

The Big Fight: Lean Manufacturing vs. Six Sigma

(Stephen Halliday)

Welcome to the ringside.

There is a buzz of excitement around the arena. The Master of Ceremonies steps up and takes the microphone.

*“Ladies and Gentlemen, welcome to today’s Big Fight of three rounds. In the Blue corner we have **Lean Manufacturing** and in the Red corner, **Six Sigma**.”*

Before the fight starts, let us look at the two contenders.

Lean Manufacturing: - recently out of the camp of Womack and Jones who have been applying Japanese principles since the late 80’s. His strengths are an emphasis on simplicity, visibility and elimination of waste. This is a World Class Contender.

On the other hand, **Six Sigma** comes from Mikel Harry’s Academy. Although around since the mid-80’s, he made his first public appearance in the early 90’s. His key strengths are an emphasis on a systematic approach to defect reduction through process improvement. He claims to be able to beaten less than four times in every million encounters. He is now acclaimed worldwide by G.E.

As we look at the contenders they are similar in many ways:

- Eyes of the customer
- Mind of the process
- Out to eliminate waste
- Always looking to improve

It should be a good contest.

The bell sounds for Round 1.

Six Sigma attacks with its DMAIC model but this is fended off by Lean’s five principles. Lean responds with his Total Productive Maintenance technique to ensure reliability in his stance and hence greater uptime. Not to be outdone, Sigma counters with his project methodology to reduce his chance of a defective move.

The bell sounds for the end of Round 1.

As the two contenders sit down, let us look at their corners.

Sigma is supported by a Black Belt (perhaps he should be in the ring!) with a cross functional team, whilst Lean is run by a small operational team used to dealing with the day-to-day knocks.

The bell goes for Round 2.

Out come the contestants...

Lean uses his basic disciplines of 5S to attack: Sort, Simplify, Sweep, Standardise and Self-discipline – this excellent combination pushes Sigma on the defensive forcing him to use his risk avoidance strategy of FMEA. Lean moves forward with Demand Management whilst Sigma is stabilising and controlling himself through Statistical Process Control. Six Sigma reaches his optimum performance through Experimental Design only to see Lean respond with his own cell design.

The bell goes for the end of Round 2.

Back to their corners.

In the Blue corner, Lean's team are using their SMED technique to ensure a fast turn round whilst in the Red corner, Sigma is receiving advice from a Master Black Belt.

The bell sounds for the third and final round. Lean leaps forward with his Value Flow but this is equally matched by Sigma's process mapping. Sigma leads with a "Design for Six Sigma" strategy and Lean responds with Kanban, replacing each blow with another.

Suddenly both create the same combination of Seven Simple Tools followed by Poka Yoke to avoid unnecessary errors.

The bell sounds – the fight is over.

There is an air of anticipation of the judges confer. The Master of Ceremonies approaches the microphone.

"Ladies and Gentlemen, after three rounds of this title fight, it is the judges decision that the fight be declared a draw."

So a well matched fight. Let's look at our post fight analysis.

Contenders possess many similarities, each has a few distinctive moves of their own but as seen today they are equally effective given management backing.

So, it is goodbye from the ringside until the next battle.