

## Watch Out for the Toolheads

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Many management fads appeal to managers because of the means of intervention; managers like to think of change as something you do with training and projects. I gained an antipathy to change by tools training and projects in the early 1980s while studying TQM programmes that failed. Of course, people do get improvements with tools, but they are insignificant when compared to the benefits from changing the system. I took the view that it is better to teach perspective — how to think — and if tools help, people will ‘beat a path’ to the cupboard door. For example, it is more important to teach the value, importance and issues associated with managing flow than teaching how to map a flow. I am still of that view. What’s more, teaching tools very rarely results in a change to the system.

It is a problem of intervention. If the object of a change is to change the system, tools can, at best, be only an aid. It is a common fallacy to believe that change is no more than a matter of education. This was the fallacy of TQM programmes and today is the fallacy behind the promotion of the Toyota System as a set of tools. Managers are being told that tools such as 5S, takt time, Poke Yoka and Value Stream Mapping are the means by which they can emulate Toyota. The purpose of this chapter is to explore how these tools got developed and assess their suitability for making effective change in service organisations.

### Tools – the codification of method

With an ever-greater interest in the Toyota phenomenon it is perhaps inevitable that ‘lean manufacturing tools’ emerged. People assume that writing the method down will facilitate its adoption by others. The Toyota Production System was labelled ‘lean’ by Womack, Roos and Jones when they wrote “The Machine That Changed the World”. The word represented the ideas of economy of effort, minimising waste and joined-up thinking in terms of working hand-in-hand with suppliers to manage flow; the consequences were low cost, low inventory and fitness for purpose. Taiichi Ohno did not call it ‘lean’. Creating the label ‘lean’ (what it is), leads naturally to the notion of tools (how you do it), obscuring the importance of perspective (how to think about it). Obscuring the importance of perspective leads to a failure to appreciate that Ohno’s ideas represent a philosophy for the design and management of work that is diametrically opposed to today’s norms. The codification of method misses this important issue: thinking. While the tools are accurate descriptions of what happens in terms of method, it is the context that is more important.

To Ohno, the approach was intuitive; a way of behaving when faced with problems that needed solving. It was both conceptual — for example, focus primarily on flow not function — and behavioural — if you found a problem it was normal to talk about it, get data about it, share it with colleagues and experts, learn the right way to fix it and then apply the solution in a way that was focused on this ‘learning’. It was based on both knowledge and empiricism. When another problem cropped up, the same principles would be applied. It was what we might call a learning and knowledge culture.

From codifying methods it is a short step to choosing those ‘tools’ that appear to be making the big difference and describing them as a series of tasks or steps to be undertaken. Codification itself suits the command-and-control culture. Tools could be taught, directed at problems (as defined in the current view), and reporting on progress can be institutionalised through the

hierarchy. Thus we have a stark contrast in leadership: learning and method through active involvement, versus tools training and projects with involvement limited to specifying (the wrong) problems (or specifying them wrongly) and receiving reports on progress.

An essential guide to the lean manufacturing tools

To understand the dangers of trying to introduce change via tools, I shall describe the lean manufacturing tools being promoted as 'solutions' to service organisations, illustrating how they are used in manufacturing. For each tool I address the questions:

- What is it?
- How does it work?
- What benefit does it bring to manufacturing?
- Subsequently I will assess their suitability for application in service organisations.

Five S

*What is 5S?*

5S is a tool that is used to provide a standard workplace environment, enabling standardised work and helping to remove waste. 5S provides visualisation of the work and waste; it enables you to see flow. 5S involves employees in maintaining an organised, efficient, safe and clean workplace. 5S is known as many things: 5S, 5C, Cando, Work Place Organisation (WPO), illustrating the fact that codification often results in a struggle properly and accurately to describe the purpose. Below are translations and pronunciations for the steps in 5S, with a brief description of each:

<b>Seiri</b>	'Say-ree' Sort	Instant disposal of unnecessary things, arrangement or reorganization
<b>Saiton</b>	'Say-ton' Set in order	Put things in order
<b>Seiso</b>	'Say-soo' Shine	Clean to original condition, do clean work positively
<b>Seiketsu</b>	'Say-kit-sue' Systemise, standardise	Clean, pure, untainted workplace. Free from bad habits
<b>Shitsuke</b>	'Shit-zuk-sustain ay'	Be well mannered, use polite behaviour, be disciplined. Maintain what has been achieved

The philosophy behind 5S is: order, organisation, discipline, elimination of bad habits and wasted effort.

