

Welcome to the March edition of the AME Newsletter. Sincere apologies that there has been a big gap since the last newsletter – hopefully we will be back on track to publish every six to eight weeks.

There are some exciting events jointly organised by the AME and Findlay Publications in March and July. Sign up now to attend. If you have any experiences, news or information to share please let us have them!

LEAN PARADIGMS

The following article appeared in "Lean Directions" the e-newsletter of the SME.

Some companies have been practicing at least some aspect of lean for 20-plus years. But in those years, paradigms have grown up around "lean," and some have become counterproductive. Tom Voss takes a look at three:

- (1) "We can't get started until we do our value stream map!"
- (2) "Lean or six sigma—we have to decide!"
- (3) "5S and TPM are the foundation for lean!"

You can access the complete article at:

<http://www.sme.org/cgi-bin/get-newsletter.pl?LEAN&20070209&5&>

DO YOU REALLY KNOW HOW TO FORWARD EMAILS?

The following article appeared in a recent edition of Richard Kunst's newsletter to the Canadian Consortium members

This was written by a System Administrator for a corporate system. It is an excellent message that ABSOLUTELY applies to ALL of us who send e-mails.

Do you really know how to forward e-mails? 50% of us do; 50% DO NOT! Do you wonder why you get viruses or excessive amounts of junk mail (Spam)? Do you hate it? Every time you forward an e-mail there is information left over

from the people who received the message before you and sent it to you, namely their e-mail addresses and names. As the messages get forwarded along, the list of addresses builds, and builds, and builds. All it takes is for some poor sap to get a virus, and his computer can send that virus to every e-mail address that has come across his computer. Or, someone can take all of those addresses and send junk mail to them or sell the addresses to spammers in the hope that you will go to the site and they will make five cents for each hit that they sell. That's right, all of that inconvenience over a nickel and because someone included visible e-mail addresses in their Forwarded message!

How do you stop it? Well, there are two easy steps:

1) When you Forward an e-mail, DELETE all of the other addresses that appear in the body of the message (at the top). That's right, DELETE them. Highlight them and delete them or backspace them or cut them -- whatever it is that you know how to do. (If you don't know how to perform at least one of these simple operations LEARN!) It only takes a second. You MUST click the "Forward" button first though; then you will have full Editing capabilities for the body and headers of the message. If you don't click on "Forward" first, you won't be able to Edit the message at all.

(2) Whenever you send an e-mail to more than one person, DO NOT use the To: or Cc: options for adding e-mail addresses. Always use the BCC: (Blind

Carbon Copy) option for listing the e-mail addresses of the folks you want to send the message to. This way the people you send to only see their own e-mail address and no one else's. If you don't see your **BCC:** option, click on where it says To: and your address list will appear. Highlight the address and choose **BCC: and that's it. It's that easy!!!**

When you send to **BCC:** (and leave the **To:** line blank) your message will automatically say "**Undisclosed Recipients**" in the "**To:**" field of the people who receive it, providing extra security and privacy to all the people in your Address Book.

(3) Remove any "FW:" in the subject line. You can rename the subject if you wish or even correct spelling.

(4) ALWAYS hit your Forward button from the actual e-mail you are reading. Ever get those e-mails that you have to open 10 or 15 or 20 FW: pages to read the one page with the information on it? By Forwarding from the actual final page you wish someone to view, prevent their having to open multiple e-mails just to see what you sent. (Many people will not open all those e-mails for fear of getting a virus; so your message may go unread.)

Have you ever received an email that is a petition? It states a position and asks you to add your name and address and to Forward it to a number of people or your entire Address Book. The email can be Forwarded on and on and can collect thousands of names and email addresses.

FACT: The completed petition is actually worth a couple of bucks to a professional spammer because of the wealth of valid names and e-mail addresses contained therein. If you want to support the petition, send it as your own personal letter to the intended recipient(s). Your position may carry more weight as a

personal letter than a laundry list of names and e-mail address on a petition - and, again, you will protect the privacy of those in your Address Book and provide them additional security against viruses and spammers.

Regarding petitions: Be aware, that the government (federal, state, and local) and most legitimate organizations completely disregard e-mail petitions. In order for a petition to have value and be acted upon, it is necessary to have LIVE, verifiable signatures, usually with the signers' legitimate mailing addresses.

So please, in the future, let's stop the junk mail and the viruses by working together and respecting the privacy and security of one another.

Finally, here's an idea!!! Let's send this to everyone we know (but PLEASE strip my address out first). This is something that **SHOULD** be forwarded.

