

Are Lean and Six Sigma Mutually Exclusive?

In the world of process improvement two giants have been fighting it out over the last two decades – Lean and Six Sigma. There are staunch advocates and critics of both.

But, are they mutually exclusive? And, should a business do one or the other?

I think not, if anything Lean and Six Sigma are closer to being collectively exhaustive. Although they aren't actually exhaustive of course, as there are lots of other ingredients needed for good processes and good businesses.

As a Master Black Belt in Six Sigma and Design for Six Sigma (DFSS), I have been heavily involved in Six Sigma for over 20 years. The latter (DFSS) under the guise of Robust Design being my speciality these days. Even so, I am certainly not of the opinion that Six Sigma is the right approach in every case, or even the majority of cases!

Lean

Lean is considered by many to be the more 'intuitive', 'pragmatic' and easily-applied of the two approaches.

Benefits come relatively quickly and typically Lean activities have a high level of worker involvement too.

Lean does not require a great deal of mathematical or statistical knowledge to apply it to good effect.

While, there's a lot to admire, Lean is not a cure-all solution and sometimes you still need to apply a scientific method with powerful data analysis tools to get the job done.



Six Sigma

Six Sigma, applied properly, provides this, but unfortunately suffers from too much jargon, a fear of statistics and its (mis)use on problems that could better have been solved with simpler approaches.

This is a shame because it's a powerful methodology.

Unfortunately, however it's often poorly implemented and by those who really don't understand it. In some cases it's badly taught, usually by an amateur, i.e. self-taught folk looking for career advancement, but who know barely more statistics than those that they're attempting to teach!

Badly-taught statistics is a recipe for disaster – people end up being more confused than they were to begin with, so of course their projects will fail. With this comes a bad reputation for Six Sigma.

Six Sigma has also suffered from being based on some statistically-shaky premises – the 1.5 Sigma shift is one of the more well-known of these. This has had an understandable impact on its credibility.

Good trainers of Six Sigma will downplay these aspects and focus only on the many good things in the DMAICT methodology.

N.B. Bourton has added a 'T' to the standard DMAIC methodology.

'T' is for Transfer and exploits the fact that problems are rarely confined to one area within a business, the solutions to one problem will probably have some merit for other problems too! The project cannot be closed until such possibilities have been critically evaluated.

There are many critics of Six Sigma, but it is not a fad. It can't be, it's been around for far too long for that. And, there's even an ISO standard for it - [ISO 13053-1:2011](#) Quantitative Methods in Process Improvement.

Part 1 of the standard concerns the DMAIC methodology (without the 'T' unfortunately!), whilst Part 2 focuses on the tools and techniques: [ISO 13053-2:2011](#)

So, what of 'Lean Sigma', or 'Lean Six Sigma'?

I'm sure that some business leaders think that Lean Sigma is 'Six Sigma without the stats (sic)', but Lean Sigma or Lean Six Sigma are really just attempts at unifying the two approaches to process improvement, recognising the strengths of both. There is help out there to understand this:

ISO 18404:2015 details the quantitative methods in process improvement including competencies for key personnel and their organisations in relation to Six Sigma and Lean implementation.

Lean Sigma training teaches both Lean and Six Sigma tools and techniques. People can then make their own mind up as to which to use for their particular problem.

N.B. Bourton Group reacted to ISO18404 when it was first released by ensuring that our Green & Black Belt courses exceeded the ISO requirements.

Conclusion

If I were to make an attempt to pragmatically characterise each approach to help determine which to use under what circumstances I would prefer the following:

Use Lean when focus is on reducing process waste and/or process flow improvement (which results in shorter lead times, less work in progress, etc.)

Use Six Sigma when trying to get to the root cause of a thorny issue of unintuitive cause and of big enough scope and concern to warrant a well-trained team spending 3-6 months sorting it out.



If you have a question about Lean or Six Sigma, or if you're looking for support with a specific situation, or maybe you'd like to develop your own coaching/mentoring skills – feel free to get in touch on 01926 633333 alternatively you can email us at info@bourton.co.uk.