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KAIKAKU: MANUFACTURING RE-IMAGINED

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As new global environments squeeze down on local manufacturers, it is important to take every opportunity to improve process and reduce cost to be competitive. But how does the modern manufacturer know if they are truly employing best practices? So many once-great American manufacturing firms are becoming vestiges of a quickly fading past glory. The key lies in assessing the current state—accurately. Sadly, many companies do not have the honest metrics to be objective and think differently than their predecessors and competition.



The old foundation is being removed so a new and stronger foundation can be poured for two of the larger machines to be relocated.

Introducing Kaikaku—“Radical Change.” Beyond TPS and Kaizen, this method of attacking stagnation on the factory floor and overhauling production is needed for the next generation manufacturers to be competitive.

Kaikaku consists of two characters: the first, Kai, meaning to change, and the second, Kaku, meaning to transform or expel.

Unlike kaizen, which is continuous improvement/incremental minor change, Kaikaku means radical change or a great reform to the system. While both Kaizen and Kaikaku can be applied to production, Kaikaku goes beyond production to break the existing paradigm and create a breakthrough using a new system or model.

There are many ways to create change within a company. TPS or lean manufacturing improvement on an incremental basis tends to come from middle management choice, identifying traditional wastes (seven wastes) from the production system and encouraging the day-to-day regular amount of placeholder or quota change that companies may require from their “lean” leaders.

There is a fundamental limitation with this in a typical western company, however. Most managers only feel com-

comfortable meeting internal demands by removing low hanging fruit, which is generally accepted and does not require a larger cost. Fundamental change, or that which requires executive approval, could possibly land the manager in a

compromising position (jeopardizing their job or ability to advance within the company).

Therefore, Kaikaku has to be a “top down” change. In fact, just as Kaizen is fundamental to the Toyota Production System,

Kaikaku is the fundamental concept to the little talked about (or understood) executive system used at Toyota.

One of the biggest struggles for many manufacturing companies is getting executives to truly understand the vital importance of not only how much manufacturing details and systems can change profitability, but moreover, how they can impede it.

This comes down to one of the basic principles discussed in the book “Good to Great.” As Jim Collins wrote, it is all about having “the right people on the bus.” And this is particularly true at the executive level as they tend to influence culture within the company the most.

Most companies are looking to hire or appoint a “Lean Champion” that is just on the manufacturing floor. But to understand and undertake great change, the executive staff also has to understand the plight of manufacturing from a ground floor level. The first step begins with understanding lean manufacturing basics and goes back to listening, observing and understanding core issues from the ground floor up.

I believe that the second law of thermodynamics applies to companies as well as energy. The second law of thermodynamics states that all energy will fall to a base form and entropy will increase over time. Entropy can be defined in many ways. Usually entropy is defined as a decrease of energy to a baser form (energy converting eventually to heat) or an expression of disorder or randomness increasing over time (chaos). With time, a company, which has many inherent variables, also

becomes more chaotic; the bigger the company, the more entropy by definition. As complexity increases within a system, so does chaos. This is why Kaizen is needed to simply stay competitive and healthy.

Many companies find themselves fighting fires within the organization, which leaves them taking care of only the immediate issues of the company. Root cause issues are not solved or understood, including at the executive level, and the fires are created by key critical problems not getting resolved. The executive needs to understand that the collective individual gripes expressed on the manufacturing floor are indeed the keys to the solution.

So often, observable “waste” is being overlooked in order to not “rock” the proverbial boat. Major changes may be needed that companies fear, such as capital cost expenditures and potential down time. Too often, manufacturing companies in North America have a management mindset that in order to increase efficiency and decrease cost, you must simply demand your employees work faster and harder. Simultaneously, they reduce spending on small but vital items, and completely avoid large capital repairs or moves—considered the sacred cows due to someone’s cost reduction agenda.

When the system gets so bad that there are too many fires to put out and not enough capital to fix even immediate problems (despite draconian cost saving measures), the company collapses, often blaming the wrong people in the process. A shortsighted mindset is a sure path to bankruptcy.

But Kaikaku is not just used to undo or overcome poor management budgeting issues, but to also re-examine why the current system or model should even be used.

Kaikaku in Action

To dispel notions that Kaikaku can only be used at the OEM level, here’s an example of a company that had been on a lean journey for six years. In that time, they had become a lean leader in mold manufacturing and had many refined systems that put them ahead of their competition. They had created a good lean culture and “top down” lean mindset.

When we first entered the company, Active Burgess, we recognized their tremendous strides and endeavored to analyze their current flow, questioning some of their core layout.

Redundancies could be consolidated between the two plants that they occupied. An overhaul of machine location and plant organization could be re-arranged to improve both sites’ productivity but requiring a capital commitment. Many

machines and operations were consolidated to reflect the real flow within the two organizations.

Cost savings and an improved value stream were revealed. New foundations were laid and cells were reorganized to achieve time and movement reductions that revolutionized the operations’ function.

Fortunately, the innovative executive staff, including the President and CEO, Mike Bragagnolo, as well as VP of Operations, Doug Brockman, understood the power and profitability in the proposed changes and decided to make some decisions that involved investing in the future, resulting in a 30% reduction in mold build hours and a repayment of capital costs within the first few mold builds.

Kaikaku begins with a healthy executive lean mindset that is willing to ask these tough questions:

- Are we investing in our future or just trying to cut costs and put out immediate fires?
- Is major capital investment needed to achieve not only competitiveness, but to surpass the competition?
- Is our current value stream reflecting the ultimate demands of the market and present/future needs of our customers?
- Are we keeping outmoded systems and machines in order to avoid downtime or capital expense?
- Are our designs the simplest and most manufacturable or are they the first ones we came up with that satisfied customer standards and functions?
- Do we have the metrics and tools to identify where change and innovation is possible or are we impeded because of fear and lack of data?
- Is our business model correct or are we missing our niche or an evolution occurring in the market?
- Are we a company only interested in status quo or are we bold enough to accept Kaikaku and become a market leader?

Shortly afterwards, new prospects toured the renovated plants and were so impressed that new business came as a result. Many companies do not realize that a commitment to lean has an effect on not only employee and company efficiencies, but also on how customers view an organization.

If you find your company has gone as far as it can using standard lean refinement tools and is unable to progress further due to your current paradigm of business, it is time for Kaikaku. Because sometimes, “If it ain’t broke, you have to break it.” **ME**