



# Total EXcellence in Manufacturing

Visit us at [www.txm.com.au](http://www.txm.com.au)

## New Year - Time to Refresh Your Production System.

By Michelle Brown

The start of the year is a great time to set goals and targets for the year ahead as well as time to reflect on the last 12 months and review the health of your production system.

In any manufacturing company, reviewing the health of the system that controls all of production can reveal how robust your system is. Apart from the usual measures of Quality and Delivery, you should look further and identify the factors affecting operational performance and determine if there was a systematic problem underlying them. You can then plan what needs to be done to fix them. The main parameters to review are:

- Leadtimes; from when raw materials enter your factory, until the finished product goes to the customer
- Inventory and Work in Progress: the number of pieces that are sitting around, whether it's in the receiving store, in work or in the finished goods store
- Takt time: Your customers' demand for your product

The above three parameters need to reflect your anticipated level of customer demand and your operating times. All three need to be kept in balance for your production system to run smoothly. If any of these three are changing dramatically, then the other two need to compensate and you will see things starting to go awry. Does action need to be taken?

Ideally the health of your production system is monitored on a regular basis through scheduled audits. Review your audit metrics for last year – how did you go? Were the corrective actions put into place if a discrepancy was found? What action needs to be taken to improve these metrics for this year?

Finally, review your system to determine how it performed over the Christmas break. Where were key personnel away on leave? How did the system perform then? Do you have enough people trained to run the production system while others take leave? How long will it take for you to get back on track and have everything running smoothly again?

By reviewing the health of your production system on a regular basis, you will be able to anticipate problems that may lie ahead. Lead times, inventory and Takt time will give you an indication of how things are going. Maintaining a robust production system is the key to any manufacturing process.

© TXM Lean Solutions Pty. Ltd. 2010 Volume 5, Issue 1, January 2010



*Above: Kanban control board at Branach Manufacturing. Kanban systems need to be reviewed regularly to allow for changes in customer demand [link to full Branach case study](#)*

## TXM Restructures and Grows

The last three months of 2009 were a time of much growth and change for TXM.

### Stronger Corporate Structure for TXM

The success of TXM over the past three years has been a team effort led by Tim McLean and Anthony Clyne. At the end of 2009 Tim and Anthony formalized their partnership with the formation of a joint venture company, TXM Lean Solutions Pty. Ltd. The new business will continue to trade as TXM and will continue to offer the same high quality lean implementation and project management services, but the new structure provides us with a much firmer base for supporting our customers.

### Partnership with Kangan Batman TAFE

TXM has offered clients the option of a Certificate IV in Competitive manufacturing for the past two years. In 2010, thanks to some excellent work by Michelle Brown, we have upgraded our training processes and procedures to enable us to enter into a formal auspicing arrangement with Kangan Batman TAFE (KBT). Partnering with a leading institution such as KBT will assure the quality and compliance of the training programs we deliver. Trainees will get the additional recognition from a certificate carrying the logos of both TXM and KBT.

### International Growth

TXM has also been successful in winning major contracts to implement lean with major global manufacturers in China and South East Asia. We are currently in the process of recruiting staff in China and establishing our first overseas office in Shanghai. This will mean we can assist companies doing business with China at both ends of their supply chain.

## How Well are We Doing Today? Finding the Right Measures.

Imagine a sport where the score was unknown until two weeks after the game and was often inaccurate and the players were never told the score. Such a sport would not have many fans. Unfortunately many businesses run this way. Financial results are generated weeks or months late and are often inaccurate. Factors driving financial performance are often not well understood and sometimes not measured at all. Even if performance is measured it is often not shared with front line employees. So what should you measure in your business and how should you measure it?

### Getting Started - Keep it Simple - Measure Frequently

With KPIs the temptation is often to measure everything. In our experience it is best to start with just one or two measures. Choose simple easily understood measures. Measures that involve counting are usually easier to measure and understand than percentages or ratios. Unit output versus target or takt time is often the first measure that is established. The next measures may well be the key things that impact achieving targets such as hours of unplanned downtime or number of defects. We also think that measures should be recorded by hand in the workplace by the people engaged in the work rather than producing elegant computer graphics in an office. This ensures that the people who are most able to make a difference to performance see themselves as accountable for that performance. Aim to measure as frequently as you can. Measuring your process hourly means that you can detect problems fast and react quickly, minimizing the consequence if you fall behind target.



*Above: These hand drawn graphs at Schuetz DSL provide fast feedback to production teams about performance in their workplace. [Link to Schuetz DSL Case Study.](#)*

### Leading and Trailing Measures

Most business measure trailing indicators. These are measures such as profit or return on assets that record the past performance of the business. This is a bit like the score in a game of football. However to improve in sport you need to look at the factors that drive the overall score. In football this might mean tracking the number of kicks or unforced errors, while in business, internal quality defects (or right first time) is often a driver of quality, while the number of out of stock items is a good predictor of on time delivery. You will also find it hard to meet customer lead time goals unless your internal production lead time is kept below the lead time your customers expect.

### Measure to Improve

A sports team will use its scores and its statistics as a basis for improvement, focusing training on the areas where performance is not meeting targets. Likewise in business, measuring KPIs goes hand in hand with a process of problem solving and continuous improvement. We find that a fifteen minute meeting every day is often all that is needed to review performance and find and address the root causes of problems. The measures then provide feedback on the success of your problem solving efforts, completing the plan-do-check-cycle. A new calendar year is a great time to start measuring your business, so start today and choose one or two key measures that will drive your business to higher performance in 2010.

## What Can we Learn from Toyota's Current Problems?

If you have been reading the papers lately you will have noticed that Toyota has had a series of very serious quality issues. How did this happen to the company we have all been taught to admire? The exact causes are no doubt the cause for a lot of soul searching in Toyota, but some factors seem already clear:

- Loss of focus on core values - Toyota became too focused their growth at the expense of their quality focus.
- Getting too big to quick - businesses can only grow as fast as their systems, people and process will allow. Toyota's quest to be number one lead to compromises in their core values and stretched their ability to control their quality.
- Hubris - great companies are always humble and perhaps Toyota had started to believe too much of their own hype.
- Failure of problem solving to think beyond the quick fix - this is perhaps the most surprising aspect of the whole episode. Toyota did not trace all the root causes of the problem and do not appear to have initially looked across their model range to see if the same problem could occur. This seems like a fundamental failure to follow their own values and is perhaps a function of the three issues outlined above.

Toyota will recover from this situation. Their reaction in shutting down production clearly shows a willingness to put the customer first and their openness about their failings makes it likely that they will learn and grow stronger from this experience. However the lessons are clear - keep your feet on the ground and never forget your core values. One final lesson is that Toyota has provided us a great case study in how NOT to manage a public relations crisis!!

**Feel free to forward this to your friends and colleagues and let us know their email address and we will add them to the distribution list for the next issue. Contact us at [info@txm.com.au](mailto:info@txm.com.au)**