Looking at 5S this way illustrates the link between the language, the meaning of the words, and their application. These words are inherent in the Japanese language. For example, three of the four words above contain the word sei, which means 'to arrange, to create sequence'. The Japanese word for production is seizou, meaning organising into a whole. In this sense, 5S is an intuitive aspect of the approach to working. Command-and-control thinkers would say they too are concerned with organising into a whole, but in practice their methods and measures are concerned with the management of parts, not the whole.

*How does 5S work?*

The idea is that through a systematic approach, people will feel more ownership of the workplace. This encourages self-discipline and the improvement of the quality and safety of the working

environment. It also ensures the workplace is well organised and the workflow can be easily seen.

The 5S or 5C activities are as follows:

<b>Sort</b>	Clearout and classify	Bin what you don't need — free-up space. If not sure, use a red tag — ask: Who owns it? Can we bin it? Store other things not needed Often short blitz sessions
<b>Set in order</b>	Configure	Set in order — a place for everything and everything in its place, eg shadow boards / fixed capacity shaped shelves Order what is remaining according to frequency of use Create a standard layout — easy to see if everything is in its place
<b>Shine</b>	Clean and check	Ensure equipment is fit for purpose
<b>Standardise</b>	Conformity	Establish best way to do things and format. Make this the standard and communicate it
<b>Sustain and Improve</b>	Custom and practice	Make it a habit and review frequently

*What benefit does 5S bring in manufacturing?*

Standardisation and 5S go hand in hand. In manufacturing, 5S is a solution to problems of organisation, order and safety in the workplace. By enabling you to see flow clearly, it helps to improve visual management in the workplace. Seeing and standardising flow are essential prerequisites for improving manufacturing operations. For this reason 5S is generally something you do first.

Takt time

*What is takt time?*

Takt time is the demand (units of production ordered by customers) divided by the time available to produce them. It is an essential method for understanding at what rate parts need to flow to meet the requirement of the whole, and the requirement of the whole is driven by the rate of customer demand. In simple terms, takt time is mathematics for managing flow throughout the system at the rate of demand.

In German, 'Takt' means 'heartbeat' or 'rhythm'. It is not a Japanese word. In the 1950s, Ohno had a problem. Toyota's trucks and tractors were in high demand because of the Korean war, but because of the war it was difficult to bring in raw materials. As a result Ohno found he often ended up trying to complete a month's production in the final two weeks of the month.

Ohno set out to deal with this problem by seeking to understand what the system would need to do in order to meet demand. He took the expected demand over a given time and divided it by the time available to meet that demand. This gave him the 'takt' time, which allowed him to understand if the system was producing enough or too much at any given time and in any place. Ohno did not use the label 'takt time'. He saw the 'heartbeat' as a way to manage production.

*How does takt time work?*

An example will illustrate:

Bottled Water Co.

The number of bottles of water a shop sells will vary enormously.

A large supermarket will sell much more than a corner shop.

What will affect sales?

- The weather – if it's a hot day the shops will sell more
- Promotions
- Health scares...etc

How does a bottled water company deal with this variation in demand?

- Hold stock. In this case, costs rise with inventory and warehousing.
- Forecasting.

The problem is variation in demand, which will lead to variation in production and thus inefficiencies. If you make too much, it costs you in raw materials and storage; and lost profit if you use promotions to get rid of the excess. If you make too little, it costs you in lost business and, possibly, penalties with major customers.

Take a typical summer period when we expect the demand to be about 25 million bottles:

The period is 16 weeks

The company works a six-day week, using the other day for cleaning and maintenance, on a 24-hour shift pattern

$16 \times 6 \times 24 = 2304$  hrs available

Demand / time available: 25,000,000 divided by 2304 = 18,851 bottles per hour

18,851 bottles per hour is the what the heartbeat or rhythm of the whole system needs to be; it is the primary guide for production.

Now that we have this figure, suppose it rains? What happens if a machine stops? What about variation? The answer is that the takt time is varied to react to changes as required. The production must be a stable, standardised flow, otherwise takt time will be irrelevant. Takt time works like a faster / slower control on the system, allowing you to produce in accordance with variation in demand. The system is, therefore, flexible and responsive. Without takt time other problems within the process and the demand would be hidden by production variation and tampering by the managers. With takt time, bottlenecks within and outside the process can be understood and managed.