DAN JONES' RECENT EMAIL

I still encounter a degree of confusion about one of the key mental models that gets in the way of lean thinking. Making products in batches and accumulating a full load before dispatching a truck are fundamental to mass production thinking. It also intuitively fits with our distant memory of harvesting crops and storing them to last through the winter. But you can find it everywhere, from seeing and treating patients in batches to flying as many passengers as possible in ever larger aircraft.

We have through the years seen regular accusations that smaller deliveries just-in-time make producers more vulnerable to disruptions in supply. We have also seen the assertion that little and often is worse for the environment, with many half-empty smaller trucks replacing fewer fully-loaded larger trucks. Unfortunately life is not as simple as this

and to really understand what is going on you need to look at real facts in real situations, not at simulation models. It is also necessary to shift our focus beyond our own activities in order to look at the supply chain as a whole.

One flaw in this argument is the experience that focusing on asset utilisation and keeping equipment as busy as possible does not actually achieve the desired result! Otherwise why would we typically find equipment in a mass production system only producing good products 30% of the time? And why is it that by focusing on improving capability, availability and flexibility lean producers can regularly increase this to 85% and above?

Exactly the same applies to truck utilisation. A few years ago, when supermarkets waited for suppliers to deliver full truck loads to them, truck utilisation was no more than 50%. Now that most supermarkets are picking up products from their suppliers more frequently, truck utilisation is also much higher.

There is a common myth that congestion in Toyota City is because they send lots of little trucks to their suppliers to pick up parts very frequently. In fact Toyota works with fewer direct suppliers, each of whom supplies five times more part numbers than western suppliers. It sends the largest trucks allowed on Japanese roads on regular milk rounds to these suppliers, arriving back at the assembly plant completely full. The congestion comes from trying to produce so many cars in one town. Indeed the congestion would be much worse if truck utilisation was as poor as in most mass production systems.

This kind of thinking also overlooks the costs incurred elsewhere in the supply chain from making and shipping in big batches. It is often associated with a belief that demand is chaotic and

unpredictable, rather than self-inflicted volatility from the way our planning systems work. Forecast driven batch production inevitably leads to continuous short term plan changes to respond to spikes and shortages despite warehouses full of stock and to overtime and expedited shipments. The costs of all this is in someone else's budget or in overheads, but they are not in the plan.

This is however the tip of the iceberg, when you factor in lost sales, discounted or obsolete stock, rework, inspection and the extra capacity and stocks to meet demand spikes and supply failures. The ideal supply chain is one in which lead times are as short as possible, production is driven by actual demand and production is capable of making every product as frequently as possible in line with demand.

But how can you justify more frequent deliveries from your suppliers? Probably only when you learn how to level your production and make every product frequently. Then you will begin to see the savings through your supply chain. It might then make sense to cooperate with other firms to pull products from your suppliers on more frequent and predictable shared deliveries.

On the other hand as on-line shopping grows regular deliveries to homes will replace the most environmentally damaging trip of all – consumers driving to pick up products from the store.

Lean thinking is not about zero inventories or the smallest trucks. It is about developing a common steady rhythm across the supply chain in line with demand, guarded from supply disruptions and real fluctuations in demand by just the right amount of standard inventories, possibly held off-line. Little and often is right thinking despite being counterintuitive.

2007 Lean Business Conferences from the Association for Manufacturing Excellence

21st March: Lean Manufacturing Business Conference Flakt Woods, Colchester, Essex

Senior managers and directors concerned with manufacturing operations will hear from their peers – manufacturing experts and business leaders advanced in their lean paths both on and beyond the production floor. This conference aims to prepare you properly for running and implementing advanced lean manufacturing to transform your business improvement.

The programme will comprise case study presentations in the morning followed by workshops in the afternoon at three levels (you select) - beginners, intermediate and advanced. The day is limited to 75 delegates (we attracted more than 100 for our last one).

Cost for booking Flakt Woods after 28 February:
members £95;
non-members £195 (includes 2007 AME-UK membership).

11th July: Lean Supply Chain Business Conference Heritage Motor Centre, Gaydon, Warwickshire

This is an opportunity to learn from professionals that have successfully taken their lean transformations right out to their supply chains. Aimed at senior managers and directors in manufacturing businesses wanting to take their lean business projects to the next level, this conference will provide

advice, guidance and workshops on techniques and systems that work.

Click here for the conference details
Details for both will be at www.leanbusiness.co.uk.

