

As I write this the markets have improved over the last month however swine flu (soon to be renamed) is at Pandemic Level 5 with an imminent Level 6 on the way. At this time cases outside of Mexico have been mild and there remains optimism that the pandemic although contagious remains mild versus severe in terms of sickness and mortality rates. This is all coupled with the weak economy. Perhaps in more ways than one we are in a "hunker down and survive" mentality. Certainly the businesses I represent are there now. First quarter crew counts were OK but now the outlook is quiet. There is always an optimism that things will turn by the third quarter. Time will tell.

The big car manufacturers remain in the news – Bailouts, Bankruptcies, Mergers, Union Concessions, etc. They certainly suffer from the big company revenue model – when revenue dries up quickly they do not have the ability to ramp costs down quick enough. However from a management standpoint some of them have very good processes that are worth looking at. I will use this column to talk about some of their management strategies. Ford for example uses manufacturing strategic priorities as follows: safety, quality, delivery, cost, morale and environment (SQDCME).

Safety in the car manufacturing business is focused on the product. In our business it focuses on the workforce and should still be considered at the top of the scale. *Quality* in both cases focuses on the product. In our case the quality of the seismic data is all we have. Quality is also impacted by technology. What does the customer want? Can it be enhanced through technology (i.e. processing advances, multi-component phones, etc.)? *Delivery* in manufacturing deals with inventory costs versus a supply-on-demand system. In our business we would insert the term "production" in its place. Production has the same effect of reducing costs for us especially on a turnkey job. *Cost* certainly is self-evident across any business function. Perhaps as it pertains to our business it is about the cost of output. My membership often must absorb soft costs in the form of regulatory burden, stakeholder involvement, and even compliance costs with training and/or best practices. Their revenue doesn't go up correspondingly so they must find other ways to recover through technology and/or production. *Morale* is a workforce issue. In our industry we have tried to spend more time on the public relations side – doing presentations on the industry and its various career paths for high schools; putting on events such Seismic in Motion (SIM); and working with other Associations on the Energy message as a whole. Morale comes into play on how people think about themselves and about the work they do. *Environment* has certainly become the buzzword over the past 5 years or so. Whereas within car manufacturing it relates to climate change and emission standards, in many fashions for us it has become one of the top priorities. We continue to work towards reducing our impact and impact on the surface. Our business revolves around the search for hydrocarbons that although essential to human energy needs create societal and morale challenge with balancing this need and the effect on the environment.

About fifty years ago Toyota put forward the seven (7) deadly wastes in manufacturing. They certainly fall into the same type of mindset as Ford's SQDCME. The Seven Wastes of Production are Overproduction, Waiting, Transportation, Inventory, Motion, Over processing and Defective Units. I

have kept these brief and strictly from a manufacturing basis. But think about them in relation to the seismic business along the lines as provided previously in terms of Fords' SQDCME.

1. Overproduction – Over production involves producing goods over and above the amount required by the market at a given time. TIP: Over production can be avoided by using smaller batch sizes.
2. Waiting – Waiting involves periods of inactivity for people and product. TIP: By improving material and information flow, optimizing setups and changeovers and reducing the distance between work centres, productivity increases as the manufacturing cost decreases.
3. Inventory – There are many costs associated with holding excess amounts of inventory. TIP: To reduce inventory levels we can manufacture in small batches and introduce 'pull systems' to link production to consumption rates.
4. Transportation/Materials handling – Transporting product between processes is often viewed as "just part of the job", however it adds no value from the customers' perspective. TIP: When a factory layout is carefully planned, through the use of mapping product flows and process relationship charts, it not only reduces transportation waste but can also reduce WIP and time.
5. Motion – The waste of Motion refers to any excessive movement by people or machines. TIP: Awareness of ergonomics (eg. bending, stretching) within the process has direct economic benefits. Analyse and redesign jobs with excessive motion with the involvement of plant personnel.
6. Over processing – Many organizations fail to ask what the customer actually values. As a result they perform work deemed unnecessary or even detrimental. The most common examples of this is unnecessary packaging, over-finishing parts, or specifying unnecessarily accurate tolerances. TIP: By determining what it is that the customer is seeking and communicating this to staff with clear standards, inappropriate processing can be eliminated.
7. Defective Units – Processes not capable of producing the required specifications or quality are an obvious source of waste. TIP: Quality is improved through the use of standard work, training, 5S and continuous improvement tools.

Tough times typically require restructuring internally and often a rethinking of old processes. Bring on the next Boom....

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From the Thursday Files

*There is nothing so useless as doing efficiently
that which should not be done at all.*

– Peter F. Drucker

Mike Doyle is the President of the CAGC – the Canadian Association of Geophysical Contractors – representing the business interests of the seismic industry within Canada. The CAGC website may be found at www.cagc.ca