*What benefit does takt time bring in manufacturing?*

Takt time gives you a volume control for the management of production against demand. It is essential in managing flow against demand. The benefits in manufacturing are the ability to produce to demand with better control and predictability. Like so much of the Toyota Production System, its effect is to clear away the chaff of management's 'created variation' so that the real causes of variation can be addressed.

## **Poke Yoka**

*What is poka yoke?*

Poke Yoka is a tool for error prevention and mistake proofing. The idea is to design products and processes to detect errors before they become defects, thereby improving productivity and reliability

Poke Yoka is the label used generally, but if you look at Ohno's written work he describes the idea as Baka Yoka. Changing Baka to Poke was driven by a combination of political correctness and Western interpretation. Baka is a mild word for 'chump / idiot / fool' and Yokeru means 'to avoid bad situations', or 'move out of the way to avoid being in danger'. Translated into English, Baka Yoka literally means 'fool proofing'. It would appear that this was not palatable, so a similar word was used which translates as 'mistake proofing'.

*How does poka yoke work?*

A machine will have a built-in automated stopping device to prevent it from doing the wrong thing. One consequence is one operator can man several machines, since the machines will signal when someone is required to fix a problem. Making problems loud, visible and obvious guarantees that they are dealt with. The flow of production is halted until the error is corrected.

In command-and-control designs, we build in inspection (which only leads to more errors), whereas in Baka Yoka the next process is inherently a quality check. If there is a fault the process stops; the problem then gets rectified at source and never returns. Examples of the application of Poke Yoka include gauges where everything but the 'OK' reading is blanked off: if you can't see the needle on the gauge, there is a problem.

*What benefit does poka yoke bring in manufacturing?*

Poke Yoka prevents errors moving forward in the production line. In this way it is a method for controlling and improving the flow of production. Note that the control is designed into the work, sending a signal to the worker to act.

Value stream mapping

*What is value stream mapping?*

Value stream mapping (VSM) is a method for visualising and thus understanding a flow, end to end. In many manufacturing environments the end-to-end flow is difficult to see. In their book Lean Thinking, Womack and Jones define five key steps for going 'lean': Identify the value stream, understand value, flow, pull, perfection. VSM is primarily concerned with the second and third steps: understanding value and flow. Without managing value work through a flow, it is difficult if not impossible to make any real steps towards a true 'pull' (make-to-order) system. The ability to identify key product flows and understand them from end to end is central to the improvement of manufacturing flows. VSM can be used to illustrate problems and trigger solutions or to build information required to redesign a manufacturing flow entirely.

*How does VSM work?*

VSM requires gathering the following data:

- inputs
- processing times
- waiting times
- batch sizes
- value-adding time
- waste

The idea is that you build the whole picture before you decide where to act.

In building a value stream map, the first step is to map the physical process, described above in the rectangles running horizontally through the middle of the map. The hexagonal shapes within the rectangles detail the cycle time for each process. Below this, you add information relating to batch sizes of incoming goods, machines speeds, downtime and uptime percentages for machines and so on. This information gives a detailed insight into what is actually happening on the shop floor.

The next important rows are the 'Qs' and triangles above the physical process. These detail the quality check points and the typical inventory found between each process. Above this are the management activities, describing the nature of control within the organisation, planning methods and frequencies both at shop floor level and above. It also contains information about the frequency of customer orders and typical order characteristics. The current method of planning and communication is also detailed here, with different styles of lines for electronic or non-electronic approaches.

The final and perhaps most important detail is the value-adding ratio, found at the bottom of the map. This is the ratio of time spent on value-adding to non-value-adding activities. It should be remembered that typical manufacturers struggle to achieve better than 5 per cent value-add; world leaders such as Toyota operate at around 20 per cent. It should be understood that the value-add ratio is never an impressive figure.

*What benefit does VSM bring in manufacturing?*

VSM can be used to identify and target some or all of the seven kinds of waste:

- output quality/defects
- overproduction
- inventory
- transportation
- motion
- waiting/delays
- processing time

By visualising the process with this level of detail and quantity of information, tackling problems becomes substantially easier. Any activities undertaken will be from an end-to-end (systems) perspective rather than specific to activities, so there will be no downstream negative impacts of local solutions. That is, solutions will be undertaken in terms of impact on flow, rather than activity improvements for their own sake.

Merely building this map would give a sufficient understanding of the flow to trigger some improvements. But VSM also provides the opportunity to redesign the whole flow. The understanding gained from this exercise can be used to build a future-state map, based on optimising end-to-end flow.