TOO MUCH SELFISH THINKING

by Bob Emiliani

The following article appeared in the Jan, 2007 issue of **Superfactory** www.superfactory.com The full article can be accessed at:

http://www.superfactory.com/articles/Emiliani_0107_selfish_thinking.htm

The Lean community has struggled for many years to gain buy-in from senior executives in large corporations. Perhaps it's been so hard because there is too much selfish thinking and not enough Lean thinking. If so, what countermeasures can be applied?

There is no doubt that Lean management has been mischaracterized as a "manufacturing thing" for most of the last 30 years, with a nearly singular focus on continuous improvement and the use Lean tools. This has been a principal factor that has limited the application of Lean principles and practices beyond operations, and also, of course, into services businesses, government, non-profits, etc. It also helps explain why nearly 30 years after Lean came to America there are only a few big businesses that practice Lean management pretty well. Shouldn't there be many more?

JIM WOMACK'S RECENT NEWSLETTER

Recently we at the Lean Enterprise Institute have started a new research project trying to answer a simple

question: "What is the best way to conduct a lean transformation?"

This is not a new question, of course. A decade ago Dan Jones and I proposed an "Action Plan" in our book *Lean Thinking*. We advised readers of the first four steps in transforming their enterprise: find a change agent, obtain the core lean knowledge, seize or create a crisis, and then map your value streams to determine the current situation and to envision future states.

The difference now is that lean thinking is fast becoming the norm rather than the exception for managers. And a large number of organizations have already taken the first four steps. Yet no one would say they are truly lean. The question therefore is, "Once you have a change agent, the core knowledge, a crisis, and maps for many of your processes, how do you most *effectively* transform your complete enterprise?"

The truth is that we don't know. We wouldn't be conducting research if we did! But we have some hypotheses I want to share:

Our first hypothesis is that it's critical to start by answering the question of *purpose*. What problems do customers want your organization to solve for them and what are the most critical needs of your organization? Dan Jones and I have found in recent years that customers often have more profound needs behind their expressed wants for specific goods or services. An organization that can identify these fundamental needs and truly solve customer problems will have a much better chance of succeeding as a lean enterprise.

Similarly, most organizations have a range of needs themselves – to grow, to increase margins, to preserve cash, to retain talented employees, etc. But what are the few critical internal needs that

the organization can tackle right now in order to truly prosper?

When we ask simple questions about customer and organizational purpose and which value streams address them, we often find that managers – lower, middle, and upper as well -- don't know. And this makes the lean transformation much harder because unimportant wants and needs may be tackled -- even the wrong value streams -- instead of the critical few that really matter. In the worst case, earnest managers may simply apply lean tools at random to every value stream in the hope that wants and needs will automatically be addressed. Yet this rarely happens.

Our second hypothesis is that it is critical for someone to accept the *responsibility* for transforming each of the critical value streams, each vital process. For value streams that flow only through one department or function, value-stream leadership is easy (or at least easier.) However, the most critical value streams – product development from concept to launch, fulfilment from order through delivery, support of the customer through the life cycle of their goods and services -- flow horizontally toward the customer through many parts of the organization and over extended periods of time. And here we have little experience with the right formula.

When we mention this issue to managers in most organizations their first proposal is to re-draw the organization chart to give specific individuals clear *authority* for each horizontal value stream. But in our experience this often misses the point. The many individuals touching the value stream are located in many different departments and functions for a good reason: This is the simplest way to organize knowledge and careers. Adding another layer of management or re-assigning everyone to a product family team with a heavy-weight manager may

do more harm than good to the organization as a whole.

A better approach is for someone to take responsibility for transforming each value stream. This individual needs to *create* their authority by asking insightful questions and tackling persistent problems to a point where those touching the value stream grant the value-stream leader the authority senior managers usually can't. (This is the situation of the Chief Engineer at Toyota, who has responsibility for the success and profitability of the product but who has no formal authority over any of the hundreds or thousands of individuals working on its development. The Chief Engineer leads by knowing more, seeing further, and asking better questions than any individual or single department.) Our hypothesis is that with careful selection of responsible value-stream leaders and by experimentation with the best methods for these responsible individuals to employ, the seeming paradox of responsibility without authority can be resolved to the great benefit of the organization.

