

Japanese Production and Manufacturing Techniques have moved to an even Higher Quality Level, Lower Cost and Shorter Production Times.

A recent tour of some of the world's best manufacturers including Honda, Toyota, Panasonic, Kawai, Mazda, and Canon, principally in Japan, has once again shown that Kaizen and Kyosei have been taken to a new level. By working on the nine wastes in production, and continuously improving all aspects of process, product and people, and focusing simultaneously on long term and short term objectives, the Japanese workforce remains highly motivated and creative.

In particular at the new Canon plant at Toride, I saw the most positively motivated workforce I have witnessed any where in the world. This comparison includes manufacturing plants in the USA, Germany, France, Italy, Switzerland, China, and NZ and many others and of course Australia.

The most significant and noticeable change I saw on this visit compared with my earlier visits was the greater emphasis on shortening the production time and the larger release of creative innovation by the workers as they designed their own clever tools to make their job easier and improve product flow. Twenty percent of the time is allocated to training and innovation and quality meetings where teams assist each other in applying scientific logic to applied manufacturing problems. In most cases the mock up prototype solution, if it involves a tool or device, is built from say Aluminium extrusions in a specially dedicated room.

Special emphasis is placed on training using the Meister system. Everyone is encouraged to move up the skill level and the Meister is revered by all including the Canon CEO. On one occasion, I used a tool designed by an operator, which allowed him to lift and assemble a 65kg part into a copying machine with his little finger.

At the head of each production line was a massive colour photograph of the team leader followed by signs saying that it takes 0.8 seconds for a step and 0.6 seconds to turn. Unnecessary movement of people and product is a waste.

The shortening of the planning cycle has become a sharp focus of all plants so that the use of forecasts can be reduced as much as possible in the production process and batch sizes can be continuously reduced. This is a step which is often overlooked in Australia.

The process of what we call Lean Manufacturing has passed to a new level which can only be described as *Continuous Innovative Manufacturing, the step beyond Lean*.

The lessons from this simple approach can be applied by all Australian manufacturers

When products are not made to order because the production lead time is too long to satisfy the customer just in time without inventory, the finished goods inventory can be manipulated and reduced dramatically using the new rules. This is not understood by producers who stick to old MRP rules.

The approach used at Canon is the same as the one I developed at Shaw Australia in 1999, where, after implementation, the total working capital was reduced by \$40M and the on-time deliveries at the same time were improved from 32% to 99%. The profitability improved dramatically from loss to approx \$40M EBITA. This enabled the company to withstand a 6 week strike and increase Gross Margins on fast moving lines. The old MRP rules were abandoned for the 5500 products made. Simple application of the Lean Manufacturing rules would not have led to such an outstanding result in such a short time.

The power of the Japanese approach can no longer be questioned. Toyota and Honda have demolished GM and Ford in the American companies own markets. Even in 2004, Toyota could have purchased GM plus Ford with one year's profit, whilst the Daimler Chrysler alliance, unlike the Renault Nissan alliance in Japan, has not worked, and the quality of Chrysler cars imported into Australia remains poor.

For a considerable time in the 80's there was a popular line of thinking in the USA, pushed by Harvard and MIT and American management gurus, that the Japanese were good copiers but they lacked the creative talent to be innovative. Who would be game enough to say this now.

Toyota in Australia is now leading the sales race. In the 50's GMH had 50% of the Australian market. Now it has approx 15% and most of the sales are fleet sales at reduced margins, not private sales. Australian manufacturers generally, are not learning fast enough. However, at the time of the launch of the 2007 Camry, the Australian produced car was ranked as the highest quality of all the new Camry plant products as measured by Japanese auditors. This to me illustrates that we can do it.

The manufacturing problem in Australia is firmly based in the management court. The leadership has not been good enough. Too often the CEO's take a short term view to maximize shareholder value and sacrifice longer term improvements.

One company I consulted to required me to guarantee a payback period of 6 months on a \$0.5M investment in process innovation aimed at reducing production time from 10 days to 1 day. I could not agree with this view and therefore the innovation was never implemented. Four years after this rejection the company went into receivership.

Surely, there is a message here.

Australia continues to trade with a current account deficit, even in the resources boom fuelled by China's insatiable demand, and at a time when the Terms of Trade have never been more favourable. Economists keep telling me it doesn't matter what the Current Account Deficit is as long as the rest of the world does not see it as a problem.

What about the ownership of our assets? Take a look at the latent advertising by Sony in Casino Royale and tell me it doesn't matter.

The new planning techniques focusing on industries where we have a unique competitive advantage, must be taught and implemented urgently. If this requires government assistance then so be it, after all Toyota was supported heavily by the Japanese Government and look at what they have achieved. It is not in the national interest to abandon manufacturing.

Wake up Australia.

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