To do this, the map is analysed to identify where bottleneck activities are, i.e. processes that have slower cycle times than the rest and/or are less reliable or are subject to other restrictions. From this the flow capability can be compared to the takt time for demand. If the activities globally take longer than the available takt time, then there is a capacity issue. If not, the activities will have to be balanced around the takt time.

VSM makes it possible to redesign the manufacturing process to optimise flow. Without establishing and managing flow, it is impossible to achieve sufficient balance and control to implement a pull system: a system that makes to order.

#### Tools solve problems

The tools that have resulted from the codification of Ohno's methods have valuable uses and can certainly solve problems in manufacturing. But it is the philosophy behind the tools – how managers think about the design and management of work — that is the key.

The methods developed in the Toyota Production System were responses to identified and understood problems. The methods were developed to eliminate these problems permanently. The choice of method was based on an understanding of the problem.

The danger with codifying method as tools is that by ignoring the all-important context it obviates the first requirement to understand the problem, and, more importantly, to understand and articulate the problem from a systems perspective. The problems managers articulate from a command-and-control perspective are often different (and wrong) ones.

All of the methods (tools) described above were developed to solve problems associated with managing the flow of manufacturing at the rate of demand. 5S gets things in order and enables you to see flow, takt time is an essential measure for managing the components of a flow such that they work in harmony, Poke Yoka prevents errors moving forward in a flow, and VSM enables a detailed overview of the end-to-end flow in order to determine where to act.

#### One philosophy — two methods

When the Vanguard team first discovered Taiichi Ohno's work, we recognised the challenge to translate his ideas for service systems. We knew that service differed from manufacturing in several important respects:

- Nothing is 'stored' in the way products can be stored
- Service is not 'made' by physical (making things) means
- Service happens at the points of transaction (we used to call these 'moments of truth')
- The service agent is part of the service delivery
- The customer is involved in the service delivery

In Chapter 3 (Purpose, measures, method) I introduced the idea that in service organisations, it is the customer who sets the nominal value. So to design an effective and efficient service organisation we first need to understand the nature of customer demand. Ohno's 'demand problem' was, 'which model?', 'which colour' and 'how many?' The demand problem in service organisations is quite different.

#### The Vanguard Method

Because the customer is 'involved in production', in service organisations we need to understand the variety of customer demands and then design the system to absorb that variety. While the methods we developed in Vanguard are entirely consistent with Ohno's philosophy, they are completely different from the methods developed in manufacturing, because they are designed to solve different problems. As I have illustrated throughout the case material in this book, this involves:

- Studying customer demand in customer terms
- Distinguishing between 'value' and 'failure' demand
- Understanding whether demand is predictable or unpredictable
- Redesigning services against customer demands
- Changing the system (measures, roles and other 'system conditions') to remove the dysfunctional aspects of command-and-control thinking and replace them with the requirements for managing the work as a system

It will serve as a summary of the material already covered to briefly emphasise the importance of each of the steps in the Vanguard Method.

### **Studying customer demand in customer terms**

If you want customers to 'pull value' from the system, you need to know the nature of demands customers place on it. If you don't know this, you risk giving poor service at high cost.

### **Distinguishing between 'value' and 'failure' demand**

Value demands are those you want customers to place on the system. Failure demands are those you don't want. Failure demands are caused by a failure to do something or do something right for the customer. It follows that failure demand is entirely under the organisation's control. Turning off the causes of failure demand is one of the greatest economic levers available to managers.

### **Understanding whether demand is predictable or unpredictable**

Before managers act on demand it is critical to determine whether demand is predictable or unpredictable. The secret to effective design is the knowledge of demand and its predictability.

### **Redesigning services against customer demands**

When failure demand falls, customers experience better service and costs fall. When service flows are designed against customers' (nominal) value demands, service improves as costs decline.

### **Changing the system**

Measures, roles and other 'system conditions' need to be changed to remove the dysfunctional aspects of command-and-control thinking and replace them with the requirements for managing the work as a system.

It is the system that delivers performance. To manage the organisation as a system requires the removal of harmful practices and the establishment of helpful practices. Just as Ohno set out to understand and manage the whole manufacturing process as a system, the Vanguard Method does the same for service organisations. Ohno's methods were developed to solve problems associated with managing flow at the rate of demand. Vanguard's methods were developed to change the characteristics of demand and absorb the inherent variety in customer demand.