Our third hypothesis is that the best way to engage *people* at every level to tackle customer and organizational purpose is to involve everyone in routine, continuous problem solving. People love to solve problems. But they rarely get the chance! Doing this means creating ways for everyone to see the current state of the process they are touching, understand how it serves the customer, and suggest ways to improve it. This includes rapid kaizen, of course. But it's often more important to tackle standard work at the primary level of value creation, to conduct A3 analysis at the value-stream level, and to engage in strategy deployment at the level of the entire organization.

Our final hypothesis is that most managers have learned to see muda (waste) in the individual steps of their

value streams. But they fail to see, much less to tackle, the problems of mura (unevenness) and muri (overburden) that create much of the muda. For example, we routinely see managers with so many out-of-control conditions to work around that they have no time left over for thinking about improvement. They are proud of how hard they work and what they manage to achieve in chaotic conditions. Yet the press of the exceptional -- the thing "gone wrong" -- crowds out the pressing need for true problem solving. As a result few problems ever get solved.

Where does this muri come from? Usually it is created within the organization rather than externally by the customer, as most managers seem to believe. Actions by managers in one part of the organization cause unevenness (mura) in the activities of managers and employees in other parts of the organization. And this causes muri -- the overburden most managers feel most of the time. For example, the waves of orders at the end of the reporting period that overburden production and purchasing are rarely addressing the real problems of the customer. Instead, these waves are created by sales incentives and bonuses set by the sales and marketing departments. It follows that to make real progress in organizational transformation managers need to address all three Ms -- muda, mura, and muri -- at the same time.

As I said at the outset, these are simply hypotheses. We'll inform everyone of our findings. But in the meantime I hope you will devise your own hypotheses about the most effective methods for lean transformation and put them to the test. And I hope you will be willing to share your findings with the Lean Community around the world.

Dan Jones and Jim Womack issue their newsletters approximately every month. In this newsletter, we have included two of their newsletters to bring you up to date!

MORE FROM JIM WOMACK - PCDA

By the time I founded the Lean Enterprise Institute in mid-1997, I had been thinking for years about how organizations prioritize and plan. And I had carefully read the policy deployment (hoshin kanri) literature emerging from Japan since the 1970s. So I thought it would be easy to develop and implement both a long-range and a one-year plan.

I asked my friend Pat Lancaster (then the Chairman of Lantech, the subject of Chapter 6 of my and Dan Jones's *Lean Thinking*) to come to Boston to help us as a facilitator. Our whole team set out with great energy and two days later, after much frank discussion, we had our plan. We had agreed on our organizational direction, selected our major priorities for the next few years, set targets, and defined specific initiatives to achieve them. We had won the war against chaos and indecision!

But there was a problem: We soon discovered that we had no practical means to implement the plan. Specifically, we had no effective way to assign responsibility for our initiatives, which cut across the organization. We had no workable way to measure our progress. And we had no means of determining why we were often not getting the results we expected from our initiatives and what to do about shortfalls. In short, we had conducted a great two-day exercise with the help of a brilliant facilitator and we had produced a great plan. But it produced no benefit for our organization. Quietly, we soon abandoned the whole approach and substituted a simple annual budgeting process.

Fortunately, this simple process was sufficient for LEI to flourish as a small organization over the next decade. However, I kept reflecting on why we were so good at picking the right things to do (and creating our annual budget) but much less adept at getting the right things done. In the language of Plan-Do-Check-Act (PDCA), introduced by W. Edwards Deming, we were great at P but struggled with DCA.

In the past year we've grown dramatically and LEI has become a much more complex organization. (We now have four major product lines – each with a value-stream leader -- for learning materials, education, events, and research partnerships with a range of organizations.) Suddenly our simple budgeting process was no longer adequate and I was forced to revisit the issue of prioritization and planning. At the same time, in our research activities I was watching many organizations struggle as they tried -- as we had -- to introduce complex planning systems derived from the standard Japanese-derived texts on hoshin kanri.

I was delighted therefore when Toyota alumnus Pascal Dennis approached me with the suggestion that strategy deployment, as he calls hoshin kanri, can be made much simpler and more effective. He proposed to write a leader's guide that was a cross between a workbook and a novel in order to illustrate a more effective method for planning and execution. He also committed to revealing the thought process behind effective planning and execution that he had learned in his years at Toyota, not just describe the techniques.

During the past year, as I've reviewed Pascal's work and tried to apply it in managing LEI, I've gained some real insights into how to do strategy

deployment properly. Let me share them briefly:

requires no adjustment to the organization chart. Deployment

* The "Plan" part really is simple. But it's critically important as you start to gain agreement on where your organization really stands, that is on its "current state." This means developing simple, visual measures of current performance that everyone can see and agree on. Otherwise the plan is based on illusion.

leadership is simply an additional task for designated senior managers, one that becomes much easier as experience is gained over several years.

