



Six Sigma: Leading to Sustainable Results?

Blom Consultancy takes a closer look

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As a specialist in improvement methods, I go to quite a lot of seminars and conferences. I recently overheard a conversation between two production managers. “I’ve had fantastic results with TPM. It’s amazing how much it’s boosted our profits!” one of them said. “Well I’m working with 6 Sigma. Have you heard of it? Brand new! You should try it,” the other replied. And so it went on for a while, as they worked their way through the relative merits of BPR, Business Process Reengineering, TQM, Total Quality Management, and Empowerment. They were both so full of their own experiences that they weren’t really listening to one another. This comparison and promotion of different improvement strategies is reinforced by those who offer the methods. The people who offer TPM - Total Productive Maintenance - for instance, swear by their own method. So, “Six Sigma or Lean Manufacturing can’t be the right approach”. Boy, what a waste of time!

Let’s go basic

Let’s just list the basic principles of all the well-known improvement programs. When you look closely, there are really only four: identifying waste, creating ownership, structured

improvement, and assuring the quality of results.

There are always losses in everything we do. We’re so used to them that we see them as a natural part of our reality. The first skill we need to master is identifying those things in our

Necessary steps for success:

1. identify waste
2. create ownership
3. structurise improvement
4. assure results

reality that are actually undesirable. These are all losses and we have to bring them into sharp focus first if we want to eliminate them.

Eliminating losses always involves people. In practice, all employees need to be challenged to improve the way they do things. There are two fundamentally different ways to tackle this:

- direct control;
- personal involvement.

Direct control is simple and clear. But the effect disappears immediately when the control

slackens off; ‘the boss’ has to be right there, watching all the time. Creating involvement is more difficult, but once people have a sense of personal involvement and responsibility, the boss can confidently take a week’s vacation. Employee involvement, also known as ‘ownership’, can’t be imposed; it has to grow. And enjoying your work is a decisive factor.

If a group of employees want to work on eliminating wastage, you have to put a structure of some kind in place to help them do it. Here too there are lots of possible variations on the theme. The structure of all successful improvement methods can always be traced back to the Deming circle: Plan, Do, Check and Act.

And this brings us to the last of the four basic principles: guaranteeing quality. If there’s no system for assuring quality, improvements won’t last.

Let’s go specific

These principles have been around in the car industry for years. Or more precisely, that’s where they were first developed. Let’s look at the most important and popular methods currently in use.

Identifying losses/ownership

The best method for identifying losses in production plants is

the Overall Equipment Effectiveness (OEE) method. The OEE is the operator tool par excellence, developed as part of TPM to measure the effectiveness of the production process.

The key to enabling all those directly involved to improve production processes is using an accepted, objective measurement method. OEE is a method that gives an indisputable answer to the question of what losses are occurring and which of those losses have been sent to the happy hunting grounds forever. The OEE Toolkit has already made this a reality for numerous production teams all over the world (www.OEEToolkit.com). Value stream mapping is a proven method for identifying losses over the whole production process chain. It clarifies the relationship between Value-adding time and Non-value-adding time in the process. Here too, an understanding of what can often be a surprisingly large loss is the first step in eliminating it!

Deming circle

As mentioned earlier, the 6 Sigma DMAIC circle is the latest variant of the Deming circle. Plan, do, check, act has here evolved into define, measure, analyse, improve and control. Multi-functional teams can bring about significant improvements based on these five steps and the use of sophisticated statistical improvement tools. Ultimately this can result in achievement of the 6 Sigma objective: a level of process control high enough to ensure that the chance of an item being outside specification is less than 3.4 in a million. For this to occur, the conditions expressed in the

six themes of 6 Sigma must be satisfied. These are, in order:

- customer focus
- facts and figures
- process focus, management and improvement
- proactive management
- commitment to the goals
- perfection (zero waste, zero defects).

Do you still believe
in controlling your
people?!
Dream on!

Guaranteeing quality

TS 16949 is a sector-specific extension and refinement of ISO 9000; a checklist, as it were, of the work procedures and improvement methods to be used. This means that, as a customer of a TS 16949-certified company, you are assured that your supplier is able to put your improvement needs into practice at his end. Whereas an ISO certificate used to be a document that primarily set out how a process should work, the main strength of this standard is that it includes testing against customer satisfaction. This actually goes a step further, because it's the result that counts.

The core of improvement

If you're already into one of the trends or fads in Improvement Land, check first whether the basic conditions are satisfied. If they are, then you can't go wrong, but be on the lookout

for superfluous baggage and guard against mindlessly swallowing hype. How to start:

1. Decide on a method that at least has the essentials right, i.e. it focuses on wastage, ownership, Deming, and guaranteeing results through standardisation;
2. Add the core principles of the most appropriate improvement tool: SMED, DoE, 5S, Line Balancing etc.
3. Keep doing this until your method of choice has a worthy successor.

What you will have is a complete toolbox, which, if skilfully used, provides a collection of the most effective and efficient methods for improving everyday production processes. Call the collection by whatever name gives it meaning for you and yours. Only then will the toolbox result in World Class Performance for all your stakeholders, now and in the future! ■