### **Toolhead Excesses**

Unthinking toolheads promote their tools to the detriment of the system. Instead of being focused on what questions to ask and how to think about problems, the toolheads do as they have been

taught. They apply the tools in an unthinking way. Here are some examples of wrong-headed application for each of the tools I have introduced:

### **Five S**

5S is generally thought of as the way to start. Here is an example:

A local authority appointed a consultant to help it implement 5S. He instituted 'black-bag Friday' and got people to clean up the office and put things in their correct place. Although every Friday was 'black-bag day', after the initial purge there was not much rubbish to be collected, and files were neatly arranged. After the 5S completion, some senior managers were not convinced that anything had changed. They asked our advice. We told them that as a result of 5S there was not much mess, but that didn't mean there was no waste. There was lots of it — much of it now sitting in computers where it was even harder to see.

5S in service organisations may give the impression of doing something, but nothing really changes.

A typical 5S office solution might be a row of box files on a shelf with a readily identifiable pattern drawn across their spines to indicate the order in which they belong. If someone removes a file, it is thus immediately evident where it needs to go back. This raises the questions: when might this help? Are the resources available in the files important, and does accessing them constitute value work? In other words, marking up the files for the sake of an exercise in tidiness could be failing to ask the important questions. It is to return to the theme: what is the problem you are trying to solve?

Behind 5S is the idea that 'everything has its place'. The idea is a good one and may be important in sorting out a manufacturing line, but it is less so in an office where the same considerations of safety and routine do not apply. We have seen instances where in the cause of 5S workers have been required to mark out their desks with defined spaces for Tippex, sellotape, scissors, stapler and paper clips. Can you imagine the impact on morale when people are told to do this? In service organisations, keeping yourself or your desk a bit tidier will have little impact on the system.

Is 5S the place to start? No, the place to start in service organisations is studying demand. The question you need to address is: 'to what extent does the current system absorb variety?' To solve this problem you need to study demand in customer terms and the capability of the system to meet it. The people who should do this work are those who work with customers every day; they find it motivational to think about their work from the customers' point of view.

Applying 5S in service organisations is solving the wrong problem. Indeed, rather than solving problems it can actually create them.

### **Standardise first?**

The toolheads often start with 5S, quoting Ohno as saying you cannot improve without first standardising work. That may be true in manufacturing, but it is wholly wrong in service organisations. Indeed, the impact of standardisation in service organisations is to damage the system's ability to absorb variety.

Standardisation in the Toyota Production System is essential — it is a manufacturing system. Ohno valued standardisation, but not for itself. He and his workers valued standardisation as a means for learning and improvement. For example, if something 'non-standard' occurs, both the

worker and manager would assume there was something that needed attention in the work. Command-and-control thinkers value standardisation for different reasons. First of all, if something 'non-standard' happens the manager assumes there is something wrong with the worker; it is axiomatic in command-and-control thinking that the workers should be held responsible for variation in performance. Further, command-and-control thinkers value standardisation because it helps them in the bulk of their work, planning and resource-management tasks. They are unaware of the need to separate their planning and operations management activities.

In service organisations there are countless examples of this error. Service 'work queues' have standard times; workers have requirements to meet standard work measures (targets). Variation in work content is ignored in terms of its value in the pursuit of improvement and causes managers to behave in unhelpful ways as illustrated throughout this book. Managers miss the obvious and exacerbate the situation making learning even more inaccessible. These and other 'system conditions' have the unintended consequences of driving waste into the system and making it hard if not impossible to see.

Just as Ohno used standardisation to learn and improve, in service organisations it is vital to use actual data (for example, time taken to execute tasks, volumes of tasks done) for learning and improvement, not arbitrary data (which is what standard times become since they do not accommodate variation). Moreover, these more useful measures must be used by those who do the work to understand and improve the work. The consequences are not only improved service at reduced cost; morale is transformed. If you start 'improvement' with standardisation in service organisations, you risk making service worse, driving up costs and driving morale down.

#### Takt time

Takt time is essential if you want to manage flow at the rate of demand in manufacturing. But does it have a place in service organisations?

A recent article in a prominent management journal contains a classic example of the misuse of takt time. The example concerns improving the processing of new business. Following the principles established for takt time in manufacturing, the author takes the volume of new business cases coming in to the organisation and divides this number by the available resource (manpower hours). The author then determines that to accommodate demand, each application would need to be dealt with in the resulting time. This is completely arbitrary. The consequence is management of the workers with an arbitrary measure that is unrelated to the needs of the work. This is pure command-and-control thinking, having nothing in common with Ohno's philosophy.