* The "Do" part will succeed if the plan tells a simple, persuasive story and each element of the plan is easily understandable by everyone. Toyota's A3 method for describing on a single sheet of paper the issue each plan element is addressing -- and the way the organization will solve it -- has startling power once everyone learns how to read A3s. (I've been amazed at what A3 analysis has done for our value-stream management at LEI and what it has done for my ability to communicate to everyone the direction LEI is taking.)

* Some organizations can deploy plan elements for each product family value stream, as we have at LEI. However, many organizations -- far more than I had realized until recently -- are so unstable in every shared process that they may be better off to start with organization-wide themes like quality, delivery, and cost, in order to create basic stability before they switch to a value-stream approach.

* The "Check" part of the plan is critical and is almost universally ignored. Yet there is no point in starting off to deploy a plan unless there is a standardized method for measuring the results and leadership commitment to follow through.

* Perhaps most important: It's all about people. I've recently reflected on Toyota's quality concept of "autonomation", or jidoka, which they describe as "automation with a human touch". This means that employees are actively engaged at every level in insuring that process technology -- no matter how sophisticated -- works properly to produce a good result every time. It has occurred to me that strategy deployment as it ought to be practiced is similar. It's not an exercise in cold logic, done once and forgotten. Rather it is "hoshin kanri with a human touch" in which everyone in the organization becomes a scientist participating in continual experiments with every plan element by means of PDCA.

* The "Act" or "Adjust" step is equally important but requires effective problem solving to understand why the plan is not achieving its intended results (as shown in the "Check" step.) Even organizations that check their progress are usually very weak at adjusting. Yet almost no plan, even at Toyota, produces exactly the results expected. Adjustment is inevitable and continual.

MORE FROM DAN JONES ...

* Every element in the plan needs a deployment leader who can look across the functions, see the whole, and take responsibility for a good result. This is like the Chief Engineer at Toyota. And the good news is that designating a deployment leader for each plan element

Two questions from very different perspectives illustrate how the reasons for going lean are changing. First from Denmark, where a few years ago they were very worried about losing manufacturing jobs to low wage countries to the east. Since then Dansk Industri, the national industry association has run one of the most successful campaigns I have seen to

encourage their members to go lean. As a result they are not just retaining manufacturing jobs in Denmark, but they are also running out of people to fill manufacturing jobs! At the same time they liberalised their labour market and unemployment is now very low, even amongst young people.

So their question was "how can we use lean to enable our existing employees to produce two or three times as much in the future?" As population ages and declines in many European countries, as well as in Russia and Japan, this question will be asked more frequently. We are going to need to find ways to produce the goods and deliver the services with less people, or to increase immigration. To achieve this means going beyond streamlining today's processes and fundamentally redesigning tomorrow's products, production processes and supply chains.

The second question was from a group of very senior managers from China. They are very enthusiastic to embrace lean, and could see how lean can help make locally produced goods more affordable to local consumers. But they realise that to meet the growing economic aspirations of their citizens they will have to do so in ways that require fewer resources and that create less environmental pollution and greenhouse gasses. So they were interested in "how can they use lean to save resources and avoid pollution?" In other words, how can lean help us also become green?

Lean thinkers are used to tracking the time and effort as a product moves through an organisation and to distinguishing the few minutes it takes to create the value customers are paying for from the month or more that it spends in the organisation. Compressing throughput time from several months to a few days clearly requires far less space and energy. It almost certainly also uses less materials and produces less scrap

and obsolescent stock. The ability to produce in line with demand also reduces the inventories (and hence storage space and energy costs) in the pipeline all the way to the end consumer.

But the really significant gains come from compressing supply chains by relocating value creating steps closer together, and where possible also closer to customers. Most organisations are unaware that their products take between three months to a year or more to travel through their current supply chains, often going back and forth across the globe before reaching the customer. Although current wage cost differentials and low transport costs encourage this trend, if we look at total supply chain costs much of this does not make economic sense, as we described in *Lean Solutions*.

If we also start tracking the energy and emissions from all the processing, storage and transportation steps across supply chains and convert them into units of CO2 per product we will also be able to see the environmental footprint of each end-to-end supply chain. We know from earlier work that the most polluting part of the supply chain for consumer goods is the trip to the supermarket and then storing the goods in our refrigerators and freezers at home until we eat them. But it also shows the choices we will increasingly have to make between for instance air freighting more and more products across the world or enabling people to fly across the world.

