Australia doing similar things, chances are that you will have considered putting them all under the one roof. With constant improvements to transport infrastructure and inevitable savings in overheads and building costs, combining two into one usually makes sense financially. However from our experience it is a difficult change to make work in practice. Get it wrong and you can mess up two factories with impacts on customers, employees and ultimately shareholders that can quickly wipe out the expected benefits of the project.

Above: TXM recently managed the relocation of Rosebank Engineering's Port Melbourne Operations (including moving this 40t concrete isolation beam)

Use Lean Plant Layout to Make the Most of Space

Like any business decision, relocating and combining plants must add value for shareholders. A key way to achieve this is to maximize use of space. Use of lean manufacturing techniques—value stream mapping and 5S can greatly reduce the footprint of your plant and lead to greater efficiency. Start by determining the likely current and future needs of your customers and develop a plant layout to suit this. In our experience our clients are frequently surprised by how efficiently space can be used. This may mean that you can combine both plants into an existing operation rather than going for the expensive option of a greenfields site. Even if you go greenfields, a lean layout may mean that you can go for a smaller and less expensive building.

Invest in Detailed Planning

Combining two factories, two sets of products, two groups of people and two organizational systems is highly risky and complex. Key risks can include undocumented product knowledge which may be lost when the product is manufactured on a new location. Cultural problems in the workforce will often default to the "lowest common denominator" between the two sites unless care is taken to communicate with staff and put in place clear cultural standards from the outset. Most importantly you must prevent any risks to customer supply. It is not acceptable to tell customers "we are moving so you may not get your product on time". They can not tell their customers to wait for their products and such an approach usually leads to "panic buying" which simply exacerbates any supply problem.

Assign the Right Resources to the Project

Combining operations inevitably involves a large investment and a high degree of business risk. It is not a good idea to just give the project to a line manager to manage "in his spare time". This will inevitably result in an unacceptable compromise between the Manager focusing on the project or focusing on his normal job. As a result neither will be done well. A senior line manager should oversee the project, but he or she should be given dedicated and experienced support to manage the detail of the project. TXM specialize in working alongside internal and external project resources to facilitate the project and manage the planning and fine detail of the execution. By providing this support we enable the management and staff of your business to focus on their customers right through the move.

Takt Time—Make Beautiful Music in Production

Takt time is possibly the simplest and most powerful of lean concepts. Takt time is simply the rate at which customers buy your product. For example, lets say you sell an average of 150 products per day with 7.5 hours or 450 minutes of working time per day. To keep up with average customer demand you would need to make one product every 3 minutes. Make more than this and you will build up inventory, make less and you will end up letting down customers. Your plant therefore should be designed to make an average of one product every 3 minutes. Each step of production needs to be able to consistently meet this rate. Equally, machinery only needs to run to meet takt time. Running more will only lead to over-production in the form of inventory and other forms of waste. When every production step runs to takt time you have level production and the minimum level of waste in your process—which is like an orchestra in perfect harmony!

Find the Hidden Wastes in Your Operations

When you walk through your factory do you find it hard to see waste? Maybe you have implemented 5S so the factory looks well organized and have a solid order backlog so that everyone seems really busy. In this environment you may look at your operation and think that the opportunity to improve is now limited. This situation may be superficially satisfying, but can also be quite frightening if your margins are under pressure. So where do you look for improvement when your factory already "looks" efficient? The best answer is to revisit your value streams and systematically identify and eliminate waste. However a walking through of your operation may show up some surprising opportunities:

Above: Systematic elimination of waste means that the new Boeing Dreamliner can be built from scratch in 3 days.

What is Everyone Doing?

Take some time to just stand in a discrete position in the workplace and observe what everyone is doing. Count how many people that you can see and then count how many of those are actually adding value for the customer while you are watching. For example do your operators leave the line to look for materials? Are there non-value-adding processes? For example do you pack your product at one stage of the process only to unpack it at a later stage? Does product get moved long distances or get put into warehouses to be removed and used again later in the process? The time taken moving stock around and tracking it can be significant and does not add any value to the customer.

Minding the Machines

Another common source of waste and cost is waiting for machines. The cash you have invested in your machines has already been spent, whereas the cost of labour is ongoing. Therefore if your operators are standing waiting for machines to finish their cycle your machine efficiency might look great, but your profit statement will not be so good. Design machines to operate automatically or at least have automatic ejection of parts and make sure that your "standard work" has the operator arriving at the machine just after the machine cycle has completed, not just before.

Where is the Inventory?

Inventory is waste, because the customer does not pay you more for your products when you have more inventory (unless you are in the warehousing business!!). However inventory also hides waste. If inventory is building up at points on your assembly line this is a sure sign that the work on the line is unbalanced. Inventory will build up behind a bottleneck. Processes upstream of the bottleneck will have their output restricted by the bottleneck and therefore will often have waste built into their work. This can manifest itself by short wait times while the upstream operators wait for the downstream operators to catch up. Inventory can also hide problems, for example unreliable equipment or long setup times. All of these factors contribute to more waste and inflexibility in your supply chain.

What is in the Bin?

Stick your head in the waste bin and see what is in there. It can often be surprising. In some processes end of run production is just thrown away when it will not fit on the pallet. Often in-process quality issues go unreported and the affected product is quietly thrown away. Alternatively setups can be a source of large amounts of startup waste. Material is usually your largest cost, so using structured problem solving techniques to find the root cause of why product ends up in the bin can have a large impact on profit. Also take note of the amount of packaging in the bin. Again you will probably be staggered by how much packaging is used for the materials you use. Packaging cost will be built into the cost of the product you buy, and, as well, the removal, handling and disposal of waste packaging in your plant can be a significant source of waste. Investigate reducing packaging or using returnable packaging—you will help the environment and reduce cost and waste.

These are just a few areas where you can look for waste, but they will provide you a start. Then take a structured approach to identifying and eliminating waste by using Value Stream Mapping and Standard Work Analysis to quantify waste and develop future state action plans to eliminate it.

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