To improve new business processing, you would want to understand the following:

- End-to-end times for new business processing, from first contact by the customer to completion, showing capability and variation
- Proportion of applicants who complete the transaction (become customers), over time, showing capability and variation
- Waste and causes of waste and hence variation in the flow: 'dirt' in input, failure demand, process design, measures, management behaviour, IT and so on

You would then redesign the flow against the value work as defined by the customer. You would use the measures identified above to track improvement, relegating the 'old' ('lagging') measures to keeping score. In this way you remove the causes of failure demand, increase capacity (faster processing), make more sales (less customers 'drop out' or give up); thus happier customers and happier workers.

## **Poke Yoka**

The most common application of Poke Yoka in service organisations is ‘forcing’ a service agent to complete a field in a computer screen. Unless the field has a value or entry, the agent cannot advance to the next screen. Because service agents are (wrongly) targeted on time taken to complete tasks, they frequently enter any value that will allow the process to move on. Typically, they will use a code or entry they can most easily remember, especially when there are many such codes and finding the right one would take time. The consequence, of course, is dirt in the system.

This kind of rule violates the principle that the worker should be in control. In manufacturing, Poke Yoka is used to send a signal from the work to the worker. In service designs, because of the inherent variety in demand the worker needs to be able to control the ‘cleanliness’ of the work (the input to the next step in the flow). Any rule set by managers from above is likely to make the system less able to absorb the variety inherent in customer demands. The information required to make clean flow – provide the service efficiently to the customer – should be the focus of any agent’s work in a service design. If the system is designed in such a way that the agent’s role is to both provide service to the customers and improve that service, he or she will be much more likely to ensure that any information gathered is correct and useable. In a service design the agent must be responsible for mistake proofing.

## **VSM**

VSM is of little value in service organisations. The mapping work starts with the machines and worker activities in a physical manufacturing flow. The constraint of machinery is not relevant to a service flow; treating work functions as proxies for machinery assumes de facto that they are necessary functions/activities. In services, the flow is understood by working from outside in — core flows are dictated by customer demands.

Everything that is analysed in respect of the value-adding ratio (cycle time, waiting time, downtime etc) requires prior standardisation of work. As I have said, this is an inappropriate intervention in service design, driving up costs by making the system less able to absorb variety.

The analysis of flow in service is concerned with matters such as preceding activities supplying information fit for purpose, rather than levels of inventory in front of processes. To measure inventory in service organisations in this way is to make a fundamental error.

In manufacturing applications of VSM, there is a strong focus on the management activities associated with the interface with the customer. In service designs it is far more effective to have the person supplying the service, at the interface with the customer, to be the means of control.

## **Watch out for the toolheads**

Labelling Ohno’s work as ‘lean’ led to the codification of method. The methods developed in manufacturing have value there, but solving the problems of service organisations requires a different approach because the context is different: service differs from manufacturing in important respects.

Much of the growth of interest in ‘lean’ for service organisations has been due to manufacturing organisations moving their ‘lean tools’ off the shop floor and in to what they call ‘back-office’ activities. Many of these activities may need to operate in synchrony with the manufacturing plant and the tools may have value in clarifying and improving processes, But before we jump to the conclusion that the tools will work in any service organisation we had best first study the systems.

It is also worth noting that whenever I have listened to a presentation by a lean manufacturer of its use of lean tools in the back office, I am interested to find out whether their use of lean tools has changed the system in the core manufacturing operations. The best question to ask is: 'Have you taken the measure of 'revenue out of the factory gate' off the factories?' If the answer is no, manufacturing cannot be working as a pull system. To manufacture to revenue targets causes inventory and other forms of waste. Such manufacturing organisations are employing 'lean' tools as they employed TQM, as training and projects focussed on process improvement. With the size of investment they get a return, but is it the kind of return they would achieve by transforming the system?

Many of the manufacturing companies using lean tools openly claim to be engaged in cost-reduction exercise. While cost reduction is a natural consequence of 'lean', it is not its purpose. The purpose of 'lean' is to increase capacity by designing a system that optimally responds to customer demand.

Today our service organisations (and their customers) suffer high cost and poor quality service. Like manufacturers, they have the opportunity to increase capacity by ridding the system of waste (the natural consequence of a command-and-control design) and deliver better service at lower cost. The opportunity will only be realised by changing the system.

Watch out for the toolheads. They risk wasting the opportunity to improve our service organisations — and they may make it more difficult to do so in the future.

Think about it...

Ohno insisted we should not codify method.

Why?

John Seddon

[www.lean-service.com](http://www.lean-service.com)