Beyond this the next step is to fundamentally rethink the product. A few weeks ago, tucked away inside the Financial Times I noticed a very interesting quote from the R&D Director of Toyota. He announced that their third generation hybrid engine to be launched in three years time would be "half, the size, half the weight and half the cost" of

the current generation engine in the Prius. With characteristic understatement he said he thought a lot of people "might be quite surprised at this".

They should not have been – Toyota began their green technology quest back in 1990 when Eiji Toyoda, the post war genius who built the post war Toyota, questioned whether it was a good idea for Toyota to keep making cars with conventional technology. At each stage Toyota has clearly announced their green intentions in their Annual Report – which everyone ignores - and then fulfilled them! Will the next generation diesel engine make such a dramatic leap in resource use and cost? What preparations are your organisations making to meet the green challenges of the future?

ASKING QUESTIONS ON THE SHOP FLOOR

Thanks to Don Breakley of the Manitoba Consortium for this article

It is always refreshing going to the **gemba** –actually walking a value stream all the way through an organization. This is where I learn to collect the questions to think about next. There is no doubt in my mind that all managers should walk their value streams as frequently as possible. By asking the right questions you can quickly discover almost all the things that need to be done. And because everything ends up on the shop floor it also reveals a lot about how management actually thinks. **After all the shop floor is a reflection of management!**

In one company making good progress with lean, an operator was showing me his daily production instructions. We discussed the problems that were holding him up that day. I then asked

how often he was able to complete his daily plan. Without hesitation he replied—never! So what do they do then? They just change tomorrow's plan! This was very revealing to the senior manager accompanying me, who was the proud architect of the central planning system that was "optimizing" production in each operation in each of their plants. This prompted a very interesting discussion when we met the management team later that day.

In another company I followed a top manager on a whirlwind tour to rally the troops. Accompanied by an army of staff he offered the shop floor team all the assistance they needed to accomplish their work, before he ran off to his next appointment. They looked baffled, because it was clear no one had told him they did not actually have enough work to do—the problem lay elsewhere. They were held up waiting for engineering drawings to arrive and for suppliers to deliver the right parts. Other departments were responsible for sorting out these problems.

In truth these events could have happened in most of our organizations, and not just in manufacturing. The reality is that as soon you begin asking the five whys across departments the trail goes cold. Because no one is responsible for the value stream as it flows through the organization. Once someone is appointed to be the value stream manager the first thing they need to do is to ask lots of questions.

One place to start asking questions is with planning or scheduling. Most planners were trained on simulations, which assume that if only the world would behave according to the plan things would work out, as they should do. To them improving the plan is all about collecting more data, improving data accuracy, getting better forecasts etc. When problems occur they find it difficult to acknowledge the extra volatility their frequent changes to the

plan create —which usually make the situation worse and not better.

Toyota starts from a completely different assumption. ***They assume that even the best processes will continually be subject to frequent interruptions.*** So they pay a lot of attention to tracking progress in real time and to designing lean response processes to get back on track as quickly as possible —so plans are actually met every day! They also take responsibility for actively leveling and filtering out the noise in orders being passed to operations, in order to create as much stability for them as possible.

And they then go to work on the problems —using the common scientific approach to problem solving through root cause analysis and experimentation, which every manager and engineer learns from the day they join the company. So the second place to ask questions is in operations itself. What are the most frequent causes of interruption in the value stream and is there a problem solving capability ready to solve them? It is staggering how much attention Toyota continues to place on problem solving and on improving the basic stability (right first time on time capability and equipment availability) in every activity.

The third place to ask questions is in the other functions like purchasing, marketing and sales, human resources and engineering. For instance, I continue to be amazed how many firms are reluctant to take full responsibility for reconfiguring their supply base and synchronizing the operations of their suppliers with their own. Almost certainly they have too many suppliers, who are usually too far away to respond quickly enough. Compressing their end-to-end value streams could remove layers of cost while also minimizing its impact on the environment.

Likewise I am also surprised how many firms are reluctant to challenge their

existing distribution channels. Some firms are learning that selling direct to end customers through the web generates additional sales, rather than cannibalizing existing channels. ***They are also learning that listening to customers can show how to eliminate unnecessary costs while improving customer service.*** Once you begin a win-win dialogue with customers who you know by name the opportunities for improvement are endless. Just watch what happens when Tesco surprises the world with it launches its new convenience-retailing format in California early next year.

So the question to think about is who is asking the right questions about how to improve each value stream in your organization?

AUTONOMOUS KAIZEN

By Gary Kerr Leveraged LEAN gary.kerr@lean.com.au

Go ahead and ask your people if they can think of at least one idea that would make their job easier, of higher quality, faster, safer, more comfortable, or somehow better and they will probably just laugh and say “You only want one?” If all your people can think of things that would make your company more competitive then what’s stopping them?

- ◆ Culture and a feeling that we are not safe from potential failure if we try to improve
- ◆ There is no Leadership expectation that my job is to make improvements
- ◆ Ownership. This is not MY process, I only work here
- ◆ Training. I have not been trained in making improvements, we have engineers for that
- ◆ Systems. I have got some ideas but there is no-one to tell and no way implement them

We often talk of Continuous Improvement without really having any idea of what it takes to energize a mass of people towards a common goal and create a system where they can contribute.

We need to address the culture and promote a “Cause” culture rather than the natural “Blame” culture. Cause is about the system while Blame is about the person. While your culture focuses on the *who-to-punish*, rather than the *what-to-fix*, Continuous Improvement will just be a slogan and not a day to day reality. Effort must be rewarded as easily as success because it is the discretionary effort that we are trying to promote. 5S will help to grow the ownership if deployed correctly with Leadership support. The most difficult part has always been the System for Continuous Improvement. We don’t want people making unauthorised changes that might lead to problems but we do want ownership. These two elements appear to be in conflict.

One of my clients (The Duha Group) have been working on the concept that I refer to as Autonomous Kaizen. I have worked with others to refine this concept into a working system.

Each team has a board as shown below. This includes all production and support teams.

and write it on a yellow sticky note or official idea slip. The note is placed onto the Effort/Reward matrix as agreed by the team.

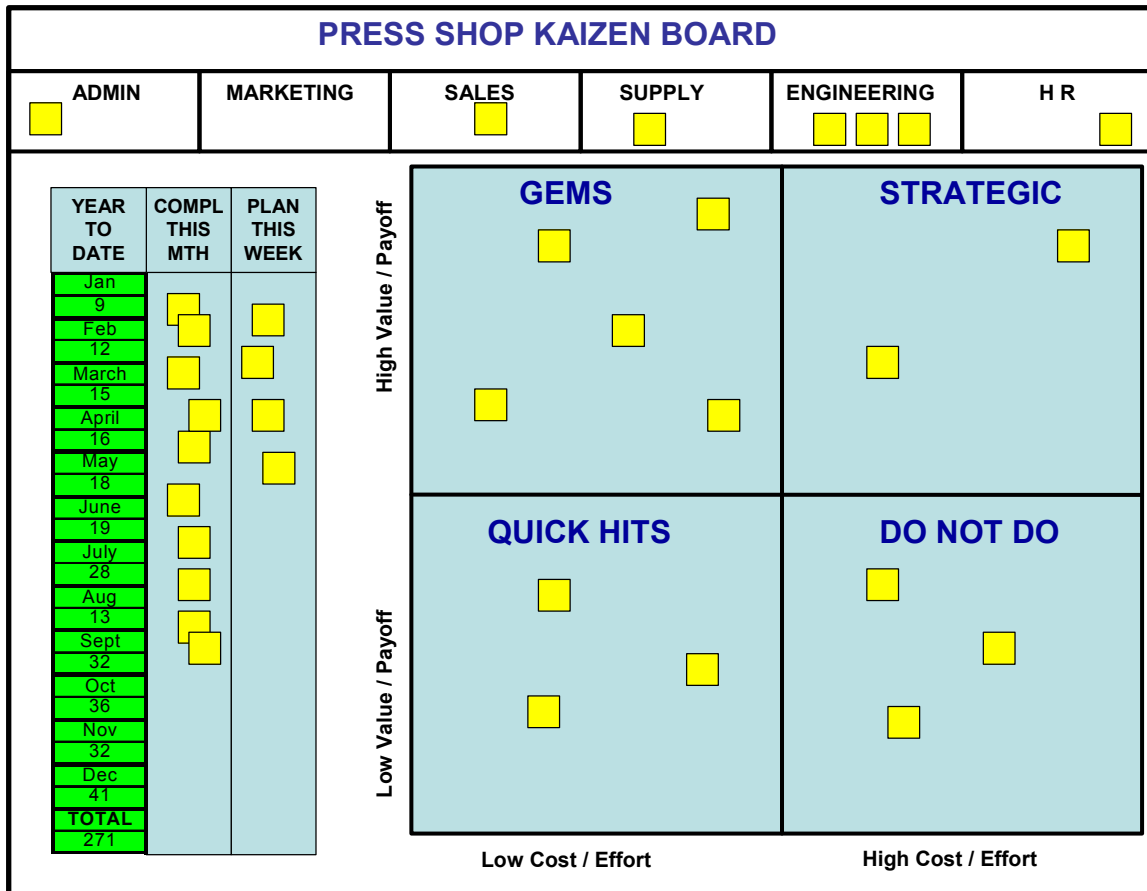
Low Effort/High Reward are *Gems* that should be implemented without delay.

Low Effort/ Low Reward still represent improvement and should be implemented as a “Quick Hits” when all the Gems are finalised.

Some great ideas are not easy for the team to implement and are placed in the **High Effort/High Rewards** quadrant. These are *Strategic* ideas which should be handed off to other groups for analysis on their boards.

Any ideas in the **High Effort/Low Reward** quadrant should be explained to the initiator before being removed from the board at month end.

Ideas in the **Low Effort/High Reward** quadrant may be implemented immediately without seeking permission (Autonomously), followed by anything in the quadrant below. The team signals its intention to implement an idea by moving the idea slip from the



Any member of the team may initiate an idea assessment matrix to the “Plan this Week”

column. As the ideas are implemented the slip is moved from the Plan column to the **Completed this Month** column so that everyone can see how each team is progressing month to date with their improvements. At the end of month the implemented ideas are tallied and the **Year to Date** score is updated so that the rate of Continuous Improvement can be noted and encouraged.

The Strategic ideas that are passed to one of the support groups on the top of the board are removed each week and placed on the support group's board. This group assesses the idea and places it on their matrix, possibly in their Low Effort area.

This system supports Continuous Improvement, provides an element of control and promotes ownership in a culture of ongoing change.

COFFEE 'SMED'

The following is from NWLEAN's Yahoogroups' Lean thread. This site allows readers to ask and respond to other's questions. <http://groups.yahoo.com/group/NWLEAN/>

Justin asked, *"Can anyone share details of a practical set-up reduction/SMED exercise that can be used to teach set up reduction in a classroom environment?"*

Bill Kluck replied:

"Here is a training module that you can develop in a couple of hours, and it will resonate with everyone. It will show each stage of SMED implementation, and point out not only the long-term benefits, but it stresses the methodology as well.

I've used it many times, and everyone involved took away practical skills that they could immediately use. Also, it uses materials that you will find in ANY facility, building, or office, so you don't have to purchase any specialized kits, or pay for consultants to facilitate it.

I call this module the COFFEE exercise. Nearly everyone drinks coffee. Coffee is

made in any number of environments: At home, in the office, in your hotel room, in the lunchroom (either by pot, or in a machine), at the restaurant or coffee shop.

The object of the module is to significantly (by 50% or greater), reduce the time it takes from the last cup of coffee in a pot, to the first cup out of the next pot.

The beauty of this module is that you do it IN THE ENVIROMENT, just like you'll be doing SMED on the floor. So you'll actually be improving a system!

Begin by timing the changeover, as performed by whoever normally does the task. Digital filming can be useful (especially if there are disputes about the sequence or the timing), so make sure you have a digital camera on hand. If you can gather data on a few cycles, all the better (it will give you some idea about the standard deviation, which is just as important to reduce).

Then list out the sequence, and assign each step the INTERNAL, EXTERNAL, or JPW (just plain waste) label. Next, reorder the steps, eliminating the JPW, and putting the EXTERNAL either up front (prep work) or after (clean up tasks). This alone will show some improvement. Then go to work on process improvements, which have no cost (5S, shortening travel distances, reducing as many other wastes as you can). This will provide another level of improvement. DON'T FORGET THAT 1/2 A POT TAKES HALF THE TIME TO BREW; dwell time isn't necessarily fixed.

Finally, brainstorm items that may have some minor costs (avoid the "BUY A COFFEE MACHINE", or "HAVE THE COFFEE CATERED" solutions, although these KAIKAKU methods should be discussed and analyzed, thru the normal capital improvement channels).

Then do some dry runs with the new system. You'll be amazed at how much time you'll have shaved off the original,

and how much the team has learned. Follow it up with a similar exercise directly in the operational environment, so your new experts can apply their newly acquired skills."